GUHRING

EDITION **ENGLISH** 2012

42

PRICE LIST

Dr. Jörg Gühring

President,
Research and Development

Oliver Gühring

Sales and Marketing
Director

Dear customers,

Highest productivity, excellent economic efficiency and optimum machining results are the principles to which we steer our products and services towards. At Guhring this is achieved with great success by in excess of 5000 employees world-wide. Their objective is customer satisfaction and this makes Guhring the leading world wide manufacturer of rotary cutting tools.

YOU BENEFIT IN MANY WAYS:

Pooled expertise

With Guhring tools you can rely on the tool material, the geometry and the coating – the essential parameters for the efficiency of a precision tool – to be perfectly co-ordinated. Our own carbide production, our own machine and equipment construction, our own coating technology as well as our own development departments ensure we maintain technological leadership in rotary cutting tools. Within the framework of our special tool production we develop optimised tools with an excellent price-performance-ratio for our customers.

Dietmar Pfränger

Production and Technical Director

Bernd Schatz

Financial and Commercial Director

Trend-setting innovations

In excess of 600 granted patents world-wide are proof of our capability for innovation. Countless Guhring standards, as for example, the TiN-coating, the HSK or MQL technology have set trends in the tooling industry.
With the new Signum-coating – one of the hardest nitride coatings on the market – new tools for the efficient machining of composite materials and highly accurate hydraulic chucks for the clamping of the smallest shank diameters we provide new impulses for the future.

Made-to-measure services

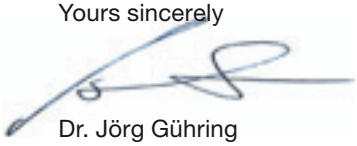
Customer specific tool management concepts combine process planning, logistics, tool application and refurbishment modules together tailor-made to suit your requirements. The new generation of Guhring tool vending systems from the simple workshop solution to the model for complex process chains completes the entire range of tool logistics.
Guhring's new carbide recycling is an environmentally friendly and profitable solution for the logical reutilisation of worn tools.

Your partner world-wide

In order for you to benefit from the advantages of our tooling solutions all over the world in close vicinity to your production, Guhring is represented internationally by 28 production plants, 47 service centres, 46 sales companies and countless sales and marketing partners. World-wide our uniform standards ensure that you can always and everywhere rely on the same high Guhring quality.

It would be our pleasure to be allowed to continue to convince you of our efficiency!

Yours sincerely



Dr. Jörg Gühring

GUHRING

Precision Cutting Tools

2012 Edition

Standard Range PL 42

Twist Drills

Gun Drills

Threading Tools

Milling Cutters

Reamers

Countersinks

PCD and CBN Tools

Tool clamping devices

Technical Section

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Competent contact partner in your immediate vicinity!

28 production plants
47 service centres
46 sales companies

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or

www.guehring.de

TWIST DRILLS

GUN DRILLS

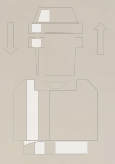
THREADING TOOLS

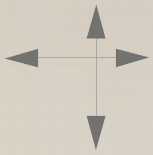
MILLING CUTTERS

REAMERS

COUNTERSINKS

PCD AND CBN TOOLS

TOOL CLAMPING DEVICES 

TECHNICAL SECTION 

PRODUCT NO. INDEX

OUR *STRENGTHS*

Own carbide technology

Own coating technology

Own original equiment, automotive, aerospace and medical technology centres

Own research and development for tool materials, geometries and surface finishes

Own service and ongoing support

Own machine-building division

World-wide presence with sales, production, service and technical field service departments

Always the optimal tool solution at a competitive price

One of the largest standard ranges of rotary cutting tools

Limitless possibilities for made-to-measure special tools

Expert advice regarding optimal tool application

Efficient provision of tool management and logistics

Competent contact partner in your immediate vicinity

Everything from a reliable single source

YOUR ADVANTAGES

Quality down to the last detail.

Whether especially high degree of hardness, pronounced bending strength, extreme toughness or extra low reactivity is required – we can produce the perfect carbide grade that exactly matches your individual requirements thanks to our own carbide development and production. For lasting optimised machining results – even with demanding tasks such tapping in steel.

Additionally: We also produce carbide blanks often with a complex geometry as the basis for sophisticated special tools. For example, this includes rods up to a length of 2000 mm or complex blanks with multiple steps as well as rods for multi-fluted tools with up to five spiral coolant ducts.

MADE - TO - MEASURE QUALITY FOR MADE - TO - MEASURE TOOLS.

In short: GUHRING can provide a perfect carbide solution for every industry and every area of application.

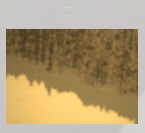
Guaranteed perfection for you.

Greater performance.
Longer tool life.

Added value.

A

TiAlN



A a

TiAlN SuperA/ nanoA

C

TiCN

Cb

Carbo

D

Cristall

F

FiRE/nano FiRE

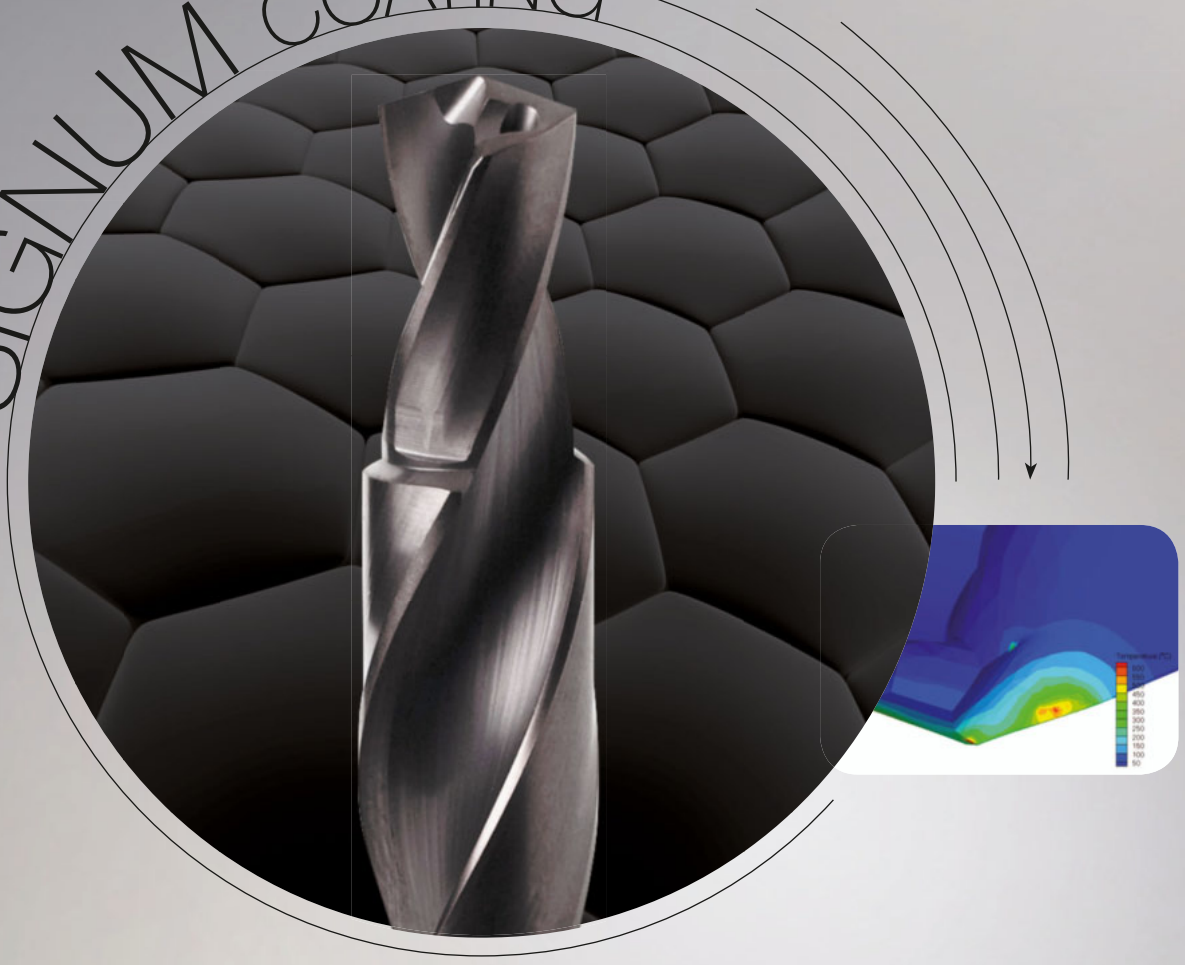
Y

Signum

S

TiN

SIGNUM COATING



GUHRING is a renowned specialist for application optimised high-performance coatings. As the first tool manufacturer world-wide to provide tools with a TiN-coating in 1980 by continuous improvement we have made them considerably more wear-resistant. To date, GUHRING consistently keeps setting pioneering tooling technology trends. The extremely hard Signum-coating or the ultra-thin Nano-coating are only a few of the many examples.

Our world-wide service centres work to uniform standards and processess to ensure that our customers' tools can always be re-coated one hundred per cent true to the original. Plus: We also coat tooling products from other suppliers as well as functional components from a wide range of industries.

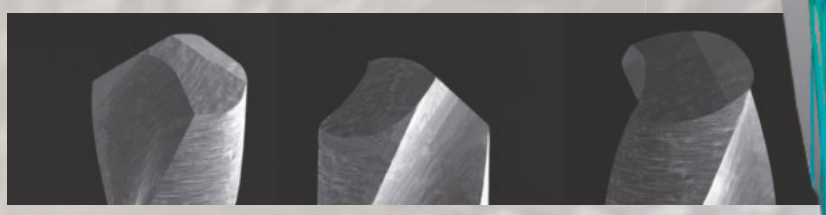
The result: Increased performance and longer tool life.

You too can rely on optimal tool wear protection made by GUHRING.

The think tank for excellent tooling solutions.

Our research and development department is the creative core of the company. Here, trend-setting tooling, machining and technology solutions of the highest accuracy, efficiency and economic efficiency are created. More than 30 years ago the success story of tool coating was originally written. The development of HSK, the introduction of minimal quantity lubrication as well as our innovative machining solutions for composite materials followed.

High-speed camera, scanning electron microscope, thermal imaging camera etc. – the R&D department is excellently equipped and possesses its own testing facility for machining trials that is also available for our customers needs. Including FEM and CFD for the detailed and industry-wide unique process and tool analysis.



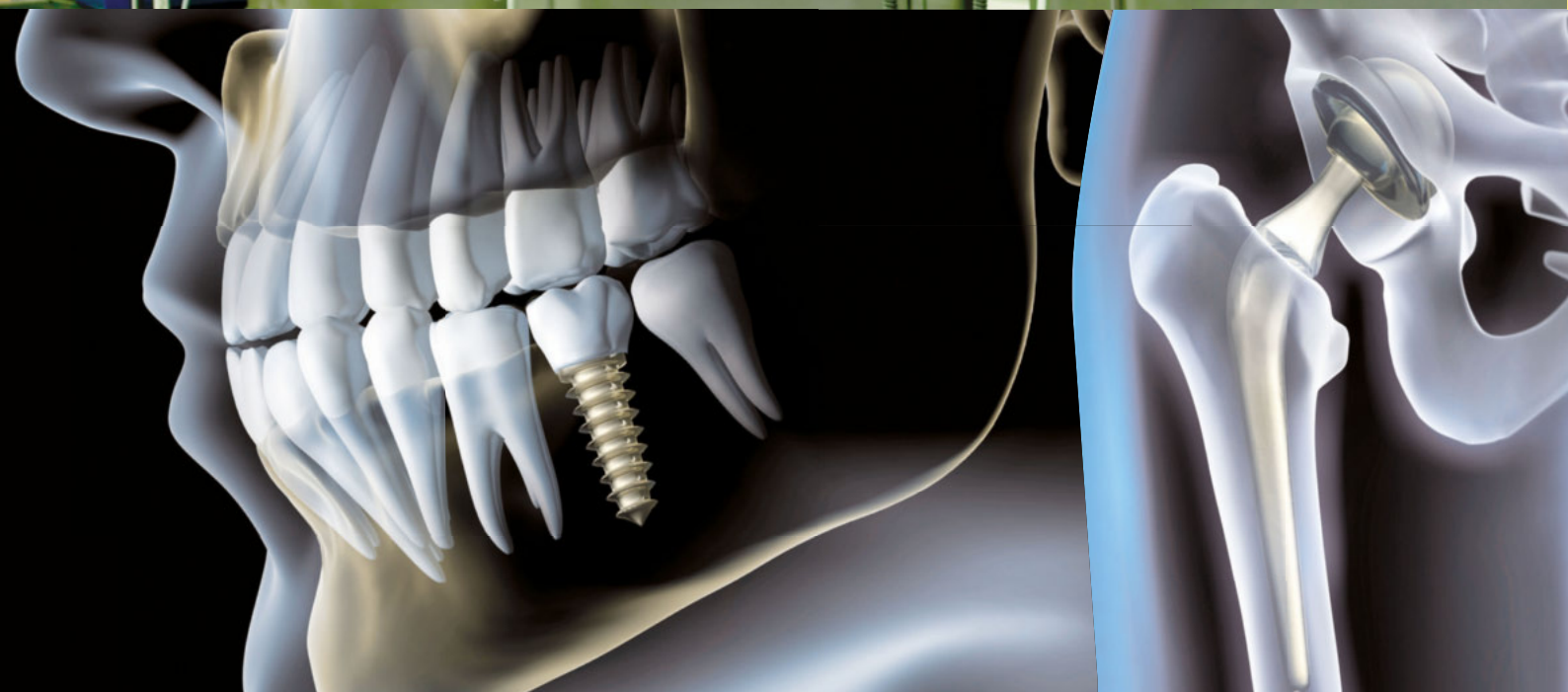
Use our know-how

and secure your competitive advantage –

with custom tooling solutions and sophisticated machining strategies

powered by Guhring.

GUHRING COMPETENCE CENTRES



With GUHRING you are guaranteed that you will always be well advised.

Our employees are knowlegable, well informed and talk from experience –
and dedicated to understand what is important to your business.

For the key sectors machine-building, automotive, aerospace and medical technology
we have established individual competence centres.

EYE –TO –EYE LEVEL ADVICE.

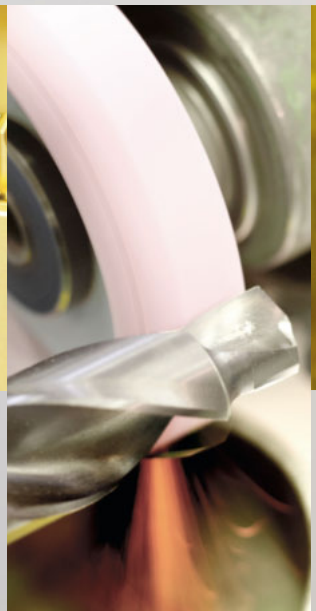
From tool and process design via the sales department to the customer support during tool application there are always competent personnel available. Such wealth of knowledge from our industry-specific tooling and process team is available to you at any time that will offer advice, proposals and solutions together with you and provide production support on your site. For robust, reliable production processes and maximum economic efficiency. Put us to the test!

GÜHRING
TM WERKZEUGAUTOMAT
TM 726
TM 526
TM 326
GÜHRING
GÜHRING
GÜHRING
GISS
2000

The component for machining success

GUHRING provides comprehensive services for everything which encompasses tool procurement, management, refurbishment and storage. From complete tool management with tool dispensing systems incorporating our special tool management software to re-grinding, re-coating or contract coating services – the GUHRING service modules can be combined, tailored and perfected to your special individual requirements.

Thanks to our world-wide presence you can benefit from our complete range of services all over the world. We are always in close proximity to you and provide direct on-site support. GUHRING Tool-Management – allows you to concentrate one hundred percent on your actual core business..... your value-generation tasks.



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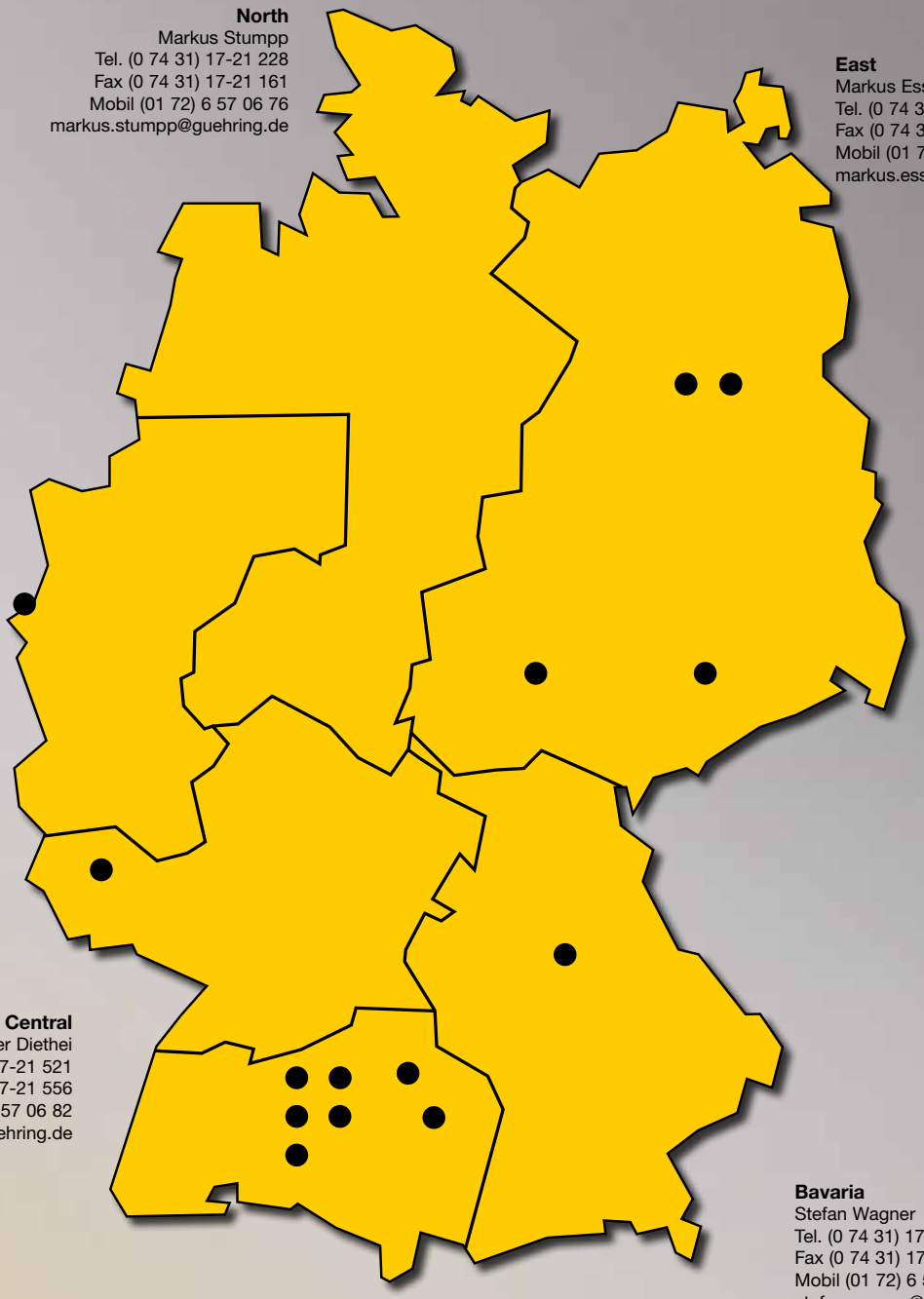

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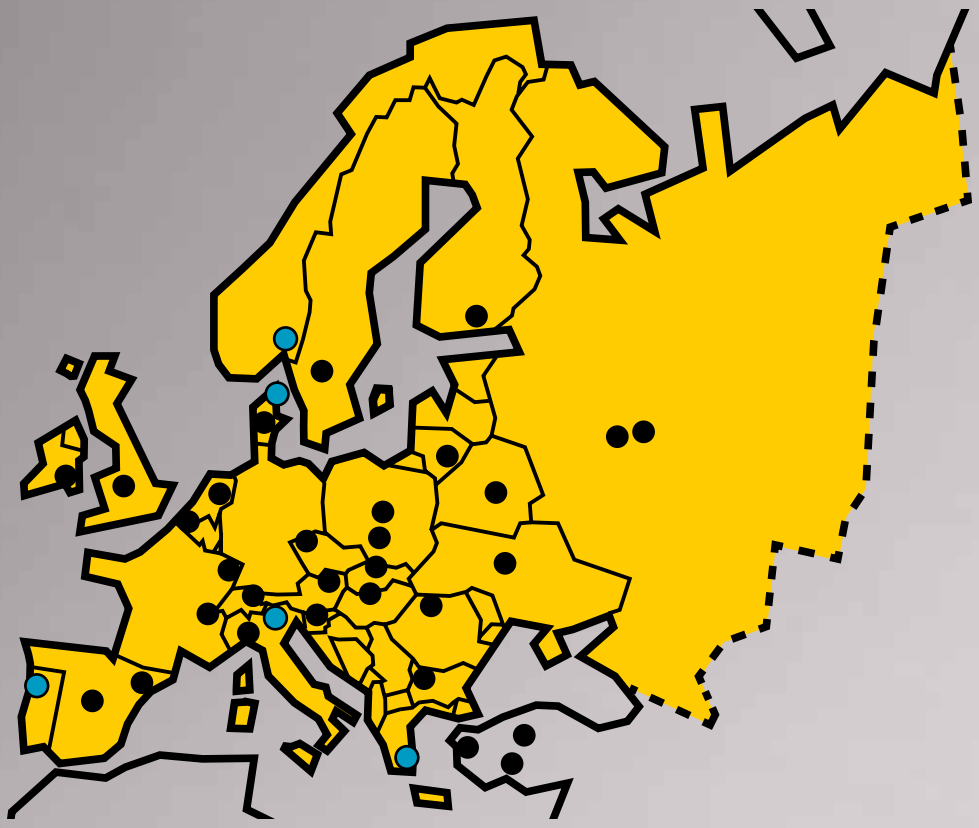

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• Service

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• Production
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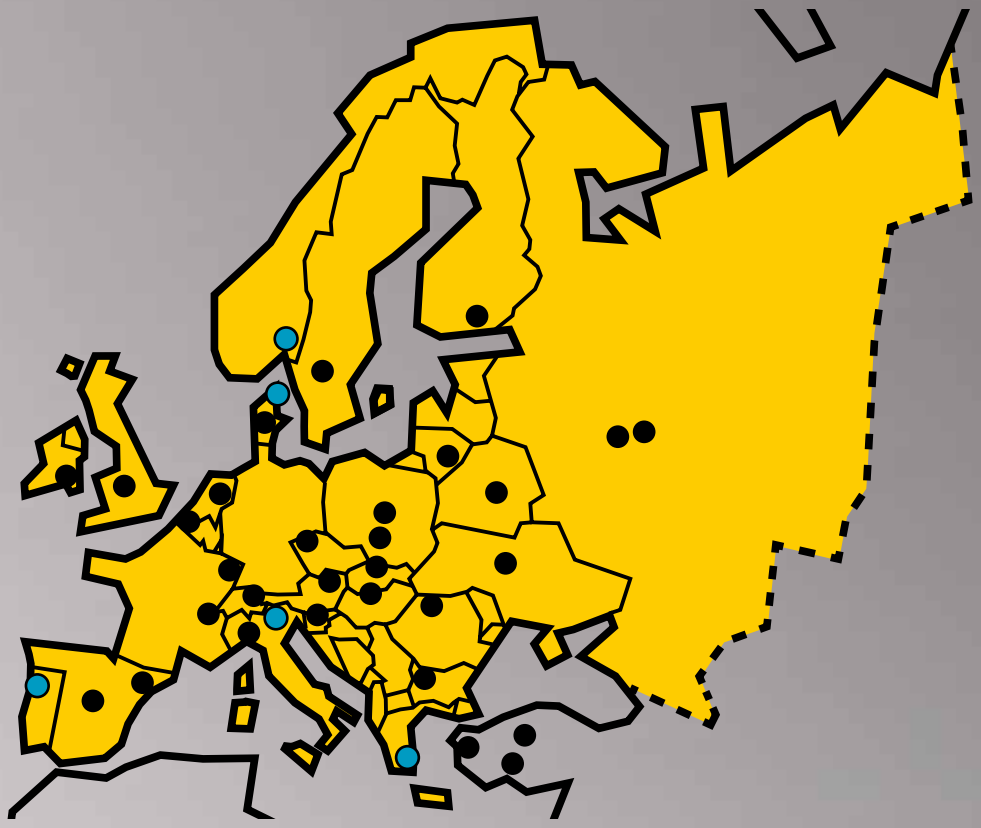

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GUHRING NORTH AMERICA AND LATIN AMERICA

USA

- Sales
- Production
- Service
- PCD/CBN tools

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Mexico

- Sales
- Production
- Service

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Brazil

- Sales
- Production
- Service

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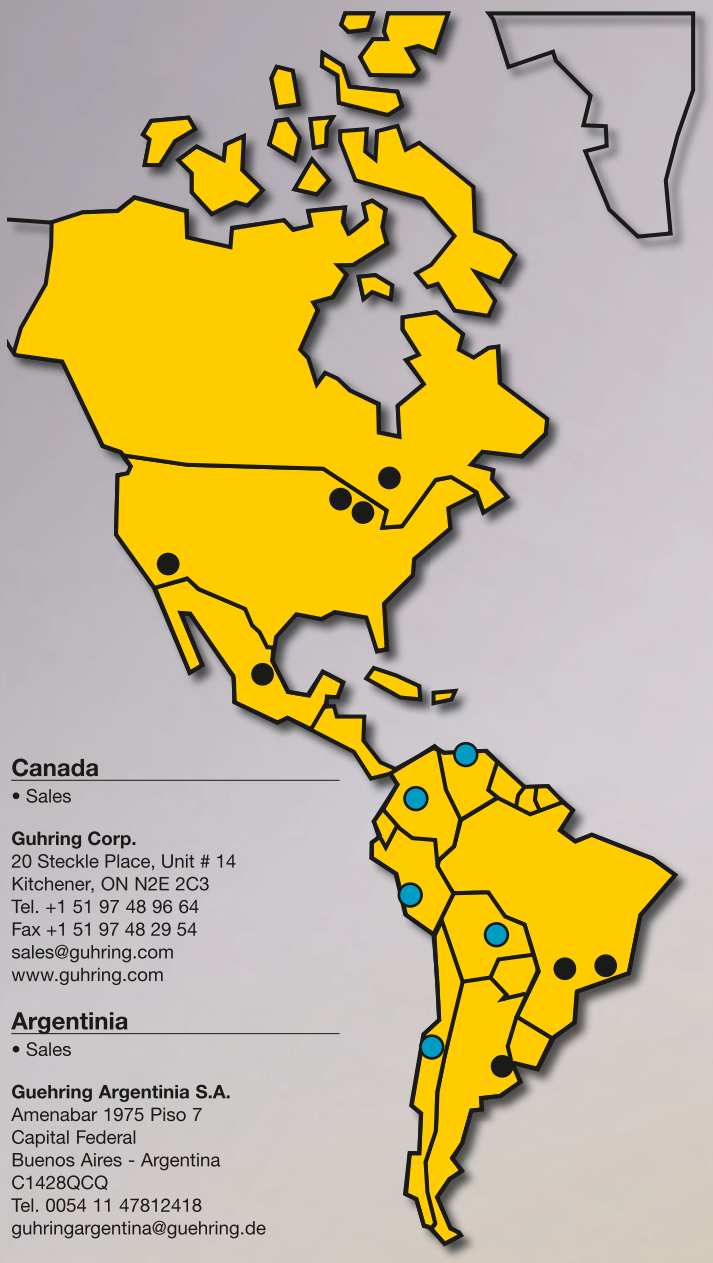

Canada

- Sales

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- Sales

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China

- Sales
- Production
- Service
- PCD/CBN tools

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Fax +86 5 19 8 51 04 83 2
info@guhringchina.com
www.guhringchina.com

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Liuzhou Regrinding Center
552, Motan Village, Hong Qiao Rd.
Liunan District
Liuzhou, Guangxi Province
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India

- Sales
- Production
- Service
- PCD/CBN tools

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Indonesia

- Sales
- Production
- Service

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Japan

- Sales
- Production
- Service

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Korea

- Sales
- Production
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- PCD/CBN tools

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Singapur

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- Production
- Service
- PCD/CBN tools

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- Service

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- Service

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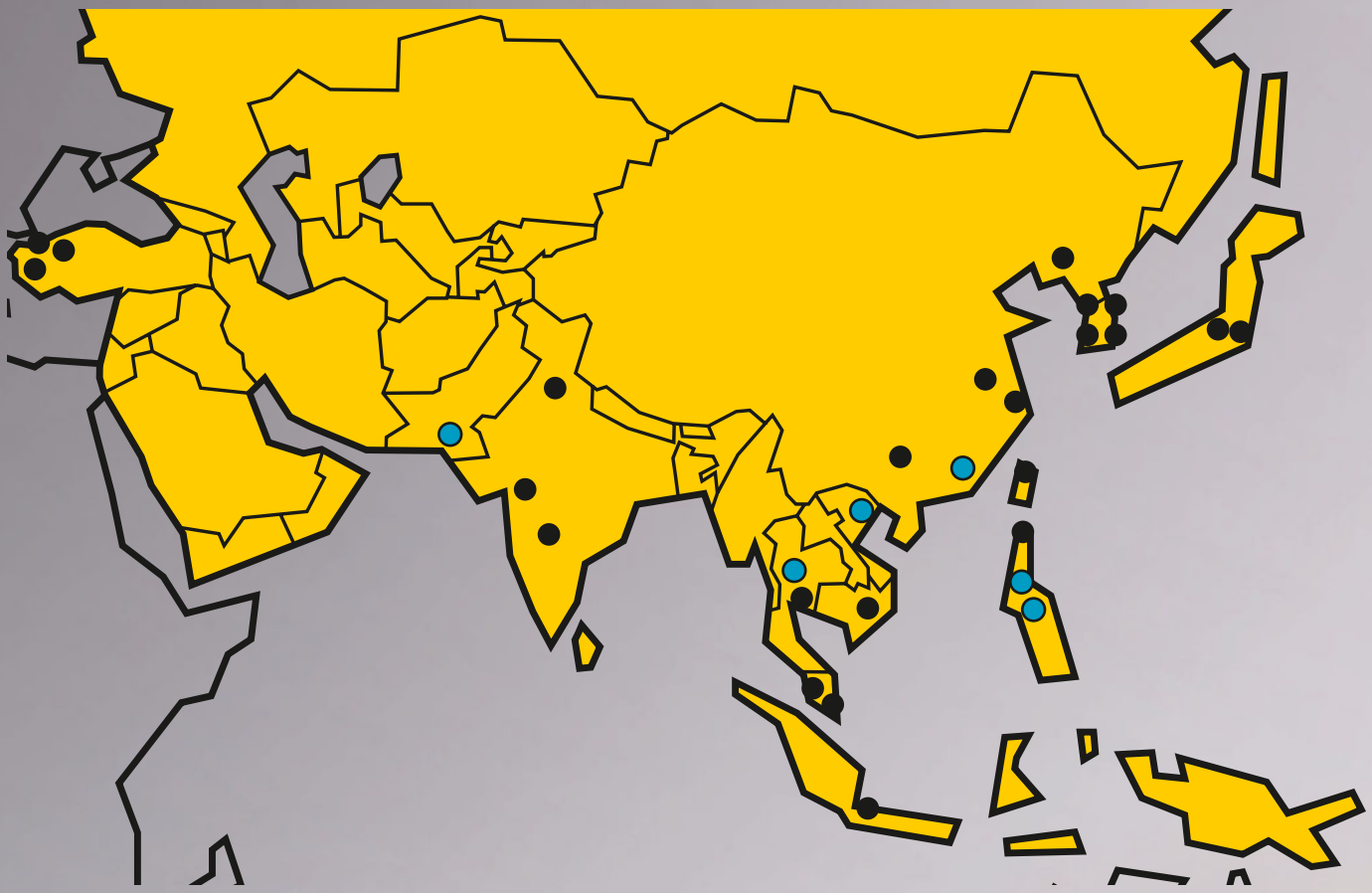

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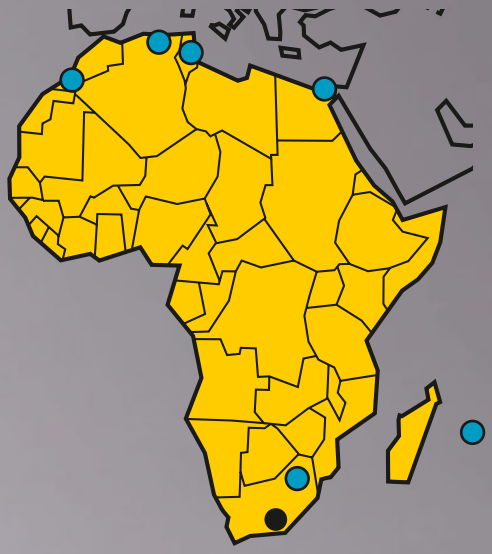

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Standard Range

Tools from the standard range are illustrated in bold in the catalogue. For most cutting tasks they provide an extremely economical solution. Standard range tools are produced in large batches and are generally in stock and available immediately.

Obsolete Range

Products that are less current are listed in our obsolete range and illustrated in light in the catalogue. They are available only as long as the product is in stock. If products from the obsolete range are out of stock, production readiness with short delivery is provided in the form of a special tool order. Prices available on request.

Your ordering possibilities

Your ordering possibilities are as versatile as the Guhring tool range:

- Direct contact with your regional representative who will offer expert advice.
- The GuhringNavigator combined with the shop assists with the selection of the optimal tool for your application: navigator.guehring.de.
- Already a Guhring customer? Then use our special B2B-Online-Shop at b2b.guehring.de. Following registration it offers numerous possibilities regarding ordering and order tracking.
- Naturally, you can also order at any time by letter or fax using the addresses and fax numbers provided.
- For customer specific special tools there are also questionaires available in the catalogue.

When ordering standard tools from the catalogue please include the following details:
a) Guhring number and
b) either the nominal diameter or - if specified - the code no.

Special sizes and tools

In addition to our standard range we also produce special solutions on request:

- intermediate sizes and special lengths
- Modified shanks, web thinning, tolerances, steps etc.
- Alternative surface finishes and coatings
- Special tools to customer drawings

Furthermore, we also offer development support. Describe your specific machining task and our tooling experts will provide their know-how for developing the optimal tool and improve your competitiveness.

Packaging Details

Tool group	Standard	Units per package
Straight shank HSS twist drills	DIN 338 DIN 1897 and similar Guhring standards	Ø 7.50 mm packed in units of 10 Ø 7.50 ... Ø 10.60 mm packed in units of 5* Ø 10.60 mm 1 unit per package
	DIN 339 DIN 340 and similar Guhring standards	Ø 6.70 mm packed in units of 10 Ø 6.70 ... Ø 10.60 mm packed in units of 5 Ø 10.60 mm 1 unit per package
	DIN 1869	Ø 7.50 mm packed in units of 10 Ø 7.50 ... Ø 10.60 mm packed in units of 5 Ø 10.60 mm 1 unit per package
Taper shank HSS twist drills	all DIN-standards and Guhring-standards	all sizes supplied 1 unit per package
Carbide and carbide tipped twist drills	all DIN-standards and Guhring-standards	Ø 2.00 mm packed in units of 10 Ø 2.00 mm 1 unit per package
Micro-precision drills	DIN 1899	all sizes supplied packed in units of 10
Metric center drills	DIN 333 form A, form R	Ø 4.00 mm packed in units of 10 Ø 4.00 mm 1 unit per package
	DIN 333 form B	Ø 2.50 mm packed in units of 10 Ø 2.50 mm 1 unit per package

*coated tools packed in units of 10

Tool group	Standard	Units per package
HSS machine taps and fluteless machine taps	DIN 371 DIN 376 DIN 374 DIN 2174 DIN 2184	≤ M12 mm packed in units of 5 > M12 mm 1 unit per package

Tool group	Standard	Units per package
Milling cutters and reamers all tool materials	all DIN-standards and Guhring-standards	all sizes supplied 1 unit per package

Conditions of sale

Goods supplied are subject to our conditions available on request.

All products marked with “DIN“, deviating from the dimensions listed in the catalogue, can be delivered, as long as they are in conformity with the DIN standard form. The DIN standard forms are available at the “Deutsches Institut für Normung e.V.“, 10787 Berlin or at www.din.de.

Machining depth

Machining depths stated in this catalogue are approximate values.

Conditions of sale for small batches

On small orders, an additional surcharge may be added

Conditions of sale for special tools

When ordering special tools, the quantity delivered can deviate by an average of 10%, at least 2 items, from the original order. Payment is for quantity supplied.

NITRIDE
★★★★★
SIGNUM
COATING
★★★★★
HARD
Unbelievably robust
and absolutely reliable
GUHRING

TWIST DRILLS

Solid carbide
micro-precision drills

Exclusive Line

Specialists for specific tasks

RT 100 T - Spiral-fluted deep hole drills up to 40xD

GUHRING

Ratio drills without oil feed

Standard	Type	Tool illustration	Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 6537 K	RT 100 U		3xD	Solid carbide	S	3,000 - 20,000	1184	121	198
DIN 6537 K	RT 100 U		3xD	Solid carbide	F	3,000 - 20,000	2480	121	198
DIN 6537 K	RT 100 U		3xD	Solid carbide	F	3,000 - 20,000	2472	121	198
DIN 6537 K	RT 100 F		3xD	Solid carbide	F	3,700 - 13,000	2475	121	198
DIN 6537 K	RT 100 HF	NEW	3xD	Solid carbide	Y	3,000 - 20,000	8524	121	198
DIN 6537 L	RT 100 U		5xD	Solid carbide	S	3,300 - 16,000	2717	121	204
DIN 6537 L	RT 100 U		5xD	Solid carbide	F	3,000 - 20,000	2996	121	204
DIN 6537 L	RT 100 U		5xD	Solid carbide	F	3,000 - 20,000	2719	121	204
DIN 6537 L	RT 100 F		5xD	Solid carbide	F	3,000 - 15,000	2712	121	204
DIN 6539	RT 100 U		3xD	Solid carbide	S	3,000 - 16,000	1242	121	209
DIN 6539	RT 100 U		3xD	Solid carbide	F	3,000 - 16,000	2473	121	209
DIN 6539	RT 100 F		3xD	Solid carbide	S	3,000 - 14,000	1702	121	209
Guhring std.	RT 100 U		5xD	Solid carbide	S	5,000 - 16,000	1243	121	213
Guhring std.	RT 100 U		5xD	Solid carbide	F	5,000 - 15,000	2474	121	213

bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A TiAlN SuperA

Ratio drills with oil feed

Standard	Type	Tool illustration		Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 6537 K	RT 100 U			3xD	Solid carbide	S	3,000 - 20,000	1181	121	216
DIN 6537 K	RT 100 U			3xD	Solid carbide	F	3,000 - 20,000	2477	121	216
DIN 6537 K	RT 100 U			3xD	Solid carbide	F	3,000 - 20,000	2469	121	216
DIN 6537 K	RT 100 F			3xD	Solid carbide	S	3,100 - 22,000	1660	121	217
DIN 6537 K	RT 100 F			3xD	Solid carbide	S	4,000 - 25,000	1180	121	217
DIN 6537 K	RT 100 F			3xD	Solid carbide	F	3,400 - 20,000	2468	121	217
DIN 6537 K	RT 100 VA		NEW	3xD	Solid carbide	a	3,000 - 20,000	8510	121	217
DIN 6537 K	RT 100 VA		NEW	3xD	Solid carbide	a	3,000 - 20,000	8610	121	217
DIN 6537 K	RT 100 HF		NEW	3xD	Solid carbide	Y	3,000 - 20,000	8520	121	217
DIN 6537 K	RT 100 HF		NEW	3xD	Solid carbide	Y	3,000 - 20,000	8620	121	217
Guhring std.	RT 150 GG			4xD	Solid carbide	◯	3,000 - 20,000	768	121	230
Guhring std.	RT 150 GG			4xD	Solid carbide	◯	3,000 - 20,000	6068	121	230
DIN 6537 L	RT 100 U			5xD	Solid carbide	S	3,000 - 19,500	1663	121	234
DIN 6537 L	RT 100 U			5xD	Solid carbide	S	3,700 - 20,000	1183	121	234
DIN 6537 L	RT 100 U			5xD	Solid carbide	F	3,000 - 20,000	2479	121	234

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Ratio drills with oil feed

Standard	Type	Tool illustration		Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 6537 L	RT 100 U			5xD	Solid carbide	F	3,000 - 20,000	2471	121	234
DIN 6537 L	RT 100 F			5xD	Solid carbide	S	3,000 - 23,500	1662	121	235
DIN 6537 L	RT 100 F			5xD	Solid carbide	S	3,000 - 25,000	1182	121	235
DIN 6537 L	RT 100 F			5xD	Solid carbide	F	3,000 - 20,000	2478	121	235
DIN 6537 L	RT 100 F			5xD	Solid carbide	F	3,000 - 20,000	2470	121	235
DIN 6537 L	RT 100 R			5xD	Solid carbide	F	3,000 - 20,000	6501	165	235
DIN 6537 L	RT 100 VA		NEW	5xD	Solid carbide	a	3,000 - 20,000	8511	121	235
DIN 6537 L	RT 100 VA		NEW	5xD	Solid carbide	a	3,000 - 20,000	8611	121	235
DIN 6537 L	RT 100 HF		NEW	5xD	Solid carbide	Y	3,000 - 20,000	8521	121	235
DIN 6537 L	RT 100 HF		NEW	5xD	Solid carbide	Y	3,000 - 20,000	8621	121	235
Guhring std.	RT 100 U			7xD	Solid carbide	S	3,000 - 19,500	2711	121	248
Guhring std.	RT 100 U			7xD	Solid carbide	F	3,000 - 20,000	4044	121	248
Guhring std.	RT 100 U			7xD	Solid carbide	F	3,000 - 20,000	4045	121	248
Guhring std.	RT 100 R			7xD	Solid carbide	F	4,000 - 20,000	6502	165	248
Guhring std.	RT 100 HF		NEW	7xD	Solid carbide	Y	3,000 - 16,000	8522	121	248

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Ratio drills with oil feed

Standard	Type	Tool illustration	Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	RT 150 GG		7xD	Solid carbide	◯	3,000 - 20,000	769	121	253
Guhring std.	RT 150 GG		7xD	Solid carbide	◯	3,000 - 19,500	6069	121	253
Guhring std.	RT 150 GG		10xD	Solid carbide	◯	3,000 - 20,000	770	121	255
Guhring std.	RT 150 GG		10xD	Solid carbide	◯	3,000 - 19,500	6070	121	255
Guhring std.	RT 150 GN		15xD	Solid carbide	◯	5,000 - 14,000	773	121	257
Guhring std.	RT 100 T	NEW	15xD	Solid carbide	A	3,000 - 14,000	6509	165	258
Guhring std.	RT 100 T		20xD	Solid carbide	A	3,000 - 14,000	6511	165	260
Guhring std.	RT 100 T		25xD	Solid carbide	A	3,000 - 12,000	6512	165	262
Guhring std.	RT 100 T		30xD	Solid carbide	A	3,000 - 10,000	6513	165	264
Guhring std.	RT 100 T	NEW	40xD	Solid carbide	A	3,000 - 8,000	6514	165	265
DIN 6538 K	RT 80 U		3xD	Carbide	S	9,500 - 25,500	1171	128	266
DIN 6538 M	RT 80 U		5xD	Carbide	S	9,800 - 25,500	1172	128	269
DIN 6538 L	RT 80 U		7xD	Carbide	S	9,600 - 25,000	1173	128	271

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3-flute Ratio drills

Standard	Type	Tool illustration	Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 6537 L	FT 200 G		5xD	Solid carbide	◯	3,000 - 20,000	2713	109	273
DIN 6539	GS 200 U		5xD	Solid carbide	◯	3,000 - 20,000	731	109	275
DIN 6539	GS 200 U		5xD	Solid carbide	Ⓢ	3,000 - 14,400	611	109	275
DIN 6539	GS 200 G		5xD	Solid carbide	◯	3,570 - 12,500	745	109	275
DIN 6539	GS 200 G		5xD	Solid carbide	◯	3,000 - 20,000	1025	109	275
DIN 6539	GS 200 F		5xD	Solid carbide	Ⓢ	3,000 - 11,000	1027	109	275

3-flute stepped Ratio drills

Standard	Type	Tool illustration	Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	GS 200 G			Solid carbide	◯	3,400 - 20,000	1032	109	279

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Standard	Type	Tool illustration		Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Tool holders for interchangeable inserts HT 800										
Guhring std.	HT 800 WP		NEW	1,5xD			11,000 - 40,000	4106	140	280
Guhring std.	HT 800 WP		NEW	3xD			11,000 - 40,000	4107	140	283
Guhring std.	HT 800 WP		NEW	5xD			11,000 - 40,000	4108	140	286
Guhring std.	HT 800 WP		NEW	7xD			11,000 - 31,500	4109	140	289
Guhring std.	HT 800 WP		NEW	10xD			11,000 - 31,500	4110	140	292
Guhring std.	HT 800 WP		NEW	1xD			11,000 - 40,000	4105	140	295
Interchangeable inserts HT 800										
Guhring std.			NEW		Solid carbide	F	11,000 - 40,000	4112	141	296
Guhring std.			NEW		Solid carbide	F	11,000 - 40,000	4113	141	297
Guhring std.			NEW		Solid carbide	○	11,000 - 40,000	4114	141	297
Guhring std.			NEW		Solid carbide	a	11,000 - 40,000	4115	141	297
Guhring std.			NEW		Solid carbide	a	11,000 - 40,000	4111	141	304
Countersinking insert HT 800										
Guhring std.					Solid carbide	○	-	7635	142	308
Guhring std.					Solid carbide	S	-	7645	142	309

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Standard	Type	Tool illustration	Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Countersinking insert HT 800									
Guhring std.				Solid carbide	A	17.000 - 46.000	**7632**	142	310
Clamping screws HT 800									
Guhring std.						-	**6128**	122	311
Guhring std.						-	**4071**	140	312
Torque wrenches									
Guhring std.						-	**4915**	114	313
Torx socket sets									
Guhring std.						-	**4917**	140	314
Torx screwdriver									
Guhring std.						-	**1612**	140	315

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Standard	Type	Tool illustration	Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Tool holders for interchangeable inserts RT 800									
Guhring std.	RT 800 WP		3xD			17,000 - 40,500	**5242**	140	316
Guhring std.	RT 800 WP		5xD			17,000 - 40,500	**5243**	140	317
Guhring std.	RT 800 WP		7xD			17,000 - 40,500	**5248**	140	318
Interchangeable inserts RT 800									
Guhring std.				**Solid carbide**	◯	16,000 - 40,000	**2747**	141	319
Guhring std.				**Solid carbide**	(F)	16,000 - 40,500	**2485**	141	321
Guhring std.				**Solid carbide**	(S)	16,000 - 40,500	**1047**	141	323
Clamping screws RT 800									
Guhring std.						-	**1071**	140	325
Torque wrenches									
Guhring std.						-	**4915**	114	313
Torx socket sets									
Guhring std.						-	**4917**	140	314
Torx screwdriver									
Guhring std.						-	**1612**	140	315

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

LT 800 tooling system

Standard	Type	Tool illustration	Drilling depth	Tool material	Surface finish	Diameter range	Guhring no.	Discount group	Standard range
Guhring std.	LT800 WP	ISO taper holder				SK 40 - SK 60/ HSK-C 63 - HSK-C 100	**4512**	114	329
Guhring std.	LT800 WP	VDI Holder				VDI 40 - VDI 60/ HSK-C 63 - HSK-C 100	**4510**	114	329
Guhring std.	LT800 WP	Reductions HSK-A/HSK-C				HSK-A 80 - HSK-A 100/ HSK-C 63 - HSK-C 80	**4355**	114	330
Guhring std.	LT800 WP	Extensions HSK-A				HSK-A 63 - HSK-A 100/ HSK-C 63 - HSK-C 100	**4549**	114	330
Guhring std.	LT800 WP	15° flutes basic holder	0.5xD/ 2.0xD			Holder size 400 - 560	**4142**	114	331

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Standard	Type	Tool illustration	Drilling depth	Tool material	Surface finish	Diameter range	Guhring no.	Discount group	Standard range

LT 800 tooling system

Guhring std.	LT800 WP	Un-fluted basic holder	0.5xD/ 2.0xD			Holder size 600 - 950	**4144**	114	331
Guhring std.	LT800 WP	15° flutes extension	3xD			Holder size 400 - 560	**4148**	114	332
Guhring std.	LT800 WP	Un-fluted extension	3xD			Holder size 600 - 950	**4149**	114	332
Guhring std.	LT800 WP	Drill heads	1xD			Holder size 400 - 950	**4150**	114	333

Accessories for LT 800 WP drill heads

Guhring std.	LT800 WP	Retension spindles				Holder size 400 - 950	**4164**	114	334
Guhring std.	LT800 WP	Torx-Bits				T30 - T45	**4188**	114	334

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Standard	Type	Tool illustration	Drilling depth	Tool material	Surface finish	Diameter range	Guhring no.	Discount group	Standard range

Accessories for LT 800 WP drill heads

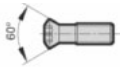
Guhring std.		Torx key				1/2“	**4915**	114	334
Guhring std.	LT800 WP	Cartridges				Holder size 400 - 950	**4160**	114	335
Guhring std.	LT800 WP	Clamping screws				Holder size 400 - 650	**4189**	114	335
DIN EN ISO 4762		Clamping screws				Holder size 700 - 950	**4907**	114	335
DIN 6798	LT800 WP	Serrated lock washers (Nord-Lock®)				Holder size 400 - 950	**4104**	114	336
Guhring std.	LT800 WP	Distance pieces				Holder size 400 - 950	**4168**	114	336

LT 800 WP internal interchangeable inserts and accessories

Guhring std.	RT800 WP		Carbide	○		27.00 - 34.00	**2747**	141	337
Guhring std.	RT800 WP		Carbide	S		27.00 - 34.00	**1047**	141	337
Guhring std.	RT800 WP		Carbide	F		27.00 - 34.00	**2485**	141	337
Guhring std.	RT800 WP	Clamping screw				T8	**1071**	140	337
Guhring std.		Torx screwdriver				T8	**1612**	140	337
Guhring std.	RT800 WP	Torx-Bit				1/4“	**4917**	140	337
Guhring std.		Torque key				1/4“	**4915**	114	337

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

LT 800 WP external interchangeable inserts and accessories

Standard	Type	Tool illustration	Drilling depth	Tool material	Surface finish	Diameter range	Guhring no.	Discount group	Standard range
Guhring std.	LTT			Carbide		insert 05 - 06	4170	142	338
Guhring std.	LTT			Carbide		insert 05 - 06	4171	142	338
Guhring std.	LTT			Carbide	S	insert 05 - 06	4172	142	338
Guhring std.	LTT			Carbide	A	insert 05 - 06	4173	142	338
Guhring std.	CCHX			Carbide		insert 09 - 12	4179	142	338
Guhring std.	CCHX			Carbide	S	insert 09 - 12	4180	142	338
Guhring std.	CCHX			Carbide	S	insert 09 - 12	4181	142	338
Guhring std.	CCHX			Carbide	S	insert 09 - 12	4182	142	338
Guhring std.		Clamping screw with 75° countersink head				for insert 05 - 09	4166	114	338
Guhring std.		 Clamping screw with 60° countersink head				for insert 05 - 12	6128	122	338

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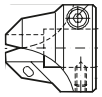
FR 90 chamfer collar

Standard	Type	Tool illustration	Drilling depth	Tool material	Surface finish	Diameter range	Guhring no.	Discount group	Standard range
Guhring std.	FR 90	Chamfer collar complete				5.0 - 16.0	**1052**	140	341
Guhring std.	FR 90	 Chamfer collar				5.0 - 18.0	**145**	140	341
Guhring std.	FR90	Clamping sleeve				5.0 - 16.0	**1053**	140	341
Guhring std.	FR90	Adjustment ring				5.0 - 18.0	**1054**	140	341
Guhring std.	FR90			**Carbide**	○	4.0 - 20.0	**1156**	142	340
Guhring std.	FR90			**Carbide**	Ⓢ	4.0 - 20.0	**1056**	142	340
Guhring std.	FR90	Adjustment element				M4	**4072**	140	340
Guhring std.	FR90	Clamping piece				4.0 - 20.0	**1055**	140	340
Guhring std.	FR90	Screwdriver				T8	**1612**	114	341
Guhring std.	FR90	Torx screw				T8/SW4 - SW5	**1072**	140	341
Guhring std.	FR90	Screwdriver				SW4 - SW5	**4912**	114	341

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Jobber drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 338	N		right-hand	HSS	>Ø 2,36	0,200 - 20,000	205	130	342
DIN 338	H		right-hand	HSS		0,200 - 20,000	206	134	342
DIN 338	W		right-hand	HSS		0,200 - 20,000	207	134	342
DIN 338	N		left-hand	HSS	>Ø 6,00	0,200 - 20,000	208	134	342
DIN 338	H		left-hand	HSS		0,300 - 20,000	209	134	342
DIN 338	W		left-hand	HSS		0,250 - 20,000	210	138	342
DIN 338	N		right-hand	HSS		3,000 - 16,000	240	132	343
DIN 338	GT 100		right-hand	HSS	>Ø 2,36	0,600 - 16,000	549	136	343
DIN 338	GT 100		left-hand	HSS	>Ø 2,36	1,000 - 16,000	550	138	343
DIN 338	N		right-hand	HSS		2,370 - 5,610	560	138	343
DIN 338	N		right-hand	HSS	S	0,200 - 19,000	651	131	343
DIN 338	GT 100		right-hand	HSS	S	1,000 - 15,000	652	137	343
DIN 338	N		left-hand	HSS	S	0,250 - 14,250	664	139	343
DIN 338	GT 100		left-hand	HSS	S	1,300 - 10,200	665	139	343
DIN 338	N		right-hand	HSS	F	1,000 - 15,500	2456	135	343

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Jobber drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 338	GT 100		right-hand	HSS	F	1,000 - 15,000	2457	137	343
DIN 338	N		right-hand	HSCO	>Ø 2,36	0,200 - 20,000	305	134	380
DIN 338	N		left-hand	HSCO	>Ø 6,00	0,360 - 18,500	308	138	380
DIN 338	Ti		right-hand	HSCO	○	0,200 - 19,000	605	134	380
DIN 338	Ti		left-hand	HSCO	○	1,300 - 9,500	608	138	380
DIN 338	GT 100		right-hand	HSCO	>Ø 2,36	1,000 - 16,000	622	136	380
DIN 338	Ti		right-hand	HSCO	S	0,500 - 14,500	657	135	380
DIN 338	GT 100		right-hand	HSCO	S	1,000 - 15,000	658	137	381
DIN 338	GT 100		right-hand	HSCO	C	3,000 - 12,000	1221	137	381
DIN 338	GT 100		right-hand	HSCO	A	3,000 - 12,000	1223	137	381
DIN 338	VA		right-hand	HSCO	○	1,000 - 13,000	1260	134	381
DIN 338	P2000		right-hand	HSCO	golden brown	1,000 - 13,000	2047	134	381
DIN 338	Ti		right-hand	HSCO	F	0,400 - 15,000	2458	135	381
DIN 338	GT 100		right-hand	HSCO	F	1,000 - 14,000	2459	137	381
DIN 338	N		right-hand	HSCO	S	1,100 - 14,000	2997	135	381

○ bright ◯ steam tempered ◒ nitrided lands ● nitrided golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Jobber drills									
DIN 338	N		right-hand	M42		0,400 - 16,000	1146	138	381
Guhring std.	Duro 150		right-hand	Carbide		2,700 - 14,000	710	102	406
Guhring std.	N		right-hand	Solid carbide		1,000 - 12,700	732	102	406
Guhring std.	N		right-hand	Solid carbide	F	1,000 - 12,700	2464	102	406
Stub drills									
DIN 1897	N		right-hand	HSS	>Ø 2,36	0,350 - 48,000	223	132	412
DIN 1897	H		right-hand	HSS		0,690 - 21,000	224	138	412
DIN 1897	W		right-hand	HSS		1,000 - 20,000	225	138	412
DIN 1897	N		left-hand	HSS	>Ø 6,00	0,320 - 50,000	226	134	412
DIN 1897	H		left-hand	HSS		0,750 - 24,000	227	138	412
DIN 1897	W		left-hand	HSS		1,000 - 21,000	228	138	412
DIN 1897	GT 80		right-hand	HSS	<Ø 2,36 >Ø 16,0	1,000 - 20,000	552	136	412
DIN 1897	GT 80		left-hand	HSS	<Ø 2,36 >Ø 16,0	1,000 - 19,840	553	138	412
DIN 1897	N		right-hand	HSS	S	0,500 - 30,160	653	133	413
DIN 1897	N		left-hand	HSS	S	0,900 - 13,500	672	139	413

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Stub drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 1897	N		right-hand	HSS	F	1,000 - 15,000	2460	133	413
DIN 1897	GV 120		right-hand	HSCO	>Ø 2,36	0,400 - 48,000	329	134	413
DIN 1897	GV 120		left-hand	HSCO	>Ø 6,00	0,450 - 35,000	330	138	413
DIN 1897	GV 120		right-hand	HSCO	S	0,500 - 15,500	659	135	413
DIN 1897	GT 80		right-hand	HSCO	S	1,000 - 20,000	1228	137	413
DIN 1897	VA		right-hand	HSCO	○	1,000 - 12,000	1261	138	413
DIN 1897	P2000		right-hand	HSCO	M	1,000 - 13,000	2048	135	413
DIN 1897	GV 120		right-hand	HSCO	F	1,000 - 13,000	2461	135	413
DIN 1897	GT 80		right-hand	HSCO	F	1,000 - 16,000	2498	137	413
DIN 1897	N		right-hand	M42	○	1,000 - 15,870	1259	138	444
DIN 1897	GT 500		right-hand	HSS-E-PM	F	1,000 - 14,290	515	115	444
DIN 6539	N		right-hand	Solid carbide	○	0,500 - 16,000	730	102	444
DIN 6539	N		right-hand	Solid carbide	F	1,000 - 16,000	2463	102	444
Guhring std.	N		right-hand	Solid carbide	○	0,500 - 6,500	702	102	450

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Standard	Type	Tool illustration	Tool material	Surface finish	Ø-range mm	Guhring no.	Discount group	Standard range, page
Jobber drill sets								
DIN 338	N	consisting of Guhring no. 205	HSS			201/ 200	130	452
DIN 338	N	consisting of Guhring no. 651	HSS	S		201/ 200	130	452
DIN 338	N	consisting of Guhring no. 305	HSCO			201/ 200	130	454
DIN 338	Ti	consisting of Guhring no. 605	HSCO			201/ 200	134	454
DIN 338	VA	consisting of Guhring no. 1260	HSCO			195	130	454
DIN 338	P2000	consisting of Guhring no. 2047	HSCO			2049	134	455
DIN 1897	P2000	consisting of Guhring no. 2048	HSCO	M		2050	134	455
Guhring std.		Case only				36	138	452
Guhring std.		Case only				73	138	453
Guhring std.		Plastic stand only				11	138	452

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Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Twist drills with oversize straight shank									
Guhring std.	GU 500		right-hand	HSCO	S	2,000 - 20,000	512	115	456
Guhring std.	GT 500		right-hand	HSS-E-PM	F	2,000 - 13,000	513	115	460
Guhring std.	GU 500		right-hand	HSCO	S	2,000 - 20,000	511	115	462
DIN 6537 K	H		right-hand	Solid carbide	A	2,600 - 14,100	1946	102	466
Jobber drills with 12.7 mm dia. shank									
Guhring std.	N		right-hand	HSS		13,000 - 28,570	268	138	467
Stub drills with 16.0 mm dia. shank									
Guhring std.	N		right-hand	HSCO	○	16,000 - 40,000	128	138	468
Stub drills with 25.4 mm dia. shank									
Guhring std.	N		right-hand	HSCO	○	25,000 - 40,000	129	138	469
Guhring std.	N		left-hand	HSCO	○	25,000 - 39,000	136	138	469
90° NC-spotting drills									
Guhring std.	N		right-hand	HSS	○	2,950 - 25,400	557	134	470
Guhring std.	N		right-hand	HSS	S	3,000 - 25,400	568	135	470
Guhring std.	N		right-hand	Solid carbide	○	4,000 - 20,000	723	102	470

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Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
90° NC-spotting drills									
Guhring std.	N		right-hand	HSS		6,350 - 25,400	559	138	471
120° NC-spotting drills									
Guhring std.	N		right-hand	HSS		3,000 - 25,400	556	134	472
Guhring std.	N		right-hand	HSS	S	3,000 - 25,000	567	139	472
Guhring std.	N		right-hand	Solid carbide		5,000 - 20,000	724	102	472
142° NC-spotting drills									
Guhring std.	N		right-hand	Solid carbide		4,000 - 20,000	546	102	473
Straight shank drills double-ended									
Guhring std.	DK 77		right-hand	HSS	~Ø 2,36	1,500 - 10,000	554	134	474
Micro-precision drills without oil feed									
DIN 1899	N		right-hand	HSS-E-PM		0,050 - 1,930	301	134	476
DIN 1899	N		left-hand	HSS-E-PM		0,130 - 1,850	303	138	476
DIN 1899	N		right-hand	HSS-E-PM	S	0,160 - 1,900	660	135	476
Guhring std.	N		right-hand	Solid carbide		0,200 - 1,400	701	102	476
Guhring std.	N	NEW	right-hand	Solid carbide	A	0,100 - 3,000	3899	102	483

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Standard	Type	Tool illustration	Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Micro-precision drills without oil feed									
Guhring std.	N		4xD	Solid carbide	A	0,500 - 3,000	6400	164	485
Guhring std.	N		7xD	Solid carbide	A	0,500 - 3,000	6401	164	487
Micro-precision drills with oil feed									
Guhring std.	N	NEW	8xD	Solid carbide	A	1,400 - 3,000	6408	164	489
Guhring std.	N	NEW	15xD	Solid carbide	A	1,400 - 3,000	6412	164	491

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Oil feed drills

Standard	Type	Tool illustration	Cooling	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	GT 80 IK		axial	HSCO	◯	5,000 - 20,000	1131	134	492
Guhring std.	GT 80 IK		axial	HSCO	(S)	5,000 - 20,000	1132	135	492
Guhring std.	N		axial	HSS	◯	3,000 - 13,000	390	136	494

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Bushing length twist drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 339	N		right-hand	HSS	>Ø 2,36	0,800 - 20,000	211	134	495
DIN 339	N		right-hand	HSS		2,400 - 5,000	561	138	495
DIN 339	N		right-hand	HSS	S	1,000 - 13,000	666	139	495
DIN 339	N		right-hand	HSCO	>Ø 2,36	1,100 - 19,000	311	138	495

Long series twist drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 340	N		right-hand	HSS		2,950 - 25,250	204	138	502
DIN 340	N		right-hand	HSS	>Ø 2,36	0,400 - 36,510	217	132	502
DIN 340	H		right-hand	HSS		0,500 - 16,000	218	134	502
DIN 340	W		right-hand	HSS		0,400 - 20,640	219	134	502
DIN 340	N		left-hand	HSS	>Ø 6,00	0,450 - 29,000	220	138	502
DIN 340	H		left-hand	HSS		0,450 - 15,000	221	138	502
DIN 340	GT50		right-hand	HSS		1,000 - 32,600	501	136	502
DIN 340	GT 100		left-hand	HSS	>Ø 2,36	1,400 - 13,000	506	138	503
DIN 340	GT 100		right-hand	HSS	>Ø 2,36	1,000 - 14,000	535	136	503
DIN 340	N		right-hand	HSS	S	0,500 - 22,220	667	133	503

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Long series twist drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 340	GT 100		right-hand	HSS	S	1,000 - 14,000	668	137	503
DIN 340	GT 100		right-hand	HSS	F	1,000 - 10,000	2462	137	503
DIN 340	N		right-hand	HSCO	>Ø 2,36	0,500 - 22,000	317	134	503
DIN 340	GT 100		right-hand	HSCO	>Ø 2,36	1,000 - 16,000	336	136	503
DIN 340	GT 100		right-hand	HSCO	F	1,000 - 12,000	396	137	503
DIN 340	Ti		right-hand	HSCO		1,000 - 13,000	617	134	503
DIN 340	Ti		right-hand	HSCO	S	1,000 - 10,200	669	139	503
Guhring std.	N		right-hand	Solid carbide		0,500 - 1,500	706	102	526

Extra length twist drills, series 1

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 1869	N		right-hand	HSS	>Ø 2,36	1,600 - 13,000	235	134	527
DIN 1869	GT 100		right-hand	HSS	>Ø 2,36	1,950 - 13,000	502	136	527
DIN 1869	GT50		right-hand	HSS		2,000 - 12,700	524	138	527
DIN 1869	GT 100		right-hand	HSS	S	1,980 - 12,700	670	137	527
DIN 1869	GT 100		right-hand	HSCO		2,700 - 10,000	618	136	527

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Extra length twist drills, series 2

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 1869	N		right-hand	HSS		2,700 - 13,000	236	134	532
DIN 1869	GT 100		right-hand	HSS	>Ø 2,36	2,000 - 13,000	503	136	532
DIN 1869	GT50		right-hand	HSS		3,000 - 13,000	528	138	532
DIN 1869	GT 100		right-hand	HSS	S	2,700 - 8,500	671	139	532
DIN 1869	GT 100		right-hand	HSCO		3,000 - 10,000	619	138	532

Extra length twist drills, series 3

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 1869	N		right-hand	HSS		3,500 - 13,000	237	138	535
DIN 1869	GT 100		right-hand	HSS		2,500 - 13,000	504	136	535
DIN 1869	GT50		right-hand	HSS		2,500 - 11,500	529	138	535
DIN 1869	GT 100	NEW	right-hand	HSCO		2,500 - 13,000	571	136	535

Extra length twist drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	GT 100		right-hand	HSS		6,000 - 12,000	242	136	538
Guhring std.	GT 100		right-hand	HSS		8,000 - 12,000	243	138	539
Guhring std.	GT 100		right-hand	HSS		10,000 - 12,000	244	138	540

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Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Aircraft extension drills, 6 inches long									
NAS 907	N		right-hand	HSS	○	1,500 - 8,000	577	138	541
NAS 907	N		right-hand	HSS	● >Ø 2,36	1,500 - 8,000	579	138	541
Aircraft extension drills, 12 inches long									
NAS 907	N		right-hand	HSS	○	1,500 - 8,000	578	138	544
NAS 907	N		right-hand	HSS	● >Ø 2,36	1,500 - 8,000	580	138	544
Taper pin drills									
DIN 1898	N		right-hand	HSS	◐ >Ø 2,36	1,000 - 12,000	531	138	546
Carbide-tipped twist drill									
DIN 8037	N		right-hand	Carbide	○	1,700 - 24,000	703	102	547
DIN 8038	N		right-hand	Carbide	○	1,900 - 24,000	704	102	547
Kevlar drills									
Guhring std.	N		right-hand	Solid carbide	○	2,500 - 12,000	1149	102	550
Carbide tipped spade drills									
Guhring std.			right-hand	Carbide	○	3,000 - 12,000	707	102	551

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Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page

Masonry drills

Guhring std.	N		right-hand	**Carbide**	◯	4,000 - 12,000	**716**	102	552

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Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Jobber drills									
Guhring std.	GV 120		right-hand	HSCO		8,100 - 43,000	363	134	553
Guhring std.	GV 120		right-hand	HSCO	S	10,500 - 33,000	663	139	553
Twist drills									
DIN 345	N		right-hand	HSS		8,500 - 59,000	229	138	555
DIN 345	N		right-hand	HSS	>Ø 2,36	2,380 - 98,420	245	132	555
DIN 345	H		right-hand	HSS		6,700 - 47,000	246	138	555
DIN 345	W		right-hand	HSS		3,200 - 32,000	247	138	555
DIN 345	N		left-hand	HSS		6,000 - 60,000	248	138	555
DIN 345	GT 100		right-hand	HSS	>Ø 16,0	7,940 - 31,750	558	138	555
DIN 345	N		right-hand	HSS	>Ø 16,0	10,000 - 28,000	592	138	555
DIN 345	GT 100		right-hand	HSS	S	7,940 - 31,500	606	139	567
DIN 345	N		right-hand	HSS	S	3,000 - 31,000	654	133	567
DIN 345	N		right-hand	HSCO		3,000 - 50,000	345	134	567
DIN 345	GT 100		right-hand	HSCO	>Ø 16,0	10,000 - 39,000	645	138	567
DIN 345	N		right-hand	HSCO	S	8,000 - 30,000	661	139	567

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Twist drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 345	GT 100		right-hand	HSCO	S	10,000 - 28,500	662	139	567
DIN 345	GT 100		right-hand	HSCO	C	10,000 - 30,160	1222	139	567
DIN 345	GT 100		right-hand	HSCO	A	10,400 - 30,160	1224	139	573
DIN 345	VA		right-hand	HSCO		10,000 - 34,000	1262	134	573
DIN 346	N		right-hand	HSS		10,000 - 76,000	251	138	575
DIN 346	N		right-hand	HSCO		12,000 - 31,500	351	138	575

Bushing length twist drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 341	N		right-hand	HSS		2,900 - 50,000	257	132	577
DIN 341	GT50		right-hand	HSS		5,500 - 29,500	505	138	577
DIN 341	GT 100		right-hand	HSS	>Ø 16,0	5,500 - 32,000	551	136	577
DIN 341	N		right-hand	HSS	S	4,200 - 22,000	655	133	577
DIN 341	GT 100		right-hand	HSS	S	6,800 - 23,000	656	139	577
DIN 341	N		right-hand	HSCO		4,750 - 44,000	357	138	577
DIN 341	GT 100		right-hand	HSCO	>Ø 16,0	10,000 - 26,000	623	138	577
Guhring std.	N		right-hand	HSS		10,000 - 29,000	523	138	584

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Oil feed drills short

Standard	Type	Tool illustration	Cooling	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	N		radial	HSS	○	9,520 - 23,020	269	138	585

Oil feed drills, flute length to DIN 341

Standard	Type	Tool illustration	Cooling	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	N		DIN 228 BK	HSS	○	10,000 - 32,000	1101	138	587
Guhring std.	N		axial	HSS	○	10,000 - 40,000	270	138	588
Guhring std.	N		radial	HSS	○	10,000 - 44,450	271	138	588
Guhring std.	N		radial	HSS	○	10,000 - 44,450	272	138	588
Guhring std.	GT 100		axial	HSCO	○	11,000 - 34,920	370	138	588
Guhring std.	GT 100		radial	HSCO	○	11,000 - 34,920	371	138	588
Guhring std.	GT 100		radial	HSCO	○	12,500 - 34,000	372	138	588

Oil feed drills, flute length to DIN 1870

Standard	Type	Tool illustration	Cooling	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	GT 100		axial	HSCO	○	11,000 - 34,000	374	138	591
Guhring std.	GT 100		radial	HSCO	○	11,000 - 34,000	375	138	591
Guhring std.	GT 100		radial	HSCO	○	11,000 - 29,000	376	138	591

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Extra length twist drills, series 1

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 1870	N		right-hand	HSS		8,000 - 50,000	266	134	593
DIN 1870	GT50		right-hand	HSS		8,200 - 33,000	525	138	593
DIN 1870	GT 100		right-hand	HSS	>Ø 16,0	8,000 - 30,000	526	136	593
DIN 1870	GT 100		right-hand	HSCO	>Ø 16,0	9,520 - 30,000	620	138	593

Extra length twist drills, series 2

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 1870	N		right-hand	HSS		8,000 - 45,000	267	138	596
DIN 1870	GT 100		right-hand	HSS	>Ø 16,0	8,000 - 30,000	527	136	596
DIN 1870	GT50		right-hand	HSS		8,500 - 31,000	542	138	596
DIN 1870	GT 100		right-hand	HSCO	>Ø 16,0	9,520 - 23,420	621	138	596

Extra length twist drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	GT 100		right-hand	HSS		6,000 - 7,500	563	138	599
Guhring std.	GT 100		right-hand	HSS	>Ø 16,0	8,000 - 40,000	566	138	599
Guhring std.	GT 100		right-hand	HSS	>Ø 16,0	14,000 - 40,000	293	138	600
Guhring std.	GT 100		right-hand	HSS		6,000 - 10,000	564	138	600
Guhring std.	GT 100		right-hand	HSS	>Ø 16,0	6,000 - 17,000	565	138	601

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Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Extra length twist drills									
Guhring std.	GT 100		right-hand	HSS	○	14,000 - 18,000	298	138	602
Guhring std.	GT 100		right-hand	HSS	○	14,000 - 18,000	299	138	603
Taper pin drills									
DIN 1898	N		right-hand	HSS	●	5,000 - 25,000	532	138	604
Carbide-tipped twist drill									
DIN 8041	N		right-hand	Carbide	○	8,500 - 40,000	705	102	605

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Stepped drills for centering to DIN 332

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	N		right-hand	HSS	●	8,000 - 40,000	274	138	606
Guhring std.	N		right-hand	HSS	●	8,000 - 40,000	574	138	606
Guhring std.	N		right-hand	HSS	●	8,000 - 20,000	575	138	607
Guhring std.	N		right-hand	HSS	●	14,000 - 40,000	576	138	608

Straight shank short step drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	N		right-hand	HSS	○	6,000 - 19,000	378	138	609
Guhring std.	N		right-hand	HSS	○	6,600 - 21,500	1147	138	609
Guhring std.	N		right-hand	HSS	○	6,000 - 18,000	379	138	610
Guhring std.	N		right-hand	HSS	○	3,400 - 13,500	380	138	611

Straight shank subland drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 8374	N		right-hand	HSS	●	6,000 - 15,000	536	138	612
DIN 8374	N		right-hand	HSS	●	7,500 - 19,000	569	138	612
Guhring std.	N		right-hand	HSS	●	6,600 - 17,200	636	138	612
Guhring std.	N		right-hand	HSS	●	6,000 - 8,000	638	138	612
DIN 8376	N		right-hand	HSS	●	6,000 - 18,000	538	138	613

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Straight shank subland drills									
Guhring std.	N		right-hand	Solid carbide	○	6,000 - 15,000	738	102	613
Guhring std.	N		right-hand	HSS	●	5,900 - 17,500	514	138	614
DIN 8378	N		right-hand	HSS	●	3,400 - 13,500	540	138	615
Guhring std.	N		right-hand	Solid carbide	○	4,500 - 11,000	739	102	615
Taper shank subland drills									
Guhring std.	N		right-hand	HSS	●	11,500 - 30,000	637	138	616
Guhring std.	N		right-hand	HSS	●	11,000 - 29,000	537	138	616
Guhring std.	N		right-hand	HSS	●	18,000 - 26,000	639	138	617
DIN 8377	N		right-hand	HSS	●	10,000 - 33,000	539	138	618
Guhring std.	N		right-hand	HSS	●	9,400 - 33,000	520	138	619
DIN 8379	N		right-hand	HSS	●	9,000 - 22,000	541	138	620

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Center drills without flat

Standard	Form	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
ASA	A		right-hand	HSS	◯	1,190 - 7,940	594	138	621
ASA	B		right-hand	HSS	◯	1,190 - 6,350	595	138	622
BS 328	A		right-hand	HSS	◯	1,190 - 7,940	292	138	623
BS 328	A		left-hand	HSS	◯	1,190 - 7,940	294	138	623
DIN 333	A		right-hand	HSS	◯	0,500 - 12,500	581	132	624
DIN 333	A		left-hand	HSS	◯	0,500 - 12,500	582	138	624
DIN 333	R		right-hand	HSS	◯	0,500 - 12,500	583	138	624
DIN 333	R		left-hand	HSS	◯	0,800 - 5,000	584	138	624
DIN 333	A		right-hand	HSS	◯	1,000 - 12,500	590	138	625
DIN 333	A		right-hand	HSS	Ⓢ	0,500 - 8,000	613	133	625
DIN 333	R		right-hand	HSS	Ⓢ	0,800 - 8,000	614	139	625
DIN 333	A		right-hand	HSCO	◯	1,000 - 4,000	381	138	625
Guhring std.	A		right-hand	Solid carbide	◯	0,500 - 6,300	736	102	625
DIN 333	A		right-hand	HSS	◯	0,500 - 10,000	281	138	626
DIN 333	A		left-hand	HSS	◯	0,800 - 5,000	282	138	626

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Center drills without flat

Standard	Form	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 333	R		right-hand	HSS	◯	0,500 - 10,000	283	138	626
DIN 333	R		left-hand	HSS	◯	1,600 - 4,000	284	138	626
DIN 333	B		right-hand	HSS	◯	1,000 - 10,000	585	138	627
DIN 333	B		left-hand	HSS	◯	1,000 - 10,000	586	138	627
DIN 333	B		right-hand	HSS	◯	1,000 - 10,000	591	138	627
Guhring std.	A		right-hand	HSS	◯	1,000 - 3,150	280	138	628
Guhring std.	B		right-hand	HSS	◯	1,000 - 6,300	285	138	629

Center drills with flat

Standard	Form	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 333	A		right-hand	HSS	◯	1,600 - 10,000	587	138	630
DIN 333	R		right-hand	HSS	◯	1,000 - 10,000	588	138	630
DIN 333	A		right-hand	HSS	◯	1,600 - 10,000	287	138	631
DIN 333	R		right-hand	HSS	◯	1,600 - 8,000	288	138	631
DIN 333	B		right-hand	HSS	◯	1,600 - 8,000	589	138	632
Guhring std.	B		right-hand	HSS	◯	1,600 - 5,000	289	138	633

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Straight shank core drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	N		right-hand	Carbide	○	3,800 - 15,000	750	102	634
DIN 344	N		right-hand	HSS	●	3,800 - 20,000	533	138	635

Taper shank core drills

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	N		right-hand	Carbide	○	26,700 - 40,000	729	102	638
DIN 343	N		right-hand	HSS	●	7,800 - 50,000	534	138	639
DIN 343	N		right-hand	HSCO	●	8,500 - 26,000	634	138	639
DIN 1864	N		right-hand	HSCO	●	8,000 - 15,000	635	138	643
DIN 1864	N		right-hand	HSS	●	5,000 - 31,000	555	138	644

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Tool illustration	Cutting direction	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page

Oil feed adapters

Guhring std.						-	**230**	138	645

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Carbide grade
Type
Surface finish
Cooling
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤3xD drilling depth

1171	1660	1180	1181	2468	2477	2469	8510	8610	8520	8620
6538K	6537K	6537K	6537K	6537K	6537K	6537K	6537K	6537K	6537K	6537K
Carbide	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.
P	K/P	K/P	K/P	K/P	K/P	K/P	K/P	K/P	K/P	**K/P**
RT 80 U	RT 100 F	RT 100 F	RT 100 U	RT 100 F	RT 100 U	RT 100 U	RT 100 VA		RT 100 HF	
S	S	S	S	F	F	F	a	a	Y	Y
axial	axial	axial	axial	axial	axial	axial	axial	axial	axial	axial
266	216	216	216	216	216	216	216	216	216	216

v_c m/min	Feed column no.	v_c m/min	Feed column no.			v_c m/min	Feed column no.			v_c m/min	Feed column no.			v_c m/min	Feed column no.	
95	**6**	110	6	6	**6**	145	7	**7**	**7**					145	**7**	**7**
80	**5**	90	5	5	**5**	120	6	**6**	**6**					120	**6**	**6**
95	**7**	130	7	7	**7**	170	8	**8**	**8**					170	**8**	**8**
75	**6**	110	7	7	**7**	145	8	**8**	**8**					145	**8**	**8**
80	**6**	100	7	7	**7**	130	8	**8**	**8**					130	**8**	**8**
75	**6**	95	6	6	**6**	125	7	**7**	**7**					125	**7**	**7**
70	**6**	90	6	6	**6**	120	7	**7**	**7**					120	**7**	**7**
75	**6**	90	6	6	**6**	120	7	**7**	**7**					120	**7**	**7**
60	**5**	80	6	6	**6**	105	7	**7**	**7**					105	**7**	**7**
90	**7**	110	7	7	**7**	145	8	**8**	**8**					145	**8**	**8**
75	**6**	90	6	6	**6**	120	7	**7**	**7**					120	**7**	**7**
60	**5**	65	4	4	**4**	85	5	**5**	**5**					85	**5**	**5**
75	**6**	85	**6**	**6**	6	110	**7**	7	7					110	**7**	**7**
60	**5**	80	**4**	**4**	5	105	**5**	5	5					105	**5**	**5**
45	**5**	60	**5**	**5**	5	80	**6**	6	6					80	**6**	**6**
35	**5**	50	**4**	**4**	4	65	**5**	5	5					65	**5**	**5**
40	**4**	45	**3**	**3**	3	60	**4**	4	4					60	**4**	**4**
		45	**2**	**2**	2	60	**3**	3	3					60	**3**	**3**
40	**2**	45	**4**	**4**	4	60	**5**	5	5	80	**5**	**5**				
35	**2**	40	**4**	**4**	4	55	**5**	5	5	60	**2-3**	**2-3**				
35	**2**	35	**4**	**4**	4	45	**5**	5	5	80	**5**	**5**				
		40	**2**	**2**	2	55	**3**	3	3					55	**3**	**3**
		25	**1**	**1**	1	35	**2**	2	2					35	2	2
		25	**3**	**3**	3	35	**4**	4	4	30	2	2		35	**4**	**4**
150	**7**	160	8	8	**8**	210	9	**9**	**9**							
110	**7**	120	8	8	**8**	160	9	**9**	**9**							
110	**7**	100	8	8	**8**	140	9	**9**	**9**							
90	**6**	95	7	7	**7**	130	8	**8**	**8**							
		30	2	2	**2**	40	3	3	3							
		35	**3**	**3**	3	45	**4**	4	4	35	2	2		45	4	4
		30	**2**	**2**	2	40	**3**	3	3					40	3	3
200	**8**	240	8	8	**8**	310	9	**9**	**9**							
200	**8**	240	8	8	**8**	310	9	**9**	**9**							
170	**8**	200	8	8	**8**	260	9	**9**	**9**							
140	**7**	170	8	8	**8**	220	9	**9**	**9**							
		230	7	7	**7**	280	8	**8**	**8**							
		95	**6**	**6**	6	125	**7**	7	7							
		250	**7**	**7**	7	325	**8**	8	8							
		170	6	6	**6**	220	7	**7**	**7**							
		95	6	6	**6**	125	7	**7**	**7**							
		80	5	5	**5**	105	6	**6**	**6**							
		70	5	5	**5**	90	6	**6**	**6**							
		60	5	5	**5**	80	6	**6**	**6**							

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.	
Standard/DIN	
Tool material	
Carbide grade	
Type	
Surface finish	
Cooling	
Std. range page	

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Al
especially suitable for machining aluminium

G
especially suitable for machining cast iron

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤3xD drilling depth

1702	1184	1242
6539	6537K	6539
Sol. carb.	Sol. carb.	Sol. carb.
K/P	K/P	K/P
RT 100 F	RT 100 U	RT 100 U
S	S	S
209	198	198

2475	2480	2472	2473
6537K	6537K	6537K	6539
Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.
K/P	K/P	K/P	K/P
RT 100 F	RT 100 U	RT 100 U	RT 100 U
F	F	F	F
198	198	198	209

8524
6537K
Sol. carb.
K/P
RT 100 HF
Y
198

≤4xD

768	6068
G.S.	G.S.
Sol. carb.	Sol. carb.
K	K
RT 150 GG	RT 150 GG
○	○
axial	axial
230	230
Al	G

Vc m/min	Feed column no.		
100	6	**6**	**6**
85	5	**5**	**5**
110	7	**7**	**7**
85	6	**6**	**6**
90	6	**6**	**6**
85	6	**6**	**6**
80	6	**6**	**6**
80	6	**6**	**6**
75	5	**5**	**5**
100	7	**7**	**7**
90	6	**6**	**6**
65	4	**4**	**4**
75	**5**	5	5
70	**4**	4	4
50	**5**	5	5
40	**4**	4	4
	3		
35	**2**	2	2
40	**3**	3	3
35	**3**	3	3
35	**2**	2	2
35	**2**	2	2
20	**1**	1	1
20	**3**	3	3
160	7	**7**	**7**
120	7	**7**	**7**
120	7	**6**	**6**
95	7	**6**	**6**
25	**2**	**2**	**2**
30	**2**	3	3
25	**2**	2	2
200	**8**	**8**	**8**
200	**8**	**8**	**8**
170	**8**	**8**	**8**
140	**7**	**7**	**7**
200	7	**7**	**7**
80	**6**	6	6
210	**7**	7	7
140	6	**6**	**6**
80	5	**5**	**5**
65	5	**5**	**5**
60	4	**4**	**4**
45	4	**4**	**4**

Vc m/min	Feed column no.			
130	7	**7**	**7**	**7**
110	6	**6**	**6**	**6**
145	8	**8**	**8**	**8**
110	7	**7**	**7**	**7**
120	7	**7**	**7**	**7**
110	7	**7**	**7**	**7**
105	7	**7**	**7**	**7**
105	7	**7**	**7**	**7**
100	6	**6**	**6**	**6**
130	8	**8**	**8**	**8**
120	7	**7**	**7**	**7**
85	5	**5**	**5**	**5**
100	**6**	6	6	6
90	**5**	5	5	5
65	**6**	6	6	6
55	**5**	5	5	5
	4			
45	**3**	3	3	3
55	**4**	4	4	4
45	**4**	4	4	4
45	**3**	3	3	3
45	**3**	3	3	3
25	**2**	2	2	2
25	**4**	4	4	4
210	8	**8**	**8**	**8**
155	8	**8**	**8**	**8**
155	8	**7**	**7**	**7**
125	8	**7**	**7**	**7**
35	**3**	**3**	**3**	**3**
40	**3**	4	4	4
35	**3**	3	3	3
260	**9**	**9**	**9**	**9**
260	**9**	**9**	**9**	**9**
220	**9**	**8**	**8**	**8**
180	**8**	**8**	**8**	**8**
260	8	**8**	**8**	**8**
105	**7**	7	7	7
270	**8**	8	8	8
180	7	**7**	**7**	**7**
105	6	**6**	**6**	**6**
85	6	**6**	**6**	**6**
80	5	**5**	**5**	**5**
60	5	**5**	**5**	**5**

Vc m/min	Feed column no.
130	**7**
110	**6**
145	**8**
110	**7**
120	**7**
110	**7**
105	**7**
105	**7**
100	**6**
130	**8**
120	**7**
85	**5**
100	**6**
90	**5**
65	**6**
55	**5**
55	**4**
45	**3**
45	**3**
25	2
25	**4**
40	3
35	3

Vc m/min	Feed column no.	
120	7	**7**
100	7	**7**
90	7	**7**
80	7	**7**
40	2	**2**
410	**9**	7
410	**9**	7
380	**9**	7
330	**9**	7
280	9	9
110	6	6
80	5	5

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.	
Standard/DIN	
Tool material	
Carbide grade	
Type	
Surface finish	
Cooling	
Std. range page	

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
◉ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◉
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◉
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◉
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◉
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◉
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◉
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◉
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◉
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◉
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◉
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◉
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◉
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◉ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◉ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◉
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◉
Chilled cast iron	–		≤350 HB	◉
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◉
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◉
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◉
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◉
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◉
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◉
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◉
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◉ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◉ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◉ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◉ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◉ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◉ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◉ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤5xD drilling depth

1172	6501	1662	1182	1663	1183	2478	2470	2479	2471
6538M	6537L		6537L	6537L	6537L	6537L	6537L	6537L	6537L
Carbide	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.
P	K/P	K/P	K/P	K/P	K/P	K/P	K/P	K/P	**K/P**
RT 80 U	**RT 100 R**	**RT 100 F**	**RT 100 F**	**RT 100 U**	**RT 100 U**	**RT 100 F**	**RT 100 F**	**RT 100 U**	**RT 100 U**
S	F	S	S	S	S	F	F	F	F
axial	**axial**	**axial**	**axial**	**axial**	**axial**	**axial**	**axial**	**axial**	**axial**
269	**234**	**234**	**234**	**234**	**234**	**234**	**234**	**234**	**234**

v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.				v_c m/min	Feed column no.			
95	5			*110*	6	6	**6**	**6**	*145*	7	7	**7**	**7**
80	4			*90*	5	5	**5**	**5**	*120*	6	6	**6**	**6**
95	6			*130*	7	7	**7**	**7**	*170*	8	8	**8**	**8**
75	5			*110*	7	7	**7**	**7**	*145*	8	8	**8**	**8**
80	5			*100*	7	7	**7**	**7**	*130*	8	8	**8**	**8**
75	5			*95*	6	6	**6**	**6**	*125*	7	7	**7**	**7**
75	5			*90*	6	6	**6**	**6**	*120*	7	7	**7**	**7**
75	5			*90*	6	6	**6**	**6**	*120*	7	7	**7**	**7**
55	4			*80*	6	6	**6**	**6**	*105*	7	7	**7**	**7**
90	6			*110*	7	7	**7**	**7**	*145*	8	8	**8**	**8**
75	5			*90*	6	6	**6**	**6**	*120*	7	7	**7**	**7**
55	4			*65*	4	4	**4**	**4**	*85*	5	5	**5**	**5**
70	5			*85*	**6**	**6**	6	6	*105*	**7**	**7**	7	7
55	4			*80*	**4**	**4**	**5**	**5**	*100*	**5**	**5**	5	5
40	4			*60*	**5**	**5**	5	5	*70*	**6**	**6**	6	6
35	4			*50*	**4**	**4**	4	4	*55*	**5**	**5**	5	5
40	3			*45*	**3**	**3**	4	4	*60*	**4**	**4**	5	5
				45	**2**	**2**	2	2	*60*	**3**	**3**	3	3
40	2			*45*	**4**	**4**	4	4	*60*	**5**	**5**	5	5
35	2			*40*	**4**	**4**	4	4	*55*	**5**	**5**	5	5
35	2			*35*	**4**	**4**	4	4	*50*	**5**	**5**	5	5
				40	**2**	**2**	2	2	*55*	**3**	**3**	3	3
				25	**1**	**1**	1	1	*35*	**2**	**2**	2	2
				25	**3**	**3**	3	3	*35*	**4**	**4**	4	4
150	6	*210*	**9**	*160*	8	8	**8**	**8**	*195*	9	9	**9**	**9**
110	6	*160*	**9**	*120*	8	8	**8**	**8**	*160*	9	9	**9**	**9**
110	6	*160*	**9**	*100*	8	8	**8**	**8**	*140*	9	9	**9**	**9**
90	5	*130*	**8**	*95*	7	7	**7**	**7**	*130*	8	8	**8**	**8**
				30	2	2	**2**	**2**	*40*	3	3	3	3
				35	**3**	**3**	3	3	*45*	**4**	**4**	4	4
				30	**2**	**2**	2	2	*40*	**3**	**3**	3	3
200	7			*240*	8	8	**8**	**8**	*310*	9	9	**9**	**9**
200	7			*240*	8	8	**8**	**8**	*310*	9	9	**9**	**9**
170	7			*200*	8	8	**8**	**8**	*260*	9	9	**9**	**9**
140	6			*170*	8	8	**8**	**8**	*220*	9	9	**9**	**9**
				230	7	7	**7**	**7**	*280*	8	8	**8**	**8**
				95	**6**	**6**	6	6	*125*	**7**	**7**	7	7
				250	**7**	**7**	7	7	*325*	**8**	**8**	8	8
				170	6	6	**6**	**6**	*220*	7	7	**7**	**7**
				95	6	6	**6**	**6**	*125*	7	7	**7**	**7**
				80	5	5	**5**	**5**	*105*	6	6	**6**	**6**
				70	5	5	**5**	**5**	*90*	6	6	**6**	**6**
				60	5	5	**5**	**5**	*80*	6	6	**6**	**6**
		130	**8**										
		100	**8**										
		80	**8**										
		60	**8**										

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Carbide grade
Type
Surface finish
Cooling
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
◉ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◉
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◉
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◉
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◉
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◉
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◉
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◉
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◉
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◉
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◉
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◉
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◉
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◉ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◉ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◉
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◉
Chilled cast iron	–		≤350 HB	◉
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◉
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◉
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◉
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◉
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◉
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◉
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◉
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◉ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◉ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◉ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◉ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◉ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◉ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◉ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤5xD drilling depth

8511	8611	8521	8621	1243	2717	2712	2474	2996	2719
6537L	6537L	6537L	6537L	G.S.	6537L	6537L	G.S.	6537L	6537L
Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.
K/P	K/P	K/P	K/P	K/P	K/P	K/P	K/P	K/P	**K/P**
RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF	RT 100 U	RT 100 U	RT 100 F	RT 100 U	RT 100 U	RT 100 U
a	a	Y	Y	S	S	F	F	F	F
axial	axial	axial	axial						
234	234	234	234	213	204	204	213	204	204

Vc m/min	Feed column no.		Vc m/min	Feed column no.		Vc m/min	Feed column no.		Vc m/min	Feed column no.			
			145	7	**7**	*100*	**6**	**6**	*130*	7	**7**	**7**	**7**
			120	**6**	**6**	*85*	**5**	**5**	*110*	6	**6**	**6**	**6**
			170	8	**8**	*110*	**7**	**7**	*145*	8	**8**	**8**	**8**
			145	**8**	**8**	*85*	**6**	**6**	*110*	7	**7**	**7**	**7**
			130	8	**8**	*90*	**6**	**6**	*120*	7	**7**	**7**	**7**
			125	7	**7**	*85*	**6**	**6**	*110*	7	**7**	**7**	**7**
			120	**7**	**7**	*80*	**6**	**6**	*105*	7	**7**	**7**	**7**
			120	**7**	**7**	*80*	**6**	**6**	*105*	7	**7**	**7**	**7**
			105	**7**	**7**	*75*	**5**	**5**	*100*	6	**6**	**6**	**6**
			145	8	**8**	*100*	**7**	**7**	*130*	8	**8**	**8**	**8**
			120	**7**	**7**	*90*	**6**	**6**	*120*	7	**7**	**7**	**7**
			85	**5**	**5**	*65*	**4**	**4**	*85*	5	**5**	**5**	**5**
			110	**7**	**7**	*75*	5	5	*100*	**6**	6	6	6
			105	**5**	**5**	*70*	4	4	*90*	**5**	5	5	5
			80	**6**	**6**	*50*	5	5	*65*	**6**	6	6	6
			65	**5**	**5**	*40*	4	4	*55*	**5**	5	5	5
			60	**4**	**4**					**4**			
			60	**3**	**3**	*35*	2	2	*45*	**3**	3	3	3
80	**5**	**5**				*40*	3	3	*55*	**4**	4	4	4
60	**2-3**	**2-3**				*35*	3	3	*45*	**4**	4	4	4
80	**5**	**5**				*35*	2	2	*45*	**3**	3	3	3
			55	**3**	**3**	*35*	2	2	*45*	**2**	3	3	3
			35	2	2	*20*	1	1	*25*	**2**	2	2	2
30	2	2	*35*	**4**	**4**	*20*	3	3	*25*	**4**	4	4	4
						160	**7**	**7**	*210*	8	**8**	**8**	**8**
						120	**7**	**7**	*155*	8	**8**	**8**	**8**
						120	**6**	**6**	*145*	8	**7**	**7**	**7**
						95	**6**	**6**	*125*	8	**7**	**7**	**7**
						25	**2**	**2**	*35*	3	**3**	**3**	**3**
35	2	2	*45*	4	4	*30*	3	3	*40*	**3**	4	4	4
			40	3	3	*25*	2	2	*35*	**3**	3	3	3
						200	**8**	**8**	*260*	9	**9**	**9**	**9**
						200	**8**	**8**	*260*	9	**9**	**9**	**9**
						170	**8**	**8**	*235*	9	**9**	**9**	**9**
						140	**7**	**7**	*170*	8	**8**	**8**	**8**
						200	**7**	**7**	*260*	8	**8**	**8**	**8**
						80	6	6	*105*	**7**	7	7	7
						210	7	7	*270*	**8**	8	**8**	**8**
						140	**6**	**6**	*180*	7	**7**	**7**	**7**
						80	**5**	**5**	*105*	6	**6**	**6**	**6**
						65	**5**	**5**	*85*	6	**6**	**6**	**6**
						60	**4**	**4**	*80*	5	**5**	**5**	**5**
						45	**4**	**4**	*60*	5	**5**	**5**	**5**

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Pilot holes are always necessary for drilling depths over 7 x D:

1. The pilot hole can be produced with a short, rigid drill. The diameter should be 0.01 - 0.02 mm larger than the diameter of the Ratio drill. Drilling depth ≥ 1 x D.
2. Alternatively, the Ratio Drills can produce their own pilot hole. Cutting speed and feed rate must therefore be reduced by 30-40%.
3. A coolant pressure of 40 bar is recommended.

For safety reasons it is very important, that a drill does not exceed a speed of n = 6 000 rev./min when not supported. The centrifugal forces could break these long tools before reaching the workpiece surface!

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
◍ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Al
especially suitable for machining aluminium

G
especially suitable for machining cast iron

Guhring no.
Standard/DIN
Tool material
Carbide grade
Type
Surface finish
Cooling
Std. range page

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◍
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◍
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◍
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◍
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◍
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◍
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◍
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◍
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◍
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◍
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◍
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◍
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◍ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◍ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◍
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◍
Chilled cast iron	–		≤350 HB	◍
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◍
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◍
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◍
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◍
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◍
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◍
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◍
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◍ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◍ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◍ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◍ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◍ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◍ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤7xD drilling depth

≤10xD

1173	769	6069	2711	4044	4045	6502	8522	770	6070
6538L	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.
Carbide	Sol. carb.		Sol. carb.	Sol. carb.		Sol. carb.	Sol. carb.	Sol. carb.	
P	K	K	K/P	K/P	K/P	K/P	K/P	K	K
RT 80 U	RT 150 GG		RT 100 U	RT 100 U		RT 100 R	RT100HF	RT 150 GG	
S	○	○	S	F	F	F	Y	○	○
axial	axial	axial	axial	axial	axial	axial	axial	axial	axial
271	253	253	248	248	248	248	248	255	255
	AI	G						AI	G

Vc m/min	Feed column no.	Vc m/min	Feed column no.		Vc m/min	Feed col. no.	Vc m/min	Feed column no.		Vc m/min	Feed col. no.	Vc m/min	Feed col. no.	Vc m/min	Feed column no.	
95	4				110	**5**	145	**6**	**6**			145	**6**			
75	3				90	**4**	120	**5**	**5**			120	**5**			
90	5				130	**6**	170	**7**	**7**			170	**7**			
75	4				110	**6**	145	**7**	**7**			145	**7**			
80	4				100	**6**	130	**7**	**7**			130	**7**			
75	4				95	**5**	125	**6**	**6**			125	**6**			
60	4				90	**5**	120	**6**	**6**			120	**6**			
75	4				90	**5**	120	**6**	**6**			120	**6**			
60	3				80	**5**	105	**6**	**6**			105	**6**			
90	5				110	**6**	145	**7**	**7**			145	**7**			
75	4				90	**5**	120	**6**	**6**			120	**6**			
55	3				65	**3**	85	**4**	**4**			85	**4**			
75	4				80	5	110	6	6			110	**6**			
55	3				75	4	105	4	4			105	**4**			
40	3				55	4	80	5	5			80	**5**			
35	3				40	3	65	4	4			65	**4**			
40	2				45	2	60	4	4			60	**3**			
					45	1	60	2	2			60	**2**			
35	1				45	3	60	4	4							
33	1				40	3	55	4	4							
25	1				35	3	45	4	4							
					40	1	55	2	2			55	**2**			
					25	1	35	1	1			35	1			
					25	2	35	3	3			35	**3**			
150	5	120	6	**7**	150	**7**	195	**8**	**8**	210	**8**			120	6	**6**
110	5	100	6	**7**	120	**7**	160	**8**	**8**	160	**8**			100	6	**6**
110	5	90	6	**7**	100	**7**	140	**8**	**8**	160	**8**			90	6	**6**
90	4	80	6	**7**	95	**6**	130	**7**	**7**	130	**7**			80	6	**6**
		40	2	**2**	30	**1**	40	2	2					40	1	**2**
					35	1	40	3	3			45	3			
					30	1	40	2	2			40	4			
180	6	410	8	7	240	7	310	**8**	**8**					410	8	6
180	6	410	8	7	240	7	310	**8**	**8**					410	8	6
160	6	380	**8**	8	200	7	260	**8**	**8**					380	**8**	6
130	5	330	**8**	8	170	7	220	**8**	**8**					330	**8**	6
					230	**6**	280	**7**	**7**							
					95	6	125	6	6							
		280	7	7	250	7	325	7	7					280	7	7
					170	**6**	220	6	6							
		110	6	6	95	**6**	125	**6**	**6**					110	6	6
		80	5	5	80	**5**	105	**5**	**5**					80	5	5
					70	**5**	90	**5**	**5**							
					60	**5**	80	**5**	**5**							
										130	**7**					
										100	**7**					
										80	**7**					
										60	**7**					

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.	
Standard/DIN	
Tool material	
Carbide grade	
Type	
Surface finish	
Cooling	
Std. range page	

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
◉ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◉
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◉
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◉
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◉
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◉
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◉
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◉
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◉
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◉
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◉
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◉
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◉
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◉ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◉ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◉
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◉
Chilled cast iron	–		≤350 HB	◉
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◉
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◉
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◉
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◉
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◉
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◉
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◉
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◉ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◉ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◉ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◉ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◉ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◉ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◉ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤15xD	≤15xD	≤20xD	≤25xD	≤30xD	≤40xD
773	6509	6511	6512	6513	6514
G.S.	G.S.	G.S.	G.S.	G.S.	G.S.
Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.
K	K/P	K/P	K/P	K/P	K/P
RT 150 GN	RT 100 T	RT 100 T	RT 100 T	RT 100 T	RT 100 T
○	A	A	A	A	A
	40 bar | MQL	40 bar MQL	40 bar MQL	40 bar MQL	40 bar
257	258	260	262	264	265

vc m/min	Feed column no.	vc m/min	Feed no.	vc m/min	Feed no.	vc m/min	Feed no.	vc m/min	Feed no.	vc m/min	Feed no.	vc m/min	Feed no.	vc m/min	Feed no.
		110	8			110	8			100	8			80	7
		110	8			110	8			100	8			80	7
		120	8			120	8			120	8			100	8
		120	8			120	8			100	8			100	8
		110	6			110	6			110	6			110	6
		110	8			110	8			100	8			80	7
		100	7			100	7			100	7			80	7
		110	7	80	7	110	7	80	7	100	7	70	7	80	7	60	6-7	80	6-7
		110	6	80	7	110	6	80	7	100	6	70	7	80	6	60	7	80	6
		110	8			110	8			100	8			80	7			80	7
		110	7	80	6-7	110	7	80	6-7	100	7	70	6-7	80	6	60	6-7	80	6
		110	6	80	6-7	110	6	80	6-7	100	6	70	6-7	80	6	60	6-7	80	6
		100	5			100	5			80	5			80	5			80	5
		80	5			80	5			60	5			60	5			60	5
		100	6-7			100	6			90	6			80	6			80	6-7
		80	5			80	5			70	4			70	4			70	4
		50	5			50	5			50	4			50	4			50	4
		50	5			50	5			50	4			50	4			50	4
		100	5			100	5			100	5			80	5			80	5
		70	2-3			60	3			60	3			60	3			70	2-3
		100	5			100	5			100	5			80	5			80	5
		50	4			50	4			50	4			50	4			50	4
		30	2			30	2			30	2			30	2			30	2
120	5	140	8			140	8			130	8			120	8			120	8
100	5	100	8			100	8			90	8			80	8			80	8
90	5	140	8			140	8			130	8			120	8			120	8
80	5	100	8			100	8			90	8			80	8	65	8	80	8
40	1																		
410	6																		
410	6																		
380	7																		
330	7																		
		120	1			120	1			120	1			120	1			120	1
280	6	120	8			120	8			110	8			100	8			100	8
110	5																		
80	4																		
		100	6			100	6			90	6			80	6			80	6
		100	6			100	6			90	6			80	6			80	6
		90	8	90	8	90	8	90	8	80	8	80	8	70	8	70	8	70	8

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.	
Standard/DIN	
Tool material	
Carbide grade	
Type	
Surface finish	
Cooling	
Std. range page	

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤3xD

745
6539
Sol. carb.
K10/K20
GS 200 G
◯
275

Vc m/min	Feed column no.
100	6
80	6
80	6
70	6
180	7
160	7
150	7
120	6
180	6
180	6

≤5xD drilling depth

1025	2713	731
6539	6537L	6539
Sol. carb.	Sol. carb.	Sol. carb.
K	K	K
GS 200 G	FT 200 G	GS 200 U
◯	◯	◯
275	273	275

Vc m/min	Feed column no.		
90			6
75			5
100	6	**6**	6
80	6	**6**	6
80	6	**6**	6
70	6	**6**	6
180	7	**7**	7
160	7	**7**	7
150	7	**7**	7
120	6	**6**	6
180	6	**6**	6
180	6	**6**	6

1027 | 611

1027	611
6539	6539
Sol. carb.	Sol. carb.
K10/K20	K/P
GS 200 F	GS 200 U
Ⓢ	Ⓢ
275	275

Vc m/min	Feed column no.	
100	5	5
85	4	4
110	6	6
95	5	5
90	5	5
85	5	5
80	5	5
80	5	5
70	4	4
100	6	6
80	5	5
70	4	4
75	4	4
70	4	4
50	4	4
40	4	4
35	3	3
140	6	6
100	6	6
100	6	6
90	6	6
200	7	7
180	7	7
170	7	7
140	6	6
200	6	6
210	6	6

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

All data are approximate values. The actually achievable cutting speeds and feed rates depend on the respective machining conditions. We recommend suitable drilling trials.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Carbide grade
Drilling depth
Surface finish
Aplication
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
● Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

HT 800 WP ≤1,5×D

4112	4115	4113	4114
G.S.	G.S.	G.S.	G.S.
S. carb.	S. carb.	S. carb.	S. carb.
K/P	K/P	K/P	K/P
1,5xD	1,5xD	1,5xD	1,5xD
F	a	F	○
steel	stainl. st.	cast iron	Al/Al-alloys
296	296	296	296

v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.
130	6						
110	5						
130	7						
110	6						
130	6						
125	6						
110	5						
110	6						
90	5						
130	7						
110	6						
70	4						
105	5						
70	4						
60	5						
55	4						
55	3						
50	2						
		55	3				
		40	3				
		35	3				
		25	2				
		25	2				
				100	6		
				90	6		
				120	7		
				100	6		
		90	6				
		40	3				
		35	2				
						200	7
						180	7
						150	7
						120	7
						180	7
						70	6
						180	7
						120	6
						70	6
						50	6
						45	6
						35	5
				80	5
				80	5
				80	5
				80	5

≤3×D

4112	4115	4113	4114
G.S.	G.S.	G.S.	G.S.
S. carb.	S. carb.	S. carb.	S. carb.
K/P	K/P	K/P	K/P
3xD	3xD	3xD	3xD
F	a	F	○
steel	stainl. st.	cast iron	Al/Al-alloys
296	296	296	296

v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.
130	6						
110	5						
130	7						
110	6						
130	6						
125	6						
110	5						
110	6						
90	5						
130	7						
110	6						
70	4						
105	5						
70	4						
60	5						
55	4						
55	3						
50	2						
		55	3				
		40	3				
		35	3				
		25	2				
		25	2				
				100	6		
				90	6		
				120	7		
				100	6		
		90	6				
		40	3				
		35	2				
						200	7
						180	7
						150	7
						120	7
						180	7
						70	6
						180	7
						120	6
						70	6
						50	6
						45	6
						35	5
				80	5
				80	5
				80	5
				80	5

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

All data are approximate values. The actually achievable cutting speeds and feed rates depend on the respective machining conditions. We recommend suitable drilling trials.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Carbide grade
Drilling depth
Surface finish
Aplication
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
● Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

HT 800 WP ≤5×D

4112	4115	4113	4114
G.S.	G.S.	G.S.	G.S.
S. carb.	S. carb.	S. carb.	S. carb.
K/P	K/P	K/P	K/P
5xD	5xD	5xD	5xD
F	a	F	○
steel	stainl. st.	cast iron	Al/Al-alloys
296	296	296	296

v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.
125	6						
105	5						
125	7						
105	6						
125	6						
120	6						
105	5						
105	6						
85	5						
125	7						
105	6						
70	4						
105	5						
70	4						
55	5						
50	4						
55	3						
50	2						
		55	3				
		40	3				
		35	3				
		25	2				
		25	2				
				100	6		
				90	6		
				120	7		
				100	6		
		90	6				
		40	3				
		35	2				
						180	7
						180	7
						140	7
						110	7
						180	7
						70	6
						180	7
						120	6
						70	6
						50	6
						45	6
						35	5
				80	5
				80	5
				80	5
				80	5

≤7×D

4112	4115	4113	4114
G.S.	G.S.	G.S.	G.S.
S. carb.	S. carb.	S. carb.	S. carb.
K/P	K/P	K/P	K/P
7xD	7xD	7xD	7xD
F	a	F	○
steel	stainl. st.	cast iron	Al/Al-alloys
296	296	296	296

v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.
120	5						
105	4						
120	6						
105	5						
120	5						
110	5						
100	4						
100	5						
85	4						
120	6						
100	5						
70	4						
105	4						
70	3						
55	4						
50	3						
55	2						
50	2						
		55	2				
		40	2				
		35	2				
		25	1				
		25	1				
				80	6		
				70	6		
				100	7		
				80	6		
		70	6				
		40	2				
		35	1				
						180	6
						180	6
						140	6
						110	6
						180	6
						70	5
						180	6
						120	5
						70	5
						50	5
						45	5
						35	4
				60	5
				60	5
				60	5
				60	5

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

All data are approximate values. The actually achievable cutting speeds and feed rates depend on the respective machining conditions. We recommend suitable drilling trials.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Carbide grade
Drilling depth
Surface finish
Aplication
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
● Soluble oil

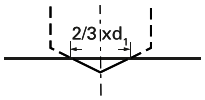
Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

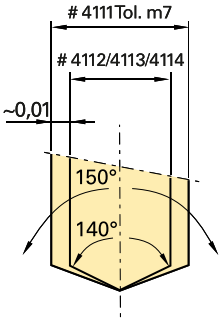
○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

HT 800 WP ≤10×D

≤1×D pilot drilling/countersinking

4112	4115	4113	4114	4111
G.S.	G.S.	G.S.	G.S.	G.S.
S. carb.	S. carb.	S. carb.	S. carb.	S. carb.
K/P	K/P	K/P	K/P	K/P
10xD	10xD	10xD	10xD	1xD
F	a	F	○	a
steel	stainl. st.	cast iron	Al/Al-alloys	pil./counters.
296	296	296	296	304





- for through holes supporting lands must remain in permanent contact. In addition, we recommend reducing the feed rate prior to exiting.
- for drilling depths from 5xD we generally recommend centring or pilot drilling with holder, Guhring no. 4105, and pilot insert, Guhring no. 4111. Alternatively – depending on the material to be machined – Ratio drills type RT 100 U or RT 100VA can be applied.
- for drilling without centring we recommend reducing the feed rate at the start of the hole.
- don't apply drilling tool without trial for interrupted cutting (grooves, transverse holes). For interrupted cutting (max. 0.2 x D) it is recommended to reduce the feed rate whenever possible.
- in contrast to conventional indexable inserts, HT 800 tools are also suitable for the drilling of stacked sheets.
- on a lathe (stationary tool) it must be ensured that the tool is accurately centred.
- pre-condition for optimal machining results is a sufficient cooling lubricant supply with soluble or neat oil.
- the tool is only of limited suitability for dry machining or MQL. For MQL application we recommend the use of the conical MQL shank end as well as Guhring MQL components. Please contact our Sales Management.

v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.
100	5							130	6
95	4							110	5
100	6							130	7
95	5							110	6
100	5							130	6
95	5							125	6
90	4							110	5
90	5							110	6
85	4							90	5
100	6							130	7
90	5							110	6
70	4							70	4
95	4							105	5
70	3							70	4
55	4							60	5
50	3							55	4
55	2							55	3
50	2							50	2
		55	2					55	3
		40	2					40	3
		35	2					35	3
		25	1					25	2
		25	1						
								25	2
				80	6			100	6
				70	6			90	6
				100	7			120	7
				80	6			100	6
		70	6					90	6
		40	2					40	3
		35	1					35	2
						150	6	200	7
						150	6	180	7
						130	6	150	7
						105	6	120	7
						150	6	180	7
						70	5	70	6
						150	6	180	7
						110	5	120	6
						70	5	70	6
						50	5	50	6
						45	5	45	6
						35	4	35	5
				60	5			80	5
				60	5			80	5
				60	5			80	5
				60	5			80	5

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

All data are approximate values. The actually achievable cutting speeds and feed rates depend on the respective machining conditions. We recommend suitable drilling trials.

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Guhring no.
Standard/DIN
Tool material
Carbide grade
Drilling depth
Surface finish
Aplication
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
● Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

RT 800 WP ≤3xD

2747	1047	2485
G.S.	G.S.	G.S.
S. carb.	S. carb.	S. carb.
K	K/P	K/P
3xD	3xD	3xD
○	S	F
cast i./Al	steels	steels
319	323	321

≤5xD

2747	1047	2485
G.S.	G.S.	G.S.
S. carb.	S. carb.	S. carb.
K	K/P	K/P
5xD	5xD	5xD
○	S	F
cast i./Al	steels	steels
319	323	321

≤7xD

2747	1047	2485
G.S.	G.S.	G.S.
S. carb.	S. carb.	S. carb.
K	K/P	K/P
7xD	7xD	7xD
○	S	F
cast i./Al	steels	steels
319	323	321

v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed col. no.
		100	6	130	6			95	6	125	6			90	5	120	5
		85	5	110	5			80	5	105	5			80	4	105	4
		100	7	130	7			95	7	125	7			90	6	120	6
		85	6	110	6			80	6	105	6			80	5	105	5
		100	6	130	6			95	6	125	6			90	5	120	5
		95	6	125	6			90	6	120	6			85	5	110	5
		85	5	110	5			80	5	105	5			75	4	100	4
		85	6	110	6			80	6	105	6			75	5	100	5
		70	5	90	5			65	5	85	5			65	4	85	4
		100	7	130	7			95	7	125	7			90	6	120	6
		85	6	110	6			80	6	105	6			75	5	100	5
		55	4	70	4			55	4	70	4			55	4	70	4
		80	5	105	5			80	5	105	5			80	4	105	4
		55	4	70	4			55	4	70	4			55	3	70	3
		40	5	55	5			40	5	55	5			40	4	55	4
		35	4	50	4			35	4	50	4			35	3	50	3
		40	3	55	3			40	3	55	3			40	2	55	2
		35	2	50	2			35	2	50	2			35	2	50	2
		40	3	55	3			40	3	55	3			40	2	55	2
		30	3	40	3			30	3	40	3			30	2	40	2
		25	3	35	3			25	3	35	3			25	2	35	2
		20	2	25	2			20	2	25	2			20	1	25	1
		20	2	25	2			20	2	25	2			20	1	25	1
100	7	160	7	210	7	90	7	150	7	195	7	90	6	150	6	195	6
80	7	80	7	155	7	70	7	110	7	145	7	70	6	110	6	145	6
80	7	120	7	155	7	70	7	110	7	145	7	70	6	110	6	145	6
70	6	100	6	130	6	60	6	90	6	120	6	60	5	90	5	120	5
10	2	25	2	35	2	10	2	25	2	35	2	10	2	25	2	35	2
		30	3	40	3			30	3	40	3			30	2	40	2
		25	2	35	2			25	2	35	2			25	1	35	1
200	7	220	7	290	7	180	7	200	7	260	7	180	6	200	6	260	6
180	7	200	7	260	7	180	7	200	7	260	7	180	6	200	6	260	6
150	7	180	7	235	7	140	7	170	7	220	7	140	6	170	6	220	6
120	7	150	7	195	7	110	7	140	7	180	7	110	6	140	6	180	6
180	7	200	7	260	7	180	7	200	7	260	7	180	6	200	6	260	6
70	6	80	6	105	6	70	6	80	6	105	6	70	5	80	5	105	5
180	7	210	7	270	7	180	7	210	7	270	7	180	6	210	6	270	6
120	6	140	6	180	6	120	6	140	6	180	6	120	5	140	5	180	5
70	6	80	6	105	6	70	6	80	6	105	6	70	5	80	5	105	5
50	6	65	6	85	6	50	6	65	6	85	6	50	5	65	5	85	5
45	6	50	6	65	6	45	6	50	6	65	6	45	5	50	5	65	5
35	5	40	5	55	5	35	5	40	5	55	5	35	4	40	4	55	4
50	5	80	5	105	5	50	5	80	5	105	5	50	4	80	4	105	4
50	5	80	5	105	5	50	5	80	5	105	5	50	4	80	4	105	4
50	5	80	5	105	5	50	5	80	5	105	5	50	4	80	4	105	4
50	5	80	5	105	5	50	5	80	5	105	5	50	4	80	4	105	4

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

All data are approximate values. The actually achievable cutting speeds and feed rates depend on the respective machining conditions. We recommend suitable drilling trials.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

- for through holes supporting lands must remain in permanent contact
- for 7 x D, centering is recommended with equal point angle of 140°, or larger, to min. 2/3 cutting edge diameter (do not apply standard centre drill to DIN 332). If centering is impossible, spot-drill with reduced feed.
- interrupted cutting (grooves, cross holes, oblique entry/exit) is not recommended without prior tests. We recommend reducing the feed by 50% if possible.
- the standard LT800 tool system is also suitable for drilling up to 55.9mm diameter in stacked metal sheets. For the drilling of stacked metal sheets above diameter 56 mm, the standard cartridge must be replaced with a cartridge with a suitable indexable insert arrangement.
- when replacing the central interchangeable insert (RT800), we recommend replacing the clamping screw with a new one (with clamping thread protection)
- with turning machines (vertical drilling tool), it must be ensured the tool operates precisely on centre.
- pre-requisite for optimal machining results is a sufficient coolant supply. The tool possesses only limited suitability for dry machining or minimal quantity lubrication applications. The cutting speed should be reduced by approximately 30% whilst retaining the same feed rate.

Safety recommendations:

- with rotating workpieces, a disc is created on hole break through. Due to the centrifugal effect there is a possible risk of accident. Safety precautions must be followed.
- in order to prevent damage to machine and tool, we recommend the prior determination of the required power and torque.

Tool material
Carbide grade
Drilling depth
Holder size
nom. Ø range mm

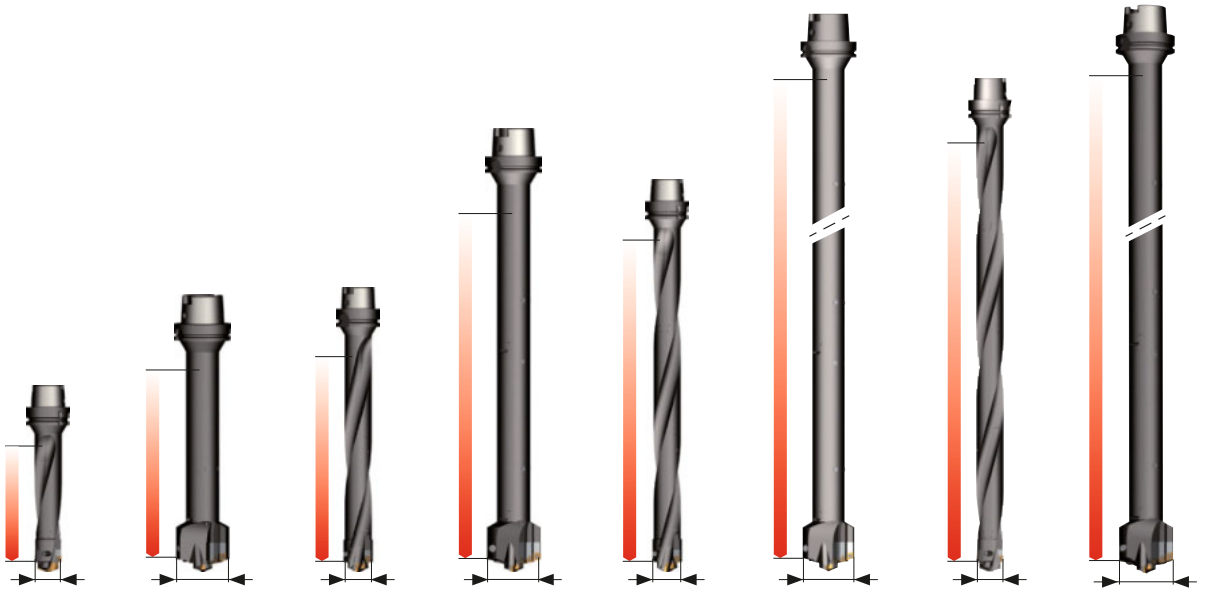
Coolant:
○ Air
● Neat oil
◍ Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◍
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◍
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◍
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◍
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◍
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◍
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◍
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◍
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◍
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◍
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◍
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◍
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◍ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◍ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◍
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◍
Chilled cast iron	–		≤350 HB	◍
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◍
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◍
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◍
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◍
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◍
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◍
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◍
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◍ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◍ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◍ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◍ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◍ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◍ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ AlTiN SuperA

LT 800 WP

Carbide	Carbide	Carbide	Carbide	Carbide	Carbide	Carbide	Carbide
depend. on insert	depend. on insert	depend. on insert	depend. on insert	depend. on insert	depend. on insert	depend. on insert	depend. on insert
≤3xD	≤3xD	≤6xD	≤6xD	≤9xD	≤9xD	≤12xD	≤12xD
400…560	600…950	400…560	600…950	400…560	600…950	400…560	600…950
40…<60	60…100	40…<60	60…100	40…<60	60…100	40…<60	60…100



Feed rate f (mm/rev.)	v_c m/min							
0.20…0.40	110…150	130…180	100…130	120…155	70…120	85…145	60…110	70…130
0.20…0.40	100…130	120…155	90…120	110…145	70…110	85…130	60…110	70…130
0.20…0.40	110…150	130…180	100…130	120…155	70…120	85…145	60…120	70…145
0.15…0.30	100…130	120…160	90…120	110…145	70…110	85…130	60…110	70…130
0.20…0.40	100…130	120…155	90…120	110…145	80…110	100…130	70…100	85…120
0.20…0.40	90…120	110…145	80…110	100…130	70…100	85…120	60…90	70…110
0.15…0.35	80…110	100…130	70…100	85…120	60…90	70…110	55…80	65…100
0.20…0.40	80…110	100…130	70…100	85…120	60…90	70…110	55…80	65…100
0.15…0.35	70…100	85…120	65…90	80…110	60…80	70…100	55…75	65…90
0.20…0.40	90…120	110…145	80…110	100…130	70…100	85…120	60…90	70…110
0.20…0.40	80…110	100…130	70…100	85…120	60…90	70…110	55…80	65…100
0.15…0.35	70…100	85…120	65…90	80…110	60…80	70…100	55…75	65…90
0.20…0.40	80…110	100…130	70…100	85…120	60…90	70…110	55…80	65…100
0.15…0.35	70…100	85…120	65…90	80…110	60…80	70…100	55…75	65…90
0.20…0.40	70…100	85…120	65…95	80…115	60…90	70…110	55…80	65…100
0.15…0.35	70…90	85…110	65…90	80…110	60…80	70…100	55…75	65…90
0.15…0.35	70…100	85…120	65…95	80…115	60…90	70…110	55…85	65…100
0.15…0.35	60…90	70…110	55…85	65…100	50…80	50…100	45…75	55…90
0.15…0.35	55…85	65…100	50…80	60…100	45…75	55…90	40…70	50…85
0.30…0.60	120…200	145…240	110…180	130…220	100…160	120…190	90…150	110…180
0.30…0.60	100…160	120…190	90…150	110…180	85…140	100…170	80…130	100…155
0.30…0.60	100…160	120…190	90…150	110…180	85…140	100…170	80…130	100…155
0.20…0.40	80…120	100…145	70…110	85…130	60…100	70…120	55…90	65…110
0.30…0.60	200…300	240…360	180…280	220…340	160…260	190…310	140…240	170…290
0.30…0.60	180…280	220…340	170…260	200…310	155…250	185…300	135…235	160…280
0.30…0.60	160…240	190…290	150…230	180…280	140…220	170…260	130…210	155…250
0.30…0.60	140…200	170…240	130…190	160…230	120…180	145…220	110…170	130…200
0.30…0.60	120…200	145…240	110…180	130…220	100…160	120…190	90…150	110…180
0.20…0.40	140…200	170…240	130…190	160…230	120…180	145…220	110…170	130…200
0.30…0.60	120…200	145…240	110…180	130…220	100…160	120…190	90…150	110…180
0.20…0.40	120…200	145…240	110…180	130…220	100…160	120…190	90…150	110…180
0.20…0.40	140…200	170…240	130…190	160…230	120…180	145…220	110…170	130…200
0.15…0.35	140…200	170…240	130…190	160…230	120…180	145…220	110…170	130…200

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no. R
Guhring no. L
Standard/DIN
Tool material
Surface finish
Type
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
◉ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◉
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◉
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◉
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◉
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◉
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◉
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◉
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◉
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◉
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◉
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◉
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◉
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◉ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◉ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◉
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◉
Chilled cast iron	–		≤350 HB	◉
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◉
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◉
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◉
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◉
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◉
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◉
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◉
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◉ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◉ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◉ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◉ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◉ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◉ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◉ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤3xD drilling depth

223	224	225	552
226	227	228	553
1897	1897	1897	1897
HSS			
>Ø 2,36			<Ø 2,36 >Ø 16,0
N	H	W	GT 80
412	412	412	412

653
672
1897
HSS
S
N
412

2460
1897
HSS
F
N
412

329	363	1261	128	129	1259
330				136	
1897	G.S.	1897	G.S.	G.S.	1897
HSCO					M42
>Ø 2,36					
GV 120	GV 120	VA	N	N	N
412	553	412	468	469	444

v_c m/min	Feed column no.			
27	**6**			6
22	**5**			5
30	**6**			**6**
30	5			5
25	**5**			**5**
25	**5**			**5**
30	**6**			6
16	4			4
30	**6**			6
30	6			6
25	**6**			6
20	6			6
70			**7**	7
70			**7**	7
50	7		7	**7**
50	6			**6**
70	6	**6**		6
60	5		5	**5**
		6		
40	5		5	**5**
30	4	4		**4**
25	4			4
15	4			4
18	4	4		**4**
28	5	**5**	5	5

v_c m/min	Feed col. no.
30	**6**
24	**5**
33	**6**
33	5
28	**5**
28	**5**
25	4
22	4
33	**6**
20	4
14	4
18	4
33	**6**
33	6
28	**6**
22	6
80	6
65	**5**
75	5
45	**5**
33	**4**
27	4
16	**4**
15	4
22	**4**
36	**5**

v_c m/min	Feed col. no.
32	**7**
26	**6**
36	**7**
36	6
31	**6**
31	**6**
28	5
24	5
36	**7**
22	5
16	5
20	5
36	7
36	**7**
31	7
24	**7**
85	8
85	8
60	**8**
60	**7**
90	6
70	**6**
80	6
50	**6**
36	**5**
30	5
18	**5**
18	5
29	**5**
47	6

v_c m/min	Feed column no.					
35	5	5	5			5
30	5	5	5			5
40	5	5	5			5
40	**5**	**5**	5	5	5	5
40	5	5	5			5
40	5	5				5
35	**4**	**4**		**4**	**4**	4
20	**4**	**4**		4	4	4
16	**3**	**3**		3	3	3
36	6	6	6			6
20	**4**	**4**		4	4	3
15	**3**	**3**		3	3	3
	4	**4**		4	4	
12	3	**3**		3	3	3
15	**4**	**4**		4	4	3
12	**3**	**3**		3	3	3
15	3	**3**		3	3	3
8	**2**	**2**		2	2	**2**
18	4	4	**4**	4	4	3
14	3	3	**3**	3	3	3
16	3	**3**	3	3	3	3
4	1	1				1
8	1	1		1	1	1
35	**6**	6				5
30	**6**	**6**				5
30	6	6				5
25	**6**	**6**				5
10	3	3				3
10	2	2	2			**2**
6	2	2	2			**2**
90			7			7
90			7			7
80			7			7
70			6			6
70			6			6
40			5			5
60			5			5
40			5			5
35	4	4	4			4
30	**4**	**4**	4			4
20	4	4	**4**			4
15	4	4	**4**			4
	4	4		4	4	
30			4			4

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.	
Standard/DIN	
Tool material	
Surface finish	
Type	
Std. range page	

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
◉ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◉
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◉
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◉
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◉
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◉
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◉
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◉
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◉
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◉
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◉
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◉
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◉
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◉ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◉ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◉
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◉
Chilled cast iron	–		≤350 HB	◉
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◉
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◉
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◉
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◉
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◉
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◉
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◉
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◉ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◉ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◉ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◉ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◉ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◉ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◉ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤3xD drilling depth

2048	1228	2498	659	663	2461	512	515
1897	1897	1897	1897	G.S.	1897	G.S.	1897
HSCO	HSCO	HSCO	HSCO	HSCO	HSCO	HSCO	HSS-E-PM
M	S	F	S	S	F	S	F
P2000	GT 80	GT 80	GV 120	GV 120	GV 120	GU 500	GT 500
412	412	412	412	553	412	456	444

v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed column no.		v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed col. no.
35	**6**	38	6	42	6	38	5	5	42	6	38	**6**	42	6
30	**5**	33	5	36	5	33	4	4	36	5	33	**5**	37	5
40	**6**	44	**6**	48	**7**	44	5	5	48	6	44	**6**	47	**7**
40	**5**	38	**5**	42	**6**	38	5	5	42	6	40	**6**	44	6
40	**5**	44	6	48	6	44	5	5	48	6	44	**6**	47	6
40	**5**	44	5	48	6	44	5	5	48	6	44	**6**	47	6
35	**4**	38	4	42	5	38	**4**	**4**	42	**5**	40	**5**	44	**5**
25	**4**	27	4	30	5	27	**4**	**4**	30	**5**	27	4	30	4
20	3	22	3	24	4	22	**3**	**3**	24	**4**	22	3	25	**3**
40	**6**	44	4	48	4	44	4	4	48	5	44	**6**	47	4
20	4	22	4	24	5	22	**4**	**4**	24	**5**	22	4	25	**5**
15	3	18	3	20	4	18	**3**	**3**	20	**4**	18	3	20	**4**
20	4	22	4	24	5	22	4	**4**	24	**5**	22	4	25	**5**
15	3	18	3	20	4	18	3	**3**	20	**4**	16	3	18	**4**
18	4	19	4	21	5	19	**4**	**4**	21	**5**	20	4	22	**5**
12	3	14	3	16	4	14	**3**	**3**	16	**4**	15	3	17	**4**
12	3	14	3	17	4	14	3	**3**	17	**4**	13	3	14	**4**
8	2	9	2	11	3	9	**2**	**2**	11	**3**	9	2	10	**2**
14	4	15	**4**	17	**4**	20	4	4	22	5	20	**4**	22	**4**
10	3	10	3	12	3	15	3	**3**	17	**4**	16	**3**	18	3
12	3	12	3	14	3	18	3	**3**	20	**4**	18	**4**	20	3
						4	1	1	5	2				
5	2					6	2	2	7	2			6	2
38	6	45	6	50	7	40	6	6	45	7	45	**6**	50	**7**
30	6	40	6	45	7	35	**6**	**6**	40	**7**	40	**6**	44	**7**
30	6	33	6	36	7	33	6	6	36	7	40	**6**	44	**7**
25	6	27	6	29	7	27	6	6	29	7	30	**6**	33	**7**
10	3	8	3	10	4	12	3	3	14	4			16	4
						11	2	2	12	3				
						7	2	2	8	3				
90	7													
90	7													
80	7													
70	6													
85	6										80	6		
80	5	88	5	96	6						88	**5**		
70	5	77	5	84	6						77	**5**		
40	5	44	5	48	6						44	**5**		
40	4	45	5	50	5	45	5	5	50	6	45	**4**	50	5
30	4	40	4	45	5	40	**4**	**4**	45	**5**	40	**4**	44	5
25	4	22	4	25	5	23	4	4	26	5	30	**4**	33	5
15	4	17	4	20	5	17	4	**4**	20	**5**	25	**4**	28	5
20	4	22	4	24	5						22	**4**		
25	5	27	5	30	5						27	**4**		

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Carbide grade
Surface finish
Type
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤3xD drilling depth

730	702	1149	710	703	705	704	707	2463	1946
6539	G.S.	G.S.	G.S.	8037	8041	8038	G.S.	6539	6537K
Sol. carb.	Sol. carb.	Sol. carb.	Carbide	Carbide	Carbide	Carbide	Carbide	Solid carbide	Solid carbide
			K10/K20					K/P	K/P
○	○	○	○	○	○	○	○	F	A
N	N	N	Duro 150	N	N	N		N	H
444	450	550	406	547	605	547	551	444	466

v_c m/min	Feed column no.								v_c m/min	Feed col. no.	v_c m/min	Feed col. no.
	4								*104*	5		
	4								*91*	5		
	5			4	4	4			*104*	**6**		
	4			3	3	3			*91*	**5**		
	4								*104*	5		
	4								*91*	5		
	4								*78*	5		
	4								*78*	5	*80*	6
	5								*104*	6		
	4								*78*	5	*65*	4
	4								*65*	5	*80*	4
	3								*65*	4		
25	2			**2**	**2**	**2**		2	*32*	3		
	4								*32*	**5**		
	3								*32*	**4**		
	3								*32*	**4**		
	3			3	3	3			*26*	4	*40*	**2**
				2	2	2					*30*	**1**
	2								*20*	3		
	4			4	4	4			*117*	**5**	*90*	8
	4			4	4	4			*104*	**5**	*80*	8
	4			4	4	4			*91*	**5**	*80*	8
	4			4	4	4			*104*	**5**	*70*	7
10				**1**	**1**	**1**		1			*30*	2
	3								*26*	4		
	2								*20*	3		
	7								*260*	**8**		
	7								*260*	**8**		
	6								*195*	**7**		
	6								*156*	**7**		
	6								*234*	**6**		
	5								*104*	**6**		
	5			5	5	5			*234*	**6**		
	5			5	5	5			*234*	**6**		
	5								*156*	**6**		
	5								*156*	**6**		
	4								*91*	5		
	3								*65*	4		
	4	**4**							*65*	5		
	3	**3**					3		*52*	4		
			1									
	3	**3**					2		*104*	4		

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no. R
Guhring no. L
Standard/DIN
Tool material
Surface finish
Type
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤5xD drilling depth

560	205 208	240	268	229 248	245	592	251	206 209	246	207 210	247	549 550	558
338	338	338	G.S.	345	345	345	346	338	345	338	345	338	345
HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
○	● >Ø 2,36	●	●	●	● >Ø 2,36	● >Ø 16,0	●	○	○	○	○	◔ >Ø 2,36	● >Ø 16,0
N	N	N	N	N	N	N	N	H	H	W	W	GT 100	GT 100
342	342	342	467	555	555	555	575	342	555	342	555	342	555

v_c m/min	Feed column no.													
27	6	**6**	**6**	**6**	**6**	**6**	**6**	6	**5**				6	6
22	**5**	**5**	**5**	**5**	**5**	**5**	5	5					5	5
30	6	**6**	**6**	**6**	**6**	**6**	**6**	6					**6**	**6**
30	5	5	5	5	5	5	5	5					5	5
25	5	**5**	**5**	**5**	**5**	**5**	**5**	5					5	5
25	**5**	**5**	**5**	**5**	**5**	**5**	5	5					5	5
30	6	6	6	6	6	6	6	6					6	6
16		4	4	4	4	4	4	4					4	4
30	6	**6**	**6**	**6**	**6**	**6**	**6**	6					6	6
30	6	6	6	6	6	6	6	6					6	6
25	6	6	6	6	6	6	6	6					6	6
25	6	6	6	6	6	6	6	6					6	6
70	**7**	7	7	7	7	7	7	7			7	7	**7**	**7**
70	**6**	6	6	6	6	6	6	6					**6**	**6**
50	6	6	6	6	6	6	6	6	6	6			6	6
50	5	5	5	5	5	5	5	5			**5**	**5**	**5**	**5**
40	5	5	5	5	5	5	5	5	**6**	**6**			**5**	**5**
	4	4	4	4	4	4	4	4	4	4				
	4	4	4	4	4	4	4	4						
15	4	4	4	4	4	4	4	4					4	4
18	4	4	4	4	4	4	4	4	4	4			**4**	**4**
	5	5	5	5	5	5	5	5	**5**	**5**	5	5		

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no. R
Guhring no. L
Standard/DIN
Tool material
Surface finish
Type
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤5xD drilling depth

651	654	2456	652	606	2457
664			665		
338	345	338	338	345	338
HSS	HSS	HSS	HSS	HSS	HSS
S	S	F	S	S	F
N	N	N	GT 100	GT 100	GT 100
342	567	342	342	567	342

305	345	351	622	645	605	1260	1262	1146
308					608			
338	345	346	338	345	338	338	345	338
HSCO	HSCO	HSCO	HSCO	HSCO	HSCO	HSCO	HSCO	M42
>Ø 2,36			>Ø 2,36	>Ø 16,0				
N	N	N	GT 100	GT 100	Ti	VA	VA	N
380	567	575	380	567	380	380	573	380

v_c m/min	Feed column no.					
32	**6**	**6**	**7**	6	6	7
26	**5**	**5**	**6**	5	5	6
36	**6**	**6**	**7**	**6**	**6**	**7**
36	5	5	6	5	5	6
31	**5**	**5**	**6**	5	5	6
31	**5**	**5**	**6**	5	5	6
28	4	4	5	4	4	5
24	4	4	5	4	4	5
36	**6**	**6**	**7**	6	6	7
22	4	4	5	4	4	5
16	4	4	5	4	4	5
20	4	4	5	4	4	5
36	6	6	7	6	6	7
36	6	6	7	6	6	7
31	**6**	**6**	7	6	6	7
24	6	6	7	6	6	7
85			8			8
85			8			8
60			**8**			8
60			**8**			7
90	6	6	7			7
70	5	5	6	**5**	**5**	6
80	5	5	6	5	5	6
50	5	5	6	**5**	**5**	6
	4	**4**	**5**			
	4	**4**	**5**			
18	**4**	**4**	**5**	4	4	5
18	**4**	**4**	**5**	4	4	5
29	4	4	5	**4**	**4**	5
	5	5				

v_c m/min	Feed column no.								
35	5	5	5	5	5		5	5	5
30	5	5	5	5	5		5	5	5
40	5	5	5	5	5		5	5	5
40	5	5	5	**5**	**5**		5	5	5
40	5	5	5	5	5		5	5	5
40	5	5	5	5	5				5
35	**4**	**4**	**4**	4	4				5
20	**4**	**4**	**4**	**4**	**4**				4
16	3	3	3	**3**	**3**	3			3
36	6	6	6	6	6	6	6	6	6
20	**4**	**4**	**4**	4	4				3
15	3	3	3	**3**	**3**	3			3
16	**4**	**4**	**4**	4	4				3
12	3	3	3	**3**	**3**	3			3
15	**4**	**4**	**4**	4	4				3
12	**3**	3	3	**3**	**3**	3			3
15	3	3	3	**3**	**3**	3			3
8	**2**	2	2			**2**			**2**
18	4	4	4	**4**	**4**	4	**4**	**4**	3
	3	3	3			**3**	3	3	
16	3	3	3	3	3	**3**	3	3	3
4									**1**
8						1			**1**
35	6	6	6	6	6				5
30	**6**	**6**	**6**	6	6				5
30	6	6	6	6	6				5
28	**6**	**6**	**6**	6	6				5
10	3	3	3	3	3	3			**3**
10						**2**	2	2	2
6						**2**	2	2	2
90							**7**	**7**	7
90							**7**	**7**	7
80				7	7		7	7	7
70				6	6		6	6	6
70							6	6	6
40	**5**	5	5	5	5		5	5	5
60							5	5	5
40	5	5	5	4	4		5	5	5
35	**4**	4	4				4	4	4
33	**4**	4	4				4	4	4
20	4	4	4	4	4		**4**	**4**	4
15	4	4	4	**4**	**4**		**1**	**1**	4
	4	4	4	4	4				

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.	
Standard/DIN	
Tool material	
Surface finish	
Type	
Std. range page	

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
◉ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◉
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◉
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◉
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◉
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◉
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◉
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◉
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◉
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◉
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◉
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◉
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◉
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◉ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◉ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◉
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◉
Chilled cast iron	–		≤350 HB	◉
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◉
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◉
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◉
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◉
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◉
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◉
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◉
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◉ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◉ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◉ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◉ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◉ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◉ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◉ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤5xD drilling depth

2997	661	658	662	2459	657	2458
338	345	338	345	338	338	338
HSCO	HSCO	HSCO	HSCO	HSCO	HSCO	HSCO
S	S	S	S	F	S	F
N	N	GT 100	GT 100	GT 100	Ti	Ti
380	567	380	567	380	380	380

1223	1224	1221	1222
338	345	338	345
HSCO	HSCO	HSCO	HSCO
A	A	C	C
GT 100	GT 100	GT 100	GT 100
380	573	380	567

v_c m/min	Feed column no.						
	6	6	6	6	6		
	5	5	5	5	5		
	5	5	5	5	6		
	5	5	**5**	**5**	**6**		
	5	5	5	5	6		
	4	**4**	4	4	5		
	4	**4**	4	4	**5**		
34	3	3	**3**	**3**	**4**	3	4
	4	4	4	4	6		
	4	**4**	4	4	5		
	3	3	**3**	**3**	**4**		
	4	**4**	4	4	5		
	3	3	**3**	**3**	**4**		
	4	**4**	**4**	4	5		
	3	3	**3**	3	**4**		
17	3	3	**3**	**3**	**4**	3	4
11	2	2			3	**2**	**2**
22	4	4	**4**	**4**	**5**	4	5
17	3	3			4	**3**	**3**
20			3	3	4	**3**	**4**
					1		
7						2	2
	6	6	6	6	7		
	6	**6**	6	6	7		
	6	6	6	6	7		
	6	**6**	6	6	7		
14					4	**3**	**3**
12						**2**	**2**
8						**2**	**2**
					8		
					7		
	5	5	5	5	6		
	4	**4**					
	4	**4**	4	4	5		
20	4	4	**4**	**4**	**5**	4	4
	4	4	4	4	5		

v_c m/min	Feed column no.			
42			6	6
36			6	6
48			6	6
42	5	5	**6**	**6**
42			**5**	**5**
30			**5**	**5**
34			**4**	**4**
48			**7**	**7**
24			**5**	**5**
20			**4**	**4**
20			**5**	**5**
15			**4**	**4**
21			**5**	**5**
16			**4**	**4**
17			**4**	**4**
11			**3**	**3**
22			**5**	**5**
18			4	4
	7	**7**		
	7	**7**		
	7	**7**		
	7	**7**		
	7	7		
	6	6		
	5	5		
	5	5		
	5	5		

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Surface finish
Type
Cooling
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
◉ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◉
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◉
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◉
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◉
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◉
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◉
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◉
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◉
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◉
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◉
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◉
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◉
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◉ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◉ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◉
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◉
Chilled cast iron	–		≤350 HB	◉
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◉
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◉
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◉
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◉
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◉
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◉
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◉
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◉ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◉ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◉ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◉ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◉ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◉ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◉ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤5xD drilling depth

2047	511	513	1131	1132	732	2464
338	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.
HSCO	HSCO	HSS-E-PM	HSCO	HSCO	Solid carbide	Solid carbide
	S	F		S		F
P2000	GU 500	GT 500	GT 80 IK	GT 80 IK	N	N
			axial	axial		
380	462	460	492	492	406	406

v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.		v_c m/min	Feed column no.	
35	**6**	38	**6**	42	6	60	7	7	100	4	5
30	**5**	33	**5**	37	5	48	6	6	90	4	5
40	6	44	**6**	47	6	60	7	7	100	**5**	**6**
40	5	40	**5**	44	6	48	6	6	90	**4**	**4**
40	**5**	44	**6**	47	6	60	6	6	100	4	5
40	**5**	44	**6**	47	6	60	6	6	90	4	5
35	**4**	40	**5**	44	**5**	50	**5**	**5**	80	4	5
25	**4**	27	4	30	4	33	**5**	**5**	80	4	5
20	3	22	3	25	**3**	31	**4**	**4**			
40	6	44	**6**	47	3	55	7	7	100	5	6
20	4	22	4	25	**4**	31	**5**	**5**	80	4	5
15	3	18	3	20	**3**	31	**4**	**4**			
20	**4**	22	4	25	**4**	30	**5**	**5**	65	4	5
15	3	16	3	18	**4**	24	**4**	**4**			
18	4	20	4	22	**5**	30	5	5	65	3	3
12	3	15	3	17	**4**	20	**4**	**4**			
12	3	13	3	14	**4**	18	**4**	**4**			
8	2	9	2	10	**2**	15	**3**	**3**	30	2	3
14	4	20	**4**	22	4	25	**5**	**5**	30	**4**	**5**
10	3	16	**4**	18	3	18	**4**	**4**	30	3	**4**
12	3	18	**4**	20	3	20	**4**	**4**	30	3	**4**
						5	**3**	**3**	25	3	3
5	2			6	2	12	**2**	**2**	20	2	3
38	6	45	**6**	50	**7**	60	7	7	115	**4**	**5**
30	6	40	**6**	44	**7**	48	**7**	**7**	100	**4**	**5**
30	6	40	**6**	44	**7**	52	7	7	90	**4**	5
25	6	30	**6**	33	**7**	40	**7**	**7**	80	**4**	**5**
10	3			16	4	15	**4**	**4**			
						18	3	3	25	**3**	**4**
						12	**3**	**3**	20	**2**	**3**
90	7								260	**7**	**8**
90	7								260	**7**	**8**
80	7					120	7	7	195	**6**	**7**
70	6					95	8	8	155	**6**	**7**
85	6	80	6						235	**5**	**6**
80	5	88	**5**			100	6	6	100	**5**	**6**
70	5	77	**5**						235	5	6
40	5	44	**5**			55	6	6	235	5	6
40	4	45	**4**	50	5				155	5	6
30	4	40	**4**	44	5	60	5	5	155	5	6
25	4	30	**4**	33	5	55	5	5	90	4	5
15	4	25	**4**	28	5	45	**5**	**5**	65	3	4
20	4	22	**4**						50	4	5
25	5	27	**4**			48	6	6	65	3	4
									100	3	4

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no. R
Guhring no. L
Standard/DIN
Tool material
Surface finish
Type
Cooling
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤10xD drilling depth

561	211	204	217	257	523
			220		
339	339	340	340	341	G.S.
HSS	HSS	HSS	HSS	HSS	HSS
	>Ø 2,36		>Ø 2,36		
N	N	N	N	N	N
495	495	502	502	577	584

218	219	501	505	535	551
221				506	
340	340	340	341	340	341
HSS	HSS	HSS	HSS	HSS	HSS
				>Ø 2,36	>Ø 16,0
H	W	GT50	GT50	GT 100	GT 100
502	502	502	577	502	577

666	667	655	668	656	2462
339	340	341	340	341	340
HSS	HSS	HSS	HSS	HSS	HSS
S	S	S	S	S	F
N	N	N	GT 100	GT 100	GT 100
495	502	577	502	577	502

v_c m/min	Feed column no.					
24	6	6	6	6	6	6
20	5	5	5	5	5	5
27	6	6	6	6	6	6
27	5	5	5	5	5	5
22	5	5	5	5	5	5
22	5	5	5	5	5	5
27		6	6	6	6	6
14		4	4	4	4	4
27	6	6	6	6	6	6
27	6	6	6	6	6	6
22	6	6	6	6	6	6
18	6	6	6	6	6	6
45	7	7	7	7	7	7
45	6	6	6	6	6	6
63	6	6	6	6	6	6
54	5	5	5	5	5	5
36	5	5	5	5	5	5
28	4	4	4	4	4	4
22	4	4	4	4	4	4
22	4	4	4	4	4	4
14	4	4	4	4	4	4
22	5	5	5	5	5	5

v_c m/min	Feed column no.					
24					**6**	**6**
20					**5**	**5**
27					**6**	**6**
27					5	5
22					**5**	**5**
22					**5**	**5**
27					**6**	**6**
14					4	4
27					**6**	**6**
27					6	6
22					**6**	**6**
18					6	6
		7	**7**	**7**		
		7	**7**	**7**		
45		7			**7**	**7**
45					**6**	**6**
	6		**6**	6		
54		5			**5**	**5**
	6					
36					**5**	**5**
	4					
22					**4**	**4**
14	4				**4**	**4**
	5	5	5	5		

v_c m/min	Feed column no.					
30	6	6	6	**6**	**6**	**7**
24	5	5	5	**5**	**5**	**6**
33	6	6	6	**6**	**6**	**7**
33	5	5	5	5	5	6
28	5	5	5	**5**	**5**	**6**
28	5	5	5	**5**	**5**	**6**
24	4	4	4	4	4	5
23	4	4	4	4	4	5
33	6	6	6	**6**	**6**	**7**
18	4	4	4	4	4	5
15	4	4	4	4	4	5
19	4	4	4	4	4	5
13	3	3	3	3	3	4
33	6	6	6	**6**	**6**	**7**
33	6	6	6	6	6	7
26	6	6	6	**6**	**6**	**7**
22	6	6	6	6	6	7
55	7	7	7	**7**	**7**	**8**
55	6	6	6	**6**	**6**	**7**
	6	6	6			
65	5	5	5	**5**	**5**	**6**
44	5	5	5	**5**	**5**	**6**
	4	**4**	**4**			
	4	**4**	**4**			
16	4	4	4	**4**	**4**	**5**
14	4	4	4	4	4	5
23	4	4	4	**4**	**4**	**5**
	5	5	5			

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.	
Standard/DIN	
Tool material	
Surface finish	
Type	
Cooling	
Std. range page	

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
◉ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◉
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◉
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◉
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◉
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◉
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◉
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◉
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◉
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◉
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◉
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◉
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◉
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◉ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◉ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◉
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◉
Chilled cast iron	–		≤350 HB	◉
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◉
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◉
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◉
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◉
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◉
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◉
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◉
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◉ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◉ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◉ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◉ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◉ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◉ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◉ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤10xD drilling depth

390	269	270	271	272	1101
G.S.	G.S.	G.S.	G.S.	G.S.	G.S.
HSS	HSS	HSS	HSS	HSS	HSS
○	●	●	●	●	●
N	N	N	N	N	N
axial	radial	axial	radial	radial	DIN 228 BK
494	585	588	588	588	587

>10xD drilling depth

235	236	237	266	267	524	528	529	525	542
1869	1869	1869	1870	1870	1869	1869	1869	1870	1870
HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
◐ >Ø 2,36	●	●	●	●	○	○	○	○	○
N	N	N	N	N	GT50	GT50	GT50	GT50	GT50
528	532	535	593	596	527	532	535	593	596

Vc m/min	Feed column no.																			
26	6	6	6	6	6	6		5	5	5	5	5								
22	5	5	5	5	5	5		4	4	4	4	4								
30	6	6	6	6	6	6		5	5	5	5	5								
30	**5**	**5**	**5**	**5**	**5**	**5**		4	4	4	4	4								
24	**5**	**5**	**5**	**5**	**5**	**5**		4	4	4	4	4								
24	**5**	**5**	**5**	**5**	**5**	**5**		4	4	4	4	4								
22	4	4	4	4	4	4														
20	4	4	4	4	4	4		3	3	3	3	3								
14	3	3	3	3	3	3														
30	**6**	**6**	**6**	**6**	**6**	**6**		5	5	5	5	5								
17	4	4	4	4	4	4		3	3	3	3	3								
12	3	3	3	3	3	3														
14	4	4	4	4	4	4		3	3	3	3	3								
10	3	3	3	3	3	3														
15	**4**	**4**	**4**	**4**	**4**	**4**		3	3	3	3	3								
10	3	3	3	3	3	3		2	2	2	2	2								
10	3	3	3	3	3	3		2	2	2	2	2								
7	2	2	2	2	2	2														
30	**6**	**6**	**6**	**6**	**6**	**6**		5	5	5	5	5								
30	6	6	6	6	6	6		5	5	5	5	5								
24	**6**	**6**	**6**	**6**	**6**	**6**		5	5	5	5	5								
20	6	6	6	6	6	6		5	5	5	5	5								
7	3	3	3	3	3	3														
							55						6	6	6	6	6			
	6						55						6	6	6	6	6			
50	**7**	**7**	**7**	**7**	**7**	**7**		6	6	6	6	6								
50	**6**	**6**	**6**	**6**	**6**	**6**		5	5	5	5	5								
							55	5	5	5	5	5	5	5	5	5	5			
60	**5**	**5**	**5**	**5**	**5**	**5**		4	4	4	4	4								
40	**5**	**5**	**5**	**5**	**5**	**5**		4 4	4 4	4 4	4 4	4 4								
24	**4**	**4**	**4**	**4**	**4**	**4**		3 3	3 3	3 3	3 3	3 3								
24	**4**	**4**	**4**	**4**	**4**	**4**		3	3	3	3	3								
22	4	4	4	4	4	4														
24	**5**	**5**	**5**	**5**	**5**	**5**	18	3 4	3 4	3 4	3 4	3 4	4	4	4	4	4			

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.	
Standard/DIN	
Tool material	
Surface finish	
Type	
Std. range page	

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
◉ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◉
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◉
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◉
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◉
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◉
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◉
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◉
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◉
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◉
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◉
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◉
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◉
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◉ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◉ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◉
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◉
Chilled cast iron	–		≤350 HB	◉
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◉
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◉
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◉
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◉
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◉
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◉
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◉
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◉ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◉ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◉ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◉ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◉ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◉ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◉ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

>10xD drilling depth

502	503	504	242	243	244	526	527	563	564	565	566	293	298	299	670	671
1869	1869	1869	G.S.	G.S.	G.S.	1870	1870	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.	1869	1869
HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
>Ø 2,36	>Ø 2,36					>Ø 16,0	>Ø 16,0			>Ø 16,0	>Ø 16,0	>Ø 16,0			S	S
GT 100	GT 100	GT 100	GT 100	GT 100	GT 100	GT 100	GT 100	GT 100	GT 100	GT 100	GT 100	GT 100	GT 100	GT 100	GT 100	GT 100
527	532	535	538	538	538	593	596	599	600	601	599	600	602	602	527	532

Vc m/min	Feed column no.															Vc m/min	Feed column no.	
22	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	28	5	5
18	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	22	4	4
22	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	28	5	5
18	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	22	4	4
22	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	28	4	4
18	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	22	4	4
																16	3	3
22	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	28	5	5
12	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	12	3	3
6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	8	2	2
																6	1	1
22	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	28	5	5
18	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	22	5	5
20	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	25	5	5
14	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	18	5	5
																70	6	6
																70	6	6
45	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	55	6	6
36	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	45	5	5
55	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	70	5	5
22	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	28	4	4
28	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	36	4	4
22	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	28	3	3
20	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	25	3	3
18	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	22	3	3
																18	3	3
12	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	15	3	3
18	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	22	4	4

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Carbide grade
Surface finish
Type
Std. range page

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
◉ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◉
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◉
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◉
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◉
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◉
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◉
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◉
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◉
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◉
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◉
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◉
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◉
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◉ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◉ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◉
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◉
Chilled cast iron	–		≤350 HB	◉
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◉
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◉
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◉
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◉
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◉
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◉
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◉
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◉ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◉ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◉ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◉ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◉ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◉ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◉ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤10xD drilling depth

311	317	357	336	623	617	669	396	706
339	340	341	340	341	340	340	340	G.S.
HSCO	HSCO	HSCO	HSCO	HSCO	HSCO	HSCO	HSCO	Solid carbide
								K10/K20
>Ø 2,36	>Ø 2,36		>Ø 2,36	>Ø 16,0		S	F	
N	N	N	GT 100	GT 100	Ti	Ti	GT 100	N
495	502	577	502	577	502	502	502	526

v_c m/min	Feed column no.						v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed col. no.
	5	5	5	5	5				*36*	**5**		
	5	5	5	5	5				*30*	**4**		
	5	5	5	5	5				*40*	**5**		
	5	5	5	**5**	**5**				*36*	5		
	5	5	5	5	5				*40*	**5**		
	5	5	5	5	5				*40*	**5**		
	4	4	4	**4**	**4**				*26*	4		
	4	4	4	**4**	**4**				*18*	4		
14	3	3	3	**3**	**3**	3	*15*	3	*15*	3		
	5	5	5	5	5				*32*	**5**		
	4	4	4	**4**	**4**				*20*	4		
	3	3	3	**3**	**3**		*13*	3	*18*	3		
	4	4	4	**4**	**4**				*18*	4		
	3	3	3	**3**	**3**		*10*	3	*12*	3		
	4	4	4	**4**	**4**				*15*	4		
	3	3	3	**3**	**3**		*10*	3	*12*	3		
	3	3	3	**3**	**3**		*10*	3	*14*	**3**		
	2	2	2	2	2		*8*	**2**	*9*	**3**		
12	4	4	4	**4**	**4**	4	*15*	4	*14*	4		
8	3	3	3	2	2	**3**	*10*	**3**	*10*	**3**		
10	3	3	3	**3**	**3**	**3**	*13*	**3**	*12*	**3**		
				1	1				*5*	1		
5	1	1	1			1	*6*	1				
	6	6	6	6	6				*35*	**6**		
	6	6	6	**6**	**6**				*30*	6		
	6	6	6	6	6				*30*	**6**		
	6	6	6	**6**	**6**				*26*	6		
6	3	3	3	3	3	3	*6*	**3**	*12*	3		
8						**2**	*10*	**2**				
5						**2**	*6*	**2**				
				7	7				*77*	**7**		
				6	6				*66*	**6**		
60						5						
	5	5	5	5	5				*40*	**6**		
				5	5							
	5	5	5	5	5				*40*	**6**		
	4	4	4	5	5							
	4	4	4	5	5							
	4	4	4	4	4				*21*	**5**		
13	4	4	4	**4**	**4**	4	*25*	4	*15*	**5**		
	4	4	4	4	4				*30*	**5**	*50*	**4**
26						4					*40*	**3**
											80	**3**

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.	
Standard/DIN	
Tool material	
Surface finish	
Type	
Cooling	
Std. range page	

Drill Ø mm	Feed column no. 1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.500	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.000	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.000	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.500	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.150	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.000	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.300	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.000	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.000	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.500	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.000	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.000	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.000	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.500	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.000	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.000	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.000	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.000	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000

Coolant:
○ Air
● Neat oil
◉ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◉
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◉
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◉
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◉
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◉
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◉
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◉
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◉
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◉
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◉
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◉
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◉
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◉ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◉ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◉
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◉
Chilled cast iron	–		≤350 HB	◉
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◉
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◉
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◉
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◉
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◉
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◉
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◉
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◉ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◉ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◉ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◉ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◉ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◉ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◉ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

>10xD drilling depth

618	619	620	621
1869	1869	1870	1870
HSCO	HSCO	HSCO	HSCO
		>Ø 16,0	>Ø 16,0
GT 100	GT 100	GT 100	GT 100
527	532	593	596

571
1869
HSCO
GT 100
535

370	371	372
G.S.	G.S.	G.S.
HSCO	HSCO	HSCO
GT 100	GT 100	GT 100
	axial	radial
588	588	588

374	375	376
G.S.	G.S.	G.S.
HSCO	HSCO	HSCO
GT 100	GT 100	GT 100
	axial	radial
591	591	591

v_c m/min	Feed column no.			
30	4	4	4	4
25	4	4	4	4
33	4	4	4	4
30	**4**	**4**	**4**	**4**
33	4	4	4	4
33	4	4	4	4
20	**3**	**3**	**3**	**3**
14	**3**	**3**	**3**	**3**
10	**2**	**2**	**2**	**2**
29	4	4	4	4
14	**3**	**3**	**3**	**3**
10	**2**	**2**	**2**	**2**
10	**3**	**3**	**3**	**3**
8	**2**	**2**	**2**	**2**
11	**3**	**3**	**3**	**3**
8	**2**	**2**	**2**	**2**
8	**2**	**2**	**2**	**2**
5	**1**	**1**	**1**	**1**
10	**3**	**3**	**3**	**3**
8	**2**	**2**	**2**	**2**
10	**2**	**2**	**2**	**2**
3	1	1	1	1
5	**1**	**1**	**1**	**1**
20	**5**	**5**	**5**	**5**
16	**5**	**5**	**5**	**5**
5	2	2	2	2
6	**1**	**1**	**1**	**1**
5	**1**	**1**	**1**	**1**
50	6	6	6	6
40	5	5	5	5
30	4	4	4	4
45	4	4	4	4
30	4	4	4	4
25	4	4	4	4
20	4	4	4	4
16	3	3	3	3
10	**3**	**3**	**3**	**3**
14	3	3	3	3
20	3	3	3	3

v_c m/min	Feed col. no.

v_c m/min	Vorschubreihen-Code		
35	6	6	6
30	5	5	5
30	6	6	6
30	5	5	5
35	5	5	5
29	5	5	5
22	**4**	**4**	**4**
18	**4**	**4**	**4**
14	**3**	**3**	**3**
35	6	6	6
18	**4**	**4**	**4**
14	**3**	**3**	**3**
14	**4**	**4**	**4**
12	**3**	**3**	**3**
15	4	4	4
11	**3**	**3**	**3**
11	**3**	**3**	**3**
8	**2**	**2**	**2**
14	**4**	**4**	**4**
10	3	3	3
12	**3**	**3**	**3**
4	2	2	2
8	**1**	**1**	**1**
30	6	6	6
24	**6**	**6**	**6**
24	6	6	6
20	**6**	**6**	**6**
8	3	3	3
10	**2**	**2**	**2**
8	**2**	**2**	**2**
60	7	7	7
50	6	6	6
38	5	5	5
55	5	5	5
36	5	5	5
24	4	4	4
20	**4**	**4**	**4**
14	**4**	**4**	**4**
25	5	5	5

v_c m/min	Vorschubreihen-Code		
30	**5**	**5**	**5**
25	**4**	**4**	**4**
30	**5**	**5**	**5**
25	**4**	**4**	**4**
30	**4**	**4**	**4**
25	**4**	**4**	**4**
18	**3**	**3**	**3**
16	**3**	**3**	**3**
12	**2**	**2**	**2**
30	**5**	**5**	**5**
16	**3**	**3**	**3**
12	**2**	**2**	**2**
12	**3**	**3**	**3**
10	**2**	**2**	**2**
13	**3**	**3**	**3**
9	**2**	**2**	**2**
9	**2**	**2**	**2**
6	**2**	**2**	**2**
12	**3**	**3**	**3**
8	**2**	**2**	**2**
12	**2**	**2**	**2**
4	**1**	**1**	**1**
6	**1**	**1**	**1**
28	**5**	**5**	**5**
22	**5**	**5**	**5**
22	**5**	**5**	**5**
18	**5**	**5**	**5**
6	**2**	**2**	**2**
8	**2**	**2**	**2**
6	**2**	**2**	**2**
55	**6**	**6**	**6**
44	**5**	**5**	**5**
35	**4**	**4**	**4**
50	4	4	4
33	**4**	**4**	**4**
22	**4**	**4**	**4**
18	**4**	**4**	**4**
12	**4**	**4**	**4**
25	**4**	**4**	**4**

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Tools with bold feed column no. are preferred choice.
To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no. R
Guhring no. L
Standard/DIN
Tool material
Carbide grade
Surface finish
Type
Cooling
Std. range page

Drill Ø mm	Feed column no. 101	102	103	104	105	106	107	108	109
	f (mm/rev.)								
0.10	0.002	0.003	0.003	0.004	0.006	0.007	0.010	0.013	0.016
0.16	0.002	0.003	0.004	0.005	0.007	0.009	0.012	0.016	0.022
0.25	0.003	0.004	0.005	0.007	0.009	0.011	0.014	0.019	0.024
0.30	0.004	0.005	0.007	0.009	0.011	0.015	0.019	0.025	0.033
0.50	0.005	0.007	0.008	0.011	0.014	0.019	0.024	0.031	0.041
0.63	0.007	0.009	0.012	0.015	0.020	0.026	0.034	0.044	0.057
0.80	0.010	0.013	0.016	0.020	0.024	0.031	0.038	0.048	0.060
1.00	0.020	0.024	0.029	0.035	0.041	0.050	0.060	0.072	0.086
1.50	0.030	0.035	0.040	0.046	0.052	0.060	0.069	0.080	0.092
2.00	0.040	0.046	0.053	0.061	0.070	0.080	0.093	0.106	0.122

Coolant:
○ Air
● Neat oil
◍ Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Drill Ø mm	Feed column no. for Guhring no. 6400/6401/6408/6412 56	57	58	59	60	61	62	63	64	65	66	67	68
	f (mm/rev.)												
0.50	0.006	0.012	0.018	0.022	0.030	0.035	0.040	0.045	0.050	0.050	0.055	0.060	0.060
0.80	0.008	0.016	0.024	0.032	0.040	0.050	0.060	0.070	0.080	0.080	0.080	0.090	0.090
1.00	0.012	0.022	0.032	0.042	0.060	0.070	0.080	0.090	0.100	0.100	0.110	0.110	0.120
1.50	0.021	0.036	0.051	0.066	0.090	0.100	0.120	0.130	0.150	0.150	0.160	0.170	0.180
2.00	0.032	0.052	0.072	0.092	0.120	0.140	0.160	0.180	0.200	0.210	0.220	0.230	0.240
2.50	0.045	0.070	0.095	0.120	0.150	0.170	0.200	0.220	0.250	0.260	0.270	0.280	0.300
3.00	0.060	0.090	0.120	0.150	0.180	0.210	0.240	0.270	0.300	0.310	0.330	0.340	0.360

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◍
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◍
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◍
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◍
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◍
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◍
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◍
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◍
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◍
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◍
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◍
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◍
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◍ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◍ ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◍
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◍
Chilled cast iron	–		≤350 HB	◍
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◍
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◍
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◍
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◍
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◍
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◍
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◍
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◍ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◍ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◍ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◍ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◍ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◍ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

				≤4xD	≤7xD	≤8xD	≤15xD
301 303	660	701	3899	6400	6401	6408	6412
1899	1899	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.
HSS-E-PM	HSS-E-PM	Solid carbide	Solid carbide	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.
		K10/K20	K/P	K/P	K/P	K/P	K/P
○	S	○	A	A	A	A	A
N	N	N	N	N	N	N	N
						axial	axial
476	476	476	483	485	487	489	491

v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed col. no.	v_c m/min	Feed column no.		v_c m/min	Feed column no.	
21	106	27	106	50	105	100	**62**	100	**64**	**62**	105	**58**	**58**
18	105	23	105	35	104	100	**62**	100	**64**	**62**	100	**58**	**58**
18	106	23	106	50	**105**	100	**62**	100	**64**	**62**	105	**59**	**59**
16	105	21	105	45	**104**	90	**61**	90	**63**	**61**	90	**59**	**59**
20	105	26	105	45	104	90	**62**	90	**64**	**62**	95	**58**	**58**
18	105	23	105	35	104	90	**62**	90	**64**	**62**	95	**58**	**58**
14	**104**	18	**104**	30	103	90	**61**	90	**63**	**61**	90	**58**	**58**
14	**104**	18	**104**	30	103	90	**61**	90	**63**	**61**	90	**58**	**58**
12	103	16	103			70	**60**	70	**62**	**60**	70	**58**	**58**
18	106	23	106	50	103	100	**61**	100	**63**	**61**	100	**57**	**57**
14	**104**	18	**104**	40	103	85	**61**	85	**63**	**61**	85	**58**	**58**
12	103	16	103			70	**60**	70	**62**	**60**	70	**58**	**58**
14	**104**	18	**104**	25	103	70	**60**	70	**62**	**60**	70	**57**	**57**
12	103	16	103			60	**60**	60	**62**	**60**	60	**57**	**57**
16	**104**	20	**104**	25	103	50	**60**	50	**62**	**60**	50	**58**	**58**
14	103	18	103			60	**60**	60	**62**	**60**	50	**58**	**58**
14	103	18	103								50	**57**	**57**
8	102	10	102	20	102						50	57	57
18	104	20	104	25	**103**						70	**57**	**57**
14	103	16	103	25	**102**						60	**56**	**56**
16	103	18	103	25	**102**						70	**57**	**57**
				15	104								
				15	**103**						25	56	56
26	106	33	106	80	**105**	130	**66**	130	**68**	**66**	150	**60**	**60**
22	**106**	28	**106**	60	**105**	130	**66**	130	**68**	**66**	140	**60**	**60**
18	106	23	106	60	105	130	**66**	130	**68**	**66**	140	**60**	**60**
22	**106**	28	**106**	50	**105**	120	**65**	120	**67**	**65**	130	**60**	**60**
				45	**104**						35	56	56
				25	**104**						35	56	56
				160	**107**						70	68	68
				150	**106**						70	68	68
26	107			100	**106**						135	59	59
18	106			60	**106**						135	59	59
75	106	80	106	150	**105**								
42	105	53	105	50	**105**								
				67	106								
22	105	28	105	44	104								
22	104	28	104	68	103								
18	104	23	104	49	103								
13	104	16	104	53	103								
		14	104	36	103								
16	104	20	104	50	103								
18	104	23	104	36	103								
				60	104								

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Ratio drills without oil feed

Optimized cutting geometry
Special web thinning
Special point grind
Very good self-centering characteristics
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Chatter-free, defined feed
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	1184
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	S
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	198

Ratio drills without oil feed

Optimized cutting geometry
Special web thinning
Special point grind
nanoFIRE coating
Very good self-centering characteristics
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Chatter-free, defined feed
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	2480
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	F
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	198

Ratio drills without oil feed

Optimized cutting geometry
Special web thinning
Special point grind
nanoFIRE coating
Very good self-centering characteristics
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Chatter-free, defined feed
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	2472
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	F
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	198

Ratio drills without oil feed

Optimized cutting geometry
Special web thinning
Special point grind
nanoFIRE coating
Very good self-centering characteristics
Highest cutting rates
Short chips
Close diameter tolerances
Alignment accurate holes
Powerful machines
Chatter-free, defined feed
Max. conc. error of clamped tool 0.02 mm

high alloyed steels
stainless/acid/heat resistant steels
Inconel, Monel, Hastelloy
brass, bronzes
Aluminium and Al-alloys
Magnesium and Magnesium alloys
Titanium and Titanium alloys
sintered powder metals

Guhring no.	2475
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	F
Type	RT 100 F
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.70
Standard range page	198

Ratio drills without oil feed

Special geometry
Maximum tool life
High process reliability

heat treatable and alloyed steels up to 1200 N/mm²
hardened steels 40 to 48 HRC
Inconel, Monel, Hastelloy

Guhring no.	8524
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	Y
Type	RT 100 HF
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	198

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

Ratio drills without oil feed

Guhring no.	2717
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	S
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	204

Optimized cutting geometry
Special web thinning
Special point grind
Very good self-centering characteristics
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Chatter-free, defined feed
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Ratio drills without oil feed

Guhring no.	2996
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	F
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	204

Optimized cutting geometry
Special web thinning
Special point grind
nanoFIRE coating
Very good self-centering characteristics
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Chatter-free, defined feed
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Ratio drills without oil feed

Guhring no.	2719
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	F
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	204

Optimized cutting geometry
Special web thinning
Special point grind
nanoFIRE coating
Very good self-centering characteristics
Highest cutting rates
Alignment accurate holes
Powerful machines
Chatter-free, defined feed
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Ratio drills without oil feed

Guhring no.	2712
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	F
Type	RT 100 F
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	204

Optimized cutting geometry
Special web thinning
Special point grind
nanoFIRE coating
Very good self-centering characteristics
Highest cutting rates
Short chips
Close diameter tolerances
Alignment accurate holes
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

high alloyed steels
stainless/acid/heat resistant steels
Inconel, Monel, Hastelloy
brass, bronzes
Aluminium and Al-alloys
Magnesium and Magnesium alloys
Titanium and Titanium alloys
sintered powder metals

Ratio drills without oil feed

Guhring no.	1242
Standard	DIN 6539
Tool material	Solid carbide
Surface	S
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	209

Optimized cutting geometry
Special web thinning
Special point grind
Very good surface quality of hole
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Chatter-free, defined feed
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Ratio drills without oil feed

Optimized cutting geometry
Special web thinning
Special point grind
nanoFIRE coating
Very good self-centering characteristics
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Chatter-free, defined feed
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	2473
Standard	DIN 6539
Tool material	Solid carbide
Surface	F
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	209

Ratio drills without oil feed

Optimized cutting geometry
Special web thinning
Special point grind
Very good self-centering characteristics
Highest cutting rates
Short chips
Close diameter tolerances
Alignment accurate holes
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

high alloyed steels
stainless/acid/heat resistant steels
Inconel, Monel, Hastelloy
brass, bronzes
Aluminium and Al-alloys
Magnesium and Magnesium alloys
Titanium and Titanium alloys
sintered powder metals

Guhring no.	1702
Standard	DIN 6539
Tool material	Solid carbide
Surface	S
Type	RT 100 F
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	209

Ratio drills without oil feed

Optimized cutting geometry
Special web thinning
Special point grind
Very good self-centering characteristics
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Chatter-free, defined feed
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	1243
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	5.00
Standard range page	213

Ratio drills without oil feed

Optimized cutting geometry
Special web thinning
Special point grind
nanoFIRE coating
Very good self-centering characteristics
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Chatter-free, defined feed
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	2474
Standard	Guhring std.
Tool material	Solid carbide
Surface	F
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	5.00
Standard range page	213

Ratio drills with oil feed

Optimized cutting geometry
Special web thinning
Special point grind
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	1181
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	S
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	216

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

Ratio drills with oil feed

Guhring no.	2477
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	F
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	216

Optimized cutting geometry
Special web thinning
Special point grind
nanoFIRE coating
Straight shank without flat
Highest cutting rates
Short chips
Alignment accurate holes
Application in hydraulic chucks
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Ratio drills with oil feed

Guhring no.	2469
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	F
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	216

Optimized cutting geometry
Special web thinning
Special point grind
nanoFIRE coating
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Ratio drills with oil feed

Guhring no.	1660
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	S
Type	RT 100 F
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	217

Optimized cutting geometry
Special web thinning
Special point grind
Straight shank without flat
Highest cutting rates
Short chips
Alignment accurate holes
Application in hydraulic chucks
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

high alloyed steels
stainless/acid/heat resistant steels
Inconel, Monel, Hastelloy
brass, bronzes
Aluminium and Al-alloys
Magnesium and Magnesium alloys
Titanium and Titanium alloys
sintered powder metals

Ratio drills with oil feed

Guhring no.	1180
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	S
Type	RT 100 F
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	217

Optimized cutting geometry
Special web thinning
Special point grind
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

high alloyed steels
stainless/acid/heat resistant steels
Inconel, Monel, Hastelloy
brass, bronzes
Aluminium and Al-alloys
Magnesium and Magnesium alloys
Titanium and Titanium alloys
sintered powder metals

Ratio drills with oil feed

Guhring no.	2468
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	F
Type	RT 100 F
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	217

Optimized cutting geometry
Special web thinning
Special point grind
nanoFIRE coating
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

high alloyed steels
stainless/acid/heat resistant steels
Inconel, Monel, Hastelloy
brass, bronzes
Aluminium and Al-alloys
Magnesium and Magnesium alloys
Titanium and Titanium alloys
sintered powder metals

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Ratio drills with oil feed

Guhring no.	8510
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	a
Type	RT 100 VA
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	217

Special geometry
Maximum tool life
High process reliability

stainless/acid/heat resistant steels
Titanium and Titanium alloys
Inconel, Monel, Hastelloy
high alloyed steels
Al-alloys

Ratio drills with oil feed

Guhring no.	8610
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	a
Type	RT 100 VA
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	217

Special geometry
Maximum tool life
High process reliability

stainless/acid/heat resistant steels
Titanium and Titanium alloys
Inconel, Monel, Hastelloy
high alloyed steels
Al-alloys

Ratio drills with oil feed

Guhring no.	8520
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	Y
Type	RT 100 HF
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	217

Special geometry
Maximum tool life
High process reliability

heat treatable and alloyed steels up to 1200 N/mm²
hardened steels 40 to 48 HRC
Inconel, Monel, Hastelloy

Ratio drills with oil feed

Guhring no.	8620
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	Y
Type	RT 100 HF
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	217

Special geometry
Maximum tool life
High process reliability

heat treatable and alloyed steels up to 1200 N/mm²
hardened steels 40 to 48 HRC
Inconel, Monel, Hastelloy

Ratio drills with oil feed

Guhring no.	768
Standard	Guhring std.
Tool material	Solid carbide
Surface	○
Type	RT 150 GG
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	3.00
Standard range page	230

Very good self-centering characteristics
High productivity
High cutting rates
Close diameter tolerances
Very good surface quality of hole
Application in hydraulic chucks
Alignment accurate tool holders
Powerful machines
Observe optimal coolant pressure
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

Aluminium and Al-alloys
with high Si-content

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Ratio drills with oil feed

Very good self-centering characteristics
High productivity
High cutting rates
Close diameter tolerances
Very good surface quality of hole
Application in hydraulic chucks
Alignment accurate tool holders
Powerful machines
Observe optimal coolant pressure
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

short chipping cast materials

Guhring no.	6068
Standard	Guhring std.
Tool material	Solid carbide
Surface	
Type	RT 150 GG
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	130
Web thinned ≥Ø	3.00
Standard range page	230

Ratio drills with oil feed

Optimized cutting edge geometry
Special web thinning
Special point grind
Straight shank without flat
Highest cutting rates
Short chips
Alignment accurate holes
Application in hydraulic chucks
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	1663
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	S
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	234

Ratio drills with oil feed

Optimized cutting edge geometry
Special web thinning
Special point grind
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	1183
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	S
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	234

Ratio drills with oil feed

Optimized cutting edge geometry
Special web thinning
Special point grind
nanoFIRE coating
Straight shank without flat
Highest cutting rates
Short chips
Alignment accurate holes
Application in hydraulic chucks
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	2479
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	F
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	234

Ratio drills with oil feed

Optimized cutting edge geometry
Special web thinning
Special point grind
nanoFIRE coating
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	2471
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	F
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	234

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Ratio drills with oil feed

Optimized cutting edge geometry
Special web thinning
Special point grind
Straight shank without flat
Highest cutting rates
Short chips
Alignment accurate holes
Application in hydraulic chucks
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

high alloyed steels
stainless/acid/heat resistant steels
Inconel, Monel, Hastelloy
brass, bronzes
Aluminium and Al-alloys
Magnesium and Magnesium alloys
Titanium and Titanium alloys
sintered powder metals

Guhring no.	1662
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	S
Type	RT 100 F
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	235

Ratio drills with oil feed

Optimized cutting edge geometry
Special web thinning
Special point grind
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

high alloyed steels
stainless/acid/heat resistant steels
Inconel, Monel, Hastelloy
brass, bronzes
Aluminium and Al-alloys
Magnesium and Magnesium alloys
Titanium and Titanium alloys
sintered powder metals

Guhring no.	1182
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	S
Type	RT 100 F
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	235

Ratio drills with oil feed

Optimized cutting edge geometry
Special web thinning
Special point grind
nanoFIRE coating
Straight shank without flat
Highest cutting rates
Short chips
Alignment accurate holes
Application in hydraulic chucks
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

high alloyed steels
stainless/acid/heat resistant steels
Inconel, Monel, Hastelloy
brass, bronzes
Aluminium and Al-alloys
Magnesium and Magnesium alloys
Titanium and Titanium alloys
sintered powder metals

Guhring no.	2478
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	F
Type	RT 100 F
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	235

Ratio drills with oil feed

Optimized cutting edge geometry
Special web thinning
Special point grind
nanoFIRE coating
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

high alloyed steels
stainless/acid/heat resistant steels
Inconel, Monel, Hastelloy
brass, bronzes
Aluminium and Al-alloys
Magnesium and Magnesium alloys
Titanium and Titanium alloys
sintered powder metals

Guhring no.	2470
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	F
Type	RT 100 F
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	235

Ratio drills with oil feed

Special geometry
Radius point grind
nanoFIRE coating
Maximum tool life
High process reliability

CGI and ADI
cast materials
grey cast iron, malleable and spheroidal iron

Guhring no.	6501
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	F
Type	RT 100 R
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	
Web thinned ≥Ø	3.00
Standard range page	235

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

Ratio drills with oil feed

Guhring no.	8511
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	a
Type	RT 100 VA
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	235

Special geometry
Maximum tool life
High process reliability

stainless/acid/heat resistant steels
Titanium and Titanium alloys
Inconel, Monel, Hastelloy
high alloyed steels
Al-alloys

Ratio drills with oil feed

Guhring no.	8611
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	a
Type	RT 100 VA
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	235

Special geometry
Maximum tool life
High process reliability

stainless/acid/heat resistant steels
Titanium and Titanium alloys
Inconel, Monel, Hastelloy
high alloyed steels
Al-alloys

Ratio drills with oil feed

Guhring no.	8521
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	Y
Type	RT 100 HF
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	235

Special geometry
Maximum tool life
High process reliability

heat treatable and alloyed steels up to 1200 N/mm²
hardened steels 40 to 48 HRC
Inconel, Monel, Hastelloy

Ratio drills with oil feed

Guhring no.	8621
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	Y
Type	RT 100 HF
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	235

Special geometry
Maximum tool life
High process reliability

heat treatable and alloyed steels up to 1200 N/mm²
hardened steels 40 to 48 HRC
Inconel, Monel, Hastelloy

Ratio drills with oil feed

Guhring no.	2711
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	248

Optimized cutting edge geometry
Special web thinning
Special point grind
Straight shank without flat
Highest cutting rates
Short chips
Alignment accurate holes
Application in hydraulic chucks
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Ratio drills with oil feed

Optimized cutting edge geometry
Special web thinning
Special point grind
nanoFIRE coating
Straight shank without flat
Highest cutting rates
Short chips
Alignment accurate holes
Application in hydraulic chucks
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	4044
Standard	Guhring std.
Tool material	Solid carbide
Surface	F
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	248

Ratio drills with oil feed

Optimized cutting edge geometry
Special web thinning
Special point grind
nanoFIRE coating
Highest cutting rates
Short chips
Alignment accurate holes
Powerful machines
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

structural and case hardened steels
cast steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
carbon steels, bronze, cast iron
high alloyed AlSi-alloys

Guhring no.	4045
Standard	Guhring std.
Tool material	Solid carbide
Surface	F
Type	RT 100 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	248

Ratio drills with oil feed

Special geometry
Radius point grind
nanoFIRE coating
Maximum tool life
High process reliability

CGI and ADI
cast materials
grey cast iron, malleable and spheroidal iron

Guhring no.	6502
Standard	Guhring std.
Tool material	Solid carbide
Surface	F
Type	RT 100 R
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	
Web thinned ≥Ø	4.00
Standard range page	248

Ratio drills with oil feed

Special geometry
Maximum tool life
High process reliability

heat treatable and alloyed steels up to 1200 N/mm²
hardened steels 40 to 48 HRC
Inconel, Monel, Hastelloy

Guhring no.	8522
Standard	Guhring std.
Tool material	Solid carbide
Surface	Y
Type	RT 100 HF
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	3.00
Standard range page	248

Ratio drills with oil feed

Very good self-centering characteristics
High productivity
High cutting rates
Close diameter tolerances
Very good surface quality of hole
Application in hydraulic chucks
Alignment accurate tool holders
Powerful machines
Observe optimal coolant pressure
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

Aluminium and Al-alloys
with high Si-content

Guhring no.	769
Standard	Guhring std.
Tool material	Solid carbide
Surface	○
Type	RT 150 GG
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	3.00
Standard range page	253

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Ratio drills with oil feed

Very good self-centering characteristics
High productivity
High cutting rates
Close diameter tolerances
Very good surface quality of hole
Application in hydraulic chucks
Alignment accurate tool holders
Powerful machines
Observe optimal coolant pressure
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

short chipping cast materials

Guhring no.	6069
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	RT 150 GG
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	130
Web thinned ≥Ø	3.00
Standard range page	253

Ratio drills with oil feed

Very good self-centering characteristics
High productivity
High cutting rates
Close diameter tolerances
Very good surface quality of hole
Application in hydraulic chucks
Alignment accurate tool holders
Powerful machines
Observe optimal coolant pressure
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

Aluminium and Al-alloys
with high Si-content

Guhring no.	770
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	RT 150 GG
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	3.00
Standard range page	255

Ratio drills with oil feed

Very good self-centering characteristics
High productivity
High cutting rates
Close diameter tolerances
Very good surface quality of hole
Application in hydraulic chucks
Alignment accurate tool holders
Powerful machines
short chipping cast materials

short chipping cast materials

Guhring no.	6070
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	RT 150 GG
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	130
Web thinned ≥Ø	3.00
Standard range page	255

Ratio drills with oil feed

Negative helix
Extremely quiet spotting characteristics
High dynamic stability
For dimensionally very accurate holes
Very good surface quality of hole
Application in hydraulic chucks
Alignment accurate tool holders
Powerful machines
Observe optimal coolant pressure
Max. conc. error of clamped tool 0.02 mm
Play-free spindles

Aluminium and Al-alloys
with high Si-content
Cast Iron

Guhring no.	773
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	RT 150 GN
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	5.00
Standard range page	257

Ratio drills with oil feed

Special geometry
Optimised flute design
Maximum diameter of coolant ducts
Highest cutting rates
Short chips
Application in hydraulic chucks
Observe optimal coolant pressure

structural and case hardened steels
Free-cutting steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
stainless steels, cast iron

Guhring no.	6509
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	RT 100 T
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	135
Web thinned ≥Ø	3.00
Standard range page	258

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Ratio drills with oil feed

Special geometry
Optimised flute design
Maximum diameter of coolant ducts
Highest cutting rates
Short chips
Application in hydraulic chucks
Observe optimal coolant pressure

structural and case hardened steels
Free-cutting steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
stainless steels, cast iron

Guhring no.	6511
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	RT 100 T
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	135
Web thinned ≥Ø	3.00
Standard range page	260

Ratio drills with oil feed

Special geometry
Optimised flute design
Maximum diameter of coolant ducts
Highest cutting rates
Short chips
Application in hydraulic chucks
Observe optimal coolant pressure

structural and case hardened steels
Free-cutting steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
stainless steels, cast iron

Guhring no.	6512
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	RT 100 T
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	135
Web thinned ≥Ø	3.00
Standard range page	262

Ratio drills with oil feed

Special geometry
Optimised flute design
Maximum diameter of coolant ducts
Highest cutting rates
Short chips
Application in hydraulic chucks
Observe optimal coolant pressure

structural and case hardened steels
Free-cutting steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
stainless steels, cast iron

Guhring no.	6513
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	RT 100 T
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	135
Web thinned ≥Ø	3.00
Standard range page	264

Ratio drills with oil feed

Special geometry
Optimised flute design
Maximum diameter of coolant ducts
Highest cutting rates
Short chips
Application in hydraulic chucks
Observe optimal coolant pressure

structural and case hardened steels
Free-cutting steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
stainless steels, cast iron

Guhring no.	6514
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	RT 100 T
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	135
Web thinned ≥Ø	3.00
Standard range page	265

Ratio drills with oil feed

HSS holder with brazed carbide insert
Special geometry
Dampens vibrations and shocks
Highest cutting rates
Optimal chip fracture and short chips
Close diameter tolerances
Alignment accurate holes
Alignment accurate tool holders
Coolant press./volume s. Techn. Section
Powerful machines
Max. conc. error of clamped tool 0.02 mm

unalloyed/low alloyed steels
grey cast iron, spheroidal graphite iron
brass, bronzes, plastics, graphite

Guhring no.	1171
Standard	DIN 6538 K
Tool material	Carbide
Surface	S
Type	RT 80 U
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	9.50
Standard range page	266

bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A TiAlN SuperA

Ratio drills with oil feed

HSS holder with brazed carbide insert
Special geometry
Dampens vibrations and shocks
Highest cutting rates
Optimal chip fracture and short chips
Close diameter tolerances
Alignment accurate holes
Alignment accurate tool holders
Coolant press./volume s. Techn. Section
Powerful machines
Max. conc. error of clamped tool 0.02 mm

unalloyed/low alloyed steels
grey cast iron, spheroidal graphite iron
brass, bronzes, plastics, graphite

Guhring no.	1172
Standard	DIN 6538 M
Tool material	Carbide
Surface	S
Type	RT 80 U
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	9.50
Standard range page	269

Ratio drills with oil feed

HSS holder with brazed carbide insert
Special geometry
Dampens vibrations and shocks
Highest cutting rates
Optimal chip fracture and short chips
Close diameter tolerances
Alignment accurate holes
Alignment accurate tool holders
Coolant press./volume s. Techn. Section
Powerful machines
Max. conc. error of clamped tool 0.02 mm

unalloyed/low alloyed steels
grey cast iron, spheroidal graphite iron
brass, bronzes, plastics, graphite

Guhring no.	1173
Standard	DIN 6538 L
Tool material	Carbide
Surface	S
Type	RT 80 U
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	9.50
Standard range page	271

3-flute Ratio drills

Short design
Wide flutes
Three flutes
Optimal centering
Very high feed rates
Spotting on oblique surfaces
Application under difficult conditions
Reboring with interrupted cutting
Maximum process reliability

cast iron
long chipping Al alloys

Guhring no.	2713
Standard	DIN 6537 L
Tool material	Solid carbide
Surface	◯
Type	FT 200 G
Cutting direction	right-hand
Point geometry	Spiro-point grind
Point angle °	130
Web thinned ≥Ø	3.00
Standard range page	273

3-flute Ratio drills

Three flutes
Very good self-centering characteristics
For dimensionally very accurate holes
Very good surface quality of hole

cast steel
alloyed/unalloyed steels over 1000 N/mm²

Guhring no.	731
Standard	DIN 6539
Tool material	Solid carbide
Surface	◯
Type	GS 200 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	150
Web thinned ≥Ø	
Standard range page	275

3-flute Ratio drills

Three flutes
Very good self-centering characteristics
For dimensionally very accurate holes
Very good surface quality of hole

cast steel
alloyed/unalloyed steels over 1000 N/mm²

Guhring no.	611
Standard	DIN 6539
Tool material	Solid carbide
Surface	S
Type	GS 200 U
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	150
Web thinned ≥Ø	
Standard range page	275

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

3-flute Ratio drills

Guhring no.	745
Standard	DIN 6539
Tool material	Solid carbide
Surface	◯
Type	GS 200 G
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	150
Web thinned ≥Ø	
Standard range page	275

Three flutes
Very good self-centering characteristics
For dimensionally very accurate holes
Very good surface quality of hole

grey cast iron, chilled cast iron
short chipping brass, bronze
short chipping Al-alloys
Al alloys with high Si-content
fiber reinforced plastics
Duroplastics
Hardened steels

3-flute Ratio drills

Guhring no.	1025
Standard	DIN 6539
Tool material	Solid carbide
Surface	◯
Type	GS 200 G
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	150
Web thinned ≥Ø	
Standard range page	275

Three flutes
Very good self-centering characteristics
For dimensionally very accurate holes
Very good surface quality of hole

Grey cast iron
long chipping Al cast alloys

3-flute Ratio drills

Guhring no.	1027
Standard	DIN 6539
Tool material	Solid carbide
Surface	(S)
Type	GS 200 F
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	150
Web thinned ≥Ø	
Standard range page	275

Three flutes
Very good self-centering characteristics
For dimensionally very accurate holes
Very good surface quality of hole

high tensile steels
long chipping Al alloys

3-flute stepped Ratio drills

Guhring no.	1032
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	GS 200 G
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	150
Web thinned ≥Ø	
Standard range page	279

Three flutes
Very good self-centering characteristics
For dimensionally very accurate holes
Very good surface quality of hole

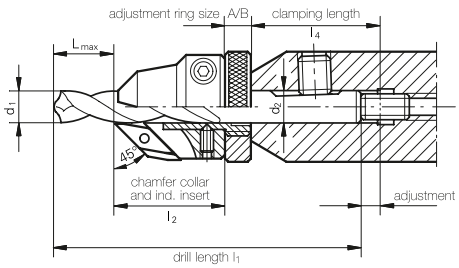
grey cast iron, chilled cast iron
short chipping brass, bronze
short chipping Al-alloys
Al alloys with high Si-content
fiber reinforced plastics
Duroplastics

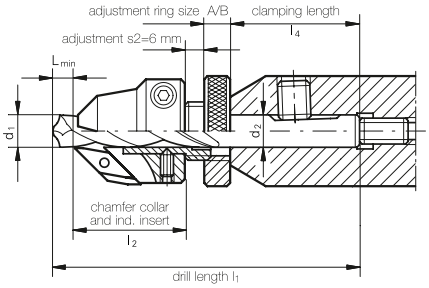
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

FR 90 chamfer collar

Product information
For the production of tapping size holes with a 90° chamfer. Ideal combination: Ratio drill plus chamfer collar FR 90. In comparison with other designs, the FR 90 has the main advantage of also being suitable for use with standard carbide and high speed steel drills, with or without coolant ducts and with slow or quick helix angles. Modifications to the shank i.e. whistle notch flats or to the drill body for the indexable insert are not necessary. Especially suitable for the drilling of cast iron and AlSi-alloys, but also for structural and heat-treatable steels.

Guhring no.	1052
Standard	Guhring std.
Tool material	depend. on insert
Surface finish	depend. on insert
Type	FR 90
Cutting direction	rh
Grinding	
Point angle°	
Web thinned	
Standard range, page	341

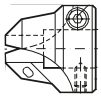




basic body	size	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	l_2 mm	29	29	29	29	33	33	33	33	39	39	39	39	45	45
drill	d_1 > mm	4,9	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18
	d_2 mm	6	6	8	8	10	10	12	12	14	14	16	16	18	18
	l_4 mm	36	36	36	36	40	40	45	45	45	45	48	48	48	48
3x D adjustment ring size A	L_{max}	–	–	12	12	14	14	22	22	21	21	26	26	28	28
	L_{min}	–	–	0	0	2	2	10	10	9	9	14	14	16	16
3x D adjustment ring size B	L_{max}	–	–	–	–	–	–	10	10	9	9	14	14	16	16
	L_{min}	–	–	–	–	–	–	0	0	0	0	2	2	4	4
5x D adjustment ring size A	L_{max}	15	15	24	24	28	28	38	38	38	38	44	44	48	48
	L_{min}	3	3	12	12	16	16	26	26	26	26	32	32	36	36
5x D adjustment ring size B	L_{max}	–	–	12	12	16	16	26	26	26	26	32	32	36	36
	L_{min}	–	–	0	0	4	4	14	14	14	14	20	20	24	24

Guhring no.	1156
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface finish	◯
Standard range, page	340

Guhring no.	1056
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface finish	S
Standard range, page	340



Guhring no.	145
Standard	Guhring std.
	Chamfer collar
Standard range, page	341

Guhring no.	1053
Standard	Guhring std.
	Clamping sleeve
Standard range, page	341

Guhring no.	1054
Standard	Guhring std.
	Adjustment
Standard range, page	341

Guhring no.	1055
Standard	Guhring std.
	Clamping piece
Standard range, page	340

Guhring no.	1072
Standard	Guhring std.
	Torx screw
Standard range, page	341

Guhring no.	4072
Standard	Guhring std.
	Adjusting element
Standard range, page	340

Guhring no.	1612
Standard	Guhring std.
	Screwdriver
Standard range, page	341

Guhring no.	4912
Standard	Guhring std.
	Screwdriver
Standard range, page	341

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Tool holders for interchangeable inserts HT 800

Guhring no. 4106

nickel-plated
Especially high wear resistance
Optimised flute design
Especially high rigidity

Standard	**Guhring std.**
Tool material	
Surface	
Type	HT 800 WP
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	280

Tool holders for interchangeable inserts HT 800

Guhring no. 4107

nickel-plated
Especially high wear resistance
Optimised flute design
Especially high rigidity

Standard	**Guhring std.**
Tool material	
Surface	
Type	HT 800 WP
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	283

Tool holders for interchangeable inserts HT 800

Guhring no. 4108

nickel-plated
Especially high wear resistance
Optimised flute design
Especially high rigidity

Standard	**Guhring std.**
Tool material	
Surface	
Type	HT 800 WP
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	286

Tool holders for interchangeable inserts HT 800

Guhring no. 4109

nickel-plated
Especially high wear resistance
Optimised flute design
Especially high rigidity

Standard	**Guhring std.**
Tool material	
Surface	
Type	HT 800 WP
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	289

Tool holders for interchangeable inserts HT 800

Guhring no. 4110

nickel-plated
Especially high wear resistance
Optimised flute design
Especially high rigidity

Standard	**Guhring std.**
Tool material	
Surface	
Type	HT 800 WP
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	292

bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A TiAlN SuperA

Tool holders for interchangeable inserts HT 800

Guhring no.	4105
Standard	Guhring std.
Tool material	
Surface	
Type	HT 800 WP
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	295

nickel-plated
Especially high wear resistance
Optimised flute design
Especially high rigidity

For piloting and countersinking 45°

Interchangeable inserts HT 800

Guhring no.	4112
Standard	Guhring std.
Tool material	Solid carbide
Surface	F
Type	
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	
Standard range page	296

Especially high wear resistance
nanoFIRE coating

alloyed/unalloyed steel and cast steel

Interchangeable inserts HT 800

Guhring no.	4113
Standard	Guhring std.
Tool material	Solid carbide
Surface	F
Type	
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	
Standard range page	297

Especially high wear resistance

grey cast iron, malleable and spheroidal iron

Interchangeable inserts HT 800

Guhring no.	4114
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	
Standard range page	297

Especially high wear resistance

Aluminium and Al-alloys
non-ferrous metals

Interchangeable inserts HT 800

Guhring no.	4115
Standard	Guhring std.
Tool material	Solid carbide
Surface	a
Type	
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	140
Web thinned ≥Ø	
Standard range page	297

Especially high wear resistance

Stainless steels

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Interchangeable inserts HT 800

Especially high wear resistance

Piloting in all materials

Guhring no.	4111
Standard	Guhring std.
Tool material	Solid carbide
Surface	a
Type	
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	145
Web thinned ≥Ø	
Standard range page	304

Countersinking insert HT 800

Aluminium and Al-alloys
non-ferrous metals

Guhring no.	7635
Standard	Guhring std.
Tool material	Solid carbide
Surface	○
Type	
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	308

Countersinking insert HT 800

alloyed/unalloyed steel and cast steel

Guhring no.	7645
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Type	
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	309

Countersinking insert HT 800

grey cast iron, malleable and spheroidal iron

Guhring no.	7632
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	
Cutting direction	neutral
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	310

Tool holders for interchangeable inserts RT 800

Short design
high rigidity
high feed rates
Secure clamping of interchangeable insert in the holder.

Guhring no.	5242
Standard	Guhring std.
Tool material	
Surface	
Type	RT 800 WP
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	316

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Tool holders for interchangeable inserts RT 800

Guhring no.	5243
Standard	Guhring std.
Tool material	
Surface	
Type	RT 800 WP
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	317

Short design
high rigidity
high feed rates
Secure clamping of interchangeable insert in the holder.

Tool holders for interchangeable inserts RT 800

Guhring no.	5248
Standard	Guhring std.
Tool material	
Surface	
Type	RT 800 WP
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	318

Short design
high rigidity
high feed rates
Secure clamping of interchangeable insert in the holder.

Interchangeable inserts RT 800

Guhring no.	2747
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	319

cast and AlSi alloys

Interchangeable inserts RT 800

Guhring no.	2485
Standard	Guhring std.
Tool material	Solid carbide
Surface	F
Type	
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	321

steels up to 1000 N/mm²

Interchangeable inserts RT 800

Guhring no.	1047
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Type	
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	323

steels up to 1000 N/mm²

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Standard range, page 329

Basic tool holders

HSK tool holding modules

SK holders **4512**

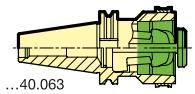
Straight (VDI) holders **4510**

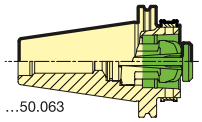
Reductions **4355**

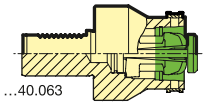
Extensions **4549**

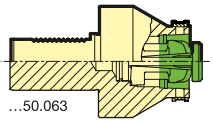
• Guhring no.
…Code no.

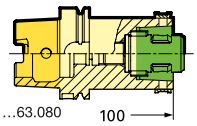
holder size	Ø nom.* range
400 (40…42.9)	40.0
	41.0
	42.0
430 (43…45.9)	43.0
	44.0
	45.0
460 (46…48.9)	46.0
	47.0
	48.0
490 (49…51.9)	49.0
	50.0
	51.0
520 (52…55.9)	52.0
	53.0
	54.0
	55.0
560 (56…59.9)	56.0
	57.0
	58.0
	59.0

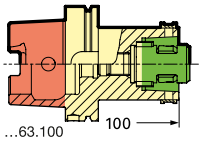


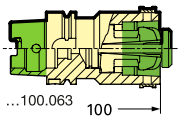


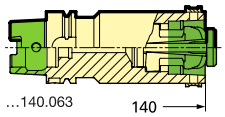


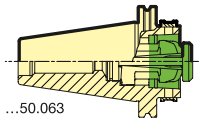


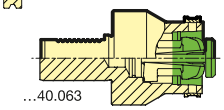


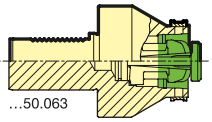


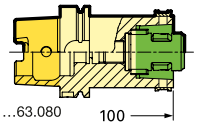


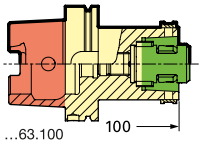


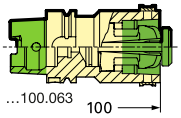


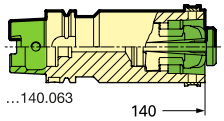






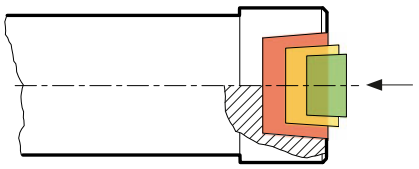




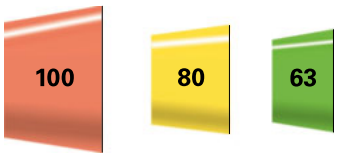


• When ordering please always state Guhring no. and code no!

* for intermediate Ø please consult Guhring application technician.



HSK size



bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A AlTiN SuperA

HSK
basic holders

15° spiral design
4142

Extensions
3 x D

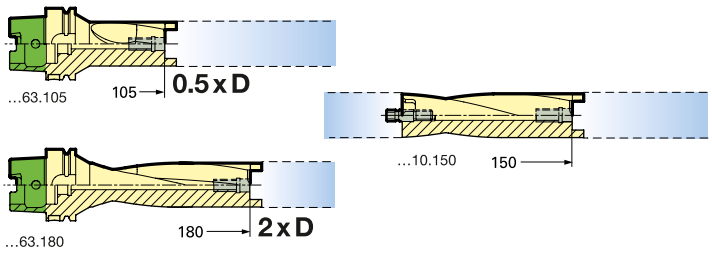
15° spiral design
4148

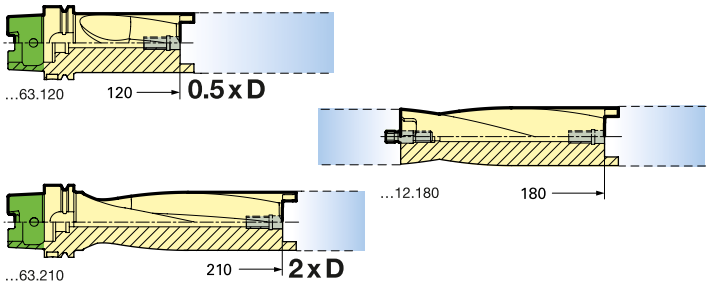
Drill heads
1 x D

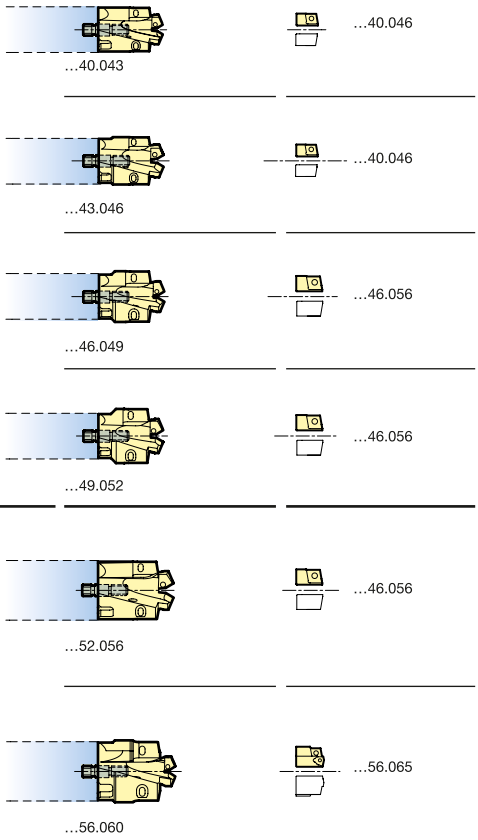
4150

Cartridges
for mounting the external indexable inserts
(x 2 per drill head)

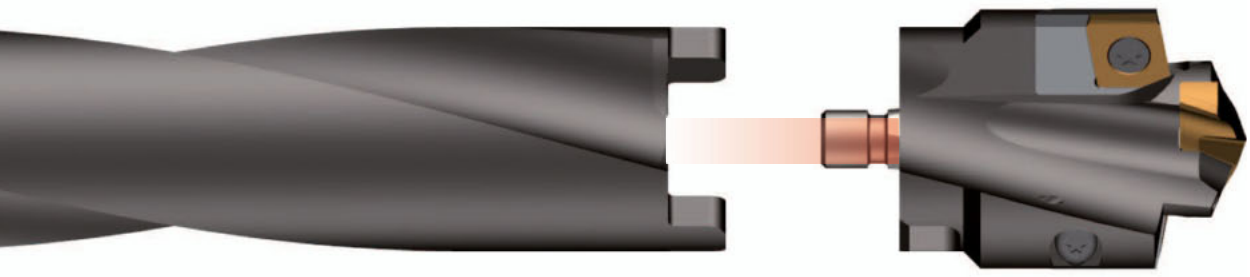
4160







Ø nom.* range	holder size
40.0	400
41.0	
42.0	
43.0	430
44.0	
45.0	
46.0	460
47.0	
48.0	
49.0	490
50.0	
51.0	
52.0	520
53.0	
54.0	
55.0	
56.0	560
57.0	
58.0	
59.0	



C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard range, page 329

Basic tool holders

HSK tool holding modules

SK holders **4512**

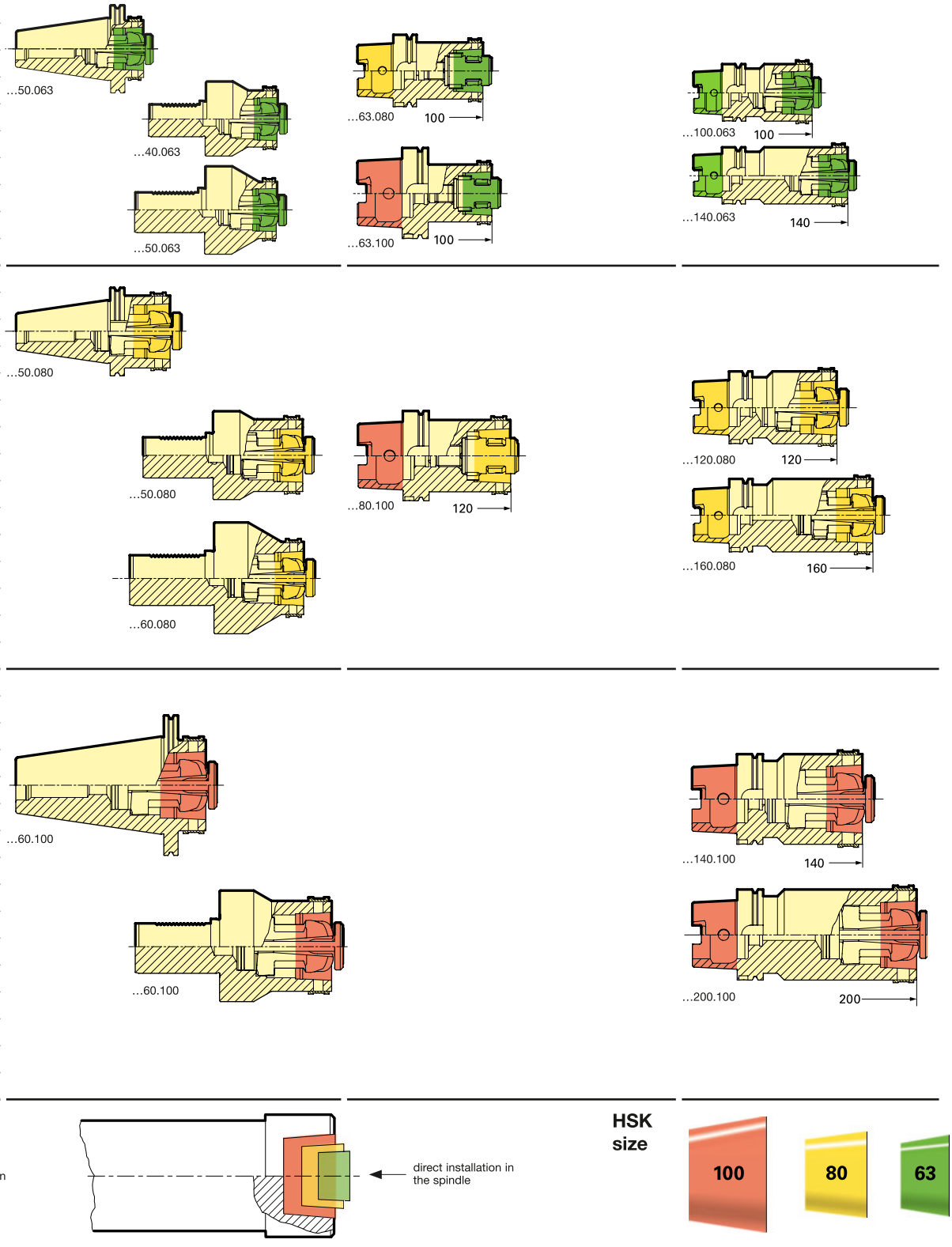
Straight (VDI) holders **4510**

Reductions **4355**

Extensions **4549**

• Guhring no.
…Code no.

holder size	Ø nom.* range
600 (60…64.9)	60.0
	61.0
	62.0
	63.0
	64.0
650 (65…69.9)	65.0
	66.0
	67.0
	68.0
	69.0
700 (70…74.9)	70.0
	71.0
	72.0
	73.0
	74.0
750 (75…79.9)	75.0
	76.0
	77.0
	78.0
	79.0
800 (80…84.9)	80.0
	81.0
	82.0
	83.0
	84.0
850 (85…89.9)	85.0
	86.0
	87.0
	88.0
	89.0
900 (90…94.9)	90.0
	91.0
	92.0
	93.0
	94.0
950 (95…100)	95.0
	96.0
	97.0
	98.0
	99.0
	100.0



• When ordering please always state Guhring no. and code no!

* for intermediate Ø please consult Guhring application technician.

HSK size

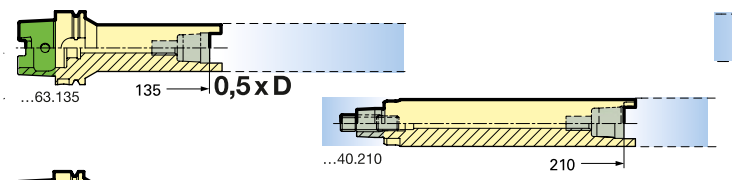
bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A AlTiN SuperA

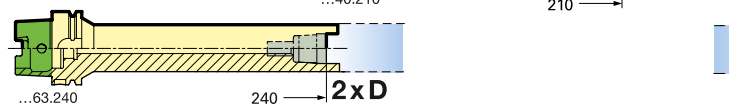
HSK
basic holders
straight stepped design,
without chip space
4144

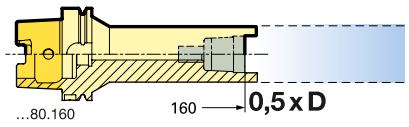
Extensions
3 x D
straight stepped design,
without chip space
4149

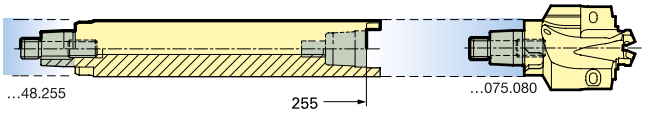
Drill heads
1 x D
4150

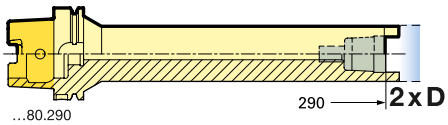
Cartridges
for mounting the external
indexable inserts
(x 2 per drill head)
4160

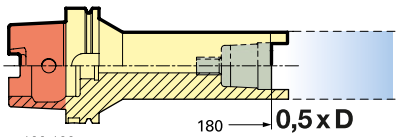


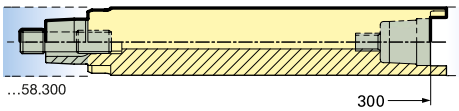


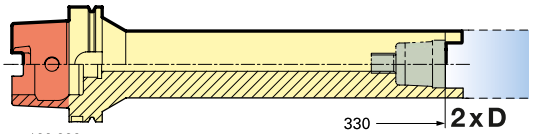


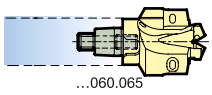


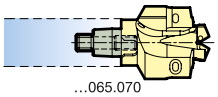


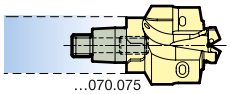


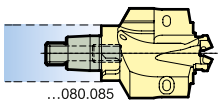


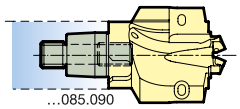


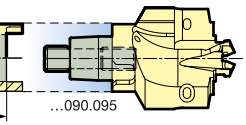


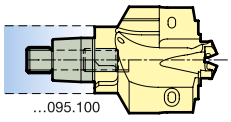


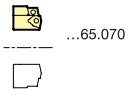


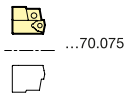


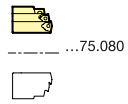


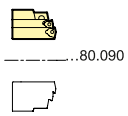


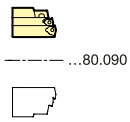


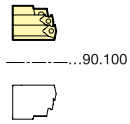


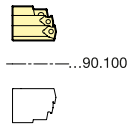










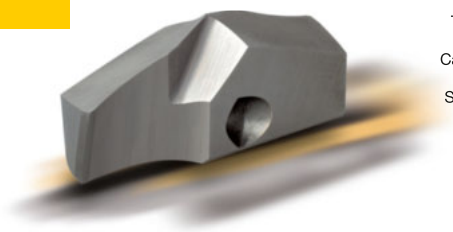


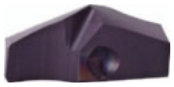
Ø nom.* range	holder size
60.0	600
61.0	
62.0	
63.0	
64.0	
65.0	650
66.0	
67.0	
68.0	
69.0	
70.0	700
71.0	
72.0	
73.0	
74.0	
75.0	750
76.0	
77.0	
78.0	
79.0	
80.0	800
81.0	
82.0	
83.0	
84.0	
85.0	850
86.0	
87.0	
88.0	
89.0	
90.0	900
91.0	
92.0	
93.0	
94.0	
95.0	950
96.0	
97.0	
98.0	
99.0	
100.0	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

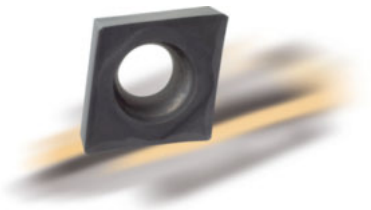
Std. range, page 337

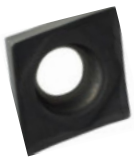
Central interchangeable inserts



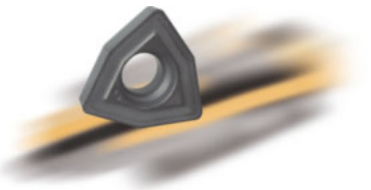
Guhring no.	2747	1047	2485
Tool material	Solid carbide	Solid carbide	Solid carbide
Carbide grade	K	K/P	K/P
Surface finish	○	S	F
especially suitable for	cast materials aluminium/Al-alloys plastics	universal steel and cast machining	universal steel and cast machining
			

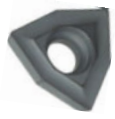
Indexable inserts Type CCHX (external)



Guhring no.	4179	4180	4181	4182
Design feature	with circular lands	with circular lands	with circular lands	with circular lands
Tool material	Solid carbide	Solid carbide	Solid carbide	Solid carbide
Carbide grade	N15	K10	P25	M35
Surface finish	○	S	S	S
especially suitable for	aluminium/Al-alloys plastics	cast materials	universal steel and cast materials	C-steels, stainless and acid-resistant steels
size 09				
size 12				

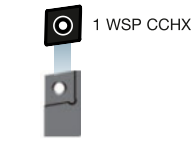
Indexable inserts Type LTT (internal)



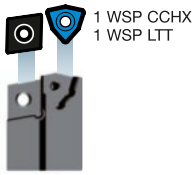
Guhring no.	4170	4171	4172	4173
Design feature	with circular lands	with circular lands	with circular lands	with circular lands
Tool material	Solid carbide	Solid carbide	Solid carbide	Solid carbide
Carbide grade	N10	K10	P25	P40
Surface finish	○	○	S	A
especially suitable for	non-ferrous metals, aluminium/Al-alloys plastics	cast materials	universal steel and cast materials	C-steels, stainless and acid-resistant steels
size 05				
size 06				

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

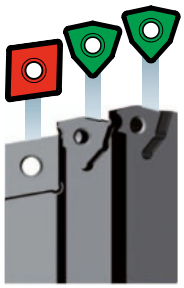
Cartridges for mounting external indexable inserts (2 cartridges per drilling head)



for size **400**



for size **560**

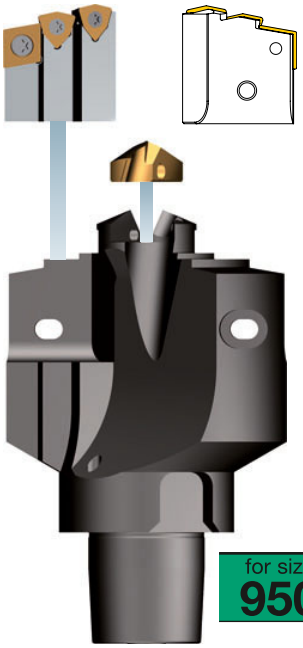


for size **950**

Drill heads (mounting examples)

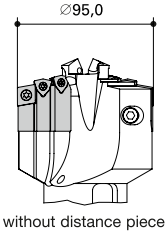
for size **400**

for size **560**

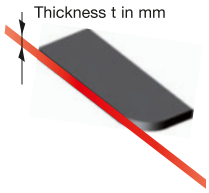


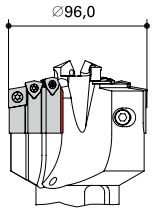
for size **950**

Diameter adjustment with distance pieces on both sides (using holder size 950 as example)

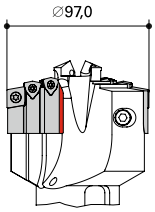


without distance piece

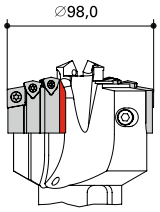




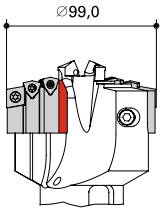
0.50



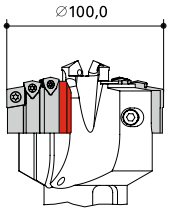
1.00



1.50



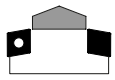
2.0

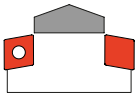


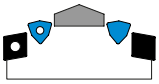
1.00/1.50

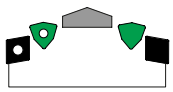
Insert mounting overview

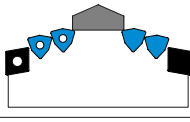
tool **size**	central interch. insert ∅	cartridge installation
400	27	
430	30	
460	28	
490	31	
520	34	
560	27	
600		
650		
700	32	
750		
800		
850	34	
900	32	
950	34	

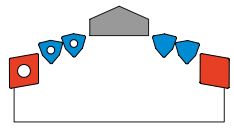


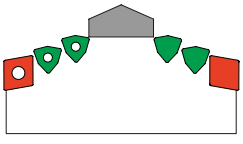












(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Jobber drills

Guhring no.	205
Standard	DIN 338
Tool material	HSS
Surface	>Ø 2,36
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	342

Standard drill

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal

Jobber drills

Guhring no.	206
Standard	DIN 338
Tool material	HSS
Surface	
Type	H
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	14.01
Standard range page	342

Standard drill

For hard and brittle materials
brass, magnesium alloys
bronze, phosphor bronze
slate, mico, pertinax

Jobber drills

Guhring no.	207
Standard	DIN 338
Tool material	HSS
Surface	
Type	W
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	14.01
Standard range page	342

Standard drill

soft/long chipping materials
Aluminium/Al-alloys, long-chipping
zinc, refined copper, silumin, electron
soft plastics
wood

Jobber drills

Guhring no.	208
Standard	DIN 338
Tool material	HSS
Surface	>Ø 6,00
Type	N
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	14.01
Standard range page	342

Standard drill

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal

Jobber drills

Guhring no.	209
Standard	DIN 338
Tool material	HSS
Surface	
Type	H
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	14.01
Standard range page	342

Standard drill

For hard and brittle materials
brass, magnesium alloys
bronze, phosphor bronze
slate, mico, pertinax

bright · steam tempered · nitrided lands · nitrided · golden brown · TiAlN · TiAlN nanoA · TiAlN SuperA

Jobber drills

Guhring no.	210
Standard	DIN 338
Tool material	HSS
Surface	○
Type	W
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	14.01
Standard range page	342

Standard drill

soft/long chipping materials
Aluminium/Al-alloys, long-chipping
zinc, refined copper, silumin, electron
soft plastics
wood

Jobber drills

Guhring no.	240
Standard	DIN 338
Tool material	HSS
Surface	●
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.00
Standard range page	343

Standard drill
With tang to DIN 1809

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal

Jobber drills

Guhring no.	549
Standard	DIN 338
Tool material	HSS
Surface	◔ >Ø 2,36
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	0.96
Standard range page	343

Wide flutes
Especially for drilling depths over 3xd

Grey cast iron
steels up to 1400 N/mm²
Not recommended for:
CrNi steels, stainless steels

Jobber drills

Guhring no.	550
Standard	DIN 338
Tool material	HSS
Surface	◔ >Ø 2,36
Type	GT 100
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	343

Wide flutes
Especially for drilling depths over 3xd

Grey cast iron
steels up to 1400 N/mm²
Not recommended for:
CrNi steels, stainless steels

Jobber drills

Guhring no.	560
Standard	DIN 338
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	2.37
Standard range page	343

Standard drill

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Jobber drills

Standard drill

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal

Guhring no.	651
Standard	DIN 338
Tool material	HSS
Surface	S
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	343

Jobber drills

Wide flutes
Especially for drilling depths over 3xd

Grey cast iron
steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Guhring no.	652
Standard	DIN 338
Tool material	HSS
Surface	S
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	343

Jobber drills

Standard drill

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal

Guhring no.	664
Standard	DIN 338
Tool material	HSS
Surface	S
Type	N
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	2.37
Standard range page	343

Jobber drills

Wide flutes
Especially for drilling depths over 3xd

Grey cast iron
steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Guhring no.	665
Standard	DIN 338
Tool material	HSS
Surface	S
Type	GT 100
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.30
Standard range page	343

Jobber drills

Standard drill

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal

Guhring no.	2456
Standard	DIN 338
Tool material	HSS
Surface	F
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	343

bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A TiAlN SuperA

Jobber drills

Guhring no.	2457
Standard	DIN 338
Tool material	HSS
Surface	F
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	343

Wide flutes
Especially for drilling depths over 3xd

Grey cast iron
steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Jobber drills

Guhring no.	305
Standard	DIN 338
Tool material	HSCO
Surface	>Ø 2,36
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	380

Co-alloyed high speed steel
Increased wear resistance

alloyed and high alloyed steels
castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Jobber drills

Guhring no.	308
Standard	DIN 338
Tool material	HSCO
Surface	>Ø 6,00
Type	N
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	2.37
Standard range page	380

Co-alloyed high speed steel
Increased wear resistance

alloyed and high alloyed steels
castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Jobber drills

Guhring no.	605
Standard	DIN 338
Tool material	HSCO
Surface	
Type	Ti
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	0.96
Standard range page	380

Co-alloyed high speed steel
Increased wear resistance

Titanium and Titanium alloys
stainless/acid-/heat resistant austenitic steels
for high tensile strength and short chipping
steels over appr. 900 N/mm²
special alloys Hastelloy, Inconel, Nimonic

Jobber drills

Guhring no.	608
Standard	DIN 338
Tool material	HSCO
Surface	
Type	Ti
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	0.96
Standard range page	380

Co-alloyed high speed steel
Increased wear resistance

Titanium and Titanium alloys
stainless/acid-/heat resistant austenitic steels
for high tensile strength and short chipping
steels over appr. 900 N/mm²
special alloys Hastelloy, Inconel, Nimonic

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Jobber drills

Guhring no.	622
Standard	DIN 338
Tool material	HSCO
Surface	>Ø 2,36
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	0.96
Standard range page	380

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
Especially for drilling depths over 3xd

alloyed and high alloyed steels
castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Jobber drills

Guhring no.	657
Standard	DIN 338
Tool material	HSCO
Surface	S
Type	Ti
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	0.96
Standard range page	380

Co-alloyed high speed steel
Increased wear resistance

Titanium and Titanium alloys
stainless/acid-/heat resistant austenitic steels
for high tensile strength and short chipping
steels over appr. 900 N/mm²
special alloys Hastelloy, Inconel, Nimonic

Jobber drills

Guhring no.	658
Standard	DIN 338
Tool material	HSCO
Surface	S
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	381

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
Especially for drilling depths over 3xd

alloyed and high alloyed steels
castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Jobber drills

Guhring no.	1221
Standard	DIN 338
Tool material	HSCO
Surface	C
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	2.10
Standard range page	381

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
Especially for drilling depths over 3xd

alloyed and high alloyed steels
castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Jobber drills

Guhring no.	1223
Standard	DIN 338
Tool material	HSCO
Surface	A
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	3.00
Standard range page	381

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
Especially for drilling depths over 3xd

alloyed and high alloyed steels
castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A TiAlN SuperA

Jobber drills

Guhring no.	1260
Standard	DIN 338
Tool material	HSCO
Surface	
Type	VA
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	
Standard range page	381

Co-alloyed high speed steel
Special geometry
Increased wear resistance

stainless/acid-/heat resistant austenitic steels (V2A and V4A)

Jobber drills

Guhring no.	2047
Standard	DIN 338
Tool material	HSCO
Surface	
Type	P2000
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	
Standard range page	381

Universal application
Co-alloyed high speed steel
Increased wear resistance

steels up to 1000 N/mm²
AlSi-alloys

Jobber drills

Guhring no.	2458
Standard	DIN 338
Tool material	HSCO
Surface	F
Type	Ti
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	381

Co-alloyed high speed steel
Increased wear resistance

Titanium and Titanium alloys
stainless/acid-/heat resistant austenitic steels for high tensile strength and short chipping
steels over appr. 900 N/mm²
special alloys Hastelloy, Inconel, Nimonic

Jobber drills

Guhring no.	2459
Standard	DIN 338
Tool material	HSCO
Surface	F
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	381

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
Especially for drilling depths over 3xd

alloyed and high alloyed steels
castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Jobber drills

Guhring no.	2997
Standard	DIN 338
Tool material	HSCO
Surface	S
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	381

Co-alloyed high speed steel
Increased wear resistance

alloyed and high alloyed steels
castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

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Jobber drills

Guhring no.	1146
Standard	DIN 338
Tool material	M42
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	135
Web thinned ≥Ø	0.96
Standard range page	381

High alloyed CoMo steel
Especially high wear resistance

medium/high tensile CrNi-based alloys
Hastelloy, Inconel, Nimonic
stainless/acid/heat resistant steels
wear-resistant sheet metals
steels/bronzes up to 1400 N/mm²

Jobber drills

Guhring no.	710
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	Duro 150
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	118
Web thinned ≥Ø	2.70
Standard range page	406

Special drill
Carbide tipped
Carbide tipped

abrasive materials
heat treated/hardened steel
hard cast iron, Mn steel, hard bronzes

Jobber drills

Guhring no.	732
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	118
Web thinned ≥Ø	2.00
Standard range page	406

Standard drill

cast iron, grey cast iron, chilled cast iron
Mn hard steels, bronzes
light and non-ferrous metals
abrasive materials (AlSi alloys)
fiber reinforced plastics
Duroplastics that cause wear on lands and cutting edges

Jobber drills

Guhring no.	2464
Standard	Guhring std.
Tool material	Solid carbide
Surface	F
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	118
Web thinned ≥Ø	2.00
Standard range page	406

Standard drill
nanoFIRE coating

cast iron, grey cast iron, chilled cast iron
Mn hard steels, bronzes
light and non-ferrous metals
abrasive materials (AlSi alloys)
fiber reinforced plastics
Duroplastics that cause wear on lands and cutting edges

Stub drills

Guhring no.	223
Standard	DIN 1897
Tool material	HSS
Surface	◯ >Ø 2,36
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	412

Rigid twist drill
For use in automatic/capstan lathes
Also for hand drilling machines

thin materials e.g. car bodies

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Stub drills	Guhring no. 224
	Standard DIN 1897
Rigid twist drill	Tool material HSS
For hard and brittle materials brass, magnesium alloys bronze, phosphor bronze electron (thin sections) slate, mico, pertinax	Surface ◯
	Type H
	Cutting direction right-hand
	Point geometry Relieved cone
	Point angle ° 118
	Web thinned ≥Ø 14.01
	Standard range page 412

Stub drills	Guhring no. 225
	Standard DIN 1897
Rigid twist drill	Tool material HSS
soft/long chipping materials Aluminium/Al-alloys, long-chipping soft plastics wood	Surface ◯
	Type W
	Cutting direction right-hand
	Point geometry Relieved cone
	Point angle ° 130
	Web thinned ≥Ø 2.37
	Standard range page 412

Stub drills	Guhring no. 226
	Standard DIN 1897
Rigid twist drill For use in automatic/capstan lathes	Tool material HSS
thin materials e.g. car bodies	Surface ◯ >Ø 6,00
	Type N
	Cutting direction left-hand
	Point geometry Relieved cone
	Point angle ° 118
	Web thinned ≥Ø 14.01
	Standard range page 412

Stub drills	Guhring no. 227
	Standard DIN 1897
Rigid twist drill	Tool material HSS
For hard and brittle materials brass, magnesium alloys bronze, phosphor bronze electron (thin sections) slate, mico, pertinax	Surface ◯
	Type H
	Cutting direction left-hand
	Point geometry Relieved cone
	Point angle ° 118
	Web thinned ≥Ø 14.01
	Standard range page 412

Stub drills	Guhring no. 228
	Standard DIN 1897
Rigid twist drill	Tool material HSS
soft/long chipping materials Aluminium/Al-alloys, long-chipping soft plastics wood	Surface ◯
	Type W
	Cutting direction left-hand
	Point geometry Relieved cone
	Point angle ° 130
	Web thinned ≥Ø 2.37
	Standard range page 412

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Stub drills

Guhring no.	552
Standard	DIN 1897
Tool material	HSS
Surface	<Ø 2,36 >Ø 16,0
Type	GT 80
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	412

Special geometry
For higher tensile steels

Free-cutting steels
acid-/stainl. resist. steels
case hardening/heat treatable steels up to 800 N/mm²
short/medium chip length Al/Cu alloys

Stub drills

Guhring no.	553
Standard	DIN 1897
Tool material	HSS
Surface	<Ø 2,36 >Ø 16,0
Type	GT 80
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	412

Special geometry
For higher tensile steels

Free-cutting steels
acid-/stainl. resist. steels
case hardening/heat treatable steels up to 800 N/mm²
short/medium chip length Al/Cu alloys

Stub drills

Guhring no.	653
Standard	DIN 1897
Tool material	HSS
Surface	S
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	413

Rigid twist drill
For use in automatic/capstan lathes
Also for hand drilling machines

thin materials e.g. car bodies

Stub drills

Guhring no.	672
Standard	DIN 1897
Tool material	HSS
Surface	S
Type	N
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	2.37
Standard range page	413

Rigid twist drill
For use in automatic/capstan lathes

thin materials e.g. car bodies

Stub drills

Guhring no.	2460
Standard	DIN 1897
Tool material	HSS
Surface	F
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	413

Rigid twist drill
For use in automatic/capstan lathes
Also for hand drilling machines

thin materials e.g. car bodies

bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A TiAlN SuperA

Stub drills

Co-alloyed high speed steel
Increased wear resistance

acid resist./stainless steels
Spring steels
Austenitic stainless steels
special alloys Hastelloy, Inconel, Nimonic

Guhring no.	329
Standard	DIN 1897
Tool material	HSCO
Surface	>Ø 2,36
Type	GV 120
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	413

Stub drills

Co-alloyed high speed steel
Increased wear resistance

acid resist./stainless steels
Spring steels
Austenitic stainless steels
special alloys Hastelloy, Inconel, Nimonic

Guhring no.	330
Standard	DIN 1897
Tool material	HSCO
Surface	>Ø 6,00
Type	GV 120
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	2.37
Standard range page	413

Stub drills

Co-alloyed high speed steel
Increased wear resistance

acid resist./stainless steels
Spring steels
Austenitic stainless steels
special alloys Hastelloy, Inconel, Nimonic

Guhring no.	659
Standard	DIN 1897
Tool material	HSCO
Surface	S
Type	GV 120
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	413

Stub drills

Co-alloyed high speed steel
Special geometry
Increased wear resistance

For higher tensile steels
long chipping materials up to 1000 N/mm²
Al- and Cu alloys
soft bronzes
electrolytic copper
ductile brass

Guhring no.	1228
Standard	DIN 1897
Tool material	HSCO
Surface	S
Type	GT 80
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	413

Stub drills

Co-alloyed high speed steel
Special geometry
Increased wear resistance

stainless/acid-/heat resistant austenitic steels
(V2A and V4A)

Guhring no.	1261
Standard	DIN 1897
Tool material	HSCO
Surface	
Type	VA
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	
Standard range page	413

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Stub drills

Universal application
Co-alloyed high speed steel
Increased wear resistance
For professional use
For hand drilling machines

long chipping steels up to 1000 N/mm²
cast and AlSi alloys

Guhring no.	2048
Standard	DIN 1897
Tool material	HSCO
Surface	M
Type	P2000
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	
Standard range page	413

Stub drills

Co-alloyed high speed steel
Increased wear resistance

acid resist./stainless steels
Spring steels
Austenitic stainless steels
special alloys Hastelloy, Inconel, Nimonic

Guhring no.	2461
Standard	DIN 1897
Tool material	HSCO
Surface	F
Type	GV 120
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	413

Stub drills

Co-alloyed high speed steel
Special geometry
Increased wear resistance

long chipping materials up to 1000 N/mm²
Al- and Cu alloys
soft bronzes
electrolytic copper
ductile brass

Guhring no.	2498
Standard	DIN 1897
Tool material	HSCO
Surface	F
Type	GT 80
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	413

Stub drills

High alloyed CoMo steel
Especially high wear resistance

medium/high tensile CrNi-based alloys
Hastelloy, Inconel, Nimonic
stainless/acid/heat resistant steels
wear-resistant sheet metals
steels/bronzes up to 1400 N/mm²

Guhring no.	1259
Standard	DIN 1897
Tool material	M42
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	135
Web thinned ≥Ø	1.00
Standard range page	444

Stub drills

PM Co-alloyed high speed steel
Especially high rigidity
Especially high wear resistance

high alloyed steels
Heat treatable and case hardened steels
Cast iron, brass, bronze

Guhring no.	515
Standard	DIN 1897
Tool material	HSS-E-PM
Surface	F
Type	GT 500
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	444

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Stub drills

Rigid twist drill
For use in automatic/capstan lathes

cast iron, grey cast iron, chilled cast iron
Mn hard steels, bronzes
light and non-ferrous metals
abrasive materials (AlSi alloys)
fiber reinforced plastics
Duroplastics that cause wear on lands and cutting edges

Guhring no.	730
Standard	DIN 6539
Tool material	Solid carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	118
Web thinned ≥Ø	2.10
Standard range page	444

Stub drills

Rigid twist drill
For use in automatic/capstan lathes
nanoFIRE coating

cast iron, grey cast iron, chilled cast iron
Mn hard steels, bronzes
light and non-ferrous metals
abrasive materials (AlSi alloys)
fiber reinforced plastics
Duroplastics that cause wear on lands and cutting edges

Guhring no.	2463
Standard	DIN 6539
Tool material	Solid carbide
Surface	F
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	118
Web thinned ≥Ø	2.00
Standard range page	444

Stub drills

Special drill

glass fibres reinforced plastics
Duroplastics that cause wear on lands and cutting edges

Guhring no.	702
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	130
Web thinned ≥Ø	
Standard range page	450

Twist drills with oversize straight shank

Co-alloyed high speed steel
Low feed force required
Low torque required
Increased wear resistance
Universal application

alloyed/unalloyed steels over 800 N/mm²
cold/hot work steels
antifriction bearing steels
non-ferrous metals
cast materials
plastics

Guhring no.	512
Standard	Guhring std.
Tool material	HSCO
Surface	S
Type	GU 500
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	118
Web thinned ≥Ø	2.00
Standard range page	456

Twist drills with oversize straight shank

PM Co-alloyed high speed steel
Especially high rigidity
Especially high wear resistance

high alloyed steels
Heat treatable and case hardened steels
Cast iron, brass, bronze

Guhring no.	513
Standard	Guhring std.
Tool material	HSS-E-PM
Surface	F
Type	GT 500
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	2.00
Standard range page	460

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Twist drills with oversize straight shank

Guhring no.	511
Standard	Guhring std.
Tool material	HSCO
Surface	S
Type	GU 500
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	118
Web thinned ≥Ø	2.00
Standard range page	462

Co-alloyed high speed steel
Low feed force required
Low torque required
Increased wear resistance
Universal application

alloyed/unalloyed steels over 800 N/mm²
cold/hot work steels
antifriction bearing steels
non-ferrous metals
cast materials
plastics

Twist drills with oversize straight shank

Guhring no.	1946
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	A
Type	H
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	120
Web thinned ≥Ø	3.00
Standard range page	466

Especially high rigidity
Optimal chip fracture and short chips

hardened steels up to 62 HRC

Jobber drills with 12.7 mm dia. shank

Guhring no.	268
Standard	Guhring std.
Tool material	HSS
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	14.01
Standard range page	467

With solid shank

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal
German silver

Stub drills with 16.0 mm dia. shank

Guhring no.	128
Standard	Guhring std.
Tool material	HSCO
Surface	
Type	N
Cutting direction	right-hand
Point geometry	without point grind
Point angle °	120
Web thinned ≥Ø	
Standard range page	468

Co-alloyed high speed steel
Increased wear resistance
With solid shank
blank, centering on both sides
without point grinding
For corrections, e.g. on diameter, step grind or form grind

difficult to machine materials
acid resist./stainless steels
Spring steels
Austenitic stainless steels

Stub drills with 25.4 mm dia. shank

Guhring no.	129
Standard	Guhring std.
Tool material	HSCO
Surface	
Type	N
Cutting direction	right-hand
Point geometry	without point grind
Point angle °	120
Web thinned ≥Ø	
Standard range page	469

Co-alloyed high speed steel
Increased wear resistance
With solid shank
blank, centering on both sides
without point grinding
For corrections, e.g. on diameter, step grind or form grind

difficult to machine materials
acid resist./stainless steels
Spring steels
Austenitic stainless steels

bright | steam tempered | nitrided lands | nitrided | golden brown | TiAlN | TiAlN nanoA | TiAlN SuperA

Stub drills with 25.4 mm dia. shank

Co-alloyed high speed steel
Increased wear resistance
With solid shank
blank, centering on both sides
without point grinding
For corrections, e.g. on diameter, step grind or form grind

difficult to machine materials
acid resist./stainless steels
Spring steels
Austenitic stainless steels

Guhring no.	136
Standard	Guhring std.
Tool material	HSCO
Surface	◯
Type	N
Cutting direction	left-hand
Point geometry	without point grind
Point angle °	120
Web thinned ≥Ø	
Standard range page	469

90° NC-spotting drills

Only suitable for spotting

Guhring no.	557
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	90
Web thinned ≥Ø	
Standard range page	470

90° NC-spotting drills

Only suitable for spotting

Guhring no.	568
Standard	Guhring std.
Tool material	HSS
Surface	(S)
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	90
Web thinned ≥Ø	
Standard range page	470

90° NC-spotting drills

Special drill
Only suitable for spotting

high tensile steels
cast iron, grey cast iron, chilled cast iron
austenitic manganese steel, CrNi steels
bronzes
light and non-ferrous metals

Guhring no.	723
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	90
Web thinned ≥Ø	
Standard range page	470

90° NC-spotting drills

Only suitable for spotting

Guhring no.	559
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	90
Web thinned ≥Ø	
Standard range page	471

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

120° NC-spotting drills

Only suitable for spotting

Guhring no.	556
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	
Standard range page	472

120° NC-spotting drills

Only suitable for spotting

Guhring no.	567
Standard	Guhring std.
Tool material	HSS
Surface	Ⓢ
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	
Standard range page	472

120° NC-spotting drills

Special drill
Only suitable for spotting

high tensile steels
cast iron, grey cast iron, chilled cast iron
austenitic manganese steel, CrNi steels
bronzes
light and non-ferrous metals

Guhring no.	724
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	120
Web thinned ≥Ø	
Standard range page	472

142° NC-spotting drills

Special drill
Only suitable for spotting

high tensile steels
cast iron, grey cast iron, chilled cast iron
austenitic manganese steel, CrNi steels
bronzes
light and non-ferrous metals

Guhring no.	546
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	142
Web thinned ≥Ø	
Standard range page	473

Straight shank drills double-ended

For application on both sides
For hand drilling mach. in car body ind.

thin materials e.g. car bodies

Guhring no.	554
Standard	Guhring std.
Tool material	HSS
Surface	◯ ◯ >Ø 2,36
Type	DK 77
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.45
Standard range page	474

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Micro-precision drills without oil feed

< Ø 0.15 mm
Co-alloyed high speed steel
With re-inforced shank

high alloyed steels

Guhring no.	301
Standard	DIN 1899
Tool material	HSS-E-PM
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	118
Web thinned ≥Ø	
Standard range page	476

Micro-precision drills without oil feed

< Ø 0.15 mm
Co-alloyed high speed steel
With re-inforced shank

high alloyed steels

Guhring no.	303
Standard	DIN 1899
Tool material	HSS-E-PM
Surface	◯
Type	N
Cutting direction	left-hand
Point geometry	Facet point grind
Point angle °	118
Web thinned ≥Ø	
Standard range page	476

Micro-precision drills without oil feed

With re-inforced shank
Increased wear resistance

high alloyed steels

Guhring no.	660
Standard	DIN 1899
Tool material	HSS-E-PM
Surface	(S)
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	118
Web thinned ≥Ø	
Standard range page	476

Micro-precision drills without oil feed

glass fibres reinforced plastics
materials that cause wear
on cutting lips and lands

Guhring no.	701
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	130
Web thinned ≥Ø	0.80
Standard range page	476

Micro-precision drills without oil feed

Universal application

Guhring no.	3899
Standard	Guhring std.
Tool material	Solid carbide
Surface	(A)
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	0.80
Standard range page	483

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Micro-precision drills without oil feed

edge preparation
Optimal chip fracture

structural and case hardened steels
Free-cutting steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
stainless steels, cast iron

Guhring no.	6400
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	0.80
Standard range page	485

Micro-precision drills without oil feed

edge preparation
Optimal chip fracture

structural and case hardened steels
Free-cutting steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
stainless steels, cast iron

Guhring no.	6401
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	140
Web thinned ≥Ø	0.80
Standard range page	487

Micro-precision drills with oil feed

edge preparation
Optimal chip fracture

structural and case hardened steels
Free-cutting steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
stainless steels, cast iron

Guhring no.	6408
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	135
Web thinned ≥Ø	1.40
Standard range page	489

Micro-precision drills with oil feed

edge preparation
Optimal chip fracture

structural and case hardened steels
Free-cutting steels, heat-treatable steels
alloyed steels up to 1200 N/mm²
stainless steels, cast iron

Guhring no.	6412
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	135
Web thinned ≥Ø	1.40
Standard range page	491

Oil feed drills

Co-alloyed high speed steel

long chipping materials up to 1000 N/mm²
Stainless steels
cast materials
non-ferrous metals

Guhring no.	1131
Standard	Guhring std.
Tool material	HSCO
Surface	○
Type	GT 80 IK
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	5.00
Standard range page	492

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Oil feed drills

Co-alloyed high speed steel
Increased wear resistance

long chipping materials up to 1000 N/mm²
Stainless steels
cast materials
non-ferrous metals

Guhring no.	1132
Standard	Guhring std.
Tool material	HSCO
Surface	S
Type	GT 80 IK
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	5.00
Standard range page	492

Oil feed drills

Oil feed drills
For drilling through drill bushes
Especially for drilling depths over 5xD

laminated sheet metal
steel and cast steel, grey cast iron
austenitic steels up to 800 N/mm²

Guhring no.	390
Standard	Guhring std.
Tool material	HSS
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	3.00
Standard range page	494

Bushing length twist drills

Special geometry
For drilling through drill bushes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Guhring no.	211
Standard	DIN 339
Tool material	HSS
Surface	>Ø 2,36
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	495

Bushing length twist drills

Special geometry
For drilling through drill bushes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Guhring no.	561
Standard	DIN 339
Tool material	HSS
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	2.40
Standard range page	495

Bushing length twist drills

Special geometry
For drilling through drill bushes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Guhring no.	666
Standard	DIN 339
Tool material	HSS
Surface	S
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	495

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Bushing length twist drills

Guhring no.	311
Standard	DIN 339
Tool material	HSCO
Surface	>Ø 2,36
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.10
Standard range page	495

Co-alloyed high speed steel
Special geometry
Increased wear resistance
For drilling through drill bushes

alloyed/unalloyed steels and castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Long series twist drills

Guhring no.	204
Standard	DIN 340
Tool material	HSS
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	2.95
Standard range page	502

With tang

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Long series twist drills

Guhring no.	217
Standard	DIN 340
Tool material	HSS
Surface	>Ø 2,36
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	502

Standard drill
Especially for deep holes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Long series twist drills

Guhring no.	218
Standard	DIN 340
Tool material	HSS
Surface	
Type	H
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	14.01
Standard range page	502

Standard drill
Especially for deep holes

hard, crumbly materials
brass, magnesium alloys
bronze, phosphor bronze
thin zamak und electron
slate, mico, pertinax
with special point grind:
insulating materials, ebonit, bakelite
galalithe, celluloid, synthetic resins, horn compounds
eternit, plexiglass

Long series twist drills

Guhring no.	219
Standard	DIN 340
Tool material	HSS
Surface	
Type	W
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	14.01
Standard range page	502

Standard drill
Especially for deep holes

soft/long chipping materials
Aluminium, long chipping Al-alloys
zinc, refined copper, silumin, electron
zamak, soft plastics, wood

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

Long series twist drills

Guhring no.	220
Standard	DIN 340
Tool material	HSS
Surface	>Ø 6,00
Type	N
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	14.01
Standard range page	502

Standard drill
Especially for deep holes
For drilling through drill bushes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Long series twist drills

Guhring no.	221
Standard	DIN 340
Tool material	HSS
Surface	
Type	H
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	14.01
Standard range page	502

Standard drill
Especially for deep holes

hard, crumbly materials
brass, magnesium alloys
bronze, phosphor bronze
thin zamak und electron
slate, mico, pertinax
with special point grind:
insulating materials, ebonit, bakelite
galalithe, celluloid, synthetic resins, horn compounds
eternit, plexiglass

Long series twist drills

Guhring no.	501
Standard	DIN 340
Tool material	HSS
Surface	
Type	GT50
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	2.37
Standard range page	502

Especially large flute

soft/long chipping materials
up to 500 N/mm²
mild steel
Aluminium, long chipping Al-alloys
zinc, refined copper, silumin, electron
zamak, argalium, soft plastics, wood

Long series twist drills

Guhring no.	506
Standard	DIN 340
Tool material	HSS
Surface	>Ø 2,36
Type	GT 100
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.40
Standard range page	503

Wide flutes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Long series twist drills

Guhring no.	535
Standard	DIN 340
Tool material	HSS
Surface	>Ø 2,36
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	503

Wide flutes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Long series twist drills

Guhring no.	667
Standard	DIN 340
Tool material	HSS
Surface	S
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	0.96
Standard range page	503

Standard drill
Especially for deep holes
For drilling through drill bushes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Long series twist drills

Guhring no.	668
Standard	DIN 340
Tool material	HSS
Surface	S
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	503

Wide flutes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Long series twist drills

Guhring no.	2462
Standard	DIN 340
Tool material	HSS
Surface	F
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	503

Wide flutes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Long series twist drills

Guhring no.	317
Standard	DIN 340
Tool material	HSCO
Surface	>Ø 2,36
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	503

Co-alloyed high speed steel
Increased wear resistance

alloyed/unalloyed steels and castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Long series twist drills

Guhring no.	336
Standard	DIN 340
Tool material	HSCO
Surface	>Ø 2,36
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	503

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
For unsatisfactory chip evacuation

alloyed/unalloyed steels and castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

Long series twist drills

Co-alloyed high speed steel
Wide flutes
Especially high wear resistance
For unsatisfactory chip evacuation

alloyed/unalloyed steels and castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Guhring no.	396
Standard	DIN 340
Tool material	HSCO
Surface	F
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	503

Long series twist drills

Co-alloyed high speed steel
Increased wear resistance

Titanium and Titanium alloys
stainless/acid-/heat resistant austenitic steels
for high tensile strength and short chipping steels over appr. 900 N/mm²
antifriction bearing steels
Hastelloy, Inconel, Nimonic

Guhring no.	617
Standard	DIN 340
Tool material	HSCO
Surface	◯
Type	Ti
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	503

Long series twist drills

Co-alloyed high speed steel
Increased wear resistance

Titanium and Titanium alloys
stainless/acid-/heat resistant austenitic steels
for high tensile strength and short chipping steels over appr. 900 N/mm²
antifriction bearing steels
Hastelloy, Inconel, Nimonic

Guhring no.	669
Standard	DIN 340
Tool material	HSCO
Surface	S
Type	Ti
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.00
Standard range page	503

Long series twist drills

glass fibres reinforced plastics
Duroplastics that cause wear on lands and cutting edges

Guhring no.	706
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	130
Web thinned ≥Ø	
Standard range page	526

Extra length twist drills, series 1

For extremely deep holes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Guhring no.	235
Standard	DIN 1869
Tool material	HSS
Surface	◯ >Ø 2,36
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	2.37
Standard range page	527

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Extra length twist drills, series 1

Guhring no.	502
Standard	DIN 1869
Tool material	HSS
Surface	>Ø 2,36
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.95
Standard range page	527

Wide flutes
For extremely deep holes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Extra length twist drills, series 1

Guhring no.	524
Standard	DIN 1869
Tool material	HSS
Surface	
Type	GT50
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	2.37
Standard range page	527

For extremely deep holes

long chipping materials up to 500 N/mm²
mild steel
Aluminium, long chipping Al-alloys
zinc, refined copper, silumin, electron
zamak, argalium, soft plastics, wood

Extra length twist drills, series 1

Guhring no.	670
Standard	DIN 1869
Tool material	HSS
Surface	S
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	1.98
Standard range page	527

Wide flutes
For extremely deep holes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Extra length twist drills, series 1

Guhring no.	618
Standard	DIN 1869
Tool material	HSCO
Surface	
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	2.70
Standard range page	527

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
For extremely deep holes
For unsatisfactory chip evacuation

high tensile steels and cast steels
grey cast iron, malleable and spheroidal iron

Extra length twist drills, series 2

Guhring no.	236
Standard	DIN 1869
Tool material	HSS
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	2.70
Standard range page	532

For extremely deep holes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

Extra length twist drills, series 2

Guhring no.	503
Standard	DIN 1869
Tool material	HSS
Surface	>Ø 2,36
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	2.00
Standard range page	532

Wide flutes
For extremely deep holes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Extra length twist drills, series 2

Guhring no.	528
Standard	DIN 1869
Tool material	HSS
Surface	
Type	GT50
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	2.80
Standard range page	532

For extremely deep holes

long chipping materials up to 500 N/mm²
mild steel
Aluminium, long chipping Al-alloys
zinc, refined copper, silumin, electron
zamak, argalium, soft plastics, wood

Extra length twist drills, series 2

Guhring no.	671
Standard	DIN 1869
Tool material	HSS
Surface	S
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	2.30
Standard range page	532

Wide flutes
For extremely deep holes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Extra length twist drills, series 2

Guhring no.	619
Standard	DIN 1869
Tool material	HSCO
Surface	
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	3.00
Standard range page	532

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
For extremely deep holes
For unsatisfactory chip evacuation

high tensile steels and cast steels
grey cast iron, malleable and spheroidal iron

Extra length twist drills, series 3

Guhring no.	237
Standard	DIN 1869
Tool material	HSS
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.50
Standard range page	535

For extremely deep holes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Extra length twist drills, series 3

Guhring no.	504
Standard	DIN 1869
Tool material	HSS
Surface	◓
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	2.50
Standard range page	535

Wide flutes
For extremely deep holes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Extra length twist drills, series 3

Guhring no.	529
Standard	DIN 1869
Tool material	HSS
Surface	◯
Type	GT50
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	2.50
Standard range page	535

For extremely deep holes

long chipping materials up to 500 N/mm²
mild steel
Aluminium, long chipping Al-alloys
zinc, refined copper, silumin, electron
zamak, argalium, soft plastics, wood

Extra length twist drills, series 3

Guhring no.	571
Standard	DIN 1869
Tool material	HSCO
Surface	◓
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	2.50
Standard range page	535

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
For extremely deep holes
For unsatisfactory chip evacuation

high tensile steels and cast steels
grey cast iron, malleable and spheroidal iron

Extra length twist drills

Guhring no.	242
Standard	Guhring std.
Tool material	HSS
Surface	◓
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	6.00
Standard range page	538

Wide flutes
For extremely deep holes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Extra length twist drills

Guhring no.	243
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	8.00
Standard range page	539

Wide flutes
For extremely deep holes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Extra length twist drills

Wide flutes
For extremely deep holes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Guhring no.	244
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	10.00
Standard range page	540

Aircraft extension drills, 6 inches long

Al-alloyed sheets
laminated plates (sandwiched materials)
steel and cast iron

Guhring no.	577
Standard	NAS 907
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.50
Standard range page	541

Aircraft extension drills, 6 inches long

Al-alloyed sheets
laminated plates (sandwiched materials)
steel and cast iron

Guhring no.	579
Standard	NAS 907
Tool material	HSS
Surface	● >Ø 2,36
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	135
Web thinned ≥Ø	1.50
Standard range page	541

Aircraft extension drills, 12 inches long

Al-alloyed sheets
laminated plates (sandwiched materials)
steel and cast iron

Guhring no.	578
Standard	NAS 907
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.50
Standard range page	544

Aircraft extension drills, 12 inches long

Al-alloyed sheets
laminated plates (sandwiched materials)
steel and cast iron

Guhring no.	580
Standard	NAS 907
Tool material	HSS
Surface	● >Ø 2,36
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	135
Web thinned ≥Ø	1.50
Standard range page	544

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Taper pin drills

Guhring no.	531
Standard	DIN 1898
Tool material	HSS
Surface	>Ø 2,36
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.00
Standard range page	546

For tapered holes
For holding taper pins
To DIN 1 (new: DIN EN 22 339)
and DIN 7978 (new: DIN EN 28 736)
With tang

Carbide-tipped twist drill

Guhring no.	703
Standard	DIN 8037
Tool material	Carbide
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	118
Web thinned ≥Ø	1.70
Standard range page	547

Carbide tipped

spring steel
hard cast iron over 300 Brinell
pure molybdenum
hard bronzes

Carbide-tipped twist drill

Guhring no.	704
Standard	DIN 8038
Tool material	Carbide
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	85
Web thinned ≥Ø	1.50
Standard range page	547

Carbide tipped

glass fibres reinforced plastics
Duroplastics that cause wear on lands and cutting edges

Kevlar drills

Guhring no.	1149
Standard	Guhring std.
Tool material	Solid carbide
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Special point grind
Point angle °	
Web thinned ≥Ø	
Standard range page	550

Special point grind

fiber reinforced plastics

Carbide tipped spade drills

Guhring no.	707
Standard	Guhring std.
Tool material	Carbide
Surface	
Type	
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	120
Web thinned ≥Ø	3.00
Standard range page	551

Special drill
In difficult conditions

Chilled cast iron
hard steel

bright | steam tempered | nitrided lands | nitrided | golden brown | TiAlN | TiAlN nanoA | TiAlN SuperA

Masonry drills

Carbide tipped
For drills and hammer drills
Drilling tiles without hammer action!

brick, concrete, ceramictiles

Guhring no.	716
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Facet point grind
Point angle °	120
Web thinned ≥Ø	
Standard range page	552

Jobber drills

Guhring no.	363
Standard	Guhring std.
Tool material	HSCO
Surface	○
Type	GV 120
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	7.00
Standard range page	553

Co-alloyed high speed steel
Increased wear resistance

difficult to machine materials
acid resist./stainless steels
spring steels, austenitic steels

Jobber drills

Guhring no.	663
Standard	Guhring std.
Tool material	HSCO
Surface	(S)
Type	GV 120
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	9.00
Standard range page	553

Co-alloyed high speed steel
Increased wear resistance

difficult to machine materials
acid resist./stainless steels
spring steels, austenitic steels

Twist drills

Guhring no.	229
Standard	DIN 345
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	8.00
Standard range page	555

Special geometry
Improved chip fracture
Note higher cutting rates

long chipping materials

Twist drills

Guhring no.	245
Standard	DIN 345
Tool material	HSS
Surface	○ ● >Ø 2,36
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	14.01
Standard range page	555

Standard drill

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Twist drills

Guhring no.	246
Standard	DIN 345
Tool material	HSS
Surface	○
Type	H
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	14.01
Standard range page	555

Standard drill

hard, crumbly materials
brass, magnesium alloys
bronze, phosphor bronze
thin zamak und electron
slate, mico, pertinax
with special point grind:
insulating materials, ebonit, bakelite
galalithe, celluloid, synthetic resins, horn compounds
eternit, plexiglass

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown (A) TiAlN (a) TiAlN nanoA (A) TiAlN SuperA

Twist drills	Guhring no.	247
	Standard	DIN 345
	Tool material	HSS
Standard drill	Surface	○
soft/long chipping materials Aluminium, long chipping Al-alloys zinc, refined copper, silumin, electron	Type	W
	Cutting direction	right-hand
	Point geometry	Relieved cone
	Point angle °	130
	Web thinned ≥Ø	14.01
	Standard range page	555

Twist drills	Guhring no.	248
	Standard	DIN 345
	Tool material	HSS
Standard drill	Surface	●
alloyed/unalloyed steel and cast steel grey cast iron, malleable and spheroidal iron sintered powder metal, German silver and graphite	Type	N
	Cutting direction	left-hand
	Point geometry	Relieved cone
	Point angle °	118
	Web thinned ≥Ø	14.01
	Standard range page	555

Twist drills	Guhring no.	558
	Standard	DIN 345
	Tool material	HSS
Wide flutes Especially for drilling depths over 3xd	Surface	◐ >Ø 16,0
cast iron and steels up to 1000 N/mm² Not recommended for: CrNi steels, stainless steels	Type	GT 100
	Cutting direction	right-hand
	Point geometry	Relieved cone
	Point angle °	130
	Web thinned ≥Ø	7.94
	Standard range page	555

Twist drills	Guhring no.	592
	Standard	DIN 345
	Tool material	HSS
Special geometry For heavy duty appl. in the steel ind.	Surface	◐ >Ø 16,0
alloyed/unalloyed steel and cast steel	Type	N
	Cutting direction	right-hand
	Point geometry	Relieved cone
	Point angle °	118
	Web thinned ≥Ø	10.00
	Standard range page	555

Twist drills	Guhring no.	606
	Standard	DIN 345
	Tool material	HSS
Wide flutes Especially for drilling depths over 3xd	Surface	S
cast iron and steels up to 1000 N/mm² Not recommended for: CrNi steels, stainless steels	Type	GT 100
	Cutting direction	right-hand
	Point geometry	Relieved cone
	Point angle °	130
	Web thinned ≥Ø	7.94
	Standard range page	567

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Twist drills

Guhring no.	654
Standard	DIN 345
Tool material	HSS
Surface	S
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.00
Standard range page	567

Standard drill

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Twist drills

Guhring no.	345
Standard	DIN 345
Tool material	HSCO
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.00
Standard range page	567

Co-alloyed high speed steel
Increased wear resistance

alloyed/unalloyed steels and castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Twist drills

Guhring no.	645
Standard	DIN 345
Tool material	HSCO
Surface	>Ø 16,0
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	9.52
Standard range page	567

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
Especially for drilling depths over 3xd

alloyed/unalloyed steels and castings over 1000 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Twist drills

Guhring no.	661
Standard	DIN 345
Tool material	HSCO
Surface	S
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	7.94
Standard range page	567

Co-alloyed high speed steel
Increased wear resistance

alloyed/unalloyed steels and castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Twist drills

Guhring no.	662
Standard	DIN 345
Tool material	HSCO
Surface	S
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	10.00
Standard range page	567

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
Especially for drilling depths over 3xd

alloyed/unalloyed steels and castings over 1000 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

Twist drills

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
Especially for drilling depths over 3xd

alloyed/unalloyed steels and castings over 1000 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Guhring no.	1222
Standard	DIN 345
Tool material	HSCO
Surface	C
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	10.00
Standard range page	567

Twist drills

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
Especially for drilling depths over 3xd

alloyed/unalloyed steels and castings over 1000 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Guhring no.	1224
Standard	DIN 345
Tool material	HSCO
Surface	A
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	10.00
Standard range page	573

Twist drills

Co-alloyed high speed steel
Special geometry
Increased wear resistance

stainless/acid-/heat resistant austenitic steels (V2A and V4A)

Guhring no.	1262
Standard	DIN 345
Tool material	HSCO
Surface	
Type	VA
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	
Standard range page	573

Twist drills

Standard drill
Oversize shank

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Guhring no.	251
Standard	DIN 346
Tool material	HSS
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	14.01
Standard range page	575

Twist drills

Co-alloyed high speed steel
Increased wear resistance
Oversize shank

alloyed/unalloyed steels and castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Guhring no.	351
Standard	DIN 346
Tool material	HSCO
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	10.00
Standard range page	575

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Bushing length twist drills

Guhring no.	257
Standard	DIN 341
Tool material	HSS
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	14.01
Standard range page	577

Special geometry
For drilling through drill bushes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Bushing length twist drills

Guhring no.	505
Standard	DIN 341
Tool material	HSS
Surface	
Type	GT50
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	4.20
Standard range page	577

Especially large flute

long chipping materials up to 500 N/mm²
mild steel
Aluminium, long chipping Al-alloys
zinc, refined copper, silumin, electron
zamak, argalium, soft plastics, wood

Bushing length twist drills

Guhring no.	551
Standard	DIN 341
Tool material	HSS
Surface	>Ø 16,0
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	5.50
Standard range page	577

Wide flutes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Bushing length twist drills

Guhring no.	655
Standard	DIN 341
Tool material	HSS
Surface	S
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	4.00
Standard range page	577

Special geometry
For drilling through drill bushes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Bushing length twist drills

Guhring no.	656
Standard	DIN 341
Tool material	HSS
Surface	S
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	5.60
Standard range page	577

Wide flutes
For unsatisfactory chip evacuation

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

Bushing length twist drills

Co-alloyed high speed steel
Special geometry
Increased wear resistance
For drilling through drill bushes

alloyed/unalloyed steels and castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Guhring no.	357
Standard	DIN 341
Tool material	HSCO
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	4.75
Standard range page	577

Bushing length twist drills

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
For unsatisfactory chip evacuation

alloyed/unalloyed steels and castings over 800 N/mm²
hot and cold rolled steels
antifriction bearing steels
high alloyed steels
Heat treatable and case hardened steels

Guhring no.	623
Standard	DIN 341
Tool material	HSCO
Surface	>Ø 16,0
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	10.00
Standard range page	577

Bushing length twist drills

Special geometry
Oversize shank
For drilling through drill bushes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal, German silver and graphite

Guhring no.	523
Standard	Guhring std.
Tool material	HSS
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	14.01
Standard range page	584

Oil feed drills short

For drilling through drill bushes

laminated sheet metal
steel and cast steel, grey cast iron
austenitic steels up to 800 N/mm²

Guhring no.	269
Standard	Guhring std.
Tool material	HSS
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	9.52
Standard range page	585

Oil feed drills, flute length to DIN 341

For drilling through drill bushes

laminated sheet metal
steel and cast steel, grey cast iron
austenitic steels up to 800 N/mm²

Guhring no.	1101
Standard	Guhring std.
Tool material	HSS
Surface	
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	10.00
Standard range page	587

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Oil feed drills, flute length to DIN 341

For drilling through drill bushes

laminated sheet metal
steel and cast steel, grey cast iron
austenitic steels up to 800 N/mm²

Guhring no.	270
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	10.00
Standard range page	588

Oil feed drills, flute length to DIN 341

For drilling through drill bushes

laminated sheet metal
steel and cast steel, grey cast iron
austenitic steels up to 800 N/mm²

Guhring no.	271
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	10.00
Standard range page	588

Oil feed drills, flute length to DIN 341

For drilling through drill bushes

laminated sheet metal
steel and cast steel, grey cast iron
austenitic steels up to 800 N/mm²

Guhring no.	272
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	10.00
Standard range page	588

Oil feed drills, flute length to DIN 341

Co-alloyed high speed steel
Increased wear resistance
For drilling through drill bushes

tensile and high tensile steels
cast steel, grey cast iron
stainless/acid/heat resistant steels
tensile strength between 800 and 1300 N/mm²

Guhring no.	370
Standard	Guhring std.
Tool material	HSCO
Surface	○
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	11.00
Standard range page	588

Oil feed drills, flute length to DIN 341

Co-alloyed high speed steel
Increased wear resistance
For drilling through drill bushes

tensile and high tensile steels
cast steel, grey cast iron
stainless/acid/heat resistant steels
tensile strength between 800 and 1300 N/mm²

Guhring no.	371
Standard	Guhring std.
Tool material	HSCO
Surface	○
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	11.00
Standard range page	588

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Oil feed drills, flute length to DIN 341

Co-alloyed high speed steel
Increased wear resistance
For drilling through drill bushes

tensile and high tensile steels
cast steel, grey cast iron
stainless/acid/heat resistant steels
tensile strength between 800 and 1300 N/mm²

Guhring no.	372
Standard	Guhring std.
Tool material	HSCO
Surface	○
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	11.00
Standard range page	588

Oil feed drills, flute length to DIN 1870

Co-alloyed high speed steel
Increased wear resistance
For drilling through drill bushes

tensile and high tensile steels
cast steel, grey cast iron
stainless/acid/heat resistant steels
tensile strength between 800 and 1300 N/mm²

Guhring no.	374
Standard	Guhring std.
Tool material	HSCO
Surface	○
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	11.00
Standard range page	591

Oil feed drills, flute length to DIN 1870

Co-alloyed high speed steel
Increased wear resistance
For drilling through drill bushes

tensile and high tensile steels
cast steel, grey cast iron
stainless/acid/heat resistant steels
tensile strength between 800 and 1300 N/mm²

Guhring no.	375
Standard	Guhring std.
Tool material	HSCO
Surface	○
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	11.00
Standard range page	591

Oil feed drills, flute length to DIN 1870

Co-alloyed high speed steel
Increased wear resistance
For drilling through drill bushes

tensile and high tensile steels
cast steel, grey cast iron
stainless/acid/heat resistant steels
tensile strength between 800 and 1300 N/mm²

Guhring no.	376
Standard	Guhring std.
Tool material	HSCO
Surface	○
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	11.00
Standard range page	591

Extra length twist drills, series 1

For extremely deep holes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal

Guhring no.	266
Standard	DIN 1870
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	7.55
Standard range page	593

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Extra length twist drills, series 1

Guhring no.	525
Standard	DIN 1870
Tool material	HSS
Surface	○
Type	GT50
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	7.75
Standard range page	593

For extremely deep holes
For soft and long-chipping materials

long chipping materials up to 500 N/mm²
mild steel
Aluminium, long chipping Al-alloys
zinc, refined copper, silumin, electron
zamak, argalium, soft plastics, wood

Extra length twist drills, series 1

Guhring no.	526
Standard	DIN 1870
Tool material	HSS
Surface	◐ >Ø 16,0
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	5.80
Standard range page	593

Wide flutes
For unsatisfactory chip evacuation
For extremely deep holes

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Extra length twist drills, series 1

Guhring no.	620
Standard	DIN 1870
Tool material	HSCO
Surface	◐ >Ø 16,0
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	9.52
Standard range page	593

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
For unsatisfactory chip evacuation
For extremely deep holes

high tensile steels and cast steels
grey cast iron, malleable and spheroidal iron

Extra length twist drills, series 2

Guhring no.	267
Standard	DIN 1870
Tool material	HSS
Surface	●
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	7.70
Standard range page	596

For extremely deep holes

alloyed/unalloyed steel and cast steel
grey cast iron, malleable and spheroidal iron
sintered powder metal

Extra length twist drills, series 2

Guhring no.	527
Standard	DIN 1870
Tool material	HSS
Surface	◐ >Ø 16,0
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	7.50
Standard range page	596

Wide flutes
For unsatisfactory chip evacuation
For extremely deep holes

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

○ bright ● steam tempered ◐ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Extra length twist drills, series 2

For extremely deep holes

long chipping materials up to 500 N/mm²
mild steel
Aluminium, long chipping Al-alloys
zinc, refined copper, silumin, electron
zamak, argalium, soft plastics, wood

Guhring no.	542
Standard	DIN 1870
Tool material	HSS
Surface	
Type	GT50
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	8.00
Standard range page	596

Extra length twist drills, series 2

Co-alloyed high speed steel
Wide flutes
Increased wear resistance
For unsatisfactory chip evacuation
For extremely deep holes

high tensile steels and cast steels
grey cast iron, malleable and spheroidal iron

Guhring no.	621
Standard	DIN 1870
Tool material	HSCO
Surface	>Ø 16,0
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	9.52
Standard range page	596

Extra length twist drills

Wide flutes
For unsatisfactory chip evacuation
For extremely deep holes

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Guhring no.	563
Standard	Guhring std.
Tool material	HSS
Surface	
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	6.00
Standard range page	599

Extra length twist drills

Wide flutes
For unsatisfactory chip evacuation
For extremely deep holes

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Guhring no.	566
Standard	Guhring std.
Tool material	HSS
Surface	>Ø 16,0
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	8.00
Standard range page	599

Extra length twist drills

Wide flutes
For unsatisfactory chip evacuation
For extremely deep holes

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Guhring no.	293
Standard	Guhring std.
Tool material	HSS
Surface	>Ø 16,0
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	14.01
Standard range page	600

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Extra length twist drills

Wide flutes
For unsatisfactory chip evacuation
For extremely deep holes

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Guhring no.	564
Standard	Guhring std.
Tool material	HSS
Surface	◓
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	6.00
Standard range page	600

Extra length twist drills

Wide flutes
For unsatisfactory chip evacuation
For extremely deep holes

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Guhring no.	565
Standard	Guhring std.
Tool material	HSS
Surface	◓ >Ø 16,0
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	6.00
Standard range page	601

Extra length twist drills

Wide flutes
For unsatisfactory chip evacuation
For extremely deep holes

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Guhring no.	298
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	14.01
Standard range page	602

Extra length twist drills

Wide flutes
For unsatisfactory chip evacuation
For extremely deep holes

cast iron and steels up to 1000 N/mm²
Not recommended for:
CrNi steels, stainless steels

Guhring no.	299
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	GT 100
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	130
Web thinned ≥Ø	14.01
Standard range page	603

Taper pin drills

For tapered holes
For holding taper pins
To DIN 1 (new: DIN EN 22 339)
DIN 7978 (new: DIN EN 28 736),
DIN 7977 (new: DIN EN 28737) and DIN 258

Guhring no.	532
Standard	DIN 1898
Tool material	HSS
Surface	●
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	5.00
Standard range page	604

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Carbide-tipped twist drill

Carbide tipped

spring steel
hard cast iron over 300 Brinell
pure molybdenum
hard bronzes
glass fibres reinforced plastics
(e.g. printed circuit boards)
Duroplastics that cause wear on lands and cutting edges

Guhring no.	705
Standard	DIN 8041
Tool material	Carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	8.00
Standard range page	605

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Stepped drills for centering to DIN 332

60° countersink angle
For tapping size holes with centre
To DIN 332, sheet 2, form D
Application on centering/cut-off mach.

Guhring no.	274
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.30
Standard range page	606

Stepped drills for centering to DIN 332

60° countersink angle
For tapping size holes with centre
To DIN 332, sheet 2, form DR
Application on centering/cut-off mach.

Guhring no.	574
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.30
Standard range page	606

Stepped drills for centering to DIN 332

Shank without flat
60° countersink angle
For tapping size holes with centre
To DIN 332, sheet 2, form D

Guhring no.	575
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.30
Standard range page	607

Stepped drills for centering to DIN 332

Shank without flat
60° countersink angle
For tapping size holes with centre
To DIN 332, sheet 2, form D

Guhring no.	576
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	6.80
Standard range page	608

Straight shank short step drills

Very high torsional stability
For CNC and NC machines
For through holes
To DIN EN 20 273
For screwhead countersinks 90°
f dependent on small diameter
vc dependent on large diameter

Guhring no.	378
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.20
Standard range page	609

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Straight shank short step drills

Very high torsional stability
For CNC and NC machines
For through holes
To DIN EN 20 273
For screwhead countersinks 90°
f dependent on small diameter
vc dependent on large diameter

Guhring no.	1147
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.40
Standard range page	609

Straight shank short step drills

Very high torsional stability
For CNC and NC machines
For through holes
To DIN EN 20 273
For screwhead countersinks 180°
to DIN 974-1
For screws
to DIN 6912, 7513, 7984
f dependent on small diameter
vc dependent on large diameter

Guhring no.	379
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.40
Standard range page	610

Straight shank short step drills

Very high torsional stability
For CNC and NC machines
For tapping size holes
to DIN 336
For countersinking 90°
To DIN EN 20 273
f dependent on small diameter
vc dependent on large diameter

Guhring no.	380
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	2.50
Standard range page	611

Straight shank subland drills

fine tolerances
For through holes
To DIN EN 20 273
For screwhead countersinks 90°
f dependent on small diameter
vc dependent on large diameter

Guhring no.	536
Standard	DIN 8374
Tool material	HSS
Surface	●
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.20
Standard range page	612

Straight shank subland drills

For through holes
To DIN EN 20 273
For screwhead countersinks 90°
Form A and F
to DIN 74
f dependent on small diameter
vc dependent on large diameter

Guhring no.	569
Standard	DIN 8374
Tool material	HSS
Surface	●
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	
Standard range page	612

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Straight shank subland drills

For through holes
To DIN EN 20 273
For screwhead countersinks 90°
Form A
to DIN 74
f dependent on small diameter
vc dependent on large diameter

Guhring no.	636
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.40
Standard range page	612

Straight shank subland drills

For through holes
To DIN EN 20 273
For screwhead countersinks 180°
to DIN 974-1
For screws
to DIN 6912, 7513, 7984
f dependent on small diameter
vc dependent on large diameter

Guhring no.	638
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.20
Standard range page	612

Straight shank subland drills

For through holes
To DIN EN 20 273
For screwhead countersinks 180°
to DIN 974-1
For screws
to DIN 6912, 7513, 7984
f dependent on small diameter
vc dependent on large diameter

Guhring no.	538
Standard	DIN 8376
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.40
Standard range page	613

Straight shank subland drills

For through holes
To DIN EN 20 273
For screwhead countersinks 180°
to DIN 974-1
For screws
to DIN 6912, 7513, 7984
f dependent on small diameter
vc dependent on large diameter

abrasive materials
AlSi-alloys
fiber reinforced plastics
Duroplastics that cause wear on lands and cutting edges
high tensile steels, cast steel, grey cast iron
chilled cast iron, Mn hard steels, CrNi steels
bronzes, light metals

Guhring no.	738
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	3.40
Standard range page	613

Straight shank subland drills

For through holes
To DIN EN 20 273
For screwhead countersinks 180°
For screws
to DIN 6912, 7513, 7984
f dependent on small diameter
vc dependent on large diameter

Guhring no.	514
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	5.90
Standard range page	614

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Straight shank subland drills

For tapping size holes
to DIN 336
For countersinking 90°
For through holes
To DIN EN 20 273
f dependent on small diameter
vc dependent on large diameter

Guhring no.	540
Standard	DIN 8378
Tool material	HSS
Surface	●
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	2.50
Standard range page	615

Straight shank subland drills

For tapping size holes
to DIN 336
For countersinking 90°
For through holes
To DIN EN 20 273
f dependent on small diameter
vc dependent on large diameter

abrasive materials
AlSi-alloys
fiber reinforced plastics
Duroplastics that cause wear on lands and cutting edges
high tensile steels, cast steel, grey cast iron
chilled cast iron, Mn hard steels, CrNi steels
bronzes, light metals

Guhring no.	739
Standard	Guhring std.
Tool material	Solid carbide
Surface	○
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	2.50
Standard range page	615

Taper shank subland drills

fine tolerances
For through holes
To DIN EN 20 273
For screwhead countersinks 90°
f dependent on small diameter
vc dependent on large diameter

Guhring no.	637
Standard	Guhring std.
Tool material	HSS
Surface	●
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	6.40
Standard range page	616

Taper shank subland drills

fine tolerances
For through holes
To DIN EN 20 273
For screwhead countersinks 90°
f dependent on small diameter
vc dependent on large diameter

Guhring no.	537
Standard	Guhring std.
Tool material	HSS
Surface	●
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	5.50
Standard range page	616

Taper shank subland drills

For through holes
To DIN EN 20 273
For screwhead countersinks 180°
to DIN 974-1
For screws
to DIN 6912, 7513, 7984
f dependent on small diameter
vc dependent on large diameter

Guhring no.	639
Standard	Guhring std.
Tool material	HSS
Surface	●
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	5.30
Standard range page	617

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Taper shank subland drills

For through holes
To DIN EN 20 273
For screwhead countersinks 180°
to DIN 74
For screws
to DIN 6912, 7513, 7984
f dependent on small diameter
vc dependent on large diameter

Guhring no.	539
Standard	DIN 8377
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	5.50
Standard range page	618

Taper shank subland drills

For through holes
With old countersinks form H, J, K
To DIN 75, part 2
For screws
To DIN 84, 912, 6712
f dependent on small diameter
vc dependent on large diameter

Guhring no.	520
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	5.30
Standard range page	619

Taper shank subland drills

For tapping size holes
To DIN 336, part 1
For countersinking 90°
To DIN EN 20 273
f dependent on small diameter
vc dependent on large diameter

Guhring no.	541
Standard	DIN 8379
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	6.80
Standard range page	620

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Center drills without flat	Guhring no. 594
	Standard ASA
For centre holes Form A to U.S. standards	Tool material HSS
	Surface ◯
	Form A
	Cutting direction right-hand
	Point geometry Relieved cone
	Point angle ° 118
	Web thinned ≥Ø 1.60
	Standard range page 621

Center drills without flat	Guhring no. 595
	Standard ASA
For centre holes Form B to U.S. standards	Tool material HSS
	Surface ◯
	Form B
	Cutting direction right-hand
	Point geometry Relieved cone
	Point angle ° 118
	Web thinned ≥Ø 1.60
	Standard range page 622

Center drills without flat	Guhring no. 292
	Standard BS 328
For centre holes Form A to British standards	Tool material HSS
	Surface ◯
	Form A
	Cutting direction right-hand
	Point geometry Relieved cone
	Point angle ° 118
	Web thinned ≥Ø 1.19
	Standard range page 623

Center drills without flat	Guhring no. 294
	Standard BS 328
For centre holes Form A to British standards	Tool material HSS
	Surface ◯
	Form A
	Cutting direction left-hand
	Point geometry Relieved cone
	Point angle ° 118
	Web thinned ≥Ø 1.19
	Standard range page 623

Center drills without flat	Guhring no. 581
	Standard DIN 333
Without protected countersink For centre holes To DIN 332, sheet 1, form A d1 ≤ 0.8 mm: not double ended	Tool material HSS
	Surface ◯
	Form A
	Cutting direction right-hand
	Point geometry Relieved cone
	Point angle ° 118
	Web thinned ≥Ø 1.60
	Standard range page 624

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Center drills without flat

Without protected countersink
For centre holes
To DIN 332, sheet 1, form A
d1 ≤ 0.8 mm: not double ended

Guhring no.	582
Standard	DIN 333
Tool material	HSS
Surface	○
Form	A
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	624

Center drills without flat

Especially high rigidity
Correct positioning between lathe centers
For centre holes
To DIN 332, sheet 1, form R
d1 ≤ 0.8 mm: not double ended

Guhring no.	583
Standard	DIN 333
Tool material	HSS
Surface	○
Form	R
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	624

Center drills without flat

Especially high rigidity
Correct positioning between lathe centers
For centre holes
To DIN 332, sheet 1, form R
d1 ≤ 0.8 mm: not double ended

Guhring no.	584
Standard	DIN 333
Tool material	HSS
Surface	○
Form	R
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	624

Center drills without flat

With heel
Without protected countersink
Recess between countersink and hole
Especially high rigidity
High cutting rates
For centre holes
To DIN 332, sheet 1, form A

Guhring no.	590
Standard	DIN 333
Tool material	HSS
Surface	○
Form	A
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	625

Center drills without flat

Without protected countersink
For centre holes
To DIN 332, sheet 1, form A
d1 ≤ 0.8 mm: not double ended

Guhring no.	613
Standard	DIN 333
Tool material	HSS
Surface	Ⓢ
Form	A
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	625

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Center drills without flat

Especially high rigidity
Correct positioning between lathe centers
For centre holes
To DIN 332, sheet 1, form R
d1 ≤ 0.8 mm: not double ended

Guhring no.	614
Standard	DIN 333
Tool material	HSS
Surface	S
Form	R
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	625

Center drills without flat

Co-alloyed high speed steel
Without protected countersink
Increased wear resistance
For centre holes
To DIN 332, sheet 1, form A

materials over 800 N/mm²
stainl./acid-/heat-res. CrNi steel s

Guhring no.	381
Standard	DIN 333
Tool material	HSCO
Surface	
Form	A
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	625

Center drills without flat

Without protected countersink
For centre holes
To DIN 332, sheet 1, form A
d1 ≤ 0.8 mm: not double ended

abrasive materials
AlSi-alloys
fiber reinforced plastics
Duroplastics that cause wear on lands and cutting edges
high tensile steels, cast steel, grey cast iron
chilled cast iron, Mn hard steels, CrNi steels
bronzes, light metals

Guhring no.	736
Standard	Guhring std.
Tool material	Solid carbide
Surface	
Form	A
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	625

Center drills without flat

Without protected countersink
For centre holes
To DIN 332, sheet 1, form A
d1 ≤ 0.8 mm: not double ended

Guhring no.	281
Standard	DIN 333
Tool material	HSS
Surface	
Form	A
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	626

Center drills without flat

Without protected countersink
For centre holes
To DIN 332, sheet 1, form A
d1 ≤ 0.8 mm: not double ended

Guhring no.	282
Standard	DIN 333
Tool material	HSS
Surface	
Form	A
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	626

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Center drills without flat

Especially high rigidity
Correct positioning between lathe centers
For centre holes
To DIN 332, sheet 1, form R
d1 ≤ 0.8 mm: not double ended

Guhring no.	283
Standard	DIN 333
Tool material	HSS
Surface	◯
Form	R
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	626

Center drills without flat

Especially high rigidity
Correct positioning between lathe centers
For centre holes
To DIN 332, sheet 1, form R

Guhring no.	284
Standard	DIN 333
Tool material	HSS
Surface	◯
Form	R
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	626

Center drills without flat

For centre holes
To DIN 332, sheet 1, form B
With protected 120° countersink

Guhring no.	585
Standard	DIN 333
Tool material	HSS
Surface	◯
Form	B
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	627

Center drills without flat

For centre holes
To DIN 332, sheet 1, form B
With protected 120° countersink

Guhring no.	586
Standard	DIN 333
Tool material	HSS
Surface	◯
Form	B
Cutting direction	left-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	627

Center drills without flat

With heel
Recess between countersink and hole
Especially high rigidity
High cutting rates
For centre holes
To DIN 332, sheet 1, form B
With protected 120° countersink
d1 ≤ 0.8 mm: not double ended

Guhring no.	591
Standard	DIN 333
Tool material	HSS
Surface	◯
Form	B
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	627

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Center drills without flat

Long special drill
Without protected countersink
For centre holes
To DIN 332, sheet 1, form A
For deep centering positions

Guhring no.	280
Standard	Guhring std.
Tool material	HSS
Surface	◯
Form	A
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	628

Center drills without flat

For centre holes

With protected 120° countersink

Guhring no.	285
Standard	Guhring std.
Tool material	HSS
Surface	◯
Form	B
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	629

Center drills with flat

Without protected countersink
For centre holes
To DIN 332, sheet 1, form A

Guhring no.	587
Standard	DIN 333
Tool material	HSS
Surface	◯
Form	A
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	630

Center drills with flat

Especially high rigidity
Correct positioning between lathe centers
For centre holes
To DIN 332, sheet 1, form R

Guhring no.	588
Standard	DIN 333
Tool material	HSS
Surface	◯
Form	R
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	630

Center drills with flat

Without protected countersink
For centre holes
To DIN 332, sheet 1, form A

Guhring no.	287
Standard	DIN 333
Tool material	HSS
Surface	◯
Form	A
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	631

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Center drills with flat

Especially high rigidity
Correct positioning between lathe centers
For centre holes
To DIN 332, sheet 1, form R

Guhring no.	288
Standard	DIN 333
Tool material	HSS
Surface	◯
Form	R
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	631

Center drills with flat

For centre holes
To DIN 332, sheet 1, form B
With protected 120° countersink

Guhring no.	589
Standard	DIN 333
Tool material	HSS
Surface	◯
Form	B
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	632

Center drills with flat

For centre holes
To DIN 332, sheet 1, form B
With protected 120° countersink

Guhring no.	289
Standard	Guhring std.
Tool material	HSS
Surface	◯
Form	B
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Standard range page	633

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Straight shank core drills

Core drills
Three flutes
Especially high rigidity
For pre-drilled/-cast/-punched holes
Corrects alignment inaccuracies
Corrects circularity errors
Improved surface quality of hole
Observe min. pilot hole dia.
Chamfer dia. < tapping size hole
Perf. finish reaming after core drilling

steels over 1000 N/mm²
cast iron over 240 Brinell
Mn-steels, AlSi alloys
hard and abrasive plastics

Guhring no.	750
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	
Standard range page	634

Straight shank core drills

Core drills
Three flutes
Especially high rigidity
For pre-drilled/-cast/-punched holes
Corrects alignment inaccuracies
Corrects circularity errors
Improved surface quality of hole
Observe min. pilot hole dia.
Chamfer dia. < tapping size hole
Perf. finish reaming after core drilling

Guhring no.	533
Standard	DIN 344
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	
Standard range page	635

Taper shank core drills

Core drills, carbide tipped
Especially high rigidity
For pre-drilled/-cast/-punched holes
Corrects alignment inaccuracies
Corrects circularity errors
Improved surface quality of hole
Observe min. pilot hole dia.
Chamfer dia. < tapping size hole
Perf. finish reaming after core drilling

steels over 1000 N/mm²
cast iron over 240 Brinell
Mn-steels, AlSi alloys
hard and abrasive plastics

Guhring no.	729
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	
Standard range page	638

Taper shank core drills

Core drills
Three flutes
Especially high rigidity
For pre-drilled/-cast/-punched holes
Corrects alignment inaccuracies
Corrects circularity errors
Improved surface quality of hole
Observe min. pilot hole dia.
Chamfer dia. < tapping size hole
Perf. finish reaming after core drilling

Guhring no.	534
Standard	DIN 343
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	
Standard range page	639

Taper shank core drills

Core drills
Co-alloyed high speed steel
Especially high rigidity
For pre-drilled/-cast/-punched holes
Corrects alignment inaccuracies
Corrects circularity errors
Improved surface quality of hole
Observe min. pilot hole dia.
Chamfer dia. < tapping size hole
Perf. finish reaming after core drilling

Guhring no.	634
Standard	DIN 343
Tool material	HSCO
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	
Standard range page	639

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Taper shank core drills

Core drills
Co-alloyed high speed steel
Especially high rigidity
For pre-drilled/-cast/-punched holes
Corrects alignment inaccuracies
Corrects circularity errors
Improved surface quality of hole
Observe min. pilot hole dia.
Chamfer dia. < tapping size hole
Perf. finish reaming after core drilling

Guhring no.	635
Standard	DIN 1864
Tool material	HSCO
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	
Standard range page	643

Taper shank core drills

Core drills
Especially high rigidity
For pre-drilled/-cast/-punched holes
Corrects alignment inaccuracies
Corrects circularity errors
Improved surface quality of hole
Observe min. pilot hole dia.
Chamfer dia. < tapping size hole
Perf. finish reaming after core drilling

Guhring no.	555
Standard	DIN 1864
Tool material	HSS
Surface	◯
Type	N
Cutting direction	right-hand
Point geometry	Relieved cone
Point angle °	120
Web thinned ≥Ø	
Standard range page	644

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Oil feed adaptors

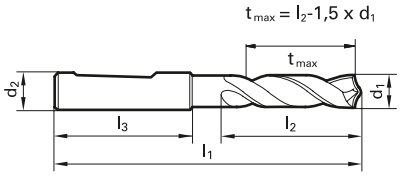
Guhring no.	230
Standard	Guhring std.
Standard range page	645

Product information
For Guhring oil feed drills (guhring no. 269, 271, 371 and 375)
Suitable for all drilling machines.
The oil feed drill fits direct into the spindle.
Radial coolant via the ball race at the run-out of the flutes.

The adaptor does not extend the drilling system.
Longitudinal stability and torsional rigidity are completely maintained.
Coolant: soluble oil.
Thin cutting oil can be used.
As a rule, coolant pumps are sufficient.

Guhring no.	1184	2480	2472	2475	8524
Standard	DIN 6537 K				
Tool material	Solid carbide				
Carbide grade	K/P				
Surface	S	F	F	F	Y
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 F	RT 100 HF
Drilling depth	3xD	3xD	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7	m7
Discount group	121	121	121	121	121
Techn. data page	120	120	120	120	120

NEW

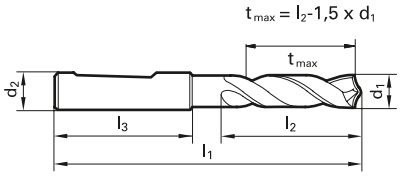


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
3.000		6.000	62.00	20.00	36.00	● ● ● ●
3.100		6.000	62.00	20.00	36.00	● ● ● ●
3.170	1/8	6.000	62.00	20.00	36.00	● ● ●
3.200		6.000	62.00	20.00	36.00	● ● ● ●
3.250		6.000	62.00	20.00	36.00	● ● ●
3.300		6.000	62.00	20.00	36.00	● ● ● ●
3.400		6.000	62.00	20.00	36.00	○ ● ● ●
3.500		6.000	62.00	20.00	36.00	● ● ● ●
3.570	9/64	6.000	62.00	20.00	36.00	● ● ● ●
3.600		6.000	62.00	20.00	36.00	○ ● ● ●
3.700		6.000	62.00	20.00	36.00	○ ● ● ● ●
3.800		6.000	66.00	24.00	36.00	● ● ● ●
3.900		6.000	66.00	24.00	36.00	○ ● ● ●
3.970	5/32	6.000	66.00	24.00	36.00	○ ● ● ●
4.000		6.000	66.00	24.00	36.00	● ● ● ●
4.100		6.000	66.00	24.00	36.00	● ● ● ●
4.200		6.000	66.00	24.00	36.00	● ● ● ●
4.300		6.000	66.00	24.00	36.00	● ● ●
4.370	11/64	6.000	66.00	24.00	36.00	● ● ●
4.400		6.000	66.00	24.00	36.00	○ ● ● ●
4.500		6.000	66.00	24.00	36.00	● ● ● ●
4.600		6.000	66.00	24.00	36.00	● ● ● ●
4.650		6.000	66.00	24.00	36.00	● ● ● ●
4.700		6.000	66.00	24.00	36.00	○ ● ● ●
4.760	3/16	6.000	66.00	28.00	36.00	○ ● ● ●
4.800		6.000	66.00	28.00	36.00	● ● ● ●
4.900		6.000	66.00	28.00	36.00	● ● ● ●
5.000		6.000	66.00	28.00	36.00	● ● ● ● ●
5.100		6.000	66.00	28.00	36.00	● ● ● ●
5.160	13/64	6.000	66.00	28.00	36.00	○ ● ● ●
5.200		6.000	66.00	28.00	36.00	● ● ● ●
5.300		6.000	66.00	28.00	36.00	● ● ● ●
5.400		6.000	66.00	28.00	36.00	● ● ● ●
5.500		6.000	66.00	28.00	36.00	● ● ● ○ ●
5.550		6.000	66.00	28.00	36.00	● ● ●
5.560	7/32	6.000	66.00	28.00	36.00	● ● ● ●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	1184	2480	2472	2475	8524
Standard	DIN 6537 K				
Tool material	Solid carbide				
Carbide grade	K/P				
Surface	S	F	F	F	Y
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 F	RT 100 HF
Drilling depth	3xD	3xD	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7	m7
Discount group	121	121	121	121	121
Techn. data page	120	120	120	120	120

NEW

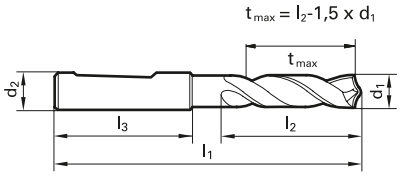


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
5.600		6.000	66.00	28.00	36.00	○ ● ● ●
5.650		6.000	66.00	28.00	36.00	●
5.700		6.000	66.00	28.00	36.00	○ ● ● ●
5.800		6.000	66.00	28.00	36.00	○ ● ● ●
5.900		6.000	66.00	28.00	36.00	● ● ● ●
5.950	15/64	6.000	66.00	28.00	36.00	○ ● ● ●
6.000		6.000	66.00	28.00	36.00	● ● ● ● ●
6.100		8.000	79.00	34.00	36.00	● ● ● ●
6.200		8.000	79.00	34.00	36.00	● ● ● ●
6.300		8.000	79.00	34.00	36.00	● ● ● ●
6.350	1/4	8.000	79.00	34.00	36.00	● ● ● ●
6.400		8.000	79.00	34.00	36.00	● ● ● ●
6.500		8.000	79.00	34.00	36.00	○ ● ● ● ●
6.600		8.000	79.00	34.00	36.00	● ● ● ●
6.700		8.000	79.00	34.00	36.00	○ ● ● ●
6.750	17/64	8.000	79.00	34.00	36.00	● ● ● ●
6.800		8.000	79.00	34.00	36.00	● ● ● ● ●
6.900		8.000	79.00	34.00	36.00	● ● ●
7.000		8.000	79.00	34.00	36.00	● ● ● ● ●
7.100		8.000	79.00	41.00	36.00	● ● ● ●
7.140	9/32	8.000	79.00	41.00	36.00	● ● ● ●
7.200		8.000	79.00	41.00	36.00	○ ● ● ●
7.300		8.000	79.00	41.00	36.00	○ ● ● ●
7.400		8.000	79.00	41.00	36.00	○ ● ● ●
7.500		8.000	79.00	41.00	36.00	○ ● ● ●
7.540	19/64	8.000	79.00	41.00	36.00	○ ● ● ●
7.600		8.000	79.00	41.00	36.00	○ ● ● ●
7.700		8.000	79.00	41.00	36.00	○ ● ● ●
7.800		8.000	79.00	41.00	36.00	○ ● ● ●
7.900		8.000	79.00	41.00	36.00	○ ● ● ●
7.940	5/16	8.000	79.00	41.00	36.00	○ ● ● ●
8.000		8.000	79.00	41.00	36.00	○ ● ● ● ●
8.100		10.000	89.00	47.00	40.00	● ● ● ●
8.200		10.000	89.00	47.00	40.00	○ ● ● ●
8.300		10.000	89.00	47.00	40.00	○ ● ● ●
8.330	21/64	10.000	89.00	47.00	40.00	○ ● ● ●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1184	2480	2472	2475	8524
Standard	DIN 6537 K				
Tool material	Solid carbide				
Carbide grade	K/P				
Surface	S	F	F	F	Y
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 F	RT 100 HF
Drilling depth	3xD	3xD	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7	m7
Discount group	121	121	121	121	121
Techn. data page	120	120	120	120	120

NEW



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
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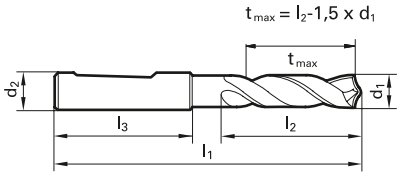
8.500		10.000	89.00	47.00	40.00	● ● ● ● ●
8.600		10.000	89.00	47.00	40.00	● ● ●
8.700		10.000	89.00	47.00	40.00	○ ● ● ●
8.730	11/32	10.000	89.00	47.00	40.00	● ● ● ●
8.800		10.000	89.00	47.00	40.00	● ● ● ●
8.900		10.000	89.00	47.00	40.00	○ ● ● ●
9.000		10.000	89.00	47.00	40.00	○ ● ● ● ●
9.100		10.000	89.00	47.00	40.00	○ ● ● ●
9.130	23/64	10.000	89.00	47.00	40.00	● ● ● ●
9.200		10.000	89.00	47.00	40.00	○ ● ● ●
9.250		10.000	89.00	47.00	40.00	● ● ●
9.300		10.000	89.00	47.00	40.00	○ ● ● ○ ●
9.400		10.000	89.00	47.00	40.00	○ ● ● ●
9.500		10.000	89.00	47.00	40.00	● ● ● ●
9.520	3/8	10.000	89.00	47.00	40.00	● ● ● ●
9.600		10.000	89.00	47.00	40.00	○ ● ● ●
9.700		10.000	89.00	47.00	40.00	○ ● ● ●
9.800		10.000	89.00	47.00	40.00	○ ● ● ●
9.900		10.000	89.00	47.00	40.00	○ ● ● ●
9.920	25/64	10.000	89.00	47.00	40.00	○ ● ● ●
10.000		10.000	89.00	47.00	40.00	● ● ● ● ●
10.100		12.000	102.00	55.00	45.00	● ● ● ●
10.200		12.000	102.00	55.00	45.00	○ ● ● ●
10.300		12.000	102.00	55.00	45.00	● ● ● ●
10.320	13/32	12.000	102.00	55.00	45.00	○ ● ● ●
10.400		12.000	102.00	55.00	45.00	● ● ●
10.500		12.000	102.00	55.00	45.00	● ● ● ○ ●
10.600		12.000	102.00	55.00	45.00	● ● ● ●
10.700		12.000	102.00	55.00	45.00	● ● ●
10.720	27/64	12.000	102.00	55.00	45.00	○
10.800		12.000	102.00	55.00	45.00	● ● ● ●
10.900		12.000	102.00	55.00	45.00	● ● ●
11.000		12.000	102.00	55.00	45.00	○ ● ● ● ●
11.100		12.000	102.00	55.00	45.00	○ ● ● ●
11.110	7/16	12.000	102.00	55.00	45.00	● ● ● ●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	1184	2480	2472	2475	8524
Standard	DIN 6537 K				
Tool material	Solid carbide				
Carbide grade	K/P				
Surface	S	F	F	F	Y
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 F	RT 100 HF
Drilling depth	3xD	3xD	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7	m7
Discount group	121	121	121	121	121
Techn. data page	120	120	120	120	120

NEW

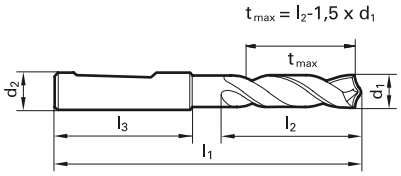


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability				
11.200		12.000	102.00	55.00	45.00	●	●	●	●	●
11.300		12.000	102.00	55.00	45.00		●	●		●
11.400		12.000	102.00	55.00	45.00	●	●	●		●
11.500		12.000	102.00	55.00	45.00	●	●	●		●
11.600		12.000	102.00	55.00	45.00	❍	●	●		●
11.700		12.000	102.00	55.00	45.00	●	●	●		●
11.800		12.000	102.00	55.00	45.00	●	●	●		●
11.900		12.000	102.00	55.00	45.00	●	●	●		●
11.910	15/32	12.000	102.00	55.00	45.00	❍	●	●		●
12.000		12.000	102.00	55.00	45.00	●	●	●	●	●
12.100		14.000	107.00	60.00	45.00	●	●	❍		
12.200		14.000	107.00	60.00	45.00	❍	●	●		●
12.300	31/64	14.000	107.00	60.00	45.00	❍				
12.400		14.000	107.00	60.00	45.00	●				
12.500		14.000	107.00	60.00	45.00		●	●		●
12.600		14.000	107.00	60.00	45.00			●		
12.700	1/2	14.000	107.00	60.00	45.00	●	●	●		●
12.800		14.000	107.00	60.00	45.00	●	●			●
13.000		14.000	107.00	60.00	45.00	●	●	●	❍	●
13.100	33/64	14.000	107.00	60.00	45.00	❍	●			
13.200		14.000	107.00	60.00	45.00	●				
13.300		14.000	107.00	60.00	45.00	❍		●		●
13.400		14.000	107.00	60.00	45.00	❍				
13.500		14.000	107.00	60.00	45.00	●	●	●		●
13.700		14.000	107.00	60.00	45.00		●	●		●
13.800		14.000	107.00	60.00	45.00	●				
13.890	35/64	14.000	107.00	60.00	45.00	●				
14.000		14.000	107.00	60.00	45.00	●	●	●		●
14.200		16.000	115.00	65.00	48.00	❍	●	●		●
14.290	9/16	16.000	115.00	65.00	48.00	●	●	●		●
14.300		16.000	115.00	65.00	48.00	●				●
14.400		16.000	115.00	65.00	48.00	❍	❍			
14.500		16.000	115.00	65.00	48.00		●	●		●
14.700		16.000	115.00	65.00	48.00	●	❍	●		●
14.800		16.000	115.00	65.00	48.00	●	●			
15.000		16.000	115.00	65.00	48.00	●	●	●		●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no.	1184	2480	2472	2475	8524
Standard	DIN 6537 K				
Tool material	Solid carbide				
Carbide grade	K/P				
Surface	S	F	F	F	Y
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 F	RT 100 HF
Drilling depth	3xD	3xD	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7	m7
Discount group	121	121	121	121	121
Techn. data page	120	120	120	120	120

NEW

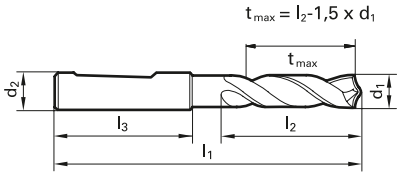


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
15.100		16.000	115.00	65.00	48.00	● ●
15.200		16.000	115.00	65.00	48.00	● ○ ● ●
15.300		16.000	115.00	65.00	48.00	○ ●
15.480	39/64	16.000	115.00	65.00	48.00	○
15.500		16.000	115.00	65.00	48.00	● ● ●
15.600		16.000	115.00	65.00	48.00	○ ● ●
15.700		16.000	115.00	65.00	48.00	○ ○ ● ●
15.800		16.000	115.00	65.00	48.00	● ○ ●
15.870	5/8	16.000	115.00	65.00	48.00	●
15.900		16.000	115.00	65.00	48.00	○
16.000		16.000	115.00	65.00	48.00	● ● ● ●
16.100		18.000	123.00	73.00	48.00	●
16.200		18.000	123.00	73.00	48.00	●
16.270	41/64	18.000	123.00	73.00	48.00	●
16.300		18.000	123.00	73.00	48.00	● ● ●
16.500		18.000	123.00	73.00	48.00	● ○ ● ●
16.800		18.000	123.00	73.00	48.00	●
16.900		18.000	123.00	73.00	48.00	●
17.000		18.000	123.00	73.00	48.00	● ● ● ●
17.300		18.000	123.00	73.00	48.00	● ●
17.460	11/16	18.000	123.00	73.00	48.00	●
17.500		18.000	123.00	73.00	48.00	● ○ ● ●
17.700		18.000	123.00	73.00	48.00	○
17.860	45/64	18.000	123.00	73.00	48.00	○
18.000		18.000	123.00	73.00	48.00	● ● ● ●
18.100		20.000	131.00	79.00	50.00	○
18.300		20.000	131.00	79.00	50.00	○ ●
18.500		20.000	131.00	79.00	50.00	○ ○ ● ●
18.650	47/64	20.000	131.00	79.00	50.00	○
18.900		20.000	131.00	79.00	50.00	●
19.000		20.000	131.00	79.00	50.00	● ● ● ●
19.050	3/4	20.000	131.00	79.00	50.00	● ●
19.200		20.000	131.00	79.00	50.00	●
19.300		20.000	131.00	79.00	50.00	●
19.500		20.000	131.00	79.00	50.00	● ○ ● ●
19.600		20.000	131.00	79.00	50.00	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	1184	2480	2472	2475	8524
Standard	DIN 6537 K				
Tool material	Solid carbide				
Carbide grade	K/P				
Surface	S	F	F	F	Y
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 F	RT 100 HF
Drilling depth	3xD	3xD	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7	m7
Discount group	121	121	121	121	121
Techn. data page	120	120	120	120	120

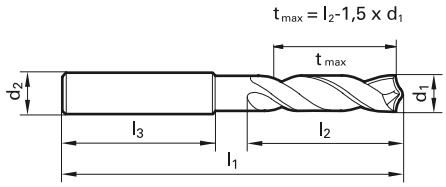
NEW



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
20.000		20.000	131.00	79.00	50.00	● ● ● ●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

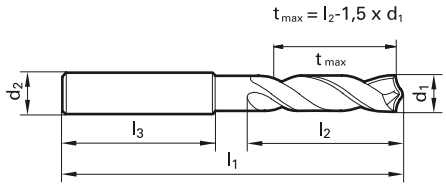
Guhring no.	2717	2996	2719	2712
Standard	DIN 6537 L			
Tool material	Solid carbide			
Carbide grade	K/P			
Surface	S	F	F	F
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 F
Drilling depth	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7
Discount group	121	121	121	121
Techn. data page	121	121	121	121



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
3.000		6.000	66.00	28.00	36.00	● ● ●
3.100		6.000	66.00	28.00	36.00	● ●
3.170	1/8	6.000	66.00	28.00	36.00	● ●
3.200		6.000	66.00	28.00	36.00	● ●
3.250		6.000	66.00	28.00	36.00	● ●
3.300		6.000	66.00	28.00	36.00	● ● ● ●
3.400		6.000	66.00	28.00	36.00	● ●
3.500		6.000	66.00	28.00	36.00	● ● ● ●
3.570	9/64	6.000	66.00	28.00	36.00	● ●
3.600		6.000	66.00	28.00	36.00	● ●
3.700		6.000	66.00	28.00	36.00	● ●
3.800		6.000	74.00	36.00	36.00	● ●
3.900		6.000	74.00	36.00	36.00	● ●
3.970	5/32	6.000	74.00	36.00	36.00	● ●
4.000		6.000	74.00	36.00	36.00	● ● ● ●
4.100		6.000	74.00	36.00	36.00	● ●
4.200		6.000	74.00	36.00	36.00	● ●
4.300		6.000	74.00	36.00	36.00	● ●
4.370	11/64	6.000	74.00	36.00	36.00	● ●
4.400		6.000	74.00	36.00	36.00	● ●
4.500		6.000	74.00	36.00	36.00	● ● ❍
4.600		6.000	74.00	36.00	36.00	● ●
4.650		6.000	74.00	36.00	36.00	● ●
4.700		6.000	74.00	36.00	36.00	● ●
4.760	3/16	6.000	82.00	44.00	36.00	● ●
4.800		6.000	82.00	44.00	36.00	● ●
4.900		6.000	82.00	44.00	36.00	● ●
5.000		6.000	82.00	44.00	36.00	● ● ● ●
5.100		6.000	82.00	44.00	36.00	● ●
5.160	13/64	6.000	82.00	44.00	36.00	● ●
5.200		6.000	82.00	44.00	36.00	● ●
5.300		6.000	82.00	44.00	36.00	● ●
5.400		6.000	82.00	44.00	36.00	● ●
5.500		6.000	82.00	44.00	36.00	❍ ● ●
5.550		6.000	82.00	44.00	36.00	● ●
5.560	7/32	6.000	82.00	44.00	36.00	● ●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

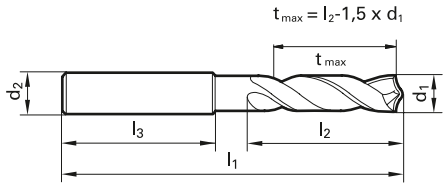
Guhring no.	2717	2996	2719	2712
Standard	DIN 6537 L			
Tool material	Solid carbide			
Carbide grade	K/P			
Surface	S	F	F	F
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 F
Drilling depth	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7
Discount group	121	121	121	121
Techn. data page	121	121	121	121



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability			
5.600		6.000	82.00	44.00	36.00		●	●	
5.700		6.000	82.00	44.00	36.00		●	●	
5.800		6.000	82.00	44.00	36.00		●	●	
5.900		6.000	82.00	44.00	36.00		●	●	
5.950	15/64	6.000	82.00	44.00	36.00		●	●	
6.000		6.000	82.00	44.00	36.00	❍	●	●	
6.100		8.000	91.00	53.00	36.00		●	●	
6.200		8.000	91.00	53.00	36.00		●	●	
6.300		8.000	91.00	53.00	36.00		●	●	
6.350	1/4	8.000	91.00	53.00	36.00		●	●	
6.400		8.000	91.00	53.00	36.00		●	●	
6.500		8.000	91.00	53.00	36.00		●	●	
6.600		8.000	91.00	53.00	36.00		●	●	
6.700		8.000	91.00	53.00	36.00		●	●	
6.750	17/64	8.000	91.00	53.00	36.00		●	●	
6.800		8.000	91.00	53.00	36.00	❍	●	●	●
6.900		8.000	91.00	53.00	36.00		●	●	
7.000		8.000	91.00	53.00	36.00	●	●	●	❍
7.100		8.000	91.00	53.00	36.00		●	●	
7.140	9/32	8.000	91.00	53.00	36.00		●	●	
7.200		8.000	91.00	53.00	36.00		●	●	
7.300		8.000	91.00	53.00	36.00		●	●	
7.400		8.000	91.00	53.00	36.00		●	●	
7.500		8.000	91.00	53.00	36.00	❍	●	●	❍
7.540	19/64	8.000	91.00	53.00	36.00		●	●	
7.600		8.000	91.00	53.00	36.00		●	●	
7.700		8.000	91.00	53.00	36.00		●	●	
7.800		8.000	91.00	53.00	36.00	❍	●	●	
7.900		8.000	91.00	53.00	36.00		●	●	
7.940	5/16	8.000	91.00	53.00	36.00		●	●	
8.000		8.000	91.00	53.00	36.00	●	●	●	●
8.100		10.000	103.00	61.00	40.00		●	●	
8.200		10.000	103.00	61.00	40.00		●	●	
8.300		10.000	103.00	61.00	40.00		●	●	
8.330	21/64	10.000	103.00	61.00	40.00		●	●	
8.400		10.000	103.00	61.00	40.00		●	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

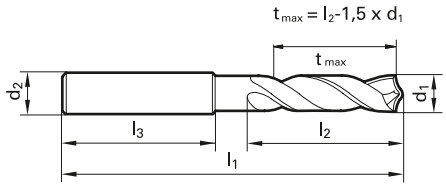
Guhring no.	2717	2996	2719	2712
Standard	DIN 6537 L			
Tool material	Solid carbide			
Carbide grade	K/P			
Surface	S	F	F	F
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 F
Drilling depth	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7
Discount group	121	121	121	121
Techn. data page	121	121	121	121



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
8.500		10.000	103.00	61.00	40.00	● ● ●
8.600		10.000	103.00	61.00	40.00	● ●
8.700		10.000	103.00	61.00	40.00	● ●
8.730	11/32	10.000	103.00	61.00	40.00	● ●
8.800		10.000	103.00	61.00	40.00	● ●
8.900		10.000	103.00	61.00	40.00	● ●
9.000		10.000	103.00	61.00	40.00	❍ ● ●
9.100		10.000	103.00	61.00	40.00	● ●
9.130	23/64	10.000	103.00	61.00	40.00	● ●
9.200		10.000	103.00	61.00	40.00	● ●
9.250		10.000	103.00	61.00	40.00	● ●
9.300		10.000	103.00	61.00	40.00	● ●
9.400		10.000	103.00	61.00	40.00	● ●
9.500		10.000	103.00	61.00	40.00	● ●
9.520	3/8	10.000	103.00	61.00	40.00	● ●
9.600		10.000	103.00	61.00	40.00	● ●
9.700		10.000	103.00	61.00	40.00	● ●
9.800		10.000	103.00	61.00	40.00	● ●
9.900		10.000	103.00	61.00	40.00	● ●
9.920	25/64	10.000	103.00	61.00	40.00	● ●
10.000		10.000	103.00	61.00	40.00	● ● ❍
10.100		12.000	118.00	71.00	45.00	● ●
10.200		12.000	118.00	71.00	45.00	● ● ● ❍
10.300		12.000	118.00	71.00	45.00	● ●
10.320	13/32	12.000	118.00	71.00	45.00	● ●
10.400		12.000	118.00	71.00	45.00	● ●
10.500		12.000	118.00	71.00	45.00	● ● ❍
10.600		12.000	118.00	71.00	45.00	● ●
10.700		12.000	118.00	71.00	45.00	● ●
10.800		12.000	118.00	71.00	45.00	● ●
10.900		12.000	118.00	71.00	45.00	● ●
11.000		12.000	118.00	71.00	45.00	❍ ● ●
11.100		12.000	118.00	71.00	45.00	● ●
11.110	7/16	12.000	118.00	71.00	45.00	● ●
11.200		12.000	118.00	71.00	45.00	● ● ●
11.300		12.000	118.00	71.00	45.00	● ●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

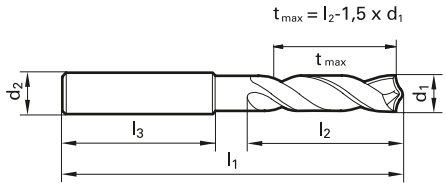
Guhring no.	2717	2996	2719	2712
Standard	DIN 6537 L			
Tool material	Solid carbide			
Carbide grade	K/P			
Surface	S	F	F	F
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 F
Drilling depth	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7
Discount group	121	121	121	121
Techn. data page	121	121	121	121



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability			
11.400		12.000	118.00	71.00	45.00		●	●	
11.500		12.000	118.00	71.00	45.00		●	●	
11.600		12.000	118.00	71.00	45.00		●	●	
11.700		12.000	118.00	71.00	45.00		●	●	
11.800		12.000	118.00	71.00	45.00		●	●	
11.900		12.000	118.00	71.00	45.00		●	●	
11.910	15/32	12.000	118.00	71.00	45.00		●	●	
12.000		12.000	118.00	71.00	45.00	❍	●	●	❍
12.100		14.000	124.00	77.00	45.00		●		
12.200		14.000	124.00	77.00	45.00		●	●	
12.400		14.000	124.00	77.00	45.00		❍		
12.500		14.000	124.00	77.00	45.00		●	●	
12.600		14.000	124.00	77.00	45.00		❍		
12.700	1/2	14.000	124.00	77.00	45.00		●	●	
12.800		14.000	124.00	77.00	45.00		❍		
13.000		14.000	124.00	77.00	45.00	●	●	●	
13.100	33/64	14.000	124.00	77.00	45.00		●		
13.300		14.000	124.00	77.00	45.00		❍		
13.500		14.000	124.00	77.00	45.00		●	●	
13.700		14.000	124.00	77.00	45.00		●	●	
14.000		14.000	124.00	77.00	45.00		●	●	
14.200		16.000	133.00	83.00	48.00		●	●	
14.290	9/16	16.000	133.00	83.00	48.00		●	●	
14.300		16.000	133.00	83.00	48.00		❍		
14.400		16.000	133.00	83.00	48.00		●		
14.500		16.000	133.00	83.00	48.00		●	●	
14.700		16.000	133.00	83.00	48.00		●	●	
14.800		16.000	133.00	83.00	48.00		❍		
15.000		16.000	133.00	83.00	48.00		●	●	❍
15.100		16.000	133.00	83.00	48.00		●		
15.200		16.000	133.00	83.00	48.00		●	●	
15.300		16.000	133.00	83.00	48.00		●		
15.500		16.000	133.00	83.00	48.00		●	●	
15.600		16.000	133.00	83.00	48.00		❍		
15.700		16.000	133.00	83.00	48.00		●	●	
15.800		16.000	133.00	83.00	48.00		●		

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Guhring no.	2717	2996	2719	2712
Standard	DIN 6537 L			
Tool material	Solid carbide			
Carbide grade	K/P			
Surface	S	F	F	F
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 F
Drilling depth	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7
Discount group	121	121	121	121
Techn. data page	121	121	121	121

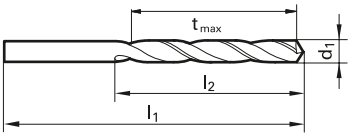


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
16.000		16.000	133.00	83.00	48.00	○ ● ●
16.500		18.000	143.00	93.00	48.00	● ●
17.000		18.000	143.00	93.00	48.00	● ●
17.500		18.000	143.00	93.00	48.00	● ●
18.000		18.000	143.00	93.00	48.00	● ●
18.500		20.000	153.00	101.00	50.00	● ●
19.000		20.000	153.00	101.00	50.00	● ●
19.500		20.000	153.00	101.00	50.00	● ●
20.000		20.000	153.00	101.00	50.00	● ●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	1242	2473	1702
Standard		DIN 6539	
Tool material		Solid carbide	
Carbide grade		K/P	
Surface	S	F	S
Type	RT 100 U	RT 100 U	RT 100 F
Drilling depth	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7
Discount group	121	121	121
Techn. data page	121	122	122

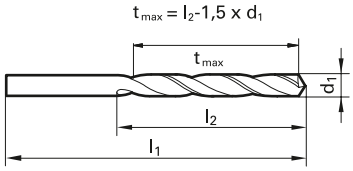
$t_{max} = l_2\text{-}1{,}5 \times d_1$



d1 mm	d1 inch	l1 mm	l2 mm	Availability		
3.000		46.00	16.00	●	●	●
3.100		49.00	18.00	●		●
3.170	1/8	49.00	18.00	●		●
3.200		49.00	18.00	●	●	●
3.300		49.00	18.00	●	●	●
3.400		52.00	20.00	●	○	●
3.500		52.00	20.00	●	●	●
3.570	9/64	52.00	20.00	●		○
3.600		52.00	20.00	●		●
3.700		52.00	20.00	●		●
3.800		55.00	22.00	●	●	●
3.900		55.00	22.00	●	●	●
3.970	5/32	55.00	22.00	●		●
4.000		55.00	22.00	●	●	●
4.100		55.00	22.00	●		●
4.200		55.00	22.00	●	●	●
4.300		58.00	24.00	●	●	●
4.370	11/64	58.00	24.00	●		●
4.400		58.00	24.00	●		●
4.500		58.00	24.00	●	○	●
4.600		58.00	24.00	●	○	●
4.700		58.00	24.00	●		○
4.760	3/16	62.00	26.00	●		●
4.800		62.00	26.00	●		●
4.900		62.00	26.00	●	●	●
5.000		62.00	26.00	●	●	●
5.100		62.00	26.00	●		●
5.160	13/64	62.00	26.00	●		●
5.200		62.00	26.00	●	●	○
5.300		62.00	26.00	●		●
5.400		66.00	28.00	●		○
5.500		66.00	28.00	●	●	●
5.560	7/32	66.00	28.00	●		●
5.600		66.00	28.00	●		●
5.700		66.00	28.00	●	●	●
5.800		66.00	28.00	●	○	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1242	2473	1702
Standard		DIN 6539	
Tool material		Solid carbide	
Carbide grade		K/P	
Surface	S	F	S
Type	RT 100 U	RT 100 U	RT 100 F
Drilling depth	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7
Discount group	121	121	121
Techn. data page	121	122	122

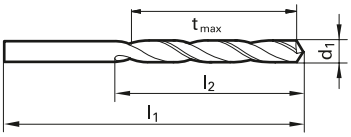


d1 mm	d1 inch	l1 mm	l2 mm	Availability		
5.900		66.00	28.00	●		○
5.950	15/64	66.00	28.00	●		●
6.000		66.00	28.00	●	●	●
6.100		70.00	31.00	●	●	●
6.200		70.00	31.00	●	●	●
6.300		70.00	31.00	●		●
6.350	1/4	70.00	31.00	●		●
6.400		70.00	31.00	●	○	○
6.500		70.00	31.00	●		●
6.600		70.00	31.00	●	○	●
6.700		70.00	31.00	●	○	●
6.750	17/64	74.00	34.00	●		○
6.800		74.00	34.00	●		●
6.900		74.00	34.00	●		●
7.000		74.00	34.00	●	●	●
7.100		74.00	34.00	●	●	○
7.140	9/32	74.00	34.00	●		○
7.200		74.00	34.00	●	●	●
7.300		74.00	34.00	○		●
7.400		74.00	34.00	●	○	○
7.500		74.00	34.00	●		
7.540	19/64	79.00	37.00	●		●
7.600		79.00	37.00	●		●
7.700		79.00	37.00	●		●
7.800		79.00	37.00	●		○
7.900		79.00	37.00	●		●
7.940	5/16	79.00	37.00	●		●
8.000		79.00	37.00	●		●
8.100		79.00	37.00	●	●	●
8.200		79.00	37.00	●		●
8.300		79.00	37.00	●		○
8.330	21/64	79.00	37.00	○		●
8.400		79.00	37.00	●		●
8.500		79.00	37.00	●	●	●
8.600		84.00	40.00	●		●
8.700		84.00	40.00	●	○	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	1242	2473	1702
Standard		DIN 6539	
Tool material		Solid carbide	
Carbide grade		K/P	
Surface	S	F	S
Type	RT 100 U	RT 100 U	RT 100 F
Drilling depth	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7
Discount group	121	121	121
Techn. data page	121	122	122

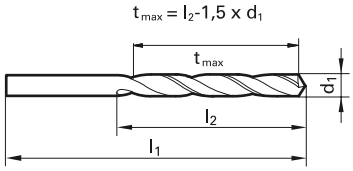
$t_{max} = l_2\text{-}1{,}5 \times d_1$



d1 mm	d1 inch	l1 mm	l2 mm	Availability		
8.730	11/32	84.00	40.00	●		●
8.800		84.00	40.00	●	○	○
8.900		84.00	40.00	○		●
9.000		84.00	40.00	●	○	○
9.100		84.00	40.00	●	○	○
9.130	23/64	84.00	40.00	●		○
9.200		84.00	40.00	●		
9.300		84.00	40.00	●		
9.400		84.00	40.00	●	○	●
9.500		84.00	40.00	●		●
9.520	3/8	89.00	43.00	●		●
9.600		89.00	43.00	●		●
9.700		89.00	43.00	○		●
9.800		89.00	43.00	●		●
9.900		89.00	43.00	●		●
9.920	25/64	89.00	43.00	●		●
10.000		89.00	43.00	●	●	●
10.100		89.00	43.00	●		
10.200		89.00	43.00	●	○	●
10.300		89.00	43.00	○		○
10.320	13/32	89.00	43.00	●		●
10.400		89.00	43.00	●		
10.500		89.00	43.00	●	○	
10.600		89.00	43.00	●		
10.700		95.00	47.00	○		
10.720	27/64	95.00	47.00	●		●
10.800		95.00	47.00	●	○	
10.900		95.00	47.00	○		
11.000		95.00	47.00	●		●
11.100		95.00	47.00	●		
11.110	7/16	95.00	47.00	●		●
11.200		95.00	47.00	●		
11.300		95.00	47.00	●		○
11.400		95.00	47.00	○		
11.500		95.00	47.00	●	○	○
11.510	29/64	95.00	47.00	●		●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

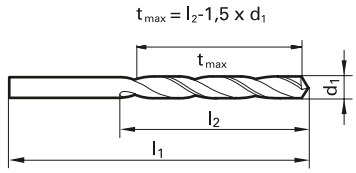
Guhring no.	1242	2473	1702
Standard		DIN 6539	
Tool material		Solid carbide	
Carbide grade		K/P	
Surface	S	F	S
Type	RT 100 U	RT 100 U	RT 100 F
Drilling depth	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7
Discount group	121	121	121
Techn. data page	121	122	122



d1 mm	d1 inch	l1 mm	l2 mm	Availability		
11.600		95.00	47.00	●	●	
11.800		95.00	47.00	●	❍	
11.900		102.00	51.00	●		
11.910	15/32	102.00	51.00	●		●
12.000		102.00	51.00	●	❍	❍
12.300	31/64	102.00	51.00			●
12.500		102.00	51.00	●	❍	●
12.700	1/2	102.00	51.00	●		●
13.000		102.00	51.00	●		●
13.500		107.00	54.00	●		●
14.000		107.00	54.00	●	❍	●
14.500		111.00	56.00	●		
15.000		111.00	56.00	●		
15.500		115.00	58.00	❍	❍	
16.000		115.00	58.00	●	●	

❍ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

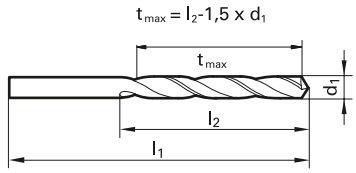
Guhring no.	1243	2474
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	S	F
Type	RT 100 U	RT 100 U
Drilling depth	5xD	5xD
Cutting direction	right-hand	right-hand
Tolerance	m7	m7
Discount group	121	121
Techn. data page	122	122



d1 mm	d1 inch	l1 mm	l2 mm	Availability	
5.000		73.00	34.00	●	●
5.100		76.00	38.00	●	●
5.160	13/64	76.00	38.00	●	
5.200		76.00	38.00	●	
5.300		76.00	38.00	●	
5.400		76.00	38.00	●	❍
5.500		76.00	38.00	●	●
5.560	7/32	81.00	41.00	●	
5.600		81.00	41.00	●	●
5.700		81.00	41.00	●	❍
5.800		81.00	41.00	❍	
5.900		81.00	41.00	●	
5.950	15/64	81.00	41.00	❍	
6.000		81.00	41.00	●	
6.100		81.00	41.00	●	
6.200		81.00	41.00	●	●
6.300		81.00	41.00	●	
6.350	1/4	81.00	41.00	●	
6.400		81.00	41.00	❍	❍
6.500		81.00	41.00	●	●
6.600		83.00	43.00	●	●
6.700		83.00	43.00	●	
6.750	17/64	83.00	43.00	●	
6.800		83.00	43.00	●	❍
6.900		83.00	43.00	●	
7.000		83.00	43.00	●	
7.100		87.00	45.00	●	❍
7.140	9/32	87.00	45.00	●	
7.200		87.00	45.00	●	❍
7.300		87.00	45.00	❍	
7.400		87.00	45.00	●	●
7.500		87.00	45.00	●	
7.540	19/64	90.00	48.00	●	
7.600		90.00	48.00	●	
7.700		90.00	48.00	●	❍
7.800		90.00	48.00	❍	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

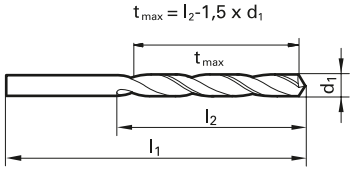
Guhring no.	1243	2474
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	S	F
Type	RT 100 U	RT 100 U
Drilling depth	5xD	5xD
Cutting direction	right-hand	right-hand
Tolerance	m7	m7
Discount group	121	121
Techn. data page	122	122



d1 mm	d1 inch	l1 mm	l2 mm	Availability	
7.900		90.00	48.00	○	
7.940	5/16	90.00	48.00	●	
8.000		90.00	48.00	●	○
8.100		96.00	53.00	○	○
8.200		96.00	53.00	●	○
8.300		96.00	53.00	○	
8.330	21/64	96.00	53.00	○	
8.400		96.00	53.00	○	
8.500		96.00	53.00	●	●
8.600		98.00	55.00	●	
8.700		98.00	55.00	●	○
8.730	11/32	98.00	55.00	●	
8.800		98.00	55.00	●	
8.900		98.00	55.00	●	
9.000		98.00	55.00	●	●
9.130	23/64	102.00	58.00	●	
9.200		102.00	58.00	●	○
9.300		102.00	58.00	●	○
9.400		102.00	58.00	○	
9.500		102.00	58.00	●	
9.520	3/8	105.00	60.00	●	
9.600		105.00	60.00	●	
9.700		105.00	60.00	●	●
9.800		105.00	60.00	●	○
9.900		105.00	60.00	○	
9.920	25/64	105.00	60.00	○	
10.000		105.00	60.00	●	○
10.100		112.00	66.00	●	
10.200		112.00	66.00	●	●
10.300		112.00	66.00	○	○
10.320	13/32	112.00	66.00	●	
10.400		112.00	66.00	●	●
10.500		112.00	66.00	○	●
10.600		114.00	68.00	○	○
10.700		114.00	68.00	●	
10.720	27/64	114.00	68.00	●	

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

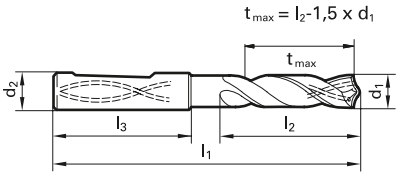
Guhring no.	1243	2474
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	S	F
Type	RT 100 U	RT 100 U
Drilling depth	5xD	5xD
Cutting direction	right-hand	right-hand
Tolerance	m7	m7
Discount group	121	121
Techn. data page	122	122



d1 mm	d1 inch	l1 mm	l2 mm	Availability	
10.800		114.00	68.00	○	○
10.900		114.00	68.00	○	○
11.000		114.00	68.00	●	○
11.100		118.00	71.00	○	
11.110	7/16	118.00	71.00	●	
11.400		118.00	71.00	○	
11.500		118.00	71.00	●	
11.600		121.00	73.00	○	●
11.700		121.00	73.00	●	●
11.800		121.00	73.00	○	○
11.900		121.00	73.00	○	
11.910	15/32	121.00	73.00	○	
12.000		121.00	73.00	●	○
12.500		135.00	76.00	●	
12.700	1/2	137.00	78.00	●	
13.000		137.00	78.00	●	●
13.500		144.00	84.00	●	
14.000		147.00	86.00	●	○
14.500		151.00	89.00	●	
15.000		153.00	91.00	●	○
15.500		157.00	94.00	●	
16.000		160.00	96.00	○	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1181	2477	2469
Standard		DIN 6537 K	
Tool material		Solid carbide	
Carbide grade		K/P	
Surface	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U
Drilling depth	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7
Discount group	121	121	121
Techn. data page	122	123	123



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability		
3.000		6.000	62.00	20.00	36.00	●	●	●
3.100		6.000	62.00	20.00	36.00		●	●
3.170	1/8	6.000	62.00	20.00	36.00		●	●
3.200		6.000	62.00	20.00	36.00		●	●
3.250		6.000	62.00	20.00	36.00		●	●
3.300		6.000	62.00	20.00	36.00	●	●	●
3.400		6.000	62.00	20.00	36.00	●	●	●
3.500		6.000	62.00	20.00	36.00		●	●
3.570	9/64	6.000	62.00	20.00	36.00		●	●
3.600		6.000	62.00	20.00	36.00		●	●
3.700		6.000	62.00	20.00	36.00		●	●
3.800		6.000	66.00	24.00	36.00		●	●
3.900		6.000	66.00	24.00	36.00		●	●
3.970	5/32	6.000	66.00	24.00	36.00		●	●
4.000		6.000	66.00	24.00	36.00	❍	●	●
4.040		6.000	66.00	24.00	36.00		●	
4.100		6.000	66.00	24.00	36.00		●	●
4.200		6.000	66.00	24.00	36.00		●	●
4.300		6.000	66.00	24.00	36.00		●	●
4.370	11/64	6.000	66.00	24.00	36.00		●	●
4.400		6.000	66.00	24.00	36.00		●	●
4.450		6.000	66.00	24.00	36.00		●	●
4.500		6.000	66.00	24.00	36.00		●	●
4.600		6.000	66.00	24.00	36.00		●	●
4.650		6.000	66.00	24.00	36.00		●	●
4.700		6.000	66.00	24.00	36.00		●	●
4.760	3/16	6.000	66.00	28.00	36.00		●	●
4.800		6.000	66.00	28.00	36.00		●	●
4.900		6.000	66.00	28.00	36.00		●	●
5.000		6.000	66.00	28.00	36.00	●	●	●
5.100		6.000	66.00	28.00	36.00		●	●
5.110		6.000	66.00	28.00	36.00		●	
5.160	13/64	6.000	66.00	28.00	36.00		●	●
5.200		6.000	66.00	28.00	36.00		●	●
5.300		6.000	66.00	28.00	36.00	●	●	●
5.400		6.000	66.00	28.00	36.00		●	●

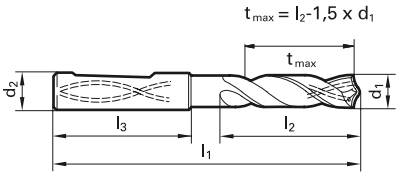
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1660	1180	2468	8510	8610	8520	8620
DIN 6537 K						
Solid carbide						
			K/P			
S	S	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
3xD	3xD	3xD	3xD	3xD	3xD	3xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7
121	121	121	121	121	121	121
123	123	123	124	124	124	124
			NEW	NEW	NEW	NEW

Availability						
○			●	●	●	●
			●	●	●	●
			●	●	●	●
		●	●	●	●	●
		○	●	●	●	●
		○	●	●	●	●
		●	●	●	●	●
●	●	●	●	●	●	●
●	●		●	●	●	●
●	●	●	●	●	●	●
●	○		●	●	●	●
	○	●	●	●	●	●
●			●	●	●	●
●	○	●	●	●	●	●
			●	●	●	●
	●	○	●	●	●	●
●	○		●	●	●	●
○	●		●	●	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	1181	2477	2469
Standard		DIN 6537 K	
Tool material		Solid carbide	
Carbide grade		K/P	
Surface	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U
Drilling depth	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7
Discount group	121	121	121
Techn. data page	122	123	123



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability		
5.410		6.000	66.00	28.00	36.00		●	
5.500		6.000	66.00	28.00	36.00	○	●	●
5.550		6.000	66.00	28.00	36.00		●	●
5.560	7/32	6.000	66.00	28.00	36.00		●	●
5.600		6.000	66.00	28.00	36.00	●	●	●
5.650		6.000	66.00	28.00	36.00		●	●
5.700		6.000	66.00	28.00	36.00		●	●
5.750		6.000	66.00	28.00	36.00		●	●
5.800		6.000	66.00	28.00	36.00	●	●	●
5.900		6.000	66.00	28.00	36.00		●	●
5.950	15/64	6.000	66.00	28.00	36.00		●	●
6.000		6.000	66.00	28.00	36.00	○	●	●
6.100		8.000	79.00	34.00	36.00	●	●	●
6.200		8.000	79.00	34.00	36.00	○	●	●
6.300		8.000	79.00	34.00	36.00	○	●	●
6.350	1/4	8.000	79.00	34.00	36.00		●	●
6.400		8.000	79.00	34.00	36.00	○	●	●
6.500		8.000	79.00	34.00	36.00		●	●
6.530		8.000	79.00	34.00	36.00		●	
6.600		8.000	79.00	34.00	36.00	○	●	●
6.700		8.000	79.00	34.00	36.00		●	●
6.750	17/64	8.000	79.00	34.00	36.00		●	●
6.800		8.000	79.00	34.00	36.00	●	●	●
6.900		8.000	79.00	34.00	36.00	○	●	●
7.000		8.000	79.00	34.00	36.00	●	●	●
7.100		8.000	79.00	41.00	36.00	○	●	●
7.140	9/32	8.000	79.00	41.00	36.00	○	●	●
7.200		8.000	79.00	41.00	36.00		●	●
7.300		8.000	79.00	41.00	36.00		●	●
7.400		8.000	79.00	41.00	36.00	●	●	●
7.450		8.000	79.00	41.00	36.00		●	●
7.500		8.000	79.00	41.00	36.00	○	●	●
7.540	19/64	8.000	79.00	41.00	36.00	●	●	●
7.550		8.000	79.00	41.00	36.00		●	
7.600		8.000	79.00	41.00	36.00	○	●	●
7.650		8.000	79.00	41.00	36.00		●	●

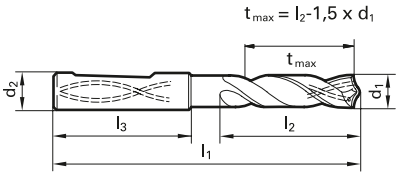
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1660	1180	2468	8510	8610	8520	8620
DIN 6537 K						
Solid carbide						
			K/P			
S	S	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
3xD	3xD	3xD	3xD	3xD	3xD	3xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7
121	121	121	121	121	121	121
123	123	123	124	124	124	124
			NEW	NEW	NEW	NEW

Availability						
○	○	●	●	●	●	●
●			●	●	●	●
			●	●	●	●
		●	●	●	●	●
●	○		●	●	●	●
●	●	●	●	●	●	●
	○	○	●	●	●	●
●			●	●	●	●
	●		●	●	●	●
○			●	●	●	●
	○		●	●	●	●
●	●	●	●	●	●	●
●	●	●	●	●	●	●
	●		●	●	●	●
●		●	●	●	●	●
	●	○	●	●	●	●
●	○		●	●	●	●
○		●	●	○	●	●
			●	●	●	●
	○		●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1181	2477	2469
Standard		DIN 6537 K	
Tool material		Solid carbide	
Carbide grade		K/P	
Surface	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U
Drilling depth	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7
Discount group	121	121	121
Techn. data page	122	123	123



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability		
7.700		8.000	79.00	41.00	36.00		●	●
7.800		8.000	79.00	41.00	36.00	❍	●	●
7.900		8.000	79.00	41.00	36.00		●	●
7.940	5/16	8.000	79.00	41.00	36.00	❍	●	●
8.000		8.000	79.00	41.00	36.00	❍	●	●
8.100		10.000	89.00	47.00	40.00	●	●	●
8.200		10.000	89.00	47.00	40.00	●	●	●
8.300		10.000	89.00	47.00	40.00		●	●
8.330	21/64	10.000	89.00	47.00	40.00		●	●
8.400		10.000	89.00	47.00	40.00	❍	●	●
8.500		10.000	89.00	47.00	40.00	●	●	●
8.550		10.000	89.00	47.00	40.00		●	●
8.600		10.000	89.00	47.00	40.00	❍	●	●
8.700		10.000	89.00	47.00	40.00	●	●	●
8.730	11/32	10.000	89.00	47.00	40.00		●	●
8.800		10.000	89.00	47.00	40.00	❍	●	●
8.900		10.000	89.00	47.00	40.00		●	●
9.000		10.000	89.00	47.00	40.00	●	●	●
9.050		10.000	89.00	47.00	40.00		●	●
9.100		10.000	89.00	47.00	40.00		●	●
9.130	23/64	10.000	89.00	47.00	40.00		●	●
9.200		10.000	89.00	47.00	40.00	●	●	●
9.250		10.000	89.00	47.00	40.00		●	●
9.300		10.000	89.00	47.00	40.00		●	●
9.340		10.000	89.00	47.00	40.00		●	
9.400		10.000	89.00	47.00	40.00	●	●	●
9.500		10.000	89.00	47.00	40.00		●	●
9.520	3/8	10.000	89.00	47.00	40.00		●	●
9.550		10.000	89.00	47.00	40.00		●	●
9.600		10.000	89.00	47.00	40.00		●	●
9.700		10.000	89.00	47.00	40.00	●	●	●
9.800		10.000	89.00	47.00	40.00	❍	●	●
9.900		10.000	89.00	47.00	40.00	❍	●	●
9.920	25/64	10.000	89.00	47.00	40.00		●	●
10.000		10.000	89.00	47.00	40.00	●	●	●
10.100		12.000	102.00	55.00	45.00		●	●

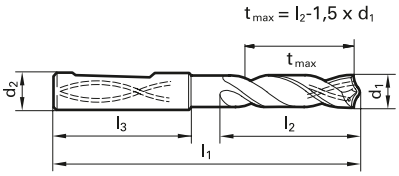
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1660	1180	2468	8510	8610	8520	8620
DIN 6537 K						
Solid carbide						
			K/P			
S	S	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
3xD	3xD	3xD	3xD	3xD	3xD	3xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7
121	121	121	121	121	121	121
123	123	123	124	124	124	124
			NEW	NEW	NEW	NEW

Availability						
●	●		●	●	●	●
			●	●	●	●
●	●	●	●	○	●	●
●	●	●	●	●	●	●
●	○	○	●	●	●	●
	●					
○	●		●	●	●	●
●	●	●	●	●	●	●
		●	●	○	●	●
●	○		●	○	●	●
●		●	●	●	●	●
○	●		●	●	●	●
●	○		●	●	●	●
●	●	●	●	●	●	●
			●	●	●	●
●	●		●	●	●	●
○	○	○	●	●	●	●
●	○	○	●	●	●	●
			●	●	●	●
●	●	●	●	●	●	●
	●	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1181	2477	2469
Standard		DIN 6537 K	
Tool material		Solid carbide	
Carbide grade		K/P	
Surface	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U
Drilling depth	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7
Discount group	121	121	121
Techn. data page	122	123	123



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability		
10.200		12.000	102.00	55.00	45.00	○	●	●
10.300		12.000	102.00	55.00	45.00	●	●	●
10.320	13/32	12.000	102.00	55.00	45.00		●	●
10.400		12.000	102.00	55.00	45.00		●	●
10.500		12.000	102.00	55.00	45.00	○	●	●
10.600		12.000	102.00	55.00	45.00	○	●	●
10.700		12.000	102.00	55.00	45.00	●	●	●
10.720	27/64	12.000	102.00	55.00	45.00	○	●	
10.800		12.000	102.00	55.00	45.00	○	●	●
10.900		12.000	102.00	55.00	45.00		●	●
11.000		12.000	102.00	55.00	45.00	●	●	●
11.100		12.000	102.00	55.00	45.00		●	●
11.110	7/16	12.000	102.00	55.00	45.00		●	●
11.200		12.000	102.00	55.00	45.00		●	●
11.300		12.000	102.00	55.00	45.00	○	●	●
11.400		12.000	102.00	55.00	45.00		●	●
11.500		12.000	102.00	55.00	45.00	○	●	●
11.510	29/64	12.000	102.00	55.00	45.00	○	●	
11.550		12.000	102.00	55.00	45.00			●
11.600		12.000	102.00	55.00	45.00		●	●
11.700		12.000	102.00	55.00	45.00		●	●
11.800		12.000	102.00	55.00	45.00	●	●	●
11.900		12.000	102.00	55.00	45.00		●	●
11.910	15/32	12.000	102.00	55.00	45.00	○	●	●
12.000		12.000	102.00	55.00	45.00	●	●	●
12.100		14.000	107.00	60.00	45.00	●	●	○
12.200		14.000	107.00	60.00	45.00		●	●
12.300	31/64	14.000	107.00	60.00	45.00	●	●	
12.400		14.000	107.00	60.00	45.00	●	○	○
12.500		14.000	107.00	60.00	45.00	○	●	●
12.600		14.000	107.00	60.00	45.00		●	
12.700	1/2	14.000	107.00	60.00	45.00	○	●	●
12.800		14.000	107.00	60.00	45.00		●	
12.900		14.000	107.00	60.00	45.00	●	●	
13.000		14.000	107.00	60.00	45.00	●	●	●
13.100	33/64	14.000	107.00	60.00	45.00			●

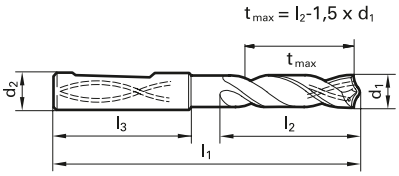
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1660	1180	2468	8510	8610	8520	8620
DIN 6537 K						
Solid carbide						
			K/P			
S	S	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
3xD	3xD	3xD	3xD	3xD	3xD	3xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7
121	121	121	121	121	121	121
123	123	123	124	124	124	124
			NEW	NEW	NEW	NEW

Availability						
○	○	●	●	○	●	●
○	●	○	●	●	●	●
○	●		●	●	●	●
●	●	●	●	●	●	●
	●	●	●	●	●	●
○	○		●	●	●	●
	●					
●	●	●	●	●	●	●
●	●		●	●	●	●
	○		●	●	●	●
●	○	●	●	●	●	●
○	○					
	○					
●	●	●	●	●	●	●
	●	●				
●	●	●	●	●	●	●
	●	○				
		○	●	●	●	●
			●	●	●	●
○	●	●	●	●	●	●
●						

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1181	2477	2469
Standard		DIN 6537 K	
Tool material		Solid carbide	
Carbide grade		K/P	
Surface	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U
Drilling depth	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7
Discount group	121	121	121
Techn. data page	122	123	123



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability		
13.200		14.000	107.00	60.00	45.00	●		
13.300		14.000	107.00	60.00	45.00	●		●
13.400		14.000	107.00	60.00	45.00			●
13.490	17/32	14.000	107.00	60.00	45.00	●		
13.500		14.000	107.00	60.00	45.00	○	●	●
13.550		14.000	107.00	60.00	45.00	●		●
13.700		14.000	107.00	60.00	45.00	●		●
13.800		14.000	107.00	60.00	45.00	○		
13.890	35/64	14.000	107.00	60.00	45.00	○	●	
13.900		14.000	107.00	60.00	45.00		●	
14.000		14.000	107.00	60.00	45.00	●	●	●
14.200		16.000	115.00	65.00	48.00		●	●
14.290	9/16	16.000	115.00	65.00	48.00		●	●
14.300		16.000	115.00	65.00	48.00	○	●	○
14.500		16.000	115.00	65.00	48.00	○	●	●
14.680	37/64	16.000	115.00	65.00	48.00	●	●	
14.700		16.000	115.00	65.00	48.00	○	●	●
14.800		16.000	115.00	65.00	48.00	●		●
14.900		16.000	115.00	65.00	48.00	●	●	
15.000		16.000	115.00	65.00	48.00		●	●
15.080	19/32	16.000	115.00	65.00	48.00		●	
15.100		16.000	115.00	65.00	48.00		●	●
15.200		16.000	115.00	65.00	48.00	●	●	●
15.300		16.000	115.00	65.00	48.00		●	●
15.480	39/64	16.000	115.00	65.00	48.00	○	●	
15.500		16.000	115.00	65.00	48.00	●	●	●
15.550		16.000	115.00	65.00	48.00			●
15.600		16.000	115.00	65.00	48.00			○
15.700		16.000	115.00	65.00	48.00		●	●
15.800		16.000	115.00	65.00	48.00		●	
15.870	5/8	16.000	115.00	65.00	48.00		●	
15.900		16.000	115.00	65.00	48.00		●	●
16.000		16.000	115.00	65.00	48.00		●	●
16.100		18.000	123.00	73.00	48.00	●	●	●
16.200		18.000	123.00	73.00	48.00	●		●
16.270	41/64	18.000	123.00	73.00	48.00		●	

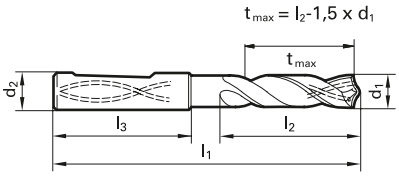
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1660	1180	2468	8510	8610	8520	8620
DIN 6537 K						
Solid carbide						
			K/P			
S	S	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
3xD	3xD	3xD	3xD	3xD	3xD	3xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7
121	121	121	121	121	121	121
123	123	123	124	124	124	124
			NEW	NEW	NEW	NEW

Availability						
❍			●	●	●	●
●	●	●	●	●	●	●
			●	●	●	●
❍	●	●	● ●	● ●	● ●	● ●
	❍ ●	●	● ● ●	● ● ●	● ● ●	● ● ●
			●	●	●	●
●	●	●	●	●	●	●
			● ●	● ●	● ●	● ●
❍	❍	●	●	❍	●	●
	❍		●	●	●	●
	❍	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1181	2477	2469
Standard		DIN 6537 K	
Tool material		Solid carbide	
Carbide grade		K/P	
Surface	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U
Drilling depth	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7
Discount group	121	121	121
Techn. data page	122	123	123



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
16.300		18.000	123.00	73.00	48.00	
16.500		18.000	123.00	73.00	48.00	● ● ●
16.670	21/32	18.000	123.00	73.00	48.00	●
16.700		18.000	123.00	73.00	48.00	●
16.900		18.000	123.00	73.00	48.00	❍ ●
17.000		18.000	123.00	73.00	48.00	● ● ●
17.070	43/64	18.000	123.00	73.00	48.00	●
17.300		18.000	123.00	73.00	48.00	● ●
17.460	11/16	18.000	123.00	73.00	48.00	●
17.500		18.000	123.00	73.00	48.00	❍ ● ●
17.550		18.000	123.00	73.00	48.00	●
17.700		18.000	123.00	73.00	48.00	●
17.860	45/64	18.000	123.00	73.00	48.00	●
17.900		18.000	123.00	73.00	48.00	● ●
18.000		18.000	123.00	73.00	48.00	● ● ●
18.260	23/32	20.000	131.00	79.00	50.00	●
18.300		20.000	131.00	79.00	50.00	● ●
18.500		20.000	131.00	79.00	50.00	● ●
18.700		20.000	131.00	79.00	50.00	● ●
18.900		20.000	131.00	79.00	50.00	●
19.000		20.000	131.00	79.00	50.00	❍ ● ●
19.050	3/4	20.000	131.00	79.00	50.00	❍ ●
19.250		20.000	131.00	79.00	50.00	●
19.300		20.000	131.00	79.00	50.00	●
19.446		20.000	131.00	79.00	50.00	●
19.450	49/64	20.000	131.00	79.00	50.00	
19.500		20.000	131.00	79.00	50.00	❍ ● ●
19.550		20.000	131.00	79.00	50.00	●
19.600		20.000	131.00	79.00	50.00	
19.700		20.000	131.00	79.00	50.00	❍ ●
19.840	25/32	20.000	131.00	79.00	50.00	●
19.900		20.000	131.00	79.00	50.00	● ●
20.000		20.000	131.00	79.00	50.00	● ● ●
20.500		25.000	146.00	84.00	56.00	
21.000		25.000	146.00	84.00	56.00	
21.500		25.000	146.00	84.00	56.00	

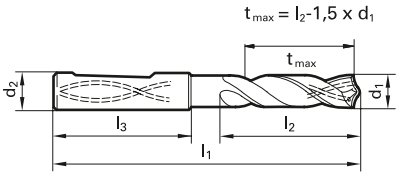
○ bright ◔ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1660	1180	2468	8510	8610	8520	8620
DIN 6537 K						
Solid carbide						
			K/P			
S	S	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
3xD	3xD	3xD	3xD	3xD	3xD	3xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7
121	121	121	121	121	121	121
123	123	123	124	124	124	124
			NEW	NEW	NEW	NEW

Availability						
●	●	●	● ●	● ●	● ●	● ●
	●	●	● ●	● ○	● ●	● ●
			●	●	●	●
	○	●	●	●	●	●
○	●	○	●	●	●	●
	○		●	●	●	●
	●		● ●	● ●	● ●	● ●
			● ●	● ●	● ●	● ●
	○		●	○	●	●
○						
	●	●	●	●	●	●
●	● ●					
○						

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1181	2477	2469
Standard		DIN 6537 K	
Tool material		Solid carbide	
Carbide grade		K/P	
Surface	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U
Drilling depth	3xD	3xD	3xD
Cutting direction	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7
Discount group	121	121	121
Techn. data page	122	123	123



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
22.000		25.000	146.00	84.00	56.00	
22.500		25.000	153.00	91.00	56.00	
23.000		25.000	153.00	91.00	56.00	
24.000		25.000	153.00	91.00	56.00	
25.000	63/64	25.000	153.00	91.00	56.00	

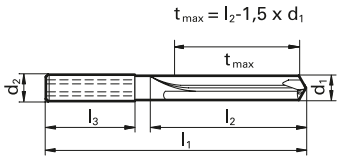
○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1660	1180	2468	8510	8610	8520	8620
DIN 6537 K						
Solid carbide						
			K/P			
S	S	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
3xD	3xD	3xD	3xD	3xD	3xD	3xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7
121	121	121	121	121	121	121
123	123	123	124	124	124	124
			NEW	NEW	NEW	NEW

Availability						
●	●					
	●					
	●					
	●					
	●					

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

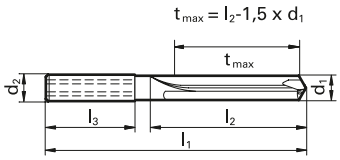
Guhring no.	768	6068
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	
Surface	◯	◯
Type	RT 150 GG	RT 150 GG
Drilling depth	4xD	4xD
Cutting direction	right-hand	right-hand
Tolerance	m7	m7
Discount group	121	121
Techn. data page	124	125



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
3.000		6.000	66.00	24.00	36.00	●	●
3.100		6.000	66.00	24.00	36.00	●	
3.200		6.000	66.00	24.00	36.00	●	●
3.300		6.000	66.00	24.00	36.00	●	❍
3.400		6.000	66.00	24.00	36.00	●	
3.500		6.000	66.00	24.00	36.00	●	●
3.600		6.000	66.00	24.00	36.00	●	
3.700		6.000	66.00	24.00	36.00	●	❍
3.800		6.000	74.00	30.00	36.00	●	
3.900		6.000	74.00	30.00	36.00	❍	❍
4.000		6.000	74.00	30.00	36.00	●	●
4.100		6.000	74.00	30.00	36.00	●	
4.200		6.000	74.00	30.00	36.00	●	❍
4.300		6.000	74.00	30.00	36.00	●	
4.400		6.000	74.00	30.00	36.00	●	
4.500		6.000	74.00	30.00	36.00	●	
4.600		6.000	74.00	30.00	36.00	●	
4.800		6.000	74.00	36.00	36.00	●	
4.900		6.000	74.00	36.00	36.00	●	
5.000		6.000	74.00	36.00	36.00	●	●
5.100		6.000	74.00	36.00	36.00	●	
5.160	13/64	6.000	74.00	36.00	36.00	●	❍
5.200		6.000	74.00	36.00	36.00	●	●
5.300		6.000	74.00	36.00	36.00	●	❍
5.400		6.000	74.00	36.00	36.00		❍
5.500		6.000	74.00	36.00	36.00	●	●
5.560	7/32	6.000	74.00	36.00	36.00	●	
5.600		6.000	74.00	36.00	36.00	●	
5.700		6.000	74.00	36.00	36.00	●	
5.800		6.000	74.00	36.00	36.00	●	❍
5.900		6.000	74.00	36.00	36.00	●	
6.000		6.000	74.00	36.00	36.00	●	❍
6.100		8.000	91.00	53.00	36.00	●	●
6.200		8.000	91.00	53.00	36.00	●	
6.300		8.000	91.00	53.00	36.00	●	●
6.350	1/4	8.000	91.00	53.00	36.00	●	●

◯ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

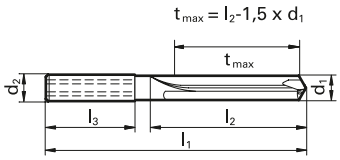
Guhring no.	768	6068
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	
Surface	◯	◯
Type	RT 150 GG	RT 150 GG
Drilling depth	4xD	4xD
Cutting direction	right-hand	right-hand
Tolerance	m7	m7
Discount group	121	121
Techn. data page	124	125



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
6.400		8.000	91.00	53.00	36.00	●	❍
6.500		8.000	91.00	53.00	36.00	●	
6.600		8.000	91.00	53.00	36.00	●	
6.700		8.000	91.00	53.00	36.00	●	
6.750	17/64	8.000	91.00	53.00	36.00	●	●
6.800		8.000	91.00	53.00	36.00	●	●
6.900		8.000	91.00	53.00	36.00	●	●
7.000		8.000	91.00	53.00	36.00	●	●
7.100		8.000	91.00	53.00	36.00	●	❍
7.140	9/32	8.000	91.00	53.00	36.00	●	●
7.200		8.000	91.00	53.00	36.00	●	
7.300		8.000	91.00	53.00	36.00	●	❍
7.400		8.000	91.00	53.00	36.00	●	
7.500		8.000	91.00	53.00	36.00	●	
7.540	19/64	8.000	91.00	53.00	36.00	●	●
7.600		8.000	91.00	53.00	36.00	●	
7.700		8.000	91.00	53.00	36.00	●	
7.800		8.000	91.00	53.00	36.00	●	●
7.900		8.000	91.00	53.00	36.00	●	
7.940	5/16	8.000	91.00	53.00	36.00	●	
8.000		8.000	91.00	53.00	36.00	●	
8.100		10.000	103.00	61.00	40.00	●	●
8.200		10.000	103.00	61.00	40.00	●	●
8.300		10.000	103.00	61.00	40.00	●	●
8.330	21/64	10.000	103.00	61.00	40.00	●	
8.400		10.000	103.00	61.00	40.00	●	
8.500		10.000	103.00	61.00	40.00	●	●
8.600		10.000	103.00	61.00	40.00	●	
8.700		10.000	103.00	61.00	40.00	●	●
8.730	11/32	10.000	103.00	61.00	40.00	●	❍
8.800		10.000	103.00	61.00	40.00	●	
8.900		10.000	103.00	61.00	40.00	●	
9.000		10.000	103.00	61.00	40.00	●	❍
9.100		10.000	103.00	61.00	40.00	●	
9.130	23/64	10.000	103.00	61.00	40.00	●	●
9.200		10.000	103.00	61.00	40.00	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

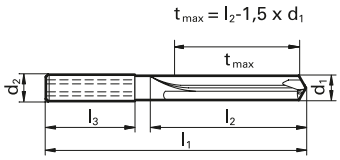
Guhring no.	768	6068
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	
Surface	◯	◯
Type	RT 150 GG	RT 150 GG
Drilling depth	4xD	4xD
Cutting direction	right-hand	right-hand
Tolerance	m7	m7
Discount group	121	121
Techn. data page	124	125



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
9.300		10.000	103.00	61.00	40.00	●	●
9.400		10.000	103.00	61.00	40.00	●	
9.500		10.000	103.00	61.00	40.00	●	
9.520	3/8	10.000	103.00	61.00	40.00	●	●
9.600		10.000	103.00	61.00	40.00	●	●
9.700		10.000	103.00	61.00	40.00	●	❍
9.800		10.000	103.00	61.00	40.00	●	
9.900		10.000	103.00	61.00	40.00	❍	
9.920	25/64	10.000	103.00	61.00	40.00	●	●
10.000		10.000	103.00	61.00	40.00	●	●
10.200		12.000	118.00	71.00	45.00	●	●
10.320	13/32	12.000	118.00	71.00	45.00	●	
10.500		12.000	118.00	71.00	45.00	●	●
10.720	27/64	12.000	118.00	71.00	45.00	●	●
11.000		12.000	118.00	71.00	45.00	●	●
11.110	7/16	12.000	118.00	71.00	45.00	●	❍
11.200		12.000	118.00	71.00	45.00	●	
11.500		12.000	118.00	71.00	45.00	●	❍
11.510	29/64	12.000	118.00	71.00	45.00	●	
11.910	15/32	12.000	118.00	71.00	45.00	●	
12.000		12.000	118.00	71.00	45.00	●	●
12.300	31/64	14.000	124.00	74.00	45.00	●	❍
12.500		14.000	124.00	74.00	45.00	●	❍
12.700	1/2	14.000	124.00	74.00	45.00	●	●
13.000		14.000	124.00	74.00	45.00	●	●
13.500		14.000	124.00	74.00	45.00	●	❍
14.000		14.000	124.00	74.00	45.00	●	●
14.500		16.000	133.00	83.00	48.00	●	
15.000		16.000	133.00	83.00	48.00	●	●
15.500		16.000	133.00	83.00	48.00	●	
16.000		16.000	133.00	83.00	48.00	●	●
16.500		18.000	143.00	93.00	48.00	●	❍
17.000		18.000	143.00	93.00	48.00	●	●
17.500		18.000	143.00	93.00	48.00	●	●
18.000		18.000	143.00	93.00	48.00	●	❍
18.500		20.000	153.00	101.00	50.00		●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

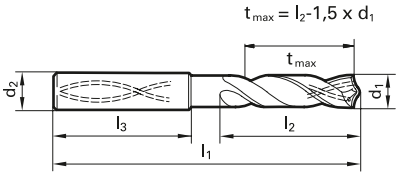
Guhring no.	768	6068
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	
Surface	◯	◯
Type	RT 150 GG	RT 150 GG
Drilling depth	4xD	4xD
Cutting direction	right-hand	right-hand
Tolerance	m7	m7
Discount group	121	121
Techn. data page	124	125



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability 768	Availability 6068
19.000		20.000	153.00	101.00	50.00	●	
19.500		20.000	153.00	101.00	50.00		●
20.000		20.000	153.00	101.00	50.00	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1663	1183	2479	2471
Standard	DIN 6537 L			
Tool material	Solid carbide			
Carbide grade	K/P			
Surface	S	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 U
Drilling depth	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7
Discount group	121	121	121	121
Techn. data page	125	125	125	125



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability			
3.000		6.000	66.00	28.00	36.00	❍		●	●
3.100		6.000	66.00	28.00	36.00			●	●
3.170	1/8	6.000	66.00	28.00	36.00			●	●
3.200		6.000	66.00	28.00	36.00			●	●
3.250		6.000	66.00	28.00	36.00			●	●
3.300		6.000	66.00	28.00	36.00			●	●
3.400		6.000	66.00	28.00	36.00			●	●
3.500		6.000	66.00	28.00	36.00			●	●
3.570	9/64	6.000	66.00	28.00	36.00			●	●
3.600		6.000	66.00	28.00	36.00			●	●
3.700		6.000	66.00	28.00	36.00	❍	❍	●	●
3.800		6.000	74.00	36.00	36.00			●	●
3.900		6.000	74.00	36.00	36.00			●	●
3.970	5/32	6.000	74.00	36.00	36.00			●	●
4.000		6.000	74.00	36.00	36.00	●	●	●	●
4.040		6.000	74.00	36.00	36.00			●	
4.100		6.000	74.00	36.00	36.00		●	●	●
4.200		6.000	74.00	36.00	36.00		●	●	●
4.300		6.000	74.00	36.00	36.00	❍	●	●	●
4.370	11/64	6.000	74.00	36.00	36.00		●	●	●
4.400		6.000	74.00	36.00	36.00		●	●	●
4.500		6.000	74.00	36.00	36.00	●	●	●	●
4.600		6.000	74.00	36.00	36.00		❍	●	●
4.650		6.000	74.00	36.00	36.00	❍	●	●	●
4.700		6.000	74.00	36.00	36.00	●	❍	●	●
4.760	3/16	6.000	82.00	44.00	36.00		●	●	●
4.800		6.000	82.00	44.00	36.00	❍	●	●	●
4.900		6.000	82.00	44.00	36.00		❍	●	●
5.000		6.000	82.00	44.00	36.00	●	●	●	●
5.100		6.000	82.00	44.00	36.00		●	●	●
5.110		6.000	82.00	44.00	36.00			●	
5.160	13/64	6.000	82.00	44.00	36.00		❍	●	●
5.200		6.000	82.00	44.00	36.00		●	●	●
5.300		6.000	82.00	44.00	36.00		❍	●	●
5.400		6.000	82.00	44.00	36.00	❍	●	●	●
5.410		6.000	82.00	44.00	36.00			●	

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

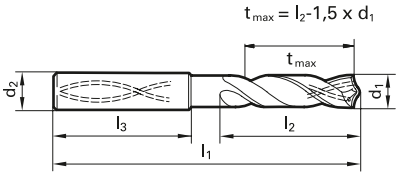
1662	1182	2478	2470	6501	8511	8611	8521	8621
DIN 6537 L								
Solid carbide								
				K/P				
S	S	F	F	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 F	RT 100 R	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7	m7	m7
121	121	121	121	165	121	121	121	121
126	126	126	126	126	127	127	127	127
					NEW	NEW	NEW	NEW

Availability

●	●	○	●	●	●	●	●	●
○				●	●	●	●	●
●				●	●	●	●	●
○				●	●	●	●	●
●	●			●	●	●	●	●
○				●	●	●	●	●
○		●	○	●	●	●	●	●
○				●	●	●	●	●
●			○	●	●	●	●	●
○				●	●	○	●	●
○			○	●	●	●	●	●
●			○	●	●	●	●	●
				●	●	●	●	●
●	●	●	●	●	●	●	●	●
●				●	●	●	●	●
●	●	●	●	●	●	●	●	●
●				●	●	●	●	●
●	●			●	●	●	●	●
●				●	●	●	●	●
○				●	●	●	●	●
○				●	●	●	●	●
●	●	●		●	●	●	●	●
●	●	●	●	●	●	●	●	●
●				●	●	●	●	●
●	●		●	●	●	●	●	●
●	○		○	●	●	●	●	●
○	●		○	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1663	1183	2479	2471
Standard	DIN 6537 L			
Tool material	Solid carbide			
Carbide grade	K/P			
Surface	S	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 U
Drilling depth	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7
Discount group	121	121	121	121
Techn. data page	125	125	125	125



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability			
5.500		6.000	82.00	44.00	36.00		●	●	●
5.550		6.000	82.00	44.00	36.00			●	●
5.560	7/32	6.000	82.00	44.00	36.00		●	●	●
5.600		6.000	82.00	44.00	36.00		●	●	●
5.650		6.000	82.00	44.00	36.00			●	
5.700		6.000	82.00	44.00	36.00		●	●	●
5.800		6.000	82.00	44.00	36.00	❍	●	●	●
5.900		6.000	82.00	44.00	36.00		●	●	●
5.950	15/64	6.000	82.00	44.00	36.00		●	●	●
6.000		6.000	82.00	44.00	36.00	●	●	●	●
6.100		8.000	91.00	53.00	36.00	❍	●	●	●
6.200		8.000	91.00	53.00	36.00	❍	●	●	●
6.300		8.000	91.00	53.00	36.00	❍	●	●	●
6.350	1/4	8.000	91.00	53.00	36.00	●	●	●	●
6.400		8.000	91.00	53.00	36.00	❍	●	●	●
6.500		8.000	91.00	53.00	36.00	●	●	●	●
6.530		8.000	91.00	53.00	36.00			●	
6.600		8.000	91.00	53.00	36.00		●	●	●
6.700		8.000	91.00	53.00	36.00	❍	●	●	●
6.750	17/64	8.000	91.00	53.00	36.00		❍	●	●
6.800		8.000	91.00	53.00	36.00	❍	●	●	●
6.900		8.000	91.00	53.00	36.00		●	●	●
7.000		8.000	91.00	53.00	36.00	●	●	●	●
7.100		8.000	91.00	53.00	36.00	●	●	●	●
7.140	9/32	8.000	91.00	53.00	36.00		●	●	●
7.200		8.000	91.00	53.00	36.00		●	●	●
7.300		8.000	91.00	53.00	36.00	●	●	●	●
7.400		8.000	91.00	53.00	36.00		●	●	●
7.500		8.000	91.00	53.00	36.00	●	❍	●	●
7.540	19/64	8.000	91.00	53.00	36.00		●	●	●
7.550		8.000	91.00	53.00	36.00			●	
7.600		8.000	91.00	53.00	36.00		●	●	●
7.650		8.000	91.00	53.00	36.00			●	
7.700		8.000	91.00	53.00	36.00	●	●	●	●
7.800		8.000	91.00	53.00	36.00	●	●	●	●
7.900		8.000	91.00	53.00	36.00		❍	●	●

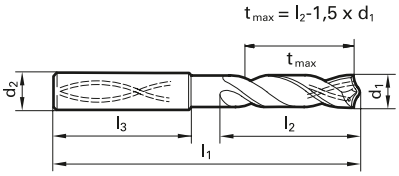
❍ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1662	1182	2478	2470	6501	8511	8611	8521	8621
DIN 6537 L								
Solid carbide								
				K/P				
S	S	F	F	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 F	RT 100 R	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7	m7	m7
121	121	121	121	165	121	121	121	121
126	126	126	126	126	127	127	127	127
					NEW	NEW	NEW	NEW

Availability								
● ○ ●	●	●	●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
● ○ ●	●		●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
● ○ ●	●		●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
● ● ●	● ● ●	●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
● ● ●	●	●	●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
●	●	●	●	●	●	●	●	●
●	●		●	●	●	●	●	●
○ ● ●	●		●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
● ● ●	● ●	●	○ ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
● ● ●	○ ●		●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
● ● ●	● ●	○ ●	○	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
○ ○	○	●	○	●	●	●	●	●
● ○ ○	● ○	●	○ ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	1663	1183	2479	2471
Standard	DIN 6537 L			
Tool material	Solid carbide			
Carbide grade	K/P			
Surface	S	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 U
Drilling depth	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7
Discount group	121	121	121	121
Techn. data page	125	125	125	125



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability			
7.940	5/16	8.000	91.00	53.00	36.00		●	●	●
8.000		8.000	91.00	53.00	36.00	●	●	●	●
8.100		10.000	103.00	61.00	40.00		●	●	●
8.200		10.000	103.00	61.00	40.00	❍	●	●	●
8.300		10.000	103.00	61.00	40.00	●	●	●	●
8.330	21/64	10.000	103.00	61.00	40.00		●	●	●
8.400		10.000	103.00	61.00	40.00	❍	●	●	●
8.500		10.000	103.00	61.00	40.00	●	●	●	●
8.600		10.000	103.00	61.00	40.00	❍	●	●	●
8.700		10.000	103.00	61.00	40.00		●	●	●
8.730	11/32	10.000	103.00	61.00	40.00		●	●	●
8.800		10.000	103.00	61.00	40.00	●	●	●	●
8.900		10.000	103.00	61.00	40.00		●	●	●
9.000		10.000	103.00	61.00	40.00	●	●	●	●
9.100		10.000	103.00	61.00	40.00		●	●	●
9.130	23/64	10.000	103.00	61.00	40.00		❍	●	●
9.200		10.000	103.00	61.00	40.00	❍	●	●	●
9.250		10.000	103.00	61.00	40.00			●	●
9.300		10.000	103.00	61.00	40.00		●	●	●
9.340		10.000	103.00	61.00	40.00			●	
9.400		10.000	103.00	61.00	40.00	❍	●	●	●
9.500		10.000	103.00	61.00	40.00	❍	●	●	●
9.520	3/8	10.000	103.00	61.00	40.00		●	●	●
9.550		10.000	103.00	61.00	40.00			●	
9.600		10.000	103.00	61.00	40.00		❍	●	●
9.700		10.000	103.00	61.00	40.00		●	●	●
9.800		10.000	103.00	61.00	40.00		❍	●	●
9.900		10.000	103.00	61.00	40.00		❍	●	●
9.920	25/64	10.000	103.00	61.00	40.00		●	●	●
10.000		10.000	103.00	61.00	40.00	❍	●	●	●
10.100		12.000	118.00	71.00	45.00	●	●	●	●
10.200		12.000	118.00	71.00	45.00	●	●	●	●
10.300		12.000	118.00	71.00	45.00		●	●	●
10.320	13/32	12.000	118.00	71.00	45.00		●	●	●
10.400		12.000	118.00	71.00	45.00		●	●	●
10.500		12.000	118.00	71.00	45.00	●	●	●	●

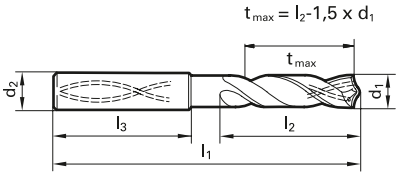
❍ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1662	1182	2478	2470	6501	8511	8611	8521	8621
DIN 6537 L								
Solid carbide								
				K/P				
S	S	F	F	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 F	RT 100 R	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7	m7	m7
121	121	121	121	165	121	121	121	121
126	126	126	126	126	127	127	127	127
					NEW	NEW	NEW	NEW

Availability								
●				●	●	●	●	●
●	●	●	●	●	●	●	●	●
●	●			●	●	●	●	●
●	●		●	●	●	●	●	●
				●	●	●	●	●
●	●	●	●	●	●	●	●	●
●	●		○	●	●	●	●	●
○				●	●	●	●	●
●	○		●	●	●	●	●	●
○				●	●	●	●	●
○	●	●	●	●	●	●	●	●
○	○			●	●	●	●	●
○	○		○	●	●	●	●	●
○				●	●	●	●	●
●	○		○	●	●	●	●	●
●				●	●	●	●	●
○	●	●	●	●	●	●	●	●
○	○			●	●	●	●	●
●				●	●	●	●	●
○	○		○	●	●	●	●	●
●	●		●	●	●	●	●	●
●	●	●		●	●	●	●	●
○	●		●	●	●	●	●	●
●				●	●	●	●	●
●	●			●	●	●	●	●
				●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1663	1183	2479	2471
Standard	DIN 6537 L			
Tool material	Solid carbide			
Carbide grade	K/P			
Surface	S	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 U
Drilling depth	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7
Discount group	121	121	121	121
Techn. data page	125	125	125	125



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability			
10.600		12.000	118.00	71.00	45.00		●	●	●
10.700		12.000	118.00	71.00	45.00		●	●	●
10.720	27/64	12.000	118.00	71.00	45.00		●	○	
10.800		12.000	118.00	71.00	45.00		●	●	●
10.900		12.000	118.00	71.00	45.00		●	●	●
11.000		12.000	118.00	71.00	45.00	●	●	●	●
11.100		12.000	118.00	71.00	45.00		●	●	●
11.110	7/16	12.000	118.00	71.00	45.00		●	●	●
11.200		12.000	118.00	71.00	45.00	○	●	●	●
11.300		12.000	118.00	71.00	45.00	○	●	●	●
11.400		12.000	118.00	71.00	45.00		○	●	●
11.450		12.000	118.00	71.00	45.00				
11.500		12.000	118.00	71.00	45.00	○	●	●	●
11.510	29/64	12.000	118.00	71.00	45.00		●	●	
11.600		12.000	118.00	71.00	45.00		●	●	●
11.700		12.000	118.00	71.00	45.00		●	●	●
11.800		12.000	118.00	71.00	45.00	○	●	●	●
11.900		12.000	118.00	71.00	45.00		●	●	●
11.910	15/32	12.000	118.00	71.00	45.00		●	●	●
12.000		12.000	118.00	71.00	45.00	○	●	●	●
12.100		14.000	124.00	77.00	45.00		●	●	●
12.200		14.000	124.00	77.00	45.00		●	●	●
12.300	31/64	14.000	124.00	77.00	45.00	○	●	●	●
12.400		14.000	124.00	77.00	45.00		●	○	●
12.500		14.000	124.00	77.00	45.00		●	●	●
12.600		14.000	124.00	77.00	45.00		●	●	
12.700		14.000	124.00	77.00	45.00		●	●	●
12.800		14.000	124.00	77.00	45.00		●	●	
12.900		14.000	124.00	77.00	45.00		●		
13.000		14.000	124.00	77.00	45.00	●	●	●	●
13.100	33/64	14.000	124.00	77.00	45.00		●	●	
13.200		14.000	124.00	77.00	45.00		●	●	
13.300		14.000	124.00	77.00	45.00		●		
13.400		14.000	124.00	77.00	45.00		●		
13.490	17/32	14.000	124.00	77.00	45.00			●	
13.500		14.000	124.00	77.00	45.00		●	●	●

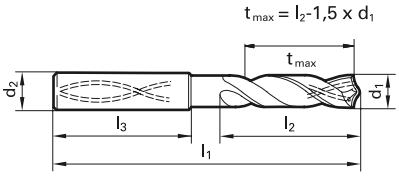
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1662	1182	2478	2470	6501	8511	8611	8521	8621
DIN 6537 L								
Solid carbide								
				K/P				
S	S	F	F	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 F	RT 100 R	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7	m7	m7
121	121	121	121	165	121	121	121	121
126	126	126	126	126	127	127	127	127
					NEW	NEW	NEW	NEW

Availability								
○	●			●	●	●	●	●
●	●		○	●	●	●	●	●
●	●	●	●	●	●	●	●	●
○	●		○	●	●	●	●	●
●	○	○		●	●	●	●	●
○		●		●	●	●	●	●
○			○	●	●	●	●	●
●	●		●	●	●	●	●	●
●				●	●	●	●	●
○	○		○	●	●	●	●	●
●			●	●				
○	●	●	●	●	●	●	●	●
●				●				
●	●		●	●	●	○	●	●
●	○			●	●	●	●	●
●	●			●	●	●	●	●
○	○			●				
●	●	●	●	●	●	●	●	●
●	●			●	●	●	●	●
				●				
●	●		●	●	●	○	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	1663	1183	2479	2471
Standard	DIN 6537 L			
Tool material	Solid carbide			
Carbide grade	K/P			
Surface	S	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 U
Drilling depth	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7
Discount group	121	121	121	121
Techn. data page	125	125	125	125



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
13.600		14.000	124.00	77.00	45.00	● ●
13.700		14.000	124.00	77.00	45.00	○ ● ●
13.800		14.000	124.00	77.00	45.00	● ● ●
13.890	35/64	14.000	124.00	77.00	45.00	● ●
13.900		14.000	124.00	77.00	45.00	○ ● ○
14.000		14.000	124.00	77.00	45.00	● ● ● ●
14.100		16.000	133.00	83.00	48.00	○ ● ●
14.200		16.000	133.00	83.00	48.00	● ● ● ●
14.290	9/16	16.000	133.00	83.00	48.00	● ● ●
14.300		16.000	133.00	83.00	48.00	●
14.400		16.000	133.00	83.00	48.00	○
14.500		16.000	133.00	83.00	48.00	● ● ● ●
14.600		16.000	133.00	83.00	48.00	○
14.680	37/64	16.000	133.00	83.00	48.00	○ ●
14.700		16.000	133.00	83.00	48.00	○ ● ●
14.800		16.000	133.00	83.00	48.00	● ●
14.900		16.000	133.00	83.00	48.00	●
15.000		16.000	133.00	83.00	48.00	○ ● ● ●
15.080	19/32	16.000	133.00	83.00	48.00	●
15.100		16.000	133.00	83.00	48.00	● ●
15.200		16.000	133.00	83.00	48.00	● ● ●
15.300		16.000	133.00	83.00	48.00	● ●
15.400		16.000	133.00	83.00	48.00	○
15.480	39/64	16.000	133.00	83.00	48.00	● ●
15.500		16.000	133.00	83.00	48.00	○ ○ ● ●
15.600		16.000	133.00	83.00	48.00	●
15.700		16.000	133.00	83.00	48.00	● ●
15.800		16.000	133.00	83.00	48.00	● ● ●
15.870	5/8	16.000	133.00	83.00	48.00	● ●
15.900		16.000	133.00	83.00	48.00	●
16.000		16.000	133.00	83.00	48.00	○ ● ● ●
16.100		18.000	143.00	93.00	48.00	●
16.200		18.000	143.00	93.00	48.00	○
16.270	41/64	18.000	143.00	93.00	48.00	● ●
16.300		18.000	143.00	93.00	48.00	
16.400		18.000	143.00	93.00	48.00	○

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

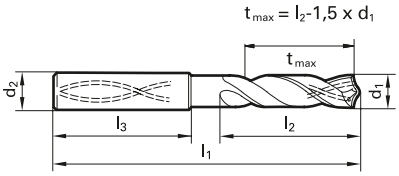
1662	1182	2478	2470	6501	8511	8611	8521	8621
DIN 6537 L								
Solid carbide								
				K/P				
S	S	F	F	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 F	RT 100 R	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7	m7	m7
121	121	121	121	165	121	121	121	121
126	126	126	126	126	127	127	127	127
					NEW	NEW	NEW	NEW

Availability

				●	●	●	●	●
	❍			●				
●	●	●	●	●	●	●	●	●
	●		●	●				
				●	●	●	●	●
				●				
●	❍	❍	❍	●	●	●	●	●
	❍			●				
				●	●	❍	●	●
				●				
●	●		●	●	●	●	●	●
				●				
		❍		●	●	●	●	●
				●				
●	●			●	●	●	●	●
				●		❍	●	●
				●				
				●				
●	●	●	●	●	●	●	●	●
					●	●	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	1663	1183	2479	2471
Standard	DIN 6537 L			
Tool material	Solid carbide			
Carbide grade	K/P			
Surface	S	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 U
Drilling depth	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7
Discount group	121	121	121	121
Techn. data page	125	125	125	125



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
16.500		18.000	143.00	93.00	48.00	● ● ●
16.600		18.000	143.00	93.00	48.00	●
16.670	21/32	18.000	143.00	93.00	48.00	●
16.700		18.000	143.00	93.00	48.00	● ●
16.800		18.000	143.00	93.00	48.00	●
16.900		18.000	143.00	93.00	48.00	●
17.000		18.000	143.00	93.00	48.00	○ ● ●
17.070	43/64	18.000	143.00	93.00	48.00	● ●
17.100		18.000	143.00	93.00	48.00	○
17.200		18.000	143.00	93.00	48.00	●
17.300		18.000	143.00	93.00	48.00	● ●
17.400		18.000	143.00	93.00	48.00	○
17.460	11/16	18.000	143.00	93.00	48.00	●
17.500		18.000	143.00	93.00	48.00	○ ● ● ●
17.600		18.000	143.00	93.00	48.00	○
17.700		18.000	143.00	93.00	48.00	● ●
17.800		18.000	143.00	93.00	48.00	○
17.860	45/64	18.000	143.00	93.00	48.00	●
17.900		18.000	143.00	93.00	48.00	○
18.000		18.000	143.00	93.00	48.00	● ● ●
18.100		20.000	153.00	101.00	50.00	○
18.200		20.000	153.00	101.00	50.00	● ●
18.260	23/32	20.000	153.00	101.00	50.00	●
18.300		20.000	153.00	101.00	50.00	●
18.400		20.000	153.00	101.00	50.00	○
18.500		20.000	153.00	101.00	50.00	○ ● ●
18.600		20.000	153.00	101.00	50.00	○ ○
18.650	47/64	20.000	153.00	101.00	50.00	●
18.700		20.000	153.00	101.00	50.00	○ ●
18.800		20.000	153.00	101.00	50.00	●
18.900		20.000	153.00	101.00	50.00	○ ●
19.000		20.000	153.00	101.00	50.00	○ ● ● ●
19.050	3/4	20.000	153.00	101.00	50.00	● ● ●
19.100		20.000	153.00	101.00	50.00	○
19.250		20.000	153.00	101.00	50.00	●
19.300		20.000	153.00	101.00	50.00	○ ●

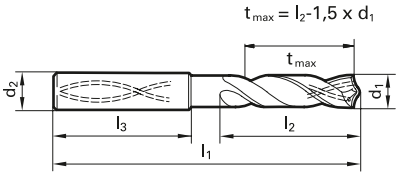
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1662	1182	2478	2470	6501	8511	8611	8521	8621
DIN 6537 L								
Solid carbide								
				K/P				
S	S	F	F	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 F	RT 100 R	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7	m7	m7
121	121	121	121	165	121	121	121	121
126	126	126	126	126	127	127	127	127
					NEW	NEW	NEW	NEW

Availability								
●	❍		●	●	●	●	●	●
				●				
					●	●	●	●
❍	●	●	●	●	●	●	●	●
					●	●	●	●
●	●	●	●	●	●	●	●	●
❍	●		●	●	●	●	●	●
				●	●	❍	●	●
❍				●	●	●	●	●
					●	❍	●	●
						●		
					●	●	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	1663	1183	2479	2471
Standard	DIN 6537 L			
Tool material	Solid carbide			
Carbide grade	K/P			
Surface	S	S	F	F
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 U
Drilling depth	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7
Discount group	121	121	121	121
Techn. data page	125	125	125	125



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability			
19.446		20.000	153.00	101.00	50.00			●	
19.500		20.000	153.00	101.00	50.00	❍	●	●	●
19.600		20.000	153.00	101.00	50.00		❍		
19.700		20.000	153.00	101.00	50.00		❍	●	
19.800		20.000	153.00	101.00	50.00		●		
19.840	25/32	20.000	153.00	101.00	50.00			●	
19.900		20.000	153.00	101.00	50.00		❍		
20.000		20.000	153.00	101.00	50.00		●	●	●
20.500		25.000	165.00	105.00	56.00				
21.000		25.000	165.00	105.00	56.00				
21.500		25.000	165.00	105.00	56.00				
22.000		25.000	165.00	105.00	56.00				
22.500		25.000	180.00	117.00	56.00				
23.500		25.000	180.00	117.00	56.00				
24.000		25.000	180.00	117.00	56.00				
24.500		25.000	180.00	117.00	56.00				
25.000		25.000	180.00	117.00	56.00				

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

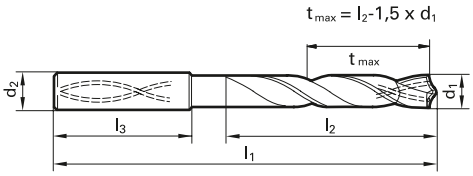
1662	1182	2478	2470	6501	8511	8611	8521	8621
DIN 6537 L								
Solid carbide								
				K/P				
S	S	F	F	F	a	a	Y	Y
RT 100 F	RT 100 F	RT 100 F	RT 100 F	RT 100 R	RT 100 VA	RT 100 VA	RT 100 HF	RT 100 HF
5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD	5xD
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
m7	m7	m7	m7	m7	m7	m7	m7	m7
121	121	121	121	165	121	121	121	121
126	126	126	126	126	127	127	127	127
					NEW	NEW	NEW	NEW

Availability								
				●	●	●	●	●
❍ ●	● ● ● ● ●	●	●	●	●	❍	●	●
❍ ●	● ● ●							
	❍							

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	2711	4044	4045	6502	8522
Standard	Guhring std.				
Tool material	Solid carbide				
Carbide grade	K/P				
Surface	S	F	F	F	Y
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 R	RT 100 HF
Drilling depth	7xD	7xD	7xD	7xD	7xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7	m7
Discount group	121	121	121	165	121
Techn. data page	127	128	128	128	128

NEW

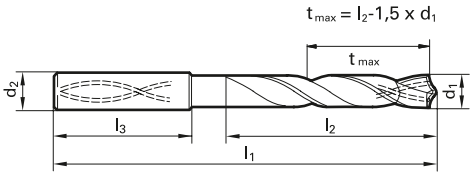


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
3.000		6.000	70.00	30.00	36.00	● ● ● ●
3.100		6.000	70.00	30.00	36.00	● ● ●
3.170	1/8	6.000	70.00	30.00	36.00	● ● ●
3.200		6.000	70.00	30.00	36.00	● ● ●
3.250		6.000	70.00	30.00	36.00	● ● ● ●
3.300		6.000	70.00	30.00	36.00	● ● ● ●
3.400		6.000	75.00	35.50	36.00	● ● ● ●
3.500		6.000	75.00	35.50	36.00	● ● ● ●
3.570	9/64	6.000	75.00	35.50	36.00	● ● ●
3.600		6.000	75.00	35.50	36.00	● ● ●
3.700		6.000	75.00	35.50	36.00	● ● ● ●
3.800		6.000	75.00	37.50	36.00	● ● ●
3.900		6.000	75.00	37.50	36.00	● ● ●
3.970	5/32	6.000	75.00	37.50	36.00	● ● ●
4.000		6.000	75.00	37.50	36.00	● ● ● ●
4.040		6.000	75.00	37.50	36.00	●
4.100		6.000	75.00	37.50	36.00	● ● ●
4.200		6.000	75.00	37.50	36.00	◯ ● ● ● ●
4.300		6.000	85.00	45.00	36.00	● ● ● ● ●
4.370	11/64	6.000	85.00	45.00	36.00	● ● ●
4.400		6.000	85.00	45.00	36.00	● ● ● ●
4.500		6.000	85.00	45.00	36.00	● ● ● ●
4.600		6.000	85.00	45.00	36.00	● ● ●
4.650		6.000	85.00	45.00	36.00	● ● ● ●
4.700		6.000	85.00	45.00	36.00	● ● ●
4.760	3/16	6.000	90.00	50.00	36.00	● ● ●
4.800		6.000	90.00	50.00	36.00	● ● ●
4.900		6.000	90.00	50.00	36.00	● ● ●
5.000		6.000	90.00	50.00	36.00	● ● ● ● ●
5.100		6.000	90.00	50.00	36.00	● ● ● ●
5.110		6.000	90.00	50.00	36.00	●
5.160	13/64	6.000	90.00	50.00	36.00	● ● ●
5.200		6.000	90.00	50.00	36.00	● ● ● ● ●
5.300		6.000	90.00	50.00	36.00	● ● ● ●
5.400		6.000	97.00	57.00	36.00	● ● ●
5.410		6.000	97.00	57.00	36.00	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	2711	4044	4045	6502	8522
Standard	Guhring std.				
Tool material	Solid carbide				
Carbide grade	K/P				
Surface	S	F	F	F	Y
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 R	RT 100 HF
Drilling depth	7xD	7xD	7xD	7xD	7xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7	m7
Discount group	121	121	121	165	121
Techn. data page	127	128	128	128	128

NEW

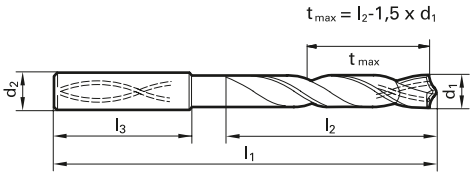


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
5.500		6.000	97.00	57.00	36.00	● ● ● ● ●
5.550		6.000	97.00	57.00	36.00	● ● ●
5.560	7/32	6.000	97.00	57.00	36.00	● ●
5.600		6.000	97.00	57.00	36.00	● ● ●
5.700		6.000	97.00	57.00	36.00	● ● ●
5.800		6.000	97.00	57.00	36.00	● ● ● ●
5.900		6.000	97.00	57.00	36.00	● ● ●
5.950	15/64	6.000	97.00	57.00	36.00	● ●
6.000		6.000	97.00	57.00	36.00	● ● ● ● ●
6.100		8.000	106.00	66.00	36.00	● ● ●
6.200		8.000	106.00	66.00	36.00	● ● ● ●
6.300		8.000	106.00	66.00	36.00	● ● ●
6.350	1/4	8.000	106.00	66.00	36.00	● ● ●
6.400		8.000	106.00	66.00	36.00	● ●
6.500		8.000	106.00	66.00	36.00	❍ ● ● ● ●
6.530		8.000	106.00	66.00	36.00	●
6.600		8.000	106.00	66.00	36.00	● ● ● ●
6.700		8.000	106.00	66.00	36.00	● ● ●
6.750	17/64	8.000	106.00	66.00	36.00	● ● ●
6.800		8.000	106.00	66.00	36.00	● ● ● ● ●
6.900		8.000	116.00	76.00	36.00	● ● ● ●
7.000		8.000	116.00	76.00	36.00	● ● ● ● ●
7.100		8.000	116.00	76.00	36.00	● ● ● ●
7.140	9/32	8.000	116.00	76.00	36.00	● ●
7.200		8.000	116.00	76.00	36.00	● ● ●
7.300		8.000	116.00	76.00	36.00	● ● ●
7.400		8.000	116.00	76.00	36.00	● ● ● ●
7.500		8.000	116.00	76.00	36.00	❍ ● ● ● ●
7.540	19/64	8.000	116.00	76.00	36.00	● ●
7.600		8.000	116.00	76.00	36.00	● ● ●
7.700		8.000	116.00	76.00	36.00	● ● ●
7.800		8.000	116.00	76.00	36.00	● ● ● ●
7.900		8.000	116.00	76.00	36.00	● ●
7.940	5/16	8.000	116.00	76.00	36.00	● ●
8.000		8.000	116.00	76.00	36.00	● ● ● ● ●
8.100		10.000	131.00	87.00	40.00	● ● ●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	2711	4044	4045	6502	8522
Standard	Guhring std.				
Tool material	Solid carbide				
Carbide grade	K/P				
Surface	S	F	F	F	Y
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 R	RT 100 HF
Drilling depth	7xD	7xD	7xD	7xD	7xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7	m7
Discount group	121	121	121	165	121
Techn. data page	127	128	128	128	128

NEW

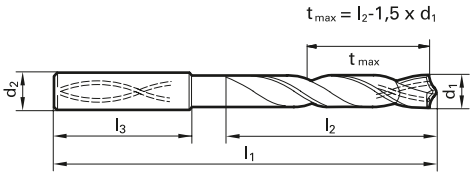


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
8.200		10.000	131.00	87.00	40.00	● ● ●
8.300		10.000	131.00	87.00	40.00	● ●
8.330	21/64	10.000	131.00	87.00	40.00	● ●
8.400		10.000	131.00	87.00	40.00	● ● ●
8.500		10.000	131.00	87.00	40.00	● ● ● ● ●
8.600		10.000	131.00	87.00	40.00	○ ● ● ● ●
8.700		10.000	131.00	87.00	40.00	● ● ● ●
8.730	11/32	10.000	131.00	87.00	40.00	● ●
8.800		10.000	131.00	87.00	40.00	○ ● ● ● ●
8.900		10.000	131.00	87.00	40.00	● ●
9.000		10.000	131.00	87.00	40.00	● ● ● ● ●
9.100		10.000	139.00	95.00	40.00	○ ● ● ●
9.130	23/64	10.000	139.00	95.00	40.00	○ ●
9.200		10.000	139.00	95.00	40.00	○ ● ● ●
9.250		10.000	139.00	95.00	40.00	● ● ●
9.300		10.000	139.00	95.00	40.00	● ● ● ●
9.340		10.000	139.00	95.00	40.00	●
9.400		10.000	139.00	95.00	40.00	● ● ● ●
9.500		10.000	139.00	95.00	40.00	○ ● ● ● ●
9.520	3/8	10.000	139.00	95.00	40.00	● ● ●
9.600		10.000	139.00	95.00	40.00	● ● ●
9.700		10.000	139.00	95.00	40.00	○ ● ● ●
9.800		10.000	139.00	95.00	40.00	● ● ● ●
9.900		10.000	139.00	95.00	40.00	● ● ●
9.920	25/64	10.000	139.00	95.00	40.00	● ●
10.000		10.000	139.00	95.00	40.00	● ● ● ●
10.100		12.000	155.00	106.00	45.00	● ●
10.200		12.000	155.00	106.00	45.00	○ ● ● ● ●
10.300		12.000	155.00	106.00	45.00	● ● ●
10.320	13/32	12.000	155.00	106.00	45.00	● ●
10.400		12.000	155.00	106.00	45.00	● ● ●
10.500		12.000	155.00	106.00	45.00	● ● ● ● ●
10.600		12.000	155.00	106.00	45.00	● ●
10.700		12.000	155.00	106.00	45.00	● ●
10.720	27/64	12.000	155.00	106.00	45.00	● ●
10.800		12.000	155.00	106.00	45.00	● ● ● ●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	2711	4044	4045	6502	8522
Standard	Guhring std.				
Tool material	Solid carbide				
Carbide grade	K/P				
Surface	S	F	F	F	Y
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 R	RT 100 HF
Drilling depth	7xD	7xD	7xD	7xD	7xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7	m7
Discount group	121	121	121	165	121
Techn. data page	127	128	128	128	128

NEW

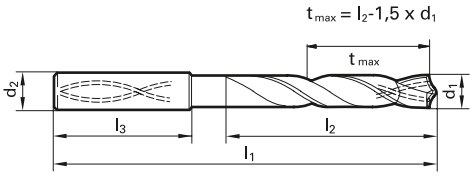


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
10.900		12.000	155.00	106.00	45.00	● ● ●
11.000		12.000	155.00	106.00	45.00	● ● ● ● ●
11.100		12.000	163.00	114.00	45.00	● ●
11.110	7/16	12.000	163.00	114.00	45.00	● ●
11.200		12.000	163.00	114.00	45.00	● ● ●
11.300		12.000	163.00	114.00	45.00	● ● ●
11.400		12.000	163.00	114.00	45.00	● ● ●
11.500		12.000	163.00	114.00	45.00	❍ ● ● ● ●
11.510	29/64	12.000	163.00	114.00	45.00	●
11.600		12.000	163.00	114.00	45.00	● ●
11.700		12.000	163.00	114.00	45.00	● ●
11.800		12.000	163.00	114.00	45.00	● ● ●
11.900		12.000	163.00	114.00	45.00	● ●
11.910	15/32	12.000	163.00	114.00	45.00	● ●
12.000		12.000	163.00	114.00	45.00	❍ ● ● ● ●
12.100		14.000	182.00	133.00	45.00	● ● ●
12.200		14.000	182.00	133.00	45.00	● ● ● ●
12.300	31/64	14.000	182.00	133.00	45.00	❍ ●
12.400		14.000	182.00	133.00	45.00	●
12.500		14.000	182.00	133.00	45.00	● ● ● ● ●
12.600		14.000	182.00	133.00	45.00	●
12.700	1/2	14.000	182.00	133.00	45.00	● ● ●
12.800		14.000	182.00	133.00	45.00	●
12.900		14.000	182.00	133.00	45.00	●
13.000		14.000	182.00	133.00	45.00	● ● ● ●
13.100	33/64	14.000	182.00	133.00	45.00	● ● ● ●
13.300		14.000	182.00	133.00	45.00	●
13.400		14.000	182.00	133.00	45.00	●
13.490	17/32	14.000	182.00	133.00	45.00	●
13.500		14.000	182.00	133.00	45.00	❍ ● ● ● ●
13.700		14.000	182.00	133.00	45.00	●
13.800		14.000	182.00	133.00	45.00	● ●
13.890	35/64	14.000	182.00	133.00	45.00	●
13.900		14.000	182.00	133.00	45.00	●
14.000		14.000	182.00	133.00	45.00	● ● ● ● ●
14.100		16.000	204.00	152.00	48.00	❍ ●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	2711	4044	4045	6502	8522
Standard	Guhring std.				
Tool material	Solid carbide				
Carbide grade	K/P				
Surface	S	F	F	F	Y
Type	RT 100 U	RT 100 U	RT 100 U	RT 100 R	RT 100 HF
Drilling depth	7xD	7xD	7xD	7xD	7xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	m7	m7	m7	m7	m7
Discount group	121	121	121	165	121
Techn. data page	127	128	128	128	128

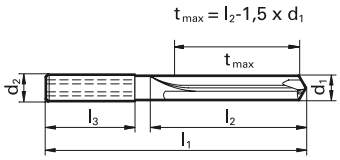
NEW



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
14.200		16.000	204.00	152.00	48.00	● ● ●
14.290	9/16	16.000	204.00	152.00	48.00	● ●
14.300		16.000	204.00	152.00	48.00	●
14.400		16.000	204.00	152.00	48.00	●
14.500		16.000	204.00	152.00	48.00	● ● ● ●
14.600		16.000	204.00	152.00	48.00	●
14.700		16.000	204.00	152.00	48.00	●
14.900		16.000	204.00	152.00	48.00	●
15.000		16.000	204.00	152.00	48.00	● ● ● ● ●
15.100		16.000	204.00	152.00	48.00	● ● ●
15.200		16.000	204.00	152.00	48.00	● ●
15.300		16.000	204.00	152.00	48.00	●
15.400		16.000	204.00	152.00	48.00	●
15.480	39/64	16.000	204.00	152.00	48.00	●
15.500		16.000	204.00	152.00	48.00	❍ ● ● ● ●
15.600		16.000	204.00	152.00	48.00	●
15.700		16.000	204.00	152.00	48.00	●
15.800		16.000	204.00	152.00	48.00	● ●
15.870	5/8	16.000	204.00	152.00	48.00	❍ ●
15.900		16.000	204.00	152.00	48.00	●
16.000		16.000	204.00	152.00	48.00	● ● ● ● ●
16.500		18.000	223.00	171.00	48.00	● ● ● ●
16.670	21/32	18.000	223.00	171.00	48.00	●
16.900		18.000	223.00	171.00	48.00	●
17.000		18.000	223.00	171.00	48.00	● ● ● ●
17.500		18.000	223.00	171.00	48.00	❍ ● ● ●
18.000		18.000	223.00	171.00	48.00	● ● ● ●
18.500		20.000	244.00	190.00	50.00	❍ ● ● ●
18.900		20.000	244.00	190.00	50.00	●
19.000		20.000	244.00	190.00	50.00	● ● ●
19.050	3/4	20.000	244.00	190.00	50.00	● ●
19.500		20.000	244.00	190.00	50.00	❍ ● ● ●
20.000		20.000	244.00	190.00	50.00	● ● ●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

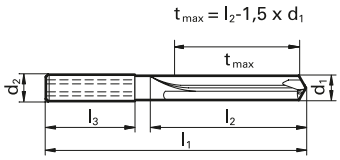
Guhring no.	769	6069
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	
Surface	◯	◯
Type	RT 150 GG	RT 150 GG
Drilling depth	7xD	7xD
Cutting direction	right-hand	right-hand
Tolerance	m7	m7
Discount group	121	121
Techn. data page	128	129



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
3.000		6.000	74.00	32.00	36.00	●	●
3.100		6.000	74.00	32.00	36.00	●	
3.200		6.000	74.00	32.00	36.00	●	●
3.300		6.000	74.00	32.00	36.00	●	❍
3.400		6.000	74.00	34.00	36.00	●	
3.500		6.000	74.00	34.00	36.00	●	●
3.600		6.000	74.00	34.00	36.00	●	❍
3.700		6.000	74.00	34.00	36.00	●	
3.800		6.000	97.00	45.00	36.00	●	❍
3.900		6.000	97.00	45.00	36.00	●	●
4.000		6.000	97.00	45.00	36.00	●	❍
4.100		6.000	97.00	45.00	36.00	●	
4.200		6.000	97.00	45.00	36.00	●	●
4.300		6.000	97.00	45.00	36.00	●	❍
4.400		6.000	97.00	45.00	36.00	●	●
4.500		6.000	97.00	45.00	36.00	●	●
4.700		6.000	97.00	45.00	36.00	●	
4.800		6.000	97.00	57.00	36.00	●	
4.900		6.000	97.00	57.00	36.00	●	
5.000		6.000	97.00	57.00	36.00	●	●
5.160	13/64	6.000	97.00	57.00	36.00	❍	❍
5.500		6.000	97.00	57.00	36.00	●	●
6.000		6.000	97.00	57.00	36.00	●	●
6.350	1/4	8.000	116.00	76.00	36.00	❍	
6.500		8.000	116.00	76.00	36.00	●	●
6.800		8.000	116.00	76.00	36.00	●	●
7.000		8.000	116.00	76.00	36.00	●	●
7.140	9/32	8.000	116.00	76.00	36.00	❍	●
7.500		8.000	116.00	76.00	36.00	●	
7.800		8.000	116.00	76.00	36.00	●	●
7.940	5/16	8.000	116.00	76.00	36.00	●	
8.000		8.000	116.00	76.00	36.00	●	●
8.330	21/64	10.000	139.00	95.00	40.00	●	●
8.500		10.000	139.00	95.00	40.00	●	●
8.730	11/32	10.000	139.00	95.00	40.00	●	●
9.000		10.000	139.00	95.00	40.00	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

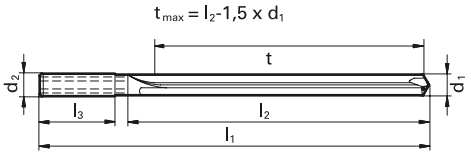
Guhring no.	769	6069
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	
Surface	○	○
Type	RT 150 GG	RT 150 GG
Drilling depth	7xD	7xD
Cutting direction	right-hand	right-hand
Tolerance	m7	m7
Discount group	121	121
Techn. data page	128	129



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
9.130	23/64	10.000	139.00	95.00	40.00	❍	●
9.500		10.000	139.00	95.00	40.00	●	●
9.520	3/8	10.000	139.00	95.00	40.00	●	●
10.000		10.000	139.00	95.00	40.00	●	●
10.200		12.000	163.00	114.00	45.00	●	●
10.320	13/32	12.000	163.00	114.00	45.00	●	●
10.500		12.000	163.00	114.00	45.00	●	●
10.720	27/64	12.000	163.00	114.00	45.00	●	❍
11.000		12.000	163.00	114.00	45.00	●	●
11.110	7/16	12.000	163.00	114.00	45.00	●	●
11.500		12.000	163.00	114.00	45.00	●	
11.510	29/64	12.000	163.00	114.00	45.00	●	●
12.000		12.000	163.00	114.00	45.00	●	●
12.300	31/64	14.000	182.00	133.00	45.00	●	❍
12.500		14.000	182.00	133.00	45.00	●	●
12.700	1/2	14.000	182.00	133.00	45.00	●	❍
13.000		14.000	182.00	133.00	45.00	●	●
13.500		14.000	182.00	133.00	45.00	●	●
14.000		14.000	182.00	133.00	45.00	●	●
14.500		16.000	204.00	152.00	48.00	●	●
15.000		16.000	204.00	152.00	48.00	●	●
15.500		16.000	204.00	152.00	48.00	●	●
16.000		16.000	204.00	152.00	48.00	●	●
16.500		18.000	223.00	171.00	48.00	●	●
17.000		18.000	223.00	171.00	48.00	●	●
17.500		18.000	223.00	171.00	48.00	●	
18.000		18.000	223.00	171.00	48.00	●	●
18.500		20.000	244.00	190.00	50.00	❍	●
19.000		20.000	244.00	190.00	50.00	●	
19.500		20.000	244.00	190.00	50.00	❍	❍
20.000		20.000	244.00	190.00	50.00	●	

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

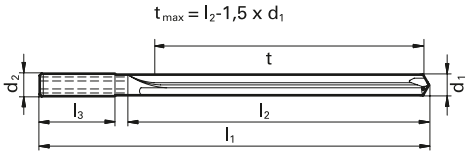
Guhring no.	770	6070
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	
Surface	◯	◯
Type	RT 150 GG	RT 150 GG
Drilling depth	10xD	10xD
Cutting direction	right-hand	right-hand
Tolerance	m7	m7
Discount group	121	121
Techn. data page	129	129



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
3.000		6.000	91.00	42.00	36.00	●	●
3.100		6.000	91.00	42.00	36.00	●	❍
3.300		6.000	91.00	42.00	36.00	●	●
3.500		6.000	91.00	48.00	36.00	●	●
3.600		6.000	91.00	48.00	36.00		●
3.700		6.000	91.00	48.00	36.00	●	
3.800		6.000	121.00	77.00	36.00	●	❍
3.900		6.000	121.00	77.00	36.00	●	
4.000		6.000	121.00	77.00	36.00	●	●
4.100		6.000	121.00	77.00	36.00	●	
4.200		6.000	121.00	77.00	36.00	●	
4.300		6.000	121.00	77.00	36.00	●	
4.400		6.000	121.00	77.00	36.00	●	●
4.500		6.000	121.00	77.00	36.00	●	
4.600		6.000	121.00	77.00	36.00	●	
4.700		6.000	121.00	77.00	36.00	❍	●
4.800		6.000	121.00	82.00	36.00	●	●
4.900		6.000	121.00	82.00	36.00	●	❍
5.000		6.000	121.00	82.00	36.00	●	●
5.160	13/64	6.000	121.00	82.00	36.00	●	
5.500		6.000	121.00	82.00	36.00	●	●
5.560	7/32	6.000	121.00	82.00	36.00	●	
6.000		6.000	121.00	82.00	36.00	●	●
6.350	1/4	8.000	146.00	106.00	36.00	●	●
6.500		8.000	146.00	106.00	36.00	●	❍
6.750	17/64	8.000	146.00	106.00	36.00	❍	
6.800		8.000	146.00	106.00	36.00	●	●
7.000		8.000	146.00	106.00	36.00	●	❍
7.140	9/32	8.000	146.00	106.00	36.00	●	●
7.500		8.000	146.00	106.00	36.00	●	●
7.800		8.000	146.00	106.00	36.00	●	●
7.940	5/16	8.000	146.00	106.00	36.00	●	●
8.000		8.000	146.00	106.00	36.00	●	●
8.330	21/64	10.000	175.00	130.00	40.00	●	●
8.500		10.000	175.00	130.00	40.00	●	●
8.730	11/32	10.000	175.00	130.00	40.00	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

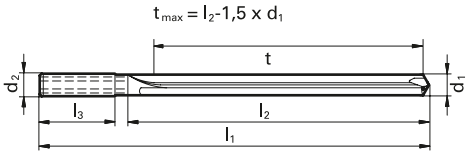
Guhring no.	770	6070
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	
Surface	◯	◯
Type	RT 150 GG	RT 150 GG
Drilling depth	10xD	10xD
Cutting direction	right-hand	right-hand
Tolerance	m7	m7
Discount group	121	121
Techn. data page	129	129



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
9.000		10.000	175.00	130.00	40.00	●	●
9.130	23/64	10.000	175.00	130.00	40.00		●
9.500		10.000	175.00	130.00	40.00	●	●
9.520	3/8	10.000	175.00	130.00	40.00	●	❍
10.000		10.000	175.00	130.00	40.00	●	
10.200		12.000	209.00	159.00	45.00	●	
10.320	13/32	12.000	209.00	159.00	45.00		●
10.500		12.000	209.00	159.00	45.00	●	●
10.720	27/64	12.000	209.00	159.00	45.00	●	
11.000		12.000	209.00	159.00	45.00	●	●
11.110	7/16	12.000	209.00	159.00	45.00		●
11.500		12.000	209.00	159.00	45.00	●	
11.510	29/64	12.000	209.00	159.00	45.00	❍	●
12.000		12.000	209.00	159.00	45.00	●	●
12.300		14.000	233.00	183.00	45.00	●	●
12.500		14.000	233.00	183.00	45.00	●	
12.700		14.000	233.00	183.00	45.00	●	❍
13.000		14.000	233.00	183.00	45.00	●	●
13.500		14.000	233.00	183.00	45.00	●	
14.000		14.000	233.00	183.00	45.00	●	●
14.500		16.000	260.00	207.00	48.00	●	
15.000		16.000	260.00	207.00	48.00	●	●
15.500		16.000	260.00	207.00	48.00	●	●
16.000		16.000	260.00	207.00	48.00	●	●
16.500		18.000	284.00	231.00	48.00	❍	
17.000		18.000	284.00	231.00	48.00	●	
17.500		18.000	284.00	231.00	48.00	●	●
18.000		18.000	284.00	231.00	48.00	●	❍
18.500		20.000	308.00	255.00	50.00	❍	●
19.000		20.000	308.00	255.00	50.00	●	
19.500		20.000	308.00	255.00	50.00		❍
20.000		20.000	308.00	255.00	50.00	●	

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	773
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	RT 150 GN
Drilling depth	15xD
Cutting direction	right-hand
Tolerance	m7
Discount group	121
Techn. data page	129

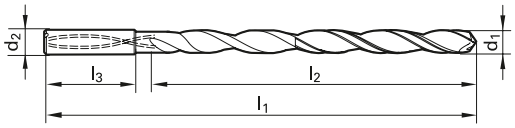


d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
5.000		6.000	145.00	105.00	36.00	●
6.000		6.000	145.00	105.00	36.00	●
8.000		8.000	180.00	137.00	36.00	●
9.000		10.000	217.00	170.00	40.00	●
10.000		10.000	217.00	170.00	40.00	●
11.000		12.000	258.00	205.00	45.00	●
12.000		12.000	258.00	205.00	45.00	●
14.000		14.000	290.00	236.00	45.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6509
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	RT 100 T
Drilling depth	15xD
Cutting direction	right-hand
Tolerance	h7
Discount group	165
Techn. data page	129

NEW

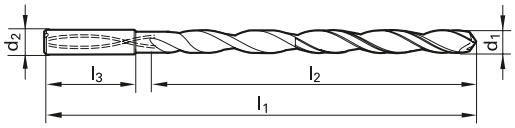


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
3.000		6.000	95.00	55.00	36.00	●
3.170	1/8	6.000	106.00	67.00	36.00	●
3.500		6.000	116.00	76.00	36.00	●
3.570	9/64	6.000	116.00	76.00	36.00	●
3.970	5/32	6.000	116.00	76.00	36.00	●
4.000		6.000	116.00	76.00	36.00	●
4.370	11/64	6.000	133.00	93.00	36.00	●
4.500		6.000	133.00	93.00	36.00	●
4.760	3/16	6.000	133.00	93.00	36.00	●
5.000		6.000	133.00	93.00	36.00	●
5.100		6.000	150.00	110.00	36.00	●
5.160	13/64	6.000	150.00	110.00	36.00	●
5.410		6.000	150.00	110.00	36.00	●
5.500		6.000	150.00	110.00	36.00	●
5.560	7/32	6.000	150.00	110.00	36.00	●
5.950	15/64	6.000	150.00	110.00	36.00	●
6.000		6.000	150.00	110.00	36.00	●
6.350	1/4	8.000	167.00	127.00	36.00	●
6.500		8.000	167.00	127.00	36.00	●
6.750	17/64	8.000	167.00	127.00	36.00	●
7.000		8.000	167.00	127.00	36.00	●
7.140	9/32	8.000	183.00	143.00	36.00	●
7.500		8.000	183.00	143.00	36.00	●
7.540	19/64	8.000	183.00	143.00	36.00	●
7.940	5/16	8.000	183.00	143.00	36.00	●
8.000		8.000	183.00	143.00	36.00	●
8.330	21/64	10.000	204.00	160.00	40.00	●
8.500		10.000	204.00	160.00	40.00	●
8.730	11/32	10.000	204.00	160.00	40.00	●
9.000		10.000	204.00	160.00	40.00	●
9.130	23/64	10.000	221.00	177.00	40.00	●
9.520	3/8	10.000	221.00	177.00	40.00	●
9.920	25/64	10.000	221.00	177.00	40.00	●
10.000		10.000	221.00	177.00	40.00	●
10.320	13/32	12.000	247.00	198.00	45.00	●
10.720	27/64	12.000	247.00	198.00	45.00	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	6509
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	RT 100 T
Drilling depth	15xD
Cutting direction	right-hand
Tolerance	h7
Discount group	165
Techn. data page	129

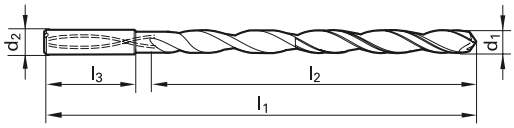
NEW



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
11.000		12.000	247.00	198.00	45.00	●
11.110	7/16	12.000	263.00	214.00	45.00	●
11.510	29/64	12.000	263.00	214.00	45.00	●
11.910	15/32	12.000	263.00	214.00	45.00	●
12.000		12.000	263.00	214.00	45.00	●
12.300	31/64	14.000	297.00	248.00	45.00	●
12.700	1/2	14.000	297.00	248.00	45.00	●
13.100	33/64	14.000	297.00	248.00	45.00	●
13.490	17/32	14.000	297.00	248.00	45.00	●
13.890	35/64	14.000	297.00	248.00	45.00	●
14.000		14.000	297.00	248.00	45.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

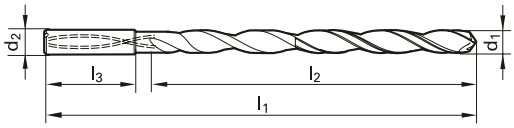
Guhring no.	6511
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	RT 100 T
Drilling depth	20xD
Cutting direction	right-hand
Tolerance	h7
Discount group	165
Techn. data page	130



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
3.000		6.000	110.00	70.00	36.00	●
3.170	1/8	6.000	123.00	83.00	36.00	●
3.500		6.000	136.00	96.00	36.00	●
3.570		6.000	136.00	96.00	36.00	●
3.970	5/32	6.000	136.00	96.00	36.00	●
4.000		6.000	136.00	96.00	36.00	●
4.370		6.000	158.00	118.00	36.00	●
4.500		6.000	158.00	118.00	36.00	●
4.760	3/16	6.000	158.00	118.00	36.00	●
5.000		6.000	158.00	118.00	36.00	●
5.100		6.000	180.00	140.00	36.00	●
5.160		6.000	180.00	140.00	36.00	●
5.410		6.000	180.00	140.00	36.00	●
5.500		6.000	180.00	140.00	36.00	●
5.560	7/32	6.000	180.00	140.00	36.00	●
5.950		6.000	180.00	140.00	36.00	●
6.000		6.000	180.00	140.00	36.00	●
6.350	1/4	8.000	202.00	162.00	36.00	●
6.500		8.000	202.00	162.00	36.00	●
6.750		8.000	202.00	162.00	36.00	●
7.000		8.000	202.00	162.00	36.00	●
7.140	9/32	8.000	223.00	183.00	36.00	●
7.500		8.000	223.00	183.00	36.00	●
7.540		8.000	223.00	183.00	36.00	●
7.940		8.000	223.00	183.00	36.00	●
8.000		8.000	223.00	183.00	36.00	●
8.330		10.000	249.00	205.00	40.00	●
8.500		10.000	249.00	205.00	40.00	●
8.730		10.000	249.00	205.00	40.00	●
9.000		10.000	249.00	205.00	40.00	●
9.130		10.000	271.00	227.00	40.00	●
9.520		10.000	271.00	227.00	40.00	●
9.920	25/64	10.000	271.00	227.00	40.00	●
10.000		10.000	271.00	227.00	40.00	●
10.320		12.000	302.00	253.00	45.00	●
10.720		12.000	302.00	253.00	45.00	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

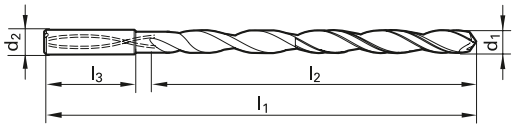
Guhring no.	6511
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	RT 100 T
Drilling depth	20xD
Cutting direction	right-hand
Tolerance	h7
Discount group	165
Techn. data page	130



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
11.000		12.000	302.00	253.00	45.00	●
11.110		12.000	323.00	274.00	45.00	●
11.510		12.000	323.00	274.00	45.00	●
11.910		12.000	323.00	274.00	45.00	●
12.000		12.000	323.00	274.00	45.00	●
12.300	31/64	14.000	367.00	318.00	45.00	●
12.700		14.000	367.00	318.00	45.00	●
13.100	33/64	14.000	367.00	318.00	45.00	●
13.490	17/32	14.000	367.00	318.00	45.00	●
13.890	35/64	14.000	367.00	318.00	45.00	●
14.000		14.000	367.00	318.00	45.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

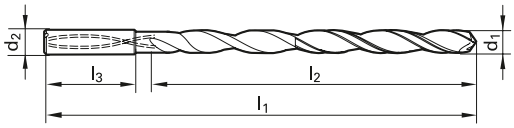
Guhring no.	6512
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	RT 100 T
Drilling depth	25xD
Cutting direction	right-hand
Tolerance	h7
Discount group	165
Techn. data page	130



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
3.000		6.000	125.00	85.00	36.00	●
3.170	1/8	6.000	141.00	101.00	36.00	●
3.500		6.000	156.00	116.00	36.00	●
3.570		6.000	156.00	116.00	36.00	●
3.970	5/32	6.000	156.00	116.00	36.00	●
4.000		6.000	156.00	116.00	36.00	●
4.370		6.000	183.00	143.00	36.00	●
4.500		6.000	183.00	143.00	36.00	●
4.760	3/16	6.000	183.00	143.00	36.00	●
5.000		6.000	183.00	143.00	36.00	●
5.100		6.000	210.00	170.00	36.00	●
5.160		6.000	210.00	170.00	36.00	●
5.410		6.000	210.00	170.00	36.00	●
5.500		6.000	210.00	170.00	36.00	●
5.560	7/32	6.000	210.00	170.00	36.00	●
5.950		6.000	210.00	170.00	36.00	●
6.000		6.000	210.00	170.00	36.00	●
6.350	1/4	8.000	237.00	197.00	36.00	●
6.500		8.000	237.00	197.00	36.00	●
6.750		8.000	237.00	197.00	36.00	●
7.000		8.000	237.00	197.00	36.00	●
7.140	9/32	8.000	263.00	223.00	36.00	●
7.500		8.000	263.00	223.00	36.00	●
7.540		8.000	263.00	223.00	36.00	●
7.940		8.000	263.00	223.00	36.00	●
8.000		8.000	263.00	223.00	36.00	●
8.330		10.000	294.00	250.00	40.00	●
8.500		10.000	294.00	250.00	40.00	●
8.730		10.000	294.00	250.00	40.00	●
9.000		10.000	294.00	250.00	40.00	●
9.130		10.000	321.00	277.00	40.00	●
9.520		10.000	321.00	277.00	40.00	●
9.920	25/64	10.000	321.00	277.00	40.00	●
10.000		10.000	321.00	277.00	40.00	●
10.320	13/32	12.000	359.00	310.00	45.00	●
10.720		12.000	359.00	310.00	40.00	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

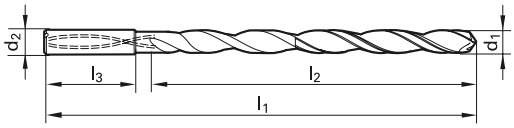
Guhring no.	6512
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	RT 100 T
Drilling depth	25xD
Cutting direction	right-hand
Tolerance	h7
Discount group	165
Techn. data page	130



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
11.000		12.000	359.00	310.00	45.00	●
11.110		12.000	386.00	337.00	40.00	●
11.510	29/64	12.000	386.00	337.00	45.00	●
11.910	15/32	12.000	386.00	337.00	45.00	●
12.000		12.000	386.00	337.00	45.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6513
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	RT 100 T
Drilling depth	30xD
Cutting direction	right-hand
Tolerance	h7
Discount group	165
Techn. data page	130

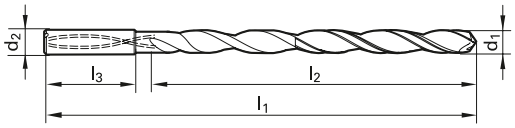


d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
3.000		6.000	140.00	100.00	36.00	●
3.170	1/8	6.000	158.00	118.00	36.00	●
3.500		6.000	176.00	136.00	36.00	●
3.570		6.000	176.00	136.00	36.00	●
3.970	5/32	6.000	176.00	136.00	36.00	●
4.000		6.000	176.00	136.00	36.00	●
4.370		6.000	208.00	168.00	36.00	●
4.500		6.000	208.00	168.00	36.00	●
4.760	3/16	6.000	208.00	168.00	36.00	●
5.000		6.000	208.00	168.00	36.00	●
5.100		6.000	240.00	200.00	36.00	●
5.160		6.000	240.00	200.00	36.00	●
5.410		6.000	240.00	200.00	36.00	●
5.500		6.000	240.00	200.00	36.00	●
5.560	7/32	6.000	240.00	200.00	36.00	●
5.950		6.000	240.00	200.00	36.00	●
6.000		6.000	240.00	200.00	36.00	●
6.350	1/4	8.000	272.00	232.00	36.00	●
6.500		8.000	272.00	232.00	36.00	●
6.750		8.000	272.00	232.00	36.00	●
7.000		8.000	272.00	232.00	36.00	●
7.140	9/32	8.000	303.00	263.00	36.00	●
7.500		8.000	303.00	263.00	36.00	●
7.540		8.000	303.00	263.00	36.00	●
7.940		8.000	303.00	263.00	36.00	●
8.000		8.000	303.00	263.00	36.00	●
8.330		10.000	339.00	295.00	40.00	●
8.500		10.000	339.00	295.00	40.00	●
8.730		10.000	339.00	295.00	40.00	●
9.000		10.000	339.00	295.00	40.00	●
9.130		10.000	371.00	327.00	40.00	●
9.520		10.000	371.00	327.00	40.00	●
9.920	25/64	10.000	371.00	327.00	40.00	●
10.000		10.000	371.00	327.00	40.00	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	6514
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	RT 100 T
Drilling depth	40xD
Cutting direction	right-hand
Tolerance	h7
Discount group	165
Techn. data page	130

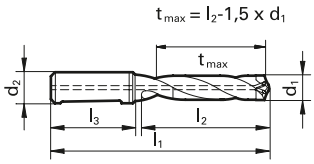
NEW



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
3.000		6.000	170.00	130.00	36.00	●
3.170	1/8	6.000	196.00	156.00	36.00	●
3.500		6.000	196.00	156.00	36.00	●
3.570	9/64	6.000	216.00	176.00	36.00	●
3.970	5/32	6.000	216.00	176.00	36.00	●
4.000		6.000	216.00	176.00	36.00	●
4.370	11/64	6.000	238.00	198.00	36.00	●
4.500		6.000	238.00	198.00	36.00	●
4.760	3/16	6.000	258.00	218.00	36.00	●
5.000		6.000	258.00	218.00	36.00	●
5.100		6.000	280.00	240.00	36.00	●
5.160	13/64	6.000	280.00	240.00	36.00	●
5.410		6.000	280.00	240.00	36.00	●
5.500		6.000	280.00	240.00	36.00	●
5.560	7/32	6.000	300.00	260.00	36.00	●
5.950	15/64	6.000	300.00	260.00	36.00	●
6.000		6.000	300.00	260.00	36.00	●
6.350	1/4	8.000	322.00	282.00	36.00	●
6.500		8.000	322.00	282.00	36.00	●
6.750	17/64	8.000	342.00	302.00	36.00	●
7.000		8.000	342.00	302.00	36.00	●
7.140	9/32	8.000	363.00	323.00	36.00	●
7.500		8.000	363.00	323.00	36.00	●
7.540	19/64	8.000	383.00	343.00	36.00	●
7.940	5/16	8.000	383.00	343.00	36.00	●
8.000		8.000	383.00	343.00	36.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

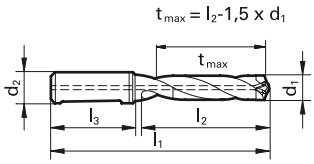
Guhring no.	1171
Standard	DIN 6538 K
Tool material	Carbide
Carbide grade	P
Surface	S
Type	RT 80 U
Drilling depth	3xD
Cutting direction	right-hand
Tolerance	h7
Discount group	128
Techn. data page	130



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
9.500		16.000	103.00	51.00	48.00	○
9.700		16.000	103.00	51.00	48.00	○
9.800		16.000	103.00	51.00	48.00	○
9.900		16.000	103.00	51.00	48.00	○
10.000		16.000	103.00	51.00	48.00	○
10.100		16.000	103.00	51.00	48.00	○
10.200		16.000	103.00	51.00	48.00	●
10.400		16.000	103.00	51.00	48.00	○
10.500		16.000	103.00	51.00	48.00	●
10.600		16.000	103.00	51.00	48.00	○
10.700		16.000	103.00	51.00	48.00	○
10.800		16.000	103.00	51.00	48.00	●
10.900		16.000	103.00	51.00	48.00	○
11.000		16.000	103.00	51.00	48.00	○
11.100		16.000	103.00	51.00	48.00	○
11.200		16.000	103.00	51.00	48.00	○
11.400		16.000	103.00	51.00	48.00	○
11.500		16.000	103.00	51.00	48.00	●
11.600		16.000	103.00	51.00	48.00	●
11.700		16.000	103.00	51.00	48.00	●
11.800		16.000	103.00	51.00	48.00	○
12.000		16.000	103.00	51.00	48.00	○
12.100		16.000	111.00	59.00	48.00	○
12.200		16.000	111.00	59.00	48.00	○
12.300	31/64	16.000	111.00	59.00	48.00	○
12.400		16.000	111.00	59.00	48.00	○
12.500		16.000	111.00	59.00	48.00	●
12.600		16.000	111.00	59.00	48.00	○
12.700	1/2	16.000	111.00	59.00	48.00	○
13.000		16.000	111.00	59.00	48.00	●
13.500		16.000	111.00	59.00	48.00	●
13.700		16.000	111.00	59.00	48.00	○
13.800		16.000	111.00	59.00	48.00	○
14.000		16.000	111.00	59.00	48.00	●
14.200		20.000	122.00	68.00	50.00	○
14.400		20.000	122.00	68.00	50.00	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

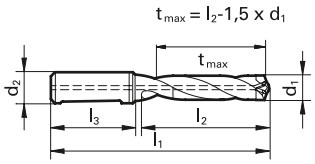
Guhring no.	1171
Standard	DIN 6538 K
Tool material	Carbide
Carbide grade	P
Surface	S
Type	RT 80 U
Drilling depth	3xD
Cutting direction	right-hand
Tolerance	h7
Discount group	128
Techn. data page	130



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
14.600		20.000	122.00	68.00	50.00	●
14.700		20.000	122.00	68.00	50.00	○
15.000		20.000	122.00	68.00	50.00	●
15.100		20.000	122.00	68.00	50.00	●
15.300		20.000	122.00	68.00	50.00	○
15.500		20.000	122.00	68.00	50.00	●
15.600		20.000	122.00	68.00	50.00	○
15.700		20.000	122.00	68.00	50.00	○
15.800		20.000	122.00	68.00	50.00	●
16.000		20.000	122.00	68.00	50.00	●
16.200		20.000	130.00	76.00	50.00	●
16.500		20.000	130.00	76.00	50.00	○
16.700		20.000	130.00	76.00	50.00	●
17.000		20.000	130.00	76.00	50.00	●
17.300		20.000	130.00	76.00	50.00	●
17.500		20.000	130.00	76.00	50.00	●
17.700		20.000	130.00	76.00	50.00	○
17.800		20.000	130.00	76.00	50.00	●
17.860	45/64	20.000	130.00	76.00	50.00	○
17.900		20.000	130.00	76.00	50.00	○
18.000		20.000	130.00	76.00	50.00	●
18.500		25.000	144.00	84.00	56.00	●
19.000		25.000	144.00	84.00	56.00	●
19.300		25.000	144.00	84.00	56.00	○
19.500		25.000	144.00	84.00	56.00	●
19.600		25.000	144.00	84.00	56.00	○
19.700		25.000	144.00	84.00	56.00	●
20.000		25.000	144.00	84.00	56.00	●
20.500		25.000	153.00	93.00	56.00	●
21.000		25.000	153.00	93.00	56.00	●
21.500		25.000	153.00	93.00	56.00	●
22.000		25.000	153.00	93.00	56.00	●
22.220	7/8	25.000	161.00	101.00	56.00	○
22.500		25.000	161.00	101.00	56.00	●
22.620	57/64	25.000	161.00	101.00	56.00	●
23.000		25.000	161.00	101.00	56.00	●

● TiCN ○ Carbo ◐ Cristall ◑ FIRE/nanoFIRE ◒ AlCrN ◓ TiN ◔ TiN+ ◕ MolyGlide ◖ Signum

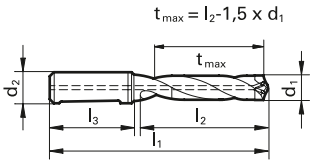
Guhring no.	1171
Standard	DIN 6538 K
Tool material	Carbide
Carbide grade	P
Surface	S
Type	RT 80 U
Drilling depth	3xD
Cutting direction	right-hand
Tolerance	h7
Discount group	128
Techn. data page	130



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
23.500		25.000	161.00	101.00	56.00	❍
24.000		25.000	161.00	101.00	56.00	●
24.500		32.000	174.00	110.00	60.00	●
25.000	63/64	32.000	174.00	110.00	60.00	●
25.500		32.000	174.00	110.00	60.00	❍

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

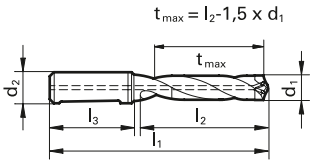
Guhring no.	1172
Standard	DIN 6538 M
Tool material	Carbide
Carbide grade	P
Surface	S
Type	RT 80 U
Drilling depth	5xD
Cutting direction	right-hand
Tolerance	h7
Discount group	128
Techn. data page	131



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
9.800		16.000	127.00	75.00	48.00	○
10.000		16.000	127.00	75.00	48.00	●
10.200		16.000	127.00	75.00	48.00	●
10.500		16.000	127.00	75.00	48.00	●
10.600		16.000	127.00	75.00	48.00	○
10.700		16.000	127.00	75.00	48.00	○
10.800		16.000	127.00	75.00	48.00	○
11.500		16.000	127.00	75.00	48.00	●
11.900		16.000	127.00	75.00	48.00	○
12.000		16.000	127.00	75.00	48.00	●
12.300	31/64	16.000	139.00	87.00	48.00	○
12.500		16.000	139.00	87.00	48.00	●
12.700	1/2	16.000	139.00	87.00	48.00	●
12.900		16.000	139.00	87.00	48.00	○
13.000		16.000	139.00	87.00	48.00	○
13.100	33/64	16.000	139.00	87.00	48.00	●
13.500		16.000	139.00	87.00	48.00	●
13.700		16.000	139.00	87.00	48.00	○
13.900		16.000	139.00	87.00	48.00	○
14.000		16.000	139.00	87.00	48.00	●
14.500		20.000	154.00	100.00	50.00	○
14.600		20.000	154.00	100.00	50.00	○
15.000		20.000	154.00	100.00	50.00	●
15.200		20.000	154.00	100.00	50.00	○
15.500		20.000	154.00	100.00	50.00	●
15.700		20.000	154.00	100.00	50.00	○
16.000		20.000	154.00	100.00	50.00	●
16.200		20.000	166.00	112.00	50.00	●
16.500		20.000	166.00	112.00	50.00	●
16.600		20.000	166.00	112.00	50.00	○
16.700		20.000	166.00	112.00	50.00	●
16.800		20.000	166.00	112.00	50.00	●
17.000		20.000	166.00	112.00	50.00	●
17.200		20.000	166.00	112.00	50.00	○
17.300		20.000	166.00	112.00	50.00	○
17.500		20.000	166.00	112.00	50.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

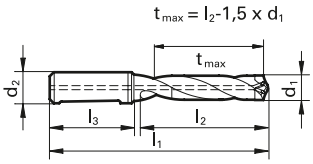
Guhring no.	1172
Standard	DIN 6538 M
Tool material	Carbide
Carbide grade	P
Surface	S
Type	RT 80 U
Drilling depth	5xD
Cutting direction	right-hand
Tolerance	h7
Discount group	128
Techn. data page	131



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
18.000		20.000	166.00	112.00	50.00	●
18.500		25.000	184.00	124.00	56.00	●
19.000		25.000	184.00	124.00	56.00	●
19.500		25.000	184.00	124.00	56.00	●
19.600		25.000	184.00	124.00	56.00	○
19.700		25.000	184.00	124.00	56.00	●
19.900		25.000	184.00	124.00	56.00	○
20.000		25.000	184.00	124.00	56.00	●
20.500		25.000	197.00	137.00	56.00	●
21.000		25.000	197.00	137.00	56.00	●
21.500		25.000	197.00	137.00	56.00	○
22.000		25.000	197.00	137.00	56.00	●
22.220	7/8	25.000	209.00	149.00	56.00	○
22.500		25.000	209.00	149.00	56.00	●
23.000		25.000	209.00	149.00	56.00	●
23.500		25.000	209.00	149.00	56.00	○
24.000		25.000	209.00	149.00	56.00	●
24.500		32.000	226.00	162.00	60.00	●
25.000	63/64	32.000	226.00	162.00	60.00	●
25.500		32.000	226.00	162.00	60.00	○

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

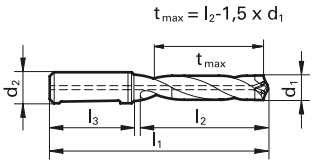
Guhring no.	1173
Standard	DIN 6538 L
Tool material	Carbide
Carbide grade	P
Surface	S
Type	RT 80 U
Drilling depth	7xD
Cutting direction	right-hand
Tolerance	h7
Discount group	128
Techn. data page	131



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
9.600		16.000	151.00	99.00	48.00	○
9.700		16.000	151.00	99.00	48.00	○
10.000		16.000	151.00	99.00	48.00	●
10.200		16.000	151.00	99.00	48.00	●
10.400		16.000	151.00	99.00	48.00	○
11.000		16.000	151.00	99.00	48.00	●
11.500		16.000	151.00	99.00	48.00	●
11.700		16.000	151.00	99.00	48.00	○
11.800		16.000	151.00	99.00	48.00	●
12.000		16.000	151.00	99.00	48.00	●
12.200		16.000	167.00	115.00	48.00	○
12.400		16.000	167.00	115.00	48.00	○
12.500		16.000	167.00	115.00	48.00	●
12.700	1/2	16.000	167.00	115.00	48.00	●
13.000		16.000	167.00	115.00	48.00	●
13.500		16.000	167.00	115.00	48.00	●
14.000		16.000	167.00	115.00	48.00	●
14.500		20.000	186.00	132.00	50.00	●
15.000		20.000	186.00	132.00	50.00	●
15.500		20.000	186.00	132.00	50.00	○
15.700		20.000	186.00	132.00	50.00	●
15.800		20.000	186.00	132.00	50.00	○
16.000		20.000	186.00	132.00	50.00	●
16.500		20.000	202.00	148.00	50.00	●
17.000		20.000	202.00	148.00	50.00	●
17.200		20.000	202.00	148.00	50.00	○
17.460	11/16	20.000	202.00	148.00	50.00	○
17.500		20.000	202.00	148.00	50.00	●
18.000		20.000	202.00	148.00	50.00	●
18.500		25.000	224.00	164.00	56.00	●
19.000		25.000	224.00	164.00	56.00	●
19.200		25.000	224.00	164.00	56.00	○
20.000		25.000	224.00	164.00	56.00	●
21.000		25.000	241.00	181.00	56.00	●
22.000		25.000	241.00	181.00	56.00	●
22.500		25.000	257.00	197.00	56.00	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

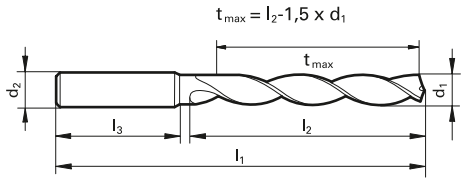
Guhring no.	1173
Standard	DIN 6538 L
Tool material	Carbide
Carbide grade	P
Surface	S
Type	RT 80 U
Drilling depth	7xD
Cutting direction	right-hand
Tolerance	h7
Discount group	128
Techn. data page	131



d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
25.000	63/64	32.000	278.00	214.00	60.00	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

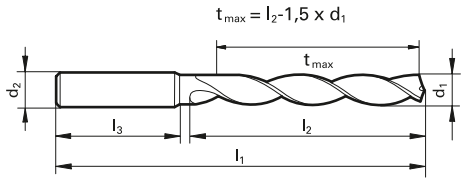
Guhring no.	2713
Standard	DIN 6537 L
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	FT 200 G
Drilling depth	5xD
Cutting direction	right-hand
Tolerance	m7
Discount group	109
Techn. data page	131



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
3.000		6.000	66.00	28.00	36.00	●
3.100		6.000	66.00	28.00	36.00	●
3.200		6.000	66.00	28.00	36.00	●
3.300		6.000	66.00	28.00	36.00	●
3.500		6.000	66.00	28.00	36.00	●
3.700		6.000	66.00	28.00	36.00	●
3.800		6.000	74.00	36.00	36.00	●
4.000		6.000	74.00	36.00	36.00	●
4.100		6.000	74.00	36.00	36.00	●
4.200		6.000	74.00	36.00	36.00	●
4.500		6.000	74.00	36.00	36.00	●
4.800		6.000	82.00	44.00	36.00	●
5.000		6.000	82.00	44.00	36.00	●
5.100		6.000	82.00	44.00	36.00	●
5.200		6.000	82.00	44.00	36.00	●
5.300		6.000	82.00	44.00	36.00	●
5.500		6.000	82.00	44.00	36.00	●
5.800		6.000	82.00	44.00	36.00	●
6.000		6.000	82.00	44.00	36.00	●
6.100		8.000	91.00	53.00	36.00	●
6.200		8.000	91.00	53.00	36.00	●
6.400		8.000	91.00	53.00	36.00	●
6.500		8.000	91.00	53.00	36.00	●
6.700		8.000	91.00	53.00	36.00	●
6.800		8.000	91.00	53.00	36.00	●
7.000		8.000	91.00	53.00	36.00	●
7.100		8.000	91.00	53.00	36.00	●
7.400		8.000	91.00	53.00	36.00	●
7.500		8.000	91.00	53.00	36.00	●
7.800		8.000	91.00	53.00	36.00	●
8.000		8.000	91.00	53.00	36.00	●
8.100		10.000	103.00	61.00	40.00	●
8.200		10.000	103.00	61.00	40.00	●
8.400		10.000	103.00	61.00	40.00	●
8.500		10.000	103.00	61.00	40.00	●
8.600		10.000	103.00	61.00	40.00	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

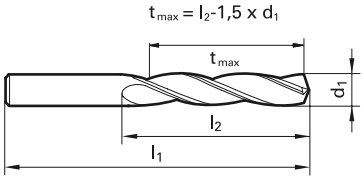
Guhring no.	2713
Standard	DIN 6537 L
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	FT 200 G
Drilling depth	5xD
Cutting direction	right-hand
Tolerance	m7
Discount group	109
Techn. data page	131



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
8.700		10.000	103.00	61.00	40.00	●
8.800		10.000	103.00	61.00	40.00	●
9.000		10.000	103.00	61.00	40.00	●
9.100		10.000	103.00	61.00	40.00	●
9.500		10.000	103.00	61.00	40.00	●
9.800		10.000	103.00	61.00	40.00	●
10.000		10.000	103.00	61.00	40.00	●
10.100		12.000	118.00	71.00	45.00	●
10.200		12.000	118.00	71.00	45.00	●
10.300		12.000	118.00	71.00	45.00	●
10.500		12.000	118.00	71.00	45.00	●
11.000		12.000	118.00	71.00	45.00	●
11.200		12.000	118.00	71.00	45.00	●
11.500		12.000	118.00	71.00	45.00	●
11.800		12.000	118.00	71.00	45.00	●
12.000		12.000	118.00	71.00	45.00	●
12.100		14.000	124.00	77.00	45.00	●
12.500		14.000	124.00	77.00	45.00	●
13.000		14.000	124.00	77.00	45.00	●
13.500		14.000	124.00	77.00	45.00	●
14.000		14.000	124.00	77.00	45.00	●
14.500		16.000	133.00	83.00	48.00	●
15.000		16.000	133.00	83.00	48.00	●
15.500		16.000	133.00	83.00	48.00	●
16.000		16.000	133.00	83.00	48.00	●
16.500		18.000	143.00	93.00	48.00	●
17.000		18.000	143.00	93.00	48.00	●
17.500		18.000	143.00	93.00	48.00	●
18.000		18.000	143.00	93.00	48.00	●
18.500		20.000	153.00	101.00	50.00	●
19.000		20.000	153.00	101.00	50.00	●
19.500		20.000	153.00	101.00	50.00	●
20.000		20.000	153.00	101.00	50.00	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

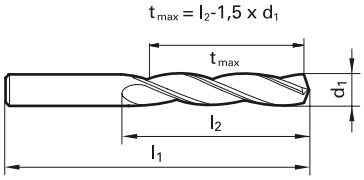
Guhring no.	731	611	745	1025	1027
Standard	DIN 6539				
Tool material	Solid carbide				
Carbide grade	K	K/P	K10/K20	K	K10/K20
Surface	○	(S)	○	○	(S)
Type	GS 200 U	GS 200 U	GS 200 G	GS 200 G	GS 200 F
Drilling depth	5xD	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h7	h7	h7	h7	h7
Discount group	109	109	109	109	109
Techn. data page	131	131	132	132	132



d1 mm	d1 inch	l1 mm	l2 mm	Availability
3.000		46.00	22.00	● ● ● ●
3.100		49.00	24.00	● ●
3.200		49.00	24.00	● ● ●
3.300		49.00	24.00	● ●
3.400		52.00	27.00	● ●
3.500		52.00	27.00	● ●
3.570	9/64	52.00	27.00	❍ ❍
3.600		52.00	27.00	● ●
3.700		52.00	27.00	● ●
3.800		55.00	30.00	● ●
3.900		55.00	30.00	● ● ● ❍
3.970	5/32	55.00	30.00	● ●
4.000		55.00	30.00	● ● ● ●
4.100		55.00	30.00	● ●
4.200		55.00	30.00	● ● ●
4.300		58.00	32.00	● ●
4.370	11/64	58.00	32.00	❍ ❍
4.400		58.00	32.00	●
4.500		58.00	32.00	● ●
4.600		58.00	32.00	●
4.700		58.00	32.00	● ● ❍ ●
4.760	3/16	62.00	35.00	●
4.800		62.00	35.00	● ●
4.900		62.00	35.00	● ●
5.000		62.00	35.00	● ● ● ●
5.100		62.00	35.00	● ●
5.200		62.00	35.00	● ●
5.300		62.00	35.00	● ❍ ● ❍
5.400		66.00	39.00	● ●
5.500		66.00	39.00	● ● ❍
5.600		66.00	39.00	● ●
5.700		66.00	39.00	❍ ●
5.800		66.00	39.00	● ● ●
5.900		66.00	39.00	●
6.000		66.00	39.00	● ● ● ●
6.100		70.00	42.00	● ●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

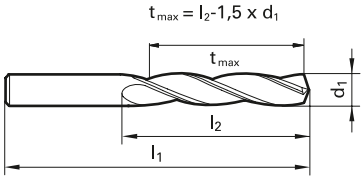
Guhring no.	731	611	745	1025	1027
Standard	DIN 6539				
Tool material	Solid carbide				
Carbide grade	K	K/P	K10/K20	K	K10/K20
Surface	○	Ⓢ	○	○	Ⓢ
Type	GS 200 U	GS 200 U	GS 200 G	GS 200 G	GS 200 F
Drilling depth	5xD	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h7	h7	h7	h7	h7
Discount group	109	109	109	109	109
Techn. data page	131	131	132	132	132



d1 mm	d1 inch	l1 mm	l2 mm	Availability
6.200		70.00	42.00	● ● ●
6.300		70.00	42.00	●
6.400		70.00	42.00	● ○ ●
6.500		70.00	42.00	● ●
6.600		70.00	42.00	●
6.700		70.00	42.00	● ●
6.750	17/64	74.00	45.00	●
6.800		74.00	45.00	● ● ●
6.900		74.00	45.00	○
7.000		74.00	45.00	● ● ● ●
7.100		74.00	45.00	●
7.200		74.00	45.00	●
7.300		74.00	45.00	○ ●
7.400		74.00	45.00	●
7.500		74.00	45.00	● ●
7.600		79.00	48.00	●
7.700		79.00	48.00	● ●
7.800		79.00	48.00	● ●
7.940	5/16	79.00	48.00	○
8.000		79.00	48.00	● ● ● ○
8.100		79.00	48.00	● ●
8.200		79.00	48.00	●
8.300		79.00	48.00	●
8.330	21/64	79.00	48.00	○
8.400		79.00	48.00	● ●
8.500		79.00	48.00	● ●
8.700		84.00	52.00	○
8.800		84.00	52.00	○ ●
8.900		84.00	52.00	○
9.000		84.00	52.00	● ● ●
9.100		84.00	52.00	●
9.200		84.00	52.00	●
9.300		84.00	52.00	○ ●
9.500		84.00	52.00	●
9.520	3/8	89.00	55.00	●
9.600		89.00	55.00	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	731	611	745	1025	1027
Standard	DIN 6539				
Tool material	Solid carbide				
Carbide grade	K	K/P	K10/K20	K	K10/K20
Surface	○	(S)	○	○	(S)
Type	GS 200 U	GS 200 U	GS 200 G	GS 200 G	GS 200 F
Drilling depth	5xD	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h7	h7	h7	h7	h7
Discount group	109	109	109	109	109
Techn. data page	131	131	132	132	132

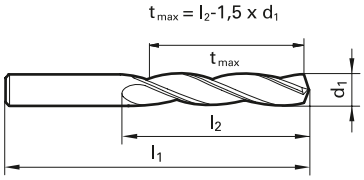


d1 mm	d1 inch	l1 mm	l2 mm	731	611	745	1025	1027
9.700		89.00	55.00	●		○	●	
9.800		89.00	55.00				●	
9.900		89.00	55.00	●				
10.000		89.00	55.00	●	●		●	●
10.200		89.00	55.00	●	●		●	
10.300		89.00	55.00				●	
10.320	13/32	89.00	55.00	○				
10.400		89.00	55.00	●				
10.500		89.00	55.00	●			●	○
10.700		95.00	60.00				●	
10.720	27/64	95.00	60.00	●		○		
10.800		95.00	60.00	●				
11.000		95.00	60.00	●			●	●
11.110	7/16	95.00	60.00				●	
11.200		95.00	60.00				●	
11.300		95.00	60.00	●				
11.500		95.00	60.00	●			●	
11.510	29/64	95.00	60.00				○	
11.600		95.00	60.00	●				
11.700		95.00	60.00	●				
11.800		95.00	60.00				●	
11.910	15/32	102.00	65.00				●	
12.000		102.00	65.00	●	●		●	
12.100		102.00	65.00	●				
12.200		102.00	65.00				●	
12.500		102.00	65.00	●		○	●	
12.700	1/2	102.00	65.00				●	
12.800		102.00	65.00	●				
12.900		102.00	65.00	●				
13.000		102.00	65.00	●			●	
13.200		102.00	65.00	●				
13.500		107.00	66.00	●			●	
13.600		107.00	66.00	●				
13.800		107.00	66.00				●	
14.000		107.00	66.00	●	●		●	
14.300		111.00	70.00	●			●	

Availability

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

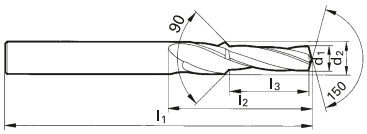
Guhring no.	731	611	745	1025	1027
Standard	DIN 6539				
Tool material	Solid carbide				
Carbide grade	K	K/P	K10/K20	K	K10/K20
Surface	○	Ⓢ	○	○	Ⓢ
Type	GS 200 U	GS 200 U	GS 200 G	GS 200 G	GS 200 F
Drilling depth	5xD	5xD	5xD	5xD	5xD
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h7	h7	h7	h7	h7
Discount group	109	109	109	109	109
Techn. data page	131	131	132	132	132



d1 mm	d1 inch	l1 mm	l2 mm	Availability
14.400		111.00	70.00	❍
14.500		111.00	70.00	●
15.000		111.00	70.00	●
15.500		115.00	73.00	●
15.870	5/8	115.00	73.00	❍
16.000		115.00	73.00	● ●
16.500		119.00	73.00	●
17.000		119.00	73.00	●
17.500		123.00	76.00	●
18.500		127.00	76.00	●
19.000		127.00	76.00	●
20.000		131.00	79.00	● ●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	1032
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	GS 200 G
Drilling depth	
Cutting direction	right-hand
Tolerance	
Discount group	109
Techn. data page	132

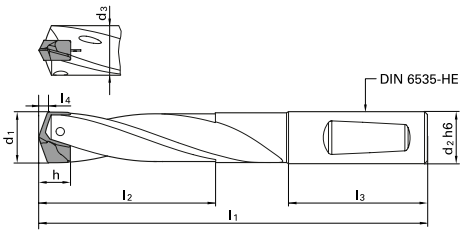


d2 mm	d1 mm	for threads	l1 mm	l2 mm	l3 mm	Code no.	Availability
3.400	2.500	M 3	52.00	27.00	9.00	3.401	●
4.200	3.600		55.00	30.00	10.00	4.200	◯
4.500	3.300		58.00	32.00	11.00	4.501	●
5.500	4.200	M 5	66.00	39.00	14.00	5.501	●
5.500	4.700		66.00	39.00	14.00	5.500	◯
6.500	5.600		70.00	42.00	16.00	6.500	◯
6.600	5.000	M 6	70.00	42.00	16.00	6.601	●
6.800	5.800		74.00	45.00	18.00	6.800	●
9.000	6.800	M 8	84.00	52.00	22.00	9.001	●
9.700	8.300		89.00	55.00	25.00	9.700	◯
10.000	8.500		89.00	55.00	25.00	10.000	◯
11.000	8.500	M10	95.00	60.00	28.00	11.001	●
11.000	8.800	M10 X1,25	95.00	60.00	28.00	11.004	◯
11.000	9.400		95.00	60.00	28.00	11.000	●
13.500	10.200	M12	107.00	66.00	33.00	13.501	●
15.500	13.200		115.00	73.00	38.00	15.500	●
17.500	15.000	M16 X1	123.00	76.00	41.00	17.502	◯
20.000	15.500	M18	131.00	79.00	43.00	20.001	◯
20.000	16.000		131.00	79.00	43.00	20.004	◯

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4106
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	1,5xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

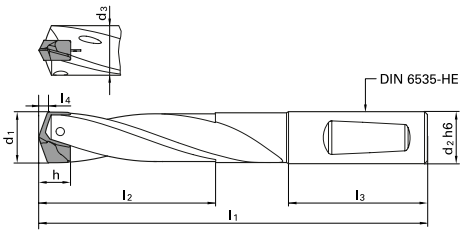


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
110	11,00-11,49	12.000	10.700	84.00	19.30	45.00	11.000	●
110	11,00-11,49	12.700	10.700	84.00	19.30	45.00	11.005	●
115	11,50-11,99	12.000	11.200	85.00	20.10	45.00	11.500	●
115	11,50-11,99	12.700	11.200	85.00	20.10	45.00	11.505	●
120	12,00-12,49	12.000	11.700	87.00	21.00	45.00	12.000	●
120	12,00-12,49	12.700	11.700	87.00	21.00	45.00	12.005	●
125	12,50-12,99	14.000	12.200	89.00	21.90	45.00	12.500	●
125	12,50-12,99	15.875	12.200	89.00	21.90	45.00	12.505	●
130	13,00-13,49	14.000	12.700	90.00	22.60	45.00	13.000	●
130	13,00-13,49	15.875	12.700	90.00	22.60	45.00	13.005	●
135	13,50-13,99	14.000	13.200	92.00	23.60	45.00	13.500	●
135	13,50-13,99	15.875	13.200	92.00	23.60	45.00	13.505	●
140	14,00-14,49	14.000	13.700	93.00	24.50	45.00	14.000	●
140	14,00-14,49	15.875	13.700	93.00	24.50	45.00	14.005	●
145	14,50-14,99	16.000	14.200	98.00	25.30	48.00	14.500	●
145	14,50-14,99	15.875	14.200	98.00	25.30	48.00	14.505	●
150	15,00-15,49	16.000	14.700	100.00	26.10	48.00	15.000	●
150	15,00-15,49	15.875	14.700	100.00	26.10	48.00	15.005	●
155	15,50-15,99	16.000	15.200	101.00	27.00	48.00	15.500	●
155	15,50-15,99	15.875	15.200	101.00	27.00	48.00	15.505	●
160	16,00-16,49	16.000	15.700	102.00	27.80	48.00	16.000	●
160	16,00-16,49	15.875	15.700	102.00	27.80	48.00	16.005	●
165	16,50-16,99	18.000	16.200	105.00	28.70	48.00	16.500	●
165	16,50-16,99	19.050	16.200	105.00	28.70	48.00	16.505	●
170	17,00-17,49	18.000	16.700	106.00	29.60	48.00	17.000	●
170	17,00-17,49	19.050	16.700	106.00	29.60	48.00	17.005	●
175	17,50-17,99	18.000	17.200	107.00	30.40	48.00	17.500	●
175	17,50-17,99	19.050	17.200	107.00	30.40	48.00	17.505	●
180	18,00-18,49	18.000	17.700	109.00	31.20	48.00	18.000	●
180	18,00-18,49	19.050	17.700	109.00	31.20	48.00	18.005	●
185	18,50-18,99	20.000	18.200	113.00	32.10	50.00	18.500	●
185	18,50-18,99	19.050	18.200	113.00	32.10	50.00	18.505	●
190	19,00-19,49	20.000	18.700	114.00	32.90	50.00	19.000	●
190	19,00-19,49	19.050	18.700	114.00	32.90	50.00	19.005	●
195	19,50-19,99	20.000	19.200	116.00	33.70	50.00	19.500	●
195	19,50-19,99	19.050	19.200	116.00	33.70	50.00	19.505	●
200	20,00-20,49	20.000	19.700	117.00	34.60	50.00	20.000	●
200	20,00-20,49	19.050	19.700	117.00	34.60	50.00	20.005	●
205	20,50-20,99	25.000	20.200	128.00	35.50	56.00	20.500	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4106
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	1,5xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

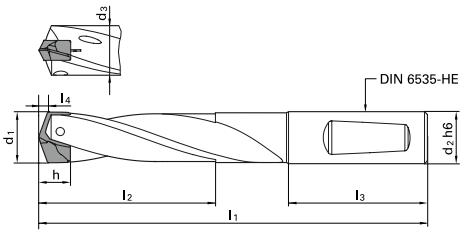


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
205	20,50-20,99	25.400	20.200	128.00	35.50	56.00	20.505	●
210	21,00-21,49	25.000	20.700	129.00	36.40	56.00	21.000	●
210	21,00-21,49	25.400	20.700	129.00	36.40	56.00	21.005	●
215	21,50-21,99	25.000	21.200	130.00	37.20	56.00	21.500	●
215	21,50-21,99	25.400	21.200	130.00	37.20	56.00	21.505	●
220	22,00-22,49	25.000	21.700	131.00	38.00	56.00	22.000	●
220	22,00-22,49	25.400	21.700	131.00	38.00	56.00	22.005	●
225	22,50-22,99	25.000	22.200	134.00	38.90	56.00	22.500	●
225	22,50-22,99	25.400	22.200	134.00	38.90	56.00	22.505	●
230	23,00-23,49	25.000	22.700	135.00	39.80	56.00	23.000	●
230	23,00-23,49	25.400	22.700	135.00	39.80	56.00	23.005	●
235	23,50-23,99	25.000	23.200	137.00	40.60	56.00	23.500	●
235	23,50-23,99	25.400	23.200	137.00	40.60	56.00	23.505	●
240	24,00-24,49	25.000	23.700	138.00	41.50	56.00	24.000	●
240	24,00-24,49	25.400	23.700	138.00	41.50	56.00	24.005	●
245	24,50-24,99	25.000	24.200	140.00	42.30	56.00	24.500	●
245	24,50-24,99	25.400	24.200	140.00	42.30	56.00	24.505	●
250	25,00-25,49	25.000	24.700	142.00	43.20	56.00	25.000	●
250	25,00-25,49	25.400	24.700	142.00	43.20	56.00	25.005	●
255	25,50-25,99	32.000	25.200	148.00	44.00	60.00	25.500	●
255	25,50-25,99	31.750	25.200	148.00	44.00	60.00	25.505	●
260	26,00-26,49	32.000	25.700	151.00	44.30	60.00	26.000	●
260	26,00-26,49	31.750	25.700	151.00	44.30	60.00	26.005	●
265	26,50-26,99	32.000	26.200	153.00	45.10	60.00	26.500	●
265	26,50-26,99	31.750	26.200	153.00	45.10	60.00	26.505	●
270	27,00-27,49	32.000	26.700	155.00	46.00	60.00	27.000	●
270	27,00-27,49	31.750	26.700	155.00	46.00	60.00	27.005	●
275	27,50-27,99	32.000	27.200	156.00	46.80	60.00	27.500	●
275	27,50-27,99	31.750	27.200	156.00	46.80	60.00	27.505	●
280	28,00-28,49	32.000	27.700	157.00	47.70	60.00	28.000	●
280	28,00-28,49	31.750	27.700	157.00	47.70	60.00	28.005	●
285	28,50-28,99	32.000	28.200	159.00	48.50	60.00	28.500	●
285	28,50-28,99	31.750	28.200	159.00	48.50	60.00	28.505	●
290	29,00-29,49	32.000	28.700	161.00	49.40	60.00	29.000	●
290	29,00-29,49	31.750	28.700	161.00	49.40	60.00	29.005	●
295	29,50-29,99	32.000	29.200	162.00	50.20	60.00	29.500	●
295	29,50-29,99	31.750	29.200	162.00	50.20	60.00	29.505	●
300	30,00-30,49	32.000	29.700	164.00	50.90	60.00	30.000	●
300	30,00-30,49	31.750	29.700	164.00	50.90	60.00	30.005	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Guhring no.	4106
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	1,5xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

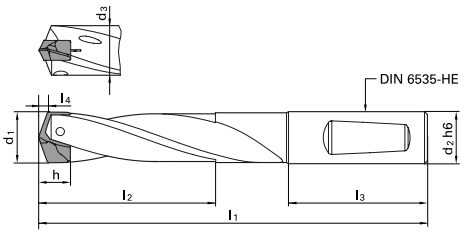


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
305	30,50-30,99	32.000	30.200	166.00	51.70	60.00	30.500	●
305	30,50-30,99	31.750	30.200	166.00	51.70	60.00	30.505	●
310	31,00-31,49	32.000	30.700	167.00	52.60	60.00	31.000	●
310	31,00-31,49	31.750	30.700	167.00	52.60	60.00	31.005	●
315	31,50-31,99	32.000	31.200	168.00	53.40	60.00	31.500	●
315	31,50-31,99	31.750	31.200	168.00	53.40	60.00	31.505	●
320	32,00-32,99	32.000	31.700	172.00	55.10	60.00	32.000	●
320	32,00-32,49	31.750	31.700	172.00	55.10	60.00	32.005	●
330	33,00-33,99	32.000	32.700	175.00	56.80	60.00	33.000	●
330	32,50-32,99	31.750	32.700	175.00	56.80	60.00	33.005	●
340	34,00-34,99	32.000	33.700	178.00	58.50	60.00	34.000	●
340	34,00-34,99	31.750	33.700	178.00	58.50	60.00	34.005	●
350	35,00-35,99	32.000	34.700	181.00	60.20	60.00	35.000	●
350	35,00-35,99	31.750	34.700	181.00	60.20	60.00	35.005	●
360	36,00-36,99	32.000	35.700	184.00	61.80	60.00	36.000	●
360	36,00-36,99	31.750	35.700	184.00	61.80	60.00	36.005	●
370	37,00-37,99	32.000	36.700	188.00	63.50	60.00	37.000	●
370	37,00-37,99	31.750	36.700	188.00	63.50	60.00	37.005	●
380	38,00-38,99	32.000	37.700	191.00	65.20	60.00	38.000	●
380	38,00-38,99	31.750	37.700	191.00	65.20	60.00	38.005	●
390	39,00-40,00	32.000	38.700	194.00	66.90	60.00	39.000	●
390	39,00-40,00	31.750	38.700	194.00	66.90	60.00	39.005	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4107
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	3xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

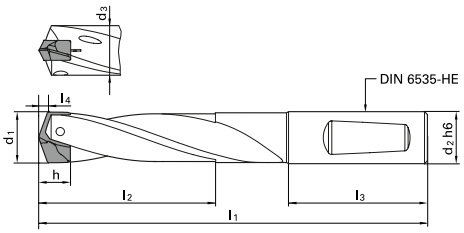


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
110	11,00-11,49	12.000	10.700	101.00	36.60	45.00	11.000	●
110	11,00-11,49	12.700	10.700	101.00	36.60	45.00	11.005	●
115	11,50-11,99	12.000	11.200	103.00	38.10	45.00	11.500	●
115	11,50-11,99	12.700	11.200	103.00	38.10	45.00	11.505	●
120	12,00-12,49	12.000	11.700	106.00	39.70	45.00	12.000	●
120	12,00-12,49	12.700	11.700	106.00	39.70	45.00	12.005	●
125	12,50-12,99	14.000	12.200	108.00	41.30	45.00	12.500	●
125	12,50-12,99	15.875	12.200	108.00	41.30	45.00	12.505	●
130	13,00-13,49	14.000	12.700	110.00	42.90	45.00	13.000	●
130	13,00-13,49	15.875	12.700	110.00	42.90	45.00	13.005	●
135	13,50-13,99	14.000	13.200	113.00	44.60	45.00	13.500	●
135	13,50-13,99	15.875	13.200	113.00	44.60	45.00	13.505	●
140	14,00-14,49	14.000	13.700	115.00	46.20	45.00	14.000	●
140	14,00-14,49	15.875	13.700	115.00	46.20	45.00	14.005	●
145	14,50-14,99	16.000	14.200	120.00	47.80	48.00	14.500	●
145	14,50-14,99	15.875	14.200	120.00	47.80	48.00	14.505	●
150	15,00-15,49	16.000	14.700	123.00	49.30	48.00	15.000	●
150	15,00-15,49	15.875	14.700	123.00	49.30	48.00	15.005	●
155	15,50-15,99	16.000	15.200	125.00	50.90	48.00	15.500	●
155	15,50-15,99	15.875	15.200	125.00	50.90	48.00	15.505	●
160	16,00-16,49	16.000	15.700	127.00	52.90	48.00	16.000	●
160	16,00-16,49	15.875	15.700	127.00	52.90	48.00	16.005	●
165	16,50-16,99	18.000	16.200	130.00	54.10	48.00	16.500	●
165	16,50-16,99	19.050	16.200	130.00	54.10	48.00	16.505	●
170	17,00-17,49	18.000	16.700	132.00	55.80	48.00	17.000	●
170	17,00-17,49	19.050	16.700	132.00	55.80	48.00	17.005	●
175	17,50-17,99	18.000	17.200	134.00	57.40	48.00	17.500	●
175	17,50-17,99	19.050	17.200	134.00	57.40	48.00	17.505	●
180	18,00-18,49	18.000	17.700	137.00	58.90	48.00	18.000	●
180	18,00-18,49	19.050	17.700	137.00	58.90	48.00	18.005	●
185	18,50-18,99	20.000	18.200	141.00	60.50	50.00	18.500	●
185	18,50-18,99	19.050	18.200	141.00	60.50	50.00	18.505	●
190	19,00-19,49	20.000	18.700	143.00	62.10	50.00	19.000	●
190	19,00-19,49	19.050	18.700	143.00	62.10	50.00	19.005	●
195	19,50-19,99	20.000	19.200	146.00	63.70	50.00	19.500	●
195	19,50-19,99	19.050	19.200	146.00	63.70	50.00	19.505	●
200	20,00-20,49	20.000	19.700	148.00	65.30	50.00	20.000	●
200	20,00-20,49	19.050	19.700	148.00	65.30	50.00	20.005	●
205	20,50-20,99	25.000	20.200	159.00	67.00	56.00	20.500	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4107
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	3xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

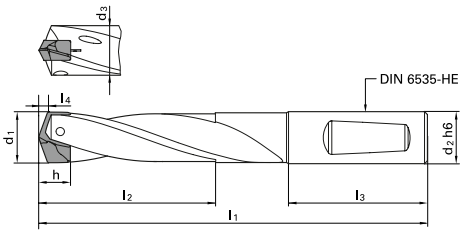


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
205	20,50-20,99	25.400	20.200	159.00	67.00	56.00	20.505	●
210	21,00-21,49	25.000	20.700	161.00	68.60	56.00	21.000	●
210	21,00-21,49	25.400	20.700	161.00	68.60	56.00	21.005	●
215	21,50-21,99	25.000	21.200	163.00	70.10	56.00	21.500	●
215	21,50-21,99	25.400	21.200	163.00	70.10	56.00	21.505	●
220	22,00-22,49	25.000	21.700	165.00	71.70	56.00	22.000	●
220	22,00-22,49	25.400	21.700	165.00	71.70	56.00	22.005	●
225	22,50-22,99	25.000	22.200	168.00	73.30	56.00	22.500	●
225	22,50-22,99	25.400	22.200	168.00	73.30	56.00	22.505	●
230	23,00-23,49	25.000	22.700	170.00	74.90	56.00	23.000	●
230	23,00-23,49	25.400	22.700	170.00	74.90	56.00	23.005	●
235	23,50-23,99	25.000	23.200	173.00	76.50	56.00	23.500	●
235	23,50-23,99	25.400	23.200	173.00	76.50	56.00	23.505	●
240	24,00-24,49	25.000	23.700	175.00	78.10	56.00	24.000	●
240	24,00-24,49	25.400	23.700	175.00	78.10	56.00	24.005	●
245	24,50-24,99	25.000	24.200	177.00	79.70	56.00	24.500	●
245	24,50-24,99	25.400	24.200	177.00	79.70	56.00	24.505	●
250	25,00-25,49	25.000	24.700	180.00	81.30	56.00	25.000	●
250	25,00-25,49	25.400	24.700	180.00	81.30	56.00	25.005	●
255	25,50-25,99	32.000	25.200	187.00	82.90	60.00	25.500	●
255	25,50-25,99	31.750	25.200	187.00	82.90	60.00	25.505	●
260	26,00-26,49	32.000	25.700	191.00	84.00	60.00	26.000	●
260	26,00-26,49	31.750	25.700	191.00	84.00	60.00	26.005	●
265	26,50-26,99	32.000	26.200	193.00	86.10	60.00	26.500	●
265	26,50-26,99	31.750	26.200	193.00	86.10	60.00	26.505	●
270	27,00-27,49	32.000	26.700	196.00	87.20	60.00	27.000	●
270	27,00-27,49	31.750	26.700	196.00	87.20	60.00	27.005	●
275	27,50-27,99	32.000	27.200	198.00	88.90	60.00	27.500	●
275	27,50-27,99	31.750	27.200	198.00	88.90	60.00	27.505	●
280	28,00-28,49	32.000	27.700	200.00	90.40	60.00	28.000	●
280	28,00-28,49	31.750	27.700	200.00	90.40	60.00	28.005	●
285	28,50-28,99	32.000	28.200	202.00	92.50	60.00	28.500	●
285	28,50-28,99	31.750	28.200	202.00	92.50	60.00	28.505	●
290	29,00-29,49	32.000	28.700	205.00	94.60	60.00	29.000	●
290	29,00-29,49	31.750	28.700	205.00	94.60	60.00	29.005	●
295	29,50-29,99	32.000	29.200	207.00	95.10	60.00	29.500	●
295	29,50-29,99	31.750	29.200	207.00	95.10	60.00	29.505	●
300	30,00-30,49	32.000	29.700	210.00	96.70	60.00	30.000	●
300	30,00-30,49	31.750	29.700	210.00	96.70	60.00	30.005	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4107
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	3xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

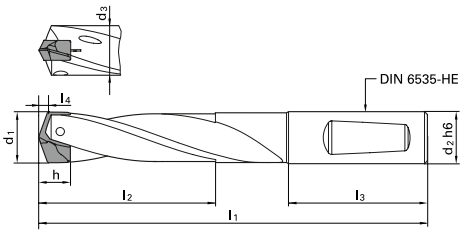


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
305	30,50-30,99	32.000	30.200	212.00	98.30	60.00	30.500	●
305	30,50-30,99	31.750	30.200	212.00	98.30	60.00	30.505	●
310	31,00-31,49	32.000	30.700	214.00	99.80	60.00	31.000	●
310	31,00-31,49	31.750	30.700	214.00	99.80	60.00	31.005	●
315	31,50-31,99	32.000	31.200	216.00	101.40	60.00	31.500	●
315	31,50-31,99	31.750	31.200	216.00	101.40	60.00	31.505	●
320	32,00-32,99	32.000	31.700	221.00	104.60	60.00	32.000	●
320	32,00-32,99	31.750	31.700	221.00	104.60	60.00	32.005	●
330	33,00-33,99	32.000	32.700	226.00	107.80	60.00	33.000	●
330	32,50-33,99	31.750	32.700	226.00	107.80	60.00	33.005	●
340	34,00-34,99	32.000	33.700	230.00	111.00	60.00	34.000	●
340	34,00-34,99	31.750	33.700	230.00	111.00	60.00	34.005	●
350	35,00-35,99	32.000	34.700	235.00	114.20	60.00	35.000	●
350	35,00-35,99	31.750	34.700	235.00	114.20	60.00	35.005	●
360	36,00-36,99	32.000	35.700	240.00	117.30	60.00	36.000	●
360	36,00-36,99	31.750	35.700	240.00	117.30	60.00	36.005	●
370	37,00-37,99	32.000	36.700	245.00	120.50	60.00	37.000	●
370	37,00-37,99	31.750	36.700	245.00	120.50	60.00	37.005	●
380	38,00-38,99	32.000	37.700	249.00	123.70	60.00	38.000	●
380	38,00-38,99	31.750	37.700	249.00	123.70	60.00	38.005	●
390	39,00-40,00	32.000	38.700	254.00	126.90	60.00	39.000	●
390	39,00-40,00	31.750	38.700	254.00	126.90	60.00	39.005	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4108
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	5xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

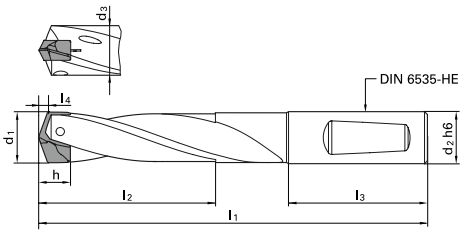


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
110	11,00-11,49	12.000	10.700	124.00	59.60	45.00	11.000	●
110	11,00-11,49	12.700	10.700	124.00	59.60	45.00	11.005	●
115	11,50-11,99	12.000	11.200	127.00	62.10	45.00	11.500	●
115	11,50-11,99	12.700	11.200	127.00	62.10	45.00	11.505	●
120	12,00-12,49	12.000	11.700	131.00	64.70	45.00	12.000	●
120	12,00-12,49	12.700	11.700	131.00	64.70	45.00	12.005	●
125	12,50-12,99	14.000	12.200	134.00	67.30	45.00	12.500	●
125	12,50-12,99	15.875	12.200	134.00	67.30	45.00	12.505	●
130	13,00-13,49	14.000	12.700	137.00	69.90	45.00	13.000	●
130	13,00-13,49	15.875	12.700	137.00	69.90	45.00	13.005	●
135	13,50-13,99	14.000	13.200	141.00	72.60	45.00	13.500	●
135	13,50-13,99	15.875	13.200	141.00	72.60	45.00	13.505	●
140	14,00-14,49	14.000	13.700	144.00	75.20	45.00	14.000	●
140	14,00-14,49	15.875	13.700	144.00	75.20	45.00	14.005	●
145	14,50-14,99	16.000	14.200	150.00	77.80	48.00	14.500	●
145	14,50-14,99	15.875	14.200	150.00	77.80	48.00	14.505	●
150	15,00-15,49	16.000	14.700	154.00	80.30	48.00	15.000	●
150	15,00-15,49	15.875	14.700	154.00	80.30	48.00	15.005	●
155	15,50-15,99	16.000	15.200	157.00	82.90	48.00	15.500	●
155	15,50-15,99	15.875	15.200	157.00	82.90	48.00	15.505	●
160	16,00-16,49	16.000	15.700	160.00	85.90	48.00	16.000	●
160	16,00-16,49	15.875	15.700	160.00	85.90	48.00	16.005	●
165	16,50-16,99	18.000	16.200	164.00	88.10	48.00	16.500	●
165	16,50-16,99	19.050	16.200	164.00	88.10	48.00	16.505	●
170	17,00-17,49	18.000	16.700	167.00	90.80	48.00	17.000	●
170	17,00-17,49	19.050	16.700	167.00	90.80	48.00	17.005	●
175	17,50-17,99	18.000	17.200	170.00	93.40	48.00	17.500	●
175	17,50-17,99	19.050	17.200	170.00	93.40	48.00	17.505	●
180	18,00-18,49	18.000	17.700	174.00	95.90	48.00	18.000	●
180	18,00-18,49	19.050	17.700	174.00	95.90	48.00	18.005	●
185	18,50-18,99	20.000	18.200	179.00	98.50	50.00	18.500	●
185	18,50-18,99	19.050	18.200	179.00	98.50	50.00	18.505	●
190	19,00-19,49	20.000	18.700	182.00	101.10	50.00	19.000	●
190	19,00-19,49	19.050	18.700	182.00	101.10	50.00	19.005	●
195	19,50-19,99	20.000	19.200	186.00	103.70	50.00	19.500	●
195	19,50-19,99	19.050	19.200	186.00	103.70	50.00	19.505	●
200	20,00-20,49	20.000	19.700	189.00	106.30	50.00	20.000	●
200	20,00-20,49	19.050	19.700	189.00	106.30	50.00	20.005	●
205	20,50-20,99	25.000	20.200	201.00	109.00	56.00	20.500	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4108
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	5xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

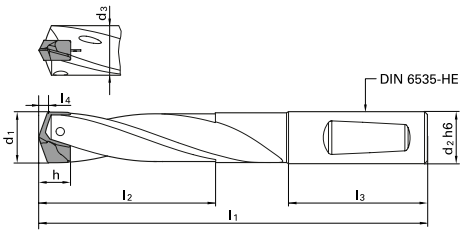


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
205	20,50-20,99	25.400	20.200	201.00	109.00	56.00	20.505	●
210	21,00-21,49	25.000	20.700	204.00	111.60	56.00	21.000	●
210	21,00-21,49	25.400	20.700	204.00	111.60	56.00	21.005	●
215	21,50-21,99	25.000	21.200	207.00	114.10	56.00	21.500	●
215	21,50-21,99	25.400	21.200	207.00	114.10	56.00	21.505	●
220	22,00-22,49	25.000	21.700	210.00	116.70	56.00	22.000	●
220	22,00-22,49	25.400	21.700	210.00	116.70	56.00	22.005	●
225	22,50-22,99	25.000	22.200	214.00	119.30	56.00	22.500	●
225	22,50-22,99	25.400	22.200	214.00	119.30	56.00	22.505	●
230	23,00-23,49	25.000	22.700	217.00	121.90	56.00	23.000	●
230	23,00-23,49	25.400	22.700	217.00	121.90	56.00	23.005	●
235	23,50-23,99	25.000	23.200	221.00	124.50	56.00	23.500	●
235	23,50-23,99	25.400	23.200	221.00	124.50	56.00	23.505	●
240	24,00-24,49	25.000	23.700	224.00	127.10	56.00	24.000	●
240	24,00-24,49	25.400	23.700	224.00	127.10	56.00	24.005	●
245	24,50-24,99	25.000	24.200	227.00	129.70	56.00	24.500	●
245	24,50-24,99	25.400	24.200	227.00	129.70	56.00	24.505	●
250	25,00-25,49	25.000	24.700	231.00	132.30	56.00	25.000	●
250	25,00-25,49	25.400	24.700	231.00	132.30	56.00	25.005	●
255	25,50-25,99	32.000	25.200	239.00	134.90	60.00	25.500	●
255	25,50-25,99	31.750	25.200	239.00	134.90	60.00	25.505	●
260	26,00-26,49	32.000	25.700	244.00	137.00	60.00	26.000	●
265	26,50-26,99	32.000	26.200	247.00	140.00	60.00	26.500	●
270	27,00-27,49	32.000	26.700	251.00	142.20	60.00	27.000	●
275	27,50-27,99	32.000	27.200	254.00	144.80	60.00	27.500	●
280	28,00-28,49	32.000	27.700	257.00	147.40	60.00	28.000	●
285	28,50-28,99	32.000	28.200	260.00	150.40	60.00	28.500	●
290	29,00-29,49	32.000	28.700	264.00	153.50	60.00	29.000	●
295	29,50-29,99	32.000	29.200	267.00	155.10	60.00	29.500	●
300	30,00-30,49	32.000	29.700	271.00	157.60	60.00	30.000	●
305	30,50-30,99	32.000	30.200	274.00	160.20	60.00	30.500	●
310	31,00-31,49	32.000	30.700	277.00	162.80	60.00	31.000	●
315	31,50-31,99	32.000	31.200	280.00	165.40	60.00	31.500	●
320	32,00-32,99	32.000	31.700	287.00	170.60	60.00	32.000	●
330	33,00-33,99	32.000	32.700	294.00	175.80	60.00	33.000	●
340	34,00-34,99	32.000	33.700	300.00	181.00	60.00	34.000	●
350	35,00-35,99	32.000	34.700	307.00	186.20	60.00	35.000	●
360	36,00-36,99	32.000	35.700	314.00	191.30	60.00	36.000	●
370	37,00-37,99	32.000	36.700	321.00	196.50	60.00	37.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4108
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	5xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

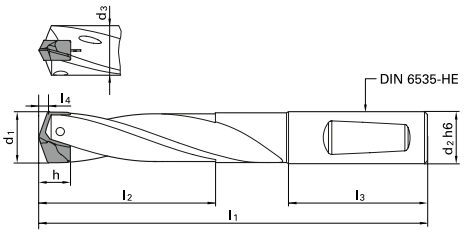


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
380	38,00-38,99	32.000	37.700	327.00	201.70	60.00	38.000	●
390	39,00-40,00	32.000	38.700	334.00	206.90	60.00	39.000	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4109
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	7xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

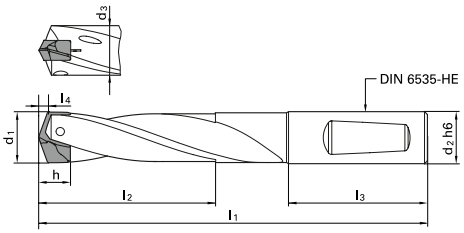


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
110	11,00-11,49	12.000	10.700	147.00	82.60	45.00	11.000	●
110	11,00-11,49	12.700	10.700	147.00	82.60	45.00	11.005	●
115	11,50-11,99	12.000	11.200	151.00	86.10	45.00	11.500	●
115	11,50-11,99	12.700	11.200	151.00	86.10	45.00	11.505	●
120	12,00-12,49	12.000	11.700	156.00	89.70	45.00	12.000	●
120	12,00-12,49	12.700	11.700	156.00	89.70	45.00	12.005	●
125	12,50-12,99	14.000	12.200	160.00	93.30	45.00	12.500	●
125	12,50-12,99	15.875	12.200	160.00	93.30	45.00	12.505	●
130	13,00-13,49	14.000	12.700	164.00	96.90	45.00	13.000	●
130	13,00-13,49	15.875	12.700	164.00	96.90	45.00	13.005	●
135	13,50-13,99	14.000	13.200	169.00	100.60	45.00	13.500	●
135	13,50-13,99	15.875	13.200	169.00	100.60	45.00	13.505	●
140	14,00-14,49	14.000	13.700	173.00	104.20	45.00	14.000	●
140	14,00-14,49	15.875	13.700	173.00	104.20	45.00	14.005	●
145	14,50-14,99	16.000	14.200	180.00	107.80	48.00	14.500	●
145	14,50-14,99	15.875	14.200	180.00	107.80	48.00	14.505	●
150	15,00-15,49	16.000	14.700	185.00	111.30	48.00	15.000	●
150	15,00-15,49	15.875	14.700	185.00	111.30	48.00	15.005	●
155	15,50-15,99	16.000	15.200	189.00	114.90	48.00	15.500	●
155	15,50-15,99	15.875	15.200	189.00	114.90	48.00	15.505	●
160	16,00-16,49	16.000	15.700	193.00	118.90	48.00	16.000	●
160	16,00-16,49	15.875	15.700	193.00	118.90	48.00	16.005	●
165	16,50-16,99	18.000	16.200	198.00	122.10	48.00	16.500	●
165	16,50-16,99	19.050	16.200	198.00	122.10	48.00	16.505	●
170	17,00-17,49	18.000	16.700	202.00	125.80	48.00	17.000	●
170	17,00-17,49	19.050	16.700	202.00	125.80	48.00	17.005	●
175	17,50-17,99	18.000	17.200	206.00	129.40	48.00	17.500	●
175	17,50-17,99	19.050	17.200	206.00	129.40	48.00	17.505	●
180	18,00-18,49	18.000	17.700	211.00	132.90	48.00	18.000	●
180	18,00-18,49	19.050	17.700	211.00	132.90	48.00	18.005	●
185	18,50-18,99	20.000	18.200	217.00	136.50	50.00	18.500	●
185	18,50-18,99	19.050	18.200	217.00	136.50	50.00	18.505	●
190	19,00-19,49	20.000	18.700	221.00	140.10	50.00	19.000	●
190	19,00-19,49	19.050	18.700	221.00	140.10	50.00	19.005	●
195	19,50-19,99	20.000	19.200	226.00	143.70	50.00	19.500	●
195	19,50-19,99	19.050	19.200	226.00	143.70	50.00	19.505	●
200	20,00-20,49	20.000	19.700	230.00	147.30	50.00	20.000	●
200	20,00-20,49	19.050	19.700	230.00	147.30	50.00	20.005	●
205	20,50-20,99	25.000	20.200	243.00	151.00	56.00	20.500	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4109
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	7xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

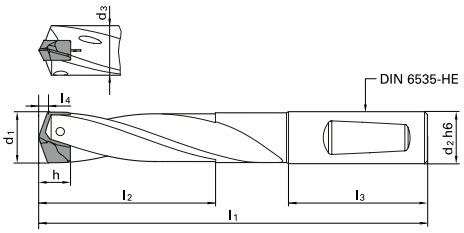


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
205	20,50-20,99	25.400	20.200	243.00	151.00	56.00	20.505	●
210	21,00-21,49	25.000	20.700	247.00	154.60	56.00	21.000	●
210	21,00-21,49	25.400	20.700	247.00	154.60	56.00	21.005	●
215	21,50-21,99	25.000	21.200	251.00	158.10	56.00	21.500	●
215	21,50-21,99	25.400	21.200	251.00	158.10	56.00	21.505	●
220	22,00-22,49	25.000	21.700	255.00	161.70	56.00	22.000	●
220	22,00-22,49	25.400	21.700	255.00	161.70	56.00	22.005	●
225	22,50-22,99	25.000	22.200	260.00	165.30	56.00	22.500	●
225	22,50-22,99	25.400	22.200	260.00	165.30	56.00	22.505	●
230	23,00-23,49	25.000	22.700	264.00	168.90	56.00	23.000	●
230	23,00-23,49	25.400	22.700	264.00	168.90	56.00	23.005	●
235	23,50-23,99	25.000	23.200	269.00	172.50	56.00	23.500	●
235	23,50-23,99	25.400	23.200	269.00	172.50	56.00	23.505	●
240	24,00-24,49	25.000	23.700	273.00	176.10	56.00	24.000	●
240	24,00-24,49	25.400	23.700	273.00	176.10	56.00	24.005	●
245	24,50-24,99	25.000	24.200	277.00	179.70	56.00	24.500	●
245	24,50-24,99	25.400	24.200	277.00	179.70	56.00	24.505	●
250	25,00-25,49	25.000	24.700	282.00	183.30	56.00	25.000	●
250	25,00-25,49	25.400	24.700	282.00	183.30	56.00	25.005	●
255	25,50-25,99	32.000	25.200	291.00	186.90	60.00	25.500	●
255	25,50-25,99	31.750	25.200	291.00	186.90	60.00	25.505	●
260	26,00-26,49	32.000	25.700	297.00	190.00	60.00	26.000	●
260	26,00-26,49	31.750	25.700	297.00	190.00	60.00	26.005	●
265	26,50-26,99	32.000	26.200	301.00	194.00	60.00	26.500	●
265	26,50-26,99	31.750	26.200	301.00	194.00	60.00	26.505	●
270	27,00-27,49	32.000	26.700	306.00	197.20	60.00	27.000	●
270	27,00-27,49	31.750	26.700	306.00	197.20	60.00	27.005	●
275	27,50-27,99	32.000	27.200	310.00	200.80	60.00	27.500	●
275	27,50-27,99	31.750	27.200	310.00	200.80	60.00	27.505	●
280	28,00-28,49	32.000	27.700	314.00	204.40	60.00	28.000	●
280	28,00-28,49	31.750	27.700	314.00	204.40	60.00	28.005	●
285	28,50-28,99	32.000	28.200	318.00	208.40	60.00	28.500	●
285	28,50-28,99	31.750	28.200	318.00	208.40	60.00	28.505	●
290	29,00-29,49	32.000	28.700	323.00	212.50	60.00	29.000	●
290	29,00-29,49	31.750	28.700	323.00	212.50	60.00	29.005	●
295	29,50-29,99	32.000	29.200	327.00	215.10	60.00	29.500	●
295	29,50-29,99	31.750	29.200	327.00	215.10	60.00	29.505	●
300	30,00-30,49	32.000	29.700	332.00	218.60	60.00	30.000	●
300	30,00-30,49	31.750	29.700	332.00	218.60	60.00	30.005	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4109
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	7xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

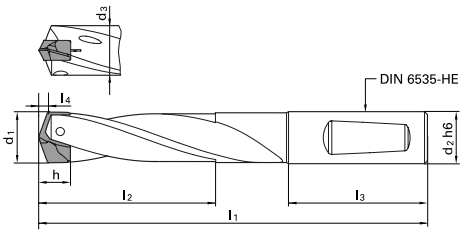


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
305	30,50-30,99	32.000	30.200	336.00	222.20	60.00	30.500	●
305	30,50-30,99	31.750	30.200	336.00	222.20	60.00	30.505	●
310	31,00-31,49	32.000	30.700	340.00	225.80	60.00	31.000	●
310	31,00-31,49	31.750	30.700	340.00	225.80	60.00	31.005	●
315	31,50-31,99	32.000	31.200	344.00	229.40	60.00	31.500	●
315	31,50-31,99	31.750	31.200	344.00	229.40	60.00	31.505	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4110
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	10xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

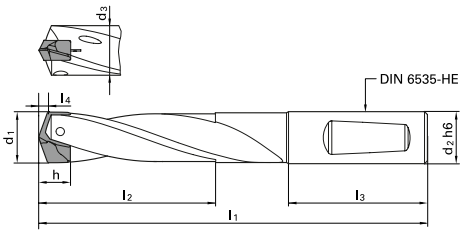


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
110	11,00-11,49	12.000	10.700	182.00	117.10	45.00	11.000	●
110	11,00-11,49	12.700	10.700	182.00	117.10	45.00	11.005	●
115	11,50-11,99	12.000	11.200	187.00	122.10	45.00	11.500	●
115	11,50-11,99	12.700	11.200	187.00	122.10	45.00	11.505	●
120	12,00-12,49	12.000	11.700	194.00	127.20	45.00	12.000	●
120	12,00-12,49	12.700	11.700	194.00	127.20	45.00	12.005	●
125	12,50-12,99	14.000	12.200	199.00	132.30	45.00	12.500	●
125	12,50-12,99	15.875	12.200	199.00	132.30	45.00	12.505	●
130	13,00-13,49	14.000	12.700	205.00	137.50	45.00	13.000	●
130	13,00-13,49	15.875	12.700	205.00	137.50	45.00	13.005	●
135	13,50-13,99	14.000	13.200	211.00	142.50	45.00	13.500	●
135	13,50-13,99	15.875	13.200	211.00	142.50	45.00	13.505	●
140	14,00-14,49	14.000	13.700	217.00	147.70	45.00	14.000	●
140	14,00-14,49	15.875	13.700	217.00	147.70	45.00	14.005	●
145	14,50-14,99	16.000	14.200	225.00	152.80	48.00	14.500	●
145	14,50-14,99	15.875	14.200	225.00	152.80	48.00	14.505	●
150	15,00-15,49	16.000	14.700	232.00	157.80	48.00	15.000	●
150	15,00-15,49	15.875	14.700	232.00	157.80	48.00	15.005	●
155	15,50-15,99	16.000	15.200	237.00	162.90	48.00	15.500	●
155	15,50-15,99	15.875	15.200	237.00	162.90	48.00	15.505	●
160	16,00-16,49	16.000	15.700	243.00	168.00	48.00	16.000	●
160	16,00-16,49	15.875	15.700	243.00	168.00	48.00	16.005	●
165	16,50-16,99	18.000	16.200	249.00	170.00	48.00	16.500	●
165	16,50-16,99	19.050	16.200	249.00	170.00	48.00	16.505	●
170	17,00-17,49	18.000	16.700	255.00	178.30	48.00	17.000	●
170	17,00-17,49	19.050	16.700	255.00	178.30	48.00	17.005	●
175	17,50-17,99	18.000	17.200	260.00	183.50	48.00	17.500	●
175	17,50-17,99	19.050	17.200	260.00	183.50	48.00	17.505	●
180	18,00-18,49	18.000	17.700	267.00	188.40	48.00	18.000	●
180	18,00-18,49	19.050	17.700	267.00	188.40	48.00	18.005	●
185	18,50-18,99	20.000	18.200	274.00	193.50	50.00	18.500	●
185	18,50-18,99	19.050	18.200	274.00	193.50	50.00	18.505	●
190	19,00-19,49	20.000	18.700	280.00	198.70	50.00	19.000	●
190	19,00-19,49	19.050	18.700	280.00	198.70	50.00	19.005	●
195	19,50-19,99	20.000	19.200	286.00	203.70	50.00	19.500	●
195	19,50-19,99	19.050	19.200	286.00	203.70	50.00	19.505	●
200	20,00-20,49	20.000	19.700	292.00	208.90	50.00	20.000	●
200	20,00-20,49	19.050	19.700	292.00	208.90	50.00	20.005	●
205	20,50-20,99	25.000	20.200	306.00	214.00	56.00	20.500	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4110
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	10xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

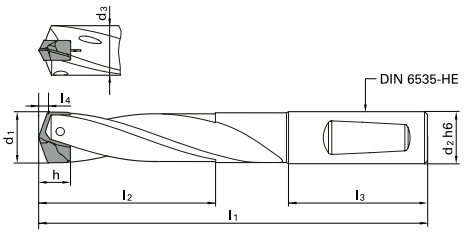


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
205	20,50-20,99	25.400	20.200	306.00	214.00	56.00	20.505	●
210	21,00-21,49	25.000	20.700	312.00	219.10	56.00	21.000	●
210	21,00-21,49	25.400	20.700	312.00	219.10	56.00	21.005	●
215	21,50-21,99	25.000	21.200	317.00	224.20	56.00	21.500	●
215	21,50-21,99	25.400	21.200	317.00	224.20	56.00	21.505	●
220	22,00-22,49	25.000	21.700	323.00	229.30	56.00	22.000	●
220	22,00-22,49	25.400	21.700	323.00	229.30	56.00	22.005	●
225	22,50-22,99	25.000	22.200	329.00	234.40	56.00	22.500	●
225	22,50-22,99	25.400	22.200	329.00	234.40	56.00	22.505	●
230	23,00-23,49	25.000	22.700	335.00	239.50	56.00	23.000	●
230	23,00-23,49	25.400	22.700	335.00	239.50	56.00	23.005	●
235	23,50-23,99	25.000	23.200	341.00	244.60	56.00	23.500	●
235	23,50-23,99	25.400	23.200	341.00	244.60	56.00	23.505	●
240	24,00-24,49	25.000	23.700	347.00	249.70	56.00	24.000	●
240	24,00-24,49	25.400	23.700	347.00	249.70	56.00	24.005	●
245	24,50-24,99	25.000	24.200	352.00	254.80	56.00	24.500	●
245	24,50-24,99	25.400	24.200	352.00	254.80	56.00	24.505	●
250	25,00-25,49	25.000	24.700	359.00	259.90	56.00	25.000	●
250	25,00-25,49	25.400	24.700	359.00	259.90	56.00	25.005	●
255	25,50-25,99	32.000	25.200	369.00	265.00	60.00	25.500	●
255	25,50-25,99	31.750	25.200	369.00	265.00	60.00	25.505	●
260	26,00-26,49	32.000	25.700	377.00	270.00	60.00	26.000	●
260	26,00-26,49	31.750	25.700	377.00	270.00	60.00	26.005	●
265	26,50-26,99	32.000	26.200	382.00	275.00	60.00	26.500	●
265	26,50-26,99	31.750	26.200	382.00	275.00	60.00	26.505	●
270	27,00-27,49	32.000	26.700	388.00	280.10	60.00	27.000	●
270	27,00-27,49	31.750	26.700	388.00	280.10	60.00	27.005	●
275	27,50-27,99	32.000	27.200	394.00	285.20	60.00	27.500	●
275	27,50-27,99	31.750	27.200	394.00	285.20	60.00	27.505	●
280	28,00-28,49	32.000	27.700	400.00	290.30	60.00	28.000	●
280	28,00-28,49	31.750	27.700	400.00	290.30	60.00	28.005	●
285	28,50-28,99	32.000	28.200	405.00	295.40	60.00	28.500	●
285	28,50-28,99	31.750	28.200	405.00	295.40	60.00	28.505	●
290	29,00-29,49	32.000	28.700	412.00	300.50	60.00	29.000	●
290	29,00-29,49	31.750	28.700	412.00	300.50	60.00	29.005	●
295	29,50-29,99	32.000	29.200	418.00	305.60	60.00	29.500	●
295	29,50-29,99	31.750	29.200	418.00	305.60	60.00	29.505	●
300	30,00-30,49	32.000	29.700	424.00	310.60	60.00	30.000	●
300	30,00-30,49	31.750	29.700	424.00	310.60	60.00	30.005	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Guhring no.	4110
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	10xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

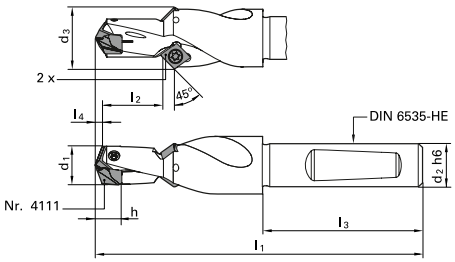


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
305	30,50-30,99	32.000	30.200	429.00	315.70	60.00	30.500	●
305	30,50-30,99	31.750	30.200	429.00	315.70	60.00	30.505	●
310	31,00-31,49	32.000	30.700	435.00	320.80	60.00	31.000	●
310	31,00-31,49	31.750	30.700	435.00	320.80	60.00	31.005	●
315	31,50-31,99	32.000	31.200	441.00	325.90	60.00	31.500	●
315	31,50-31,99	31.750	31.200	441.00	325.90	60.00	31.505	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	4105
Standard	Guhring std.
Type	HT 800 WP
Drilling depth	1xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	

NEW

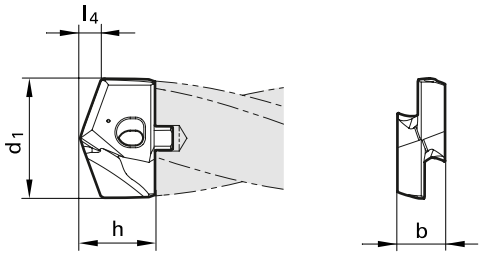


holder size	d1	d2 h6	d3	l1	l2 max.	l3	Code no.	Availability
	mm	mm	mm	mm	mm	mm		
110	11,00-11,99	12.000	17.000	81.00	12.00	45.00	11.000	●
110	11,00-11,99	12.700	17.000	81.00	12.00	45.00	11.005	●
120	12,00-12,99	12.000	18.000	84.00	13.00	45.00	12.000	●
120	12,00-12,99	12.700	18.000	84.00	13.00	45.00	12.005	●
130	13,00-13,99	14.000	18.000	86.00	14.00	45.00	13.000	●
130	13,00-13,99	15.875	18.000	86.00	14.00	48.00	13.005	●
140	14,00-15,99	16.000	18.000	93.00	16.00	48.00	14.000	●
140	14,00-15,99	15.875	18.000	93.00	16.00	48.00	14.005	●
160	16,00-17,99	18.000	20.000	99.00	18.00	48.00	16.000	●
160	16,00-17,99	19.050	20.000	99.00	18.00	50.00	16.005	●
180	18,00-19,99	20.000	22.000	106.00	20.00	50.00	18.000	●
180	18,00-19,99	19.050	22.000	106.00	20.00	50.00	18.005	●
200	20,00-21,99	25.000	24.000	117.00	22.00	56.00	20.000	●
200	20,00-21,99	25.400	24.000	117.00	22.00	56.00	20.005	●
220	22,00-23,99	25.000	26.000	122.00	24.00	56.00	22.000	●
220	22,00-23,99	25.400	26.000	122.00	24.00	56.00	22.005	●
240	24,00-25,99	25.000	28.000	128.00	26.00	56.00	24.000	●
240	24,00-25,99	25.400	28.000	128.00	26.00	56.00	24.005	●
260	26,00-27,99	32.000	32.000	142.00	28.00	60.00	26.000	●
260	26,00-27,99	31.750	32.000	142.00	28.00	60.00	26.005	●
280	28,00-29,99	32.000	34.000	147.00	30.00	60.00	28.000	●
280	28,00-29,99	31.750	34.000	147.00	30.00	60.00	28.005	●
300	30,00-31,99	32.000	38.000	152.00	32.00	60.00	30.000	●
300	30,00-31,99	31.750	38.000	152.00	32.00	60.00	30.005	●
320	32,00-35,99	32.000	42.000	163.00	36.00	60.00	32.000	●
320	32,00-35,99	31.750	42.000	163.00	36.00	60.00	32.005	●
360	36,00-40,00	32.000	46.000	173.00	40.00	60.00	36.000	●
360	36,00-40,00	31.750	46.000	173.00	40.00	60.00	36.005	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4112
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Cutting direction	right-hand
Tolerance	h7
Discount group	141
Techn. data page	

NEW



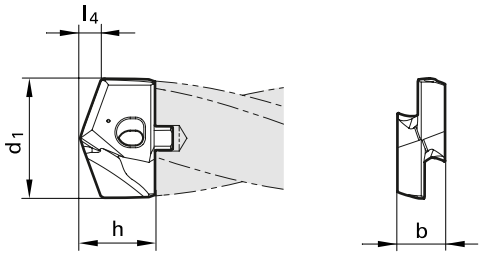
holder size	d1		l4	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
110	11.000		2.10	4.500	7.50	11.000	●
110	11.200		2.10	4.500	7.50	11.200	●
115	11.500		2.10	4.500	7.50	11.500	●
115	11.510	29/64	2.10	4.500	7.50	11.510	●
115	11.700		2.20	4.500	7.50	11.700	●
115	11.800		2.20	4.500	7.50	11.800	●
115	11.910	15/32	2.20	4.500	7.50	11.910	●
120	12.000		2.20	5.000	7.70	12.000	●
120	12.100		2.30	5.000	7.70	12.100	●
120	12.200		2.30	5.000	7.70	12.200	●
120	12.300	31/64	2.30	5.000	7.70	12.300	●
125	12.500		2.30	5.000	7.70	12.500	●
125	12.600		2.30	5.000	7.70	12.600	●
125	12.700	1/2	2.40	5.000	7.70	12.700	●
125	12.800		2.40	5.000	7.70	12.800	●
125	12.900		2.40	5.000	7.70	12.900	●
130	13.000		2.40	5.500	8.50	13.000	●
130	13.100	33/64	2.40	5.500	8.50	13.100	●
130	13.490	17/32	2.50	5.500	8.50	13.490	●
135	13.500		2.50	5.500	8.50	13.500	●
135	13.600		2.50	5.500	8.50	13.600	●
135	13.700		2.50	5.500	8.50	13.700	●
135	13.800		2.60	5.500	8.50	13.800	●
135	13.890	35/64	2.60	5.500	8.50	13.890	●
140	14.000		2.60	6.000	9.60	14.000	●
140	14.100		2.60	6.000	9.60	14.100	●
140	14.290	9/16	2.70	6.000	9.60	14.290	●
140	14.400		2.70	6.000	9.60	14.400	●
145	14.500		2.70	6.000	9.60	14.500	●
145	14.600		2.70	6.000	9.60	14.600	●
145	14.680	37/64	2.70	6.000	9.60	14.680	●
145	14.700		2.70	6.000	9.60	14.700	●
145	14.800		2.70	6.000	9.60	14.800	●
150	15.000		2.80	6.000	9.80	15.000	●
150	15.080	19/32	2.80	6.000	9.80	15.080	●
150	15.100		2.80	6.000	9.80	15.100	●
150	15.200		2.80	6.000	9.80	15.200	●
150	15.300		2.80	6.000	9.80	15.300	●
150	15.480	39/64	2.90	6.000	9.80	15.480	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

4113	4114	4115
Guhring std.		
Solid carbide		
K/P		
F	○	a
right-hand	right-hand	right-hand
m7	h7	h7
141	141	141
NEW	NEW	NEW
Availability		
●	●	●
●	●	●
●	●	●

Guhring no.	4112
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Cutting direction	right-hand
Tolerance	h7
Discount group	141
Techn. data page	

NEW



holder size	d1		l4	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
155	15.500		2.90	6.000	9.80	15.500	●
155	15.600		2.90	6.000	9.80	15.600	●
155	15.700		2.90	6.000	9.80	15.700	●
155	15.800		2.90	6.000	9.80	15.800	●
155	15.870	5/8	2.90	6.000	9.80	15.870	●
160	16.000		3.00	7.000	11.00	16.000	●
160	16.270	41/64	3.00	7.000	11.00	16.270	●
165	16.500		3.10	7.000	11.00	16.500	●
165	16.670	21/32	3.10	7.000	11.00	16.670	●
170	17.000		3.10	7.000	11.00	17.000	●
170	17.070	43/64	3.20	7.000	11.00	17.070	●
170	17.460	11/16	3.20	7.000	11.00	17.460	●
175	17.500		3.20	7.000	11.00	17.500	●
175	17.600		3.30	7.000	11.00	17.600	●
175	17.860	45/64	3.30	7.000	11.00	17.860	●
180	18.000		3.30	8.000	12.60	18.000	●
180	18.260	23/32	3.40	8.000	12.60	18.260	●
185	18.500		3.40	8.000	12.60	18.500	●
185	18.650	47/64	3.40	8.000	12.60	18.650	●
190	19.000		3.50	8.000	12.60	19.000	●
190	19.050	3/4	3.50	8.000	12.60	19.050	●
190	19.250		3.60	8.000	12.60	19.250	●
190	19.450	49/64	3.60	8.000	12.60	19.450	●
195	19.500		3.60	8.000	12.60	19.500	●
195	19.600		3.60	8.000	12.60	19.600	●
195	19.840	25/32	3.70	8.000	12.60	19.840	●
200	20.000		3.70	9.000	13.90	20.000	●
200	20.240	51/64	3.70	9.000	13.90	20.240	●
205	20.500		3.80	9.000	13.90	20.500	●
205	20.640	13/16	3.80	9.000	13.90	20.640	●
210	21.000		3.90	9.000	13.90	21.000	●
210	21.030	53/64	3.90	9.000	13.90	21.030	●
210	21.100		3.90	9.000	13.90	21.100	●
210	21.430	27/32	3.90	9.000	13.90	21.430	●
215	21.500		4.00	9.000	13.90	21.500	●
215	21.830	55/64	4.00	9.000	13.90	21.830	●
220	22.000		4.10	10.000	15.30	22.000	●
220	22.220	7/8	4.10	10.000	15.30	22.220	●
225	22.500		4.10	10.000	15.30	22.500	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

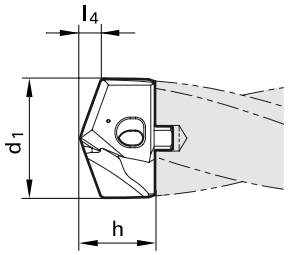
4113	4114	4115
Guhring std.		
Solid carbide		
K/P		
F	◯	a
right-hand	right-hand	right-hand
m7	h7	h7
141	141	141
135	135	135
NEW	NEW	NEW

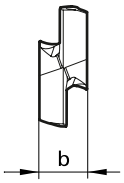
Availability		
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4112
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Cutting direction	right-hand
Tolerance	h7
Discount group	141
Techn. data page	135

NEW





holder size	d1		l4	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
225	22.620	57/64	4.20	10.000	15.30	22.620	●
230	23.000		4.20	10.000	15.30	23.000	●
230	23.020	29/32	4.20	10.000	15.30	23.020	●
230	23.420	59/64	4.30	10.000	15.30	23.420	●
235	23.500		4.30	10.000	15.30	23.500	●
235	23.810	15/16	4.40	10.000	15.30	23.810	●
240	24.000		4.40	11.000	15.80	24.000	●
240	24.100		4.40	11.000	15.80	24.100	●
240	24.210	61/64	4.50	11.000	15.80	24.210	●
245	24.500		4.50	11.000	15.80	24.500	●
245	24.610	31/32	4.50	11.000	15.80	24.610	●
250	25.000	63/64	4.60	11.000	15.80	25.000	●
250	25.400	1	4.70	11.000	15.80	25.400	●
255	25.500		4.70	11.000	15.80	25.500	●
255	25.670		4.70	11.000	15.80	25.670	●
255	25.700		4.70	11.000	15.80	25.700	●
255	25.810		4.70	11.000	15.80	25.810	●
260	26.000		4.80	12.000	20.00	26.000	●
260	26.190	1 1/32	4.80	12.000	20.00	26.190	●
260	26.500		4.90	12.000	20.00	26.500	●
260	26.590	1 3/64	4.90	12.000	20.00	26.590	●
270	27.000		5.00	12.000	20.00	27.000	●
270	27.500		5.10	12.000	20.00	27.500	●
270	27.700		5.10	12.000	20.00	27.700	●
270	27.780	1 3/32	5.10	12.000	20.00	27.780	●
280	28.000		5.10	13.000	20.70	28.000	●
280	28.180	1 7/64	5.20	13.000	20.70	28.180	●
280	28.500		5.20	13.000	20.70	28.500	●
280	28.580		5.30	13.000	20.70	28.580	●
290	29.000		5.30	13.000	20.70	29.000	●
290	29.370	1 5/32	5.40	13.000	20.70	29.370	●
290	29.500		5.40	13.000	20.70	29.500	●
290	29.770	1 11/64	5.50	13.000	20.70	29.770	●
300	30.000		5.50	14.000	22.30	30.000	●
300	30.160	1 3/16	5.50	14.000	22.30	30.160	●
300	30.500		5.60	14.000	22.30	30.500	●
300	30.960	1 7/32	5.70	14.000	22.30	30.960	●
310	31.000		5.70	14.000	22.30	31.000	●
310	31.500		5.80	14.000	22.30	31.500	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

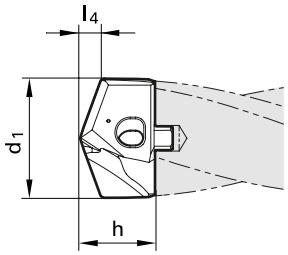
4113	4114	4115
Guhring std.		
Solid carbide		
	K/P	
F	○	a
right-hand	right-hand	right-hand
m7	h7	h7
141	141	141
135	135	135
NEW	NEW	NEW

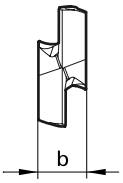
Availability		
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4112
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Cutting direction	right-hand
Tolerance	h7
Discount group	141
Techn. data page	135

NEW





holder size	d1		l4	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
310	31.750	1 1/4	5.80	14.000	22.30	31.750	●
320	32.000		5.90	15.000	23.10	32.000	●
320	32.500		6.00	15.000	23.10	32.500	●
320	32.540	1 9/32	6.00	15.000	23.10	32.540	●
320	32.940	1 19/6	6.00	15.000	23.10	32.940	●
330	33.000		6.10	15.000	23.10	33.000	●
330	33.340	1 5/16	6.10	15.000	23.10	33.340	●
330	33.500		6.10	15.000	23.10	33.500	●
340	34.000		6.20	15.000	23.10	34.000	●
340	34.130	1 11/3	6.30	15.000	23.10	34.130	●
340	34.500		6.30	15.000	23.10	34.500	●
340	34.930		6.40	15.000	23.10	34.930	●
350	35.000		6.40	15.000	23.10	35.000	●
350	35.500		6.50	15.000	23.10	35.500	●
350	35.720	1 13/3	6.60	15.000	23.10	35.720	●
360	36.000		6.60	16.000	23.90	36.000	●
360	36.500		6.70	16.000	23.90	36.500	●
360	36.510	1 7/16	6.70	16.000	23.90	36.510	●
370	37.000		6.80	16.000	23.90	37.000	●
370	37.310	1 15/3	6.80	16.000	23.90	37.310	●
370	37.500		6.90	16.000	23.90	37.500	●
380	38.000		7.00	16.000	23.90	38.000	●
380	38.100	1 1/2	7.00	16.000	23.90	38.100	●
380	38.460		7.00	16.000	23.90	38.460	●
380	38.500	1 33/6	7.10	16.000	23.90	38.500	●
390	39.000		7.10	16.000	23.90	39.000	●
390	39.500		7.20	16.000	23.90	39.500	●
400	40.000		7.30	16.000	23.90	40.000	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

4113	4114	4115
Guhring std.		
Solid carbide		
K/P		
F	○	a
right-hand	right-hand	right-hand
m7	h7	h7
141	141	141
135	135	135
NEW	NEW	NEW

Availability		
●	●	●
●	●	●
●	●	●
●	●	●
●	●	
●	●	
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
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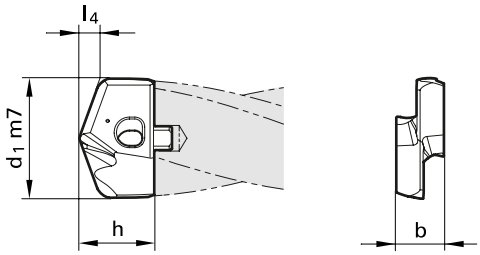
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4111
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	a
Cutting direction	right-hand
Tolerance	m7
Discount group	141
Techn. data page	136

NEW

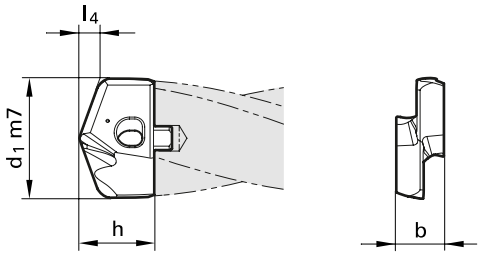


holder size	d1		l4	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
110	11.000		1.80	4.500	7.20	11.000	●
110	11.200		1.80	4.500	7.20	11.200	●
110	11.500		1.90	4.500	7.20	11.500	●
110	11.510	29/64	1.90	4.500	7.20	11.510	●
110	11.700		1.90	4.500	7.20	11.700	●
110	11.800		1.90	4.500	7.20	11.800	●
110	11.910	15/32	1.90	4.500	7.20	11.910	●
120	12.000		1.90	5.000	7.40	12.000	●
120	12.100		2.00	5.000	7.40	12.100	●
120	12.200		2.00	5.000	7.40	12.200	●
120	12.300	31/64	2.00	5.000	7.40	12.300	●
120	12.500		2.00	5.000	7.40	12.500	●
120	12.600		2.00	5.000	7.40	12.600	●
120	12.700	1/2	2.10	5.000	7.40	12.700	●
120	12.800		2.10	5.000	7.40	12.800	●
120	12.900		2.10	5.000	7.40	12.900	●
130	13.000		2.10	5.500	8.20	13.000	●
130	13.100	33/64	2.10	5.500	8.20	13.100	●
130	13.490	17/32	2.20	5.500	8.20	13.490	●
130	13.500		2.20	5.500	8.20	13.500	●
130	13.600		2.20	5.500	8.20	13.600	●
130	13.700		2.20	5.500	8.20	13.700	●
130	13.800		2.20	5.500	8.20	13.800	●
130	13.890	35/64	2.20	5.500	8.20	13.890	●
140	14.000		2.30	6.000	9.40	14.000	●
140	14.100		2.30	6.000	9.40	14.100	●
140	14.290	9/16	2.30	6.000	9.40	14.290	●
140	14.400		2.30	6.000	9.40	14.400	●
140	14.500		2.30	6.000	9.40	14.500	●
140	14.600		2.40	6.000	9.40	14.600	●
140	14.680	37/64	2.40	6.000	9.40	14.680	●
140	14.700		2.40	6.000	9.40	14.700	●
140	14.800		2.40	6.000	9.40	14.800	●
150	15.000		2.40	6.000	9.40	15.000	●
150	15.080	19/32	2.40	6.000	9.40	15.080	●
150	15.100		2.40	6.000	9.40	15.100	●
150	15.200		2.40	6.000	9.40	15.200	●
150	15.300		2.50	6.000	9.40	15.300	●
150	15.480	39/64	2.50	6.000	9.40	15.480	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4111
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	a
Cutting direction	right-hand
Tolerance	m7
Discount group	141
Techn. data page	136

NEW

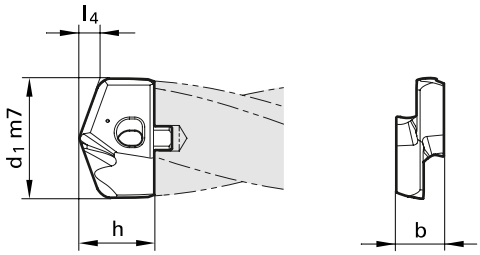


holder size	d1		l4	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
150	15.500		2.50	6.000	9.40	15.500	●
150	15.600		2.50	6.000	9.40	15.600	●
150	15.700		2.50	6.000	9.40	15.700	●
150	15.800		2.50	6.000	9.40	15.800	●
150	15.870	5/8	2.60	6.000	9.40	15.870	●
160	16.000		2.60	7.000	10.60	16.000	●
160	16.270	41/64	2.60	7.000	10.60	16.270	●
160	16.500		2.70	7.000	10.60	16.500	●
160	16.670	21/32	2.70	7.000	10.60	16.670	●
170	17.000		2.70	7.000	10.60	17.000	●
170	17.070	43/64	2.70	7.000	10.60	17.070	●
170	17.460	11/16	2.80	7.000	10.60	17.460	●
170	17.500		2.80	7.000	10.60	17.500	●
170	17.600		2.80	7.000	10.60	17.600	●
170	17.860	45/64	2.90	7.000	10.60	17.860	●
180	18.000		2.90	8.000	12.10	18.000	●
180	18.260	23/32	2.90	8.000	12.10	18.260	●
180	18.500		3.00	8.000	12.10	18.500	●
180	18.650	47/64	3.00	8.000	12.10	18.650	●
190	19.000		3.00	8.000	12.10	19.000	●
190	19.050	3/4	3.10	8.000	12.10	19.050	●
190	19.450	49/64	3.10	8.000	12.10	19.450	●
190	19.500		3.10	8.000	12.10	19.500	●
190	19.600		3.10	8.000	12.10	19.600	●
190	19.840	25/32	3.20	8.000	12.10	19.840	●
200	20.000		3.20	9.000	13.30	20.000	●
200	20.240	51/64	3.20	9.000	13.30	20.240	●
200	20.500		3.30	9.000	13.30	20.500	●
200	20.640	13/16	3.30	9.000	13.30	20.640	●
210	21.000		3.40	9.000	13.30	21.000	●
210	21.030	53/64	3.40	9.000	13.30	21.030	●
210	21.100		3.40	9.000	13.30	21.100	●
210	21.430	27/32	3.40	9.000	13.30	21.430	●
210	21.500		3.40	9.000	13.30	21.500	●
210	21.830	55/64	3.50	9.000	13.30	21.830	●
220	22.000		3.50	10.000	14.80	22.000	●
220	22.220	7/8	3.60	10.000	14.80	22.220	●
220	22.500		3.60	10.000	14.80	22.500	●
220	22.620	57/64	3.60	10.000	14.80	22.620	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4111
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	a
Cutting direction	right-hand
Tolerance	m7
Discount group	141
Techn. data page	136

NEW

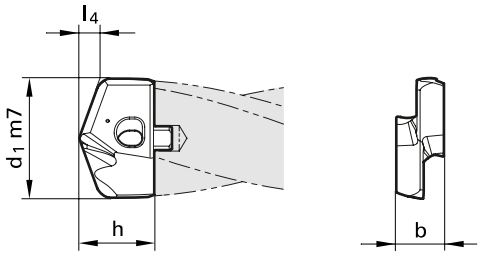


holder size	d1		l4	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
230	23.000		3.70	10.000	14.80	23.000	●
230	23.020	29/32	3.70	10.000	14.80	23.020	●
230	23.420	59/64	3.70	10.000	14.80	23.420	●
230	23.500		3.80	10.000	14.80	23.500	●
230	23.810	15/16	3.80	10.000	14.80	23.810	●
240	24.000		3.80	11.000	15.30	24.000	●
240	24.100		3.80	11.000	15.30	24.100	●
240	24.210	61/64	3.90	11.000	15.30	24.210	●
240	24.500		3.90	11.000	15.30	24.500	●
240	24.610	31/32	3.90	11.000	15.30	24.610	●
250	25.000	63/64	4.00	11.000	15.30	25.000	●
250	25.400	1	4.10	11.000	15.30	25.400	●
250	25.500		4.10	11.000	15.30	25.500	●
250	25.700		4.00	11.000	15.30	25.700	●
260	26.000		4.10	12.000	19.40	26.000	●
260	26.190	1 1/32	4.10	12.000	19.40	26.190	●
260	26.500		4.20	12.000	19.40	26.500	●
260	26.590	1 3/64	4.20	12.000	19.40	26.590	●
270	27.000		4.30	12.000	19.40	27.000	●
270	27.500		4.30	12.000	19.40	27.500	●
270	27.700		4.30	12.000	19.40	27.700	●
270	27.780	1 3/32	4.30	12.000	19.40	27.780	●
280	28.000		4.40	13.000	20.10	28.000	●
280	28.180		4.40	13.000	20.10	28.180	●
280	28.500		4.50	13.000	20.10	28.500	●
280	28.580		4.50	13.000	20.10	28.580	●
290	29.000		4.60	13.000	20.10	29.000	●
290	29.370	1 5/32	4.60	13.000	20.10	29.370	●
290	29.500		4.60	13.000	20.10	29.500	●
300	30.000		4.70	14.000	21.70	30.000	●
300	30.160	1 3/16	4.70	14.000	21.70	30.160	●
300	30.500		4.80	14.000	21.70	30.500	●
300	30.960		4.80	14.000	21.70	30.960	●
310	31.000		4.90	14.000	21.70	31.000	●
310	31.500		4.90	14.000	21.70	31.500	●
310	31.750	1 1/4	4.90	14.000	21.70	31.750	●
320	32.000		5.00	15.000	22.40	32.000	●
320	32.500		5.10	15.000	22.40	32.500	●
320	32.540	1 9/32	5.10	15.000	22.40	32.540	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4111
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	a
Cutting direction	right-hand
Tolerance	m7
Discount group	141
Techn. data page	136

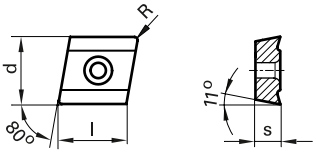
NEW



holder size	d1		l4	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
330	33.000		5.20	15.000	22.40	33.000	●
330	33.340	1 5/16	5.20	15.000	22.40	33.340	●
330	33.500		5.30	15.000	22.40	33.500	●
340	34.000		5.40	15.000	22.40	34.000	●
340	34.130	1 11/32	5.40	15.000	22.40	34.130	●
340	34.500		5.40	15.000	22.40	34.500	●
340	34.930		5.40	15.000	22.40	34.930	●
350	35.000		5.50	15.000	22.40	35.000	●
350	35.500		5.60	15.000	22.40	35.500	●
350	35.720		5.60	15.000	22.40	35.720	●
360	36.000		5.70	16.000	23.20	36.000	●
360	36.500		5.70	16.000	23.20	36.500	●
360	36.510		5.70	16.000	23.20	36.510	●
370	37.000		5.80	16.000	23.20	37.000	●
370	37.310	1 15/32	5.80	16.000	23.20	37.310	●
370	37.500		5.90	16.000	23.20	37.500	●
380	38.000		6.00	16.000	23.20	38.000	●
380	38.100	1 1/2	6.00	16.000	23.20	38.100	●
380	38.500	1 33/64	6.10	16.000	23.20	38.500	●
390	39.000		6.20	16.000	23.20	39.000	●
390	39.500		6.20	16.000	23.20	39.500	●
400	40.000		6.20	16.000	23.20	40.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

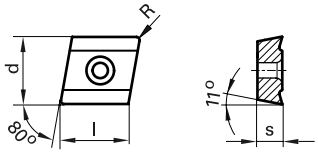
Guhring no.	7635
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	AL
Surface	◯
Cutting direction	right-hand
Discount group	142
	136



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CPGT0502	5.560	2.380	0.40	5.64	52.040	●
CPGT0602	6.350	2.380	0.40	6.45	62.040	●
CPGT09T3	9.525	3.970	0.80	9.67	93.080	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

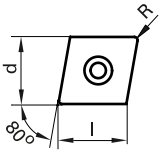
Guhring no.	7645
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	P
Surface	S
Cutting direction	right-hand
Discount group	142
	136

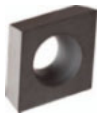


ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CPGT0502	5.560	2.380	0.40	5.64	52.040	●
CPGT0602	6.350	2.380	0.40	6.45	62.040	●
CPGT09T3	9.525	3.970	0.80	9.67	93.080	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	7632
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	A
Cutting direction	neutral
Discount group	142
	136



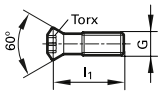


ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CPGW0502	5.560	2.380	0.40	5.64	52.040	●
CPGW0602	6.350	2.380	0.40	6.45	62.040	●
CPGW09T3	9.525	3.970	0.80	9.67	93.080	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**6128**
Standard	**Guhring std.**
Discount group	**122**
Techn. data page	

for countersinking inserts

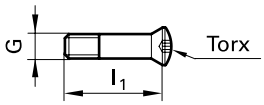


G	l1	Torx	Code no.	Availability
	mm			
M 2	5.50	T6	2.000	●
M 2,5	5.30	T7	2.500	●
M 4 X9,5	9.50	T15	4.006	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**4071**
Standard	**Guhring std.**
Discount group	**140**
Techn. data page	

for drilling inserts



G	l1	Torx	Code no.	Availability
	mm			
M 2,2	9.50	T7	2.200	●
M 2,2	10.50	T7	2.201	●
M 2,5	11.40	T8	2.500	●
M 3	12.10	T9	3.000	●
M 3	13.10	T9	3.001	●
M 3,5	14.25	T10	3.500	●
M 4	16.00	T15	4.000	●
M 4,5	18.00	T15	4.500	●
M 5	19.75	T20	5.000	●
M 5	21.75	T20	5.001	●
M 5	23.40	T20	5.003	●
M 6	27.00	T25	6.000	●
M 6	28.50	T25	6.001	●
M 6	32.50	T25	6.002	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4915
Standard	Guhring std.
Discount group	114
Techn. data page	

Type	Drive	l1	Torque	Code no.	Availability
		mm			
A	1/4	160.00	0,8...2	2.000	●
A	1/4	160.00	2...8	8.000	●
A	1/4	200.00	0,4...14	14.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**4917**
Standard	**Guhring std.**
Discount group	**140**
Techn. data page	

Torx	Drive	l1	Code no.	Availability
		mm		
T7	1/4	25.00	7.000	●
T8	1/4	25.00	8.000	●
T9	1/4	25.00	9.000	●
T10	1/4	25.00	10.000	●
T15	1/4	25.00	15.000	●
T20	1/4	25.00	20.000	●
T25	1/2	55.00	25.000	●

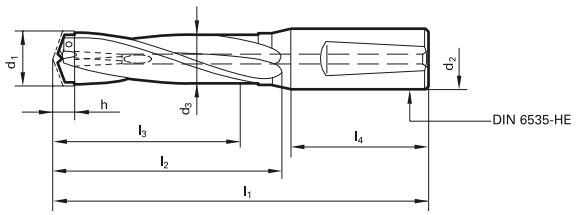
○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**1612**
Standard	**Guhring std.**
Discount group	**140**
Techn. data page	

Torx	Code no.	Availability
T6	6.000	●
T7	7.000	●
T7	7.001	●
T8	8.001	●
T9	9.001	●
T10	10.001	●
T15	15.000	●
T15	15.001	●
T20	20.001	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

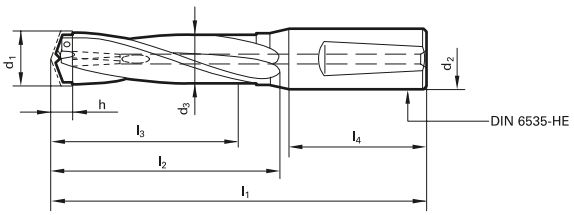
Guhring no.	5242
Standard	Guhring std.
Type	RT 800 WP
Drilling depth	3xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	136



holder size	d1	d2 h6	d3	l1	l2	l3	l4	Code no.	Availability
	mm	mm	mm	mm	mm	mm	mm		
0.1	16,00-17,00	20.000	15.700	130.00	74.40	54.00	50.00	17.000	●
0.1	16,00-17,00	19.050	15.700	130.00	74.40	54.00	50.00	17.005	●
0.2	17,01-17,99	20.000	16.700	130.00	74.60	54.00	50.00	17.990	●
0.2	17,01-17,99	19.050	16.700	130.00	74.60	54.00	50.00	17.995	●
1.1	18,00-19,00	20.000	17.700	138.00	82.70	60.00	50.00	19.000	●
1.1	18,00-19,00	19.050	17.700	138.00	82.70	60.00	50.00	19.005	●
1.2	19,01-20,00	20.000	18.700	138.00	82.90	60.00	50.00	20.000	●
1.2	19,01-20,00	19.050	18.700	138.00	82.90	60.00	50.00	20.005	●
2.1	20,01-21,00	25.000	19.700	153.00	91.60	66.00	56.00	21.000	●
2.1	20,01-21,00	25.400	19.700	153.00	91.60	66.00	56.00	21.005	●
2.2	21,01-22,50	25.000	20.700	153.00	91.80	66.00	56.00	22.500	●
2.2	21,01-22,50	25.400	20.700	153.00	91.80	66.00	56.00	22.505	●
3.1	22,51-24,00	25.000	22.200	161.00	99.40	72.00	56.00	24.000	●
3.1	22,51-24,00	25.400	22.200	161.00	99.40	72.00	56.00	24.005	●
3.2	24,01-25,50	25.000	23.700	170.00	108.70	78.00	56.00	25.500	●
3.2	24,01-25,50	25.400	23.700	170.00	108.70	78.00	56.00	25.505	●
4.1	25,51-27,50	32.000	25.200	182.00	116.00	84.00	60.00	27.500	●
4.1	25,51-27,50	31.750	25.200	182.00	116.00	84.00	60.00	27.505	●
4.2	27,51-29,50	32.000	27.200	190.00	124.40	90.00	60.00	29.500	●
4.2	27,51-29,50	31.750	27.200	190.00	124.40	90.00	60.00	29.505	●
5.1	29,51-32,00	32.000	29.200	198.00	131.60	96.00	60.00	32.000	●
5.1	29,51-32,00	31.750	29.200	198.00	131.60	96.00	60.00	32.005	●
5.2	32,01-34,50	32.000	31.700	206.00	140.10	102.00	60.00	34.500	●
5.2	32,01-34,50	31.750	31.700	206.00	140.10	102.00	60.00	34.505	●
6.1	34,51-37,50	32.000	34.000	218.00	151.10	114.00	60.00	37.500	●
6.1	34,51-37,50	31.750	34.000	218.00	151.10	114.00	60.00	37.505	●
6.2	37,51-40,50	32.000	37.000	231.00	163.70	120.00	60.00	40.500	●
6.2	37,51-40,50	31.750	37.000	231.00	163.70	120.00	60.00	40.505	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

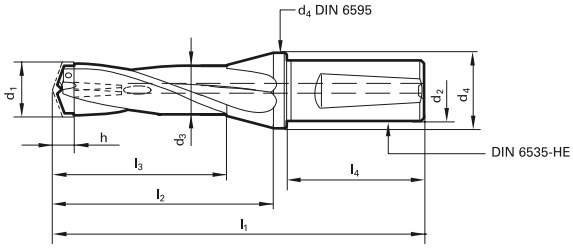
Guhring no.	5243
Standard	Guhring std.
Type	RT 800 WP
Drilling depth	5xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	137



holder size	d1	d2 h6	d3	l1	l2	l3	l4	Code no.	Availability
	mm	mm	mm	mm	mm	mm	mm		
0.1	16,00-17,00	20.000	15.700	166.00	110.40	90.00	50.00	17.000	●
0.1	16,00-17,00	19.050	15.700	166.00	110.40	90.00	50.00	17.005	●
0.2	17,01-17,99	20.000	16.700	166.00	110.60	90.00	50.00	17.990	●
0.2	17,01-17,99	19.050	16.700	166.00	110.60	90.00	50.00	17.995	●
1.1	18,00-19,00	20.000	17.700	178.00	122.70	100.00	50.00	19.000	●
1.1	18,00-19,00	19.050	17.700	178.00	122.70	100.00	50.00	19.005	●
1.2	19,01-20,00	20.000	18.700	178.00	122.90	100.00	50.00	20.000	●
1.2	19,01-20,00	19.050	18.700	178.00	122.90	100.00	50.00	20.005	●
2.1	20,01-21,00	25.000	19.700	197.00	135.60	110.00	56.00	21.000	●
2.1	20,01-21,00	25.400	19.700	197.00	135.60	110.00	56.00	21.005	●
2.2	21,01-22,50	25.000	20.700	197.00	135.80	110.00	56.00	22.500	●
2.2	21,01-22,50	25.400	20.700	197.00	135.80	110.00	56.00	22.505	●
3.1	22,51-24,00	25.000	22.200	209.00	147.40	120.00	56.00	24.000	●
3.1	22,51-24,00	25.400	22.200	209.00	147.40	120.00	56.00	24.005	●
3.2	24,01-25,50	25.000	23.700	222.00	160.70	130.00	56.00	25.500	●
3.2	24,01-25,50	25.400	23.700	222.00	160.70	130.00	56.00	25.505	●
4.1	25,51-27,50	32.000	25.200	238.00	172.00	140.00	60.00	27.500	●
4.1	25,51-27,50	31.750	25.200	238.00	172.00	140.00	60.00	27.505	●
4.2	27,51-29,50	32.000	27.200	250.00	184.40	150.00	60.00	29.500	●
4.2	27,51-29,50	31.750	27.200	250.00	184.40	150.00	60.00	29.505	●
5.1	29,51-32,00	32.000	29.200	262.00	195.60	160.00	60.00	32.000	●
5.1	29,51-32,00	31.750	29.200	262.00	195.60	160.00	60.00	32.005	●
5.2	32,01-34,50	32.000	31.700	274.00	208.10	170.00	60.00	34.500	●
5.2	32,01-34,50	31.750	31.700	274.00	208.10	170.00	60.00	34.505	●
6.1	34,51-37,50	32.000	34.000	292.00	225.10	190.00	60.00	37.500	●
6.1	34,51-37,50	31.750	34.000	292.00	225.10	190.00	60.00	37.505	●
6.2	37,51-40,50	32.000	37.000	311.00	243.70	200.00	60.00	40.500	●
6.2	37,51-40,50	31.750	37.000	311.00	243.70	200.00	60.00	40.505	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

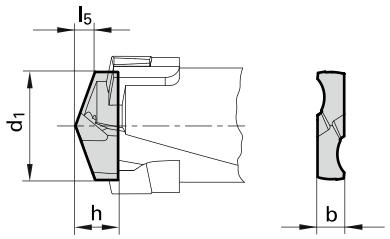
Guhring no.	5248
Standard	Guhring std.
Type	RT 800 WP
Drilling depth	7xD
Cooling	axial
Cutting direction	right-hand
Discount group	140
Techn. data page	137



holder size	d1	d2 h6	d3	d4	l1	l2	l3	l4	Code no.	Availability
	mm	mm	mm	mm	mm	mm	mm	mm		
0.1	16,00-17,00	20.000	15.700	25.000	202.00	146.40	126.00	50.00	17.000	●
0.1	16,00-17,00	19.050	15.700	25.000	202.00	146.40	126.00	50.00	17.005	●
0.2	17,01-17,99	20.000	16.700	25.000	202.00	146.60	126.00	50.00	17.990	●
0.2	17,01-17,99	19.050	16.700	25.000	202.00	146.60	126.00	50.00	17.995	●
1.1	18,00-19,00	20.000	17.700	25.000	218.00	162.70	140.00	50.00	19.000	●
1.1	18,00-19,00	19.050	17.700	25.000	218.00	162.70	140.00	50.00	19.005	●
1.2	19,01-20,00	20.000	18.700	25.000	218.00	162.90	140.00	50.00	20.000	●
1.2	19,01-20,00	19.050	18.700	25.000	218.00	162.90	140.00	50.00	20.005	●
2.1	20,01-21,00	25.000	19.700	31.000	241.00	179.60	154.00	56.00	21.000	●
2.1	20,01-21,00	25.400	19.700	31.000	241.00	179.60	154.00	56.00	21.005	●
2.2	21,01-22,50	25.000	20.700	31.000	241.00	179.80	154.00	56.00	22.500	●
2.2	21,01-22,50	25.400	20.700	31.000	241.00	179.80	154.00	56.00	22.505	●
3.1	22,51-24,00	25.000	22.200	31.000	257.00	195.40	168.00	56.00	24.000	●
3.1	22,51-24,00	25.400	22.200	31.000	257.00	195.40	168.00	56.00	24.005	●
3.2	24,01-25,50	25.000	23.700	31.000	274.00	212.70	182.00	56.00	25.500	●
3.2	24,01-25,50	25.400	23.700	31.000	274.00	212.70	182.00	56.00	25.505	●
4.1	25,51-27,50	32.000	25.200	38.000	294.00	228.00	196.00	60.00	27.500	●
4.1	25,51-27,50	31.750	25.200	38.000	294.00	228.00	196.00	60.00	27.505	●
4.2	27,51-29,50	32.000	27.200	38.000	310.00	244.40	210.00	60.00	29.500	●
4.2	27,51-29,50	31.750	27.200	38.000	310.00	244.40	210.00	60.00	29.505	●
5.1	29,51-32,00	32.000	29.200	38.000	326.00	259.60	224.00	60.00	32.000	●
5.1	29,51-32,00	31.750	29.200	38.000	326.00	259.60	224.00	60.00	32.005	●
5.2	32,01-34,50	32.000	31.700	38.000	342.00	276.10	238.00	60.00	34.500	●
5.2	32,01-34,50	31.750	31.700	38.000	342.00	276.10	238.00	60.00	34.505	●
6.1	34,51-37,50	32.000	34.000	38.000	366.00	299.10	266.00	60.00	37.500	●
6.1	34,51-37,50	31.750	34.000	38.000	366.00	299.10	266.00	60.00	37.505	●
6.2	37,51-40,50	32.000	37.000	40.500	391.00	323.70	280.00	60.00	40.500	●
6.2	37,51-40,50	31.750	37.000	40.500	391.00	323.70	280.00	60.00	40.505	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

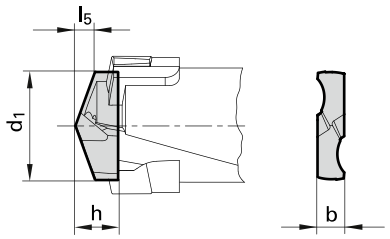
Guhring no.	2747
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Cutting direction	right-hand
Tolerance	
Discount group	141
Techn. data page	137



holder size	d1 h7		l5	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
0.1	16.000		3.00	4.500	8.00	16.000	●
0.1	16.500		3.10	4.500	8.00	16.500	●
0.1	17.000		3.10	4.500	8.00	17.000	●
0.2	17.070	43/64	3.20	4.500	8.00	17.070	●
0.2	17.500		3.20	4.500	8.00	17.500	●
0.2	17.860	45/64	3.30	4.500	8.00	17.860	●
1.1	18.000		3.30	5.000	8.00	18.000	●
1.1	18.260	23/32	3.40	5.000	8.00	18.260	●
1.1	18.650	47/64	3.40	5.000	8.00	18.650	●
1.1	19.000		3.50	5.000	8.00	19.000	●
1.2	19.050	3/4	3.50	5.000	8.00	19.050	●
1.2	19.250		3.60	5.000	8.00	19.250	●
1.2	19.450	49/64	3.60	5.000	8.00	19.450	●
1.2	19.500		3.60	5.000	8.00	19.500	●
1.2	19.840	25/32	3.70	5.000	8.00	19.840	●
1.2	20.000		3.70	5.000	8.00	20.000	●
2.1	20.500		3.80	5.500	8.80	20.500	●
2.1	20.640	13/16	3.80	5.500	8.80	20.640	●
2.1	21.000		3.90	5.500	8.80	21.000	●
2.2	21.030	53/64	3.90	5.500	8.80	21.030	●
2.2	21.430	27/32	3.90	5.500	8.80	21.430	●
2.2	21.830	55/64	4.00	5.500	8.80	21.830	●
2.2	22.000		4.10	5.500	8.80	22.000	●
2.2	22.220	7/8	4.10	5.500	8.80	22.220	●
3.1	23.420	59/64	4.30	6.300	10.00	23.420	●
3.1	23.500		4.30	6.300	10.00	23.500	●
3.1	24.000		4.40	6.300	10.00	24.000	●
3.2	24.210	61/64	4.50	6.300	10.00	24.210	●
3.2	24.500		4.50	6.300	10.00	24.500	●
3.2	25.000	63/64	4.60	6.300	10.00	25.000	●
3.2	25.500		4.70	6.300	10.00	25.500	●
4.1	26.000		4.80	7.300	11.60	26.000	●
4.1	26.500		4.90	7.300	11.60	26.500	●
4.1	27.000		5.00	7.300	11.60	27.000	●
4.1	27.500		5.10	7.300	11.60	27.500	●
4.2	28.000		5.10	7.300	11.60	28.000	●
5.1	30.000		5.50	8.500	13.60	30.000	●
5.1	30.500		5.60	8.500	13.60	30.500	●
5.1	31.000		5.70	8.500	13.60	31.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

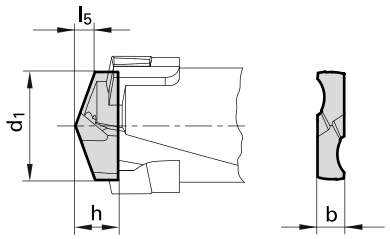
Guhring no.	2747
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Cutting direction	right-hand
Tolerance	
Discount group	141
Techn. data page	137



holder size	d1 h7		l5	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
5.1	31.500		5.80	8.500	13.60	31.500	●
5.1	32.000		5.90	8.500	13.60	32.000	●
5.2	32.500		6.00	8.500	13.60	32.500	●
5.2	33.000		6.10	8.500	13.60	33.000	●
5.2	33.500		6.10	8.500	13.60	33.500	●
5.2	34.000		6.20	8.500	13.60	34.000	●
5.2	34.500		6.30	8.500	13.60	34.500	●
6.1	35.000		6.40	10.000	16.00	35.000	●
6.1	36.000		6.60	10.000	16.00	36.000	●
6.1	37.000		6.80	10.000	16.00	37.000	●
6.2	39.000		7.10	10.000	16.00	39.000	●
6.2	40.000		7.30	10.000	16.00	40.000	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

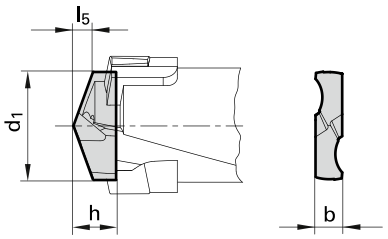
Guhring no.	2485
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Cutting direction	right-hand
Tolerance	
Discount group	141
Techn. data page	137



holder size	d1 h7		l5	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
0.1	16.000		3.00	4.500	8.00	16.000	●
0.1	16.270	41/64	3.00	4.500	8.00	16.270	●
0.1	16.500		3.10	4.500	8.00	16.500	●
0.1	16.670	21/32	3.10	4.500	8.00	16.670	●
0.1	17.000		3.10	4.500	8.00	17.000	●
0.2	17.070	43/64	3.20	4.500	8.00	17.070	●
0.2	17.460	11/16	3.20	4.500	8.00	17.460	●
0.2	17.500		3.20	4.500	8.00	17.500	●
0.2	17.860	45/64	3.30	4.500	8.00	17.860	●
1.1	18.000		3.30	5.000	8.00	18.000	●
1.1	18.260	23/32	3.40	5.000	8.00	18.260	●
1.1	18.500		3.40	5.000	8.00	18.500	●
1.1	18.650	47/64	3.40	5.000	8.00	18.650	●
1.1	19.000		3.50	5.000	8.00	19.000	●
1.2	19.050	3/4	3.50	5.000	8.00	19.050	●
1.2	19.250		3.60	5.000	8.00	19.250	●
1.2	19.450	49/64	3.60	5.000	8.00	19.450	●
1.2	19.500		3.60	5.000	8.00	19.500	●
1.2	19.840	25/32	3.70	5.000	8.00	19.840	●
1.2	20.000		3.70	5.000	8.00	20.000	●
2.1	20.240	51/64	3.70	5.500	8.80	20.240	●
2.1	20.500		3.80	5.500	8.80	20.500	●
2.1	20.640	13/16	3.80	5.500	8.80	20.640	●
2.1	21.000		3.90	5.500	8.80	21.000	●
2.2	21.030	53/64	3.90	5.500	8.80	21.030	●
2.2	21.430	27/32	3.90	5.500	8.80	21.430	●
2.2	21.500		4.00	5.500	8.80	21.500	●
2.2	21.830	55/64	4.00	5.500	8.80	21.830	●
2.2	22.000		4.10	5.500	8.80	22.000	●
2.2	22.220	7/8	4.10	5.500	8.80	22.220	●
2.2	22.500		4.10	5.500	8.80	22.500	●
3.1	22.620	57/64	4.20	6.300	10.00	22.620	●
3.1	23.000		4.20	6.300	10.00	23.000	●
3.1	23.020	29/32	4.20	6.300	10.00	23.020	●
3.1	23.420	59/64	4.30	6.300	10.00	23.420	●
3.1	23.500		4.30	6.300	10.00	23.500	●
3.1	23.810	15/16	4.40	6.300	10.00	23.810	●
3.1	24.000		4.40	6.300	10.00	24.000	●
3.2	24.210	61/64	4.50	6.300	10.00	24.210	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

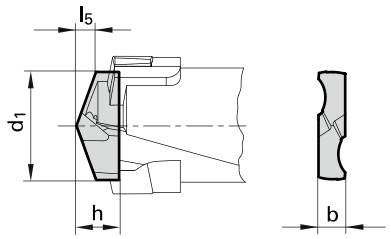
Guhring no.	2485
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Cutting direction	right-hand
Tolerance	
Discount group	141
Techn. data page	137



holder size	d1 h7		l5	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
3.2	24.500		4.50	6.300	10.00	24.500	●
3.2	24.610	31/32	4.50	6.300	10.00	24.610	●
3.2	25.000	63/64	4.60	6.300	10.00	25.000	●
3.2	25.400	1	4.70	6.300	10.00	25.400	●
3.2	25.500		4.70	6.300	10.00	25.500	●
4.1	26.000		4.80	7.300	11.60	26.000	●
4.1	26.500		4.90	7.300	11.60	26.500	●
4.1	27.000		5.00	7.300	11.60	27.000	●
4.1	27.500		5.10	7.300	11.60	27.500	●
4.2	28.000		5.10	7.300	11.60	28.000	●
4.2	28.500		5.20	7.300	11.60	28.500	●
4.2	29.000		5.30	7.300	11.60	29.000	●
4.2	29.500		5.40	7.300	11.60	29.500	●
5.1	30.000		5.50	8.500	13.60	30.000	●
5.1	30.500		5.60	8.500	13.60	30.500	●
5.1	31.000		5.70	8.500	13.60	31.000	●
5.1	31.500		5.80	8.500	13.60	31.500	●
5.1	32.000		5.90	8.500	13.60	32.000	●
5.2	32.500		6.00	8.500	13.60	32.500	●
5.2	33.000		6.10	8.500	13.60	33.000	●
5.2	33.500		6.10	8.500	13.60	33.500	●
5.2	34.000		6.20	8.500	13.60	34.000	●
5.2	34.500		6.30	8.500	13.60	34.500	●
6.1	35.000		6.40	10.000	16.00	35.000	●
6.1	36.000		6.60	10.000	16.00	36.000	●
6.1	37.000		6.80	10.000	16.00	37.000	●
6.1	37.500		6.90	10.000	16.00	37.500	●
6.2	38.000		7.00	10.000	16.00	38.000	●
6.2	39.000		7.10	10.000	16.00	39.000	●
6.2	40.000		7.30	10.000	16.00	40.000	●
6.2	40.500		7.40	10.000	16.00	40.500	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

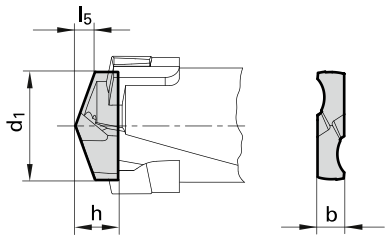
Guhring no.	1047
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	S
Cutting direction	right-hand
Tolerance	
Discount group	141
Techn. data page	137



holder size	d1 h7		l5	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
0.1	16.000		3.00	4.500	8.00	16.000	●
0.1	16.270	41/64	3.00	4.500	8.00	16.270	●
0.1	16.500		3.10	4.500	8.00	16.500	●
0.1	16.670	21/32	3.10	4.500	8.00	16.670	●
0.1	17.000		3.10	4.500	8.00	17.000	●
0.2	17.070	43/64	3.20	4.500	8.00	17.070	●
0.2	17.460	11/16	3.20	4.500	8.00	17.460	●
0.2	17.500		3.20	4.500	8.00	17.500	●
0.2	17.860	45/64	3.30	4.500	8.00	17.860	●
1.1	18.000		3.30	5.000	8.00	18.000	●
1.1	18.260	23/32	3.40	5.000	8.00	18.260	●
1.1	18.500		3.40	5.000	8.00	18.500	●
1.1	18.650	47/64	3.40	5.000	8.00	18.650	●
1.1	19.000		3.50	5.000	8.00	19.000	●
1.2	19.050	3/4	3.50	5.000	8.00	19.050	●
1.2	19.250		3.60	5.000	8.00	19.250	●
1.2	19.450	49/64	3.60	5.000	8.00	19.450	●
1.2	19.500		3.60	5.000	8.00	19.500	●
1.2	19.840	25/32	3.70	5.000	8.00	19.840	●
1.2	20.000		3.70	5.000	8.00	20.000	●
2.1	20.240	51/64	3.70	5.500	8.80	20.240	●
2.1	20.500		3.80	5.500	8.80	20.500	●
2.1	20.640	13/16	3.80	5.500	8.80	20.640	●
2.1	21.000		3.90	5.500	8.80	21.000	●
2.2	21.030	53/64	3.90	5.500	8.80	21.030	●
2.2	21.430	27/32	3.90	5.500	8.80	21.430	●
2.2	21.500		4.00	5.500	8.80	21.500	●
2.2	21.830	55/64	4.00	5.500	8.80	21.830	●
2.2	22.000		4.10	5.500	8.80	22.000	●
2.2	22.220	7/8	4.10	5.500	8.80	22.220	●
2.2	22.500		4.10	5.500	8.80	22.500	●
3.1	22.620	57/64	4.20	6.300	10.00	22.620	●
3.1	23.000		4.20	6.300	10.00	23.000	●
3.1	23.020	29/32	4.20	6.300	10.00	23.020	●
3.1	23.420	59/64	4.30	6.300	10.00	23.420	●
3.1	23.500		4.30	6.300	10.00	23.500	●
3.1	23.810	15/16	4.40	6.300	10.00	23.810	●
3.1	24.000		4.40	6.300	10.00	24.000	●
3.2	24.210	61/64	4.50	6.300	10.00	24.210	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

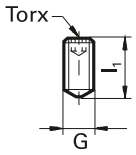
Guhring no.	1047
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	S
Cutting direction	right-hand
Tolerance	
Discount group	141
Techn. data page	137



holder size	d1 h7		l5	b	h	Code no.	Availability
	mm	inch	mm	mm	mm		
3.2	24.500		4.50	6.300	10.00	24.500	●
3.2	24.610	31/32	4.50	6.300	10.00	24.610	●
3.2	25.000	63/64	4.60	6.300	10.00	25.000	●
3.2	25.400	1	4.70	6.300	10.00	25.400	●
3.2	25.500		4.70	6.300	10.00	25.500	●
4.1	26.000		4.80	7.300	11.60	26.000	●
4.1	26.500		4.90	7.300	11.60	26.500	●
4.1	27.000		5.00	7.300	11.60	27.000	●
4.1	27.500		5.10	7.300	11.60	27.500	●
4.2	28.000		5.10	7.300	11.60	28.000	●
4.2	28.500		5.20	7.300	11.60	28.500	●
4.2	29.000		5.30	7.300	11.60	29.000	●
4.2	29.500		5.40	7.300	11.60	29.500	●
5.1	30.000		5.50	8.500	13.60	30.000	●
5.1	30.500		5.60	8.500	13.60	30.500	●
5.1	31.000		5.70	8.500	13.60	31.000	●
5.1	31.500		5.80	8.500	13.60	31.500	●
5.1	32.000		5.90	8.500	13.60	32.000	●
5.2	32.500		6.00	8.500	13.60	32.500	●
5.2	33.000		6.10	8.500	13.60	33.000	●
5.2	33.500		6.10	8.500	13.60	33.500	●
5.2	34.000		6.20	8.500	13.60	34.000	●
5.2	34.500		6.30	8.500	13.60	34.500	●
6.1	35.000		6.40	10.000	16.00	35.000	●
6.1	36.000		6.60	10.000	16.00	36.000	●
6.1	37.000		6.80	10.000	16.00	37.000	●
6.1	37.500		6.90	10.000	16.00	37.500	●
6.2	38.000		7.00	10.000	16.00	38.000	●
6.2	39.000		7.10	10.000	16.00	39.000	●
6.2	40.000		7.30	10.000	16.00	40.000	●
6.2	40.500		7.40	10.000	16.00	40.500	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**1071**
Standard	**Guhring std.**
Discount group	**140**
Techn. data page	



G	l1	Torx	Code no.	Availability
	mm			
M 3 X0,35	7.00	T6	3.000	●
M 3 X0,35	6.00	T6	3.006	●
M 3,5X0,35	8.00	T7	3.500	●
M 4 X0,5	9.00	T8	4.000	●
M 4,5X0,5	10.00	T8	4.500	●
M 5 X0,5	11.00	T10	5.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**4915**
Standard	**Guhring std.**
Discount group	**114**
Techn. data page	

Type	Drive	l1	Torque	Code no.	Availability
		mm			
A	1/4	160.00	1...5	5.001	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**4917**
Standard	**Guhring std.**
Discount group	**140**
Techn. data page	

Torx	Drive	l1	Code no.	Availability
		mm		
T6	1/4	25.00	6.000	●
T8	1/4	25.00	8.000	●
T10	1/4	25.00	10.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

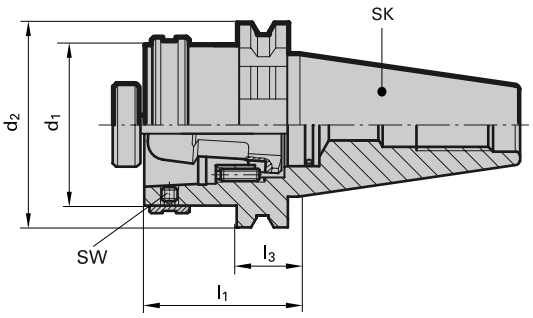
Guhring no.	**1612**
Standard	**Guhring std.**
Discount group	**140**
Techn. data page	

Torx	Code no.	Availability
T6	6.000	●
T8	8.000	●
T10	10.000	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

ISO taper holder (DIN 69871, form AD)/HSK-C

Guhring no.	**4512**
Standard	**Guhring std.**
Discount group	**114**
Techn. data page	**138**

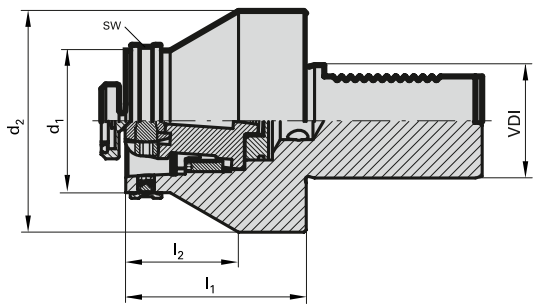


ISO taper size	HSK-C d1	d2	l1	l3	SW		Code no.
	mm	mm	mm	mm		kg	
40	63	63.5	70	19.05	5.0	1.38	40,063
50	63	97.5	40	19.05	5.0	2.73	50,063
50	80	97.5	70	19.05	6.0	3.70	50,080
50	100	97.5	100	19.05	8.0	4.90	50,100
60	100	155.0	40	19.05	8.0	9.70	60,100

Availability
●
●
●
●
●

Holder with straight shank (VDI) to DIN 69880-1/HSK-C

Guhring no.	**4510**
Standard	**Guhring std.**
Discount group	**114**
Techn. data page	**138**



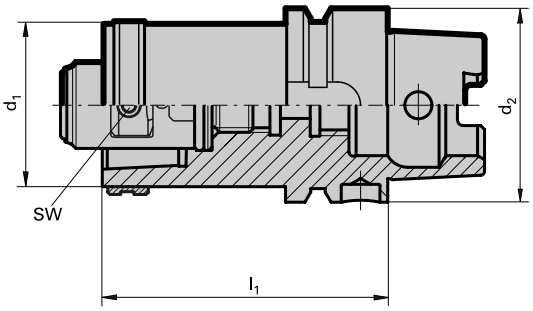
VDI size	HSK-C d1	d2	l1	l2	SW		Code no.
	mm	mm	mm	mm		kg	
40	63	83	80	50	5	2.38	40,063
50	63	98	80	50	5	4.21	50,063
50	80	98	100	70	6	5.00	50,080
60	80	123	100	62	6	8.10	60,080
60	100	123	125	87	8	9.70	60,100

Availability
●
●
●
●
●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Reductions HSK-C/HSK-A

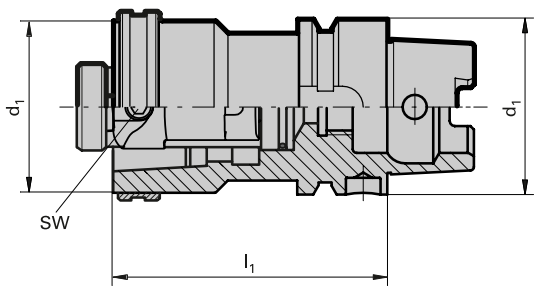
Guhring no.	**4355**
Standard	**Guhring std.**
Discount group	**114**
Techn. data page	**138**



HSK-C	HSK-A		SW		Code no.	Availability
d1	d2	l1				
mm	mm	mm		kg		
63	80	100	5	2.69	63,080	●
63	100	100	5	3.31	63,100	●
80	100	120	6	5.13	80,100	●

Extensions HSK-C/HSK-A

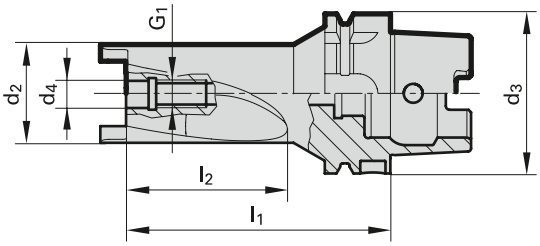
Guhring no.	**4549**
Standard	**Guhring std.**
Discount group	**114**
Techn. data page	**138**



HSK-C	HSK-A		SW		Code no.	Availability
d1	d2	l1				
mm	mm	mm		kg		
63	63	100	4	1.84	100,063	●
63	63	140	5	2.30	140,063	●
80	80	120	4	3.90	120,080	●
80	80	160	6	5.40	160,080	●
100	100	140	5	7.80	140,100	●
100	100	200	6	10.54	200,100	●

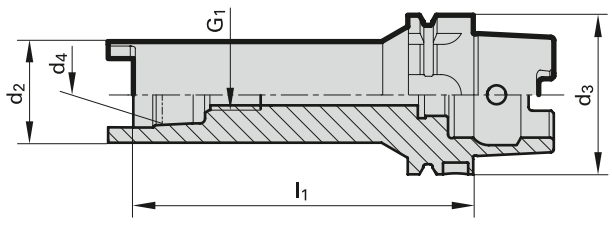
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Guhring no.	**4142**
Standard	**Guhring std.**
Flute	**15° spiral**
Discount group	**114**
Techn. data page	**139**



for holder size	d2 mm	HSK-A d3 mm	d4 mm	l1 mm	l2 mm	G1	kg	Code no.	Availability
400-490	38.7	63	10.5	105	65	M10	1.2	63,105	●
400-490	38.7	63	10.5	180	140	M10	1.5	63,180	●
520/560	50.7	63	12.5	120	88	M12	1.6	63,120	●
520/560	50.7	63	12.5	210	178	M12	2.4	63,210	●

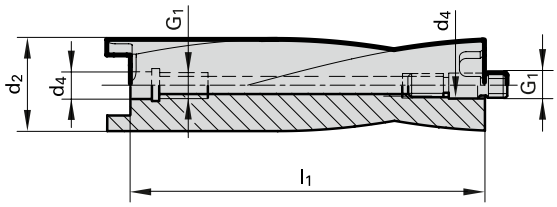
Guhring no.	**4144**
Standard	**Guhring std.**
Flute	**without**
Discount group	**114**
Techn. data page	**141**



for holder size	d2 mm	HSK-A d3 mm	d4 mm	l1 mm	G1	kg	Code no.	Availability
600/650	40	63	24	135	M14	1.6	63,135	●
600/650	40	63	24	240	M14	2.6	63,240	●
700-800	48	80	30	160	M16	2.8	80,160	●
700-800	48	80	30	290	M16	4.5	80,290	●
850-950	58	100	38	180	M16	4.8	100,180	●
850-950	58	100	38	330	M16	7.8	100,330	●

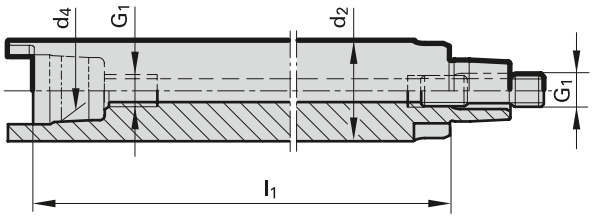
C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Guhring no.	4148
Standard	Guhring std.
Flute	15° spiral
Discount group	114
Techn. data page	139



for holder size	d2 mm	d4 mm	l1 mm	G1	kg	Code no.	Availability
400-490	38.7	10.5	150	M10	0.8	10,150	●
520/560	50.7	12.5	180	M12	1.7	12,180	●

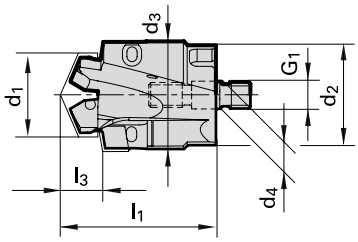
Guhring no.	4149
Standard	Guhring std.
Flute	without
Discount group	114
Techn. data page	141

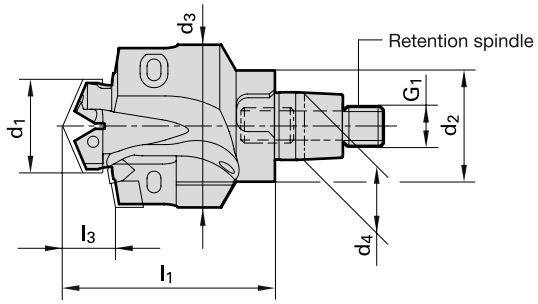


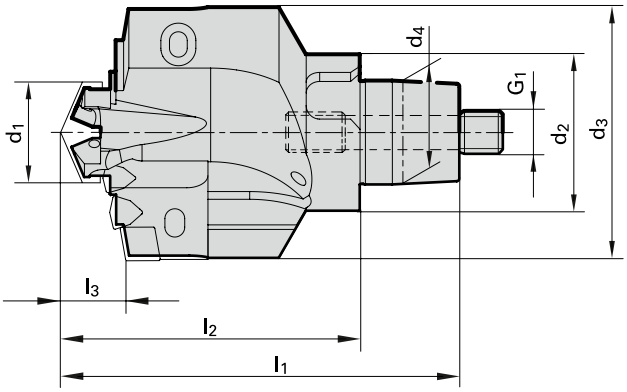
for holder size	d2 mm	d4 mm	l1 mm	G1	kg	Code no.	Availability
600/650	40	24	210	M14	1.9	40,210	●
700-800	48	30	255	M16	3.3	48,255	●
850-950	58	38	300	M16	5.7	58,300	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Guhring no.	**4150**
Standard	**Guhring std.**
Discount group	**114**
Techn. data page	**143**





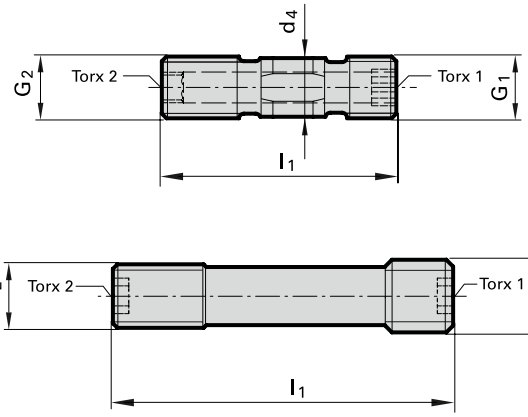


for holder size	d1 mm	Cartridge with index. inserts	d2 mm	d3 mm	d4 mm	l1 mm	l2 mm	l3 mm	G1	kg	Code no.	Availability
400	27	1	38.7	38.7	10.5	–	60	14	M10	0.20	40,043	●
430	30	1	38.7	41.7	10.5	–	60	15	M10	0.22	43,046	●
460	28	1	38.7	44.7	10.5	–	60	15	M10	0.22	46,049	●
490	31	1	38.7	47.7	10.5	–	60	16	M10	0.24	49,052	●
520	34	1	50.7	50.7	12.5	–	70	18	M12	0.39	52,056	●
560	27	2	50.7	54.5	12.5	–	70	17	M12	0.41	56,060	●
600	32	2	40.0	58.5	24.0	99	75	18	M14	0.63	60,065	●
650	32	2	40.0	63.5	24.0	104	80	19	M14	0.73	65,070	●
700	32	2	48.0	68.5	30.0	115	85	20	M16	0.98	70,075	●
750	32	3	48.0	73.5	30.0	130	100	23	M16	1.21	75,080	●
800	32	3	48.0	78.5	30.0	130	100	23	M16	1.24	80,085	●
850	34	3	58.0	83.5	38.0	142	105	21	M16	1.70	85,090	●
900	32	3	58.0	88.5	38.0	147	110	25	M16	1.90	90,095	●
950	34	3	58.0	93.5	38.0	147	110	23	M16	2.10	95,100	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Retention spindles (Torx-Screws)

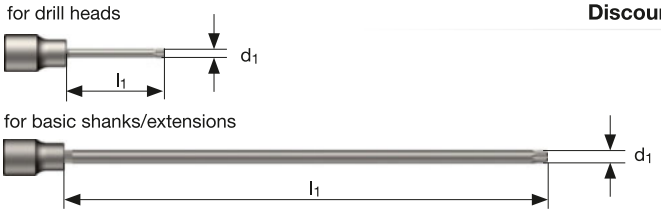
Guhring no.	**4164**
Standard	**Guhring std.**
Discount group	



für Träger-Größe	d4 mm	l1 mm	Torx 1	Torx 12	G1	G2	Code no.	Availability
400-490	10.5	38	T40	T30	M10	M10x1	40,052	●
520/560	12.5	45	T45	T30	M12	M12x1	52,060	●
600/650	–	55	T45	T45	M14	M14x1	60,070	●
700-800	–	65	T45	T45	M16	M14x1	70,085	●
850-950	–	75	T45	T45	M16	M14x1	85,100	●

Torx driver sockets (retention spindles)

Guhring no.	**4188**
Discount group	**114**



suitable for	Torx d1	l1 mm	Code no.	Availability
drill heads	T30	60	30,060	●
basic shanks/ extensions	T30	210	30,210	●
	T40	180	40,180	●
drill heads	T45	105	45,105	●
basic shanks/ extensions	T45	300	45,300	●

Torque key

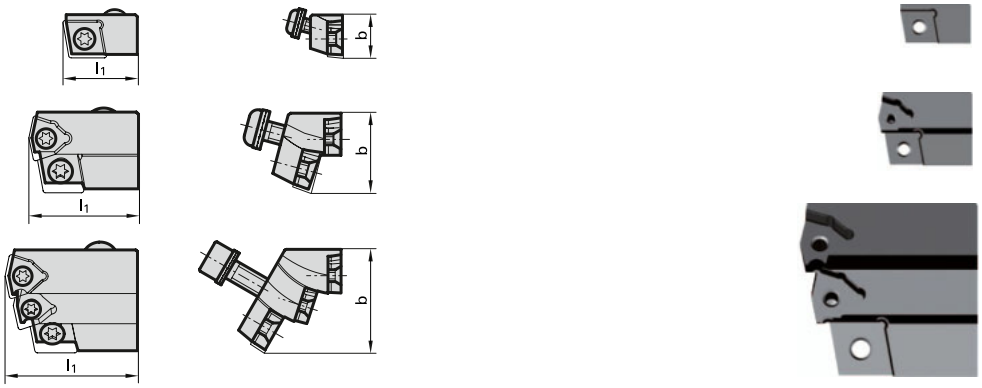
Guhring no.	**4915**
Discount group	**114**

suitable for	Type	Drive	l1 mm	Torque Nm	Code no.	Availability
drill heads, basic shanks and extensions	C	1/2" ■	480	20-200	200,00	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Cartridges for indexable inserts

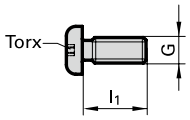
Guhring no.	**4160**
Standard	**Guhring std.**
Discount group	**114**
Techn. data page	**139**



for holder size	for insert no.	b mm	l1 mm	Code no.	Availability
400/430	1	11,0	19.5	40,046	●
460-520	1	14,0	23.6	46,056	●
560/600	2	18,2	25.4	56,065	●
650	2	21,0	25.4	65,070	●
700	2	23,9	29.4	70,075	●
750	3	23,3	35.5	75,080	●
800/850	3	26,0	39.0	80,090	●
900/950	3	30,2	39.0	90,100	●

Clamping screws for interchangeable inserts

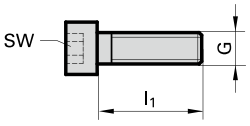
Guhring no.	**4189**
Discount group	**114**



for holder size	l1 mm	G	Torx	Code no.	Availability
400/430	9.4	M3.5	T10	3,500	●
460-520	10.0	M4	T15	4,000	●
560 / 600 / 650	12.0	M4.5	T15	4,500	●

Fastening screw for cartridges

Guhring no.	**4907**
Standard	**DIN EN ISO 4762**
Discount group	**114**

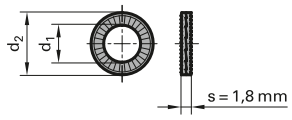


for holder size	l1 mm	G	SW	Code no.	Availability
700	16	M5	SW4	5,161	●
750	14	M6	SW5	6,140	●
800/850	16	M6	SW5	6,161	●
900/950	20	M6	SW5	6,201	●

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Serrated lock washers (Nord-Lock®)

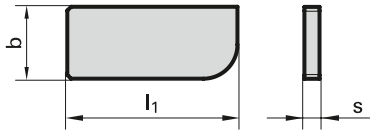
Guhring no.	**4104**
Standard	**Guhring std.**
Discount group	**114**



for holder size	d1 mm	d2 mm	Code no.	Availability
400/430	3,9	7,6	3,500	●
460-520	4,4	7,6	4,000	●
560	5,4	9,0	5,000	●
700	5,4	9,0	5,000	●
750-950	6,5	10,8	6,000	●

Distance piece (sets)

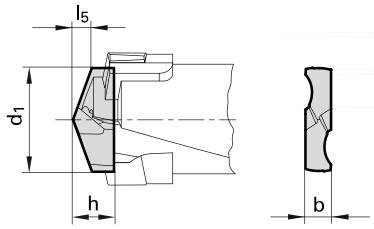
Guhring no.	**4168**
Standard	**Guhring std.**
Discount group	**114**



for holder size	l1 mm	b mm	thickness and quantity (2x) s mm	Code no.	Availability
400/430	18,5	8,5	0,5/1,0/1,5	40,046	●
460-520	22,5	9,5	0,5/1,0/1,5/2,0	46,056	●
560 / 600 / 650	22,5	11,0	0,5/1,0/1,5/2,0	56,070	●
700	26,5	11,5	0,5/1,0/1,5/2,0	70,075	●
750	33,0	13,5	0,5/1,0/1,5/2,0	75,080	●
800/850	36,5	13,5	0,5/1,0/1,5/2,0	80,090	●
900/950	36,0	15,0	0,5/1,0/1,5/2,0	90,100	●

Central interchangeable inserts

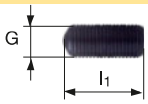
Guhring no.	2747	1047	2485
Standard	Guhring std.	Guhring std.	Guhring std.
Tool material	Solid carbide	Solid carbide	Solid carbide
Carbide grade	K	K/P	K/P
Surface finish	◯	S	F
Discount group	141	141	141
Techn. data page	142	142	142



for insert size	d1 h7 mm	l5 mm	b mm	h mm	Availability		
400/560	27.00	4.9	7.3	11.6	●	●	●
460	28.00	5.1	7.3	11.6	●	●	●
430	30.00	5.5	8.5	13.6	●	●	●
490	31.00	5.6	8.5	13.6	●	●	●
600-800/900	32.00	5.8	8.5	13.6	●	●	●
520 / 850 / 950	34.00	6.2	8.5	13.6	●	●	●

Clamping screws for central interchangeable inserts

Guhring no.	1071
Discount group	140



for insert size	G	l1 mm	Torx	Code no.	Availability
400/460/560	M4x0.5	9.00	T8	4,000	●
430/490/600-950	M4.5x0.5	10.00	T8	4,500	●

Torque key

Guhring no.	4915
Discount group	114

Type	Drive	l1 mm	Torque Nm	Code no.	Availability
A	1/4“	160	1-5	5,001	●

Torx-Bits

Guhring no.	4917
Discount group	140

for Torx	Drive	l1 mm	Code no.	Availability
T8	1/4“ ⬢	25	8,000	●

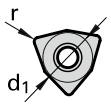
Torx Screwdriver

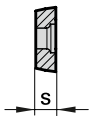
Guhring no.	1612
Discount group	140

for Torx	Code no.	Availability
T8	8,001	●

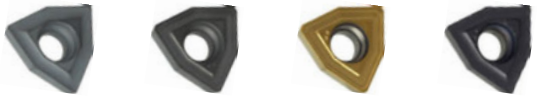
Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Indexable inserts LTT (internal)



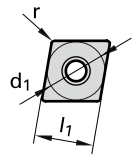


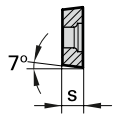
Guhring no.	4170	4171	4172	4173
Standard	Guhring std.	Guhring std.	Guhring std.	Guhring std.
Tool material	Solid carbide	Solid carbide	Solid carbide	Solid carbide
Carbide grade	N10	K10	P25	P40
Surface finish	○	○	Ⓢ	Ⓐ
Discount group	142	142	142	142
Techn. data page	142	142	142	142



Insert size / Größe	Insert description	d1 mm	r mm	s mm	Code no.	Availability			
05	LTT05T304	8.0	0.4	3.80	53,040	●			●
05	LTT05T308	8.0	0.8	3.80	53,080		●	●	
06	LTT06T304	10.0	0.4	3.80	63,040	●			●
06	LTT06T308	10.0	0.8	3.80	63,080		●	●	

CCHX indexable inserts (external)



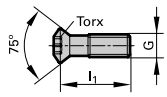


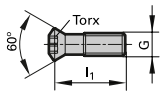
Guhring no.	4179	4180	4181	4182
Standard	Guhring std.	Guhring std.	Guhring std.	Guhring std.
Tool material	Solid carbide	Solid carbide	Solid carbide	Solid carbide
Carbide grade	N15	K10	P25	M35
Surface finish	○	Ⓢ	Ⓢ	Ⓢ
Discount group	142	142	142	142
Techn. data page	142	142	142	142

Insert size / Größe	Insert description	d1 mm	r mm	s mm	l1 mm	Code no.	Availability			
09	CCHX09T308	9.525	0.8	3.97	9.35	93,080	●	●	●	●
12	CCHX120408	12.700	0.8	4.76	12.50	124,080	●	●	●	●

Clamping screws with 75°/60° countersink head

Guhring no.	4166	6128
Coutersink angle	75°	60°
Discount group	114	122





for insert size	for holder size	Insert no.	l1 mm	G	Torx size	Code no.	Availability	
05	500/600	2	7.4	M2.5	T8	2,500	●	
05	750-850	4	7.4	M2.5	T8	2,500	●	
06	650/700	2	7.3	M3.5	T10	3,500	●	
06	900/950	4	7.3	M3.5	T10	3,500	●	
09	400/430	2	7.3	M3.5	T10	3,500	●	
09	560-650, 750	2	7.3	M3.5	T10	3,500	●	
12	460-520, 700	2	7.5	M4.5	T15	4,501		●
12	800-950	2	7.5	M4.5	T15	4,501		●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ AlTiN SuperA

EXCLUSIVELINE

With ExclusiveLine Guhring provides high-tech tools for especially demanding machining tasks. Benefit from innovative tool geometries, application orientated tool materials as well as coatings to provide new opportunities for your production.

FR 90 chamfer collar

Techn. data page 133

Guhring no.

Discount group

Size	Ø-range	d1	d2	d3	d4	l1	l2	l4	l5	G	M
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
1	5.0	5.0	27	8	30.0	27.5	23.8	37	49	M5	12x1
2	>5- 6.0		28	9	30.0	27.5	23.8			M5	12x1
3	>6- 7.0	6.8	29	10	30.0	27.5	23.8	37	49	M5	12x1
4	>7- 8.0		30	11	30.0	27.5	23.8			M5	12x1
5	>8- 9.0	8.5	31	13	34.0	31.7	27.3	41	53	M5	18x1
6	>9- 10.0		32	14	34.0	31.7	27.3			M5	18x1
7	>10-11.0	10.2	33	15	34.0	32.1	27.3	41	53	M5	18x1
8	>11-12.0		34	16	34.0	32.1	27.3			M5	18x1
10	>13-14.0	14.0	38	19	40.0	37.6	31.8	47	59	M6	24x1,5
11	>14-15.0		39	20	40.0	37.6	31.8			M6	24x1,5
12	>15-16.0	15.5	40	21	40.0	37.6	31.8	47	59	M6	24x1,5
13	>16-17.0		42	23	43.0	43.5	36.8			M6	30x1,5
14	>17-18.0		43	24	43.0	43.5	36.8			M6	30x1,5

Indexable inserts

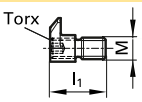
Guhring no.	1156	1056
Standard	Guhring std.	Guhring std.
Tool material	Solid carbide	Solid carbide
Carbide grade	K	K/P
Surface finish	◯	Ⓢ
Discount group	142	142

Ø-range	Code no.	Availability	
>4-12,0	4,012	●	●
>12-20,0	12,020	●	●

Adjusting element

Guhring no. 4072

Discount group 140

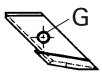


pour size	M	Torx	l1 mm	Code no.	Availability
1-14	M4	T8	9.0	4,010	●

Clamping piece

Guhring no. 1055

Discount group 140



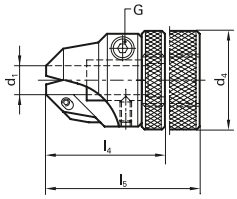
Ø-range d1	G	Code no.	Availability
>4-12.0	M2.5	4,012	●
>12-20.0	M2.5	12,020	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ AlTiN SuperA

Complete

1052

140

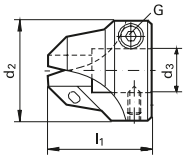


Code no.	Availability
1,050	❍
3,068	●
5,085	❍
7,102	●
10,140	❍
12,155	❍

Collars

145

140

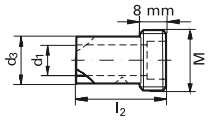


Code no.	Availability
1,050	❍
2,060	❍
3,070	❍
4,080	❍
5,090	❍
6,100	❍
7,110	❍
8,120	❍
10,140	❍
11,150	❍
12,160	❍
13,170	❍
14,180	❍

Clamp. sleeves

1053

140

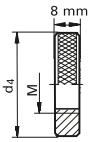


Code no.	Availability
1,050	❍
3,068	❍
5,085	❍
7,102	❍
10,140	❍
12,155	❍

Adjustment rings

1054

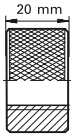
140



Code no. Größe 8	Availability
4,080	❍
4,080	❍
4,080	❍
4,080	❍
8,080	❍
8,080	❍
8,080	❍
8,080	❍
12,080	❍
12,080	❍
12,080	❍
14,080	❍
14,080	❍

1054

140



Code no. Größe 20	Availability
4,200	❍
4,200	❍
4,200	❍
4,200	❍
8,200	❍
8,200	❍
8,200	❍
8,200	❍
12,200	❍
12,200	❍
12,200	❍
14,200	❍
14,200	❍

Screwdriver

Guhring no. **1612**

Discount group **140**

pour size	pour Torx	Code no.	Availability
1-14	T8	8,000	●

Clamping screw

Guhring no. **1072**

Discount group **140**

pour size	G	l1 mm	Torx/SW	Code no.	Availability
1-14	M2.5	6.0	T8	2,500	●
1-14	M5	15.0	SW4	5,000	●
1-14	M6	16.0	SW5	6,000	●

T-handle hexagonal spanner

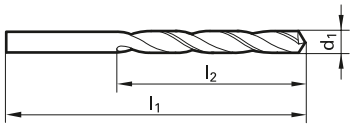
Guhring no. **4912**

Discount group **114**

SW	Code no.	Availability
4	4,000	●
5	5,000	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
0.200		19.00	2.50	● ● ● ●
0.210		19.00	2.50	● ○
0.220		19.00	2.50	● ○
0.230		19.00	2.50	●
0.240		19.00	2.50	● ○ ○
0.250		19.00	3.00	● ● ● ○
0.260		19.00	3.00	●
0.270		19.00	3.00	● ○
0.280		19.00	3.00	● ○ ○
0.290		19.00	3.00	● ○ ○
0.300		19.00	3.00	● ● ● ● ○
0.310		19.00	4.00	● ●
0.320		19.00	4.00	● ○ ●
0.330		19.00	4.00	● ○
0.340		19.00	4.00	● ○ ○ ● ○
0.350		19.00	4.00	● ● ● ●
0.360		19.00	4.00	● ○ ○
0.370		19.00	4.00	● ○
0.380		19.00	4.00	●
0.390		20.00	5.00	● ○ ○
0.400	1/64	20.00	5.00	● ● ● ● ○ ○
0.410		20.00	5.00	● ○ ○ ● ○
0.415		20.00	5.00	○
0.420		20.00	5.00	● ○ ○ ○
0.430		20.00	5.00	● ○ ○
0.440		20.00	5.00	● ○ ○
0.450		20.00	5.00	● ● ● ● ● ○
0.460		20.00	5.00	● ● ○ ●
0.470		20.00	5.00	● ● ○
0.480		20.00	5.00	● ● ○ ○
0.490		22.00	6.00	● ○ ○
0.500		22.00	6.00	● ● ● ● ● ○
0.510		22.00	6.00	● ○ ○
0.520		22.00	6.00	● ● ● ○
0.525		22.00	6.00	○
0.530		22.00	6.00	● ● ○ ○ ○
0.540		24.00	7.00	● ● ○
0.550		24.00	7.00	● ● ● ● ●
0.560		24.00	7.00	● ○ ○ ○

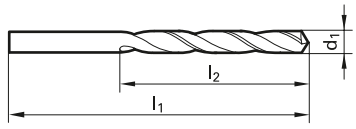
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
○	>Ø 2,36	>Ø 2,36	○	S	S	S	S	F	F
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
●									
●						❍			
●									
●									
●									
●									
●									
●									
●									
●						❍			
●						❍			
●						❍			
●									
●									
●									
●						❍			
●									
●									
●						❍			

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
0.570		24.00	7.00	● ● ● ●
0.575		24.00	7.00	
0.580		24.00	7.00	● ● ○
0.590		24.00	7.00	● ○ ○
0.600		24.00	7.00	● ● ● ● ● ●
0.610		26.00	8.00	● ● ● ● ○
0.620		26.00	8.00	● ● ● ● ○ ○
0.630		26.00	8.00	● ○
0.640		26.00	8.00	● ○ ● ● ●
0.650		26.00	8.00	● ● ● ● ●
0.660		26.00	8.00	● ● ● ○ ● ○
0.670		26.00	8.00	● ● ● ○
0.675		28.00	9.00	○
0.680		28.00	9.00	● ● ● ○
0.690		28.00	9.00	● ○ ○
0.700		28.00	9.00	● ● ● ● ● ●
0.710		28.00	9.00	● ● ● ● ○
0.720		28.00	9.00	● ● ● ○ ○ ●
0.730		28.00	9.00	● ● ● ○ ●
0.740		28.00	9.00	● ● ● ○ ○
0.750		28.00	9.00	● ● ● ● ● ○
0.760		30.00	10.00	● ● ○
0.770		30.00	10.00	● ● ○ ○
0.775		30.00	10.00	○
0.780		30.00	10.00	● ● ○ ○
0.790	1/32	30.00	10.00	● ● ● ● ○
0.800		30.00	10.00	● ● ● ● ● ●
0.810		30.00	10.00	● ● ● ● ● ●
0.820		30.00	10.00	● ● ○ ○
0.825		30.00	10.00	○
0.830		30.00	10.00	● ● ●
0.840		30.00	10.00	● ● ● ● ○
0.850		30.00	10.00	● ● ● ● ● ○
0.860		32.00	11.00	● ○ ● ● ○ ○
0.870		32.00	11.00	● ● ○ ●
0.880		32.00	11.00	● ● ○ ○ ○
0.890		32.00	11.00	● ● ● ○
0.900		32.00	11.00	● ● ● ● ● ○
0.910		32.00	11.00	● ● ● ●

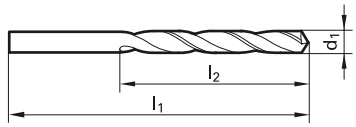
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	>Ø 2,36	>Ø 2,36	○	(S)	(S)	(S)	(S)	(F)	(F)
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
				●		❍			
	●			●		●			
				●					
				❍					
				●					
						❍			
				●		❍			
	●			●		●			
	●			●					
				●					
				●		❍			
	●			●		●			
	●			●					
				●					
				●					
				●					
	●			●		❍			
	●			●					

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
0.920		32.00	11.00	● ● ●
0.930		32.00	11.00	● ● ●
0.940		32.00	11.00	● ○
0.950		32.00	11.00	● ● ● ● ● ○
0.960		34.00	12.00	● ● ● ●
0.970		34.00	12.00	● ● ● ● ○ ○
0.980		34.00	12.00	● ○ ● ○
0.990		34.00	12.00	● ● ● ● ○
1.000		34.00	12.00	● ● ● ● ● ●
1.010		34.00	12.00	● ● ○
1.020		34.00	12.00	● ● ● ● ○ ○
1.030		34.00	12.00	● ● ●
1.040		34.00	12.00	● ● ● ○
1.050		34.00	12.00	● ● ● ● ● ○
1.060		34.00	12.00	● ● ●
1.070		36.00	14.00	● ● ● ● ○
1.080		36.00	14.00	● ● ● ●
1.090		36.00	14.00	● ○
1.100		36.00	14.00	● ● ● ● ● ●
1.110		36.00	14.00	● ○ ○
1.120		36.00	14.00	● ● ● ● ○ ○
1.130		36.00	14.00	● ○ ● ○
1.140		36.00	14.00	● ● ○
1.150		36.00	14.00	● ● ● ● ● ●
1.160		36.00	14.00	● ● ○
1.165		36.00	14.00	○
1.170		36.00	14.00	● ● ○
1.180		36.00	14.00	● ● ○ ●
1.190	3/64	38.00	16.00	● ● ● ●
1.200		38.00	16.00	● ● ● ● ● ●
1.210		38.00	16.00	● ○ ● ○ ●
1.220		38.00	16.00	● ● ● ● ● ○
1.230		38.00	16.00	● ● ○
1.240		38.00	16.00	● ● ○
1.250		38.00	16.00	● ● ● ● ● ○
1.260		38.00	16.00	● ○
1.270		38.00	16.00	● ● ● ● ●
1.280		38.00	16.00	● ● ● ○
1.290		38.00	16.00	● ● ○

○ bright ◔ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

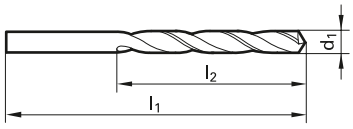
240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	>Ø 2,36	>Ø 2,36	○	S	S	S	S	F	F
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability

				●		❍			
	●			●		●			
	●			●					
	●	●		●	●	●		●	●
	●			●	●				
	●			●	●	❍			
	●			●		●			
	●			●	●	❍			
	●			●	●	●		●	❍
				●					
	●			●		❍			
				●					
	●			●	●	❍			
	●			●	●	❍			
	●			●	●	●		●	
	●			●	●				
	❍								
	●			●					
	●			●	●	●			
				❍					
				●					

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
1.300		38.00	16.00	● ● ● ● ● ○
1.305		38.00	16.00	
1.310		38.00	16.00	● ○
1.320		38.00	16.00	● ● ● ○ ○
1.330		40.00	18.00	● ● ●
1.340		40.00	18.00	●
1.350		40.00	18.00	● ● ● ●
1.360		40.00	18.00	●
1.370		40.00	18.00	● ●
1.380		40.00	18.00	● ● ● ○ ○
1.390		40.00	18.00	● ●
1.400		40.00	18.00	● ● ● ● ● ●
1.410		40.00	18.00	● ○
1.420		40.00	18.00	● ● ● ● ●
1.430		40.00	18.00	● ● ● ●
1.440		40.00	18.00	● ● ○
1.450		40.00	18.00	● ● ● ● ● ●
1.460		40.00	18.00	●
1.465		40.00	18.00	○
1.470		40.00	18.00	● ● ●
1.480		40.00	18.00	● ● ○ ○
1.485		40.00	18.00	
1.490		40.00	18.00	● ● ○
1.500		40.00	18.00	● ● ● ● ● ●
1.510		43.00	20.00	● ● ●
1.520		43.00	20.00	● ● ● ○ ○ ○
1.530		43.00	20.00	● ● ● ○
1.540		43.00	20.00	● ○ ● ○
1.550		43.00	20.00	● ● ● ● ● ○
1.560		43.00	20.00	● ○
1.570		43.00	20.00	● ● ○
1.580		43.00	20.00	● ○ ○ ○
1.590	1/16	43.00	20.00	● ● ○ ●
1.600		43.00	20.00	● ● ● ● ● ○
1.610		43.00	20.00	● ● ○ ○
1.620		43.00	20.00	● ● ● ○
1.630		43.00	20.00	● ● ○ ○ ○
1.640		43.00	20.00	● ●
1.650		43.00	20.00	● ● ● ● ●

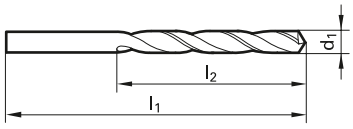
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	◔ >Ø 2,36	◔ >Ø 2,36	○	Ⓢ	Ⓢ	Ⓢ	Ⓢ	Ⓕ	Ⓕ
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
	● ○	●		●	●	●	○	●	●
	●			● ● ○	●	○			
	●	●		●	●				
	●	●		●	●	●	○	●	
				● ●		○			
	● ○	●		● ●	●	○			
				● ●					
		○ ○		●					
	●	●		●	●	●	●	●	●
	● ● ●			● ● ●	●	○			
	● ●	●		● ● ○	●	○	○		
	● ● ●	○ ●		● ●	●	● ●	○		
	● ● ● ●	●		● ● ● ●	● ● ●	○	○		○
	●	●		● ●	●	○	○		

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
1.660		43.00	20.00	● ● ●
1.670		43.00	20.00	● ● ● ○
1.680		43.00	20.00	● ○ ● ●
1.690		43.00	20.00	●
1.700		43.00	20.00	● ● ● ● ● ○
1.710		46.00	22.00	● ○
1.720		46.00	22.00	● ● ● ○
1.730		46.00	22.00	● ● ○ ○
1.740		46.00	22.00	● ○
1.750		46.00	22.00	● ● ● ● ● ○
1.760		46.00	22.00	● ○
1.770		46.00	22.00	● ● ○
1.780		46.00	22.00	● ● ○ ● ●
1.790		46.00	22.00	● ○
1.800		46.00	22.00	● ● ● ● ● ●
1.810		46.00	22.00	● ●
1.820		46.00	22.00	● ● ● ● ○
1.830		46.00	22.00	● ● ●
1.840		46.00	22.00	● ○
1.850		46.00	22.00	● ● ● ● ● ○
1.860		46.00	22.00	● ○
1.870		46.00	22.00	● ● ●
1.880		46.00	22.00	● ○
1.890		46.00	22.00	● ○
1.900		46.00	22.00	● ● ● ● ● ○
1.910		49.00	24.00	●
1.920		49.00	24.00	● ● ○ ○
1.930		49.00	24.00	● ● ○ ○
1.940		49.00	24.00	● ○
1.950		49.00	24.00	● ● ● ● ○ ○
1.960		49.00	24.00	● ○ ○
1.970		49.00	24.00	● ○ ○
1.980	5/64	49.00	24.00	● ● ● ● ○
1.990		49.00	24.00	●
2.000		49.00	24.00	● ● ● ● ● ●
2.010		49.00	24.00	● ● ●
2.020		49.00	24.00	● ○ ●
2.030		49.00	24.00	● ● ● ●
2.040		49.00	24.00	● ● ● ○

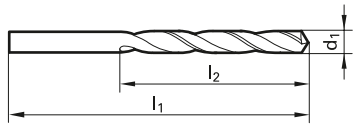
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	>Ø 2,36	>Ø 2,36	○	(S)	(S)	(S)	(S)	(F)	(F)
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
❍ ● ● ● ●	❍	●							
● ●	●	● ● ●	●	●	●	●	●	❍	
●	●	● ● ●	●						
●	●	● ●	●	❍					
● ●	● ●	● ●	●	●	●	●	●	●	
●		● ●							
● ●	●	●	●	●	●	●			
	❍	●							
●	●	● ●	●	❍	●	●	●	●	
●		●	❍						
		❍ ● ●							
●	●	●	●	●	●		●		
● ● ●	● ● ●	● ● ●	● ● ●	●	●	●	●	●	●
●	●	● ●							

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
2.050		49.00	24.00	● ● ● ● ●
2.060		49.00	24.00	● ● ● ○ ○
2.070		49.00	24.00	● ●
2.080		49.00	24.00	● ○ ● ●
2.090		49.00	24.00	●
2.100		49.00	24.00	● ● ● ● ●
2.110		49.00	24.00	●
2.120		49.00	24.00	● ● ● ○
2.130		53.00	27.00	●
2.140		53.00	27.00	● ○
2.150		53.00	27.00	● ● ● ● ○ ●
2.170		53.00	27.00	●
2.180		53.00	27.00	● ● ●
2.200		53.00	27.00	● ● ● ● ● ○
2.210		53.00	27.00	●
2.220		53.00	27.00	● ● ●
2.230		53.00	27.00	● ● ●
2.240		53.00	27.00	● ○ ○
2.250		53.00	27.00	● ● ● ● ○ ●
2.260		53.00	27.00	● ●
2.270		53.00	27.00	● ● ● ○
2.280		53.00	27.00	● ○
2.290		53.00	27.00	● ○
2.300		53.00	27.00	● ● ● ● ● ●
2.320		53.00	27.00	● ● ● ○ ○ ○
2.330		53.00	27.00	●
2.340		53.00	27.00	● ○
2.350		53.00	27.00	● ● ● ● ● ○
2.360		53.00	27.00	● ○
2.370		57.00	30.00	● ○
2.380	3/32	57.00	30.00	● ● ○ ● ○ ○
2.390		57.00	30.00	● ○
2.400		57.00	30.00	● ● ● ● ●
2.420		57.00	30.00	● ○ ○
2.430		57.00	30.00	●
2.440		57.00	30.00	●
2.450		57.00	30.00	● ● ● ● ● ○
2.460		57.00	30.00	●
2.470		57.00	30.00	● ● ○ ○

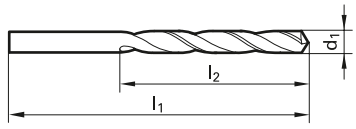
○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	◔ >Ø 2,36	◔ >Ø 2,36	○	Ⓢ	Ⓢ	Ⓢ	Ⓢ	Ⓕ	Ⓕ
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
● ●	●	●	●	●	●	○	○	●	●
○	○	○		●	●				
●	●	●		●	●	○	○	●	●
●	●			●	●	○			
● ●	●			●	○ ●	○	○	○	●
● ●	● ●			● ●	● ●		○		
●	●			●	●	●	●	●	
●									
●	●			●	●	○			
●	○ ●	○		●	●				
●	●			●	●	○	○		
●	●	●		●	●	●	●	●	●
●				●	●				
●				●	●	●			

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
2.480		57.00	30.00	● ● ○
2.490		57.00	30.00	● ● ○
2.500		57.00	30.00	● ● ● ● ● ●
2.510		57.00	30.00	●
2.520		57.00	30.00	● ● ●
2.530		57.00	30.00	● ● ● ● ● ○
2.540		57.00	30.00	●
2.550		57.00	30.00	● ● ● ● ● ○
2.570		57.00	30.00	● ● ○ ● ○
2.580		57.00	30.00	● ●
2.590		57.00	30.00	○
2.600		57.00	30.00	● ● ● ● ● ●
2.610		57.00	30.00	●
2.620		57.00	30.00	● ○
2.630		57.00	30.00	●
2.640		57.00	30.00	● ● ●
2.650		57.00	30.00	● ● ● ● ● ●
2.660		61.00	33.00	● ○
2.670		61.00	33.00	● ●
2.680		61.00	33.00	● ○
2.700		61.00	33.00	● ● ● ● ● ○
2.710		61.00	33.00	● ○ ○
2.720		61.00	33.00	●
2.730		61.00	33.00	● ● ●
2.750		61.00	33.00	● ● ● ● ● ○
2.760		61.00	33.00	●
2.780	7/64	61.00	33.00	● ● ● ●
2.790		61.00	33.00	●
2.800		61.00	33.00	● ● ● ● ● ○
2.820		61.00	33.00	● ● ● ○
2.830		61.00	33.00	● ● ●
2.840		61.00	33.00	●
2.850		61.00	33.00	● ● ● ○
2.870		61.00	33.00	● ●
2.880		61.00	33.00	● ●
2.900		61.00	33.00	● ● ● ● ● ●
2.910		61.00	33.00	● ○
2.920		61.00	33.00	●
2.930		61.00	33.00	● ● ○

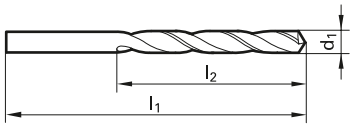
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	◔ >Ø 2,36	◔ >Ø 2,36	○	Ⓢ	Ⓢ	Ⓢ	Ⓢ	Ⓕ	Ⓕ
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
● ● ●	○ ●	●	● ●	● ●	●	●	●	
●	●		● ●	●	●	○		
●	●	●	●	●				
●	●	○	●	●	○	○		
●	●	○	●	●	●	○	●		
● ●	● ●	○	● ●	● ●	○				
	●								
●	●	●	●	●	●	●	●	●	
●		○	● ●	●	○				
●	●	○	●	●	●	○			
● ● ●	● ● ●	○ ○ ○	● ● ●	● ● ○	●	○	●	●	●
●		○	●	●	●	○			
●	●	○	●	●	●	○			
●	●	●	●	●	●	●		○	○

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
2.940		61.00	33.00	●
2.950		61.00	33.00	● ● ● ● ○
2.960		61.00	33.00	●
2.970		61.00	33.00	● ● ○ ●
2.980		61.00	33.00	●
2.990		61.00	33.00	●
3.000		61.00	33.00	● ● ● ● ● ●
3.010		65.00	36.00	● ●
3.020		65.00	36.00	● ● ○ ○
3.030		65.00	36.00	● ● ● ○ ●
3.040		65.00	36.00	● ○
3.050		65.00	36.00	● ● ● ● ● ○
3.060		65.00	36.00	● ○
3.070		65.00	36.00	● ● ○ ○ ●
3.080		65.00	36.00	● ○
3.100		65.00	36.00	● ● ● ● ● ●
3.120		65.00	36.00	● ●
3.130		65.00	36.00	● ●
3.150		65.00	36.00	● ● ● ● ●
3.160		65.00	36.00	● ○
3.170	1/8	65.00	36.00	● ● ● ● ○ ○
3.175		65.00	36.00	○
3.180		65.00	36.00	● ○
3.200		65.00	36.00	● ● ● ● ● ●
3.220		65.00	36.00	● ● ●
3.230		65.00	36.00	●
3.240		65.00	36.00	○
3.250		65.00	36.00	● ● ● ● ● ○
3.260		65.00	36.00	● ● ○ ●
3.270		65.00	36.00	○
3.280		65.00	36.00	○ ○
3.300		65.00	36.00	● ● ● ● ● ●
3.320		65.00	36.00	● ○ ●
3.330		65.00	36.00	○ ○
3.340		65.00	36.00	○ ○
3.350		65.00	36.00	● ● ● ● ●
3.360		70.00	39.00	○
3.370		70.00	39.00	● ○
3.380		70.00	39.00	● ○ ○ ●

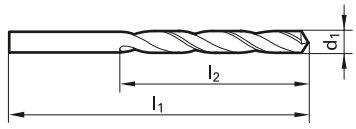
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	>Ø 2,36	>Ø 2,36	○	(S)	(S)	(S)	(S)	(F)	(F)
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
	●	●	○	●	●	●	●		
	●								
●	●	●	●	●	●	●	●	●	●
		○		●					
	●			●					
	●	●	●	●	●	○	●		
	●								
●	●	●		●	●	●	●	●	●
	●	●		●					
	●	●	●	●	●	○	○		
		○							
●	●	●	●	●	●	●	●	●	●
	●								
	●	○	●	●	●				
	●	●	○	●	●				
●	●	●	●	●	●	●	●	●	●
			○						
	●	●		●	●	○	○		
	●								

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36			>Ø 6,00		
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
3.400		70.00	39.00	● ● ● ● ● ●
3.410		70.00	39.00	○
3.420		70.00	39.00	●
3.430		70.00	39.00	○
3.450		70.00	39.00	● ● ● ● ○ ●
3.470		70.00	39.00	○ ● ○
3.500		70.00	39.00	● ● ● ● ● ●
3.520		70.00	39.00	● ● ○
3.530		70.00	39.00	○
3.550		70.00	39.00	● ● ● ● ○ ○
3.570	9/64	70.00	39.00	● ● ○ ○
3.580		70.00	39.00	○
3.600		70.00	39.00	● ● ● ● ○
3.610		70.00	39.00	○
3.620		70.00	39.00	● ○
3.630		70.00	39.00	○
3.650		70.00	39.00	● ● ● ● ○ ●
3.660		70.00	39.00	●
3.680		70.00	39.00	●
3.700		70.00	39.00	● ● ● ● ● ○
3.710		70.00	39.00	○
3.720		70.00	39.00	○
3.725		70.00	39.00	●
3.730		70.00	39.00	● ○ ○
3.750		70.00	39.00	● ● ● ○ ○
3.800		75.00	43.00	● ● ● ● ○
3.820		75.00	43.00	● ○
3.830		75.00	43.00	○ ● ○
3.850		75.00	43.00	● ● ● ○
3.860		75.00	43.00	● ○
3.870		75.00	43.00	○ ○ ○
3.880		75.00	43.00	●
3.900		75.00	43.00	● ● ● ● ○ ●
3.910		75.00	43.00	● ● ○ ○
3.920		75.00	43.00	● ○
3.930		75.00	43.00	●
3.940		75.00	43.00	○
3.950		75.00	43.00	● ● ● ○ ○
3.960		75.00	43.00	●

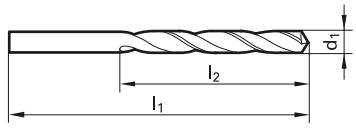
○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	◔ >Ø 2,36	◔ >Ø 2,36	○	Ⓢ	Ⓢ	Ⓢ	Ⓢ	Ⓕ	Ⓕ
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
●	●	●	●	●	●	●	○	●	●
	●	●	●	●	●		○		
●	●	●	○	●	●	●		●	●
	●	●	●	●					
	●	●	○	●	●	○	○		
	○								
●	●	●	●	●	●		○	●	●
		●	●	●	●				
	●	●	○	●	●				
●	●								
	●	●	○	●	●	●	●	●	
	●								
		○		●					
	●	●	○	●	●				
			○						
						●			
●	●	●	○	●	●		●	●	
	●								
						○			
	●		●	●	○	○			

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	205	206	207	208	209	210
3.970	5/32	75.00	43.00	●	●	●	○	○	
3.980		75.00	43.00	●					
3.990		75.00	43.00	●					
4.000		75.00	43.00	●	●	●	●	●	●
4.010		75.00	43.00	●					
4.020		75.00	43.00	●	●				
4.030		75.00	43.00	●		●	○		○
4.040		75.00	43.00	●	●	●		○	
4.050		75.00	43.00	●	●	●	●	●	○
4.060		75.00	43.00	●				○	
4.070		75.00	43.00	●	●			●	
4.080		75.00	43.00	●					
4.090		75.00	43.00	●			●		
4.100		75.00	43.00	●	●	●	●	●	○
4.120		75.00	43.00	●				○	
4.130		75.00	43.00				○		
4.150		75.00	43.00	●	●	●	●		
4.200		75.00	43.00	●	●	●	●	●	●
4.210		75.00	43.00						
4.220		75.00	43.00	●		●		○	
4.250		75.00	43.00	●	●	●	●	○	○
4.270		80.00	47.00	●					
4.280		80.00	47.00				○	○	
4.300		80.00	47.00	●	●	●	●	●	●
4.320		80.00	47.00	●					
4.350		80.00	47.00	●	●	●	○	○	
4.370	11/64	80.00	47.00	●	●	○	○	○	
4.380		80.00	47.00	○					
4.390		80.00	47.00	●		○	○		
4.400		80.00	47.00	●	●	●	●	●	●
4.420		80.00	47.00	●	○				
4.450		80.00	47.00	●	●		○	○	
4.500		80.00	47.00	●	●	●	●	●	●
4.520		80.00	47.00	●			○		○
4.530		80.00	47.00	●			○		
4.550		80.00	47.00	●		●	○	○	○
4.570		80.00	47.00	●			○		
4.600		80.00	47.00	●	●	●	●	●	○
4.620		80.00	47.00	●		●			

Availability

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

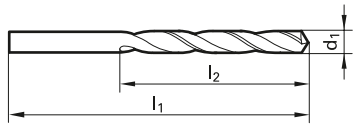
240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	>Ø 2,36	>Ø 2,36	○	(S)	(S)	(S)	(S)	(F)	(F)
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability

❍	●		❍	●	●	❍			
	●	❍		●	●				
●	●	●	●	●	●	●	●	●	●
	●	●		●	●				
	●			❍					
	●			●	❍				
●	●	●	❍	●	●	●	●	●	
	●			●					
●	●	●	❍	●	●	●	●	●	●
	●	●		●	●				
	❍		❍	●	●	❍			
●	●	●	❍	●	●	●	●	●	❍
	●	●		●	●				
	●		❍	●					
●	●	●	❍	●	●			❍	
	●		❍	●					

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
4.650		80.00	47.00	● ● ● ○ ○
4.680		80.00	47.00	○
4.700		80.00	47.00	● ● ● ● ○
4.720		80.00	47.00	○
4.730		80.00	47.00	●
4.750		80.00	47.00	● ● ● ○ ○
4.760	3/16	86.00	52.00	● ● ● ●
4.770		86.00	52.00	○
4.800		86.00	52.00	● ● ● ● ●
4.830		86.00	52.00	●
4.850		86.00	52.00	● ● ● ● ○ ○
4.860		86.00	52.00	●
4.870		86.00	52.00	○
4.900		86.00	52.00	● ● ● ● ○
4.920		86.00	52.00	● ○
4.930		86.00	52.00	○ ○
4.950		86.00	52.00	● ● ○ ● ○
4.970		86.00	52.00	● ○
4.980		86.00	52.00	● ●
5.000		86.00	52.00	● ● ● ● ● ●
5.020		86.00	52.00	● ○
5.025		86.00	52.00	○
5.030		86.00	52.00	● ●
5.050		86.00	52.00	● ● ● ●
5.060		86.00	52.00	● ○
5.080		86.00	52.00	● ○
5.100		86.00	52.00	● ● ● ● ● ●
5.110		86.00	52.00	● ●
5.120		86.00	52.00	●
5.150		86.00	52.00	● ● ○
5.160	13/64	86.00	52.00	● ● ● ○
5.180		86.00	52.00	● ○
5.190		86.00	52.00	○
5.200		86.00	52.00	● ● ● ● ● ●
5.220		86.00	52.00	● ○
5.250		86.00	52.00	● ● ● ● ○
5.260		86.00	52.00	○
5.300		86.00	52.00	● ● ● ● ●
5.310		93.00	57.00	● ●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

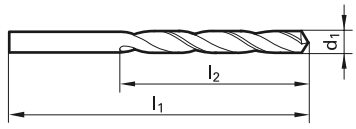
240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
○	>Ø 2,36	>Ø 2,36	○	S	S	S	S	F	F
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability

	●		○	●		●			
●	●	●	●	●	●	○	○	○	●
	●			●					
	●	●	○	●	●	○	○		
●	●		●	●	●	○	●	○	●
	●	○	○	●	●				
●	●	○	○	●	●	●	○	●	●
	●			●					
	●	○	○	●					
●	●	●	●	●	●	●	●	●	●
	●			●					
	●	●		●	●	○			
●	●		●	●	●	○	●	●	●
	●			●					
	●	●		●	●	○	○		
●	●	●	○	●	●	●	●	●	
	●			●					
●	●	●	○	●	●	●	○	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
5.350		93.00	57.00	●
5.400		93.00	57.00	● ● ● ● ○ ●
5.410		93.00	57.00	●
5.420		93.00	57.00	○
5.450		93.00	57.00	● ● ● ○ ○
5.500		93.00	57.00	● ● ● ● ● ●
5.520		93.00	57.00	○
5.550		93.00	57.00	● ● ○
5.560	7/32	93.00	57.00	● ● ○ ● ○
5.600		93.00	57.00	● ● ● ● ○
5.610		93.00	57.00	● ○
5.620		93.00	57.00	○
5.630		93.00	57.00	○
5.650		93.00	57.00	● ○ ○
5.700		93.00	57.00	● ● ● ●
5.750		93.00	57.00	● ● ● ●
5.790		93.00	57.00	● ●
5.800		93.00	57.00	● ● ● ● ● ○
5.850		93.00	57.00	● ● ○ ○ ○
5.900		93.00	57.00	● ● ● ○ ● ●
5.920		93.00	57.00	●
5.930		93.00	57.00	●
5.940		93.00	57.00	● ○
5.950	15/64	93.00	57.00	● ● ○ ○ ○
5.960		93.00	57.00	○
5.970		93.00	57.00	●
5.980		93.00	57.00	●
5.990		93.00	57.00	○
6.000		93.00	57.00	● ● ● ● ● ●
6.030		101.00	63.00	● ○
6.040		101.00	63.00	●
6.050		101.00	63.00	● ● ● ● ○
6.080		101.00	63.00	●
6.100		101.00	63.00	● ● ● ● ● ○
6.120		101.00	63.00	○
6.130		101.00	63.00	○
6.150		101.00	63.00	● ● ● ○ ○
6.170		101.00	63.00	●
6.200		101.00	63.00	● ● ● ● ● ●

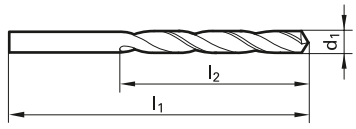
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	◐ >Ø 2,36	◐ >Ø 2,36	○	Ⓢ	Ⓢ	Ⓢ	Ⓢ	Ⓕ	Ⓕ
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
●	● ● ●	●		● ●	● ●	● ○	○	○	○
●	● ●	●		● ●	●	●	●	●	
	● ●	●		● ●	●	○			
●	● ● ●	●	○	● ●	● ●	●	●	●	○
●	● ●	●		● ●	●	○	○	○	●
● ○	● ● ●	● ○		● ● ●	● ● ●		●	●	●
● ○	● ●			● ●	●	●	○	○	
	● ●	●		○ ●	● ●	○			
●	●	●		●	●	●	●	●	●
○	● ●			● ●	● ●				
●	●	●		●	●	●		●	●
●	● ●	●		● ●	● ●	●		●	○

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
6.210		101.00	63.00	○
6.220		101.00	63.00	●
6.250		101.00	63.00	● ● ● ○
6.300		101.00	63.00	● ● ● ● ○
6.350	1/4	101.00	63.00	● ● ○ ● ○
6.380		101.00	63.00	○
6.400		101.00	63.00	● ● ● ● ●
6.450		101.00	63.00	● ● ○ ○ ○
6.500		101.00	63.00	● ● ● ● ●
6.530		101.00	63.00	● ● ● ○
6.550		101.00	63.00	● ○ ○ ○
6.570		101.00	63.00	○
6.600		101.00	63.00	● ● ● ● ○
6.630		101.00	63.00	● ○ ○
6.650		101.00	63.00	● ● ○
6.700		101.00	63.00	● ● ● ● ○ ○
6.750	17/64	109.00	69.00	● ● ● ○
6.800		109.00	69.00	● ● ● ● ○
6.810		109.00	69.00	
6.830		109.00	69.00	
6.850		109.00	69.00	● ●
6.880		109.00	69.00	○
6.900		109.00	69.00	● ● ● ● ○ ○
6.910		109.00	69.00	○
6.950		109.00	69.00	● ○ ○
7.000		109.00	69.00	● ● ● ● ● ●
7.020		109.00	69.00	
7.030		109.00	69.00	● ○
7.040		109.00	69.00	● ○
7.050		109.00	69.00	● ● ○
7.070		109.00	69.00	●
7.100		109.00	69.00	● ● ● ● ○ ○
7.130		109.00	69.00	○
7.140	9/32	109.00	69.00	● ● ○ ○
7.150		109.00	69.00	● ○
7.200		109.00	69.00	● ● ● ● ●
7.220		109.00	69.00	○ ○
7.250		109.00	69.00	● ● ● ○
7.290		109.00	69.00	

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

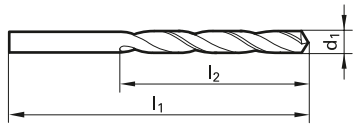
240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	◐ >Ø 2,36	◐ >Ø 2,36	○	Ⓢ	Ⓢ	Ⓢ	Ⓢ	Ⓕ	Ⓕ
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability

	●	○		●	●	○			
●	●	●		●	●	○		●	
●	●	●		●	●	○	○	●	
●	●	●		●	●		●	●	
	●			●	●				
●	●	●		●	●	●		○	○
	●			●	●				
●	●	○		●	●	●		●	
	●			●	●				
				●					
	●	●		●	●	○		○	
●	●	●		●	●	●	○	●	●
	●			●	●				
	○			○					
				●					
●	●			●	●		○	●	○
	●	●		●	●	○	○		
●	●	●		●	●	○		●	●
	●			●					
	○								

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
7.300		109.00	69.00	● ● ● ● ●
7.320		109.00	69.00	●
7.350		109.00	69.00	● ● ● ○
7.370		109.00	69.00	●
7.400		109.00	69.00	● ● ● ● ● ●
7.450		109.00	69.00	● ○ ○
7.490		109.00	69.00	○ ● ○
7.500		109.00	69.00	● ● ● ● ○
7.520		117.00	75.00	○
7.540	19/64	117.00	75.00	● ● ○ ○
7.550		117.00	75.00	● ○ ○
7.580		117.00	75.00	
7.600		117.00	75.00	● ● ● ○ ○
7.650		117.00	75.00	●
7.670		117.00	75.00	●
7.700		117.00	75.00	● ● ● ●
7.750		117.00	75.00	● ● ○
7.800		117.00	75.00	● ● ● ● ○
7.850		117.00	75.00	● ● ○
7.900		117.00	75.00	● ● ● ● ○ ○
7.940	5/16	117.00	75.00	● ● ● ●
7.950		117.00	75.00	●
7.980		117.00	75.00	●
8.000		117.00	75.00	● ● ● ● ● ●
8.030		117.00	75.00	● ○
8.050		117.00	75.00	● ● ○ ○
8.100		117.00	75.00	● ● ● ● ●
8.130		117.00	75.00	●
8.150		117.00	75.00	●
8.200		117.00	75.00	● ● ● ● ●
8.250		117.00	75.00	● ● ○
8.300		117.00	75.00	● ● ● ● ○
8.330	21/64	117.00	75.00	● ● ○
8.350		117.00	75.00	●
8.400		117.00	75.00	● ● ● ○
8.430		117.00	75.00	●
8.450		117.00	75.00	● ○ ●
8.500		117.00	75.00	● ● ● ● ●
8.550		125.00	81.00	●

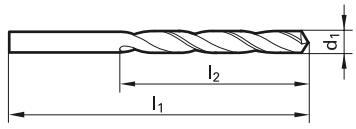
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	>Ø 2,36	>Ø 2,36	○	(S)	(S)	(S)	(S)	(F)	(F)
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
	●	●		●	●	❍		❍	❍
	● ●	●		● ● ●	● ●	❍	❍	❍	❍
●	● ●	●		● ●	● ●	❍		●	
	● ❍	❍		●	●	❍	❍		
	● ❍	❍		●	●			●	
●	● ● ● ●	❍		● ●	● ●			● ●	
	● ● ❍	● ❍		● ●	● ●	❍ ❍	❍	❍	❍
●	●	●		●	●	●		●	●
●	● ●	●		● ●	❍ ●			●	❍
●	●			● ●	●			❍	
❍ ●	● ● ● ●	❍		● ● ● ●				❍	
●	● ● ●	●		● ● ●	● ● ●			●	❍
●	●	●		● ●	●	●	●	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
8.600		125.00	81.00	● ● ● ○ ● ○
8.610		125.00	81.00	● ○
8.650		125.00	81.00	● ○
8.700		125.00	81.00	● ● ● ● ●
8.730	11/32	125.00	81.00	● ● ○
8.750		125.00	81.00	● ○ ● ○
8.800		125.00	81.00	● ● ● ○
8.840		125.00	81.00	○ ○
8.850		125.00	81.00	●
8.900		125.00	81.00	● ● ●
8.950		125.00	81.00	●
9.000		125.00	81.00	● ● ● ● ●
9.050		125.00	81.00	● ○
9.090		125.00	81.00	● ○
9.100		125.00	81.00	● ● ● ● ●
9.130	23/64	125.00	81.00	● ● ● ○
9.150		125.00	81.00	●
9.200		125.00	81.00	● ● ● ● ●
9.250		125.00	81.00	● ● ● ○
9.300		125.00	81.00	● ● ● ●
9.340		125.00	81.00	● ○
9.350		125.00	81.00	● ○
9.400		125.00	81.00	● ● ● ○ ○ ○
9.450		125.00	81.00	●
9.500		125.00	81.00	● ● ● ● ○ ○
9.510		133.00	87.00	○
9.520	3/8	133.00	87.00	● ● ●
9.550		133.00	87.00	
9.560		133.00	87.00	
9.570		133.00	87.00	○
9.580		133.00	87.00	●
9.600		133.00	87.00	● ● ● ○
9.650		133.00	87.00	● ○
9.700		133.00	87.00	● ● ● ○ ○
9.750		133.00	87.00	● ○ ○ ○
9.800		133.00	87.00	● ● ● ○ ○
9.850		133.00	87.00	● ○
9.900		133.00	87.00	● ● ● ●
9.920	25/64	133.00	87.00	● ○ ● ○

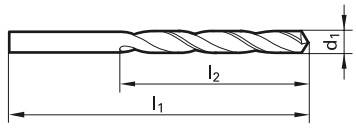
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	>Ø 2,36	>Ø 2,36	○	S	S	S	S	F	F
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
●	● ●			● ●	● ●		❍	❍	
●	● ● ●	● ●		● ● ●	●	❍		●	❍
●	● ●	●		● ● ●	● ●	❍		●	●
❍ ●	●	●		●	●			● ●	❍
●	● ●			● ●	●	❍			❍
	● ●	❍		●	❍	❍	❍		
❍ ❍	● ● ●			● ● ●	● ●				
❍	● ●	❍		●	●	❍		●	❍
●	● ●	●		●	●	❍	❍ ❍	●	
	●			❍ ●					
●	● ●	❍		● ●	●	❍		❍	❍
❍	● ● ●	●		● ● ●	● ●	●	❍	❍ ●	●
	● ●			● ●	● ●	●		●	

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
9.950		133.00	87.00	●
10.000		133.00	87.00	● ● ● ● ● ●
10.050		133.00	87.00	● ●
10.060		133.00	87.00	
10.080		133.00	87.00	● ● ❍
10.100		133.00	87.00	● ● ●
10.150		133.00	87.00	● ●
10.200		133.00	87.00	● ● ● ● ●
10.250		133.00	87.00	● ● ●
10.260		133.00	87.00	● ❍
10.300		133.00	87.00	● ● ❍
10.320	13/32	133.00	87.00	● ●
10.350		133.00	87.00	●
10.400		133.00	87.00	● ●
10.450		133.00	87.00	●
10.490		133.00	87.00	❍
10.500		133.00	87.00	● ● ● ● ● ●
10.550		133.00	87.00	
10.600		133.00	87.00	● ●
10.700		142.00	94.00	● ● ❍
10.720	27/64	142.00	94.00	● ● ❍
10.750		142.00	94.00	● ❍ ❍
10.800		142.00	94.00	● ● ●
10.900		142.00	94.00	● ● ❍
11.000		142.00	94.00	● ● ● ●
11.050		142.00	94.00	●
11.100		142.00	94.00	● ● ❍ ❍
11.110	7/16	142.00	94.00	● ● ❍
11.150		142.00	94.00	●
11.200		142.00	94.00	● ● ●
11.250		142.00	94.00	● ❍
11.300		142.00	94.00	●
11.350		142.00	94.00	❍
11.400		142.00	94.00	● ● ❍
11.500		142.00	94.00	● ● ● ● ● ❍
11.510	29/64	142.00	94.00	● ● ❍ ❍
11.520		142.00	94.00	●
11.600		142.00	94.00	● ❍
11.650		142.00	94.00	

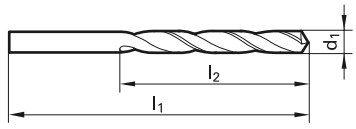
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	◔ >Ø 2,36	◔ >Ø 2,36	○	Ⓢ	Ⓢ	Ⓢ	Ⓢ	Ⓕ	Ⓕ
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
●	●	●		●	●	●		●	
●	●			●				❍	
●	●	●		●	●	❍	❍	❍	●
	●	●		●	●	❍		●	❍
	●	●		●				●	
●	●	❍		❍	●				
❍	●	●		●	●			❍	❍
❍	●	●		●		❍			
●	●			●	●	●		●	
❍	●	●		●	●			❍	
	●			●				●	
●	●			●	●	●		●	❍
	●			●	●				

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
11.700		142.00	94.00	● ● ●
11.750		142.00	94.00	● ○
11.800		142.00	94.00	● ● ●
11.900		151.00	101.00	● ○ ● ○
11.910	15/32	151.00	101.00	● ●
11.950		151.00	101.00	○
12.000		151.00	101.00	● ● ● ● ●
12.050		151.00	101.00	● ○
12.100		151.00	101.00	● ● ● ○ ●
12.150		151.00	101.00	○
12.200		151.00	101.00	● ● ● ○ ●
12.250		151.00	101.00	● ○ ○
12.300	31/64	151.00	101.00	● ● ● ○
12.400		151.00	101.00	●
12.500		151.00	101.00	● ● ● ● ○
12.600		151.00	101.00	● ● ○
12.650		151.00	101.00	●
12.700	1/2	151.00	101.00	● ● ● ○ ○
12.750		151.00	101.00	● ○ ○
12.800		151.00	101.00	● ● ○ ○ ○ ○
12.850		151.00	101.00	●
12.900		151.00	101.00	● ●
13.000		151.00	101.00	● ● ● ●
13.030		151.00	101.00	○
13.100	33/64	151.00	101.00	● ● ○
13.200		151.00	101.00	● ● ● ○
13.250		160.00	108.00	● ○
13.300		160.00	108.00	● ○
13.400		160.00	108.00	● ○
13.490	17/32	160.00	108.00	●
13.500		160.00	108.00	● ● ● ○
13.530		160.00	108.00	○
13.600		160.00	108.00	● ○
13.700		160.00	108.00	● ○
13.750		160.00	108.00	● ○
13.800		160.00	108.00	● ● ● ○
13.890	35/64	160.00	108.00	●
13.900		160.00	108.00	●
14.000		160.00	108.00	● ● ● ● ○

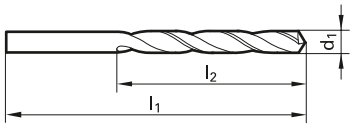
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◍ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	>Ø 2,36	>Ø 2,36	○	Ⓢ	Ⓢ	Ⓢ	Ⓢ	Ⓕ	Ⓕ
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
	●	❍		●				❍	❍
	●	❍		●	●			❍	
●	●			●	●	●			●
	●			●	●				●
	●	●		●					
	●	❍		●	●	❍			
	●	●		●	●	❍			
				●	●				
❍	●			●	●			❍	
	●	❍		●				❍	
	●			●	●				
	●			●					
●	●			●	●			●	
	●			●	●				
	●			●					
❍	●			●	●				
	●			●		❍			
	●			●					
	●			●					
	●			●	●				
	●			●				●	

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145

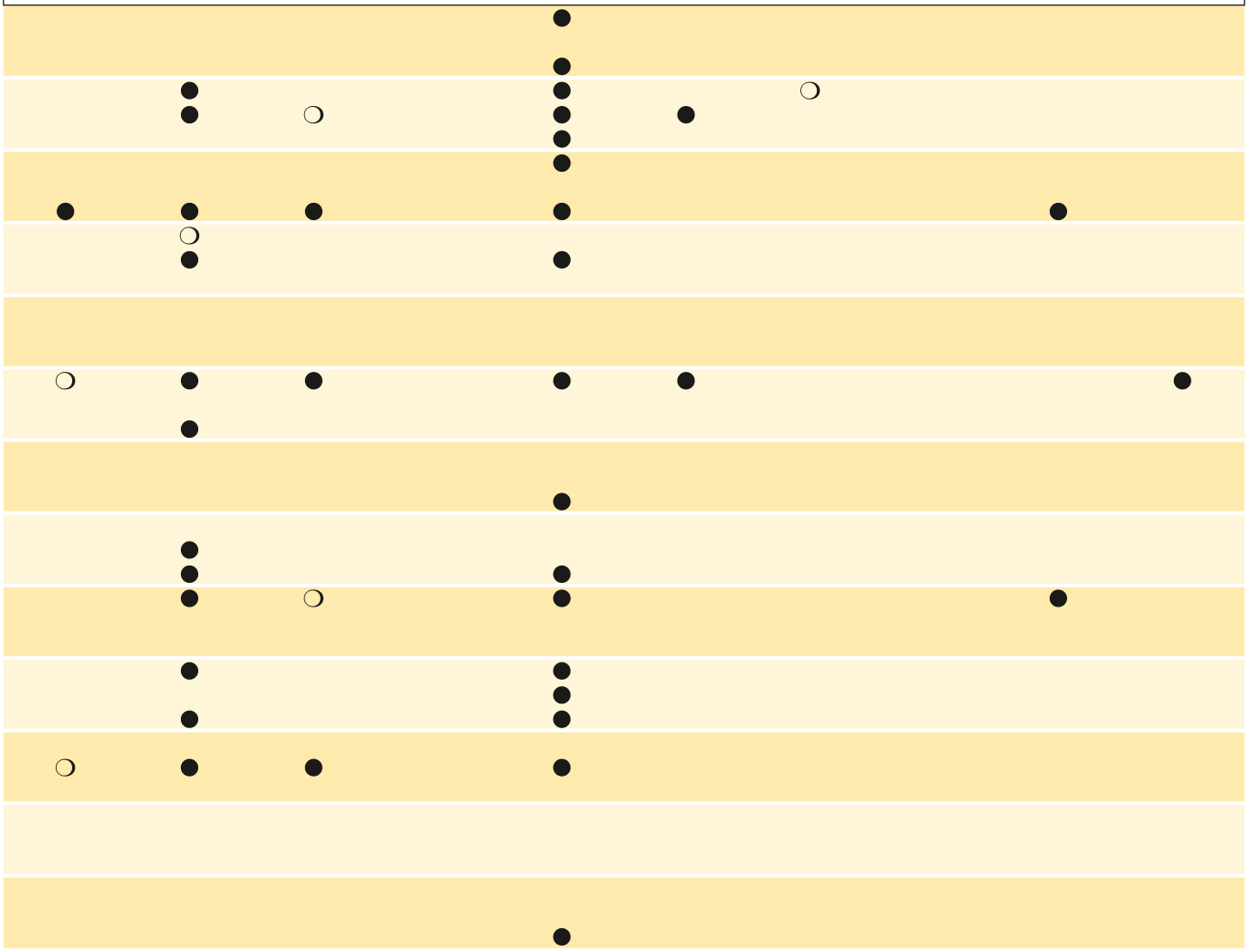


d1 mm	d1 inch	l1 mm	l2 mm	Availability
14.100		169.00	114.00	●
14.150		169.00	114.00	❍
14.200		169.00	114.00	● ❍
14.250		169.00	114.00	●
14.290	9/16	169.00	114.00	●
14.300		169.00	114.00	● ❍
14.400		169.00	114.00	● ❍
14.450		169.00	114.00	❍
14.500		169.00	114.00	● ● ● ❍ ●
14.600		169.00	114.00	●
14.680	37/64	169.00	114.00	●
14.700		169.00	114.00	● ❍ ●
14.750		169.00	114.00	●
14.800		169.00	114.00	● ❍
14.900		169.00	114.00	● ❍
15.000		169.00	114.00	● ● ● ● ❍
15.050		178.00	120.00	❍
15.080	19/32	178.00	120.00	●
15.100		178.00	120.00	● ❍ ❍
15.200		178.00	120.00	●
15.250		178.00	120.00	●
15.300		178.00	120.00	● ❍
15.400		178.00	120.00	●
15.480	39/64	178.00	120.00	●
15.500		178.00	120.00	● ● ● ❍ ❍
15.600		178.00	120.00	● ● ❍
15.700		178.00	120.00	● ❍
15.750		178.00	120.00	● ❍
15.800		178.00	120.00	● ❍
15.870	5/8	178.00	120.00	● ❍
15.900		178.00	120.00	●
16.000		178.00	120.00	● ● ● ● ❍
16.100		184.00	125.00	●
16.200		184.00	125.00	● ❍
16.250		184.00	125.00	●
16.270	41/64	184.00	125.00	●
16.300		184.00	125.00	●
16.400		184.00	125.00	●
16.500		184.00	125.00	● ●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

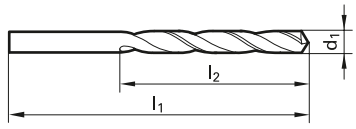
240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
●	>Ø 2,36	>Ø 2,36	○	(S)	(S)	(S)	(S)	(F)	(F)
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability



(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no.	205	206	207	208	209	210
Standard	DIN 338					
Tool material	HSS					
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○
Type	N	H	W	N	H	W
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	130	134	134	134	134	138
Techn. data page	144	144	144	144	144	145



d1 mm	d1 inch	l1 mm	l2 mm	Availability
16.600		184.00	125.00	●
16.670	21/32	184.00	125.00	●
16.700		184.00	125.00	●
16.750		184.00	125.00	●
16.800		184.00	125.00	●
16.900		184.00	125.00	●
17.000		184.00	125.00	● ● ● ❍ ❍
17.070	43/64	191.00	130.00	●
17.200		191.00	130.00	●
17.250		191.00	130.00	● ❍
17.300		191.00	130.00	● ❍
17.400		191.00	130.00	●
17.460	11/16	191.00	130.00	●
17.500		191.00	130.00	● ❍ ❍ ❍
17.600		191.00	130.00	● ❍
17.700		191.00	130.00	●
17.750		191.00	130.00	●
17.800		191.00	130.00	●
17.860	45/64	191.00	130.00	●
17.900		191.00	130.00	❍
18.000		191.00	130.00	● ● ● ● ❍ ❍
18.100		198.00	135.00	●
18.200		198.00	135.00	●
18.400		198.00	135.00	●
18.500		198.00	135.00	●
18.600		198.00	135.00	●
18.650	47/64	198.00	135.00	●
18.750		198.00	135.00	●
18.800		198.00	135.00	❍
19.000		198.00	135.00	● ● ❍
19.050	3/4	205.00	140.00	● ❍
19.100		205.00	140.00	●
19.200		205.00	140.00	●
19.250		205.00	140.00	●
19.500		205.00	140.00	● ❍ ❍
19.600		205.00	140.00	●
19.750		205.00	140.00	●
19.800		205.00	140.00	❍
20.000		205.00	140.00	● ● ● ● ❍ ❍

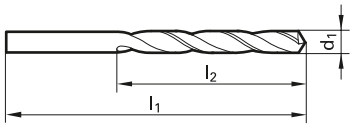
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

240	549	550	560	651	652	664	665	2456	2457
DIN 338									
HSS									
○	◔ >Ø 2,36	◔ >Ø 2,36	○	Ⓢ	Ⓢ	Ⓢ	Ⓢ	Ⓕ	Ⓕ
N	GT 100	GT 100	N	N	GT 100	N	GT 100	N	GT 100
right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
132	136	138	138	131	137	139	139	135	137
145	145	145	145	146	146	146	146	146	147

Availability									
				●					
				●					
				❍					
				●					
				●					
				●					
				❍					
				●					

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00			>Ø 2,36	S
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	305	308	605	608	622	657
0.200		19.00	2.50	●		●			
0.210		19.00	2.50	●					
0.220		19.00	2.50	●					
0.230		19.00	2.50	●					
0.250		19.00	3.00	●					
0.260		19.00	3.00	●					
0.270		19.00	3.00	●					
0.280		19.00	3.00	●					
0.300		19.00	3.00	●		●			
0.310		19.00	4.00	●					
0.320		19.00	4.00	●					
0.330		19.00	4.00	●					
0.340		19.00	4.00	❍					
0.350		19.00	4.00	●					
0.360		19.00	4.00	●	●				
0.370		19.00	4.00	●					
0.380		19.00	4.00	●		❍			
0.390		20.00	5.00	●	❍				
0.400	1/64	20.00	5.00	●		●			
0.410		20.00	5.00	●					
0.420		20.00	5.00	●					
0.430		20.00	5.00	●					
0.440		20.00	5.00	●		●			
0.450		20.00	5.00	●		●			
0.460		20.00	5.00	●					
0.470		20.00	5.00	●					
0.480		20.00	5.00	●	●				
0.490		22.00	6.00	●					
0.500		22.00	6.00	●	❍	●			●
0.510		22.00	6.00	❍					
0.520		22.00	6.00	●					
0.530		22.00	6.00	●		●			●
0.540		24.00	7.00	●					
0.550		24.00	7.00	●		●			
0.560		24.00	7.00	●	●				
0.570		24.00	7.00	●		●			
0.580		24.00	7.00	●		●			
0.590		24.00	7.00	●	❍				
0.600		24.00	7.00	●	❍	●			●

Availability

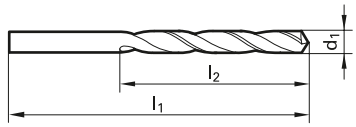
❍ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
					●			●
								●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00	○	○	>Ø 2,36	S
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	305	308	605	608	622	657
0.610		26.00	8.00	●		●			
0.620		26.00	8.00	●	○				
0.630		26.00	8.00		○				
0.640		26.00	8.00	●		●			
0.650		26.00	8.00	●	○	●			●
0.660		26.00	8.00	●					
0.670		26.00	8.00	●					
0.680		28.00	9.00	●					
0.700		28.00	9.00	●	●	●			●
0.710		28.00	9.00	●		●			
0.720		28.00	9.00	●		●			
0.730		28.00	9.00	●					
0.740		28.00	9.00	●					
0.750		28.00	9.00	●	○	●			●
0.760		30.00	10.00	○		●			
0.770		30.00	10.00	●					
0.780		30.00	10.00	●	○				
0.790	1/32	30.00	10.00	●					
0.800		30.00	10.00	●	●	●			●
0.810		30.00	10.00	●		●			
0.820		30.00	10.00	●	○	●			
0.830		30.00	10.00	●		●			
0.840		30.00	10.00	●		●			
0.850		30.00	10.00	●		●			●
0.860		32.00	11.00	●		●			
0.870		32.00	11.00	●		●			
0.880		32.00	11.00	●		●			○
0.887		32.00	11.00			●			
0.890		32.00	11.00	●		●			
0.900		32.00	11.00	●		●			●
0.910		32.00	11.00	●	○	●			
0.920		32.00	11.00	●	○	●			●
0.930		32.00	11.00	●	●				
0.940		32.00	11.00	●		●			●
0.950		32.00	11.00	●	○	●			●
0.960		34.00	12.00	●					
0.970		34.00	12.00	●					
0.980		34.00	12.00	●	●	●			
0.990		34.00	12.00	●		●			

Availability

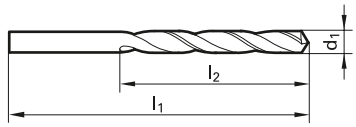
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
					●			
								●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00			>Ø 2,36	S
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	Availability
1.000		34.00	12.00	● ● ● ● ●
1.010		34.00	12.00	●
1.020		34.00	12.00	● ● ● ❍
1.025		34.00	12.00	❍
1.030		34.00	12.00	● ❍
1.040		34.00	12.00	● ❍ ●
1.050		34.00	12.00	● ❍ ● ● ●
1.070		36.00	14.00	● ● ●
1.080		36.00	14.00	● ❍ ●
1.090		36.00	14.00	● ● ●
1.100		36.00	14.00	● ● ● ●
1.120		36.00	14.00	●
1.130		36.00	14.00	● ●
1.140		36.00	14.00	● ●
1.150		36.00	14.00	● ❍ ● ● ●
1.160		36.00	14.00	● ●
1.170		36.00	14.00	●
1.180		36.00	14.00	● ❍ ● ● ●
1.190	3/64	38.00	16.00	● ● ● ● ●
1.200		38.00	16.00	● ● ● ● ●
1.210		38.00	16.00	● ❍ ● ●
1.220		38.00	16.00	● ●
1.230		38.00	16.00	● ❍ ●
1.250		38.00	16.00	● ● ● ●
1.260		38.00	16.00	❍
1.270		38.00	16.00	●
1.280		38.00	16.00	●
1.290		38.00	16.00	● ●
1.300		38.00	16.00	● ● ● ● ● ●
1.310		38.00	16.00	●
1.320		38.00	16.00	● ❍ ● ❍ ● ❍
1.330		40.00	18.00	● ❍
1.350		40.00	18.00	● ● ● ● ● ●
1.360		40.00	18.00	●
1.370		40.00	18.00	●
1.380		40.00	18.00	●
1.390		40.00	18.00	● ●
1.400		40.00	18.00	● ● ● ● ● ●
1.410		40.00	18.00	●

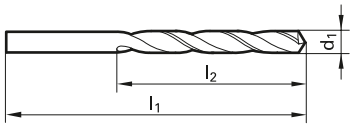
❍ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
●			●	●	●	●		●
●								
○								
●								
●								
●			●	●	●	●	○	●
●								
●								
●					○			
●			●	●	●	●	●	●
●			●	●	●	●	○	●
●								
●								
●			●	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00			>Ø 2,36	S
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	305	308	605	608	622	657
1.420		40.00	18.00	●					
1.430		40.00	18.00	●	●			●	
1.440		40.00	18.00	●				●	
1.450		40.00	18.00	●	●	●		●	●
1.460		40.00	18.00	●		●			
1.470		40.00	18.00	●	❍				
1.480		40.00	18.00	●	❍				
1.490		40.00	18.00	●	❍				
1.500		40.00	18.00	●	●	●		●	●
1.510		43.00	20.00	●	❍	●		●	●
1.520		43.00	20.00	●	●	●			●
1.530		43.00	20.00	●		●			
1.540		43.00	20.00	●					
1.550		43.00	20.00	●	●	●		●	●
1.560		43.00	20.00	●					
1.570		43.00	20.00	●		●			
1.580		43.00	20.00	●					
1.590	1/16	43.00	20.00	●	●	●		●	●
1.600		43.00	20.00	●	●	●	●	●	●
1.610		43.00	20.00	●	❍	●		●	●
1.620		43.00	20.00	●	❍	●	❍		●
1.630		43.00	20.00						
1.640		43.00	20.00	●			❍		
1.650		43.00	20.00	●	●	●		●	●
1.660		43.00	20.00	●					
1.670		43.00	20.00	●					
1.680		43.00	20.00	●	❍	●			
1.700		43.00	20.00	●	❍	●	❍	●	●
1.710		46.00	22.00	●					
1.720		46.00	22.00	●	❍				
1.730		46.00	22.00	●		●			
1.740		46.00	22.00	●					
1.750		46.00	22.00	●	●	●			●
1.760		46.00	22.00	●					
1.780		46.00	22.00	●	❍	●		●	●
1.790		46.00	22.00	●					
1.800		46.00	22.00	●	❍	●	❍	●	●
1.810		46.00	22.00	●					
1.820		46.00	22.00	●		●			

Availability

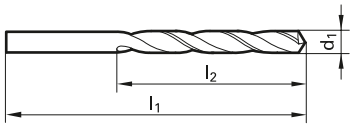
❍ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
●								
●								
●			●	●	●	●	●	●
●					○			
●								
●					●			●
●			●	●	●	●	●	●
●								
●					○			
●			●	●	●	●	●	●
●								
●			●	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00	○	○	>Ø 2,36	Ⓢ
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	305	308	605	608	622	657
1.830		46.00	22.00	●	●				
1.840		46.00	22.00	●					
1.850		46.00	22.00	●	●	●		●	●
1.860		46.00	22.00	●					
1.900		46.00	22.00	●	●	●	○	●	●
1.910		49.00	24.00	●					
1.920		49.00	24.00					●	
1.930		49.00	24.00	●	●	●		●	
1.950		49.00	24.00	●	●	●	○	●	●
1.960		49.00	24.00	●				○	
1.970		49.00	24.00	●		●			
1.980	5/64	49.00	24.00	●	○	●		●	●
1.990		49.00	24.00	●		●		●	
2.000		49.00	24.00	●	●	●	●	●	●
2.010		49.00	24.00	●					
2.020		49.00	24.00	●		●			
2.030		49.00	24.00	●		●			
2.040		49.00	24.00	●		●			
2.050		49.00	24.00	●	○	●		●	●
2.060		49.00	24.00	●	○			●	
2.080		49.00	24.00	●	○	●		●	
2.100		49.00	24.00	●	●	●		●	●
2.120		49.00	24.00			●			
2.150		53.00	27.00	●	●	●	●	●	●
2.180		53.00	27.00	●	●	●		●	
2.200		53.00	27.00	●	●	●		●	●
2.230		53.00	27.00	●					
2.250		53.00	27.00	●	○	●		●	●
2.260		53.00	27.00	●	●	●		●	●
2.300		53.00	27.00	●	●	●		●	●
2.320		53.00	27.00	●		●			
2.350		53.00	27.00	●	●	●		●	●
2.370		57.00	30.00	●	○	●		●	
2.380	3/32	57.00	30.00	●	●	●		●	●
2.400		57.00	30.00	●	○	●	○	●	●
2.420		57.00	30.00					●	
2.440		57.00	30.00	●				●	●
2.450		57.00	30.00	●		●		●	
2.470		57.00	30.00	●					

Availability

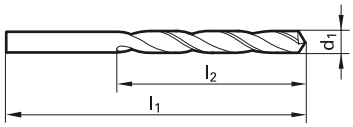
○ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
●								
●			●	●	●	●	❍	●
●								
●					●			❍
●			●	●	●	●	●	●
●					❍			
●			●	●	●	●	●	●
●			●	●	●	●	●	●
●			●	●	❍	●	●	●
●					❍			
●			●	●	●	●		●
●								

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00	○	○	>Ø 2,36	Ⓢ
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	Availability
2.490		57.00	30.00	● ○ ●
2.500		57.00	30.00	● ● ● ● ● ●
2.520		57.00	30.00	● ○ ●
2.530		57.00	30.00	● ● ● ● ●
2.550		57.00	30.00	● ● ● ● ●
2.580		57.00	30.00	● ●
2.600		57.00	30.00	● ● ● ○ ● ●
2.640		57.00	30.00	● ○ ●
2.650		57.00	30.00	● ● ●
2.700		61.00	33.00	● ○ ● ● ●
2.710		61.00	33.00	● ○ ● ●
2.750		61.00	33.00	● ● ● ○ ● ●
2.780	7/64	61.00	33.00	● ● ● ● ●
2.790		61.00	33.00	● ○ ○ ●
2.800		61.00	33.00	● ● ● ○ ● ●
2.810		61.00	33.00	●
2.820		61.00	33.00	● ○ ● ● ●
2.850		61.00	33.00	● ● ●
2.870		61.00	33.00	● ○ ● ●
2.890		61.00	33.00	○
2.900		61.00	33.00	● ○ ● ● ●
2.920		61.00	33.00	●
2.950		61.00	33.00	● ○ ● ● ●
2.970		61.00	33.00	●
3.000		61.00	33.00	● ● ● ● ● ●
3.020		65.00	36.00	●
3.030		65.00	36.00	● ○ ●
3.050		65.00	36.00	● ○ ● ○ ● ●
3.100		65.00	36.00	● ○ ● ● ●
3.150		65.00	36.00	● ● ● ● ●
3.170	1/8	65.00	36.00	● ● ● ● ●
3.200		65.00	36.00	● ○ ● ● ●
3.250		65.00	36.00	● ● ● ●
3.260		65.00	36.00	● ● ● ●
3.300		65.00	36.00	● ● ● ● ● ●
3.320		65.00	36.00	○
3.330		65.00	36.00	○
3.350		65.00	36.00	● ○ ● ○ ●
3.400		70.00	39.00	● ○ ● ● ● ●

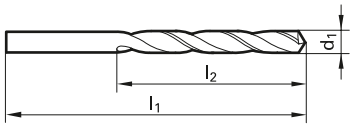
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
●			●	●	●	●	●	●
●								
●			●	●	●	●		●
●			●	●	●	●	●	●
●					○			
●					●			○
●			●	●	●	●	●	●
●								
●			●	●	●	●	●	●
●								
●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●
●	○	●	●	●	●	●	●	●
●								
●	●	●	●	●	●	●	●	●
●	●		●	●	●	●	○	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00	○	○	>Ø 2,36	Ⓢ
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	305	308	605	608	622	657
3.420		70.00	39.00		○				
3.450		70.00	39.00	●	●	●		●	
3.500		70.00	39.00	●	●	●		●	●
3.530		70.00	39.00		●		○		
3.550		70.00	39.00	●		●	●		
3.570	9/64	70.00	39.00	●		●		●	○
3.600		70.00	39.00	●		●	●	●	●
3.650		70.00	39.00		●	●	○	●	●
3.660		70.00	39.00	●	○			●	
3.700		70.00	39.00	●	●	●	○	●	●
3.730		70.00	39.00	●				●	
3.750		70.00	39.00	●		●			●
3.790		75.00	43.00			○			
3.800		75.00	43.00	●	●	●		●	●
3.850		75.00	43.00	●					
3.860		75.00	43.00	●	○			●	
3.900		75.00	43.00	●	○	●	○	●	●
3.910		75.00	43.00	●	●			●	
3.920		75.00	43.00		○				
3.950		75.00	43.00			●			
3.970	5/32	75.00	43.00	●	●	●		●	●
3.980		75.00	43.00	○		●			
3.990		75.00	43.00	●	○			●	
4.000		75.00	43.00	●	●	●	●	●	●
4.020		75.00	43.00	●				●	
4.030		75.00	43.00						
4.040		75.00	43.00	●	○	●		●	
4.050		75.00	43.00	●	●	●		●	●
4.070		75.00	43.00	●					
4.090		75.00	43.00	●	○			●	
4.100		75.00	43.00	●		●		●	●
4.120		75.00	43.00	●					
4.150		75.00	43.00	●	○	●		●	
4.170		75.00	43.00	●					
4.200		75.00	43.00	●	●	●		●	●
4.220		75.00	43.00	●	○	●		●	
4.250		75.00	43.00	●	●	●	○	●	●
4.300		80.00	47.00	●	○	●	○	●	●
4.330		80.00	47.00			○			

Availability

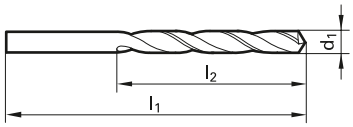
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
●	●	●	●	●	●	●	●	●
●	○		○		●			
●	○	○	●	●	●	●	○	●
●	●							
●	●	●	●	●	●	●	●	●
●								
●	●	●	●	●	●	●	●	●
●		●						
●	○	●			●			●
●	●	●	●	●	●	●	●	●
●	●	●						
		○						
●								
●	●	○	●	●	●	●	●	●
					○			
●	●	●	●	●	●	●	●	●
●					○			
●	●	●	●	●	●	●	○	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00	○	○	>Ø 2,36	Ⓢ
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	Availability
4.350		80.00	47.00	○ ● ●
4.370	11/64	80.00	47.00	● ○ ○ ● ●
4.390		80.00	47.00	● ○ ●
4.400		80.00	47.00	● ● ● ○ ● ●
4.450		80.00	47.00	● ●
4.500		80.00	47.00	● ● ● ○ ● ●
4.550		80.00	47.00	● ● ●
4.570		80.00	47.00	● ○ ○ ●
4.600		80.00	47.00	● ● ● ●
4.620		80.00	47.00	● ○ ●
4.650		80.00	47.00	● ● ● ●
4.700		80.00	47.00	● ● ● ○ ● ●
4.750		80.00	47.00	● ● ●
4.760	3/16	86.00	52.00	● ● ● ● ●
4.790		86.00	52.00	○
4.800		86.00	52.00	● ○ ● ○ ● ●
4.830		86.00	52.00	○
4.850		86.00	52.00	● ● ●
4.900		86.00	52.00	● ● ● ○ ● ●
4.920		86.00	52.00	● ○ ●
4.950		86.00	52.00	●
4.980		86.00	52.00	● ●
5.000		86.00	52.00	● ● ● ● ● ●
5.020		86.00	52.00	●
5.030		86.00	52.00	●
5.050		86.00	52.00	● ● ●
5.060		86.00	52.00	● ○ ●
5.100		86.00	52.00	● ● ● ● ●
5.110		86.00	52.00	● ● ● ● ○
5.150		86.00	52.00	● ○
5.160	13/64	86.00	52.00	● ○ ● ● ●
5.180		86.00	52.00	● ○ ●
5.200		86.00	52.00	● ● ● ○ ● ●
5.220		86.00	52.00	● ● ●
5.250		86.00	52.00	● ● ●
5.300		86.00	52.00	● ● ● ● ●
5.310		93.00	57.00	● ○ ● ●
5.400		93.00	57.00	● ○ ● ○ ● ●
5.410		93.00	57.00	● ○ ○ ●

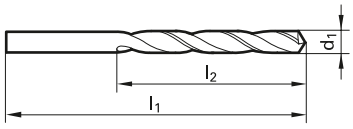
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
●	❍	●			●			
●		❍	●	●	●	●		●
●	●	●	●	●	●	●	●	●
●		❍	●	●	●	●		●
●	●	❍	●	●	●	●	❍	●
●	❍	●			●			●
●	●	❍	●	●	●	●	●	●
●	●	❍	●	●	●	●	●	●
●	❍	❍						
●	❍	❍	●	●	●	●	●	●
					❍			
●	●	●	●	●	●	●		●
●		●			●			●
●	●	●	●	●	●	●	●	●
●	●	❍	●	●	●	●		●
●	❍	●	●	●	●	●	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00	○	○	>Ø 2,36	Ⓢ
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	305	308	605	608	622	657
5.450		93.00	57.00	○			●		
5.500		93.00	57.00	●		●		●	●
5.550		93.00	57.00	●	○	●	○		
5.560	7/32	93.00	57.00	●	●	●		●	●
5.570		93.00	57.00		○				
5.580		93.00	57.00				○		
5.600		93.00	57.00	●		●	○	●	●
5.610		93.00	57.00	●	○	○		●	●
5.650		93.00	57.00	●					
5.700		93.00	57.00	●	○	●	●	●	●
5.750		93.00	57.00	●		●		○	
5.790		93.00	57.00	○				●	
5.800		93.00	57.00	●	●	●	○	●	●
5.850		93.00	57.00	○					
5.900		93.00	57.00	●	●	●	○	●	●
5.940		93.00	57.00	○	○			●	
5.950	15/64	93.00	57.00	●	○	●		●	●
5.990		93.00	57.00		○				
6.000		93.00	57.00	●	●	●	●	●	●
6.040		101.00	63.00	●				●	
6.050		101.00	63.00	●		●		●	
6.080		101.00	63.00			○			
6.100		101.00	63.00	●	●	●		●	●
6.150		101.00	63.00	●	○			●	
6.200		101.00	63.00	●	●	●		●	●
6.250		101.00	63.00	●	○			●	
6.300		101.00	63.00	●	○	●	○	●	●
6.350	1/4	101.00	63.00	●	●	●		●	●
6.400		101.00	63.00	●	○	●		●	●
6.450		101.00	63.00	●	○				
6.500		101.00	63.00	●	●	●		●	●
6.530		101.00	63.00	●	○			●	
6.600		101.00	63.00	●	○	●	○	●	●
6.630		101.00	63.00	●				●	
6.650		101.00	63.00					●	
6.700		101.00	63.00	●	○	●		●	●
6.750	17/64	109.00	69.00	●	○	●		●	●
6.760		109.00	69.00	○					
6.800		109.00	69.00	●		●	○	●	●

Availability

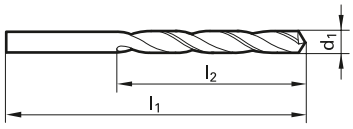
○ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
●	●	●	●	●	●	●	●	●
●	●	●			●			
●		●	●	●	●	●	○	●
●	●	○	○	●	○	●	●	●
○								
●		●	●	●	●	●	●	●
●	●	○	●	●	●	●		●
●		○			○			●
●	●	●	●	●	●	●	●	●
●	●	○	●	●	●	●	●	●
●	●		●	●	●	●		●
●	●	○	●	●	●		●	●
●	○	●			●			●
●	○	○	●	●		●	●	●
●		●	●	●	●	●	●	●
●		●						
●	○	○	●	●	●	●	●	●
●	●	○	●	●	●	●	●	●
●					●			●
●	○		●	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00	○	○	>Ø 2,36	Ⓢ
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	305	308	605	608	622	657
6.850		109.00	69.00	●					
6.900		109.00	69.00	●		●	○	●	●
6.950		109.00	69.00	●					
7.000		109.00	69.00	●	●	●	●	●	●
7.030		109.00	69.00	●				●	
7.040		109.00	69.00		○				
7.050		109.00	69.00	●					
7.100		109.00	69.00	●		●	○	●	●
7.140	9/32	109.00	69.00	●		○		●	●
7.200		109.00	69.00	●		●		●	●
7.250		109.00	69.00	●					
7.300		109.00	69.00	●		●	○	●	●
7.370		109.00	69.00	●	○			●	
7.400		109.00	69.00	●	●	●	○	●	●
7.450		109.00	69.00					●	
7.490		109.00	69.00	○	○			●	
7.500		109.00	69.00	●	○	●	○	●	●
7.540	19/64	117.00	75.00	●	○	●		●	○
7.600		117.00	75.00	●	○	●	○	●	●
7.670		117.00	75.00	●	○			●	
7.700		117.00	75.00	●	○	●	○	●	●
7.750		117.00	75.00	●				●	
7.800		117.00	75.00	●		●	○	●	●
7.900		117.00	75.00	●	●	●	○	●	●
7.940	5/16	117.00	75.00	●		●		●	●
8.000		117.00	75.00	●	●	●	●	●	●
8.030		117.00	75.00	●	○			●	
8.040		117.00	75.00		○				
8.050		117.00	75.00	●					
8.100		117.00	75.00	●		●	○	●	●
8.150		117.00	75.00	●					
8.200		117.00	75.00	●		●		●	●
8.250		117.00	75.00	●					
8.300		117.00	75.00	●	●	●		●	●
8.330	21/64	117.00	75.00	●	○	●		●	
8.400		117.00	75.00	●		●	○	●	●
8.430		117.00	75.00	●	○			●	
8.500		117.00	75.00	●		●		●	●
8.550		125.00	81.00			○			○

Availability

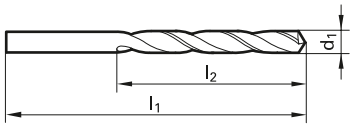
○ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	❍	●	●
●		❍	●	●				●
●		❍		●	●	●	●	●
●	❍	●	●	●	●	●	❍	●
●		❍	●	●	●	●	●	●
●		❍		●	❍		❍	●
●		❍	●	●		●	●	●
●	●	●	●	●	●	●	●	●
●	●	❍	●	●	●	❍	●	●
●		●	●	●	●	●		●
●	❍	❍	●	●	●	●	●	●
●	❍	❍	●	●	●	●		●
●	❍	❍	●	●	●	●	❍	●
●	●	●	●	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00	○	○	>Ø 2,36	Ⓢ
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	Availability
8.600		125.00	81.00	● ○ ● ● ● ●
8.610		125.00	81.00	● ○ ●
8.700		125.00	81.00	● ○ ● ● ●
8.730	11/32	125.00	81.00	● ○ ● ● ●
8.750		125.00	81.00	● ○
8.800		125.00	81.00	● ○ ● ○ ● ●
8.840		125.00	81.00	● ○ ●
8.900		125.00	81.00	● ● ● ●
9.000		125.00	81.00	● ● ● ● ●
9.090		125.00	81.00	○ ○ ○
9.100		125.00	81.00	● ○ ● ○ ● ●
9.130	23/64	125.00	81.00	● ○ ● ●
9.200		125.00	81.00	● ○ ● ○ ○ ●
9.250		125.00	81.00	●
9.300		125.00	81.00	● ○ ● ○ ● ●
9.340		125.00	81.00	● ○ ●
9.400		125.00	81.00	● ○ ● ● ●
9.500		125.00	81.00	● ● ● ○ ● ●
9.520	3/8	133.00	87.00	● ● ● ● ●
9.530		133.00	87.00	
9.580		133.00	87.00	○ ○ ○
9.600		133.00	87.00	● ○ ● ● ●
9.650		133.00	87.00	○
9.700		133.00	87.00	● ○ ● ● ●
9.750		133.00	87.00	●
9.800		133.00	87.00	● ● ● ● ●
9.850		133.00	87.00	●
9.900		133.00	87.00	● ○ ● ● ●
9.920	25/64	133.00	87.00	● ○ ○ ● ○
10.000		133.00	87.00	● ● ● ● ●
10.050		133.00	87.00	●
10.080		133.00	87.00	● ○ ●
10.100		133.00	87.00	● ● ● ●
10.200		133.00	87.00	● ○ ● ● ●
10.250		133.00	87.00	● ●
10.260		133.00	87.00	○ ○ ○
10.300		133.00	87.00	● ● ● ●
10.320	13/32	133.00	87.00	● ○ ● ● ●
10.400		133.00	87.00	● ● ● ●

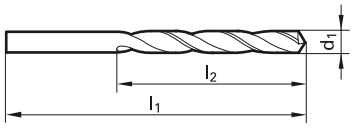
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
●		●	●	●	●	●		●
●	○	○	●	●	●	●		●
●		○			●			●
●								
●		●	●	●	●	●	●	●
	○	○	○	●			●	●
●		○	●	●	●	●	●	●
	○			●	○		○	○
●		○	●	●	●	○		●
●				●	●		○	●
●			●	●	●	●	○	●
●	●	○	●	●	●	●	●	●
●	○	○						
●		○						
●			●	●	●	●	○	●
●			●	●	●	●	○	●
●		●	●	●	●	●	○	●
●	○	○	○	●	●	●	○	●
●	○	●	●	●	●	●	●	●
●	○	●	●	●	●	●	●	●
●		○	●		●	●	●	
●	●	○			●	●		

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00	○	○	>Ø 2,36	Ⓢ
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	305	308	605	608	622	657
10.490		133.00	87.00	●	○				
10.500		133.00	87.00	●		●		●	●
10.600		133.00	87.00	●		●		●	
10.700		142.00	94.00	●		●		●	
10.720	27/64	142.00	94.00	●	○	●		●	
10.750		142.00	94.00	●					
10.800		142.00	94.00	●	○	●		●	●
10.900		142.00	94.00	●				●	
11.000		142.00	94.00	●	●	●		●	●
11.100		142.00	94.00	●		●		●	
11.110	7/16	142.00	94.00	●	●	●		●	
11.200		142.00	94.00	●	○	●		●	●
11.250		142.00	94.00	●					
11.300		142.00	94.00	●		●		○	
11.400		142.00	94.00	●	○			●	
11.500		142.00	94.00	●	○	●		●	●
11.510	29/64	142.00	94.00	●	○	●		●	
11.600		142.00	94.00	●		●		●	
11.700		142.00	94.00	●		●		●	
11.750		142.00	94.00	●	○	●			
11.800		142.00	94.00	●		●		●	
11.900		151.00	101.00	●		●			
11.910	15/32	151.00	101.00	●	○			●	○
12.000		151.00	101.00	●		●		●	●
12.050		151.00	101.00		○				
12.100		151.00	101.00	●		●			●
12.200		151.00	101.00	●		●			
12.250		151.00	101.00	●	○				
12.300	31/64	151.00	101.00	●	○	●			●
12.400		151.00	101.00	●					
12.500		151.00	101.00	●	○	●		●	●
12.600		151.00	101.00	●					
12.700	1/2	151.00	101.00	●	●	●		●	●
12.750		151.00	101.00	●					
12.800		151.00	101.00	●		●		●	
12.900		151.00	101.00	●					
13.000		151.00	101.00	●		●		●	●
13.100	33/64	151.00	101.00	●		●			
13.200		151.00	101.00	●					

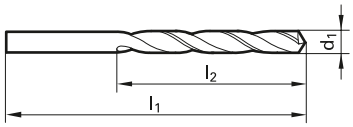
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◍ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
●		○	● ○	●	●	●	●	●
○ ●	○	○ ○			●			
● ●		○ ○	○ ●	●	●	●	○ ●	●
● ●	○	○ ○	● ●		●		○	
			●					
●		○	● ●	●	● ●	●	●	● ○
● ●		○	● ●					
● ●	○ ○	○	● ●	●	● ●	●	●	● ●
					●			●
● ○			●	●	● ●		● ○	●
● ●			●	●	● ●	●	●	● ●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	305	308	605	608	622	657
Standard	DIN 338					
Tool material	HSCO					
Surface	>Ø 2,36	>Ø 6,00			>Ø 2,36	S
Type	N	N	Ti	Ti	GT 100	Ti
Cutting direction	right-hand	left-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	134	138	134	138	136	135
Techn. data page	147	147	147	147	148	148



d1 mm	d1 inch	l1 mm	l2 mm	305	308	605	608	622	657
13.300		160.00	108.00	●					
13.400		160.00	108.00	●					
13.490	17/32	160.00	108.00	●					
13.500		160.00	108.00	●		●		●	●
13.600		160.00	108.00	●					
13.700		160.00	108.00	●					
13.750		160.00	108.00	●	❍				
13.800		160.00	108.00	●		●		●	
13.890	35/64	160.00	108.00	❍		●			
13.900		160.00	108.00	●					
13.970		160.00	108.00			●			
14.000		160.00	108.00	●	❍	●		●	●
14.100		169.00	114.00	●					
14.150		169.00	114.00	❍					
14.200		169.00	114.00	●					
14.290	9/16	169.00	114.00	●		●			
14.300		169.00	114.00		❍				
14.500		169.00	114.00	●	❍	●			●
14.600		169.00	114.00	❍					
14.680	37/64	169.00	114.00	●					
15.000		169.00	114.00	●		●			
15.100		178.00	120.00	●					
15.250		178.00	120.00	●					
15.480	39/64	178.00	120.00	●					
15.500		178.00	120.00	●		●			
15.750		178.00	120.00	●					
15.870	5/8	178.00	120.00	●					
16.000		178.00	120.00	●		●		●	
16.200		184.00	125.00		❍				
16.500		184.00	125.00	●	❍	●			
16.670	21/32	184.00	125.00	●					
17.000		184.00	125.00	●		●			
17.460	11/16	191.00	130.00	●					
17.500		191.00	130.00	●		●			
18.000		191.00	130.00	●	❍	●			
18.500		198.00	135.00	●	❍				
19.000		198.00	135.00	●		●			
19.500		205.00	140.00	●					
20.000		205.00	140.00	●					

Availability

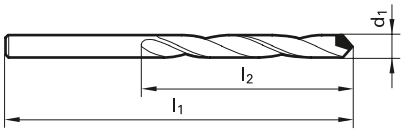
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

658	1221	1223	1260	2047	2458	2459	2997	1146
DIN 338								
HSCO								M42
S	C	A	○	●	F	F	S	○
GT 100	GT 100	GT 100	VA	P2000	Ti	GT 100	N	N
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8
137	137	137	134	134	135	137	135	138
148	148	148	149	149	149	149	149	150

Availability								
					●			
●								●
❍								
●					●	●	●	●
					●			
●					●			
●					●			●
								●
								❍
								●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

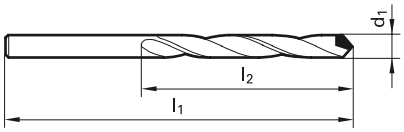
Guhring no.	710	732	2464
Standard		Guhring std.	
Tool material	Carbide	Solid carbide	
Surface	○	○	F
Type	Duro 150	N	N
Cutting direction	right-hand	right-hand	right-hand
Tolerance	h8	h7	h7
Discount group	102	102	102
Techn. data page	150	150	150



d1		l1	l2	Availability	
mm	inch	mm	mm		
1.000		34.00	12.00	●	●
1.020		34.00	12.00	●	●
1.040		34.00	12.00	●	●
1.070		36.00	14.00	●	●
1.090		36.00	14.00	●	●
1.100		36.00	14.00	●	●
1.180		36.00	14.00	●	●
1.190	3/64	38.00	16.00	●	●
1.200		38.00	16.00	●	●
1.300		38.00	16.00	●	●
1.320		38.00	16.00	●	●
1.400		40.00	18.00	●	●
1.500		40.00	18.00	●	●
1.510		43.00	20.00	●	●
1.590	1/16	43.00	20.00	●	●
1.600		43.00	20.00	●	●
1.610		43.00	20.00	●	●
1.700		43.00	20.00	●	●
1.780		46.00	22.00	●	●
1.800		46.00	22.00	●	●
1.850		46.00	22.00	●	●
1.900		46.00	22.00	●	●
1.930		49.00	24.00	●	●
1.980	5/64	49.00	24.00	●	●
1.990		49.00	24.00	●	●
2.000		49.00	24.00	●	●
2.060		49.00	24.00	●	●
2.080		49.00	24.00	●	●
2.100		49.00	24.00	●	●
2.180		53.00	27.00	●	●
2.200		53.00	27.00	●	●
2.260		53.00	27.00	●	●
2.300		53.00	27.00	●	●
2.370		57.00	30.00	●	●
2.380	3/32	57.00	30.00	●	●
2.400		57.00	30.00	●	●
2.440		57.00	30.00	●	●
2.490		57.00	30.00	●	●
2.500		57.00	30.00	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

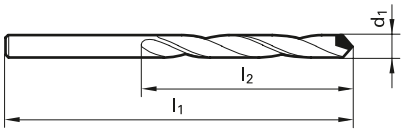
Guhring no.	710	732	2464
Standard		Guhring std.	
Tool material	Carbide	Solid carbide	
Surface	○	○	(F)
Type	Duro 150	N	N
Cutting direction	right-hand	right-hand	right-hand
Tolerance	h8	h7	h7
Discount group	102	102	102
Techn. data page	150	150	150



d1 mm	d1 inch	l1 mm	l2 mm	Availability		
2.530		57.00	30.00		●	●
2.580		57.00	30.00		●	●
2.600		57.00	30.00		●	●
2.640		57.00	30.00		●	●
2.700		61.00	33.00	●	●	●
2.710		61.00	33.00		●	●
2.780	7/64	61.00	33.00		●	●
2.790		61.00	33.00		●	●
2.800		61.00	33.00		●	●
2.820		61.00	33.00		●	●
2.870		61.00	33.00		●	●
2.900		61.00	33.00		●	●
2.950		61.00	33.00		●	●
3.000		61.00	33.00	●	●	●
3.050		65.00	36.00		●	●
3.100		65.00	36.00	○	●	●
3.170	1/8	65.00	36.00		●	●
3.200		65.00	36.00		●	●
3.260		65.00	36.00		●	●
3.300		65.00	36.00	●	●	●
3.400		70.00	39.00	●	●	●
3.450		70.00	39.00		●	●
3.500		70.00	39.00	●	●	●
3.570	9/64	70.00	39.00		●	●
3.600		70.00	39.00		●	●
3.660		70.00	39.00		●	●
3.700		70.00	39.00		●	●
3.730		70.00	39.00		●	●
3.800		75.00	43.00		●	●
3.860		75.00	43.00		●	●
3.900		75.00	43.00		●	●
3.910		75.00	43.00		●	●
3.970	5/32	75.00	43.00		●	●
3.990		75.00	43.00		●	●
4.000		75.00	43.00	●	●	●
4.040		75.00	43.00		●	●
4.090		75.00	43.00		●	●
4.100		75.00	43.00		●	●
4.200		75.00	43.00	●	●	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

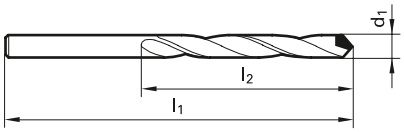
Guhring no.	710	732	2464
Standard		Guhring std.	
Tool material	Carbide	Solid carbide	
Surface	○	○	F
Type	Duro 150	N	N
Cutting direction	right-hand	right-hand	right-hand
Tolerance	h8	h7	h7
Discount group	102	102	102
Techn. data page	150	150	150



d1 mm	d1 inch	l1 mm	l2 mm	Availability
4.220		75.00	43.00	
4.300		80.00	47.00	
4.370	11/64	80.00	47.00	
4.390		80.00	47.00	
4.400		80.00	47.00	
4.500		80.00	47.00	●
4.570		80.00	47.00	
4.600		80.00	47.00	
4.620		80.00	47.00	
4.700		80.00	47.00	❍
4.760	3/16	86.00	52.00	
4.800		86.00	52.00	
4.850		86.00	52.00	
4.900		86.00	52.00	
4.920		86.00	52.00	
4.980		86.00	52.00	
5.000		86.00	52.00	●
5.060		86.00	52.00	
5.100		86.00	52.00	●
5.110		86.00	52.00	
5.160	13/64	86.00	52.00	
5.180		86.00	52.00	
5.200		86.00	52.00	
5.220		86.00	52.00	
5.300		86.00	52.00	●
5.310		93.00	57.00	
5.400		93.00	57.00	
5.410		93.00	57.00	
5.500		93.00	57.00	●
5.560	7/32	93.00	57.00	
5.600		93.00	57.00	
5.610		93.00	57.00	
5.700		93.00	57.00	
5.790		93.00	57.00	
5.800		93.00	57.00	
5.900		93.00	57.00	
5.940		93.00	57.00	
5.950	15/64	93.00	57.00	
6.000		93.00	57.00	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

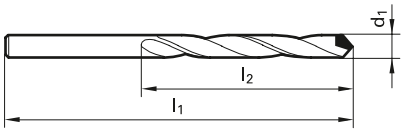
Guhring no.	710	732	2464
Standard		Guhring std.	
Tool material	Carbide	Solid carbide	
Surface	○	○	(F)
Type	Duro 150	N	N
Cutting direction	right-hand	right-hand	right-hand
Tolerance	h8	h7	h7
Discount group	102	102	102
Techn. data page	150	150	150



d1 mm	d1 inch	l1 mm	l2 mm	Availability		
6.040		101.00	63.00		●	●
6.100		101.00	63.00		●	●
6.150		101.00	63.00		●	●
6.200		101.00	63.00		●	●
6.250		101.00	63.00		●	●
6.300		101.00	63.00	●	●	●
6.350	1/4	101.00	63.00		●	○
6.400		101.00	63.00		●	●
6.500		101.00	63.00	●	●	●
6.530		101.00	63.00		●	●
6.600		101.00	63.00		●	●
6.630		101.00	63.00		●	●
6.700		101.00	63.00	●	●	●
6.750	17/64	109.00	69.00		●	●
6.800		109.00	69.00	●	●	●
6.900		109.00	69.00		●	●
7.000		109.00	69.00	●	●	●
7.030		109.00	69.00		●	●
7.100		109.00	69.00	○	●	●
7.140	9/32	109.00	69.00		●	●
7.200		109.00	69.00	●	●	●
7.300		109.00	69.00		●	●
7.370		109.00	69.00		●	●
7.400		109.00	69.00	○	●	●
7.490		109.00	69.00		●	●
7.500		109.00	69.00	●	●	●
7.540	19/64	117.00	75.00		●	●
7.600		117.00	75.00		●	●
7.670		117.00	75.00		●	●
7.700		117.00	75.00		●	●
7.800		117.00	75.00		●	●
7.900		117.00	75.00		●	●
7.940	5/16	117.00	75.00		●	●
8.000		117.00	75.00	●	●	●
8.030		117.00	75.00		●	●
8.100		117.00	75.00		●	●
8.200		117.00	75.00		●	●
8.300		117.00	75.00		●	●
8.330	21/64	117.00	75.00		●	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

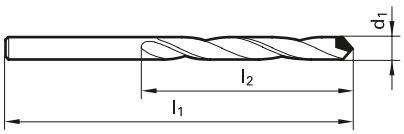
Guhring no.	710	732	2464
Standard		Guhring std.	
Tool material	Carbide	Solid carbide	
Surface	○	○	F
Type	Duro 150	N	N
Cutting direction	right-hand	right-hand	right-hand
Tolerance	h8	h7	h7
Discount group	102	102	102
Techn. data page	150	150	150



d1 mm	d1 inch	l1 mm	l2 mm	Availability
8.400		117.00	75.00	● ●
8.430		117.00	75.00	● ●
8.500		117.00	75.00	● ● ●
8.600		125.00	81.00	● ●
8.610		125.00	81.00	● ●
8.700		125.00	81.00	● ●
8.730	11/32	125.00	81.00	● ●
8.800		125.00	81.00	● ●
8.840		125.00	81.00	● ●
8.900		125.00	81.00	● ●
9.000		125.00	81.00	● ● ●
9.090		125.00	81.00	● ●
9.100		125.00	81.00	● ●
9.130	23/64	125.00	81.00	● ●
9.200		125.00	81.00	● ●
9.300		125.00	81.00	● ●
9.340		125.00	81.00	● ●
9.400		125.00	81.00	● ●
9.500		125.00	81.00	● ● ●
9.520	3/8	133.00	87.00	● ●
9.580		133.00	87.00	● ●
9.600		133.00	87.00	● ●
9.700		133.00	87.00	● ●
9.800		133.00	87.00	● ●
9.900		133.00	87.00	● ●
9.920	25/64	133.00	87.00	● ●
10.000		133.00	87.00	● ● ●
10.080		133.00	87.00	● ●
10.200		133.00	87.00	● ● ○
10.260		133.00	87.00	● ●
10.300		133.00	87.00	● ●
10.320	13/32	133.00	87.00	● ●
10.490		133.00	87.00	● ●
10.500		133.00	87.00	● ●
10.720	27/64	142.00	94.00	● ●
11.000		142.00	94.00	● ● ●
11.110	7/16	142.00	94.00	● ○
11.500		142.00	94.00	● ○
11.510	29/64	142.00	94.00	● ●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

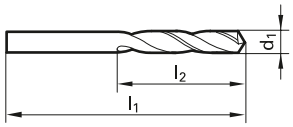
Guhring no.	710	732	2464
Standard		Guhring std.	
Tool material	Carbide	Solid carbide	
Surface	○	○	(F)
Type	Duro 150	N	N
Cutting direction	right-hand	right-hand	right-hand
Tolerance	h8	h7	h7
Discount group	102	102	102
Techn. data page	150	150	150



d1		l1	l2	Availability		
mm	inch	mm	mm			
11.910	15/32	151.00	101.00		●	●
12.000		151.00	101.00	●	●	●
12.300	31/64	151.00	101.00		●	●
12.500		151.00	101.00	●		
12.700	1/2	151.00	101.00		●	●
13.000		151.00	101.00	●		
14.000		160.00	108.00	●		

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	223	224	225	226	227	228	552	553
0.320		19.00	2.00				○				
0.350		19.00	2.00	○							
0.400	1/64	19.00	2.50	●							
0.450		19.00	2.50								
0.480		19.00	2.50	○							
0.500		20.00	3.00	●			○				
0.510		20.00	3.00								
0.520		20.00	3.00								
0.550		21.00	3.50	●			○				
0.570		21.00	3.50								
0.575		21.00	3.50	○							
0.580		21.00	3.50				○				
0.590		21.00	3.50								
0.600		21.00	3.50	●			●				
0.610		22.00	4.00								
0.620		22.00	4.00				○				
0.640		22.00	4.00								
0.650		22.00	4.00	●			○				
0.660		22.00	4.00	○							
0.690		23.00	4.50		○						
0.700		23.00	4.50	●			●				
0.710		23.00	4.50								
0.720		23.00	4.50	●							
0.730		23.00	4.50								
0.740		23.00	4.50				○				
0.750		23.00	4.50	●			○	●			
0.780		24.00	5.00								
0.790	1/32	24.00	5.00	●							
0.800		24.00	5.00	●			●				
0.810		24.00	5.00				○				
0.820		24.00	5.00	●							
0.825		24.00	5.00	○							
0.840		24.00	5.00								
0.850		24.00	5.00	●			○				
0.860		25.00	5.50								
0.870		25.00	5.50								
0.875		25.00	5.50				○				
0.890		25.00	5.50	●			○				
0.900		25.00	5.50	●	●		●				

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

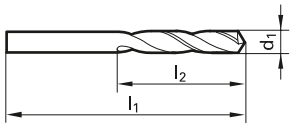
653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S	○	M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability

			●							
			○	○						
●			●	○	●					
			●							
			○							
			●							
			●							
●			○							
			●		●					
			●	●						
			●							
●			●	○	●					
			○	○						
			●							
			○							
			●							
○			●		●					
			●							
			●							
●	○		●	●	●					

C TiCN	Cb Carbo	D Cristall	F FIRE/nanoFIRE	P AlCrN	S TiN	S+ TiN+	M MolyGlide	Y Signum		

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	223	224	225	226	227	228	552	553
0.910		25.00	5.50								
0.930		25.00	5.50	●							
0.940		25.00	5.50								
0.950		25.00	5.50	●	❍		●				
0.960		26.00	6.00								
0.970		26.00	6.00				❍				
0.975		26.00	6.00				●				
0.980		26.00	6.00	●							
0.990		26.00	6.00								
1.000		26.00	6.00	●	●	●	●		❍	●	●
1.020		26.00	6.00	●			❍			●	●
1.030		26.00	6.00	❍			❍				
1.040		26.00	6.00	❍			❍	❍		●	
1.050		26.00	6.00	●			❍			●	
1.060		26.00	6.00				❍				
1.070		28.00	7.00	●			●			●	❍
1.090		28.00	7.00	●			●			●	❍
1.100		28.00	7.00	●	●	●	●		❍	●	●
1.110		28.00	7.00	❍							
1.120		28.00	7.00	●							
1.150		28.00	7.00	●			●	❍	❍	●	●
1.170		28.00	7.00								
1.180		28.00	7.00	●			❍			●	●
1.190	3/64	30.00	8.00	●	❍	❍	❍	❍	❍	●	❍
1.200		30.00	8.00	●	●	●	●	●	❍	●	●
1.210		30.00	8.00								
1.220		30.00	8.00				❍				
1.230		30.00	8.00								
1.250		30.00	8.00	●	●		●			●	❍
1.260		30.00	8.00	❍							
1.280		30.00	8.00	●							
1.300		30.00	8.00	●	●	●	●		❍	●	●
1.320		30.00	8.00	●			●			●	●
1.330		32.00	9.00				●				
1.350		32.00	9.00	●			●	❍		❍	●
1.370		32.00	9.00								
1.400		32.00	9.00	●	●	●	●		❍	●	●
1.420		32.00	9.00								
1.430		32.00	9.00	●							

Availability

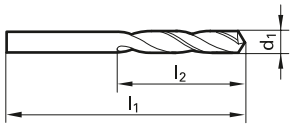
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◍ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S	○	M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
●	○		●							
	○		●		●					
			○							
			●							
●	○	●	●	○	●	●	●	○	●	●
●				○	○					
●			●	●						
				○						
●			●	○	○					
●	○		●	●	●	○		○	●	●
○										
●			●	○	●	●	●	○	●	●
●			●	○						
●			●	○	○	○				
●			●	○						
●			●	○	●	●	●	●	●	●
○										
●		○	●	○	●	●	●	●	●	●
●			●	○	○					
			○							
●			●	○						
			○							
●	●		●		●	●	●	○	●	●
				○						

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	Availability
1.450		32.00	9.00	● ○ ○ ● ●
1.470		32.00	9.00	
1.480		32.00	9.00	●
1.500		32.00	9.00	● ● ● ● ● ○ ● ●
1.510		34.00	10.00	● ○ ● ○
1.520		34.00	10.00	●
1.530		34.00	10.00	●
1.540		34.00	10.00	○
1.550		34.00	10.00	● ● ● ● ●
1.570		34.00	10.00	○
1.580		34.00	10.00	○
1.590	1/16	34.00	10.00	● ○ ○ ● ○ ○ ● ○
1.600		34.00	10.00	● ● ● ● ○ ● ●
1.610		34.00	10.00	● ● ● ○
1.620		34.00	10.00	●
1.630		34.00	10.00	
1.650		34.00	10.00	● ○ ● ●
1.670		34.00	10.00	○
1.680		34.00	10.00	
1.700		34.00	10.00	● ● ● ● ● ○ ● ●
1.720		36.00	11.00	● ●
1.730		36.00	11.00	○ ○
1.740		36.00	11.00	○
1.750		36.00	11.00	● ● ●
1.770		36.00	11.00	○
1.780		36.00	11.00	● ● ○ ● ○
1.800		36.00	11.00	● ● ● ● ● ○ ● ●
1.810		36.00	11.00	○
1.820		36.00	11.00	●
1.830		36.00	11.00	
1.850		36.00	11.00	● ● ○ ● ●
1.900		36.00	11.00	● ● ● ● ○ ○ ● ●
1.930		38.00	12.00	● ● ○ ○
1.940		38.00	12.00	○
1.950		38.00	12.00	● ● ● ○ ● ●
1.970		38.00	12.00	●
1.980	5/64	38.00	12.00	● ○ ○ ● ○ ○ ● ○
1.990		38.00	12.00	● ○ ● ○
2.000		38.00	12.00	● ● ● ● ○ ● ●

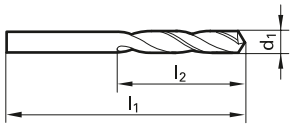
○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S	○	M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
●			● ●	● ●	●					
● ●	○	○	● ●	● ○	● ●	●	●	●	●	●
●			● ●	● ○	● ●					
●			●		●					
●	○		● ●	○ ○	● ●	○	○			
●			●	●			●	○	●	●
●			●							
●			● ●	○	●	●	●	○	●	●
●			●							
●	●	●	● ●	○ ○	● ●	●		○	●	●
●			●							
● ● ●		●	● ● ●	○ ○ ○	● ● ●	●	●	○	●	●
●			●	●	●					
● ● ●	●	○	● ●	● ○	● ○	●	●	●	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	Availability
2.010		38.00	12.00	○
2.020		38.00	12.00	● ●
2.030		38.00	12.00	
2.050		38.00	12.00	● ● ● ● ●
2.060		38.00	12.00	● ○ ● ○
2.080		38.00	12.00	● ○ ● ○
2.100		38.00	12.00	● ● ● ● ○ ○ ● ●
2.120		38.00	12.00	●
2.130		40.00	13.00	●
2.150		40.00	13.00	● ○ ●
2.180		40.00	13.00	● ○ ● ○
2.200		40.00	13.00	● ● ● ● ○ ○ ● ●
2.220		40.00	13.00	● ●
2.250		40.00	13.00	● ● ○ ● ●
2.260		40.00	13.00	● ● ● ●
2.270		40.00	13.00	○
2.300		40.00	13.00	● ● ● ● ● ○ ● ●
2.320		40.00	13.00	●
2.350		40.00	13.00	● ● ● ○ ● ●
2.360		40.00	13.00	○
2.370		43.00	14.00	● ○ ○ ○ ●
2.380	3/32	43.00	14.00	● ● ● ○ ○ ○ ● ○
2.400		43.00	14.00	● ● ● ● ● ○ ● ●
2.420		43.00	14.00	○ ○ ○
2.440		43.00	14.00	● ○ ● ●
2.450		43.00	14.00	● ○ ● ●
2.470		43.00	14.00	○
2.480		43.00	14.00	● ●
2.490		43.00	14.00	● ● ● ●
2.500		43.00	14.00	● ● ● ● ● ● ● ●
2.520		43.00	14.00	● ○
2.530		43.00	14.00	● ● ○ ● ●
2.550		43.00	14.00	● ● ● ● ● ●
2.570		43.00	14.00	○
2.580		43.00	14.00	● ○ ○ ● ●
2.600		43.00	14.00	● ● ● ● ○ ○ ● ●
2.640		43.00	14.00	● ○ ● ○
2.650		43.00	14.00	● ○ ● ● ●
2.700		46.00	16.00	● ● ● ● ○ ○ ● ●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

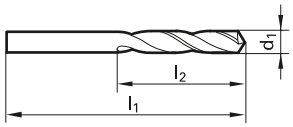
653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S		M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability

○			●	○						
●			●	○	●					
●			●	○	●					
○			●	○	●					
●	●	●	●	○	●	○		○	●	●
●			●	○	●					
●	●	○	●	●	●	●	●	○	●	●
●			●	○	●					
●	○		●	●	○					
○			●	○	●					
●			●	○	●					
○	●	○	●	●	●	●	●	○	●	●
●			●	○	●					
●	●	○	●	○	●					
●			●	○	●					
●	○		●	●	●	○				
●			●	○	●					
●	●	○	●	●	●	●	●	○	●	●
●			●	○	●					
●	●	○	●	○	●	●	●	○	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	223	224	225	226	227	228	552	553
2.710		46.00	16.00	●		○	○			●	●
2.720		46.00	16.00				○				
2.750		46.00	16.00	●		○				●	●
2.770		46.00	16.00								
2.780	7/64	46.00	16.00	●	○	○	●	○	○	●	●
2.790		46.00	16.00	●			○			●	●
2.800		46.00	16.00	●	●	●	●	○	○	●	●
2.820		46.00	16.00	●			○			●	○
2.830		46.00	16.00								
2.850		46.00	16.00	●			○			●	●
2.870		46.00	16.00	○			●			●	●
2.880		46.00	16.00				○				
2.900		46.00	16.00	●	●	●	●	●	○	●	●
2.920		46.00	16.00	○					○		
2.950		46.00	16.00	●	●					●	○
2.970		46.00	16.00	●							
3.000		46.00	16.00	●	●	●	●	●		●	●
3.020		49.00	18.00	●			○				
3.030		49.00	18.00								
3.050		49.00	18.00	●		●	●			●	●
3.100		49.00	18.00	●	●	●	●	●	○	●	●
3.150		49.00	18.00	●			●	○		●	●
3.170	1/8	49.00	18.00	●	○	●	○	○	○	●	●
3.200		49.00	18.00	●	●	●	●	○	●	●	●
3.230		49.00	18.00				●				
3.250		49.00	18.00	●	●		●			●	●
3.260		49.00	18.00	●						●	○
3.300		49.00	18.00	●	●	●	●	●		●	●
3.330		49.00	18.00				●				
3.350		49.00	18.00	●	●			○		●	●
3.400		52.00	20.00	●	●	●	●	●		●	●
3.420		52.00	20.00				○				
3.450		52.00	20.00	●			●			●	●
3.480		52.00	20.00				○				
3.500		52.00	20.00	●	●	●	●	●		●	●
3.520		52.00	20.00								
3.530		52.00	20.00				○				
3.550		52.00	20.00	●			○			●	●
3.570	9/64	52.00	20.00	●	●	○		○	○	●	○

Availability

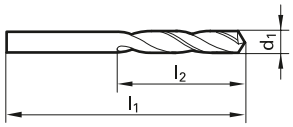
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◍ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S	○	M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
●			●		●					
●			●	○						
				○						
●			●	●	●					
●			●		●					
●			●	○						
●			●		●					
○			●	○						
●	●	○	●	●	●	●	●	○	●	●
			●	○	●					
			○							
●			●		●					
○			●							
●			●		●					
●	●	●	●	●	●	●	●	○	●	●
●			●		●					
●	●		●		●					
●			●							
●	●	●	●	●	●	●	●	○	●	●
●			●		●					
●	●	○	●	●	●	●	●	○	●	●
			●	○	●					
●	●		●		●	●	●	○	●	●
●			●							
●			●		●	○				

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○	<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	Availability
3.580		52.00	20.00	○
3.600		52.00	20.00	● ● ● ○ ● ● ●
3.650		52.00	20.00	● ○ ● ● ●
3.660		52.00	20.00	● ● ●
3.680		52.00	20.00	●
3.700		52.00	20.00	● ● ● ● ○ ○ ● ●
3.710		52.00	20.00	○
3.720		52.00	20.00	○
3.730		52.00	20.00	○ ● ● ○
3.750		52.00	20.00	● ● ● ●
3.770		55.00	22.00	○
3.800		55.00	22.00	● ● ● ● ● ● ●
3.830		55.00	22.00	
3.840		55.00	22.00	○
3.850		55.00	22.00	● ● ● ● ●
3.860		55.00	22.00	● ○ ● ○
3.900		55.00	22.00	● ○ ○ ○ ● ●
3.910		55.00	22.00	● ○ ● ○
3.950		55.00	22.00	● ○ ● ○
3.960		55.00	22.00	●
3.970	5/32	55.00	22.00	● ○ ○ ○ ○ ○ ● ○
3.990		55.00	22.00	● ○ ● ○
4.000		55.00	22.00	● ● ● ● ● ● ● ●
4.020		55.00	22.00	● ○
4.030		55.00	22.00	○
4.033		55.00	22.00	○
4.040		55.00	22.00	● ○ ● ○
4.050		55.00	22.00	● ● ● ○
4.080		55.00	22.00	●
4.090		55.00	22.00	● ● ●
4.100		55.00	22.00	● ● ● ● ● ○ ● ●
4.150		55.00	22.00	● ● ●
4.200		55.00	22.00	● ● ● ● ● ● ● ●
4.220		55.00	22.00	● ○ ● ●
4.230		55.00	22.00	○
4.250		55.00	22.00	● ● ○ ○ ● ●
4.290		58.00	24.00	○
4.300		58.00	24.00	● ● ● ● ● ● ● ●
4.350		58.00	24.00	○ ●

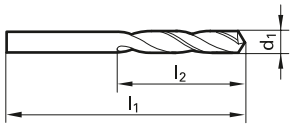
○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S	○	M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
●		○	●	●	●	●	●	○	●	●
●			●		●					
●		●	●	●	●	●	●	○	●	●
●			●		●					
●			●		●					
●	●	●	●	●	●	●	○	○	●	●
			○							
			●							
●			●	○	●					
●	●	●	●	○	●	●	●	○	●	●
			●		●					
●			●	○	●	○				
●			●		●					
●			●	●	●	●	●	●	●	●
			●							
●			●		●					
●			●	○	●					
●		○	●	○	●	●	●	○	●	●
●	●	●	●	●	●	●	●	○	●	●
			●							
●	●		●		●					
●	●	●	●	●	●	●	●	○	●	●
			●							

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	Availability
4.370	11/64	58.00	24.00	● ○ ● ● ○ ○ ● ●
4.380		58.00	24.00	○
4.390		58.00	24.00	○ ○ ○ ○
4.400		58.00	24.00	● ● ● ● ○ ● ●
4.450		58.00	24.00	● ● ○ ● ●
4.500		58.00	24.00	● ● ● ● ● ● ● ●
4.520		58.00	24.00	○
4.550		58.00	24.00	● ● ●
4.560		58.00	24.00	○
4.570		58.00	24.00	● ○ ● ○
4.600		58.00	24.00	● ● ● ● ● ○ ● ●
4.620		58.00	24.00	● ○ ● ●
4.650		58.00	24.00	● ● ●
4.700		58.00	24.00	● ● ○ ● ● ●
4.750		58.00	24.00	● ○ ● ○
4.760	3/16	62.00	26.00	● ● ● ● ○ ○ ● ○
4.800		62.00	26.00	● ○ ● ● ○ ● ● ●
4.850		62.00	26.00	● ● ● ○
4.900		62.00	26.00	● ○ ● ● ○ ● ●
4.920		62.00	26.00	● ○ ● ○
4.930		62.00	26.00	○
4.950		62.00	26.00	● ● ● ○
4.970		62.00	26.00	○
4.980		62.00	26.00	● ○ ● ○
5.000		62.00	26.00	● ● ● ● ● ● ●
5.020		62.00	26.00	●
5.050		62.00	26.00	● ●
5.060		62.00	26.00	● ● ○
5.100		62.00	26.00	● ● ● ● ● ● ● ●
5.110		62.00	26.00	● ● ●
5.150		62.00	26.00	● ● ○
5.160	13/64	62.00	26.00	● ○ ○ ○ ● ○
5.180		62.00	26.00	● ○ ● ○
5.200		62.00	26.00	● ● ● ● ○ ● ●
5.220		62.00	26.00	● ○ ● ○
5.250		62.00	26.00	● ● ●
5.300		62.00	26.00	● ● ● ○ ● ● ●
5.310		66.00	28.00	● ○ ●
5.350		66.00	28.00	●

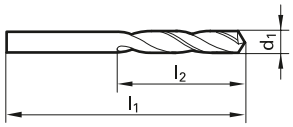
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S		M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
●			●	○	●	○				
○			○	○	●					
●	○	○	●	○	●	●	○	○	●	●
●		●	●	●	●	●	●	●	●	●
			●							
●	●	●	●	○	●	●	●	○	●	●
●			●							
●	●	○	●		●	●	●	●	●	●
●			●							
●	●	○	●	○	●	●	●	○	●	●
○			○	○	●					
●			●							
●	●	●	●	●	●	●	●	●	●	●
●			●	○	●					
●	●	●	●	○	●	●	●	○	●	
●			●	○						
●			●	●	●	●				
●	●	●	●	○	●	●	●	○	●	●
●			●		●					
●		●	●	○	●	●	●	○	●	●
●			●		●					

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○	<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	Availability
5.400		66.00	28.00	● ● ❍ ❍ ❍ ●
5.410		66.00	28.00	● ● ●
5.450		66.00	28.00	● ❍
5.500		66.00	28.00	● ● ● ● ● ● ●
5.520		66.00	28.00	
5.550		66.00	28.00	●
5.560	7/32	66.00	28.00	❍ ● ● ❍ ❍ ❍ ● ●
5.600		66.00	28.00	● ● ● ● ❍ ● ●
5.610		66.00	28.00	❍ ❍ ● ●
5.620		66.00	28.00	●
5.700		66.00	28.00	● ● ● ● ❍ ❍ ● ●
5.750		66.00	28.00	● ●
5.790		66.00	28.00	❍ ❍ ● ●
5.800		66.00	28.00	● ● ● ❍ ❍ ● ●
5.850		66.00	28.00	
5.900		66.00	28.00	● ❍ ● ● ❍ ❍ ● ●
5.940		66.00	28.00	● ❍ ● ● ❍
5.950	15/64	66.00	28.00	● ❍ ● ❍ ❍ ❍ ● ❍
6.000		66.00	28.00	● ● ● ● ● ●
6.040		70.00	31.00	❍ ❍ ●
6.050		70.00	31.00	● ●
6.100		70.00	31.00	● ● ● ● ❍ ● ●
6.150		70.00	31.00	● ● ❍ ● ❍
6.170		70.00	31.00	❍
6.200		70.00	31.00	● ● ● ● ❍ ● ●
6.250		70.00	31.00	● ❍ ● ●
6.300		70.00	31.00	● ● ●
6.320		70.00	31.00	
6.350	1/4	70.00	31.00	● ● ● ● ❍ ❍ ● ❍
6.400		70.00	31.00	● ● ● ● ❍ ● ❍
6.450		70.00	31.00	●
6.500		70.00	31.00	● ● ● ● ● ❍ ● ●
6.530		70.00	31.00	● ● ● ●
6.540		70.00	31.00	●
6.550		70.00	31.00	● ●
6.570		70.00	31.00	❍
6.600		70.00	31.00	● ● ● ● ● ● ●
6.630		70.00	31.00	● ❍ ● ●
6.700		70.00	31.00	● ● ❍ ● ●

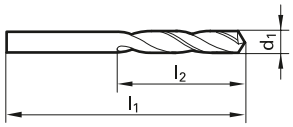
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S		M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
● ● ● ●	○	●	● ● ● ●	○ ○	●	●	●	○	●	
● ● ●		●	● ●	●	●	●	●	○	●	●
● ● ●	●		● ● ● ●	○ ○ ○	● ● ●	● ●	●	○	●	●
● ● ●	●	○	● ● ●	○ ○	●	●		○	●	
●	●	●	● ● ● ●	●	●	●	●	●	●	
●	●	●	● ● ●	○ ○	● ● ●	●	● ○		●	
● ● ● ●	●	●	● ● ● ●	● ○	● ● ●	●	●	●	●	●
● ●	●	●	● ● ●	●	● ●	●	●	○	●	●
● ● ●	●	○ ○	● ● ● ●	● ●	● ●	●	● ○	○ ○	●	●
● ●			● ● ● ●	○	● ●	● ○	●	○	○	
● ● ●	●		● ● ●	●	● ●	●	●	○	●	●
			●							
●		●	● ●	○	●	●	●	○	●	●
●	○	●	●		●	●	●	○		

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	Availability
6.750	17/64	74.00	34.00	● ○ ○ ● ○
6.760		74.00	34.00	○
6.800		74.00	34.00	● ● ● ● ○ ● ●
6.850		74.00	34.00	●
6.900		74.00	34.00	● ○ ● ● ○ ● ●
6.920		74.00	34.00	○
6.950		74.00	34.00	●
7.000		74.00	34.00	● ● ● ● ● ○ ● ●
7.030		74.00	34.00	○ ○ ● ○
7.050		74.00	34.00	●
7.100		74.00	34.00	● ● ●
7.140	9/32	74.00	34.00	● ● ● ● ○ ○ ● ○
7.150		74.00	34.00	●
7.200		74.00	34.00	● ● ○ ●
7.250		74.00	34.00	● ○
7.300		74.00	34.00	● ● ● ○ ● ●
7.350		74.00	34.00	●
7.370		74.00	34.00	● ○ ● ●
7.400		74.00	34.00	● ● ○ ● ●
7.450		74.00	34.00	● ●
7.490		74.00	34.00	● ○ ● ○
7.500		74.00	34.00	● ● ● ● ○ ○ ● ○
7.540	19/64	79.00	37.00	● ○ ○ ○ ○ ○ ● ○
7.550		79.00	37.00	○ ○
7.600		79.00	37.00	● ● ● ○
7.670		79.00	37.00	● ● ○
7.700		79.00	37.00	● ● ● ○
7.750		79.00	37.00	● ● ● ○
7.800		79.00	37.00	● ○ ○ ○ ●
7.850		79.00	37.00	●
7.900		79.00	37.00	● ○ ○ ●
7.940	5/16	79.00	37.00	● ● ● ○ ○ ● ○
8.000		79.00	37.00	● ● ● ● ● ●
8.030		79.00	37.00	● ● ○ ●
8.050		79.00	37.00	●
8.100		79.00	37.00	● ● ● ●
8.150		79.00	37.00	●
8.200		79.00	37.00	● ● ● ●
8.250		79.00	37.00	●

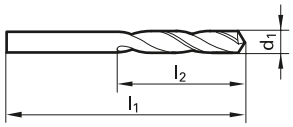
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S	○	M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
●			●	●	●	●				
●	●	●	●	●	●	●	●		●	●
●	○		●	○	●	●		○	●	●
●			●	●	●	●	●	○	●	●
			●	○						
●		●	●	○	●		○	○		
●			●	●	●	○				
●			●		●	●	●	○	●	
●		○	●	○	●	●	○	○	●	
●		●	●		●	●	○	○	●	
			●	○						
●			●		●					
●	●	●	●	○	●	●	●	○	●	●
			●	○	●	○				
●			●		●					
●			●	●	●		●	○	●	●
			●	○	●	○				
●		●	●		●	●	○	●	●	●
			●	○						
●		○	●	●	●	●	○	●	●	●
			●	○						
●		○	●		●	●		○	●	
			●							
●		○	●		●	●		○	●	
			●							

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	Availability
8.300		79.00	37.00	● ○ ● ●
8.330	21/64	79.00	37.00	● ● ○ ○ ○ ○ ● ○
8.400		79.00	37.00	● ● ● ● ○ ●
8.430		79.00	37.00	● ○ ● ●
8.450		79.00	37.00	●
8.500		79.00	37.00	● ● ● ● ● ● ●
8.520		84.00	40.00	
8.550		84.00	40.00	●
8.600		84.00	40.00	● ● ● ● ●
8.610		84.00	40.00	● ● ●
8.650		84.00	40.00	●
8.700		84.00	40.00	● ● ● ●
8.730	11/32	84.00	40.00	● ● ○ ○ ○ ● ○
8.750		84.00	40.00	●
8.800		84.00	40.00	● ○ ○ ● ○
8.840		84.00	40.00	● ○ ● ○
8.850		84.00	40.00	○
8.900		84.00	40.00	● ○ ○ ●
8.950		84.00	40.00	●
9.000		84.00	40.00	● ● ● ● ○ ● ○
9.050		84.00	40.00	●
9.090		84.00	40.00	○ ○ ● ○
9.100		84.00	40.00	● ● ●
9.130	23/64	84.00	40.00	● ○ ○ ○ ○ ● ○
9.150		84.00	40.00	● ○
9.160		84.00	40.00	○
9.200		84.00	40.00	● ● ○ ●
9.250		84.00	40.00	●
9.270		84.00	40.00	○
9.300		84.00	40.00	● ● ●
9.340		84.00	40.00	● ● ● ○
9.350		84.00	40.00	● ○
9.400		84.00	40.00	● ○ ● ○
9.500		84.00	40.00	● ● ● ○ ○ ● ○
9.520	3/8	89.00	43.00	● ○ ● ● ○ ○ ● ○
9.580		89.00	43.00	● ○ ● ○
9.600		89.00	43.00	● ● ● ○
9.650		89.00	43.00	●
9.700		89.00	43.00	● ○ ● ●

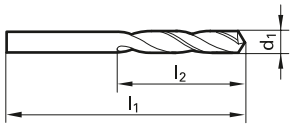
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S		M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
●		●	●		●	●	●	○	●	
●			●	○		○				
●		●	●		●		○	○		
●			●	○						
●	●	●	●	●	●	●	●	○	●	●
●			○							
●	●		○							
●			●	○	●					
●	●	●	●	●	●	●	●	○	●	●
●	○	○	●	○	●	●				
●			●							
●	○	○	●	●	●		●	●	●	
●			●		●					
●		○	●					○		
●	●	●	●	●	●	●	●	○	●	●
●			●	○						
●			●		●	●		○		
●			●	○						
●	○	●	●		●	●	○	○	●	●
●			●	○	●					
○			●	○						
		○	●		●	●		○		
●			○							
●			●	○	●	●		○		

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	Availability
9.750		89.00	43.00	● ○ ● ●
9.800		89.00	43.00	● ○ ● ●
9.850		89.00	43.00	●
9.900		89.00	43.00	● ○ ● ○
9.920	25/64	89.00	43.00	● ○ ○ ○ ○ ● ○
10.000		89.00	43.00	● ● ● ● ● ● ●
10.040		89.00	43.00	
10.050		89.00	43.00	● ●
10.080		89.00	43.00	● ○ ●
10.100		89.00	43.00	● ● ●
10.150		89.00	43.00	● ●
10.200		89.00	43.00	● ● ● ●
10.250		89.00	43.00	●
10.260		89.00	43.00	● ● ○
10.300		89.00	43.00	● ○ ●
10.320	13/32	89.00	43.00	● ● ○ ○ ○ ● ○
10.400		89.00	43.00	● ●
10.490		89.00	43.00	● ○ ○ ○
10.500		89.00	43.00	● ● ● ● ● ● ●
10.600		89.00	43.00	● ○ ○
10.700		95.00	47.00	● ○ ○
10.720	27/64	95.00	47.00	● ● ○ ○ ○ ● ○
10.750		95.00	47.00	●
10.800		95.00	47.00	● ● ●
10.900		95.00	47.00	● ○
11.000		95.00	47.00	● ● ● ● ● ● ●
11.100		95.00	47.00	● ○
11.110	7/16	95.00	47.00	● ● ● ● ○ ○ ● ○
11.200		95.00	47.00	● ○ ●
11.250		95.00	47.00	● ●
11.300		95.00	47.00	● ●
11.400		95.00	47.00	● ●
11.500		95.00	47.00	● ● ● ○ ● ●
11.510	29/64	95.00	47.00	● ○ ○ ● ○
11.600		95.00	47.00	●
11.700		95.00	47.00	●
11.750		95.00	47.00	● ○
11.800		95.00	47.00	● ● ● ○
11.900		102.00	51.00	●

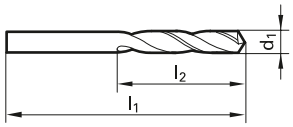
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◍ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S	○	M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
●	●	●	●●○		●	●		○	●	●
●○●		○●	●●●	○○●	●	●○●	●	○●		
	●			●						
●○●	●	○●	●●●	○●	●	●	●	●	●	●
				○						
●			●	○	●					
●●●●			●●●●	○	●	●				
●●●		●	●●●●		●	●	●	○	●	●
●●●			●●●●	○	●					●
●	●		●●●●	●○	●●	●	○		●	●
●●		●	●●●●	○	●					
●●●	○●	●	●●●●	○						
●			●●●●	○		○				
●●●			●			●				●

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	223	224	225	226	227	228	552	553
11.910	15/32	102.00	51.00	○	●			○	○	●	○
12.000		102.00	51.00	●	●	●	●			●	○
12.050		102.00	51.00	●							
12.100		102.00	51.00	●		○					
12.150		102.00	51.00	●							
12.200		102.00	51.00	●			●				
12.250		102.00	51.00	●							
12.300	31/64	102.00	51.00	●				○	○	●	○
12.350		102.00	51.00	●							
12.400		102.00	51.00	●						●	
12.450		102.00	51.00				○				
12.500		102.00	51.00	●	●	●	●		○	●	○
12.600		102.00	51.00	●							
12.700	1/2	102.00	51.00	●		●	●		○	●	○
12.750		102.00	51.00	●							
12.800		102.00	51.00	●		●			○		○
12.900		102.00	51.00	●			○			●	
13.000		102.00	51.00	●	●	●	●		○	●	○
13.100	33/64	102.00	51.00	●						●	○
13.200		102.00	51.00	●			○				
13.250		107.00	54.00	●			○				
13.300		107.00	54.00	●							
13.400		107.00	54.00	●							
13.490	17/32	107.00	54.00	●						●	○
13.500		107.00	54.00	●				○	○	●	○
13.600		107.00	54.00	●							
13.620		107.00	54.00		○						
13.700		107.00	54.00	●							
13.750		107.00	54.00	●			○				○
13.800		107.00	54.00	●							
13.890	35/64	107.00	54.00	●			○			●	○
14.000		107.00	54.00	●	●	●	●		●	●	●
14.050		111.00	56.00				○				
14.100		111.00	56.00	●							
14.200		111.00	56.00	●			●				
14.250		111.00	56.00	●			○				○
14.290	9/16	111.00	56.00	●			●			●	○
14.300		111.00	56.00	●							
14.400		111.00	56.00	●							

Availability

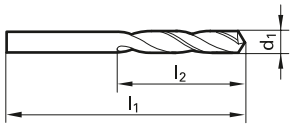
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◍ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S	○	M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
○ ●			● ●	○ ●	●	●	●	○	●	●
●			●		●					
●		●	●		●					
●		○	●	○	●	●				
				○						
●	●		●		●	●		○	●	●
●	○	○	● ●		●	●				
●		●	● ●		●	●				
●	●		●	○	●	●		○	●	●
● ○			●			●				
					●					
●			●		●	○				
●	○	○	● ●	○		●				●
●			● ●							
● ●			● ●	○	●	●				●
●			●							
●			●		●					

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36	○	○	>Ø 6,00	○	○	<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	Availability
14.500		111.00	56.00	● ● ● ● ○ ● ○
14.600		111.00	56.00	●
14.680	37/64	111.00	56.00	● ○ ○
14.700		111.00	56.00	○ ○ ○
14.750		111.00	56.00	●
14.800		111.00	56.00	●
14.900		111.00	56.00	●
15.000		111.00	56.00	● ● ● ● ● ○ ● ○
15.080	19/32	115.00	58.00	● ○ ○
15.100		115.00	58.00	●
15.200		115.00	58.00	● ●
15.250		115.00	58.00	●
15.300		115.00	58.00	●
15.400		115.00	58.00	●
15.480	39/64	115.00	58.00	● ○ ● ○
15.500		115.00	58.00	● ○ ● ○
15.600		115.00	58.00	● ○
15.700		115.00	58.00	● ○
15.750		115.00	58.00	● ○
15.800		115.00	58.00	
15.870	5/8	115.00	58.00	● ● ● ○
16.000		115.00	58.00	● ● ● ● ● ○
16.100		119.00	60.00	●
16.150		119.00	60.00	●
16.200		119.00	60.00	● ○
16.250		119.00	60.00	●
16.270	41/64	119.00	60.00	● ● ○
16.300		119.00	60.00	●
16.500		119.00	60.00	● ● ○ ●
16.670	21/32	119.00	60.00	● ●
16.750		119.00	60.00	●
17.000		119.00	60.00	● ● ● ● ○
17.070	43/64	123.00	62.00	● ○ ● ○
17.100		123.00	62.00	●
17.200		123.00	62.00	●
17.250		123.00	62.00	●
17.460	11/16	123.00	62.00	● ● ○
17.500		123.00	62.00	● ○
17.600		123.00	62.00	●

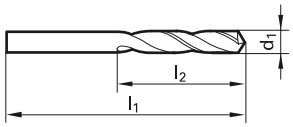
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S	○	M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
●		●	●		●	●				●
			●	●						
●										
●										
●		●	●		●	●				●
●										
				○						
●			●							
●			●	○	●	●				
●			●	○		●				●
●			●							
●			●			●				
●			●			●				
●			●							
●			●			●				

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	Availability
17.750		123.00	62.00	● ○
17.860	45/64	123.00	62.00	● ● ○
18.000		123.00	62.00	● ● ● ● ○ ● ●
18.100		127.00	64.00	●
18.200		127.00	64.00	●
18.250		127.00	64.00	●
18.260	23/32	127.00	64.00	● ● ○
18.500		127.00	64.00	● ○ ○
18.650	47/64	127.00	64.00	● ○
18.750		127.00	64.00	●
19.000		127.00	64.00	● ● ● ○
19.050	3/4	131.00	66.00	● ○ ○ ○ ○
19.100		131.00	66.00	●
19.250		131.00	66.00	●
19.450	49/64	131.00	66.00	○
19.500		131.00	66.00	● ○
19.750		131.00	66.00	○
19.840	25/32	131.00	66.00	○ ○ ● ○
20.000		131.00	66.00	● ● ○ ● ● ○
20.100		136.00	68.00	●
20.240	51/64	136.00	68.00	●
20.250		136.00	68.00	●
20.500		136.00	68.00	●
20.640	13/16	136.00	68.00	● ○
20.750		136.00	68.00	●
20.800		136.00	68.00	●
21.000		136.00	68.00	● ● ● ○
21.030	53/64	136.00	68.00	○
21.250		141.00	70.00	○
21.430	27/32	141.00	70.00	●
21.500		141.00	70.00	●
21.750		141.00	70.00	○
21.830	55/64	141.00	70.00	○ ○
22.000		141.00	70.00	● ●
22.200		141.00	70.00	○
22.220	7/8	141.00	70.00	●
22.400		141.00	70.00	○
22.500		146.00	72.00	● ●
22.620	57/64	146.00	72.00	

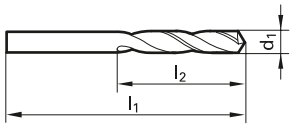
○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S	○	M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
● ●			○ ●			●				
○										
○ ● ●			● ●			●				
● ●			● ●			●				
			●							
●			●	○ ○ ●						
●			●			●				
			● ● ●							
●			●							
●										
●			● ●							
● ○				○						

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	Availability
23.000		146.00	72.00	● ●
23.020	29/32	146.00	72.00	●
23.420	59/64	146.00	72.00	○
23.500		146.00	72.00	●
23.810	15/16	151.00	75.00	●
24.000		151.00	75.00	● ● ○
24.210	61/64	151.00	75.00	●
24.500		151.00	75.00	●
24.610	31/32	151.00	75.00	●
25.000	63/64	151.00	75.00	● ●
25.400	1	156.00	78.00	● ●
25.500		156.00	78.00	○
26.000		156.00	78.00	●
26.190	1 1/32	156.00	78.00	○
26.500		156.00	78.00	●
26.590	1 3/64	162.00	81.00	○
26.990	1 1/16	162.00	81.00	○
27.000		162.00	81.00	●
27.380	1 5/64	162.00	81.00	○
27.500		162.00	81.00	●
28.000		162.00	81.00	●
28.500		168.00	84.00	
28.570	1 1/8	168.00	84.00	●
29.000		168.00	84.00	● ○
29.370	1 5/32	168.00	84.00	●
29.500		168.00	84.00	
30.000		168.00	84.00	●
30.160	1 3/16	174.00	87.00	
30.960	1 7/32	174.00	87.00	○ ○
31.000		174.00	87.00	●
31.500		174.00	87.00	●
31.750	11/4	180.00	90.00	○
32.000		180.00	90.00	●
32.150	1 17/64	180.00	90.00	○
32.940	1 19/64	180.00	90.00	○
33.000		180.00	90.00	○ ○
34.500		186.00	93.00	○
34.920	1 3/8	186.00	93.00	○
35.000		186.00	93.00	

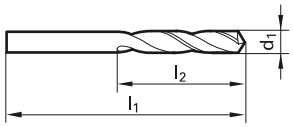
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S	○	M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
●			●							
●				○						
●			●	○						
●			●							
●			●	○						
○			●							
			●	○						
				○						
○			●							
○										
○										
○										
●										
○										
				○						
				○						
				○						

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	223	224	225	226	227	228	552	553
Standard	DIN 1897							
Tool material	HSS							
Surface	>Ø 2,36			>Ø 6,00			<Ø 2,36 >Ø 16,0	<Ø 2,36 >Ø 16,0
Type	N	H	W	N	H	W	GT 80	GT 80
Cutting direction	right-hand	right-hand	right-hand	left-hand	left-hand	left-hand	right-hand	left-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	138	134	138	138	136	138
Techn. data page	150	151	151	151	151	151	152	152



d1 mm	d1 inch	l1 mm	l2 mm	Availability
36.000		193.00	96.00	❍
37.000		193.00	96.00	❍
39.500		200.00	100.00	❍
40.000		200.00	100.00	❍ ❍
44.000		214.00	108.00	❍
44.450	13/4	214.00	108.00	❍
45.000		214.00	108.00	❍
48.000		228.00	116.00	❍ ❍
50.000		228.00	116.00	❍

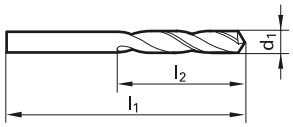
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

653	672	2460	329	330	659	1228	1261	2048	2461	2498
DIN 1897										
HSS			HSCO							
S	S	F	>Ø 2,36	>Ø 6,00	S	S		M	F	F
N	N	N	GV 120	GV 120	GV 120	GT 80	VA	P2000	GV 120	GT 80
right-hand	left-hand	right-hand	right-hand	left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
133	139	133	134	138	135	137	138	135	135	137
152	152	152	153	153	153	153	153	154	154	154

Availability										
			○							

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

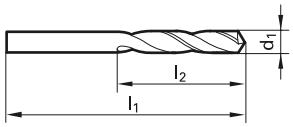
Guhring no.	1259	515	730	2463
Standard	DIN 1897		DIN 6539	
Tool material	M42	HSS-E-PM	Solid carbide	
Surface	○	F	○	F
Type	N	GT 500	N	N
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h7	h7
Discount group	138	115	102	102
Techn. data page	154	154	155	155



d1 mm	d1 inch	l1 mm	l2 mm	Availability
0.500		20.00	3.00	●
0.600		21.00	3.50	●
0.700		23.00	4.50	●
0.800		24.00	5.00	●
0.900		25.00	5.50	●
1.000		26.00	6.00	● ● ● ●
1.020		26.00	6.00	● ● ●
1.040		26.00	6.00	● ● ●
1.070		28.00	7.00	● ● ●
1.090		28.00	7.00	● ● ●
1.100		28.00	7.00	● ● ● ●
1.180		28.00	7.00	● ● ●
1.190	3/64	30.00	8.00	● ● ●
1.200		30.00	8.00	● ● ● ●
1.300		30.00	8.00	● ● ● ●
1.320		30.00	8.00	● ● ●
1.400		32.00	9.00	● ● ● ●
1.500		32.00	9.00	● ● ● ●
1.510		34.00	10.00	● ● ●
1.590	1/16	34.00	10.00	● ● ●
1.600		34.00	10.00	● ● ● ●
1.610		34.00	10.00	● ● ●
1.700		34.00	10.00	● ● ● ●
1.780		36.00	11.00	● ● ●
1.800		36.00	11.00	● ● ● ●
1.850		36.00	11.00	● ● ●
1.900		36.00	11.00	● ● ● ●
1.930		38.00	12.00	● ● ●
1.980	5/64	38.00	12.00	○ ● ●
1.990		38.00	12.00	● ● ●
2.000		38.00	12.00	● ● ● ●
2.060		38.00	12.00	● ● ●
2.080		38.00	12.00	● ● ●
2.100		38.00	12.00	● ● ● ●
2.180		40.00	13.00	● ● ●
2.200		40.00	13.00	● ● ● ●
2.250		40.00	13.00	● ●
2.260		40.00	13.00	● ● ●
2.300		40.00	13.00	● ● ● ●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

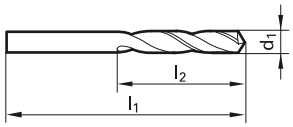
Guhring no.	1259	515	730	2463
Standard	DIN 1897		DIN 6539	
Tool material	M42	HSS-E-PM	Solid carbide	
Surface	○	(F)	○	(F)
Type	N	GT 500	N	N
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h7	h7
Discount group	138	115	102	102
Techn. data page	154	154	155	155



d1 mm	d1 inch	l1 mm	l2 mm	Availability
2.370		43.00	14.00	● ● ●
2.380	3/32	43.00	14.00	○ ● ● ●
2.400		43.00	14.00	● ● ● ●
2.440		43.00	14.00	● ● ●
2.490		43.00	14.00	● ● ●
2.500		43.00	14.00	● ● ● ●
2.530		43.00	14.00	● ● ●
2.580		43.00	14.00	● ● ●
2.600		43.00	14.00	● ● ● ●
2.640		43.00	14.00	● ● ●
2.700		46.00	16.00	● ● ● ●
2.710		46.00	16.00	● ● ●
2.780	7/64	46.00	16.00	● ● ● ●
2.790		46.00	16.00	● ● ●
2.800		46.00	16.00	● ● ● ●
2.820		46.00	16.00	● ● ●
2.870		46.00	16.00	● ● ●
2.900		46.00	16.00	● ● ● ●
2.950		46.00	16.00	● ● ●
3.000		46.00	16.00	● ● ● ●
3.050		49.00	18.00	● ● ●
3.100		49.00	18.00	● ● ● ●
3.170	1/8	49.00	18.00	● ● ● ●
3.200		49.00	18.00	● ● ● ●
3.260		49.00	18.00	● ● ●
3.300		49.00	18.00	● ● ● ●
3.400		52.00	20.00	● ● ● ●
3.450		52.00	20.00	● ● ●
3.500		52.00	20.00	● ● ● ●
3.570	9/64	52.00	20.00	● ● ●
3.600		52.00	20.00	● ○ ● ●
3.660		52.00	20.00	● ● ●
3.700		52.00	20.00	● ● ● ●
3.730		52.00	20.00	● ● ●
3.800		55.00	22.00	● ● ● ●
3.860		55.00	22.00	● ● ●
3.900		55.00	22.00	● ● ● ●
3.910		55.00	22.00	● ● ●
3.970	5/32	55.00	22.00	○ ● ● ●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

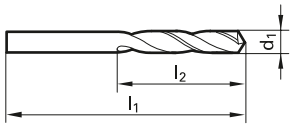
Guhring no.	1259	515	730	2463
Standard	DIN 1897		DIN 6539	
Tool material	M42	HSS-E-PM	Solid carbide	
Surface	○	F	○	F
Type	N	GT 500	N	N
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h7	h7
Discount group	138	115	102	102
Techn. data page	154	154	155	155



d1 mm	d1 inch	l1 mm	l2 mm	Availability
3.990		55.00	22.00	● ● ●
4.000		55.00	22.00	● ● ● ●
4.040		55.00	22.00	● ● ●
4.090		55.00	22.00	● ●
4.100		55.00	22.00	● ● ● ●
4.200		55.00	22.00	● ● ● ●
4.220		55.00	22.00	● ● ●
4.300		58.00	24.00	● ● ● ●
4.370	11/64	58.00	24.00	○ ● ● ○
4.390		58.00	24.00	● ● ●
4.400		58.00	24.00	● ● ● ●
4.500		58.00	24.00	● ● ● ●
4.570		58.00	24.00	● ● ●
4.600		58.00	24.00	● ● ● ●
4.620		58.00	24.00	● ● ●
4.650		58.00	24.00	●
4.700		58.00	24.00	● ● ● ●
4.760	3/16	62.00	26.00	● ● ● ●
4.800		62.00	26.00	● ● ● ●
4.850		62.00	26.00	● ● ●
4.900		62.00	26.00	● ● ● ●
4.920		62.00	26.00	● ● ●
4.980		62.00	26.00	● ● ●
5.000		62.00	26.00	● ● ● ●
5.060		62.00	26.00	● ● ●
5.100		62.00	26.00	● ● ● ●
5.110		62.00	26.00	● ● ●
5.160	13/64	62.00	26.00	● ● ●
5.180		62.00	26.00	● ● ●
5.200		62.00	26.00	● ● ● ●
5.220		62.00	26.00	● ● ●
5.300		62.00	26.00	● ● ● ●
5.310		66.00	28.00	● ● ●
5.400		66.00	28.00	● ● ● ●
5.410		66.00	28.00	● ● ●
5.500		66.00	28.00	● ● ● ●
5.560	7/32	66.00	28.00	● ● ● ●
5.600		66.00	28.00	● ● ● ●
5.610		66.00	28.00	● ●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

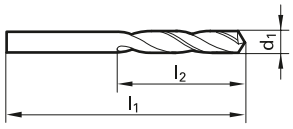
Guhring no.	1259	515	730	2463
Standard	DIN 1897		DIN 6539	
Tool material	M42	HSS-E-PM	Solid carbide	
Surface	○	(F)	○	(F)
Type	N	GT 500	N	N
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h7	h7
Discount group	138	115	102	102
Techn. data page	154	154	155	155



d1 mm	d1 inch	l1 mm	l2 mm	Availability
5.700		66.00	28.00	○ ● ● ●
5.790		66.00	28.00	● ● ●
5.800		66.00	28.00	● ● ● ●
5.900		66.00	28.00	● ● ●
5.940		66.00	28.00	● ● ●
5.950	15/64	66.00	28.00	● ● ● ●
6.000		66.00	28.00	● ● ● ●
6.040		70.00	31.00	● ● ●
6.100		70.00	31.00	● ● ● ●
6.150		70.00	31.00	● ● ●
6.200		70.00	31.00	● ● ● ●
6.250		70.00	31.00	● ● ●
6.300		70.00	31.00	● ● ● ●
6.350	1/4	70.00	31.00	● ● ● ●
6.400		70.00	31.00	● ● ● ●
6.500		70.00	31.00	● ● ● ●
6.530		70.00	31.00	● ● ●
6.600		70.00	31.00	● ● ● ●
6.630		70.00	31.00	● ● ●
6.700		70.00	31.00	● ● ● ●
6.750	17/64	74.00	34.00	● ● ●
6.800		74.00	34.00	● ● ● ●
6.900		74.00	34.00	● ● ● ●
7.000		74.00	34.00	● ● ● ●
7.030		74.00	34.00	● ● ●
7.100		74.00	34.00	● ● ● ●
7.140	9/32	74.00	34.00	○ ● ● ●
7.200		74.00	34.00	● ● ● ●
7.300		74.00	34.00	● ● ● ●
7.370		74.00	34.00	● ● ●
7.400		74.00	34.00	● ● ● ●
7.490		74.00	34.00	● ●
7.500		74.00	34.00	● ● ● ●
7.540	19/64	79.00	37.00	○ ● ● ●
7.600		79.00	37.00	● ● ● ●
7.670		79.00	37.00	● ● ●
7.700		79.00	37.00	● ● ● ●
7.800		79.00	37.00	● ● ● ●
7.900		79.00	37.00	● ● ● ●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

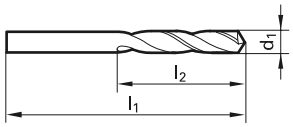
Guhring no.	1259	515	730	2463
Standard	DIN 1897		DIN 6539	
Tool material	M42	HSS-E-PM	Solid carbide	
Surface	○	F	○	F
Type	N	GT 500	N	N
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h7	h7
Discount group	138	115	102	102
Techn. data page	154	154	155	155



d1 mm	d1 inch	l1 mm	l2 mm	Availability
7.940	5/16	79.00	37.00	● ● ● ●
8.000		79.00	37.00	● ● ● ●
8.030		79.00	37.00	● ● ●
8.100		79.00	37.00	● ● ● ●
8.200		79.00	37.00	● ● ● ●
8.300		79.00	37.00	● ● ● ●
8.330	21/64	79.00	37.00	❍ ● ● ●
8.400		79.00	37.00	● ● ●
8.430		79.00	37.00	● ● ●
8.500		79.00	37.00	● ● ● ●
8.600		84.00	40.00	● ● ●
8.610		84.00	40.00	● ● ●
8.700		84.00	40.00	● ● ●
8.730	11/32	84.00	40.00	● ● ●
8.800		84.00	40.00	● ● ●
8.840		84.00	40.00	● ● ●
8.900		84.00	40.00	● ● ●
9.000		84.00	40.00	● ● ● ●
9.090		84.00	40.00	● ● ●
9.100		84.00	40.00	● ●
9.130	23/64	84.00	40.00	● ● ●
9.200		84.00	40.00	❍ ● ●
9.300		84.00	40.00	● ● ● ●
9.340		84.00	40.00	● ● ●
9.350		84.00	40.00	❍
9.400		84.00	40.00	● ❍ ● ●
9.500		84.00	40.00	● ● ● ●
9.520	3/8	89.00	43.00	● ● ●
9.580		89.00	43.00	● ● ●
9.600		89.00	43.00	● ● ●
9.700		89.00	43.00	● ● ●
9.800		89.00	43.00	❍ ● ● ●
9.900		89.00	43.00	● ● ●
9.920	25/64	89.00	43.00	● ● ●
10.000		89.00	43.00	● ● ● ●
10.080		89.00	43.00	● ● ●
10.200		89.00	43.00	● ● ●
10.260		89.00	43.00	● ● ●
10.300		89.00	43.00	● ●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

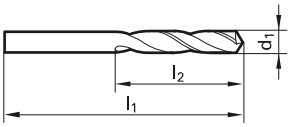
Guhring no.	1259	515	730	2463
Standard	DIN 1897		DIN 6539	
Tool material	M42	HSS-E-PM	Solid carbide	
Surface	○	(F)	○	(F)
Type	N	GT 500	N	N
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h7	h7
Discount group	138	115	102	102
Techn. data page	154	154	155	155



d1 mm	d1 inch	l1 mm	l2 mm	Availability			
10.320	13/32	89.00	43.00		●	●	●
10.490		89.00	43.00		●	●	●
10.500		89.00	43.00	●	●	●	●
10.720	27/64	95.00	47.00		●	●	●
11.000		95.00	47.00	●	●	●	●
11.110	7/16	95.00	47.00		●	●	❍
11.500		95.00	47.00	●	●	●	❍
11.510	29/64	95.00	47.00	❍	❍	●	●
11.700		95.00	47.00			●	
11.800		95.00	47.00		❍		
11.910	15/32	102.00	51.00		●	●	❍
12.000		102.00	51.00	●	●	●	●
12.300	31/64	102.00	51.00		●	●	●
12.500		102.00	51.00	●	●	●	
12.700	1/2	102.00	51.00	❍	●	●	●
13.000		102.00	51.00	❍	●	●	●
13.100	33/64	102.00	51.00		●		
13.490	17/32	107.00	54.00		●	●	●
13.500		107.00	54.00		●		
14.000		107.00	54.00		●	●	●
14.290	9/16	111.00	56.00		●	●	●
15.000		111.00	56.00	●		●	●
15.870	5/8	115.00	58.00	❍			
16.000		115.00	58.00			●	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

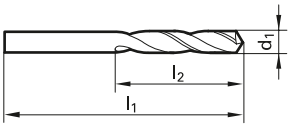
Guhring no.	702
Standard	Guhring std.
Tool material	Solid carbide
Surface	○
Type	N
Cutting direction	right-hand
Tolerance	h7
Discount group	102
Techn. data page	155



d1 mm	d1 inch	l1 mm	l2 mm	Availability
0.500		30.00	5.50	●
0.550		30.00	5.50	●
0.600		30.00	5.50	●
0.650		30.00	6.50	●
0.700		30.00	6.50	●
0.750		30.00	8.50	●
0.800		30.00	8.50	●
0.900		30.00	9.50	●
0.950		30.00	11.00	●
1.000		30.00	11.00	●
1.050		30.00	11.00	●
1.100		30.00	11.00	●
1.200		30.00	13.00	●
1.350		30.00	13.00	●
1.400		30.00	13.00	●
1.450		30.00	13.00	●
1.500		30.00	13.00	●
1.600		40.00	17.50	●
1.650		40.00	17.50	●
1.700		40.00	17.50	●
1.800		40.00	17.50	●
1.850		40.00	17.50	●
1.900		40.00	17.50	●
1.930		40.00	17.50	●
2.000		40.00	17.50	●
2.010		40.00	17.50	●
2.050		40.00	17.50	●
2.100		40.00	17.50	●
2.200		40.00	17.50	●
2.260		40.00	17.50	○
2.300		40.00	17.50	●
2.400		40.00	17.50	●
2.490		40.00	17.50	●
2.500		40.00	17.50	●
2.530		45.00	20.00	●
2.600		45.00	20.00	●
2.700		45.00	20.00	●
2.800		45.00	20.00	●
3.000		45.00	20.00	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	702
Standard	Guhring std.
Tool material	Solid carbide
Surface	○
Type	N
Cutting direction	right-hand
Tolerance	h7
Discount group	102
Techn. data page	155



d1		l1	l2	Availability
mm	inch	mm	mm	
3.050		50.00	22.00	●
3.100		50.00	22.00	●
3.150		50.00	22.00	●
3.200		50.00	22.00	●
3.260		50.00	22.00	○
3.300		50.00	22.00	●
3.400		50.00	22.00	●
3.450		50.00	22.00	●
3.500		50.00	22.00	●
3.570	9/64	50.00	22.00	●
3.600		50.00	22.00	●
3.910		50.00	22.00	○
4.000		50.00	22.00	●
4.200		50.00	25.00	○
4.300		50.00	25.00	●
4.400		50.00	25.00	○
4.700		50.00	25.00	○
4.900		50.00	25.00	●
5.000		50.00	25.00	●
5.200		50.00	25.00	●
5.310		50.00	25.00	○
5.610		50.00	25.00	○
5.790		50.00	25.00	○
5.950	15/64	50.00	25.00	○
6.000		50.00	25.00	●
6.250		65.00	30.00	●
6.350	1/4	65.00	30.00	○
6.500		65.00	30.00	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no. of set	201	200	36	11
as Guhring no.	205	205		
	Set in case	Drills only	Case only	Plastic stand only
Standard	DIN 338	DIN 338	Guhring standard	Guhring standard
Tool material	HSS	HSS	-	-
Surface finish	◯◯	◯◯	-	-
Type	N	N	-	-
Cutting direction	rh	rh	-	-
Discount group	130	130	138	138
Techn. data page				

Guhring drills are available in the sets of popular sizes as shown. For bench use the sets can be supplied in bakelite stands. For more portable use the box is recommended.
Other drill set compositions on request.

composition of drill sets	drills per set	Code no.	Availability	Code no.	Availability	Code no.	Availability	Code no.	Availability
from 1.0 - 5.0 mm in increments of 0.1 mm	41			**200** 0,011	●			**11** 0,111	●
from 5.1 - 10.0 mm in increments of 0.1 mm	50	**201** 0,012	●	**200** 0,012	●			**11** 0,112	●
from 1.0 - 10.0 mm in increments of 0.5 mm	19	**201** 0,013	●	**200** 0,013	●	**36** 0,213	●	**11** 0,113	●
from 1.0 - 13 mm in increments of 0.5 mm	25	**201** 0,014	●	**200** 0,014	●	**36** 0,214	●	**11** 0,114	●
from 1.0 - 5.9 mm in increments of 0.1 mm	50	**201** 0,015	●	**200** 0,015	●	**36** 0,215	●	**11** 0,115	●
from 6.0 - 10.0 mm in increments of 0.1 mm	41	**201** 0,016	●	**200** 0,016	●	**36** 0,216	●		
from 1.0 - 6.0 mm in increments of 0.5 mm	11	**201** 0,017	❍						
from 1.0 - 10.5 mm in increments of 0.5 mm supplementary sizes 3.3/4.2/6.8 und 10.2	24	**201** 0,018	●	**200** 0,018	●	**36** 0,218	●		
from 1.0 - 10.5 mm in increments of 0.5 mm supplementary sizes 1.9/2.1/2.6/2.9/3.2/3.3 3.8/4.2/5.1/6.8/7.9/10.2	32	**201** 0,019	●		❍	**36** 0,219	●		
from 1/16 - 1/2 inch in increments of 1/64 inch	29	**201** 0,021	●					**11** 0,121	❍
from 1.02 - 5.79 mm	60	**201** 0,028	❍						

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Guhring no. of set	201	200	73	11
as Guhring no.	651	651		
	Set in case	Drills only	Case only	Plastic stand only
Standard	DIN 338	DIN 338	Guhring standard	Guhring standard
Tool material	HSS	HSS	-	-
Surface finish	S	S	-	-
Type	N	N	-	-
Cutting direction	rh	rh	-	-
Discount group	130	130	138	138
Techn. data page				

Guhring drills are available in the sets of popular sizes as shown. For bench use the sets can be supplied in bakelite stands. For more portable use the box is recommended.
Other drill set compositions on request.

composition of drill sets	drills per set	Code no.	Availability	Code no.	Availability	Code no.	Availability	Code no.	Availability
from 1.0 - 10.0 mm in increments of 0.5 mm	19	**201** 6,013	●					**11** 0,113	●
from 1.0 - 13.0 mm in increments of 0.5 mm	25	**201** 6,014	●			**73** 0,614	●	**11** 0,114	●
from 1.0 - 5.9 mm in increments of 0.1 mm	50	**201** 6,015	●					**11** 0,115	●
from 6.0 - 10 mm in increments of 0.1 mm	41	**201** 6,016	●						
from 1/16 - 1/2 inch in increments of 1/64 inch	29	**201** 6,021	❍	**200** 6,021	❍			**11** 0,121	❍
from 1/16 - 1/2 inch in increments of 1/32 inch	15	**201** 6,022	❍	**200** 6,022	❍				

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no. of set	201	201	200	195	11
as Guhring no.	305	605	605	1260	
	Set in case	Set in case	Drills only	Set in case	Plastic stand only
Standard	DIN 338	DIN 338	DIN 338	DIN 338	Guhring standard
Tool material	HSCO	HSCO	HSCO	HSCO	-
Surface finish	○ ◐	○	○	○	-
Type	N	Ti	Ti	VA	-
Cutting direction	rh	rh	rh	rh	-
Discount group	130	134	134	130	138
Techn. data page					

Guhring drills are available in the sets of popular sizes as shown. For bench use the sets can be supplied in bakelite stands. For more portable use the box is recommended.
Other drill set compositions on request.

composition of drill sets	drills per set	Code no.	Availability	Code no.	Availability	Code no.	Availability	Code no.	Availability	Code no.	Availability
from 1,0 - 10,0 mm in increments of 0.5 mm	19	**201** 3,013	●							**11** 0,113	●
from 1,0 - 13,0 mm in increments of 0.5 mm	25	**201** 3,014	●	**201** 8,014	●			**195** 8,014	●	**11** 0,114	●
from 1,0 - 5,9 mm in increments of 0.1 mm	50	**201** 3,015	●							**11** 0,115	●
from 6,0 - 10 mm in increments of 0.1 mm	41	**201** 3,016	●								
from 1,0 - 10,5 mm in increments of 0.5 mm supplementary sizes 3,3/4,2/6,8 and 10,2	24			**201** 8,018	●	**200** 8,018	◑	**195** 8,018	●		
from 1/16 - 1/2 inch in increments of 1/64 inch	29	**201** 3,021	●								

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

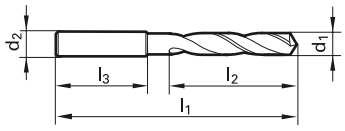
Guhring no. of set	2049	2050
as Guhring no.	2047	2048
	Performance-drill sets in case	*Performance*-drill sets in case
Standard	DIN 338	DIN 1897
Tool material	HSCO	HSCO
Surface finish	●	Ⓜ
Type	P2000	P2000
Cutting direction	rh	rh
Discount group	134	135
Techn. data page		

Guhring drills are available in the sets of popular sizes as shown. For bench use the sets can be supplied in bakelite stands. For more portable use the box is recommended.
Other drill set compositions on request.

composition of drill sets	drills per set	Code no.	Availability	Code no.	Availability
from 1.0 - 5.0 mm in increments of 0.1 mm	41	**2049** 0,011	●		
from 5.1 - 10.0 mm in increments of 0.1 mm	50	**2049** 0,012	●	**2050** 0,012	❍
from 1.0 - 10.0 mm in increments of 0.5 mm	19	**2049** 0,013	●	**2050** 0,013	●
from 1.0 - 13.0 mm in increments of 0.5 mm	25	**2049** 0,014	●	**2050** 0,014	❍
from 1.0 - 10.5 mm in increments of 0.5 mm supplementary sizes 3.3/4.2/6.8 und 10.2	24	**2049** 0,018	●		

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

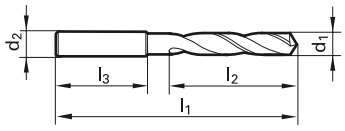
Guhring no.	512
Standard	Guhring std.
Tool material	HSCO
Surface	S
Type	GU 500
Cutting direction	right-hand
Tolerance	h8
Discount group	115
Techn. data page	155



d1	d2	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
2.000	3.000	44.00	12.00	28.00	●
2.100	3.000	44.00	12.00	28.00	●
2.200	3.000	45.00	13.00	28.00	●
2.300	3.000	45.00	13.00	28.00	●
2.380	3.000	46.00	14.00	28.00	●
2.400	3.000	46.00	14.00	28.00	●
2.500	3.000	46.00	14.00	28.00	●
2.600	3.000	46.00	14.00	28.00	●
2.700	3.000	48.00	16.00	28.00	●
2.780	3.000	48.00	16.00	28.00	○
2.800	3.000	48.00	16.00	28.00	●
2.900	3.000	48.00	16.00	28.00	●
3.000	3.000	48.00	16.00	28.00	●
3.100	4.000	50.00	18.00	28.00	●
3.170	4.000	50.00	18.00	28.00	●
3.200	4.000	50.00	18.00	28.00	●
3.300	4.000	50.00	18.00	28.00	●
3.400	4.000	52.00	20.00	28.00	●
3.500	4.000	52.00	20.00	28.00	●
3.570	4.000	52.00	20.00	28.00	○
3.600	4.000	52.00	20.00	28.00	●
3.700	4.000	52.00	20.00	28.00	●
3.800	4.000	54.00	22.00	28.00	●
3.900	4.000	54.00	22.00	28.00	●
4.000	4.000	54.00	22.00	28.00	●
4.100	6.000	66.00	22.00	36.00	●
4.200	6.000	66.00	22.00	36.00	●
4.300	6.000	68.00	24.00	36.00	●
4.370	6.000	68.00	24.00	36.00	○
4.400	6.000	68.00	24.00	36.00	●
4.500	6.000	68.00	24.00	36.00	●
4.700	6.000	68.00	24.00	36.00	●
4.760	6.000	70.00	26.00	36.00	○
4.800	6.000	70.00	26.00	36.00	●
4.900	6.000	70.00	26.00	36.00	●
5.000	6.000	70.00	26.00	36.00	●
5.100	6.000	70.00	26.00	36.00	●
5.200	6.000	70.00	26.00	36.00	●
5.300	6.000	70.00	26.00	36.00	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

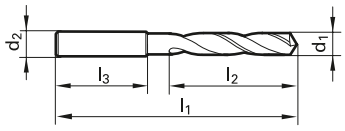
Guhring no.	512
Standard	Guhring std.
Tool material	HSCO
Surface	S
Type	GU 500
Cutting direction	right-hand
Tolerance	h8
Discount group	115
Techn. data page	155



d1	d2	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
5.400	6.000	72.00	28.00	36.00	●
5.500	6.000	72.00	28.00	36.00	●
5.560	6.000	72.00	28.00	36.00	○
5.600	6.000	72.00	28.00	36.00	●
5.800	6.000	72.00	28.00	36.00	●
5.900	6.000	72.00	28.00	36.00	●
5.950	6.000	72.00	28.00	36.00	●
6.000	6.000	72.00	28.00	36.00	●
6.100	8.000	75.00	31.00	36.00	○
6.200	8.000	75.00	31.00	36.00	●
6.300	8.000	75.00	31.00	36.00	●
6.350	8.000	75.00	31.00	36.00	○
6.400	8.000	75.00	31.00	36.00	●
6.500	8.000	75.00	31.00	36.00	●
6.600	8.000	75.00	31.00	36.00	●
6.750	8.000	78.00	34.00	36.00	○
6.800	8.000	78.00	34.00	36.00	●
6.900	8.000	78.00	34.00	36.00	●
7.000	8.000	78.00	34.00	36.00	●
7.100	8.000	78.00	34.00	36.00	●
7.140	8.000	78.00	34.00	36.00	○
7.200	8.000	78.00	34.00	36.00	○
7.300	8.000	78.00	34.00	36.00	●
7.500	8.000	78.00	34.00	36.00	●
7.540	8.000	81.00	37.00	36.00	●
7.600	8.000	81.00	37.00	36.00	●
7.800	8.000	81.00	37.00	36.00	●
7.900	8.000	81.00	37.00	36.00	●
7.940	8.000	81.00	37.00	36.00	○
8.000	8.000	81.00	37.00	36.00	●
8.100	10.000	87.00	37.00	40.00	●
8.200	10.000	87.00	37.00	40.00	●
8.300	10.000	87.00	37.00	40.00	●
8.330	10.000	87.00	37.00	40.00	○
8.500	10.000	87.00	37.00	40.00	●
8.600	10.000	91.00	40.00	40.00	●
8.730	10.000	91.00	40.00	40.00	○
8.900	10.000	91.00	40.00	40.00	●
9.000	10.000	91.00	40.00	40.00	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

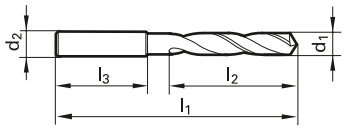
Guhring no.	512
Standard	Guhring std.
Tool material	HSCO
Surface	S
Type	GU 500
Cutting direction	right-hand
Tolerance	h8
Discount group	115
Techn. data page	155



d1	d2	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
9.100	10.000	91.00	40.00	40.00	●
9.130	10.000	91.00	40.00	40.00	○
9.400	10.000	91.00	40.00	40.00	●
9.520	10.000	93.00	43.00	40.00	○
9.900	10.000	93.00	43.00	40.00	○
9.920	10.000	93.00	43.00	40.00	○
10.000	10.000	93.00	43.00	40.00	●
10.100	12.000	100.00	43.00	45.00	○
10.200	12.000	100.00	43.00	45.00	○
10.300	12.000	100.00	43.00	45.00	●
10.320	12.000	100.00	43.00	45.00	●
10.500	12.000	100.00	43.00	45.00	●
10.900	12.000	104.00	47.00	45.00	○
11.000	12.000	104.00	47.00	45.00	●
11.100	12.000	104.00	47.00	45.00	●
11.110	12.000	104.00	47.00	45.00	○
11.200	12.000	104.00	47.00	45.00	●
11.300	12.000	104.00	47.00	45.00	●
11.400	12.000	104.00	47.00	45.00	○
11.500	12.000	104.00	47.00	45.00	●
11.510	12.000	104.00	47.00	45.00	○
11.700	12.000	104.00	47.00	45.00	○
11.800	12.000	104.00	47.00	45.00	●
12.000	12.000	108.00	51.00	45.00	●
12.300	16.000	111.00	51.00	48.00	○
12.500	16.000	111.00	51.00	48.00	●
13.490	16.000	114.00	54.00	48.00	○
13.500	16.000	114.00	54.00	48.00	●
14.000	16.000	114.00	54.00	48.00	●
14.290	16.000	116.00	56.00	48.00	●
14.500	16.000	116.00	56.00	48.00	●
15.000	16.000	116.00	56.00	48.00	●
15.870	16.000	118.00	58.00	48.00	○
16.000	16.000	118.00	58.00	48.00	●
16.500	20.000	126.00	60.00	50.00	●
16.670	20.000	126.00	60.00	50.00	○
17.500	20.000	128.00	62.00	50.00	●
18.000	20.000	128.00	62.00	50.00	●
18.500	20.000	130.00	64.00	50.00	●

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

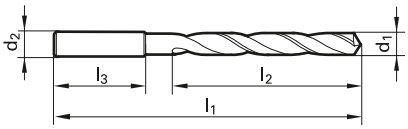
Guhring no.	512
Standard	Guhring std.
Tool material	HSCO
Surface	S
Type	GU 500
Cutting direction	right-hand
Tolerance	h8
Discount group	115
Techn. data page	155



d1	d2	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
19.500	20.000	132.00	66.00	50.00	❍
20.000	20.000	132.00	66.00	50.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

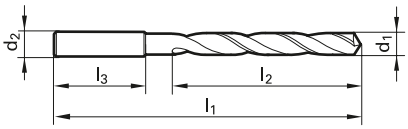
Guhring no.	513
Standard	Guhring std.
Tool material	HSS-E-PM
Surface	F
Type	GT 500
Cutting direction	right-hand
Tolerance	h8
Discount group	115
Techn. data page	155



d1	d2	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
2.000	3.000	56.00	24.00	28.00	●
2.100	3.000	56.00	24.00	28.00	●
2.300	3.000	59.00	27.00	28.00	●
2.380	3.000	62.00	30.00	28.00	○
2.500	3.000	62.00	30.00	28.00	●
2.780	3.000	65.00	33.00	28.00	●
3.000	3.000	65.00	33.00	28.00	●
3.170	4.000	68.00	36.00	28.00	○
3.300	4.000	68.00	36.00	28.00	●
3.500	4.000	71.00	39.00	28.00	●
3.570	4.000	71.00	39.00	28.00	○
3.970	4.000	75.00	43.00	28.00	○
4.000	4.000	75.00	43.00	28.00	●
4.200	6.000	87.00	43.00	36.00	●
4.370	6.000	91.00	47.00	36.00	○
4.500	6.000	91.00	47.00	36.00	●
4.650	6.000	91.00	47.00	36.00	○
4.760	6.000	96.00	52.00	36.00	○
4.800	6.000	96.00	52.00	36.00	●
5.000	6.000	96.00	52.00	36.00	●
5.100	6.000	96.00	52.00	36.00	●
5.160	6.000	96.00	52.00	36.00	●
5.200	6.000	96.00	52.00	36.00	●
5.300	6.000	96.00	52.00	36.00	○
5.500	6.000	101.00	57.00	36.00	○
5.800	6.000	101.00	57.00	36.00	●
6.000	6.000	101.00	57.00	36.00	●
6.100	8.000	107.00	63.00	36.00	●
6.350	8.000	107.00	63.00	36.00	○
6.500	8.000	107.00	63.00	36.00	○
6.600	8.000	107.00	63.00	36.00	●
6.750	8.000	113.00	69.00	36.00	○
6.800	8.000	113.00	69.00	36.00	●
7.000	8.000	113.00	69.00	36.00	●
7.140	8.000	113.00	69.00	36.00	○
7.400	8.000	113.00	69.00	36.00	○
7.500	8.000	113.00	69.00	36.00	●
7.540	8.000	119.00	75.00	36.00	○
7.800	8.000	119.00	75.00	36.00	○

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

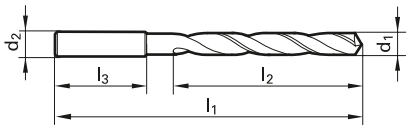
Guhring no.	513
Standard	Guhring std.
Tool material	HSS-E-PM
Surface	F
Type	GT 500
Cutting direction	right-hand
Tolerance	h8
Discount group	115
Techn. data page	155



d1	d2	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
7.940	8.000	119.00	75.00	36.00	○
8.000	8.000	119.00	75.00	36.00	○
8.330	10.000	125.00	75.00	40.00	○
8.500	10.000	125.00	75.00	40.00	●
8.730	10.000	131.00	81.00	40.00	○
8.800	10.000	131.00	81.00	40.00	●
9.000	10.000	131.00	81.00	40.00	○
9.130	10.000	131.00	81.00	40.00	●
9.300	10.000	131.00	81.00	40.00	○
9.500	10.000	131.00	81.00	40.00	●
9.520	10.000	137.00	87.00	40.00	○
9.600	10.000	137.00	87.00	40.00	○
9.700	10.000	137.00	87.00	40.00	●
9.800	10.000	137.00	87.00	40.00	○
9.920	10.000	137.00	87.00	40.00	○
10.000	10.000	137.00	87.00	40.00	●
10.200	12.000	144.00	87.00	45.00	○
10.400	12.000	144.00	87.00	45.00	○
10.500	12.000	144.00	87.00	45.00	○
10.600	12.000	144.00	87.00	45.00	○
10.700	12.000	151.00	94.00	45.00	○
10.900	12.000	151.00	94.00	45.00	○
11.000	12.000	151.00	94.00	45.00	●
11.100	12.000	151.00	94.00	45.00	○
11.300	12.000	151.00	94.00	45.00	○
11.400	12.000	151.00	94.00	45.00	○
11.500	12.000	151.00	94.00	45.00	●
11.700	12.000	151.00	94.00	45.00	●
11.900	12.000	158.00	101.00	45.00	○
12.000	12.000	158.00	101.00	45.00	●
12.200	14.000	161.00	101.00	45.00	●
12.300	14.000	161.00	101.00	45.00	○
12.400	14.000	161.00	101.00	45.00	○
12.500	14.000	161.00	101.00	45.00	○
12.600	14.000	161.00	101.00	45.00	○
12.700	14.000	161.00	101.00	45.00	○
12.800	14.000	161.00	101.00	45.00	●
12.900	14.000	161.00	101.00	45.00	○
13.000	14.000	161.00	101.00	45.00	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

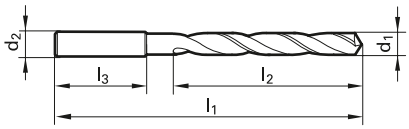
Guhring no.	511
Standard	Guhring std.
Tool material	HSCO
Surface	S
Type	GU 500
Cutting direction	right-hand
Tolerance	h8
Discount group	115
Techn. data page	156



d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	Availability
2.000	3.000	56.00	24.00	28.00	●
2.100	3.000	56.00	24.00	28.00	●
2.300	3.000	59.00	27.00	28.00	○
2.380	3.000	62.00	30.00	28.00	○
2.400	3.000	62.00	30.00	28.00	●
2.500	3.000	62.00	30.00	28.00	●
2.600	3.000	62.00	30.00	28.00	●
2.780	3.000	65.00	33.00	28.00	○
2.800	3.000	65.00	33.00	28.00	●
2.900	3.000	65.00	33.00	28.00	●
3.000	3.000	65.00	33.00	28.00	●
3.100	4.000	68.00	36.00	28.00	●
3.200	4.000	68.00	36.00	28.00	●
3.300	4.000	68.00	36.00	28.00	●
3.400	4.000	71.00	39.00	28.00	●
3.500	4.000	71.00	39.00	28.00	●
3.570	4.000	71.00	39.00	28.00	○
3.900	4.000	75.00	43.00	28.00	●
3.970	4.000	75.00	43.00	28.00	○
4.000	4.000	75.00	43.00	28.00	●
4.200	6.000	87.00	43.00	36.00	●
4.300	6.000	91.00	47.00	36.00	●
4.370	6.000	91.00	47.00	36.00	●
4.400	6.000	91.00	47.00	36.00	●
4.500	6.000	91.00	47.00	36.00	●
4.600	6.000	91.00	47.00	36.00	●
4.650	6.000	91.00	47.00	36.00	●
4.700	6.000	91.00	47.00	36.00	○
4.760	6.000	96.00	52.00	36.00	○
4.800	6.000	96.00	52.00	36.00	●
4.900	6.000	96.00	52.00	36.00	○
5.000	6.000	96.00	52.00	36.00	●
5.100	6.000	96.00	52.00	36.00	●
5.160	6.000	96.00	52.00	36.00	●
5.200	6.000	96.00	52.00	36.00	●
5.300	6.000	96.00	52.00	36.00	●
5.400	6.000	101.00	57.00	36.00	○
5.500	6.000	101.00	57.00	36.00	●
5.600	6.000	101.00	57.00	36.00	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

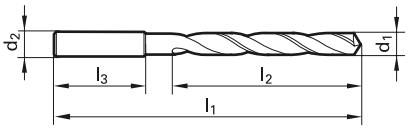
Guhring no.	511
Standard	Guhring std.
Tool material	HSCO
Surface	S
Type	GU 500
Cutting direction	right-hand
Tolerance	h8
Discount group	115
Techn. data page	156



d1	d2	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
5.800	6.000	101.00	57.00	36.00	○
5.900	6.000	101.00	57.00	36.00	●
5.950	6.000	101.00	57.00	36.00	○
6.000	6.000	101.00	57.00	36.00	●
6.100	8.000	107.00	63.00	36.00	○
6.300	8.000	107.00	63.00	36.00	○
6.350	8.000	107.00	63.00	36.00	○
6.400	8.000	107.00	63.00	36.00	○
6.500	8.000	107.00	63.00	36.00	●
6.600	8.000	107.00	63.00	36.00	○
6.700	8.000	107.00	63.00	36.00	●
6.750	8.000	113.00	69.00	36.00	●
6.800	8.000	113.00	69.00	36.00	●
6.900	8.000	113.00	69.00	36.00	●
7.000	8.000	113.00	69.00	36.00	●
7.100	8.000	113.00	69.00	36.00	○
7.140	8.000	113.00	69.00	36.00	○
7.200	8.000	113.00	69.00	36.00	○
7.300	8.000	113.00	69.00	36.00	○
7.400	8.000	113.00	69.00	36.00	●
7.500	8.000	113.00	69.00	36.00	●
7.540	8.000	119.00	75.00	36.00	●
7.550	8.000	119.00	75.00	36.00	○
7.600	8.000	119.00	75.00	36.00	○
7.700	8.000	119.00	75.00	36.00	○
7.900	8.000	119.00	75.00	36.00	○
7.940	8.000	119.00	75.00	36.00	○
8.000	8.000	119.00	75.00	36.00	●
8.100	10.000	125.00	75.00	40.00	●
8.200	10.000	125.00	75.00	40.00	●
8.300	10.000	125.00	75.00	40.00	●
8.330	10.000	125.00	75.00	40.00	○
8.500	10.000	125.00	75.00	40.00	●
8.600	10.000	131.00	81.00	40.00	●
8.730	10.000	131.00	81.00	40.00	○
8.800	10.000	131.00	81.00	40.00	●
8.900	10.000	131.00	81.00	40.00	○
9.000	10.000	131.00	81.00	40.00	●
9.100	10.000	131.00	81.00	40.00	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

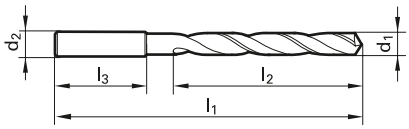
Guhring no.	511
Standard	Guhring std.
Tool material	HSCO
Surface	S
Type	GU 500
Cutting direction	right-hand
Tolerance	h8
Discount group	115
Techn. data page	156



d1	d2	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
9.130	10.000	131.00	81.00	40.00	○
9.400	10.000	131.00	81.00	40.00	●
9.500	10.000	131.00	81.00	40.00	●
9.520	10.000	137.00	87.00	40.00	○
9.550	10.000	137.00	87.00	40.00	●
9.600	10.000	137.00	87.00	40.00	○
9.700	10.000	137.00	87.00	40.00	○
9.900	10.000	137.00	87.00	40.00	○
9.920	10.000	137.00	87.00	40.00	○
10.000	10.000	137.00	87.00	40.00	●
10.100	12.000	144.00	87.00	45.00	●
10.200	12.000	144.00	87.00	45.00	●
10.400	12.000	144.00	87.00	45.00	○
10.500	12.000	144.00	87.00	45.00	●
10.600	12.000	144.00	87.00	45.00	○
10.700	12.000	151.00	94.00	45.00	○
10.800	12.000	151.00	94.00	45.00	●
10.900	12.000	151.00	94.00	45.00	○
11.000	12.000	151.00	94.00	45.00	●
11.110	12.000	151.00	94.00	45.00	○
11.300	12.000	151.00	94.00	45.00	●
11.510	12.000	151.00	94.00	45.00	○
11.700	12.000	151.00	94.00	45.00	●
11.900	12.000	158.00	101.00	45.00	○
11.910	12.000	158.00	101.00	45.00	○
12.000	12.000	158.00	101.00	45.00	●
12.500	16.000	161.00	101.00	48.00	●
12.700	16.000	161.00	101.00	48.00	○
13.000	16.000	161.00	101.00	48.00	●
13.500	16.000	166.00	106.00	48.00	○
13.890	16.000	166.00	106.00	48.00	●
14.000	16.000	166.00	106.00	48.00	●
14.500	16.000	169.00	109.00	48.00	●
15.000	16.000	169.00	109.00	48.00	●
15.500	16.000	172.00	112.00	48.00	●
16.000	16.000	172.00	112.00	48.00	●
16.500	20.000	181.00	115.00	50.00	●
16.670	20.000	181.00	115.00	50.00	○
17.000	20.000	181.00	115.00	50.00	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

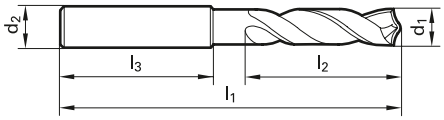
Guhring no.	511
Standard	Guhring std.
Tool material	HSCO
Surface	S
Type	GU 500
Cutting direction	right-hand
Tolerance	h8
Discount group	115
Techn. data page	156



d1	d2	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
17.460	20.000	184.00	118.00	50.00	❍
17.500	20.000	184.00	118.00	50.00	●
18.000	20.000	184.00	118.00	50.00	●
18.500	20.000	188.00	122.00	50.00	●
19.000	20.000	188.00	122.00	50.00	●
19.500	20.000	191.00	125.00	50.00	●
20.000	20.000	191.00	125.00	50.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

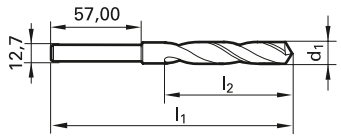
Guhring no.	1946
Standard	DIN 6537 K
Tool material	Solid carbide
Surface	A
Type	H
Cutting direction	right-hand
Tolerance	m7
Discount group	102
Techn. data page	156



d1	d2	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
2.600	6.000	62.00	20.00	36.00	●
3.000	6.000	62.00	20.00	36.00	●
3.400	6.000	62.00	20.00	36.00	●
4.000	6.000	66.00	24.00	36.00	●
4.300	6.000	66.00	24.00	36.00	●
5.000	6.000	66.00	28.00	36.00	●
5.100	6.000	66.00	28.00	36.00	●
5.600	6.000	66.00	28.00	36.00	●
6.000	6.000	66.00	28.00	36.00	●
6.900	8.000	79.00	34.00	36.00	●
7.100	8.000	79.00	41.00	36.00	●
8.000	8.000	79.00	41.00	36.00	●
8.600	10.000	89.00	47.00	40.00	●
9.100	10.000	89.00	47.00	40.00	●
10.000	10.000	89.00	47.00	40.00	●
10.400	12.000	102.00	55.00	45.00	●
10.600	12.000	102.00	55.00	45.00	●
11.100	12.000	102.00	55.00	45.00	●
12.000	12.000	102.00	55.00	45.00	●
14.100	16.000	115.00	65.00	48.00	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**268**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	●
Type	**N**
Cutting direction	**right-hand**
Tolerance	**h8**
Discount group	**138**
Techn. data page	**156**

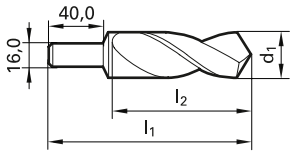


d1		l1	l2	Availability
mm	inch	mm	mm	
13.000		156.00	82.00	●
13.490	17/32	156.00	82.00	○
13.500		156.00	82.00	●
14.000		156.00	82.00	●
14.290	9/16	157.00	83.00	○
14.500		157.00	83.00	●
15.000		157.00	83.00	●
15.080	19/32	157.00	83.00	○
15.500		157.00	83.00	●
15.870	5/8	157.00	83.00	○
16.000		157.00	83.00	●
16.500		158.00	84.00	●
16.670	21/32	158.00	84.00	○
17.000		158.00	84.00	●
17.460	11/16	158.00	84.00	●
17.500		158.00	84.00	●
18.000		158.00	84.00	●
19.000		158.00	84.00	●
19.050	3/4	159.00	85.00	○
19.840	25/32	159.00	85.00	○
20.000		159.00	85.00	●
21.000		159.00	85.00	●
21.430	27/32	159.00	85.00	○
22.000		159.00	85.00	●
22.220	7/8	159.00	85.00	○
23.000		159.00	85.00	●
23.020	29/32	159.00	85.00	○
23.810	15/16	160.00	86.00	○
24.000		160.00	86.00	●
25.000	63/64	160.00	86.00	●
25.400	1	160.00	86.00	○
28.570	1 1/8	160.00	86.00	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	128
Standard	Guhring std.
Tool material	HSCO
Surface	○
Type	N
Cutting direction	right-hand
Tolerance	h8
Discount group	138
Techn. data page	156

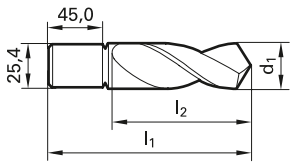
without point grind



d1 mm	l1 mm	l2 mm	Availability
16.000	130.00	88.00	●
16.500	130.00	88.00	●
17.000	130.00	88.00	●
17.500	130.00	88.00	●
18.000	130.00	88.00	●
19.000	130.00	88.00	●
20.000	130.00	88.00	●
20.500	130.00	88.00	●
21.000	130.00	88.00	●
21.500	130.00	88.00	●
22.000	130.00	88.00	●
22.500	130.00	88.00	●
23.000	130.00	88.00	●
23.500	130.00	88.00	●
24.000	130.00	88.00	●
24.500	130.00	88.00	●
25.000	130.00	88.00	●
25.500	140.00	98.00	●
26.000	140.00	98.00	●
27.000	140.00	98.00	●
28.000	140.00	98.00	●
28.500	140.00	98.00	●
30.000	140.00	98.00	●
31.000	140.00	98.00	●
32.000	140.00	98.00	●
35.000	140.00	98.00	●
38.000	140.00	98.00	●
40.000	140.00	98.00	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

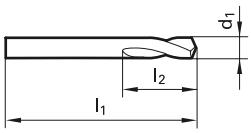
Guhring no.	129	136
Standard	Guhring std.	
Tool material	HSCO	
Surface	◯	◯
Type	N	N
Cutting direction	right-hand	left-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	156	157
	without point grind	without point grind



d1	l1	l2	Availability	
mm	mm	mm		
25.000	140.00	93.00	●	❍
25.500	140.00	93.00		❍
26.000	140.00	93.00	●	❍
26.500	140.00	93.00		❍
27.500	140.00	93.00		❍
28.000	140.00	93.00	●	
29.500	140.00	93.00	❍	❍
30.000	140.00	93.00	●	
32.000	140.00	93.00	●	
33.000	140.00	93.00	●	
34.000	140.00	93.00	●	
35.000	140.00	93.00	●	
36.000	140.00	93.00	●	❍
37.000	140.00	93.00	●	
38.000	140.00	93.00	●	❍
39.000	140.00	93.00		❍
40.000	140.00	93.00	●	

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

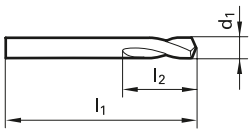
Guhring no.	557	568	723
Standard		Guhring std.	
Tool material		HSS	Solid carbide
Surface	○	Ⓢ	○
Type	N	N	N
Point angle °	90	90	90
Cutting direction	right-hand	right-hand	right-hand
Tolerance	h6	h6	h6
Discount group	134	135	102
Techn. data page	157	157	157



d1 mm	d1 inch	l1 mm	l2 mm	Availability		
2.950		46.00	12.00	●		
3.000		46.00	12.00	●	●	
4.000		55.00	12.00	●	●	●
5.000		62.00	14.00	●	●	●
6.000		66.00	16.00	●	●	●
6.350	1/4	70.00	17.00	●	●	●
8.000		79.00	21.00	●	●	●
9.000		84.00	22.00	●		
9.520	3/8	89.00	25.00	●	●	●
10.000		89.00	25.00	●	●	●
12.000		102.00	30.00	●	●	●
12.700	1/2	102.00	30.00	●	●	●
13.000		102.00	30.00	●		
14.000		107.00	33.50	●		
15.870	5/8	115.00	37.50	●	❍	●
16.000		115.00	37.50	●	●	●
19.050	3/4	131.00	45.00	●	❍	●
20.000		131.00	45.00	●	●	●
25.000	63/64	151.00	53.00	●	●	
25.400	1	156.00	53.00	●	❍	

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

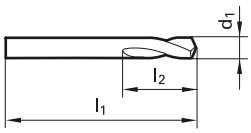
Guhring no.	559
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Point angle °	90
Cutting direction	right-hand
Tolerance	h6
Discount group	138
Techn. data page	157



d1		l1	l2	Availability
mm	inch	mm	mm	
6.350	1/4	105.00	17.00	●
8.000		118.00	21.00	●
9.520	3/8	132.00	25.00	●
12.700	1/2	159.00	30.00	●
15.870	5/8	186.00	37.50	●
19.050	3/4	213.00	45.00	●
25.400	1	216.00	53.00	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

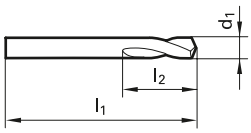
Guhring no.	556	567	724
Standard		Guhring std.	
Tool material		HSS	Solid carbide
Surface	○	Ⓢ	○
Type	N	N	N
Point angle °	120	120	120
Cutting direction	right-hand	right-hand	right-hand
Tolerance	h6	h6	h6
Discount group	134	139	102
Techn. data page	158	158	158



d1 mm	d1 inch	l1 mm	l2 mm	Availability		
3.000		46.00	12.00	●	●	
4.000		55.00	12.00	●	●	
5.000		62.00	14.00	●	●	●
5.600		66.00	16.00	❍		
6.000		66.00	16.00	●	●	●
6.350	1/4	70.00	17.00	●	❍	●
6.500		70.00	17.00	❍		
7.000		74.00	19.00	●		
8.000		79.00	21.00	●	●	●
9.520	3/8	89.00	25.00	●	●	●
10.000		89.00	25.00	●	●	●
11.550		95.00	28.00	❍		
12.000		102.00	30.00	●	●	●
12.700	1/2	102.00	30.00	●	●	●
14.000		107.00	33.50	●		
15.000		111.00	33.50	●		
15.870	5/8	115.00	37.50	●	❍	●
16.000		115.00	37.50	●	●	●
19.000		127.00	40.00	❍		
19.050	3/4	131.00	45.00	●	❍	
20.000		131.00	45.00	●	●	●
25.000	63/64	151.00	53.00	●	●	
25.400	1	156.00	53.00	●		

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

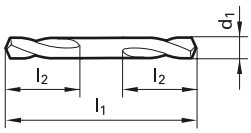
Guhring no.	546
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	N
Point angle °	142
Cutting direction	right-hand
Tolerance	h6
Discount group	102
Techn. data page	158



d1 mm	d1 inch	l1 mm	l2 mm	Availability
4.000		55.00	12.00	●
5.000		62.00	14.00	●
6.000		66.00	16.00	●
8.000		79.00	21.00	●
10.000		89.00	25.00	●
12.000		102.00	30.00	●
16.000		115.00	37.50	●
20.000		131.00	45.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

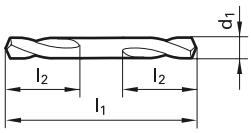
Guhring no.	554
Standard	Guhring std.
Tool material	HSS
Surface	>Ø 2,36
Type	DK 77
Point angle °	118
Cutting direction	right-hand
Tolerance	h8
Discount group	134
Techn. data page	158



d1 mm	d1 inch	l1 mm	l2 mm	Availability
1.500		32.00	6.00	○
1.600		34.00	6.30	●
1.900		36.00	7.10	●
2.000		38.00	7.50	●
2.100		38.00	7.50	●
2.200		40.00	8.50	●
2.300		40.00	8.50	●
2.400		43.00	9.50	●
2.450		43.00	9.50	○
2.500		43.00	9.50	●
2.600		43.00	9.50	●
2.700		46.00	10.60	●
2.780	7/64	46.00	10.60	○
2.800		46.00	10.60	●
2.900		46.00	10.60	●
3.000		46.00	10.60	●
3.050		49.00	11.20	○
3.100		49.00	11.20	●
3.170	1/8	49.00	11.20	●
3.200		49.00	11.20	●
3.250		49.00	11.20	●
3.260		49.00	11.20	○
3.300		49.00	11.20	●
3.400		52.00	12.50	●
3.500		52.00	12.50	●
3.570	9/64	52.00	12.50	○
3.600		52.00	12.50	●
3.650		52.00	12.50	○
3.700		52.00	12.50	●
3.800		55.00	14.00	●
3.900		55.00	14.00	○
3.970	5/32	55.00	14.00	○
4.000		55.00	14.00	●
4.100		55.00	14.00	●
4.200		55.00	14.00	●
4.300		58.00	15.50	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

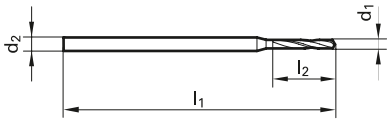
Guhring no.	**554**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	>Ø 2,36
Type	**DK 77**
Point angle °	**118**
Cutting direction	**right-hand**
Tolerance	**h8**
Discount group	**134**
Techn. data page	**158**



d1		l1	l2	Availability
mm	inch	mm	mm	
4.500		58.00	15.50	●
4.600		58.00	15.50	●
4.760	3/16	62.00	17.00	○
4.800		62.00	17.00	●
4.900		62.00	17.00	●
5.000		62.00	17.00	●
5.100		62.00	17.00	●
5.200		62.00	17.00	●
5.300		62.00	17.00	●
5.400		66.00	19.00	○
5.500		66.00	19.00	●
5.560	7/32	66.00	19.00	○
5.600		66.00	19.00	○
5.700		66.00	19.00	●
5.800		66.00	19.00	●
5.900		66.00	19.00	○
5.950	15/64	66.00	19.00	○
6.000		66.00	19.00	●
6.100		70.00	21.20	●
6.300		70.00	21.20	○
6.350	1/4	70.00	21.20	○
6.500		70.00	21.20	●
6.800		74.00	23.60	○
7.000		74.00	23.60	●
7.100		74.00	23.60	○
7.500		74.00	23.60	●
7.940	5/16	79.00	25.00	○
8.000		79.00	25.00	●
8.500		79.00	25.00	○
8.600		84.00	25.00	○
9.000		84.00	25.00	○
9.500		84.00	25.00	●
9.520	3/8	89.00	25.00	○
10.000		89.00	25.00	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

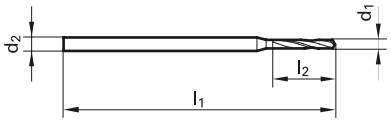
Guhring no.	301	303	660	701
Standard	DIN 1899			Guhring std.
Tool material	HSS-E-PM			Solid carbide
Surface	○	○	Ⓢ	○
Type	N	N	N	N
Cutting direction	right-hand	left-hand	right-hand	right-hand
Tolerance	0/-0,004	0/-0,004	0/-0,004	0/-0,004
Discount group	134	138	135	102
Techn. data page	159	159	159	159



d1	d2 h8	l1	l2	Availability
mm	mm	mm	mm	
0.050	1.000	25.00	0.40	●
0.060	1.000	25.00	0.40	●
0.070	1.000	25.00	0.50	●
0.075	1.000	25.00	0.50	●
0.080	1.000	25.00	0.50	●
0.090	1.000	25.00	0.50	●
0.100	1.000	25.00	0.50	●
0.105	1.000	25.00	0.50	●
0.110	1.000	25.00	0.50	●
0.115	1.000	25.00	0.50	●
0.120	1.000	25.00	0.50	●
0.121	1.000	25.00	0.80	○
0.125	1.000	25.00	0.80	●
0.128	1.000	25.00	0.80	●
0.130	1.000	25.00	0.80	● ○
0.140	1.000	25.00	0.80	● ○
0.143	1.000	25.00	0.80	●
0.145	1.000	25.00	0.80	●
0.147	1.000	25.00	0.80	○
0.150	1.000	25.00	0.80	● ○
0.155	1.000	25.00	1.10	● ○
0.160	1.000	25.00	1.10	● ● ●
0.170	1.000	25.00	1.10	● ○ ●
0.175	1.000	25.00	1.10	● ○
0.180	1.000	25.00	1.10	● ○ ●
0.185	1.000	25.00	1.10	○
0.190	1.000	25.00	1.10	● ● ●
0.195	1.000	25.00	1.50	● ○
0.200	1.000	25.00	1.50	● ● ● ●
0.205	1.000	25.00	1.50	●
0.210	1.000	25.00	1.50	● ○ ●
0.215	1.000	25.00	1.50	○ ○
0.220	1.000	25.00	1.50	● ● ● ●
0.225	1.000	25.00	1.50	● ○
0.230	1.000	25.00	1.50	● ○ ●
0.235	1.000	25.00	1.50	● ○ ○
0.240	1.000	25.00	1.50	● ● ●
0.245	1.000	25.00	1.90	● ○ ○
0.250	1.000	25.00	1.90	● ○ ● ●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

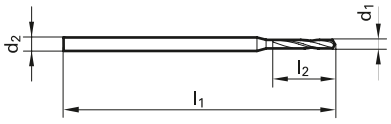
Guhring no.	301	303	660	701
Standard		DIN 1899		Guhring std.
Tool material		HSS-E-PM		Solid carbide
Surface	○	○	(S)	○
Type	N	N	N	N
Cutting direction	right-hand	left-hand	right-hand	right-hand
Tolerance	0/-0,004	0/-0,004	0/-0,004	0/-0,004
Discount group	134	138	135	102
Techn. data page	159	159	159	159

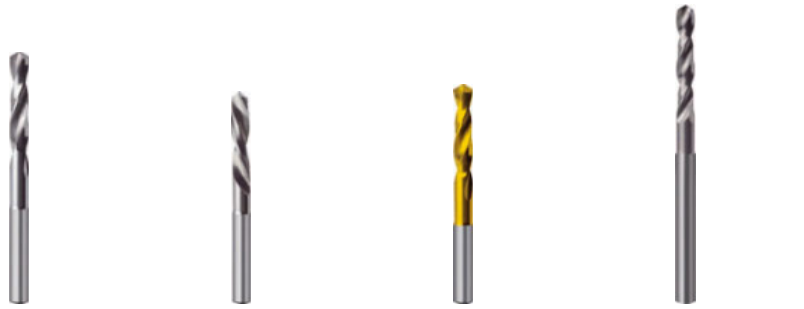


d1	d2 h8	l1	l2	Availability			
mm	mm	mm	mm				
0.255	1.000	25.00	1.90	●	○	●	
0.260	1.000	25.00	1.90	●	○	●	●
0.265	1.000	25.00	1.90	●	○	○	
0.270	1.000	25.00	1.90	●	●	●	
0.275	1.000	25.00	1.90	●	○	○	
0.280	1.000	25.00	1.90	●	○	●	●
0.285	1.000	25.00	1.90	●			
0.290	1.000	25.00	1.90	●	●	●	
0.295	1.000	25.00	1.90	●	●	○	
0.300	1.000	25.00	1.90	●	●	●	●
0.305	1.000	25.00	2.40	●		●	
0.310	1.000	25.00	2.40	●	●	●	
0.315	1.000	25.00	2.40	●	○		
0.320	1.000	25.00	2.40	●		●	
0.325	1.000	25.00	2.40	●		●	
0.330	1.000	25.00	2.40	●	●	●	●
0.335	1.000	25.00	2.40	●		●	
0.340	1.000	25.00	2.40	●	●	●	
0.345	1.000	25.00	2.40	●	○		
0.350	1.000	25.00	2.40	●	●	●	●
0.355	1.000	25.00	2.40	●	○		
0.360	1.000	25.00	2.40	●	●	●	
0.365	1.000	25.00	2.40	●			
0.370	1.000	25.00	2.40	●	●	●	
0.375	1.000	25.00	2.40	●			
0.380	1.000	25.00	2.40	●	●	●	
0.385	1.000	25.00	3.00	●			
0.390	1.000	25.00	3.00	●	●	●	
0.400	1.000	25.00	3.00	●	●	●	●
0.405	1.000	25.00	3.00	●			
0.410	1.000	25.00	3.00	●	●	●	
0.415	1.000	25.00	3.00	○	○		
0.420	1.000	25.00	3.00	●	○	●	
0.425	1.000	25.00	3.00	●			
0.430	1.000	25.00	3.00	●	●	●	
0.432	1.000	25.00	3.00	●			
0.435	1.000	25.00	3.00	●	○		
0.440	1.000	25.00	3.00	●	●	●	
0.445	1.000	25.00	3.00	●			

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no.	301	303	660	701
Standard		DIN 1899		Guhring std.
Tool material		HSS-E-PM		Solid carbide
Surface	○	○	Ⓢ	○
Type	N	N	N	N
Cutting direction	right-hand	left-hand	right-hand	right-hand
Tolerance	0/-0,004	0/-0,004	0/-0,004	0/-0,004
Discount group	134	138	135	102
Techn. data page	159	159	159	159

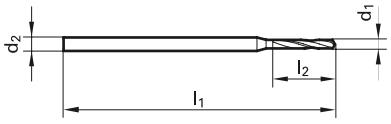




d1 mm	d2 h8 mm	l1 mm	l2 mm	Availability
0.450	1.000	25.00	3.00	● ● ● ●
0.460	1.000	25.00	3.00	● ● ●
0.465	1.000	25.00	3.00	○
0.470	1.000	25.00	3.00	● ● ●
0.475	1.000	25.00	3.00	○
0.480	1.000	25.00	3.00	● ● ●
0.485	1.000	25.00	3.40	● ○
0.490	1.000	25.00	3.40	● ● ●
0.495	1.000	25.00	3.40	● ○
0.500	1.000	25.00	3.40	● ● ● ●
0.505	1.000	25.00	3.40	● ○
0.510	1.000	25.00	3.40	● ● ●
0.515	1.000	25.00	3.40	●
0.520	1.000	25.00	3.40	● ● ●
0.525	1.000	25.00	3.40	● ○
0.530	1.000	25.00	3.40	● ● ●
0.535	1.000	25.00	3.90	● ○
0.540	1.000	25.00	3.90	● ○ ●
0.545	1.000	25.00	3.90	○
0.550	1.000	25.00	3.90	● ● ●
0.555	1.000	25.00	3.90	● ○
0.560	1.000	25.00	3.90	● ● ●
0.565	1.000	25.00	3.90	○
0.570	1.000	25.00	3.90	● ● ●
0.575	1.000	25.00	3.90	●
0.580	1.000	25.00	3.90	● ● ●
0.585	1.000	25.00	3.90	●
0.590	1.000	25.00	3.90	● ● ●
0.595	1.000	25.00	3.90	●
0.600	1.000	25.00	3.90	● ● ● ●
0.605	1.000	25.00	4.20	●
0.610	1.000	25.00	4.20	● ○ ●
0.615	1.000	25.00	4.20	● ○
0.620	1.000	25.00	4.20	● ● ●
0.625	1.000	25.00	4.20	● ○
0.630	1.000	25.00	4.20	● ● ●
0.632	1.000	25.00	4.20	●
0.640	1.000	25.00	4.20	● ● ●
0.650	1.000	25.00	4.20	● ● ● ●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

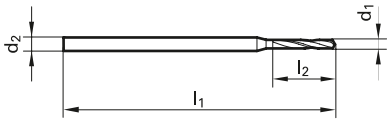
Guhring no.	301	303	660	701
Standard		DIN 1899		Guhring std.
Tool material		HSS-E-PM		Solid carbide
Surface	○	○	(S)	○
Type	N	N	N	N
Cutting direction	right-hand	left-hand	right-hand	right-hand
Tolerance	0/-0,004	0/-0,004	0/-0,004	0/-0,004
Discount group	134	138	135	102
Techn. data page	159	159	159	159



d1 mm	d2 h8 mm	l1 mm	l2 mm	Availability
0.655	1.000	25.00	4.20	● ○
0.660	1.000	25.00	4.20	● ● ●
0.665	1.000	25.00	4.20	●
0.670	1.000	25.00	4.20	● ● ●
0.675	1.000	25.00	4.80	● ○
0.680	1.000	25.00	4.80	● ○ ●
0.685	1.000	25.00	4.80	○
0.690	1.000	25.00	4.80	● ○ ●
0.695	1.000	25.00	4.80	● ○
0.700	1.000	25.00	4.80	● ● ● ●
0.705	1.000	25.00	4.80	●
0.710	1.000	25.00	4.80	● ● ●
0.720	1.000	25.00	4.80	● ● ●
0.725	1.000	25.00	4.80	● ○
0.730	1.000	25.00	4.80	● ○ ●
0.740	1.000	25.00	4.80	● ● ●
0.750	1.000	25.00	4.80	● ● ● ●
0.760	1.000	25.00	5.30	● ○ ●
0.770	1.000	25.00	5.30	● ○ ●
0.775	1.000	25.00	5.30	○ ○
0.780	1.000	25.00	5.30	● ○ ●
0.790	1.000	25.00	5.30	● ● ●
0.795	1.500	25.00	5.30	●
0.800	1.500	25.00	5.30	● ● ● ●
0.805	1.500	25.00	5.30	○
0.810	1.500	25.00	5.30	● ● ● ●
0.820	1.500	25.00	5.30	● ● ●
0.825	1.500	25.00	5.30	●
0.830	1.500	25.00	5.30	● ● ● ●
0.840	1.500	25.00	5.30	● ○ ○
0.845	1.500	25.00	5.30	○
0.850	1.500	25.00	5.30	● ● ● ●
0.855	1.500	25.00	6.00	○
0.860	1.500	25.00	6.00	● ○ ●
0.870	1.500	25.00	6.00	● ● ●
0.875	1.500	25.00	6.00	○
0.880	1.500	25.00	6.00	● ● ●
0.885	1.500	25.00	6.00	●
0.890	1.500	25.00	6.00	● ●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

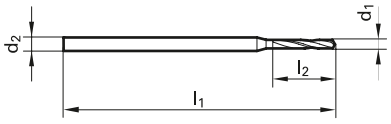
Guhring no.	301	303	660	701
Standard		DIN 1899		Guhring std.
Tool material		HSS-E-PM		Solid carbide
Surface	○	○	Ⓢ	○
Type	N	N	N	N
Cutting direction	right-hand	left-hand	right-hand	right-hand
Tolerance	0/-0,004	0/-0,004	0/-0,004	0/-0,004
Discount group	134	138	135	102
Techn. data page	159	159	159	159



d1	d2 h8	l1	l2	Availability
mm	mm	mm	mm	
0.900	1.500	25.00	6.00	● ● ● ●
0.910	1.500	25.00	6.00	● ○ ●
0.915	1.500	25.00	6.00	○
0.920	1.500	25.00	6.00	● ○ ●
0.925	1.500	25.00	6.00	○ ○
0.930	1.500	25.00	6.00	● ●
0.935	1.500	25.00	6.00	○
0.940	1.500	25.00	6.00	● ○ ●
0.945	1.500	25.00	6.00	○
0.950	1.500	25.00	6.00	● ○ ●
0.960	1.500	25.00	6.80	● ● ●
0.965	1.500	25.00	6.80	○
0.970	1.500	25.00	6.80	● ● ●
0.975	1.500	25.00	6.80	●
0.980	1.500	25.00	6.80	● ● ●
0.985	1.500	25.00	6.80	○
0.990	1.500	25.00	6.80	● ○
0.995	1.500	25.00	6.80	●
1.000	1.500	25.00	6.80	● ● ● ●
1.005	1.500	25.00	6.80	○
1.010	1.500	25.00	6.80	● ●
1.020	1.500	25.00	6.80	● ● ●
1.030	1.500	25.00	6.80	● ●
1.035	1.500	25.00	6.80	○
1.040	1.500	25.00	6.80	● ○ ●
1.050	1.500	25.00	6.80	● ● ● ●
1.055	1.500	25.00	6.80	●
1.060	1.500	25.00	6.80	● ●
1.070	1.500	25.00	7.60	● ● ●
1.080	1.500	25.00	7.60	● ● ●
1.085	1.500	25.00	7.60	○
1.090	1.500	25.00	7.60	● ●
1.100	1.500	25.00	7.60	● ○ ● ●
1.110	1.500	25.00	7.60	● ○
1.120	1.500	25.00	7.60	● ○
1.125	1.500	25.00	7.60	○
1.130	1.500	25.00	7.60	●
1.140	1.500	25.00	7.60	●
1.150	1.500	25.00	7.60	● ● ● ●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

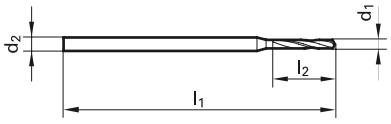
Guhring no.	301	303	660	701
Standard		DIN 1899		Guhring std.
Tool material		HSS-E-PM		Solid carbide
Surface	○	○	(S)	○
Type	N	N	N	N
Cutting direction	right-hand	left-hand	right-hand	right-hand
Tolerance	0/-0,004	0/-0,004	0/-0,004	0/-0,004
Discount group	134	138	135	102
Techn. data page	159	159	159	159



d1 mm	d2 h8 mm	l1 mm	l2 mm	Availability
1.160	1.500	25.00	7.60	● ●
1.170	1.500	25.00	7.60	● ●
1.175	1.500	25.00	7.60	●
1.180	1.500	25.00	7.60	● ● ●
1.190	1.500	25.00	8.50	● ○ ●
1.200	1.500	25.00	8.50	● ● ● ●
1.210	1.500	25.00	8.50	● ●
1.220	1.500	25.00	8.50	● ● ●
1.230	1.500	25.00	8.50	●
1.240	1.500	25.00	8.50	●
1.250	1.500	25.00	8.50	● ○ ● ●
1.260	1.500	25.00	8.50	●
1.265	1.500	25.00	8.50	○
1.270	1.500	25.00	8.50	● ○
1.280	1.500	25.00	8.50	● ●
1.285	1.500	25.00	8.50	○
1.290	1.500	25.00	8.50	● ○
1.300	1.500	25.00	8.50	● ● ● ●
1.310	1.500	25.00	8.50	● ○
1.320	1.500	25.00	8.50	● ○
1.325	1.500	25.00	9.50	●
1.330	1.500	25.00	9.50	● ○
1.340	1.500	25.00	9.50	●
1.350	1.500	25.00	9.50	● ○ ● ●
1.360	1.500	25.00	9.50	○
1.370	1.500	25.00	9.50	●
1.375	1.500	25.00	9.50	○
1.380	1.500	25.00	9.50	●
1.390	1.500	25.00	9.50	● ○
1.400	1.500	25.00	9.50	● ● ● ●
1.405	1.500	25.00	9.50	○
1.410	1.500	25.00	9.50	●
1.420	1.500	25.00	9.50	● ●
1.425	1.500	25.00	9.50	○
1.430	1.500	25.00	9.50	●
1.440	1.500	25.00	9.50	●
1.450	1.500	25.00	9.50	● ● ●
1.460	2.000	30.00	9.50	● ○
1.470	2.000	30.00	9.50	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no.	301	303	660	701
Standard		DIN 1899		Guhring std.
Tool material		HSS-E-PM		Solid carbide
Surface	○	○	Ⓢ	○
Type	N	N	N	N
Cutting direction	right-hand	left-hand	right-hand	right-hand
Tolerance	0/-0,004	0/-0,004	0/-0,004	0/-0,004
Discount group	134	138	135	102
Techn. data page	159	159	159	159

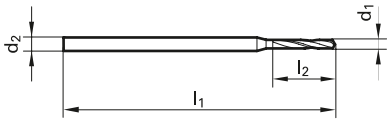


d1	d2 h8	l1	l2	Availability			
mm	mm	mm	mm				
1.500	2.000	30.00	9.50	●	●	●	
1.520	2.000	30.00	10.60	●			
1.525	2.000	30.00	10.60		❍		
1.530	2.000	30.00	10.60	●			
1.540	2.000	30.00	10.60	●			
1.550	2.000	30.00	10.60	●			
1.590	2.000	30.00	10.60	●			
1.600	2.000	30.00	10.60	●	❍		
1.610	2.000	30.00	10.60	●			
1.615	2.000	30.00	10.60		❍		
1.630	2.000	30.00	10.60	●			
1.640	2.000	30.00	10.60	❍			
1.650	2.000	30.00	10.60	●			
1.660	2.000	30.00	10.60	●			
1.690	2.000	30.00	10.60	❍			
1.700	2.000	30.00	10.60	●			
1.710	2.000	30.00	11.80	●			
1.715	2.000	30.00	11.80	❍			
1.730	2.000	30.00	11.80	●			
1.745	2.000	30.00	11.80	●			
1.750	2.000	30.00	11.80	●			
1.775	2.000	30.00	11.80	●			
1.800	2.000	30.00	11.80	●	❍	●	
1.830	2.000	30.00	11.80	●			
1.840	2.000	30.00	11.80	●			
1.850	2.000	30.00	11.80	●	❍		
1.860	2.000	30.00	11.80	●			
1.900	2.000	30.00	11.80	●		●	
1.920	2.000	30.00	13.20	●			
1.930	2.000	30.00	13.20	❍			

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	3899
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	N
Cutting direction	right-hand
Tolerance	h7
Discount group	102
Techn. data page	159

NEW

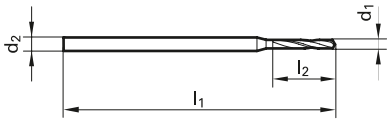


d1	d2 h8	l1	l2	Availability
mm	mm	mm	mm	
0.100	3.000	38.00	1.20	●
0.150	3.000	38.00	2.00	●
0.200	3.000	38.00	2.50	●
0.250	3.000	38.00	3.00	●
0.300	3.000	38.00	5.00	●
0.310	3.000	38.00	5.00	●
0.350	3.000	38.00	6.00	●
0.370	3.000	38.00	6.00	●
0.400	3.000	38.00	7.00	●
0.450	3.000	38.00	7.00	●
0.500	3.000	38.00	7.00	●
0.550	3.000	38.00	7.00	●
0.600	3.000	38.00	7.00	●
0.640	3.000	38.00	7.00	●
0.650	3.000	38.00	7.00	●
0.700	3.000	38.00	8.00	●
0.710	3.000	38.00	8.00	●
0.720	3.000	38.00	8.00	●
0.740	3.000	38.00	8.00	●
0.750	3.000	38.00	8.00	●
0.760	3.000	38.00	8.00	○
0.770	3.000	38.00	8.00	○
0.780	3.000	38.00	8.00	○
0.790	3.000	38.00	8.00	●
0.800	3.000	38.00	10.00	●
0.810	3.000	38.00	10.00	●
0.820	3.000	38.00	10.00	●
0.830	3.000	38.00	10.00	○
0.840	3.000	38.00	10.00	●
0.850	3.000	38.00	10.00	○
0.860	3.000	38.00	10.00	○
0.870	3.000	38.00	10.00	○
0.880	3.000	38.00	10.00	○
0.890	3.000	38.00	10.00	○
0.900	3.000	38.00	10.00	●
0.910	3.000	38.00	10.00	●
0.920	3.000	38.00	10.00	●
0.930	3.000	38.00	10.00	●
0.940	3.000	38.00	10.00	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Guhring no.	3899
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	N
Cutting direction	right-hand
Tolerance	h7
Discount group	102
Techn. data page	159

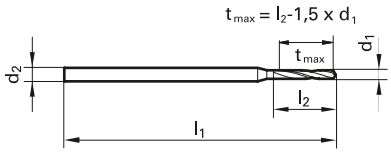
NEW



d1 mm	d2 h8 mm	l1 mm	l2 mm	Availability
0.950	3.000	38.00	10.00	●
0.960	3.000	38.00	10.00	○
0.970	3.000	38.00	10.00	○
0.980	3.000	38.00	10.00	○
0.990	3.000	38.00	10.00	●
1.000	3.000	38.00	10.00	●
1.100	3.000	38.00	10.00	●
1.110	3.000	38.00	10.00	○
1.150	3.000	38.00	10.00	●
1.200	3.000	38.00	10.00	●
1.210	3.000	38.00	10.00	○
1.400	3.000	38.00	10.00	●
1.450	3.000	38.00	10.00	●
1.500	3.000	38.00	10.00	●
1.510	3.000	38.00	10.00	●
1.520	3.000	38.00	10.00	●
1.550	3.000	38.00	10.00	●
1.600	3.000	38.00	12.00	●
1.650	3.000	38.00	12.00	●
1.700	3.000	38.00	12.00	●
1.800	3.000	38.00	12.00	●
1.810	3.000	38.00	12.00	●
1.830	3.000	38.00	12.00	●
1.850	3.000	38.00	12.00	●
1.900	3.000	38.00	12.00	●
1.920	3.000	38.00	12.00	●
1.950	3.000	38.00	12.00	●
1.980	3.000	38.00	12.00	●
2.000	3.000	38.00	12.00	●
2.050	3.000	38.00	12.00	○
2.100	3.000	38.00	12.00	●
2.400	3.000	38.00	12.00	●
2.500	3.000	38.00	12.00	●
2.600	3.000	38.00	12.00	●
2.750	3.000	38.00	12.00	●
2.950	3.000	38.00	12.00	●
3.000	3.000	38.00	12.00	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

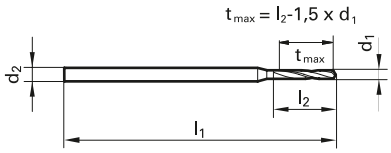
Guhring no.	**6400**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Surface	A
Type	**N**
Drilling depth	**4xD**
Cutting direction	**right-hand**
Tolerance	**m7**
Discount group	**164**
Techn. data page	**160**



d1 mm	d2 h6 mm	l1 mm	l2 mm	Availability
0.500	3.000	47.00	3.00	●
0.550	3.000	47.00	3.30	●
0.600	3.000	47.00	3.60	●
0.650	3.000	47.00	3.90	●
0.700	3.000	47.00	4.20	●
0.750	3.000	47.00	4.50	●
0.800	3.000	47.00	4.80	●
0.850	3.000	47.00	5.10	●
0.900	3.000	47.00	5.40	●
0.950	3.000	47.00	5.70	●
1.000	3.000	47.00	6.00	●
1.050	3.000	47.00	6.30	●
1.100	3.000	47.00	6.60	●
1.150	3.000	47.00	6.90	●
1.200	3.000	47.00	7.20	●
1.250	3.000	47.00	7.50	●
1.300	3.000	47.00	7.80	●
1.350	3.000	47.00	8.10	●
1.400	3.000	47.00	8.40	●
1.450	3.000	47.00	8.70	●
1.500	3.000	47.00	9.00	●
1.550	3.000	47.00	9.30	●
1.590	3.000	47.00	9.60	●
1.600	3.000	47.00	9.60	●
1.650	3.000	47.00	9.90	●
1.700	3.000	47.00	10.20	●
1.750	3.000	47.00	10.50	●
1.800	3.000	52.00	10.80	●
1.850	3.000	52.00	11.10	●
1.900	3.000	52.00	11.40	●
1.950	3.000	52.00	11.70	●
1.980	4.000	59.00	12.00	●
2.000	4.000	59.00	12.00	●
2.050	4.000	59.00	12.30	●
2.100	4.000	59.00	12.60	●
2.150	4.000	59.00	12.90	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

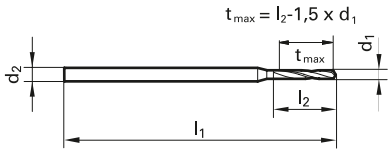
Guhring no.	6400
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	N
Drilling depth	4xD
Cutting direction	right-hand
Tolerance	m7
Discount group	164
Techn. data page	160



d1 mm	d2 h6 mm	l1 mm	l2 mm	Availability
2.200	4.000	59.00	13.20	●
2.250	4.000	59.00	13.50	●
2.300	4.000	59.00	13.80	●
2.350	4.000	59.00	14.10	●
2.380	4.000	59.00	14.40	●
2.400	4.000	59.00	14.40	●
2.450	4.000	59.00	14.70	●
2.500	4.000	59.00	15.00	●
2.550	4.000	59.00	15.30	●
2.600	4.000	59.00	15.60	●
2.650	4.000	59.00	15.90	●
2.700	4.000	59.00	16.20	●
2.750	4.000	59.00	16.50	●
2.780	4.000	59.00	16.80	●
2.800	4.000	59.00	16.80	●
2.850	4.000	59.00	17.10	●
2.900	4.000	59.00	17.40	●
2.950	4.000	59.00	17.70	●
3.000	4.000	59.00	18.00	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

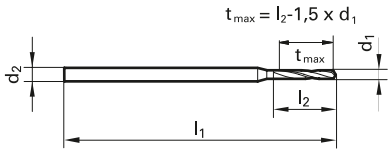
Guhring no.	6401
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	N
Drilling depth	7xD
Cutting direction	right-hand
Tolerance	m7
Discount group	164
Techn. data page	160



d1 mm	d2 h6 mm	l1 mm	l2 mm	Availability
0.500	3.000	47.00	4.00	●
0.550	3.000	47.00	4.40	●
0.600	3.000	47.00	4.80	●
0.650	3.000	47.00	5.20	●
0.700	3.000	47.00	5.60	●
0.750	3.000	47.00	6.00	●
0.800	3.000	47.00	6.40	●
0.850	3.000	47.00	6.80	●
0.900	3.000	47.00	7.20	●
0.950	3.000	47.00	7.60	●
1.000	3.000	47.00	8.00	●
1.050	3.000	47.00	8.40	●
1.100	3.000	47.00	8.80	●
1.150	3.000	47.00	9.20	●
1.200	3.000	52.00	10.80	●
1.250	3.000	52.00	11.30	●
1.300	3.000	52.00	11.70	●
1.350	3.000	52.00	12.20	●
1.400	3.000	52.00	12.60	●
1.450	3.000	52.00	13.10	●
1.500	3.000	52.00	13.50	●
1.550	3.000	52.00	14.00	●
1.590	3.000	52.00	14.40	●
1.600	3.000	52.00	14.40	●
1.650	3.000	52.00	14.90	●
1.700	3.000	52.00	15.30	●
1.750	3.000	52.00	15.80	●
1.800	3.000	52.00	16.20	●
1.850	3.000	52.00	16.70	●
1.900	3.000	52.00	17.10	●
1.950	3.000	52.00	17.60	●
1.980	4.000	63.00	18.00	●
2.000	4.000	63.00	18.00	●
2.050	4.000	63.00	18.50	●
2.100	4.000	63.00	18.90	●
2.150	4.000	63.00	19.40	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Guhring no.	6401
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	N
Drilling depth	7xD
Cutting direction	right-hand
Tolerance	m7
Discount group	164
Techn. data page	160

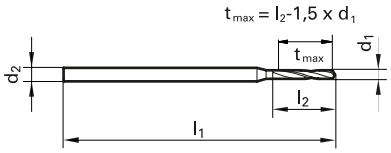


d1 mm	d2 h6 mm	l1 mm	l2 mm	Availability
2.200	4.000	63.00	19.80	●
2.250	4.000	63.00	20.30	●
2.300	4.000	63.00	20.70	●
2.350	4.000	63.00	21.20	●
2.380	4.000	63.00	21.60	●
2.400	4.000	63.00	21.60	●
2.450	4.000	63.00	22.10	●
2.500	4.000	63.00	22.50	●
2.550	4.000	63.00	23.00	●
2.600	4.000	67.00	23.40	●
2.650	4.000	67.00	23.90	●
2.700	4.000	67.00	24.30	●
2.750	4.000	67.00	24.80	●
2.780	4.000	67.00	25.20	●
2.800	4.000	67.00	25.20	●
2.850	4.000	67.00	25.70	●
2.900	4.000	67.00	26.10	●
2.950	4.000	67.00	26.60	●
3.000	4.000	67.00	27.00	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	6408
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	N
Drilling depth	8xD
Cutting direction	right-hand
Tolerance	h7
Discount group	164
Techn. data page	160

NEW

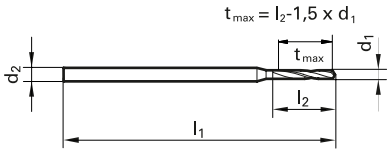


d1 mm	d2 h6 mm	l1 mm	l2 mm	Availability
1.400	4.000	52.00	15.00	●
1.450	4.000	52.00	16.00	●
1.500	4.000	52.00	17.00	●
1.550	4.000	52.00	17.00	●
1.590	4.000	52.00	18.00	●
1.600	4.000	52.00	18.00	●
1.650	4.000	52.00	18.00	●
1.700	4.000	56.00	19.00	●
1.750	4.000	56.00	19.00	●
1.800	4.000	56.00	20.00	●
1.850	4.000	56.00	20.00	●
1.900	4.000	56.00	21.00	●
1.950	4.000	56.00	21.00	●
1.980	4.000	56.00	22.00	●
2.000	4.000	56.00	22.00	●
2.050	4.000	56.00	23.00	●
2.100	4.000	62.00	23.00	●
2.150	4.000	62.00	24.00	●
2.200	4.000	62.00	24.00	●
2.250	4.000	62.00	25.00	●
2.300	4.000	62.00	25.00	●
2.350	4.000	62.00	26.00	●
2.380	4.000	62.00	26.00	●
2.400	4.000	62.00	26.00	●
2.450	4.000	62.00	27.00	●
2.500	4.000	62.00	28.00	●
2.550	4.000	62.00	28.00	●
2.600	4.000	66.00	29.00	●
2.650	4.000	66.00	29.00	●
2.700	4.000	66.00	30.00	●
2.750	4.000	66.00	30.00	●
2.780	4.000	66.00	31.00	●
2.800	4.000	66.00	31.00	●
2.850	4.000	66.00	31.00	●
2.900	4.000	66.00	32.00	●
2.950	4.000	66.00	32.00	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Guhring no.	6408
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	N
Drilling depth	8xD
Cutting direction	right-hand
Tolerance	h7
Discount group	164
Techn. data page	160

NEW

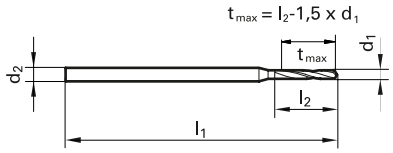


d1	d2 h6	l1	l2	Availability
mm	mm	mm	mm	
3.000	4.000	66.00	33.00	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ◯ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	6412
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	N
Drilling depth	15xD
Cutting direction	right-hand
Tolerance	h7
Discount group	164
Techn. data page	160

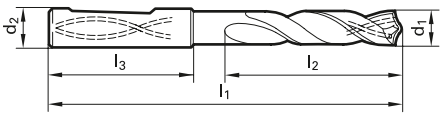
NEW



d1 mm	d2 h6 mm	l1 mm	l2 mm	Availability
1.400	4.000	62.00	25.00	●
1.500	4.000	62.00	27.00	●
1.590	4.000	62.00	29.00	●
1.600	4.000	62.00	29.00	●
1.700	4.000	70.00	31.00	●
1.800	4.000	70.00	32.00	●
1.900	4.000	70.00	34.00	●
1.980	4.000	70.00	36.00	●
2.000	4.000	70.00	36.00	●
2.100	4.000	78.00	38.00	●
2.200	4.000	78.00	40.00	●
2.300	4.000	78.00	42.00	●
2.380	4.000	78.00	44.00	●
2.400	4.000	78.00	44.00	●
2.500	4.000	78.00	45.00	●
2.600	4.000	87.00	47.00	●
2.700	4.000	87.00	48.00	●
2.780	4.000	87.00	50.00	●
2.800	4.000	87.00	50.00	●
2.900	4.000	87.00	52.00	●
3.000	4.000	87.00	54.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

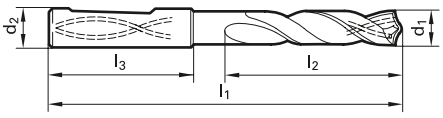
Guhring no.	1131	1132
Standard	Guhring std.	
Tool material	HSCO	
Surface	○	Ⓢ
Type	GT 80 IK	GT 80 IK
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	134	135
Techn. data page	160	161



d1	d2 h6	l1	l2	l3	Availability	
mm	mm	mm	mm	mm		
5.000	6.000	82.00	44.00	36.00	●	●
5.500	6.000	82.00	44.00	36.00	●	●
6.000	6.000	82.00	44.00	36.00	●	●
6.350	8.000	91.00	53.00	36.00	○	○
6.500	8.000	91.00	53.00	36.00		●
6.800	8.000	91.00	53.00	36.00	●	●
7.000	8.000	91.00	53.00	36.00		●
7.140	8.000	91.00	53.00	36.00	○	
7.500	8.000	91.00	53.00	36.00		●
7.800	8.000	91.00	53.00	36.00	○	●
7.940	8.000	91.00	53.00	36.00	○	○
8.000	8.000	91.00	53.00	36.00	●	●
8.500	10.000	103.00	61.00	40.00		●
8.730	10.000	103.00	61.00	40.00		○
9.000	10.000	103.00	61.00	40.00	●	●
9.500	10.000	103.00	61.00	40.00	●	○
9.520	10.000	103.00	61.00	40.00	○	○
10.000	10.000	103.00	61.00	40.00	●	●
10.200	12.000	118.00	71.00	45.00		●
10.320	12.000	118.00	71.00	45.00	○	○
10.500	12.000	118.00	71.00	45.00	●	●
11.000	12.000	118.00	71.00	45.00	●	●
11.110	12.000	118.00	71.00	45.00		○
11.500	12.000	118.00	71.00	45.00	●	
12.000	12.000	118.00	71.00	45.00	●	●
12.500	14.000	124.00	77.00	45.00	●	●
12.700	14.000	124.00	77.00	45.00		○
13.000	14.000	124.00	77.00	45.00	●	●
13.490	14.000	124.00	77.00	45.00	○	
13.500	14.000	124.00	77.00	45.00	●	●
14.000	14.000	124.00	77.00	45.00	●	●
14.290	16.000	133.00	83.00	48.00	○	○
14.500	16.000	133.00	83.00	48.00		●
15.000	16.000	133.00	83.00	48.00	●	●
15.080	16.000	133.00	83.00	48.00	○	○
15.500	16.000	133.00	83.00	48.00	○	●
15.870	16.000	133.00	83.00	48.00	○	○
16.000	16.000	133.00	83.00	48.00	●	○
16.500	18.000	143.00	93.00	48.00	●	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

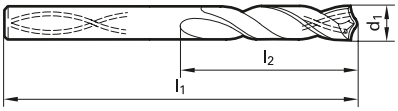
Guhring no.	1131	1132
Standard	Guhring std.	
Tool material	HSCO	
Surface	○	(S)
Type	GT 80 IK	GT 80 IK
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	134	135
Techn. data page	160	161



d1	d2 h6	l1	l2	l3	Availability	
mm	mm	mm	mm	mm		
17.000	18.000	143.00	93.00	48.00	●	●
17.500	18.000	143.00	93.00	48.00	○	●
18.000	18.000	143.00	93.00	48.00	●	●
18.500	20.000	153.00	101.00	50.00	●	
19.000	20.000	153.00	101.00	50.00		●
19.500	20.000	153.00	101.00	50.00	○	●
20.000	20.000	153.00	101.00	50.00	●	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

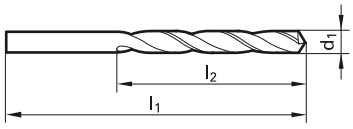
Guhring no.	390
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Tolerance	h8
Discount group	136
Techn. data page	161



d1	d2	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
3.000	3.000	100.00	66.00	34.00	●
3.300	3.300	106.00	69.00	37.00	●
3.500	3.500	112.00	73.00	39.00	●
4.000	4.000	119.00	78.00	41.00	●
4.200	4.200	119.00	78.00	41.00	●
4.500	4.500	126.00	82.00	44.00	●
5.000	5.000	132.00	87.00	45.00	●
5.500	5.500	139.00	91.00	48.00	●
6.000	6.000	139.00	91.00	48.00	●
6.500	6.500	148.00	97.00	51.00	●
6.800	6.800	156.00	102.00	54.00	●
6.900	6.900	156.00	102.00	54.00	○
7.000	7.000	156.00	102.00	54.00	●
7.500	7.500	156.00	102.00	54.00	●
8.000	8.000	165.00	109.00	56.00	●
8.500	8.500	165.00	109.00	56.00	●
9.000	9.000	175.00	115.00	60.00	●
9.500	9.500	175.00	115.00	60.00	●
10.000	10.000	184.00	121.00	63.00	●
10.200	10.200	184.00	121.00	63.00	○
10.500	10.500	184.00	121.00	63.00	●
11.000	11.000	195.00	128.00	67.00	●
11.500	11.500	195.00	128.00	67.00	●
12.000	12.000	205.00	134.00	71.00	●
13.000	13.000	205.00	134.00	71.00	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

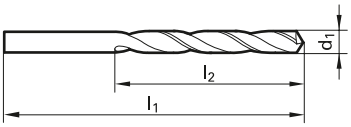
Guhring no.	211	561	666	311
Standard	DIN 339			
Tool material	HSS			HSCO
Surface	>Ø 2,36		S	>Ø 2,36
Type	N	N	N	N
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	134	138	139	138
Techn. data page	161	161	161	162



d1 mm	d1 inch	l1 mm	l2 mm	Availability
0.800		42.00	22.00	●
1.000		48.00	26.00	● ●
1.050		48.00	26.00	●
1.080		50.00	28.00	○
1.100		50.00	28.00	● ● ○
1.110		50.00	28.00	○
1.150		50.00	28.00	●
1.200		52.00	30.00	● ●
1.230		52.00	30.00	○
1.250		52.00	30.00	●
1.270		52.00	30.00	●
1.280		52.00	30.00	○
1.300		52.00	30.00	● ● ●
1.320		52.00	30.00	●
1.350		55.00	33.00	○ ●
1.380		55.00	33.00	●
1.400		55.00	33.00	● ●
1.430		55.00	33.00	○
1.450		55.00	33.00	● ○
1.460		55.00	33.00	○
1.480		55.00	33.00	○
1.500		55.00	33.00	● ● ●
1.510		58.00	35.00	○
1.520		58.00	35.00	●
1.550		58.00	35.00	○
1.580		58.00	35.00	○
1.600		58.00	35.00	● ● ●
1.620		58.00	35.00	●
1.650		58.00	35.00	○
1.700		58.00	35.00	● ●
1.800		62.00	38.00	● ● ●
1.810		62.00	38.00	○
1.850		62.00	38.00	●
1.870		62.00	38.00	○
1.880		62.00	38.00	○
1.900		62.00	38.00	● ● ●
1.930		66.00	41.00	●
1.950		66.00	41.00	● ●
1.980	5/64	66.00	41.00	● ○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

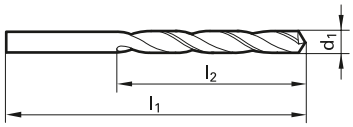
Guhring no.	211	561	666	311
Standard	DIN 339			
Tool material	HSS			HSCO
Surface	>Ø 2,36	○	S	>Ø 2,36
Type	N	N	N	N
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	134	138	139	138
Techn. data page	161	161	161	162



d1 mm	d1 inch	l1 mm	l2 mm	Availability
1.990		66.00	41.00	○ ○
2.000		66.00	41.00	● ● ●
2.020		66.00	41.00	○ ○
2.030		66.00	41.00	○
2.050		66.00	41.00	●
2.100		66.00	41.00	● ● ●
2.150		70.00	44.00	●
2.200		70.00	44.00	● ●
2.220		70.00	44.00	○
2.300		70.00	44.00	●
2.320		70.00	44.00	○
2.350		70.00	44.00	●
2.360		70.00	44.00	○
2.400		74.00	47.00	● ● ●
2.450		74.00	47.00	● ●
2.470		74.00	47.00	○
2.500		74.00	47.00	● ● ● ●
2.520		74.00	47.00	○
2.530		74.00	47.00	○
2.550		74.00	47.00	● ●
2.600		74.00	47.00	● ○ ●
2.620		74.00	47.00	○
2.650		74.00	47.00	●
2.680		79.00	51.00	○
2.700		79.00	51.00	○
2.730		79.00	51.00	●
2.800		79.00	51.00	● ● ●
2.900		79.00	51.00	● ● ●
2.930		79.00	51.00	○
2.950		79.00	51.00	●
2.960		79.00	51.00	●
3.000		79.00	51.00	● ● ● ●
3.050		84.00	55.00	● ●
3.070		84.00	55.00	○
3.100		84.00	55.00	● ○ ● ●
3.120		84.00	55.00	○
3.150		84.00	55.00	○ ○
3.170	1/8	84.00	55.00	●
3.200		84.00	55.00	● ○ ● ●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

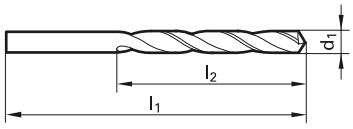
Guhring no.	211	561	666	311
Standard	DIN 339			
Tool material	HSS			HSCO
Surface	>Ø 2,36		S	>Ø 2,36
Type	N	N	N	N
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	134	138	139	138
Techn. data page	161	161	161	162



d1 mm	d1 inch	l1 mm	l2 mm	Availability
3.250		84.00	55.00	●
3.260		84.00	55.00	●
3.300		84.00	55.00	● ● ●
3.400		91.00	60.00	● ●
3.480		91.00	60.00	❍
3.500		91.00	60.00	● ●
3.570	9/64	91.00	60.00	●
3.600		91.00	60.00	● ●
3.700		91.00	60.00	● ❍
3.730		91.00	60.00	❍
3.800		96.00	64.00	● ●
3.900		96.00	64.00	● ●
3.950		96.00	64.00	❍
4.000		96.00	64.00	● ● ● ●
4.100		96.00	64.00	● ●
4.200		96.00	64.00	● ●
4.250		96.00	64.00	❍
4.300		102.00	69.00	● ● ●
4.400		102.00	69.00	● ❍ ❍
4.500		102.00	69.00	● ● ❍
4.580		102.00	69.00	❍
4.600		102.00	69.00	● ●
4.700		102.00	69.00	●
4.750		102.00	69.00	❍
4.800		108.00	74.00	● ❍ ❍
4.900		108.00	74.00	● ●
4.950		108.00	74.00	❍
5.000		108.00	74.00	● ● ● ●
5.100		108.00	74.00	● ● ❍
5.150		108.00	74.00	❍
5.200		108.00	74.00	● ❍
5.300		108.00	74.00	● ●
5.330		116.00	80.00	❍
5.350		116.00	80.00	●
5.400		116.00	80.00	● ❍
5.500		116.00	80.00	● ●
5.550		116.00	80.00	●
5.600		116.00	80.00	● ●
5.700		116.00	80.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

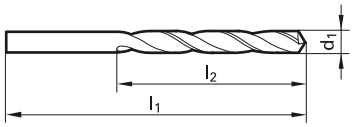
Guhring no.	211	561	666	311
Standard	DIN 339			
Tool material	HSS			HSCO
Surface	>Ø 2,36	○	S	>Ø 2,36
Type	N	N	N	N
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	134	138	139	138
Techn. data page	161	161	161	162



d1 mm	d1 inch	l1 mm	l2 mm	Availability
5.800		116.00	80.00	● ●
5.900		116.00	80.00	●
6.000		116.00	80.00	● ●
6.100		124.00	86.00	● ● ●
6.150		124.00	86.00	●
6.200		124.00	86.00	● ○
6.300		124.00	86.00	●
6.350	1/4	124.00	86.00	○ ○
6.400		124.00	86.00	● ○ ○
6.500		124.00	86.00	● ●
6.550		124.00	86.00	○
6.600		124.00	86.00	● ○
6.700		124.00	86.00	● ○
6.800		133.00	93.00	● ● ●
6.900		133.00	93.00	● ○
7.000		133.00	93.00	● ● ●
7.050		133.00	93.00	○
7.100		133.00	93.00	● ○
7.150		133.00	93.00	○
7.200		133.00	93.00	● ○
7.300		133.00	93.00	○ ○
7.400		133.00	93.00	●
7.500		133.00	93.00	○
7.600		142.00	100.00	○ ○
7.700		142.00	100.00	○
7.750		142.00	100.00	○
7.800		142.00	100.00	● ○
7.900		142.00	100.00	○ ○
7.940	5/16	142.00	100.00	○
7.950		142.00	100.00	○
8.000		142.00	100.00	● ●
8.100		142.00	100.00	●
8.120		142.00	100.00	○
8.200		142.00	100.00	● ● ○
8.300		142.00	100.00	○
8.400		142.00	100.00	● ●
8.500		142.00	100.00	● ● ○
8.600		151.00	107.00	● ○
8.700		151.00	107.00	●

○ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

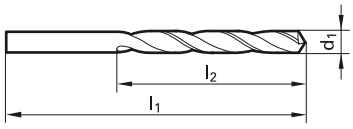
Guhring no.	211	561	666	311
Standard	DIN 339			
Tool material	HSS			HSCO
Surface	>Ø 2,36		S	>Ø 2,36
Type	N	N	N	N
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	134	138	139	138
Techn. data page	161	161	161	162



d1 mm	d1 inch	l1 mm	l2 mm	Availability
8.730	11/32	151.00	107.00	○
8.900		151.00	107.00	○
9.000		151.00	107.00	● ●
9.100		151.00	107.00	●
9.200		151.00	107.00	●
9.300		151.00	107.00	●
9.500		151.00	107.00	●
9.600		162.00	116.00	○ ○
9.650		162.00	116.00	○
9.700		162.00	116.00	○
9.750		162.00	116.00	○
9.800		162.00	116.00	● ○
9.850		162.00	116.00	○
9.900		162.00	116.00	○
10.000		162.00	116.00	● ● ●
10.200		162.00	116.00	● ●
10.500		162.00	116.00	●
10.800		173.00	125.00	○ ○
10.900		173.00	125.00	○
11.000		173.00	125.00	● ○
11.300		173.00	125.00	○
11.400		173.00	125.00	○
11.500		173.00	125.00	○ ○
11.700		173.00	125.00	○
11.750		173.00	125.00	●
11.910	15/32	184.00	134.00	○
12.000		184.00	134.00	●
12.100		184.00	134.00	○
12.250		184.00	134.00	○
12.300	31/64	184.00	134.00	○
12.500		184.00	134.00	○ ○
13.000		184.00	134.00	● ●
13.100	33/64	184.00	134.00	○
13.200		184.00	134.00	○
13.300		194.00	142.00	○
13.400		194.00	142.00	○ ○
13.500		194.00	142.00	○
13.600		194.00	142.00	○
13.800		194.00	142.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	211	561	666	311
Standard	DIN 339			
Tool material	HSS			HSCO
Surface	>Ø 2,36		S	>Ø 2,36
Type	N	N	N	N
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	134	138	139	138
Techn. data page	161	161	161	162



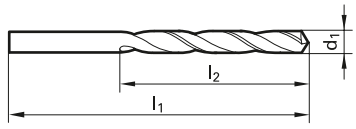
d1 mm	d1 inch	l1 mm	l2 mm	Availability
14.200		202.00	147.00	●
14.500		202.00	147.00	○
15.000		202.00	147.00	○
15.250		211.00	153.00	○
15.500		211.00	153.00	○
16.500		218.00	159.00	○
17.000		218.00	159.00	○
17.500		226.00	165.00	●
18.000		226.00	165.00	○
18.250		234.00	171.00	○
18.500		234.00	171.00	○
19.000		234.00	171.00	○ ○
19.500		242.00	177.00	○
20.000		242.00	177.00	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

RE-GRINDING & RE-COATING

Guhring thinks big in all service matters. A comprehensive service is a matter of course even post tool sale. One area of our service program is the re-grinding and re-coating of tools – not only Guhring tools – to original geometries and original coatings so the efficiency of your tools is retained indefinitely.

Guhring no.	204	217	218	219	220	221	501
Standard	DIN 340						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	● >Ø 6,00	○	○
Type	N	N	H	W	N	H	GT50
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	134	134	138	138	136
Techn. data page	162	162	162	162	163	163	163



d1 mm	d1 inch	l1 mm	l2 mm	Availability
0.400	1/64	30.00	10.00	● ●
0.440		30.00	10.00	●
0.450		30.00	10.00	● ○ ○
0.470		30.00	10.00	● ○
0.500		32.00	12.00	● ○ ●
0.520		32.00	12.00	● ● ○
0.550		35.00	15.00	● ●
0.570		35.00	15.00	●
0.600		35.00	15.00	● ● ● ●
0.620		38.00	18.00	●
0.650		38.00	18.00	● ● ● ○
0.700		42.00	21.00	● ● ● ○
0.730		42.00	21.00	●
0.740		42.00	21.00	●
0.750		42.00	21.00	● ● ●
0.760		46.00	25.00	●
0.790	1/32	46.00	25.00	●
0.800		46.00	25.00	● ● ●
0.820		46.00	25.00	● ●
0.840		46.00	25.00	●
0.850		46.00	25.00	● ● ●
0.900		51.00	29.00	● ● ● ○ ○
0.910		51.00	29.00	●
0.920		51.00	29.00	●
0.950		51.00	29.00	● ● ● ○
0.960		56.00	33.00	
0.970		56.00	33.00	● ○ ○
0.980		56.00	33.00	●
1.000		56.00	33.00	● ● ● ●
1.020		56.00	33.00	○ ●
1.030		56.00	33.00	○
1.040		56.00	33.00	●
1.050		56.00	33.00	● ● ● ●
1.070		60.00	37.00	●
1.080		60.00	37.00	● ●
1.090		60.00	37.00	○ ○
1.100		60.00	37.00	● ● ● ○ ● ●
1.120		60.00	37.00	●
1.130		60.00	37.00	○

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

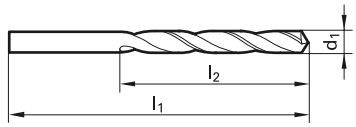
506	535	667	668	2462	317	336	396	617	669
DIN 340									
HSS					HSCO				
>Ø 2,36	>Ø 2,36	S	S	F	>Ø 2,36	>Ø 2,36	F	○	S
GT 100	GT 100	N	GT 100	GT 100	N	GT 100	GT 100	Ti	Ti
left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
138	136	133	137	137	134	136	137	134	139
163	163	164	164	164	164	164	165	165	165

Availability

		●			●				
		●			●				
		○							
		●			●				
		●			●				
		●			●				
					●				
		●			●				
		○			●				
					○				
	●	●	●	●	●	●	●	●	●
	●				●	●			
	○				○				
	●		●			●			
	●	●	●	●	●	●	●	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	204	217	218	219	220	221	501
Standard	DIN 340						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	● >Ø 6,00	○	○
Type	N	N	H	W	N	H	GT50
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	134	134	138	138	136
Techn. data page	162	162	162	162	163	163	163



d1 mm	d1 inch	l1 mm	l2 mm	Availability
1.150		60.00	37.00	● ● ● ○
1.180		60.00	37.00	● ○ ●
1.190	3/64	65.00	41.00	● ○ ●
1.200		65.00	41.00	● ● ● ● ● ●
1.220		65.00	41.00	●
1.240		65.00	41.00	○
1.250		65.00	41.00	● ● ● ○ ●
1.300		65.00	41.00	● ● ● ● ●
1.320		65.00	41.00	● ○ ●
1.350		70.00	45.00	● ● ●
1.370		70.00	45.00	○ ●
1.400		70.00	45.00	● ● ○ ● ●
1.430		70.00	45.00	○
1.440		70.00	45.00	● ○
1.450		70.00	45.00	● ○ ●
1.470		70.00	45.00	●
1.480		70.00	45.00	○
1.490		70.00	45.00	●
1.500		70.00	45.00	● ● ● ● ● ●
1.510		76.00	50.00	○ ●
1.520		76.00	50.00	●
1.550		76.00	50.00	● ● ● ○ ●
1.560		76.00	50.00	○
1.570		76.00	50.00	●
1.580		76.00	50.00	○
1.590	1/16	76.00	50.00	● ●
1.600		76.00	50.00	● ● ● ● ●
1.610		76.00	50.00	● ○ ●
1.630		76.00	50.00	○
1.650		76.00	50.00	● ● ●
1.660		76.00	50.00	○
1.670		76.00	50.00	
1.680		76.00	50.00	
1.700		76.00	50.00	● ● ● ● ●
1.730		80.00	53.00	○
1.750		80.00	53.00	● ● ● ●
1.760		80.00	53.00	○
1.770		80.00	53.00	○
1.780		80.00	53.00	● ●

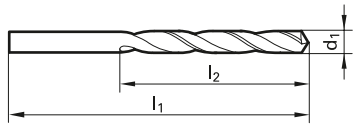
○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

506	535	667	668	2462	317	336	396	617	669
DIN 340									
HSS					HSCO				
>Ø 2,36	>Ø 2,36	S	S	F	>Ø 2,36	>Ø 2,36	F	○	S
GT 100	GT 100	N	GT 100	GT 100	N	GT 100	GT 100	Ti	Ti
left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
138	136	133	137	137	134	136	137	134	139
163	163	164	164	164	164	164	165	165	165

Availability									
	○ ● ●	○	● ○		● ○	● ●			
	●	●	●	●	●	●	●	●	●
	● ● ○	● ○	● ●	●	● ●	● ● ●	●	●	●
○	●	●	●		●	●		●	●
	●	●			●			●	
●	● ●	●	● ● ●	●	● ○	● ●	●	●	●
	●	●			●	●			
●	● ●	● ●	● ●	●	● ●	● ● ●	●	● ● ○	● ●
	●	●	●		●			●	
○	●								
	●	●	●		●	● ●		● ●	●
	●							●	
	●				●	●			

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	204	217	218	219	220	221	501
Standard	DIN 340						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	● >Ø 6,00	○	○
Type	N	N	H	W	N	H	GT50
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	134	134	138	138	136
Techn. data page	162	162	162	162	163	163	163



d1 mm	d1 inch	l1 mm	l2 mm	Availability
1.800		80.00	53.00	● ● ● ○ ○ ●
1.820		80.00	53.00	●
1.850		80.00	53.00	● ● ● ○ ○ ●
1.900		80.00	53.00	● ● ● ● ●
1.930		85.00	56.00	● ●
1.950		85.00	56.00	● ● ● ● ●
1.970		85.00	56.00	○
1.980	5/64	85.00	56.00	● ●
1.990		85.00	56.00	○
2.000		85.00	56.00	● ● ● ● ● ●
2.020		85.00	56.00	● ○
2.030		85.00	56.00	●
2.040		85.00	56.00	○
2.050		85.00	56.00	● ● ● ○ ●
2.060		85.00	56.00	○ ●
2.070		85.00	56.00	○
2.080		85.00	56.00	● ●
2.100		85.00	56.00	● ● ● ●
2.150		90.00	59.00	● ● ● ●
2.160		90.00	59.00	○
2.180		90.00	59.00	○ ○ ●
2.200		90.00	59.00	● ● ● ○ ●
2.210		90.00	59.00	○
2.220		90.00	59.00	●
2.250		90.00	59.00	● ● ○ ●
2.260		90.00	59.00	● ●
2.270		90.00	59.00	○
2.300		90.00	59.00	● ● ● ○ ●
2.350		90.00	59.00	● ○ ● ○ ●
2.370		95.00	62.00	● ●
2.380	3/32	95.00	62.00	● ● ●
2.400		95.00	62.00	● ● ● ●
2.420		95.00	62.00	○
2.430		95.00	62.00	○
2.440		95.00	62.00	● ○
2.450		95.00	62.00	● ● ○ ○
2.480		95.00	62.00	
2.490		95.00	62.00	● ○ ●
2.500		95.00	62.00	● ● ● ● ●

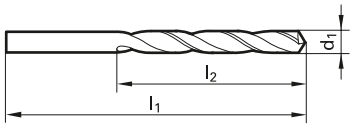
○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

506	535	667	668	2462	317	336	396	617	669
DIN 340									
HSS					HSCO				
>Ø 2,36	>Ø 2,36	S	S	F	>Ø 2,36	>Ø 2,36	F		S
GT 100	GT 100	N	GT 100	GT 100	N	GT 100	GT 100	Ti	Ti
left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
138	136	133	137	137	134	136	137	134	139
163	163	164	164	164	164	164	165	165	165

Availability									
●	●	●	●	●	●	●	●	●	●
○	●	●	●		○	●		○	
	●	●	●	●	●	○		●	●
	●	●	●		○	●		○	
	●	●	●			●		●	
	●	○	●		●	●		●	●
	●		●			●			
	●		●		●	●			
	○		●			●			
	●	●	●	●	●	●	●	●	●
	●		●		○	●			
	●	●	●			●		●	
	○		●			●			
	●	●	●	●	●	●	●	●	●
○	●	●	●	●	●	●	●	●	●
○	●	●				●			
	●	●				●			
	●	○							
	●	●	●	●	●	●	●	●	●
	●	●				●		●	
	●	●				●			
	●							○	
	●		●			●			
●	●	●	●	●	●	●	●	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	204	217	218	219	220	221	501
Standard	DIN 340						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	● >Ø 6,00	○	○
Type	N	N	H	W	N	H	GT50
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	134	134	138	138	136
Techn. data page	162	162	162	162	163	163	163

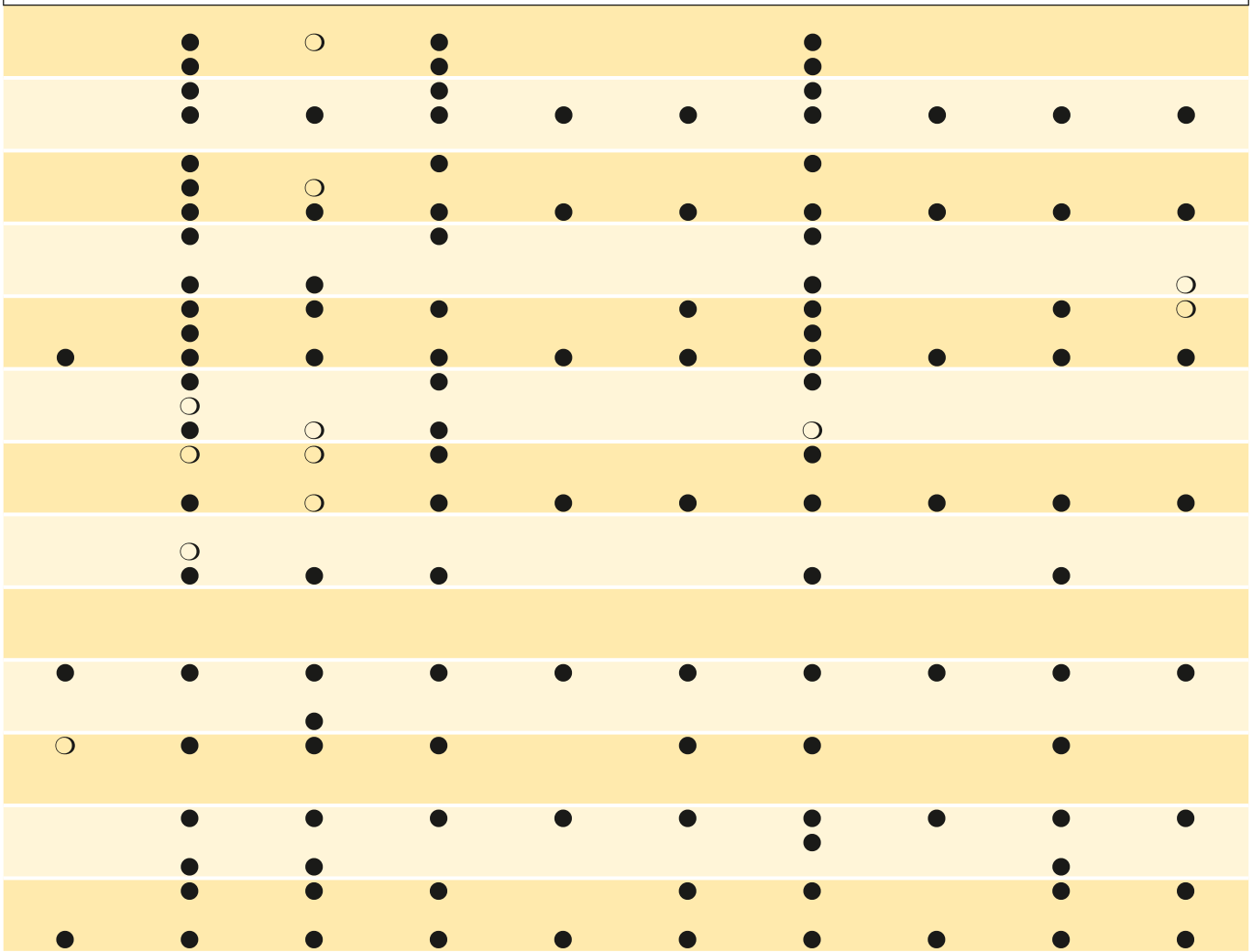


d1 mm	d1 inch	l1 mm	l2 mm	Availability
2.520		95.00	62.00	●
2.530		95.00	62.00	● ●
2.550		95.00	62.00	● ● ● ●
2.580		95.00	62.00	● ●
2.600		95.00	62.00	● ● ● ●
2.620		95.00	62.00	○ ○
2.640		95.00	62.00	○ ●
2.650		95.00	62.00	● ● ● ○
2.700		100.00	66.00	● ● ● ○ ● ●
2.710		100.00	66.00	○ ○ ●
2.720		100.00	66.00	●
2.750		100.00	66.00	● ● ● ○ ●
2.780	7/64	100.00	66.00	● ●
2.790		100.00	66.00	● ○
2.800		100.00	66.00	● ● ● ○ ●
2.820		100.00	66.00	○ ●
2.830		100.00	66.00	○
2.850		100.00	66.00	● ● ○ ●
2.870		100.00	66.00	● ● ●
2.880		100.00	66.00	○
2.900		100.00	66.00	● ● ● ● ○ ●
2.920		100.00	66.00	●
2.940		100.00	66.00	●
2.950		100.00	66.00	○ ● ● ○ ○ ○ ●
2.970		100.00	66.00	●
2.980		100.00	66.00	●
2.990		100.00	66.00	●
3.000		100.00	66.00	● ● ● ● ● ● ●
3.020		106.00	69.00	● ○
3.030		106.00	69.00	●
3.050		106.00	69.00	● ● ● ○ ●
3.060		106.00	69.00	○
3.070		106.00	69.00	○
3.100		106.00	69.00	● ● ● ● ○ ●
3.120		106.00	69.00	
3.150		106.00	69.00	● ● ○ ○
3.170	1/8	106.00	69.00	○ ● ● ○ ●
3.180		106.00	69.00	● ○
3.200		106.00	69.00	● ● ● ● ● ○ ●

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

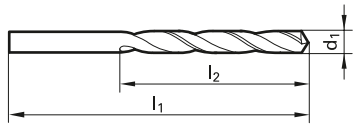
506	535	667	668	2462	317	336	396	617	669
DIN 340									
HSS					HSCO				
>Ø 2,36	>Ø 2,36	S	S	F	>Ø 2,36	>Ø 2,36	F	○	S
GT 100	GT 100	N	GT 100	GT 100	N	GT 100	GT 100	Ti	Ti
left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
138	136	133	137	137	134	136	137	134	139
163	163	164	164	164	164	164	165	165	165

Availability



C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	204	217	218	219	220	221	501
Standard	DIN 340						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	● >Ø 6,00	○	○
Type	N	N	H	W	N	H	GT50
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	134	134	138	138	136
Techn. data page	162	162	162	162	163	163	163



d1 mm	d1 inch	l1 mm	l2 mm	Availability
3.250		106.00	69.00	● ● ● ○ ○ ●
3.260		106.00	69.00	○ ○ ●
3.270		106.00	69.00	●
3.280		106.00	69.00	
3.300		106.00	69.00	● ● ● ● ○ ●
3.350		106.00	69.00	● ○ ○ ●
3.400		112.00	73.00	● ● ● ● ○ ○ ●
3.420		112.00	73.00	○
3.440		112.00	73.00	
3.450		112.00	73.00	● ○ ○ ● ●
3.500		112.00	73.00	● ● ● ● ● ○ ●
3.510		112.00	73.00	○
3.550		112.00	73.00	● ● ○ ○ ●
3.570	9/64	112.00	73.00	● ●
3.600		112.00	73.00	○ ● ● ● ○ ●
3.650		112.00	73.00	● ● ●
3.660		112.00	73.00	○ ●
3.700		112.00	73.00	● ● ○ ○ ●
3.730		112.00	73.00	
3.750		112.00	73.00	● ●
3.800		119.00	78.00	● ● ● ● ○ ●
3.830		119.00	78.00	●
3.850		119.00	78.00	●
3.860		119.00	78.00	○ ●
3.870		119.00	78.00	
3.900		119.00	78.00	○ ● ● ● ●
3.910		119.00	78.00	○ ●
3.920		119.00	78.00	○
3.950		119.00	78.00	●
3.970	5/32	119.00	78.00	● ○ ●
3.990		119.00	78.00	○ ● ○
4.000		119.00	78.00	● ● ● ● ● ● ●
4.030		119.00	78.00	○ ○
4.040		119.00	78.00	● ●
4.050		119.00	78.00	○ ● ● ○ ●
4.090		119.00	78.00	● ●
4.100		119.00	78.00	● ● ● ● ○ ●
4.130		119.00	78.00	
4.150		119.00	78.00	● ●

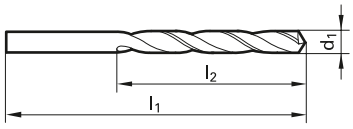
○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

506	535	667	668	2462	317	336	396	617	669
DIN 340									
HSS					HSCO				
>Ø 2,36	>Ø 2,36	S	S	F	>Ø 2,36	>Ø 2,36	F	○	S
GT 100	GT 100	N	GT 100	GT 100	N	GT 100	GT 100	Ti	Ti
left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
138	136	133	137	137	134	136	137	134	139
163	163	164	164	164	164	164	165	165	165

Availability									
	● ● ○	● ○	● ○		●	●		●	●
○	●	● ●	●	●	●	●	●	○ ●	●
○	●	●	●	●	●	● ○	●	●	●
●	● ●	●	● ●	●	●	● ●	●	● ●	●
●	● ● ●	● ○ ●	● ●		● ○ ●	● ●	○	● ●	● ●
	● ● ●	● ●	●	●	●	● ●	●	●	●
○	● ● ●	● ○ ●	● ○ ●	○	●	● ○ ●	●	●	●
	●	○	●			●			
○	● ●	○	● ○ ●	○	●	● ●	●	●	●
○	●	● ○	●		○	●		●	○
●	● ●	●	●	●	●	● ●	●	●	●
	● ● ●	●	● ○		○	● ●		●	
	● ○ ●	●	●		●	●	●	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	204	217	218	219	220	221	501
Standard	DIN 340						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	● >Ø 6,00	○	○
Type	N	N	H	W	N	H	GT50
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	134	134	138	138	136
Techn. data page	162	162	162	162	163	163	163



d1 mm	d1 inch	l1 mm	l2 mm	Availability
4.200		119.00	78.00	● ● ● ● ● ●
4.220		119.00	78.00	● ●
4.250		119.00	78.00	○ ● ● ○ ●
4.300		126.00	82.00	● ● ● ● ○ ●
4.350		126.00	82.00	○ ●
4.370	11/64	126.00	82.00	● ●
4.390		126.00	82.00	○
4.400		126.00	82.00	● ● ● ● ○
4.450		126.00	82.00	○
4.500		126.00	82.00	● ● ● ● ● ○ ●
4.550		126.00	82.00	●
4.570		126.00	82.00	○ ●
4.600		126.00	82.00	○ ● ● ● ○ ●
4.620		126.00	82.00	●
4.650		126.00	82.00	●
4.700		126.00	82.00	● ● ● ●
4.750		126.00	82.00	● ●
4.760	3/16	132.00	87.00	○ ● ● ●
4.780		132.00	87.00	○
4.800		132.00	87.00	● ● ● ● ○ ●
4.830		132.00	87.00	○
4.850		132.00	87.00	○ ●
4.870		132.00	87.00	○
4.900		132.00	87.00	● ● ● ● ●
4.910		132.00	87.00	
4.920		132.00	87.00	○ ●
4.950		132.00	87.00	● ○ ○
4.980		132.00	87.00	● ○
5.000		132.00	87.00	● ● ● ● ● ● ●
5.030		132.00	87.00	●
5.050		132.00	87.00	● ○ ●
5.060		132.00	87.00	● ●
5.080		132.00	87.00	○
5.100		132.00	87.00	● ● ● ● ○ ○ ●
5.110		132.00	87.00	○ ●
5.150		132.00	87.00	●
5.160	13/64	132.00	87.00	● ○
5.180		132.00	87.00	○ ○
5.200		132.00	87.00	● ● ● ● ○ ●

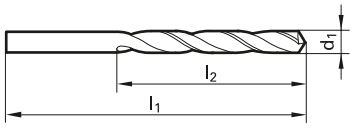
○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

506	535	667	668	2462	317	336	396	617	669
DIN 340									
HSS					HSCO				
>Ø 2,36	>Ø 2,36	S	S	F	>Ø 2,36	>Ø 2,36	F	○	S
GT 100	GT 100	N	GT 100	GT 100	N	GT 100	GT 100	Ti	Ti
left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
138	136	133	137	137	134	136	137	134	139
163	163	164	164	164	164	164	165	165	165

Availability									
●	● ○ ●	● ●	● ●	●	●	● ●	●	●	●
	● ● ●	● ○	● ●	●	● ○	● ●		●	● ●
○	● ●	● ●	● ●		● ○	● ●		●	●
●	● ●	● ○	● ●	●	● ○	● ●	●	●	●
○	● ●	○ ○ ○	● ●		● ●	● ●		●	
	● ● ●	● ○ ●	● ●	●	● ●	● ●	●	● ●	● ●
○	● ●	● ●	● ●	●	● ●	● ●	●	● ●	●
	● ●	○ ○	○ ● ○	● ●	● ●	● ●		● ●	
○	● ●	○	● ○ ●			● ●		○	
●	● ●	●	●	●	●	● ●	●	●	●
	● ●		● ●		● ●	● ●			
	● ●		●		●	● ●	●	●	●
○ ○	● ● ●	○ ●	●	●	○ ●	● ○ ●	●	● ●	○ ●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	204	217	218	219	220	221	501
Standard	DIN 340						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	● >Ø 6,00	○	○
Type	N	N	H	W	N	H	GT50
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	134	134	138	138	136
Techn. data page	162	162	162	162	163	163	163



d1 mm	d1 inch	l1 mm	l2 mm	Availability
5.220		132.00	87.00	●
5.250		132.00	87.00	●
5.300		132.00	87.00	● ● ● ●
5.310		139.00	91.00	○ ○
5.350		139.00	91.00	○
5.400		139.00	91.00	● ● ● ○ ●
5.410		139.00	91.00	○ ○
5.430		139.00	91.00	○
5.450		139.00	91.00	○ ○
5.500		139.00	91.00	● ● ● ● ○ ●
5.550		139.00	91.00	○
5.560	7/32	139.00	91.00	● ●
5.600		139.00	91.00	● ● ● ○ ○ ●
5.610		139.00	91.00	● ○
5.650		139.00	91.00	○ ○ ○
5.700		139.00	91.00	● ● ○ ●
5.750		139.00	91.00	●
5.790		139.00	91.00	○ ○
5.800		139.00	91.00	● ● ● ●
5.850		139.00	91.00	○
5.900		139.00	91.00	○ ● ● ● ○ ●
5.940		139.00	91.00	○
5.950	15/64	139.00	91.00	● ○ ●
5.980		139.00	91.00	○
6.000		139.00	91.00	● ● ● ● ● ● ●
6.030		148.00	97.00	●
6.040		148.00	97.00	●
6.050		148.00	97.00	○
6.060		148.00	97.00	○
6.100		148.00	97.00	● ● ● ● ○
6.150		148.00	97.00	●
6.200		148.00	97.00	● ● ● ●
6.250		148.00	97.00	● ○ ○
6.300		148.00	97.00	● ● ● ● ● ●
6.350	1/4	148.00	97.00	● ● ●
6.400		148.00	97.00	● ● ● ○ ●
6.420		148.00	97.00	○
6.500		148.00	97.00	● ● ● ● ○ ●
6.530		148.00	97.00	●

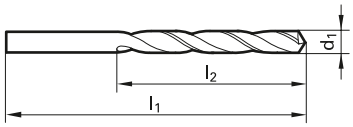
○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

506	535	667	668	2462	317	336	396	617	669
DIN 340									
HSS					HSCO				
>Ø 2,36	>Ø 2,36	S	S	F	>Ø 2,36	>Ø 2,36	F	○	S
GT 100	GT 100	N	GT 100	GT 100	N	GT 100	GT 100	Ti	Ti
left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
138	136	133	137	137	134	136	137	134	139
163	163	164	164	164	164	164	165	165	165

Availability									
●	●	●	●		●	●		●	●
○	●	○				●			
	●	●	●	○	●	●	○	●	○
	●	○				●			
	●	●	●	●	●	●	●	●	●
	●	○	●		○	●		●	○
○	●	●	●		●	●		●	●
	●	●				○			
○	●	○	●		●	●		●	●
	●					●			
○	●	●	●		●	●	●	●	●
	●					○			
	●		●		●	●			
●	●	●	●	●	●	●	●	●	●
	●		●			●			
	●				●				
	●	●	○	●	●	●		●	●
	●		●			●			
	●	●	●	○	●	●	●	●	●
	●		●			●			
	●	●	●		●	●	●	●	○
	●		●			●			●
	●	●	●	●	●	●	●	●	●
	●		●			●			

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	204	217	218	219	220	221	501
Standard	DIN 340						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	● >Ø 6,00	○	○
Type	N	N	H	W	N	H	GT50
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	134	134	138	138	136
Techn. data page	162	162	162	162	163	163	163



d1 mm	d1 inch	l1 mm	l2 mm	Availability
6.600		148.00	97.00	● ● ● ● ● ●
6.630		148.00	97.00	●
6.700		148.00	97.00	● ● ● ● ●
6.750	17/64	156.00	102.00	○ ● ●
6.760		156.00	102.00	
6.800		156.00	102.00	● ● ● ● ● ○ ●
6.900		156.00	102.00	● ● ○ ● ●
6.910		156.00	102.00	
7.000		156.00	102.00	● ● ● ● ●
7.030		156.00	102.00	
7.040		156.00	102.00	○
7.100		156.00	102.00	● ○ ●
7.140	9/32	156.00	102.00	● ●
7.200		156.00	102.00	● ● ○ ○
7.250		156.00	102.00	○
7.300		156.00	102.00	● ● ●
7.350		156.00	102.00	○
7.370		156.00	102.00	○
7.400		156.00	102.00	○ ● ●
7.450		156.00	102.00	○
7.490		156.00	102.00	○
7.500		156.00	102.00	● ● ● ● ○ ●
7.540	19/64	165.00	109.00	● ○ ●
7.550		165.00	109.00	●
7.600		165.00	109.00	○ ○ ○
7.670		165.00	109.00	○ ○
7.700		165.00	109.00	○ ● ○
7.750		165.00	109.00	●
7.800		165.00	109.00	○ ● ○
7.850		165.00	109.00	●
7.900		165.00	109.00	● ● ○
7.940	5/16	165.00	109.00	● ●
7.950		165.00	109.00	○
8.000		165.00	109.00	● ● ● ● ● ○ ●
8.025		165.00	109.00	○
8.030		165.00	109.00	●
8.050		165.00	109.00	
8.100		165.00	109.00	● ● ○ ●
8.200		165.00	109.00	○ ● ● ● ●

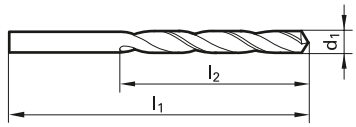
○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

506	535	667	668	2462	317	336	396	617	669
DIN 340									
HSS					HSCO				
>Ø 2,36	>Ø 2,36	S	S	F	>Ø 2,36	>Ø 2,36	F	○	S
GT 100	GT 100	N	GT 100	GT 100	N	GT 100	GT 100	Ti	Ti
left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
138	136	133	137	137	134	136	137	134	139
163	163	164	164	164	164	164	165	165	165

Availability									
	●	●	●	●	●	●		●	●
	●		●		○	●			●
	●		●			●	●		●
	●	○	●		○	●		●	●
	●	●	○			●	●	●	●
	●	●	●	●	●	●	●	●	●
	○					●		●	○
	●	●	●			●		●	●
	●	●	○	●	●	●	●	○	○
	●	●	●			●	○	●	○
	●	○	○	○	○	●	○	○	●
	●	●	●	○		●			●
	●	○	○			●			○
	○	●	○	●	●	●	●	●	
	●		●			●	○		●
	○	●	●		●	●	●	●	●
	○			○	○				○
	●	●	●		●	●	●	●	○
	●	○	●	○		●		●	○
	●	●	●	●	●	●	●	●	●
	●					○			
	●	●	●			●			
	●	●				●	●		

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	204	217	218	219	220	221	501
Standard	DIN 340						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	● >Ø 6,00	○	○
Type	N	N	H	W	N	H	GT50
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	134	134	138	138	136
Techn. data page	162	162	162	162	163	163	163



d1 mm	d1 inch	l1 mm	l2 mm	Availability
8.250		165.00	109.00	❍ ● ❍
8.300		165.00	109.00	● ❍ ❍
8.330	21/64	165.00	109.00	● ●
8.400		165.00	109.00	❍ ● ❍ ❍
8.430		165.00	109.00	●
8.450		165.00	109.00	❍
8.500		165.00	109.00	● ● ● ●
8.550		175.00	115.00	❍
8.600		175.00	115.00	❍ ● ❍ ❍
8.610		175.00	115.00	●
8.700		175.00	115.00	● ● ● ●
8.730	11/32	175.00	115.00	● ●
8.750		175.00	115.00	❍ ● ● ❍ ❍
8.800		175.00	115.00	● ● ● ❍
8.840		175.00	115.00	
8.900		175.00	115.00	● ● ❍ ●
9.000		175.00	115.00	● ● ● ● ❍ ❍ ●
9.090		175.00	115.00	❍
9.100		175.00	115.00	● ❍ ●
9.130	23/64	175.00	115.00	● ●
9.200		175.00	115.00	●
9.300		175.00	115.00	❍ ● ●
9.340		175.00	115.00	❍
9.350		175.00	115.00	❍
9.400		175.00	115.00	❍ ● ❍
9.500		175.00	115.00	● ● ●
9.520	3/8	184.00	121.00	● ❍ ●
9.580		184.00	121.00	●
9.600		184.00	121.00	● ●
9.700		184.00	121.00	❍ ● ❍ ❍ ❍
9.750		184.00	121.00	●
9.800		184.00	121.00	● ● ● ❍ ●
9.900		184.00	121.00	❍ ● ● ❍ ❍
9.920	25/64	184.00	121.00	● ●
10.000		184.00	121.00	● ● ● ● ● ●
10.080		184.00	121.00	●
10.100		184.00	121.00	● ❍
10.200		184.00	121.00	● ● ●
10.250		184.00	121.00	●

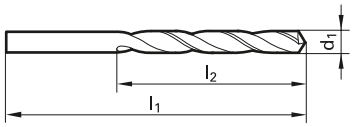
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

506	535	667	668	2462	317	336	396	617	669
DIN 340									
HSS					HSCO				
>Ø 2,36	>Ø 2,36	S	S	F	>Ø 2,36	>Ø 2,36	F	○	S
GT 100	GT 100	N	GT 100	GT 100	N	GT 100	GT 100	Ti	Ti
left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
138	136	133	137	137	134	136	137	134	139
163	163	164	164	164	164	164	165	165	165

Availability									
	● ● ●	○ ●	●		○	●	○	●	
	● ● ●	●	● ●		●	●		●	
●	● ● ●	●	●		●	●	●	●	●
	● ● ●	● ●	○ ● ●		○	● ● ●		● ○	○
	● ●	●	●		●	●	●		
●	● ● ●	○ ●	● ●	●	●	● ● ●	○ ●	●	●
	● ● ●	●	● ○		○ ○ ●	● ○	○ ○		○
	● ○ ●	○	●		●	● ● ○			●
	● ● ●	○ ● ○	○ ● ●		○ ●	● ● ●	●	● ○	● ○
	● ●	●	●		●	●	○ ○		
○	● ●	●	○		○	○ ● ●		●	
	● ● ●	○ ●	● ●	●	○ ●	●	●	●	●
	● ●	●	○ ●		●	●		●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	204	217	218	219	220	221	501
Standard	DIN 340						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	● >Ø 6,00	○	○
Type	N	N	H	W	N	H	GT50
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	134	134	138	138	136
Techn. data page	162	162	162	162	163	163	163

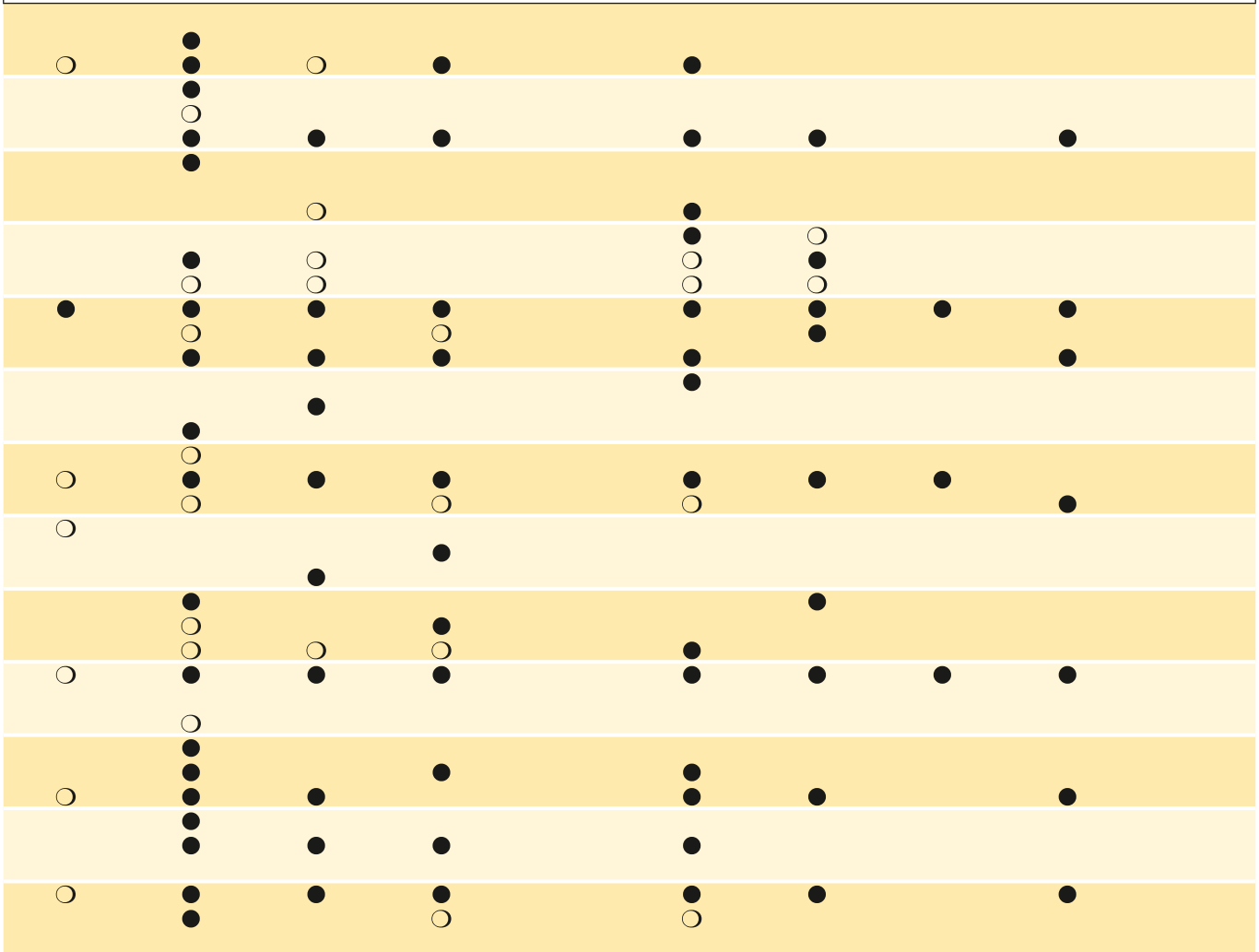


d1 mm	d1 inch	l1 mm	l2 mm	Availability
10.260		184.00	121.00	○
10.300		184.00	121.00	○ ● ○ ●
10.320	13/32	184.00	121.00	● ○
10.400		184.00	121.00	○ ● ●
10.490		184.00	121.00	
10.500		184.00	121.00	● ● ● ●
10.600		184.00	121.00	● ○
10.700		195.00	128.00	● ○ ○
10.720	27/64	195.00	128.00	● ○
10.750		195.00	128.00	● ○
10.800		195.00	128.00	○ ● ○
10.900		195.00	128.00	
11.000		195.00	128.00	● ● ○ ●
11.100		195.00	128.00	
11.110	7/16	195.00	128.00	● ●
11.200		195.00	128.00	● ○
11.250		195.00	128.00	○
11.300		195.00	128.00	○
11.400		195.00	128.00	● ○ ○
11.500		195.00	128.00	● ○ ●
11.510	29/64	195.00	128.00	● ○
11.600		195.00	128.00	● ●
11.700		195.00	128.00	●
11.750		195.00	128.00	● ○
11.800		195.00	128.00	● ●
11.900		205.00	134.00	○ ○
11.910	15/32	205.00	134.00	● ●
12.000		205.00	134.00	● ● ● ○ ●
12.100		205.00	134.00	● ○
12.150		205.00	134.00	
12.200		205.00	134.00	● ○ ●
12.300	31/64	205.00	134.00	○ ● ●
12.500		205.00	134.00	● ○ ●
12.600		205.00	134.00	
12.700	1/2	205.00	134.00	● ●
12.800		205.00	134.00	● ○
13.000		205.00	134.00	○ ● ○ ●
13.100	33/64	205.00	134.00	○ ●
13.200		205.00	134.00	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

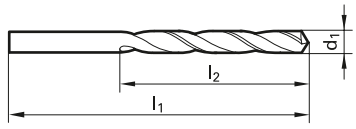
506	535	667	668	2462	317	336	396	617	669
DIN 340									
HSS					HSCO				
>Ø 2,36	>Ø 2,36	S	S	F	>Ø 2,36	>Ø 2,36	F	○	S
GT 100	GT 100	N	GT 100	GT 100	N	GT 100	GT 100	Ti	Ti
left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
138	136	133	137	137	134	136	137	134	139
163	163	164	164	164	164	164	165	165	165

Availability



C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Guhring no.	204	217	218	219	220	221	501
Standard	DIN 340						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	● >Ø 6,00	○	○
Type	N	N	H	W	N	H	GT50
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	134	134	138	138	136
Techn. data page	162	162	162	162	163	163	163



d1 mm	d1 inch	l1 mm	l2 mm	Availability
13.490	17/32	214.00	140.00	● ● ●
13.500		214.00	140.00	● ● ● ○
13.700		214.00	140.00	○
13.750		214.00	140.00	○ ●
13.800		214.00	140.00	●
13.890	35/64	214.00	140.00	● ●
13.900		214.00	140.00	
14.000		214.00	140.00	● ○ ○ ●
14.100		220.00	144.00	●
14.200		220.00	144.00	●
14.250		220.00	144.00	●
14.290	9/16	220.00	144.00	●
14.400		220.00	144.00	
14.490		220.00	144.00	○
14.500		220.00	144.00	● ○ ●
14.600		220.00	144.00	
14.680	37/64	220.00	144.00	●
14.700		220.00	144.00	
14.750		220.00	144.00	○
14.800		220.00	144.00	
14.900		220.00	144.00	●
15.000		220.00	144.00	● ○ ● ○
15.080	19/32	227.00	149.00	●
15.200		227.00	149.00	●
15.250		227.00	149.00	●
15.400		227.00	149.00	○
15.480	39/64	227.00	149.00	●
15.500		227.00	149.00	● ●
15.600		227.00	149.00	○
15.800		227.00	149.00	
15.870	5/8	227.00	149.00	●
16.000		227.00	149.00	● ●
16.270	41/64	235.00	154.00	●
16.500		235.00	154.00	●
16.670	21/32	235.00	154.00	●
16.750		235.00	154.00	
17.000		235.00	154.00	● ●
17.070	43/64	241.00	158.00	●
17.460	11/16	241.00	158.00	●

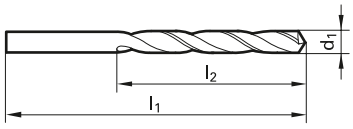
○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

506	535	667	668	2462	317	336	396	617	669
DIN 340									
HSS					HSCO				
>Ø 2,36	>Ø 2,36	S	S	F	>Ø 2,36	>Ø 2,36	F	○	S
GT 100	GT 100	N	GT 100	GT 100	N	GT 100	GT 100	Ti	Ti
left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
138	136	133	137	137	134	136	137	134	139
163	163	164	164	164	164	164	165	165	165

Availability									
●	●	●			●				
●	●	●			●				
○									
		●							
●	●	●			○				
○					○				
●		●	●		●				
		●			○				
					○				
		●							
					○				
					●				
		●			●				
		●							
		○			○				
		●			●				
		○			○				
					●				
					○	○			
					●				
		●			●	●			
		○							
		●							
		●							
		●							

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	204	217	218	219	220	221	501
Standard	DIN 340						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	● >Ø 6,00	○	○
Type	N	N	H	W	N	H	GT50
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	left-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	134	134	138	138	136
Techn. data page	162	162	162	162	163	163	163



d1 mm	d1 inch	l1 mm	l2 mm	Availability
17.500		241.00	158.00	●
18.000		241.00	158.00	● ○
18.250		247.00	162.00	○ ○
18.500		247.00	162.00	●
18.650	47/64	247.00	162.00	●
19.000		247.00	162.00	● ○ ○
19.450	49/64	254.00	166.00	
19.840	25/32	254.00	166.00	○
20.000		254.00	166.00	● ● ○
20.100		261.00	171.00	○
20.400		261.00	171.00	●
20.500		261.00	171.00	●
20.640	13/16	261.00	171.00	● ○
20.750		261.00	171.00	●
21.000		261.00	171.00	●
21.500		268.00	176.00	●
22.000		268.00	176.00	● ○
22.220	7/8	268.00	176.00	
23.300		275.00	180.00	○
23.420	59/64	275.00	180.00	○
23.810	15/16	282.00	185.00	●
24.000		282.00	185.00	●
24.750		282.00	185.00	○
25.000	63/64	282.00	185.00	● ○
25.250		290.00	190.00	○
25.500		290.00	190.00	○
26.190	1 1/32	290.00	190.00	○
26.500		290.00	190.00	●
26.990	1 1/16	298.00	195.00	●
28.570	1 1/8	307.00	201.00	○
29.000		307.00	201.00	○ ○
29.370	1 5/32	307.00	201.00	○
29.500		307.00	201.00	○
30.000		307.00	201.00	●
30.160	1 3/16	316.00	207.00	○
30.960	1 7/32	316.00	207.00	○
31.000		316.00	207.00	○
32.600		325.00	213.00	○
36.510	1 7/16	345.00	225.00	○

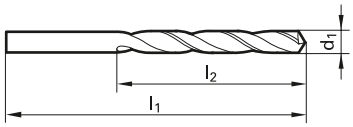
○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

506	535	667	668	2462	317	336	396	617	669
DIN 340									
HSS					HSCO				
>Ø 2,36	>Ø 2,36	S	S	F	>Ø 2,36	>Ø 2,36	F	○	S
GT 100	GT 100	N	GT 100	GT 100	N	GT 100	GT 100	Ti	Ti
left-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
h8	h8	h8	h8	h8	h8	h8	h8	h8	h8
138	136	133	137	137	134	136	137	134	139
163	163	164	164	164	164	164	165	165	165

Availability									
●									
○									
		○							
		○			●				

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

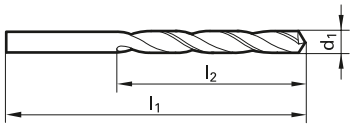
Guhring no.	706
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	N
Cutting direction	right-hand
Tolerance	h7
Discount group	102
Techn. data page	165



d1		l1	l2	Availability
mm	inch	mm	mm	
0.500		38.00	8.50	●
0.600		38.00	9.50	●
0.650		38.00	10.50	●
0.700		38.00	10.50	●
0.750		38.00	12.50	●
0.800		38.00	12.50	●
0.850		38.00	14.50	●
0.900		38.00	14.50	●
1.000		38.00	17.00	●
1.050		38.00	17.00	●
1.100		38.00	17.00	●
1.400		38.00	17.00	●
1.450		38.00	17.00	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

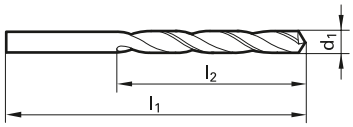
Guhring no.	235	502	524	670	618
Standard	DIN 1869				
Tool material	HSS				HSCO
Surface	>Ø 2,36	>Ø 2,36		S	
Type	N	GT 100	GT50	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8
Discount group	134	136	138	137	136
Techn. data page	165	166	166	166	166



d1 mm	d1 inch	l1 mm	l2 mm	Availability
1.600		115.00	75.00	●
1.700		115.00	75.00	●
1.800		120.00	80.00	●
1.900		120.00	80.00	●
1.930		125.00	85.00	❍
1.950		125.00	85.00	● ●
1.980	5/64	125.00	85.00	❍
2.000		125.00	85.00	● ● ● ●
2.050		125.00	85.00	● ●
2.100		125.00	85.00	● ● ● ●
2.200		135.00	90.00	● ● ● ●
2.300		135.00	90.00	● ● ● ●
2.350		135.00	90.00	❍ ●
2.370		140.00	95.00	●
2.380	3/32	140.00	95.00	● ● ● ●
2.400		140.00	95.00	● ● ● ●
2.450		140.00	95.00	❍
2.500		140.00	95.00	● ● ● ●
2.550		140.00	95.00	●
2.580		140.00	95.00	●
2.600		140.00	95.00	● ● ●
2.700		150.00	100.00	● ● ●
2.780	7/64	150.00	100.00	❍ ● ● ❍
2.800		150.00	100.00	● ● ● ●
2.850		150.00	100.00	●
2.870		150.00	100.00	●
2.900		150.00	100.00	● ● ● ● ●
2.950		150.00	100.00	● ● ●
3.000		150.00	100.00	● ● ● ● ●
3.030		155.00	105.00	●
3.100		155.00	105.00	● ● ● ● ●
3.170	1/8	155.00	105.00	● ● ● ● ●
3.200		155.00	105.00	● ● ● ● ●
3.220		155.00	105.00	❍
3.250		155.00	105.00	● ●
3.300		155.00	105.00	● ● ● ● ●
3.350		155.00	105.00	❍
3.400		165.00	115.00	● ● ● ●
3.450		165.00	115.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

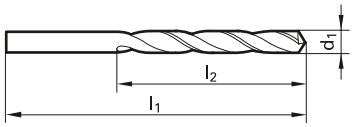
Guhring no.	235	502	524	670	618
Standard	DIN 1869				
Tool material	HSS				HSCO
Surface	>Ø 2,36	>Ø 2,36		S	
Type	N	GT 100	GT50	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8
Discount group	134	136	138	137	136
Techn. data page	165	166	166	166	166



d1 mm	d1 inch	l1 mm	l2 mm	Availability
3.500		165.00	115.00	● ● ● ● ●
3.530		165.00	115.00	○
3.570	9/64	165.00	115.00	● ● ○ ○ ○
3.600		165.00	115.00	● ● ○ ● ●
3.650		165.00	115.00	○
3.700		165.00	115.00	● ● ● ●
3.750		165.00	115.00	○ ● ○
3.800		175.00	120.00	● ● ● ● ●
3.860		175.00	120.00	●
3.900		175.00	120.00	● ● ●
3.970	5/32	175.00	120.00	● ● ● ● ●
4.000		175.00	120.00	● ● ● ● ●
4.100		175.00	120.00	● ● ● ● ●
4.200		175.00	120.00	● ● ● ● ●
4.250		175.00	120.00	●
4.300		185.00	125.00	● ● ●
4.370	11/64	185.00	125.00	○ ● ○ ● ●
4.400		185.00	125.00	● ● ● ●
4.500		185.00	125.00	● ● ● ● ●
4.570		185.00	125.00	●
4.600		185.00	125.00	○ ● ● ●
4.700		185.00	125.00	● ●
4.760	3/16	195.00	135.00	● ● ● ● ●
4.800		195.00	135.00	● ● ● ● ●
4.850		195.00	135.00	○
4.900		195.00	135.00	● ● ○
5.000		195.00	135.00	● ● ● ● ●
5.100		195.00	135.00	● ● ● ● ●
5.110		195.00	135.00	●
5.160	13/64	195.00	135.00	● ● ● ●
5.200		195.00	135.00	● ● ● ● ●
5.300		195.00	135.00	● ● ○ ●
5.340		205.00	140.00	○
5.400		205.00	140.00	● ● ○ ●
5.500		205.00	140.00	● ● ● ● ●
5.560	7/32	205.00	140.00	● ● ● ●
5.600		205.00	140.00	● ● ○ ●
5.700		205.00	140.00	● ● ● ●
5.750		205.00	140.00	●

○ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

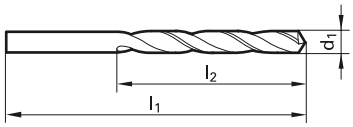
Guhring no.	235	502	524	670	618
Standard	DIN 1869				
Tool material	HSS				HSCO
Surface	>Ø 2,36	>Ø 2,36		S	
Type	N	GT 100	GT50	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8
Discount group	134	136	138	137	136
Techn. data page	165	166	166	166	166



d1 mm	d1 inch	l1 mm	l2 mm	235	502	524	670	618
5.800		205.00	140.00	●	●	●	●	●
5.900		205.00	140.00	●	●	○		
5.950	15/64	205.00	140.00	○	○	○		
6.000		205.00	140.00	●	●	●	●	●
6.050		215.00	150.00	○				
6.100		215.00	150.00	●	●	●	●	●
6.200		215.00	150.00	●	●		●	●
6.250		215.00	150.00	●	●			
6.300		215.00	150.00	●	●			●
6.350	1/4	215.00	150.00	●	●	●	●	●
6.400		215.00	150.00	●	●	●		●
6.500		215.00	150.00	●	●	●	●	●
6.600		215.00	150.00	●	●	●	○	●
6.700		215.00	150.00	●	●	○		●
6.750	17/64	225.00	155.00	●	●	○		●
6.800		225.00	155.00	●	●	●	●	●
6.900		225.00	155.00		●			
7.000		225.00	155.00	●	●	●	●	●
7.100		225.00	155.00		●	○		
7.140	9/32	225.00	155.00	○		○	●	●
7.200		225.00	155.00	●	●			
7.300		225.00	155.00		●	○		
7.400		225.00	155.00	●		●		○
7.500		225.00	155.00	●	●	●	●	●
7.540	19/64	240.00	165.00	○	●	○	○	●
7.600		240.00	165.00			○		
7.700		240.00	165.00	●	●			●
7.750		240.00	165.00		●			
7.800		240.00	165.00	●	●	●	●	●
7.900		240.00	165.00	●	●	○		
7.940	5/16	240.00	165.00	○	●	○	●	●
8.000		240.00	165.00	●	●	●	●	●
8.100		240.00	165.00	●	●	●		
8.200		240.00	165.00	●	●	○	○	●
8.300		240.00	165.00	●	●			
8.330	21/64	240.00	165.00	○	●	○		
8.400		240.00	165.00	○	●	○		
8.430		240.00	165.00		●			
8.500		240.00	165.00	●	●		●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

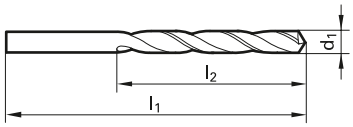
Guhring no.	235	502	524	670	618
Standard	DIN 1869				
Tool material	HSS				HSCO
Surface	>Ø 2,36	>Ø 2,36	○	S	◓
Type	N	GT 100	GT50	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8
Discount group	134	136	138	137	136
Techn. data page	165	166	166	166	166



d1 mm	d1 inch	l1 mm	l2 mm	Availability
8.600		250.00	175.00	● ○
8.700		250.00	175.00	● ● ●
8.730	11/32	250.00	175.00	● ● ○ ● ●
8.800		250.00	175.00	● ● ● ●
8.900		250.00	175.00	● ○
9.000		250.00	175.00	● ● ● ● ●
9.130	23/64	250.00	175.00	○ ● ○ ○
9.200		250.00	175.00	● ●
9.300		250.00	175.00	●
9.400		250.00	175.00	●
9.500		250.00	175.00	● ● ○ ● ●
9.520	3/8	265.00	185.00	● ● ● ○ ●
9.600		265.00	185.00	○ ● ○
9.700		265.00	185.00	● ● ○ ●
9.800		265.00	185.00	● ●
9.900		265.00	185.00	● ●
9.920	25/64	265.00	185.00	○ ● ○ ○
10.000		265.00	185.00	● ● ● ● ●
10.100		265.00	185.00	●
10.200		265.00	185.00	● ●
10.250		265.00	185.00	●
10.320	13/32	265.00	185.00	● ● ○ ○
10.500		265.00	185.00	● ● ●
10.600		265.00	185.00	○
10.720	27/64	280.00	195.00	●
10.900		280.00	195.00	○
11.000		280.00	195.00	● ● ● ●
11.110	7/16	280.00	195.00	● ○
11.200		280.00	195.00	●
11.500		280.00	195.00	● ● ●
11.510	29/64	280.00	195.00	○ ○
11.750		280.00	195.00	●
11.800		280.00	195.00	● ●
11.900		295.00	205.00	○
11.910	15/32	295.00	205.00	● ○
12.000		295.00	205.00	● ● ● ●
12.100		295.00	205.00	●
12.250		295.00	205.00	●
12.300	31/64	295.00	205.00	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

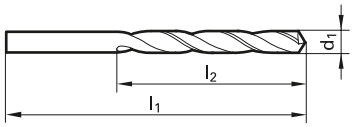
Guhring no.	235	502	524	670	618
Standard	DIN 1869				
Tool material	HSS				HSCO
Surface	>Ø 2,36	>Ø 2,36		S	
Type	N	GT 100	GT50	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8
Discount group	134	136	138	137	136
Techn. data page	165	166	166	166	166



d1 mm	d1 inch	l1 mm	l2 mm	Availability
12.500		295.00	205.00	● ● ●
12.700	1/2	295.00	205.00	● ● ● ○
13.000		295.00	205.00	● ●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

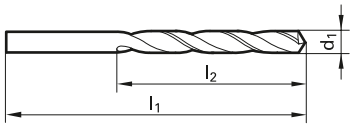
Guhring no.	236	503	528	671	619
Standard	DIN 1869				
Tool material	HSS				HSCO
Surface	●	◓ >Ø 2,36	○	Ⓢ	◓
Type	N	GT 100	GT50	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8
Discount group	134	136	138	139	138
Techn. data page	166	167	167	167	167



d1 mm	d1 inch	l1 mm	l2 mm	Availability
2.000		160.00	110.00	●
2.200		170.00	115.00	●
2.300		170.00	115.00	●
2.500		180.00	120.00	●
2.700		190.00	130.00	● ❍
2.800		190.00	130.00	● ● ●
2.900		190.00	130.00	●
3.000		190.00	130.00	● ● ● ●
3.030		200.00	135.00	● ❍
3.100		200.00	135.00	● ● ● ❍
3.170	1/8	200.00	135.00	● ● ● ● ●
3.200		200.00	135.00	● ● ● ●
3.300		200.00	135.00	● ● ●
3.400		210.00	145.00	●
3.500		210.00	145.00	● ● ● ● ●
3.570	9/64	210.00	145.00	❍ ● ❍ ●
3.600		210.00	145.00	● ●
3.650		210.00	145.00	❍
3.700		210.00	145.00	●
3.800		220.00	150.00	● ● ❍
3.900		220.00	150.00	●
3.970	5/32	220.00	150.00	● ❍ ● ●
4.000		220.00	150.00	● ● ● ● ●
4.090		220.00	150.00	❍
4.100		220.00	150.00	● ● ●
4.200		220.00	150.00	● ● ● ●
4.300		235.00	160.00	● ●
4.370		235.00	160.00	❍ ❍ ❍ ❍
4.400		235.00	160.00	❍ ❍
4.500		235.00	160.00	● ● ● ● ●
4.600		235.00	160.00	● ●
4.760	3/16	245.00	170.00	● ● ❍ ● ●
4.800		245.00	170.00	● ● ● ❍ ●
4.900		245.00	170.00	● ● ●
5.000		245.00	170.00	● ● ● ● ●
5.100		245.00	170.00	●
5.110		245.00	170.00	●
5.160	13/64	245.00	170.00	●
5.200		245.00	170.00	● ● ●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

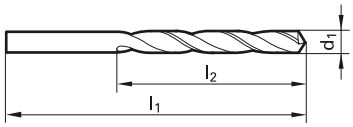
Guhring no.	236	503	528	671	619
Standard	DIN 1869				
Tool material	HSS				HSCO
Surface		>Ø 2,36		S	
Type	N	GT 100	GT50	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8
Discount group	134	136	138	139	138
Techn. data page	166	167	167	167	167



d1 mm	d1 inch	l1 mm	l2 mm	Availability
5.300		245.00	170.00	○
5.400		260.00	180.00	
5.500		260.00	180.00	● ● ○ ● ●
5.560	7/32	260.00	180.00	○ ● ○ ●
5.700		260.00	180.00	● ●
5.800		260.00	180.00	● ● ○
5.900		260.00	180.00	● ●
5.950	15/64	260.00	180.00	○ ○ ●
6.000		260.00	180.00	● ● ● ● ●
6.100		275.00	190.00	● ●
6.150		275.00	190.00	●
6.200		275.00	190.00	● ● ●
6.350	1/4	275.00	190.00	● ● ● ●
6.400		275.00	190.00	●
6.500		275.00	190.00	● ● ○ ● ●
6.600		275.00	190.00	●
6.700		275.00	190.00	● ●
6.750	17/64	290.00	200.00	● ○ ●
6.800		290.00	200.00	● ● ● ●
6.900		290.00	200.00	●
7.000		290.00	200.00	● ● ● ● ●
7.140	9/32	290.00	200.00	○ ● ○ ●
7.200		290.00	200.00	●
7.400		290.00	200.00	●
7.500		290.00	200.00	● ● ● ○ ●
7.540	19/64	305.00	210.00	○ ○ ○
7.600		305.00	210.00	○ ○
7.700		305.00	210.00	●
7.800		305.00	210.00	● ●
7.940	5/16	305.00	210.00	● ● ● ●
8.000		305.00	210.00	● ● ● ● ●
8.100		305.00	210.00	●
8.200		305.00	210.00	● ●
8.330	21/64	305.00	210.00	●
8.500		305.00	210.00	● ● ● ● ●
8.600		320.00	220.00	●
8.700		320.00	220.00	●
8.730	11/32	320.00	220.00	● ● ●
8.800		320.00	220.00	● ●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	236	503	528	671	619
Standard			DIN 1869		
Tool material			HSS		HSCO
Surface	●	◓ >Ø 2,36	○	Ⓢ	◓
Type	N	GT 100	GT50	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8
Discount group	134	136	138	139	138
Techn. data page	166	167	167	167	167

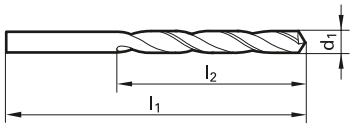


d1 mm	d1 inch	l1 mm	l2 mm	Availability
8.900		320.00	220.00	❍
9.000		320.00	220.00	● ● ❍ ●
9.100		320.00	220.00	❍
9.130	23/64	320.00	220.00	❍ ❍ ❍
9.200		320.00	220.00	❍
9.300		320.00	220.00	❍
9.500		320.00	220.00	● ● ●
9.520	3/8	340.00	235.00	● ●
9.600		340.00	235.00	●
9.700		340.00	235.00	●
9.800		340.00	235.00	● ●
9.900		340.00	235.00	●
9.920	25/64	340.00	235.00	❍ ●
10.000		340.00	235.00	● ● ● ●
10.200		340.00	235.00	● ●
10.500		340.00	235.00	● ● ❍
10.720	27/64	365.00	250.00	● ●
11.000		365.00	250.00	● ● ❍
11.110	7/16	365.00	250.00	● ●
11.500		365.00	250.00	● ● ❍
11.510	29/64	365.00	250.00	❍ ❍
11.750		365.00	250.00	● ●
11.910	15/32	375.00	260.00	❍ ●
12.000		375.00	260.00	● ●
12.300	31/64	375.00	260.00	●
12.500		375.00	260.00	●
12.700	1/2	375.00	260.00	●
13.000		375.00	260.00	● ● ❍

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	237	504	529	571
Standard		DIN 1869		
Tool material		HSS		HSCO
Surface	●	◓	○	◓
Type	N	GT 100	GT50	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	138	136	138	136
Techn. data page	167	168	168	168

NEW

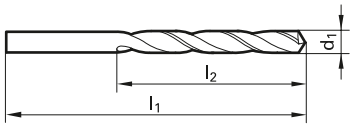


d1 mm	d1 inch	l1 mm	l2 mm	Availability
2.500		225.00	150.00	● ● ●
3.000		240.00	160.00	● ● ●
3.100		250.00	170.00	● ●
3.170	1/8	250.00	170.00	● ●
3.200		250.00	170.00	● ●
3.300		250.00	170.00	● ●
3.400		265.00	180.00	● ●
3.500		265.00	180.00	● ● ○ ●
3.570	9/64	265.00	180.00	○
3.600		265.00	180.00	○
3.700		265.00	180.00	● ●
3.800		280.00	190.00	● ● ○ ●
3.900		280.00	190.00	○ ● ●
3.970	5/32	280.00	190.00	● ●
4.000		280.00	190.00	● ● ● ●
4.100		280.00	190.00	● ○ ●
4.200		280.00	190.00	● ● ●
4.300		295.00	200.00	● ●
4.370	11/64	295.00	200.00	○
4.400		295.00	200.00	○
4.500		295.00	200.00	● ● ○ ●
4.600		295.00	200.00	● ●
4.760	3/16	315.00	210.00	● ●
4.800		315.00	210.00	● ○ ●
4.900		315.00	210.00	● ●
5.000		315.00	210.00	● ● ● ●
5.100		315.00	210.00	● ●
5.200		315.00	210.00	● ● ●
5.400		330.00	225.00	○
5.500		330.00	225.00	● ● ○ ●
5.560	7/32	330.00	225.00	● ●
5.800		330.00	225.00	● ● ●
5.900		330.00	225.00	●
5.950	15/64	330.00	225.00	● ●
6.000		330.00	225.00	● ● ● ●
6.100		350.00	235.00	● ● ●
6.200		350.00	235.00	● ● ●
6.300		350.00	235.00	● ●
6.350	1/4	350.00	235.00	● ●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	237	504	529	571
Standard		DIN 1869		
Tool material		HSS		HSCO
Surface	◯	◓	○	◓
Type	N	GT 100	GT50	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	138	136	138	136
Techn. data page	167	168	168	168

NEW



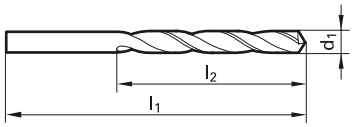
d1 mm	d1 inch	l1 mm	l2 mm	237	504	529	571
6.400		350.00	235.00	○	●		●
6.500		350.00	235.00	●	●	●	●
6.600		350.00	235.00		○		
6.700		350.00	235.00	●	●	○	●
6.750	17/64	370.00	250.00		●		●
6.800		370.00	250.00	●	●	○	●
7.000		370.00	250.00	●	●	●	●
7.140	9/32	370.00	250.00		●		●
7.200		370.00	250.00		●		●
7.500		370.00	250.00	○	●	○	●
7.540	19/64	390.00	265.00		○		
7.750		390.00	265.00		●		●
7.800		390.00	265.00	●	●		●
7.940	5/16	390.00	265.00		●		●
8.000		390.00	265.00	●	●	●	●
8.200		390.00	265.00		●		●
8.330	21/64	390.00	265.00		○		
8.500		390.00	265.00	●	●	●	●
8.600		410.00	280.00		●		●
8.700		410.00	280.00	●			
8.730	11/32	410.00	280.00		●		●
8.800		410.00	280.00		●		●
8.900		410.00	280.00		○		
9.000		410.00	280.00	●	●	●	●
9.100		410.00	280.00		○		
9.200		410.00	280.00		○		
9.500		410.00	280.00	●	●	○	●
9.520	3/8	430.00	295.00		●		●
9.530		430.00	295.00		○		
9.800		430.00	295.00	●			
9.920	25/64	430.00	295.00		○		
10.000		430.00	295.00	●	●	●	●
10.300		430.00	295.00	●			
10.320	13/32	430.00	295.00		●		●
10.500		430.00	295.00	●	●		●
10.720	27/64	455.00	310.00		●		●
11.000		455.00	310.00	●	●		●
11.100		455.00	310.00		○		
11.110	7/16	455.00	310.00		●		●

Availability

○ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	237	504	529	571
Standard	DIN 1869			
Tool material	HSS			HSCO
Surface	●	◓	○	◓
Type	N	GT 100	GT50	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	138	136	138	136
Techn. data page	167	168	168	168

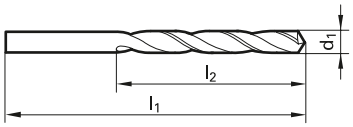
NEW



d1 mm	d1 inch	l1 mm	l2 mm	237	504	529	571
				Availability			
11.500		455.00	310.00	●	●	○	●
11.750		455.00	310.00	●			
12.000		480.00	330.00	●	●		●
12.200		480.00	330.00		●		●
12.500		480.00	330.00	●	●		●
13.000		480.00	330.00	●	●		●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

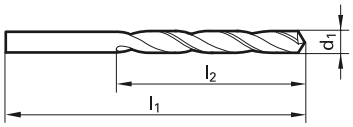
Guhring no.	242
Standard	Guhring std.
Tool material	HSS
Surface	◓
Type	GT 100
Cutting direction	right-hand
Tolerance	h8
Discount group	136
Techn. data page	168



d1 mm	l1 mm	l2 mm	Availability
6.000	500.00	400.00	●
8.000	500.00	400.00	●
10.000	600.00	500.00	●
11.000	600.00	500.00	●
12.000	600.00	500.00	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

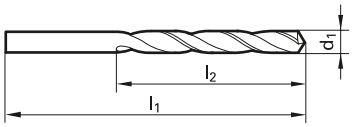
Guhring no.	243
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	GT 100
Cutting direction	right-hand
Tolerance	h8
Discount group	138
Techn. data page	168



d1 mm	l1 mm	l2 mm	Availability
8.000	750.00	650.00	●
9.800	750.00	650.00	●
10.000	750.00	650.00	●
11.000	750.00	650.00	●
12.000	750.00	650.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

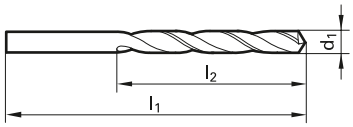
Guhring no.	244
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	GT 100
Cutting direction	right-hand
Tolerance	h8
Discount group	138
Techn. data page	169



d1 mm	l1 mm	l2 mm	Availability
10.000	1000.00	850.00	●
11.000	1000.00	850.00	●
12.000	1000.00	850.00	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

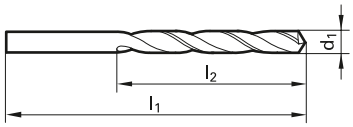
Guhring no.	577	579
Standard	NAS 907	
Tool material	HSS	
Surface	○	● >Ø 2,36
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	169	169



d1 mm	d1 inch	l1 mm	l2 mm	Availability	
1.500		153.00	23.00	●	●
1.590	1/16	153.00	26.00	●	○
1.650		153.00	26.00	●	
1.750		153.00	26.00	○	
1.780		153.00	26.00	●	●
1.900		153.00	26.00	●	
1.930		153.00	29.00	○	
1.980	5/64	153.00	29.00	○	○
1.990		153.00	29.00	○	
2.000		153.00	29.00	●	●
2.100		153.00	29.00	●	
2.300		153.00	32.50	●	
2.370		153.00	37.00	○	
2.380	3/32	153.00	37.00	●	●
2.400		153.00	37.00	●	●
2.490		153.00	37.00	●	●
2.500		153.00	37.00	●	●
2.530		153.00	37.00	●	●
2.580		153.00	37.00	●	○
2.640		153.00	37.00		○
2.710		153.00	42.00	○	○
2.780	7/64	153.00	42.00		○
2.790		153.00	42.00	○	○
2.820		153.00	42.00		○
2.870		153.00	42.00	○	○
2.950		153.00	42.00	○	○
3.000		153.00	42.00	●	●
3.050		153.00	42.00	○	●
3.170	1/8	153.00	42.00	●	●
3.200		153.00	42.00	●	○
3.260		153.00	42.00	●	●
3.450		154.00	49.00		○
3.500		154.00	49.00	●	○
3.570	9/64	154.00	49.00	○	○
3.600		154.00	49.00		○
3.660		154.00	49.00		○
3.700		154.00	49.00		●
3.730		154.00	49.00	○	
3.800		154.00	55.00	●	○

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

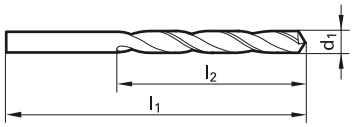
Guhring no.	577	579
Standard	NAS 907	
Tool material	HSS	
Surface	○	● >Ø 2,36
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	169	169



d1 mm	d1 inch	l1 mm	l2 mm	Availability	
3.860		154.00	55.00	○	
3.910		154.00	55.00	○	
3.970	5/32	154.00	55.00	●	●
3.990		154.00	55.00	○	○
4.000		154.00	55.00	●	●
4.040		154.00	55.00	●	●
4.090		154.00	55.00	●	●
4.220		154.00	55.00	●	○
4.370	11/64	154.00	60.00		○
4.390		154.00	60.00	●	○
4.500		154.00	60.00	●	○
4.570		154.00	60.00	○	○
4.620		154.00	60.00		○
4.700		154.00	60.00	●	○
4.760	3/16	154.00	63.50	●	●
4.800		154.00	63.50	●	●
4.850		154.00	63.50	○	○
4.920		154.00	63.50	●	○
4.980		154.00	63.50	○	○
5.000		154.00	63.50	●	●
5.160	13/64	154.00	63.50	●	○
5.410		154.00	68.50		○
5.500		154.00	68.50	●	●
5.560	7/32	154.00	68.50	●	●
5.800		154.00	68.50	●	○
5.940		154.00	68.50	○	○
5.950	15/64	154.00	68.50	○	○
6.040		154.00	75.00	○	○
6.150		154.00	75.00	○	○
6.200		154.00	75.00	○	○
6.250		154.00	75.00	○	○
6.350	1/4	154.00	75.00	●	●
6.400		154.00	75.00	○	
6.450		154.00	75.00		●
6.530		154.00	75.00	●	○
6.750	17/64	155.00	80.00		○
6.800		155.00	80.00	○	
7.000		155.00	80.00	●	
7.700		155.00	90.00	○	

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

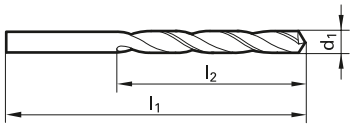
Guhring no.	577	579
Standard	NAS 907	
Tool material	HSS	
Surface	○	● >Ø 2,36
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	169	169



d1		l1	l2	Availability	
mm	inch	mm	mm		
7.940	5/16	155.00	90.00	○	●
8.000		155.00	90.00	○	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

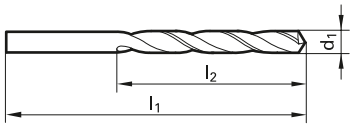
Guhring no.	578	580
Standard	NAS 907	
Tool material	HSS	
Surface	○	●○ >Ø 2,36
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	169	169



d1 mm	d1 inch	l1 mm	l2 mm	Availability 578	Availability 580
1.500		306.00	23.00	●	●
1.590	1/16	306.00	26.00	●	○
1.780		306.00	26.00	○	○
1.850		306.00	26.00	●	
1.930		306.00	29.00	●	
1.980	5/64	306.00	29.00		○
1.990		306.00	29.00	○	
2.000		306.00	29.00	●	●
2.180		306.00	32.50	●	
2.260		306.00	32.50	●	
2.380	3/32	306.00	37.00	●	●
2.440		306.00	37.00	●	
2.490		306.00	37.00	○	●
2.500		306.00	37.00	●	●
2.530		306.00	37.00		○
2.580		306.00	37.00	●	○
2.640		306.00	37.00	○	○
2.710		306.00	42.00		●
2.780	7/64	306.00	42.00		○
2.790		306.00	42.00	●	●
2.820		306.00	42.00	●	○
2.870		306.00	42.00		○
2.950		306.00	42.00		○
3.000		306.00	42.00	●	●
3.170	1/8	306.00	42.00	●	●
3.200		306.00	42.00	●	
3.260		306.00	42.00	●	○
3.450		308.00	49.00	○	○
3.500		308.00	49.00	●	●
3.570	9/64	308.00	49.00	○	
3.660		308.00	49.00	○	○
3.700		308.00	49.00	○	○
3.730		308.00	49.00		○
3.800		308.00	55.00	●	○
3.970	5/32	308.00	55.00	●	●
3.990		308.00	55.00		○
4.000		308.00	55.00	●	●
4.040		308.00	55.00	●	●
4.090		308.00	55.00	●	

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

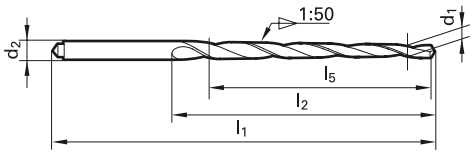
Guhring no.	578	580
Standard	NAS 907	
Tool material	HSS	
Surface	○	●/○ >Ø 2,36
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	169	169



d1 mm	d1 inch	l1 mm	l2 mm	Availability 578	Availability 580
4.220		308.00	55.00	●	
4.300		308.00	60.00		○
4.370	11/64	308.00	60.00	○	○
4.390		308.00	60.00	○	○
4.500		308.00	60.00	●	●
4.570		308.00	60.00	○	○
4.620		308.00	60.00	○	○
4.700		308.00	60.00	○	○
4.760	3/16	308.00	63.50	●	●
4.800		308.00	63.50	●	●
4.850		308.00	63.50	○	○
4.920		308.00	63.50	●	○
4.980		308.00	63.50	○	○
5.000		308.00	63.50	●	●
5.060		308.00	63.50		●
5.110		308.00	63.50		○
5.160	13/64	308.00	63.50	●	●
5.500		308.00	68.50	●	
5.560	7/32	308.00	68.50		○
5.790		308.00	68.50	○	○
5.800		308.00	68.50	●	
5.940		308.00	68.50		○
5.950	15/64	308.00	68.50	●	●
6.000		308.00	68.50	●	●
6.040		308.00	75.00	○	○
6.150		308.00	75.00	○	○
6.250		308.00	75.00	○	○
6.350	1/4	308.00	75.00	●	●
6.530		308.00	75.00	●	○
7.000		310.00	80.00	●	
7.940	5/16	310.00	90.00		●
8.000		310.00	90.00	●	○

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

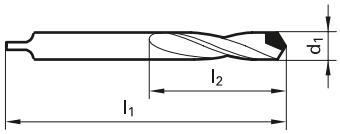
Guhring no.	531
Standard	DIN 1898
Tool material	HSS
Surface	>Ø 2,36
Type	N
Cutting direction	right-hand
Tolerance	
Discount group	138
Techn. data page	170



d1	d2	l1	l2	l5	Availability
mm	mm	mm	mm	mm	
1.000	1.600	50.00	29.00	26.00	●
2.000	3.150	86.00	52.00	48.00	●
2.500	3.150	86.00	52.00	48.00	●
3.000	4.000	100.00	63.00	58.00	●
3.500	5.000	112.00	74.00	68.00	●
4.000	5.000	112.00	74.00	68.00	●
4.500	6.300	122.00	81.00	73.00	●
5.000	6.300	122.00	81.00	73.00	●
5.500	8.000	160.00	114.00	105.00	○
6.000	8.000	160.00	114.00	105.00	●
8.000	10.000	207.00	157.00	145.00	●
10.000	12.500	245.00	190.00	175.00	●
12.000	16.000	290.00	228.00	210.00	●

○ bright ◯ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

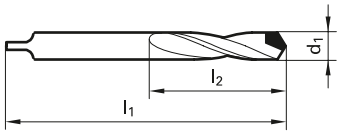
Guhring no.	703	704
Standard	DIN 8037	DIN 8038
Tool material	Carbide	
Surface	◯	◯
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	102	102
Techn. data page	170	170



d1 mm	l1 mm	l2 mm	Availability	
1.700	45.00	18.00	●	
1.900	45.00	18.00		●
2.200	45.00	18.00		●
2.600	50.00	20.00	●	
2.700	50.00	20.00	❍	
2.900	50.00	20.00	●	
3.000	50.00	20.00	●	
3.100	56.00	25.00	●	●
3.200	56.00	25.00	●	●
3.250	56.00	25.00	●	
3.300	56.00	25.00	●	
3.500	56.00	25.00	●	●
3.700	56.00	25.00	●	❍
3.800	56.00	25.00	●	
3.900	56.00	25.00	●	
4.000	56.00	25.00	●	
4.100	63.00	28.00	●	
4.200	63.00	28.00	●	●
4.300	63.00	28.00	●	
4.400	63.00	28.00	●	
4.500	63.00	28.00	●	●
4.800	63.00	28.00	●	
4.900	63.00	28.00	●	
5.000	63.00	28.00	●	●
5.100	71.00	32.00	●	
5.200	71.00	32.00	●	
5.300	71.00	32.00	●	
5.400	71.00	32.00	●	
5.500	71.00	32.00	●	●
5.800	71.00	32.00	●	
6.000	71.00	32.00	●	❍
6.200	71.00	32.00	●	
6.300	71.00	32.00	●	
6.350	71.00	32.00	●	
6.400	71.00	32.00	●	
6.500	71.00	32.00	●	
6.700	80.00	40.00	●	
6.800	80.00	40.00	●	
7.000	80.00	40.00	●	

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

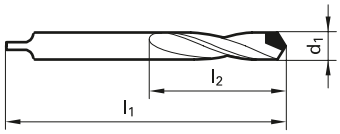
Guhring no.	703	704
Standard	DIN 8037	DIN 8038
Tool material	Carbide	
Surface	○	○
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	102	102
Techn. data page	170	170



d1	l1	l2	Availability	
mm	mm	mm		
7.100	80.00	40.00	●	
7.200	80.00	40.00	○	
7.500	80.00	40.00	●	
7.800	80.00	40.00	●	
8.000	80.00	40.00	●	●
8.200	90.00	50.00	●	
8.400	90.00	50.00	●	
8.500	90.00	50.00	●	
8.800	90.00	50.00	●	
9.000	90.00	50.00	●	
9.500	90.00	50.00	●	
9.700	100.00	56.00	●	
9.800	100.00	56.00	●	
10.000	100.00	56.00	●	
10.200	100.00	56.00	●	
10.400	100.00	56.00	●	
10.500	100.00	56.00	●	
11.000	100.00	56.00	●	
11.500	112.00	63.00	●	
12.000	112.00	63.00	●	
12.500	112.00	63.00	●	
12.700	112.00	63.00	●	
13.000	112.00	63.00	●	
13.500	125.00	71.00	●	
14.000	125.00	71.00	●	
14.500	125.00	71.00	●	
15.000	125.00	71.00	●	
15.500	140.00	80.00	●	
16.000	140.00	80.00	●	
16.500	140.00	80.00	●	●
17.000	140.00	80.00	●	
17.500	160.00	90.00	●	
18.000	160.00	90.00	●	
19.000	160.00	90.00	●	
19.500	160.00	90.00	●	
20.000	160.00	90.00	●	
21.000	160.00	90.00	●	
22.000	160.00	90.00	●	
23.500	170.00	100.00	●	

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

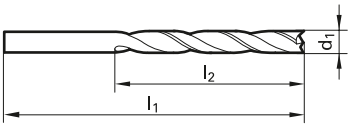
Guhring no.	703	704
Standard	DIN 8037	DIN 8038
Tool material	Carbide	
Surface	◯	◯
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	102	102
Techn. data page	170	170



d1	l1	l2	Availability	
mm	mm	mm		
24.000	170.00	100.00	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

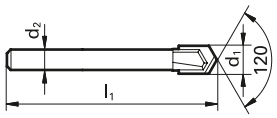
Guhring no.	1149
Standard	Guhring std.
Tool material	Solid carbide
Surface	○
Type	N
Cutting direction	right-hand
Tolerance	h8
Discount group	102
Techn. data page	170



d1		l1	l2	Availability
mm	inch	mm	mm	
2.500		43.00	14.00	●
3.200		49.00	18.00	○
3.570	9/64	52.00	20.00	●
4.000		55.00	22.00	●
4.760	3/16	62.00	26.00	○
5.000		62.00	26.00	●
6.000		66.00	28.00	●
8.000		79.00	37.00	●
10.000		89.00	43.00	●
12.000		102.00	51.00	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

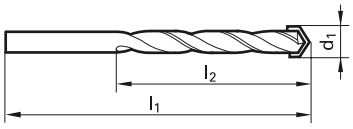
Guhring no.	707
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Tolerance	h8
Discount group	102
Techn. data page	170



d1 mm	d2 mm	l1 mm	Availability
3.000	2.500	50.00	❍
5.000	4.000	63.00	❍
5.500	5.000	70.00	❍
6.000	5.000	70.00	❍
7.000	6.000	80.00	●
8.000	6.000	80.00	●
9.000	7.000	90.00	❍
10.000	8.000	100.00	●
12.000	8.000	112.00	❍

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

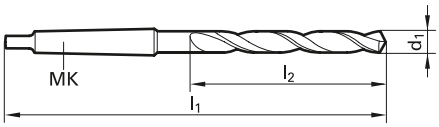
Guhring no.	716
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	N
Cutting direction	right-hand
Tolerance	
Discount group	102
Techn. data page	171



d1 mm	l1 mm	l2 mm	Availability
4.000	75.00	40.00	●
5.000	85.00	50.00	●
6.000	100.00	60.00	●
8.000	120.00	80.00	●
10.000	120.00	80.00	●
12.000	150.00	90.00	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

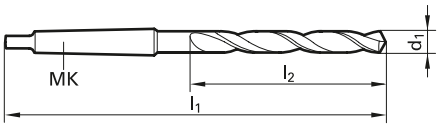
Guhring no.	363	663
Standard	Guhring std.	
Tool material	HSCO	
Surface	●	(S)
Type	GV 120	GV 120
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	134	139
Techn. data page	172	172



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability	
8.100		1	130.00	49.00	○	
8.200		1	130.00	49.00	○	
8.300		1	130.00	49.00	○	
8.500		1	130.00	49.00	●	
8.600		1	134.00	53.00	○	
8.730	11/32	1	134.00	53.00	○	
9.000		1	134.00	53.00	●	
9.520	3/8	1	138.00	57.00	○	
9.920	25/64	1	138.00	57.00	○	
10.000		1	138.00	57.00	●	
10.100		1	138.00	57.00	○	
10.200		1	138.00	57.00	●	
10.500		1	138.00	57.00	●	●
10.750		1	142.00	61.00		○
11.000		1	142.00	61.00	●	
11.500		1	142.00	61.00		○
11.510	29/64	1	142.00	61.00	○	
11.750		1	142.00	61.00	○	
12.000		1	147.00	66.00	●	
12.500		1	147.00	66.00	●	○
12.700	1/2	1	147.00	66.00	○	
13.000		1	147.00	66.00	●	
13.490	17/32	2	168.00	70.00	○	
13.500		2	168.00	70.00	●	○
14.000		2	168.00	70.00	●	●
14.250		2	172.00	74.00		○
14.290	9/16	2	172.00	74.00		○
14.500		2	172.00	74.00	●	
15.000		2	172.00	74.00	●	●
15.480		2	176.00	78.00		○
15.500		2	176.00	78.00	●	●
16.000		2	176.00	78.00	●	●
16.500		2	179.00	81.00	●	●
17.000		2	179.00	81.00	●	●
17.500		2	183.00	85.00	●	●
18.000		2	183.00	85.00	●	●
18.500		2	186.00	88.00	●	
19.000		2	186.00	88.00	●	○
19.450	49/64	3	212.00	91.00	○	

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

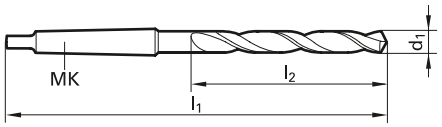
Guhring no.	363	663
Standard	Guhring std.	
Tool material	HSCO	
Surface	○	Ⓢ
Type	GV 120	GV 120
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	134	139
Techn. data page	172	172



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability	
20.000		3	212.00	91.00	●	●
20.500		3	216.00	95.00	●	
20.900		3	216.00	95.00	❍	
21.000		3	216.00	95.00	●	●
21.030	53/64	3	216.00	95.00	❍	
21.500		3	219.00	98.00	●	
22.000		3	219.00	98.00	●	●
22.220	7/8	3	219.00	98.00	●	
23.000		3	222.00	101.00	●	●
23.020	29/32	3	222.00	101.00	❍	
24.000		3	225.00	104.00	●	
24.500		3	225.00	104.00	●	
25.000	63/64	3	225.00	104.00	●	●
26.000		4	256.00	107.00	●	
26.500		4	256.00	107.00	●	
27.000		4	259.00	110.00	●	●
27.500		4	259.00	110.00	❍	
28.000		4	259.00	110.00	●	
29.000		4	263.00	114.00	●	❍
29.370	1 5/32	4	263.00	114.00	❍	
30.000		4	263.00	114.00	●	❍
31.000		4	266.00	117.00		●
32.000		4	269.00	120.00	●	
32.500		4	269.00	120.00	❍	
33.000		4	269.00	120.00	●	❍
37.000		4	276.00	127.00	●	
38.000		5	317.00	130.00	❍	
43.000		5	323.00	136.00	❍	

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	229	245	246	247	248	558	592
Standard	DIN 345						
Tool material	HSS						
Surface		>Ø 2,36				>Ø 16,0	>Ø 16,0
Type	N	N	H	W	N	GT 100	N
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	138	138	138	138	138
Techn. data page	172	172	172	173	173	173	173



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
2.380	3/32	1	111.00	30.00	○
2.400		1	111.00	30.00	○
2.450		1	111.00	30.00	○
2.500		1	111.00	30.00	●
2.650		1	111.00	30.00	○
2.750		1	114.00	33.00	●
2.780	7/64	1	114.00	33.00	○
2.900		1	114.00	33.00	○
3.000		1	114.00	33.00	●
3.050		1	117.00	36.00	○
3.170	1/8	1	117.00	36.00	●
3.200		1	117.00	36.00	● ○
3.250		1	117.00	36.00	●
3.300		1	117.00	36.00	● ○
3.450		1	120.00	39.00	○
3.500		1	120.00	39.00	●
3.570	9/64	1	120.00	39.00	○
3.600		1	120.00	39.00	○
3.700		1	120.00	39.00	○
3.800		1	124.00	43.00	○
3.970	5/32	1	124.00	43.00	○
4.000		1	124.00	43.00	● ○
4.200		1	124.00	43.00	●
4.250		1	124.00	43.00	●
4.300		1	128.00	47.00	○
4.370	11/64	1	128.00	47.00	○
4.400		1	128.00	47.00	○
4.500		1	128.00	47.00	●
4.600		1	128.00	47.00	○
4.700		1	128.00	47.00	○
4.750		1	128.00	47.00	●
4.760	3/16	1	133.00	52.00	●
4.800		1	133.00	52.00	●
4.900		1	133.00	52.00	○
5.000		1	133.00	52.00	● ○
5.100		1	133.00	52.00	●
5.160	13/64	1	133.00	52.00	●
5.200		1	133.00	52.00	●
5.300		1	133.00	52.00	●

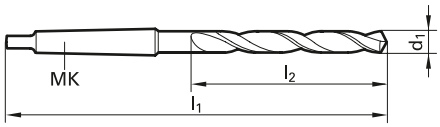
(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no.	229	245	246	247	248	558	592
Standard	DIN 345						
Tool material	HSS						
Surface	●	◒ >Ø 2,36	○	○	●	◒ >Ø 16,0	◒ >Ø 16,0
Type	N	N	H	W	N	GT 100	N
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	138	138	138	138	138
Techn. data page	172	172	172	173	173	173	173

d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability						
5.400		1	138.00	57.00	○		○				
5.500		1	138.00	57.00	●		○				
5.560	7/32	1	138.00	57.00	○						
5.600		1	138.00	57.00	●						
5.700		1	138.00	57.00	●						
5.750		1	138.00	57.00	●						
5.800		1	138.00	57.00	●						
5.900		1	138.00	57.00	●						
5.950	15/64	1	138.00	57.00	○						
6.000		1	138.00	57.00	●		○	○			
6.050		1	144.00	63.00	○						
6.100		1	144.00	63.00	●						
6.200		1	144.00	63.00	●						
6.300		1	144.00	63.00	●		○				
6.350	1/4	1	144.00	63.00	○						
6.400		1	144.00	63.00	●						
6.500		1	144.00	63.00	●		○	○			
6.600		1	144.00	63.00	●		○				
6.700		1	144.00	63.00	●	○					
6.750	17/64	1	150.00	69.00	●		○				
6.800		1	150.00	69.00	●		○				
6.900		1	150.00	69.00	○						
7.000		1	150.00	69.00	●		○				
7.140	9/32	1	150.00	69.00	○						
7.200		1	150.00	69.00	●						
7.250		1	150.00	69.00	●						
7.300		1	150.00	69.00	●						
7.400		1	150.00	69.00	●						
7.500		1	150.00	69.00	●		○				
7.540	19/64	1	156.00	75.00	○						
7.700		1	156.00	75.00	●		○				
7.750		1	156.00	75.00	●		○				
7.800		1	156.00	75.00	●		○				
7.900		1	156.00	75.00	●						
7.940	5/16	1	156.00	75.00	○				○		
8.000		1	156.00	75.00	●		○	○	●		
8.050		1	156.00	75.00	●						
8.100		1	156.00	75.00	●			○			
8.200		1	156.00	75.00	●	○					

○ bright ◒ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

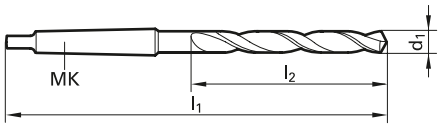
Guhring no.	229	245	246	247	248	558	592
Standard	DIN 345						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	●	● >Ø 16,0	● >Ø 16,0
Type	N	N	H	W	N	GT 100	N
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	138	138	138	138	138
Techn. data page	172	172	172	173	173	173	173



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
8.250		1	156.00	75.00	● ○
8.300		1	156.00	75.00	●
8.330	21/64	1	156.00	75.00	●
8.400		1	156.00	75.00	● ○
8.500		1	156.00	75.00	● ● ● ○
8.600		1	162.00	81.00	●
8.700		1	162.00	81.00	●
8.730	11/32	1	162.00	81.00	○ ●
8.750		1	162.00	81.00	●
8.800		1	162.00	81.00	●
8.900		1	162.00	81.00	●
9.000		1	162.00	81.00	● ● ○
9.050		1	162.00	81.00	○
9.100		1	162.00	81.00	●
9.130	23/64	1	162.00	81.00	●
9.200		1	162.00	81.00	● ○
9.250		1	162.00	81.00	●
9.300		1	162.00	81.00	●
9.400		1	162.00	81.00	○
9.500		1	162.00	81.00	● ● ○ ●
9.520	3/8	1	168.00	87.00	○ ○
9.700		1	168.00	87.00	●
9.750		1	168.00	87.00	● ○ ○
9.800		1	168.00	87.00	● ○
9.900		1	168.00	87.00	●
9.920	25/64	1	168.00	87.00	○
10.000		1	168.00	87.00	○ ● ● ○
10.100		1	168.00	87.00	●
10.150		1	168.00	87.00	○
10.200		1	168.00	87.00	● ○
10.250		1	168.00	87.00	● ○
10.300		1	168.00	87.00	●
10.320	13/32	1	168.00	87.00	● ○
10.400		1	168.00	87.00	●
10.500		1	168.00	87.00	● ○
10.520		1	168.00	87.00	○
10.600		1	168.00	87.00	●
10.700		1	175.00	94.00	●
10.720	27/64	1	175.00	94.00	○

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

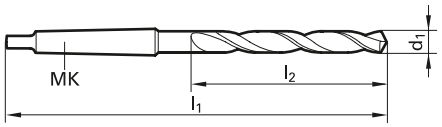
Guhring no.	229	245	246	247	248	558	592
Standard	DIN 345						
Tool material	HSS						
Surface	●	◒ >Ø 2,36	○	○	●	◒ >Ø 16,0	◒ >Ø 16,0
Type	N	N	H	W	N	GT 100	N
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	138	138	138	138	138
Techn. data page	172	172	172	173	173	173	173



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
10.750		1	175.00	94.00	●
10.800		1	175.00	94.00	●
10.900		1	175.00	94.00	●
11.000		1	175.00	94.00	● ● ○ ○ ○ ○
11.100		1	175.00	94.00	●
11.110	7/16	1	175.00	94.00	○ ○ ●
11.200		1	175.00	94.00	●
11.250		1	175.00	94.00	●
11.300		1	175.00	94.00	●
11.400		1	175.00	94.00	●
11.500		1	175.00	94.00	● ○ ○
11.600		1	175.00	94.00	●
11.700		1	175.00	94.00	●
11.750		1	175.00	94.00	● ○
11.800		1	175.00	94.00	●
11.900		1	182.00	101.00	●
11.910	15/32	1	182.00	101.00	○ ● ○
12.000		1	182.00	101.00	● ○ ● ○
12.100		1	182.00	101.00	●
12.200		1	182.00	101.00	●
12.250		1	182.00	101.00	○ ●
12.300	31/64	1	182.00	101.00	●
12.500		1	182.00	101.00	● ● ○
12.550		1	182.00	101.00	○
12.600		1	182.00	101.00	● ○
12.700	1/2	1	182.00	101.00	● ○ ○
12.750		1	182.00	101.00	● ○
12.800		1	182.00	101.00	● ○
12.850		1	182.00	101.00	○
12.900		1	182.00	101.00	●
13.000		1	182.00	101.00	● ● ● ○ ○ ○
13.100	33/64	1	182.00	101.00	●
13.200		1	182.00	101.00	● ○
13.250		1	189.00	108.00	○ ● ○
13.300		1	189.00	108.00	●
13.490	17/32	1	189.00	108.00	○ ● ○
13.500		1	189.00	108.00	● ○
13.600		1	189.00	108.00	●
13.700		1	189.00	108.00	●

○ bright ◒ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

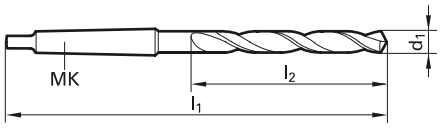
Guhring no.	229	245	246	247	248	558	592
Standard	DIN 345						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	●	● >Ø 16,0	● >Ø 16,0
Type	N	N	H	W	N	GT 100	N
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	138	138	138	138	138
Techn. data page	172	172	172	173	173	173	173



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
13.750		1	189.00	108.00	● ○
13.800		1	189.00	108.00	●
13.890	35/64	1	189.00	108.00	●
14.000		1	189.00	108.00	● ● ○ ● ○ ● ○
14.050		2	212.00	114.00	●
14.100		2	212.00	114.00	●
14.200		2	212.00	114.00	●
14.250		2	212.00	114.00	○ ● ○
14.290	9/16	2	212.00	114.00	○ ● ○ ○
14.300		2	212.00	114.00	●
14.400		2	212.00	114.00	●
14.500		2	212.00	114.00	● ● ○ ○
14.600		2	212.00	114.00	●
14.700		2	212.00	114.00	●
14.750		2	212.00	114.00	●
14.800		2	212.00	114.00	●
14.900		2	212.00	114.00	●
15.000		2	212.00	114.00	● ● ○ ○
15.080	19/32	2	218.00	120.00	○ ● ○
15.100		2	218.00	120.00	●
15.200		2	218.00	120.00	●
15.250		2	218.00	120.00	● ○
15.300		2	218.00	120.00	●
15.400		2	218.00	120.00	●
15.500		2	218.00	120.00	● ● ○
15.600		2	218.00	120.00	●
15.700		2	218.00	120.00	●
15.750		2	218.00	120.00	●
15.800		2	218.00	120.00	●
15.870	5/8	2	218.00	120.00	● ○
15.900		2	218.00	120.00	●
16.000		2	218.00	120.00	● ● ○ ●
16.100		2	223.00	125.00	●
16.200		2	223.00	125.00	●
16.250		2	223.00	125.00	●
16.270	41/64	2	223.00	125.00	●
16.300		2	223.00	125.00	●
16.400		2	223.00	125.00	●
16.500		2	223.00	125.00	● ○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

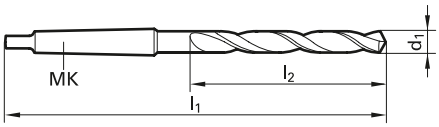
Guhring no.	229	245	246	247	248	558	592
Standard	DIN 345						
Tool material	HSS						
Surface	●	◓ >Ø 2,36	○	○	●	◓ >Ø 16,0	◓ >Ø 16,0
Type	N	N	H	W	N	GT 100	N
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	138	138	138	138	138
Techn. data page	172	172	172	173	173	173	173



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
16.670	21/32	2	223.00	125.00	●
16.700		2	223.00	125.00	●
16.750		2	223.00	125.00	●
16.800		2	223.00	125.00	●
17.000		2	223.00	125.00	● ● ○ ● ◓
17.070	43/64	2	228.00	130.00	●
17.100		2	228.00	130.00	●
17.200		2	228.00	130.00	◓
17.250		2	228.00	130.00	●
17.300		2	228.00	130.00	●
17.400		2	228.00	130.00	●
17.460		2	228.00	130.00	◓ ●
17.500		2	228.00	130.00	● ●
17.600		2	228.00	130.00	●
17.700		2	228.00	130.00	●
17.750		2	228.00	130.00	●
17.800		2	228.00	130.00	●
17.860	45/64	2	228.00	130.00	●
17.900		2	228.00	130.00	●
18.000		2	228.00	130.00	● ● ● ◓ ● ◓
18.100		2	233.00	135.00	●
18.200		2	233.00	135.00	●
18.250		2	233.00	135.00	◓ ●
18.260	23/32	2	233.00	135.00	●
18.300		2	233.00	135.00	●
18.500		2	233.00	135.00	● ◓
18.650	47/64	2	233.00	135.00	●
18.700		2	233.00	135.00	◓
18.750		2	233.00	135.00	●
18.800		2	233.00	135.00	●
18.900		2	233.00	135.00	●
19.000		2	233.00	135.00	● ● ●
19.050	3/4	2	238.00	140.00	◓ ● ◓
19.100		2	238.00	140.00	●
19.200		2	238.00	140.00	●
19.250		2	238.00	140.00	●
19.450	49/64	2	238.00	140.00	●
19.500		2	238.00	140.00	◓ ● ●
19.700		2	238.00	140.00	●

○ bright ◓ steam tempered ◒ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

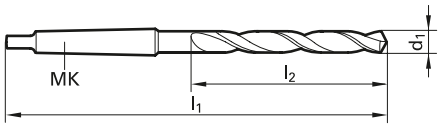
Guhring no.	229	245	246	247	248	558	592
Standard	DIN 345						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	●	● >Ø 16,0	● >Ø 16,0
Type	N	N	H	W	N	GT 100	N
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	138	138	138	138	138
Techn. data page	172	172	172	173	173	173	173



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
19.750		2	238.00	140.00	●
19.800		2	238.00	140.00	●
19.840	25/32	2	238.00	140.00	○ ● ○
20.000		2	238.00	140.00	● ● ● ○ ○ ○
20.100		2	243.00	145.00	●
20.200		2	243.00	145.00	●
20.250		2	243.00	145.00	●
20.300		2	243.00	145.00	●
20.400		2	243.00	145.00	●
20.500		2	243.00	145.00	● ● ○ ●
20.600		2	243.00	145.00	○
20.640	13/16	2	243.00	145.00	○ ● ○
20.750		2	243.00	145.00	●
21.000		2	243.00	145.00	● ● ○ ● ●
21.100		2	243.00	145.00	●
21.200		2	243.00	145.00	○
21.250		2	248.00	150.00	● ○
21.430	27/32	2	248.00	150.00	● ○
21.500		2	248.00	150.00	●
21.750		2	248.00	150.00	●
21.830	55/64	2	248.00	150.00	●
22.000		2	248.00	150.00	● ● ○ ● ○
22.100		2	248.00	150.00	●
22.200		2	248.00	150.00	●
22.220	7/8	2	248.00	150.00	○ ●
22.250		2	248.00	150.00	● ○
22.400		2	248.00	150.00	●
22.500		2	253.00	155.00	○ ● ○
22.620	57/64	2	253.00	155.00	●
22.750		2	253.00	155.00	●
23.000		2	253.00	155.00	● ○ ● ○ ○
23.020	29/32	2	253.00	155.00	●
23.250		3	276.00	155.00	●
23.300		3	276.00	155.00	○
23.420	59/64	3	276.00	155.00	●
23.500		3	276.00	155.00	● ○
23.750		3	281.00	160.00	●
23.810	15/16	3	281.00	160.00	○ ●
23.900		3	281.00	160.00	○

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

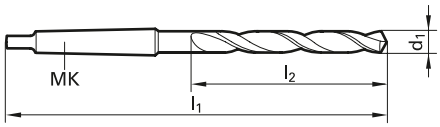
Guhring no.	229	245	246	247	248	558	592
Standard	DIN 345						
Tool material	HSS						
Surface	●	◓ >Ø 2,36	○	○	●	◓ >Ø 16,0	◓ >Ø 16,0
Type	N	N	H	W	N	GT 100	N
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	138	138	138	138	138
Techn. data page	172	172	172	173	173	173	173



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
24.000		3	281.00	160.00	○ ● ●
24.100		3	281.00	160.00	●
24.210	61/64	3	281.00	160.00	●
24.250		3	281.00	160.00	●
24.300		3	281.00	160.00	○
24.500		3	281.00	160.00	●
24.610	31/32	3	281.00	160.00	●
24.750		3	281.00	160.00	●
25.000	63/64	3	281.00	160.00	● ● ○
25.100		3	286.00	165.00	●
25.200		3	286.00	165.00	●
25.250		3	286.00	165.00	● ○
25.400	1	3	286.00	165.00	○ ●
25.500		3	286.00	165.00	● ○
25.750		3	286.00	165.00	●
25.800	1 1/64	3	286.00	165.00	●
26.000		3	286.00	165.00	● ●
26.190	1 1/32	3	286.00	165.00	○ ●
26.250		3	286.00	165.00	●
26.500		3	286.00	165.00	○ ●
26.590	1 3/64	3	291.00	170.00	●
26.750		3	291.00	170.00	●
26.990	1 1/16	3	291.00	170.00	●
27.000		3	291.00	170.00	● ○
27.200		3	291.00	170.00	○
27.250		3	291.00	170.00	○
27.500		3	291.00	170.00	○ ● ○ ○
27.750		3	291.00	170.00	●
27.780	1 3/32	3	291.00	170.00	○
28.000		3	291.00	170.00	● ● ○ ○
28.250		3	296.00	175.00	●
28.500		3	296.00	175.00	● ○ ○
28.570	1 1/8	3	296.00	175.00	● ○
28.750		3	296.00	175.00	●
29.000		3	296.00	175.00	● ○
29.250		3	296.00	175.00	●
29.370	1 5/32	3	296.00	175.00	○
29.500		3	296.00	175.00	● ○
29.750		3	296.00	175.00	●

○ bright ◓ steam tempered ◒ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

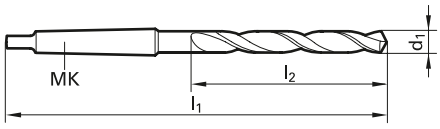
Guhring no.	229	245	246	247	248	558	592
Standard	DIN 345						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	●	● >Ø 16,0	● >Ø 16,0
Type	N	N	H	W	N	GT 100	N
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	138	138	138	138	138
Techn. data page	172	172	172	173	173	173	173



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
30.000		3	296.00	175.00	● ●
30.100		3	301.00	180.00	●
30.160	1 3/16	3	301.00	180.00	● ❍
30.250		3	301.00	180.00	● ❍
30.300		3	301.00	180.00	❍
30.500		3	301.00	180.00	● ❍ ❍ ❍
30.560	1 13/64	3	301.00	180.00	●
30.750		3	301.00	180.00	●
31.000		3	301.00	180.00	● ❍
31.250		3	301.00	180.00	●
31.500		3	301.00	180.00	❍ ● ❍ ❍
31.750	1 1/4	3	306.00	185.00	● ❍
32.000		4	334.00	185.00	● ❍
32.150	1 17/64	4	334.00	185.00	●
32.250		4	334.00	185.00	●
32.500		4	334.00	185.00	● ❍
32.540	1 9/32	4	334.00	185.00	❍
32.750		4	334.00	185.00	●
33.000		4	334.00	185.00	● ❍
33.340	1 5/16	4	334.00	185.00	●
33.500		4	334.00	185.00	●
33.730	1 21/64	4	339.00	190.00	❍
34.000		4	339.00	190.00	● ❍
34.500		4	339.00	190.00	●
34.750		4	339.00	190.00	●
34.920	1 3/8	4	339.00	190.00	●
35.000		4	339.00	190.00	● ●
35.500		4	339.00	190.00	●
36.000		4	344.00	195.00	● ❍
36.500		4	344.00	195.00	●
36.750		4	344.00	195.00	❍
37.000		4	344.00	195.00	●
37.310	1 15/32	4	344.00	195.00	●
37.500		4	344.00	195.00	●
37.700	1 31/64	4	349.00	200.00	❍
38.000		4	349.00	200.00	● ❍
38.100	1 1/2	4	349.00	200.00	●
38.500	1 33/64	4	349.00	200.00	●
39.000		4	349.00	200.00	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

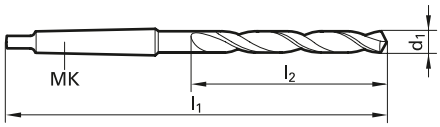
Guhring no.	229	245	246	247	248	558	592
Standard	DIN 345						
Tool material	HSS						
Surface	●	◒ >Ø 2,36	○	○	●	◒ >Ø 16,0	◒ >Ø 16,0
Type	N	N	H	W	N	GT 100	N
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	138	138	138	138	138
Techn. data page	172	172	172	173	173	173	173



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
39.500		4	349.00	200.00	○ ●
39.690	1 9/16	4	349.00	200.00	●
40.000		4	349.00	200.00	● ○
40.500		4	354.00	205.00	●
40.750		4	354.00	205.00	○
40.800		4	354.00	205.00	○
40.880	1 39/64	4	354.00	205.00	○
41.000		4	354.00	205.00	●
41.270	1 5/8	4	354.00	205.00	●
41.500		4	354.00	205.00	●
42.000		4	354.00	205.00	●
42.500		4	354.00	205.00	○ ●
43.000		4	359.00	210.00	●
43.500		4	359.00	210.00	○ ●
44.000		4	359.00	210.00	●
44.450	1 3/4	4	359.00	210.00	●
44.500		4	359.00	210.00	●
45.000		4	359.00	210.00	●
45.240	1 25/32	4	364.00	215.00	○
45.500		4	364.00	215.00	●
46.000		4	364.00	215.00	● ●
46.040	1 13/16	4	364.00	215.00	○
46.430	1 53/64	4	364.00	215.00	○
46.500		4	364.00	215.00	○ ●
46.830	1 27/32	4	364.00	215.00	○
47.000		4	364.00	215.00	● ○
47.230	1 55/64	4	364.00	215.00	○
47.500		4	364.00	215.00	○ ●
47.620	1 7/8	4	369.00	220.00	●
48.000		4	369.00	220.00	●
48.020	1 57/64	4	369.00	220.00	○
48.500		4	369.00	220.00	●
48.820	1 59/64	4	369.00	220.00	●
49.000		4	369.00	220.00	●
49.500		4	369.00	220.00	●
49.610	1 61/64	4	369.00	220.00	●
50.000		4	369.00	220.00	●
50.500		4	374.00	225.00	●
50.800	2	4	374.00	225.00	●

○ bright ◒ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

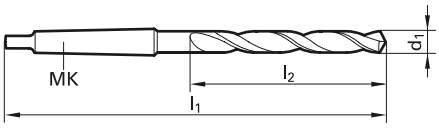
Guhring no.	229	245	246	247	248	558	592
Standard	DIN 345						
Tool material	HSS						
Surface	●	● >Ø 2,36	○	○	●	● >Ø 16,0	● >Ø 16,0
Type	N	N	H	W	N	GT 100	N
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	138	138	138	138	138
Techn. data page	172	172	172	173	173	173	173



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
51.000		5	412.00	225.00	●
52.000		5	412.00	225.00	●
53.000		5	412.00	225.00	●
53.390		5	417.00	230.00	○
53.400		5	417.00	230.00	○
54.000		5	417.00	230.00	●
55.000		5	417.00	230.00	●
55.500		5	417.00	230.00	○
55.560	2 3/16	5	417.00	230.00	○
56.000		5	417.00	230.00	○ ●
57.000		5	422.00	235.00	○ ●
58.000		5	422.00	235.00	○ ●
59.000		5	422.00	235.00	● ●
60.000		5	422.00	235.00	● ○
61.000		5	427.00	240.00	●
62.000		5	427.00	240.00	●
63.000		5	427.00	240.00	●
63.500	2 1/2	5	432.00	245.00	●
65.000		5	432.00	245.00	●
66.670	2 5/8	5	432.00	245.00	●
67.500		5	437.00	250.00	○
68.000		5	437.00	250.00	●
69.850	2 3/4	5	437.00	250.00	○
70.000		5	437.00	250.00	●
71.500		5	442.00	255.00	○
72.000		5	442.00	255.00	●
75.000		5	442.00	255.00	●
76.990	3 1/32	6	514.00	260.00	○
77.000		6	514.00	260.00	●
77.790	3 1/16	6	514.00	260.00	○
78.580	3 3/32	6	514.00	260.00	○
79.000		6	514.00	260.00	○
79.500		6	514.00	260.00	●
87.310	3 7/16	6	524.00	270.00	○
89.000		6	524.00	270.00	●
89.500		6	524.00	270.00	○
91.000		6	529.00	275.00	○
91.500		6	529.00	275.00	○
92.500		6	529.00	275.00	○

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

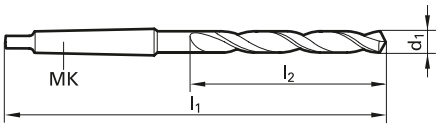
Guhring no.	229	245	246	247	248	558	592
Standard	DIN 345						
Tool material	HSS						
Surface		>Ø 2,36				>Ø 16,0	>Ø 16,0
Type	N	N	H	W	N	GT 100	N
Cutting direction	right-hand	right-hand	right-hand	right-hand	left-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	138	132	138	138	138	138	138
Techn. data page	172	172	172	173	173	173	173



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
93.000		6	529.00	275.00	❍
94.000		6	529.00	275.00	❍
94.500		6	529.00	275.00	❍
95.250	3 3/4	6	534.00	280.00	❍
95.500		6	534.00	280.00	❍
96.000		6	534.00	280.00	❍
98.420	3 7/8	6	534.00	280.00	❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

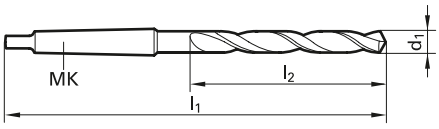
Guhring no.	606	654	345	645	661	662	1222
Standard	DIN 345						
Tool material	HSS		HSCO				
Surface	(S)	(S)	○	>Ø 16,0	(S)	(S)	(C)
Type	GT 100	N	N	GT 100	N	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	139	133	134	138	139	139	139
Techn. data page	173	174	174	174	174	174	175



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
3.000		1	114.00	33.00	○ ○
3.170	1/8	1	117.00	36.00	○
3.500		1	120.00	39.00	○
3.570	9/64	1	120.00	39.00	○
3.970	5/32	1	124.00	43.00	○
4.000		1	124.00	43.00	● ●
4.100		1	124.00	43.00	○
4.250		1	124.00	43.00	○
4.370	11/64	1	128.00	47.00	○
4.500		1	128.00	47.00	○
4.760	3/16	1	133.00	52.00	○
5.000		1	133.00	52.00	● ●
5.160	13/64	1	133.00	52.00	○
5.200		1	133.00	52.00	○
5.500		1	138.00	57.00	●
5.560	7/32	1	138.00	57.00	○
6.000		1	138.00	57.00	● ●
6.200		1	144.00	63.00	○
6.400		1	144.00	63.00	● ○
6.500		1	144.00	63.00	● ●
6.700		1	144.00	63.00	●
6.750	17/64	1	150.00	69.00	○ ○
6.800		1	150.00	69.00	● ●
7.000		1	150.00	69.00	● ●
7.100		1	150.00	69.00	○ ○
7.140	9/32	1	150.00	69.00	○
7.250		1	150.00	69.00	○
7.400		1	150.00	69.00	○
7.500		1	150.00	69.00	●
7.540	19/64	1	156.00	75.00	○
7.700		1	156.00	75.00	○
7.750		1	156.00	75.00	○
7.900		1	156.00	75.00	○
7.940	5/16	1	156.00	75.00	○ ○
8.000		1	156.00	75.00	● ● ●
8.200		1	156.00	75.00	● ●
8.500		1	156.00	75.00	● ● ●
8.700		1	162.00	81.00	● ●
8.730	11/32	1	162.00	81.00	○

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

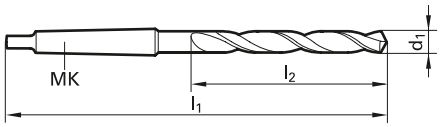
Guhring no.	606	654	345	645	661	662	1222
Standard	DIN 345						
Tool material	HSS		HSCO				
Surface	(S)	(S)	◯	◯ >Ø 16,0	(S)	(S)	(C)
Type	GT 100	N	N	GT 100	N	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	139	133	134	138	139	139	139
Techn. data page	173	174	174	174	174	174	175



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
8.750		1	162.00	81.00	○
8.800		1	162.00	81.00	○ ●
9.000		1	162.00	81.00	● ● ● ●
9.130	23/64	1	162.00	81.00	○
9.200		1	162.00	81.00	●
9.400		1	162.00	81.00	○ ○
9.500		1	162.00	81.00	● ●
9.520	3/8	1	168.00	87.00	○ ● ● ○
9.600		1	168.00	87.00	○
9.750		1	168.00	87.00	○ ○ ○
9.800		1	168.00	87.00	○
10.000		1	168.00	87.00	○ ● ● ● ● ○ ○
10.100		1	168.00	87.00	○ ●
10.150		1	168.00	87.00	○
10.200		1	168.00	87.00	● ● ● ● ● ○
10.250		1	168.00	87.00	● ●
10.300		1	168.00	87.00	●
10.320	13/32	1	168.00	87.00	○ ○
10.400		1	168.00	87.00	● ○
10.500		1	168.00	87.00	○ ● ● ●
10.700		1	175.00	94.00	○
10.720	27/64	1	175.00	94.00	● ○ ○
10.750		1	175.00	94.00	○ ●
10.800		1	175.00	94.00	● ● ●
11.000		1	175.00	94.00	● ● ● ● ○
11.110	7/16	1	175.00	94.00	○ ● ○ ○
11.200		1	175.00	94.00	○ ●
11.250		1	175.00	94.00	● ○
11.400		1	175.00	94.00	○ ○
11.500		1	175.00	94.00	○ ● ● ●
11.510	29/64	1	175.00	94.00	● ○
11.600		1	175.00	94.00	● ○
11.700		1	175.00	94.00	○
11.750		1	175.00	94.00	● ●
11.800		1	175.00	94.00	●
11.900		1	182.00	101.00	●
11.910	15/32	1	182.00	101.00	○
12.000		1	182.00	101.00	● ● ● ●
12.100		1	182.00	101.00	●

○ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

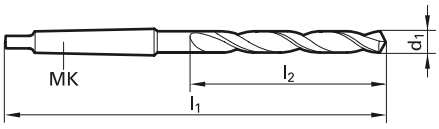
Guhring no.	606	654	345	645	661	662	1222
Standard	DIN 345						
Tool material	HSS		HSCO				
Surface	(S)	(S)	●	>Ø 16,0	(S)	(S)	(C)
Type	GT 100	N	N	GT 100	N	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	139	133	134	138	139	139	139
Techn. data page	173	174	174	174	174	174	175



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
12.150		1	182.00	101.00	○
12.200		1	182.00	101.00	● ● ○
12.250		1	182.00	101.00	○ ●
12.300	31/64	1	182.00	101.00	○ ○ ○
12.400		1	182.00	101.00	●
12.500		1	182.00	101.00	○ ● ● ● ● ○ ○
12.700	1/2	1	182.00	101.00	● ● ○ ○
12.750		1	182.00	101.00	○ ● ○
12.800		1	182.00	101.00	○
13.000		1	182.00	101.00	● ● ● ● ●
13.100	33/64	1	182.00	101.00	○ ○
13.250		1	189.00	108.00	○ ●
13.300		1	189.00	108.00	○ ○
13.490	17/32	1	189.00	108.00	● ●
13.500		1	189.00	108.00	● ● ● ●
13.700		1	189.00	108.00	○
13.750		1	189.00	108.00	●
13.890	35/64	1	189.00	108.00	○
13.900		1	189.00	108.00	●
14.000		1	189.00	108.00	○ ● ● ● ● ●
14.100		2	212.00	114.00	●
14.200		2	212.00	114.00	● ● ○
14.250		2	212.00	114.00	● ● ●
14.290	9/16	2	212.00	114.00	● ○ ○
14.500		2	212.00	114.00	○ ● ● ● ●
14.680	37/64	2	212.00	114.00	○
14.750		2	212.00	114.00	● ●
14.900		2	212.00	114.00	○
15.000		2	212.00	114.00	○ ● ● ● ● ●
15.080	19/32	2	218.00	120.00	●
15.200		2	218.00	120.00	○
15.250		2	218.00	120.00	● ● ●
15.500		2	218.00	120.00	● ● ● ●
15.750		2	218.00	120.00	● ● ● ●
15.870	5/8	2	218.00	120.00	○ ● ● ○
16.000		2	218.00	120.00	● ● ● ● ●
16.100		2	223.00	125.00	●
16.200		2	223.00	125.00	●
16.250		2	223.00	125.00	● ●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

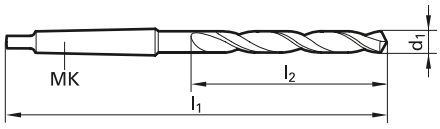
Guhring no.	606	654	345	645	661	662	1222
Standard	DIN 345						
Tool material	HSS		HSCO				
Surface	(S)	(S)	●	◓ >Ø 16,0	(S)	(S)	(C)
Type	GT 100	N	N	GT 100	N	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	139	133	134	138	139	139	139
Techn. data page	173	174	174	174	174	174	175



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
16.270	41/64	2	223.00	125.00	●
16.500		2	223.00	125.00	● ● ● ○
16.670	21/32	2	223.00	125.00	○ ● ○ ○
16.750		2	223.00	125.00	●
17.000		2	223.00	125.00	● ● ● ●
17.070	43/64	2	228.00	130.00	○ ○
17.250		2	228.00	130.00	● ● ○
17.460		2	228.00	130.00	○ ● ○ ○ ○ ○
17.500		2	228.00	130.00	● ● ● ● ● ●
17.750		2	228.00	130.00	● ●
17.860	45/64	2	228.00	130.00	○ ○
18.000		2	228.00	130.00	● ● ● ●
18.200		2	233.00	135.00	●
18.250		2	233.00	135.00	● ● ○
18.260	23/32	2	233.00	135.00	● ●
18.500		2	233.00	135.00	● ● ●
18.650	47/64	2	233.00	135.00	○ ● ○
18.750		2	233.00	135.00	●
19.000		2	233.00	135.00	○ ● ● ● ●
19.050	3/4	2	238.00	140.00	● ● ○
19.250		2	238.00	140.00	○ ●
19.450	49/64	2	238.00	140.00	●
19.500		2	238.00	140.00	● ● ● ○
19.750		2	238.00	140.00	● ●
19.840	25/32	2	238.00	140.00	● ●
20.000		2	238.00	140.00	○ ● ● ● ● ●
20.250		2	243.00	145.00	● ● ○
20.500		2	243.00	145.00	○ ● ● ● ○ ●
20.640	13/16	2	243.00	145.00	○ ●
20.750		2	243.00	145.00	● ●
21.000		2	243.00	145.00	● ● ● ● ●
21.250		2	248.00	150.00	● ●
21.500		2	248.00	150.00	● ● ● ○
21.750		2	248.00	150.00	○
21.830	55/64	2	248.00	150.00	○
22.000		2	248.00	150.00	● ● ● ● ●
22.220	7/8	2	248.00	150.00	● ● ○
22.250		2	248.00	150.00	●
22.500		2	253.00	155.00	● ●

○ bright ◓ steam tempered ◒ nitrided lands ● nitrided ◉ golden brown (A) TiAlN (a) TiAlN nanoA (A) TiAlN SuperA

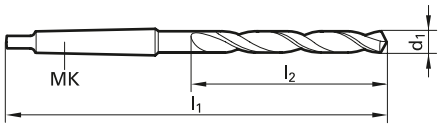
Guhring no.	606	654	345	645	661	662	1222
Standard	DIN 345						
Tool material	HSS		HSCO				
Surface	S	S		>Ø 16,0	S	S	C
Type	GT 100	N	N	GT 100	N	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	139	133	134	138	139	139	139
Techn. data page	173	174	174	174	174	174	175



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
22.620	57/64	2	253.00	155.00	○ ○
23.000		2	253.00	155.00	● ● ● ○ ○
23.020	29/32	2	253.00	155.00	●
23.500		3	276.00	155.00	○ ● ● ○ ○
23.750		3	281.00	160.00	●
23.810	15/16	3	281.00	160.00	○ ● ○ ○ ○
24.000		3	281.00	160.00	● ● ●
24.210	61/64	3	281.00	160.00	○ ○
24.500		3	281.00	160.00	● ●
24.610	31/32	3	281.00	160.00	○
24.750		3	281.00	160.00	●
25.000	63/64	3	281.00	160.00	● ● ● ●
25.250		3	286.00	165.00	●
25.400	1	3	286.00	165.00	○ ○ ● ○ ○ ○
25.500		3	286.00	165.00	● ● ○
26.000		3	286.00	165.00	● ● ● ●
26.500		3	286.00	165.00	● ● ● ●
26.990	1 1/16	3	291.00	170.00	○ ○ ○ ○ ○
27.000		3	291.00	170.00	● ● ○
27.380	1 5/64	3	291.00	170.00	○
27.500		3	291.00	170.00	● ○
27.780	1 3/32	3	291.00	170.00	○
28.000		3	291.00	170.00	● ●
28.500		3	296.00	175.00	○ ○ ● ○
28.570	1 1/8	3	296.00	175.00	○ ○ ● ○
29.000		3	296.00	175.00	○ ● ● ○
29.370	1 5/32	3	296.00	175.00	○
29.500		3	296.00	175.00	○ ● ● ○ ○
29.750		3	296.00	175.00	○
30.000		3	296.00	175.00	● ● ● ●
30.160	1 3/16	3	301.00	180.00	○
30.500		3	301.00	180.00	● ●
31.000		3	301.00	180.00	○ ● ●
31.500		3	301.00	180.00	○ ● ○
31.750	1 1/4	3	306.00	185.00	●
32.000		4	334.00	185.00	●
32.500		4	334.00	185.00	●
33.000		4	334.00	185.00	● ○
34.000		4	339.00	190.00	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

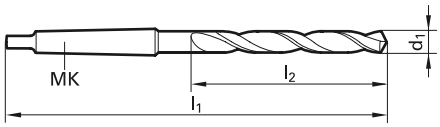
Guhring no.	606	654	345	645	661	662	1222
Standard	DIN 345						
Tool material	HSS		HSCO				
Surface	S	S		>Ø 16,0	S	S	C
Type	GT 100	N	N	GT 100	N	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	139	133	134	138	139	139	139
Techn. data page	173	174	174	174	174	174	175



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability	
35.000		4	339.00	190.00	●	●
36.000		4	344.00	195.00	●	
37.000		4	344.00	195.00	●	●
38.000		4	349.00	200.00	●	○
39.000		4	349.00	200.00	●	○
40.000		4	349.00	200.00	●	
42.000		4	354.00	205.00	●	
42.070	1 21/32	4	354.00	205.00	○	
42.860	1 11/16	4	359.00	210.00	●	
43.000		4	359.00	210.00	●	
45.000		4	359.00	210.00	●	
50.000		4	369.00	220.00	●	

○ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

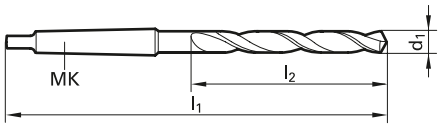
Guhring no.	1224	1262
Standard	DIN 345	
Tool material	HSCO	
Surface	A	○
Type	GT 100	VA
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	139	134
Techn. data page	175	175



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
10.000		1	168.00	87.00	●
10.200		1	168.00	87.00	●
10.400		1	168.00	87.00	○
10.500		1	168.00	87.00	●
10.800		1	175.00	94.00	●
11.000		1	175.00	94.00	●
11.110	7/16	1	175.00	94.00	○
11.200		1	175.00	94.00	○
11.800		1	175.00	94.00	○
12.000		1	182.00	101.00	●
12.300	31/64	1	182.00	101.00	○
12.500		1	182.00	101.00	●
12.700	1/2	1	182.00	101.00	○
13.000		1	182.00	101.00	●
13.490	17/32	1	189.00	108.00	○
13.500		1	189.00	108.00	●
13.750		1	189.00	108.00	●
13.800		1	189.00	108.00	●
14.000		1	189.00	108.00	●
14.200		2	212.00	114.00	○
14.250		2	212.00	114.00	●
14.290	9/16	2	212.00	114.00	○
14.500		2	212.00	114.00	●
14.750		2	212.00	114.00	●
15.000		2	212.00	114.00	●
15.250		2	218.00	120.00	●
15.480	39/64	2	218.00	120.00	○
15.500		2	218.00	120.00	●
15.870	5/8	2	218.00	120.00	○
16.000		2	218.00	120.00	●
16.250		2	223.00	125.00	○
16.500		2	223.00	125.00	●
17.000		2	223.00	125.00	●
17.460		2	228.00	130.00	○
17.500		2	228.00	130.00	●
17.860	45/64	2	228.00	130.00	○
18.000		2	228.00	130.00	●
18.500		2	233.00	135.00	●
19.000		2	233.00	135.00	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

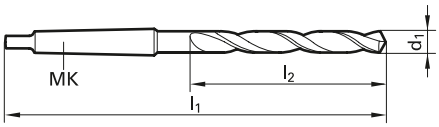
Guhring no.	1224	1262
Standard	DIN 345	
Tool material	HSCO	
Surface	A	○
Type	GT 100	VA
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	139	134
Techn. data page	175	175



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
19.500		2	238.00	140.00	● ●
20.000		2	238.00	140.00	●
20.500		2	243.00	145.00	●
21.000		2	243.00	145.00	●
21.500		2	248.00	150.00	●
21.750		2	248.00	150.00	○
22.000		2	248.00	150.00	●
22.500		2	253.00	155.00	●
23.000		2	253.00	155.00	●
23.420	59/64	3	276.00	155.00	○
23.810	15/16	3	281.00	160.00	○
24.000		3	281.00	160.00	●
24.500		3	281.00	160.00	●
25.000	63/64	3	281.00	160.00	●
25.500		3	286.00	165.00	○ ○
26.000		3	286.00	165.00	●
26.500		3	286.00	165.00	●
26.990	1 1/16	3	291.00	170.00	○
27.000		3	291.00	170.00	○ ●
27.500		3	291.00	170.00	○
28.000		3	291.00	170.00	○ ●
28.500		3	296.00	175.00	○ ●
29.000		3	296.00	175.00	● ●
29.500		3	296.00	175.00	○
30.000		3	296.00	175.00	●
30.160	1 3/16	3	301.00	180.00	○
31.500		3	301.00	180.00	○
31.750	1 1/4	3	306.00	185.00	○
32.000		4	334.00	185.00	●
34.000		4	339.00	190.00	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

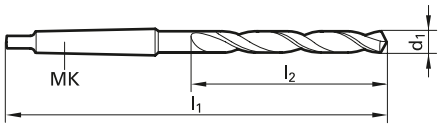
Guhring no.	251	351
Standard	DIN 346	
Tool material	HSS	HSCO
Surface	○	○
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	175	175



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability	
10.000		2	185.00	87.00	●	
10.500		2	185.00	87.00	●	
11.910	15/32	2	199.00	101.00	○	
12.000		2	199.00	101.00	●	●
12.250		2	199.00	101.00	○	
12.500		2	199.00	101.00	●	
12.700	1/2	2	199.00	101.00	○	
12.750		2	199.00	101.00		○
13.000		2	199.00	101.00	●	●
13.100	33/64	2	199.00	101.00	○	
13.250		2	206.00	108.00	○	○
13.490	17/32	2	206.00	108.00	○	
13.500		2	206.00	108.00	●	
13.890	35/64	2	206.00	108.00	○	
14.000		2	206.00	108.00	●	●
16.000		3	241.00	120.00	○	
16.700		3	246.00	125.00	○	
17.000		3	246.00	125.00	○	
17.250		3	251.00	130.00	○	
17.500		3	251.00	130.00		○
18.250		3	256.00	135.00	○	
18.260	23/32	3	256.00	135.00	○	
18.500		3	256.00	135.00		●
18.650	47/64	3	256.00	135.00	○	
18.750		3	256.00	135.00	○	
19.000		3	256.00	135.00	●	
19.050	3/4	3	261.00	140.00	○	
19.450	49/64	3	261.00	140.00	○	
19.840	25/32	3	261.00	140.00	○	
20.000		3	261.00	140.00	●	●
20.250		3	266.00	145.00	○	
20.640	13/16	3	266.00	145.00	●	
21.000		3	266.00	145.00	●	○
21.030	53/64	3	266.00	145.00	○	
21.430	27/32	3	271.00	150.00	○	
21.500		3	271.00	150.00	○	○
21.830		3	271.00	150.00	○	
22.000		3	271.00	150.00	●	
22.220	7/8	3	271.00	150.00	○	

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

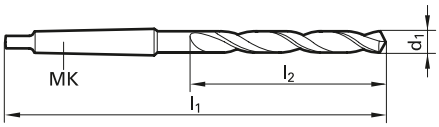
Guhring no.	251	351
Standard	DIN 346	
Tool material	HSS	HSCO
Surface	○	○
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	175	175



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
22.500		3	276.00	155.00	○
22.750		3	276.00	155.00	○
23.000		3	276.00	155.00	● ○
23.020	29/32	3	276.00	155.00	○
27.500		4	319.00	170.00	○
27.750		4	319.00	170.00	○
27.780	1 3/32	4	319.00	170.00	○
28.000		4	319.00	170.00	●
28.180	1 7/64	4	324.00	175.00	○
28.500		4	324.00	175.00	○
28.570	1 1/8	4	324.00	175.00	○
28.970	1 9/64	4	324.00	175.00	○
29.000		4	324.00	175.00	○
29.770	1 11/64	4	324.00	175.00	○
30.000		4	324.00	175.00	○
30.960	1 7/32	4	329.00	180.00	○
31.000		4	329.00	180.00	○
31.500		4	329.00	180.00	○ ○
32.000		5	372.00	185.00	○
35.000		5	377.00	190.00	○
36.000		5	382.00	195.00	○
40.080	1 37/64	5	392.00	205.00	●
41.000		5	392.00	205.00	○
41.500		5	392.00	205.00	○
42.000		5	392.00	205.00	○
42.070	1 21/32	5	392.00	205.00	○
44.050	1 47/64	5	397.00	210.00	○
45.000		5	397.00	210.00	○
46.000		5	402.00	215.00	○
46.040	1 13/16	5	402.00	215.00	○
47.000		5	402.00	215.00	○
49.000		5	407.00	220.00	○
49.500		5	407.00	220.00	○
73.000		6	509.00	255.00	○
76.000		6	514.00	260.00	○

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

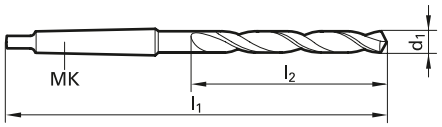
Guhring no.	257	505	551	655	656	357	623
Standard	DIN 341						
Tool material	HSS					HSCO	
Surface			>Ø 16,0	S	S		>Ø 16,0
Type	N	GT50	GT 100	N	GT 100	N	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	136	133	139	138	138
Techn. data page	176	176	176	176	176	177	177



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
2.900		1	132.00	51.00	○
3.900		1	145.00	64.00	○
4.000		1	145.00	64.00	●
4.100		1	145.00	64.00	●
4.200		1	145.00	64.00	● ○
4.500		1	150.00	69.00	●
4.700		1	150.00	69.00	○
4.750		1	150.00	69.00	●
5.000		1	155.00	74.00	● ● ●
5.100		1	155.00	74.00	●
5.200		1	155.00	74.00	●
5.250		1	155.00	74.00	○
5.400		1	161.00	80.00	○
5.500		1	161.00	80.00	○ ○ ○ ○
5.550		1	161.00	80.00	○
5.600		1	161.00	80.00	○
5.800		1	161.00	80.00	● ○
6.000		1	161.00	80.00	● ● ○ ● ●
6.100		1	167.00	86.00	○
6.300		1	167.00	86.00	○
6.350	1/4	1	167.00	86.00	○
6.500		1	167.00	86.00	● ○ ● ○
6.700		1	167.00	86.00	● ○
6.750	17/64	1	174.00	93.00	● ○
6.800		1	174.00	93.00	● ● ○ ○ ●
7.000		1	174.00	93.00	● ○ ● ● ● ●
7.100		1	174.00	93.00	○
7.200		1	174.00	93.00	● ○
7.300		1	174.00	93.00	○ ○ ○
7.400		1	174.00	93.00	○
7.500		1	174.00	93.00	● ○ ○ ●
7.540		1	181.00	100.00	○
7.600		1	181.00	100.00	●
7.700		1	181.00	100.00	○
7.800		1	181.00	100.00	●
7.940	5/16	1	181.00	100.00	○
7.950		1	181.00	100.00	○
8.000		1	181.00	100.00	● ● ● ● ●
8.050		1	181.00	100.00	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

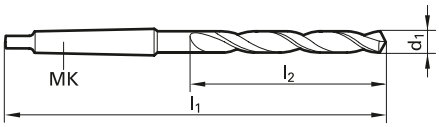
Guhring no.	257	505	551	655	656	357	623
Standard	DIN 341						
Tool material	HSS					HSCO	
Surface	●	○	◒ >Ø 16,0	Ⓢ	Ⓢ	●	◒ >Ø 16,0
Type	N	GT50	GT 100	N	GT 100	N	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	136	133	139	138	138
Techn. data page	176	176	176	176	176	177	177



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
8.100		1	181.00	100.00	●
8.200		1	181.00	100.00	● ● ● ○ ○
8.250		1	181.00	100.00	○
8.300		1	181.00	100.00	○ ○
8.330	21/64	1	181.00	100.00	●
8.400		1	181.00	100.00	○ ● ○
8.500		1	181.00	100.00	● ○ ● ● ●
8.600		1	188.00	107.00	● ● ○ ○
8.700		1	188.00	107.00	○ ● ○
8.750		1	188.00	107.00	● ○ ○
8.800		1	188.00	107.00	● ○ ●
8.900		1	188.00	107.00	○
9.000		1	188.00	107.00	● ● ● ●
9.050		1	188.00	107.00	○
9.100		1	188.00	107.00	○
9.300		1	188.00	107.00	● ○
9.400		1	188.00	107.00	○
9.500		1	188.00	107.00	● ○ ● ● ○ ●
9.520	3/8	1	197.00	116.00	○
9.600		1	197.00	116.00	● ○ ○
9.700		1	197.00	116.00	●
9.750		1	197.00	116.00	●
9.800		1	197.00	116.00	● ○ ● ●
9.900		1	197.00	116.00	○ ○
9.920	25/64	1	197.00	116.00	● ○
10.000		1	197.00	116.00	● ● ● ● ● ● ●
10.050		1	197.00	116.00	○ ○
10.100		1	197.00	116.00	● ○
10.200		1	197.00	116.00	● ○ ● ● ○ ● ●
10.250		1	197.00	116.00	● ○ ○ ○
10.300		1	197.00	116.00	●
10.320	13/32	1	197.00	116.00	○ ○ ●
10.400		1	197.00	116.00	● ●
10.500		1	197.00	116.00	● ● ● ● ○ ● ●
10.600		1	197.00	116.00	○
10.700		1	206.00	125.00	○
10.720	27/64	1	206.00	125.00	○
10.750		1	206.00	125.00	● ○ ○
10.800		1	206.00	125.00	● ○ ●

○ bright ◒ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

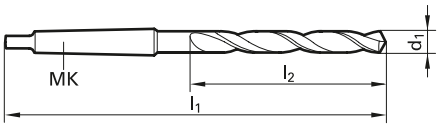
Guhring no.	257	505	551	655	656	357	623
Standard	DIN 341						
Tool material	HSS					HSCO	
Surface	●	○	● >Ø 16,0	(S)	(S)	●	● >Ø 16,0
Type	N	GT50	GT 100	N	GT 100	N	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	136	133	139	138	138
Techn. data page	176	176	176	176	176	177	177



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
10.900		1	206.00	125.00	●
11.000		1	206.00	125.00	● ● ● ● ● ●
11.100		1	206.00	125.00	○
11.110	7/16	1	206.00	125.00	● ○ ○
11.200		1	206.00	125.00	○ ○ ●
11.250		1	206.00	125.00	○ ○
11.300		1	206.00	125.00	●
11.400		1	206.00	125.00	● ○
11.500		1	206.00	125.00	● ○ ● ● ● ● ●
11.510	29/64	1	206.00	125.00	○ ○
11.750		1	206.00	125.00	● ○ ○
11.800		1	206.00	125.00	● ○ ● ●
12.000		1	215.00	134.00	● ○ ● ● ● ● ●
12.050		1	215.00	134.00	○
12.100		1	215.00	134.00	●
12.200		1	215.00	134.00	● ○ ○
12.250		1	215.00	134.00	● ○ ●
12.300	31/64	1	215.00	134.00	● ○
12.400		1	215.00	134.00	● ●
12.500		1	215.00	134.00	● ○ ● ● ○ ● ●
12.600		1	215.00	134.00	●
12.700	1/2	1	215.00	134.00	○ ○ ○
12.750		1	215.00	134.00	●
12.800		1	215.00	134.00	● ○ ● ○
13.000		1	215.00	134.00	● ● ● ● ● ● ●
13.100	33/64	1	215.00	134.00	● ○
13.200		1	215.00	134.00	● ○ ○ ●
13.250		1	223.00	142.00	○ ○
13.490	17/32	1	223.00	142.00	○ ○ ●
13.500		1	223.00	142.00	● ● ○ ● ●
13.750		1	223.00	142.00	● ○ ○
13.800		1	223.00	142.00	○ ● ○
13.890	35/64	1	223.00	142.00	○ ○
13.900		1	223.00	142.00	●
14.000		1	223.00	142.00	● ● ● ● ● ● ●
14.100		2	245.00	147.00	●
14.200		2	245.00	147.00	○ ○ ●
14.250		2	245.00	147.00	● ○ ● ○
14.290	9/16	2	245.00	147.00	○ ● ●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

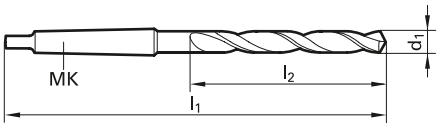
Guhring no.	257	505	551	655	656	357	623
Standard	DIN 341						
Tool material	HSS					HSCO	
Surface	●	○	◒ >Ø 16,0	Ⓢ	Ⓢ	●	◒ >Ø 16,0
Type	N	GT50	GT 100	N	GT 100	N	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	136	133	139	138	138
Techn. data page	176	176	176	176	176	177	177



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
14.300		2	245.00	147.00	○ ○
14.400		2	245.00	147.00	○ ○
14.500		2	245.00	147.00	● ○ ● ● ● ● ●
14.680	37/64	2	245.00	147.00	●
14.750		2	245.00	147.00	● ○ ● ○ ●
14.800		2	245.00	147.00	○
14.900		2	245.00	147.00	●
15.000		2	245.00	147.00	● ● ● ● ● ● ●
15.080	19/32	2	251.00	153.00	○
15.200		2	251.00	153.00	●
15.250		2	251.00	153.00	● ● ●
15.480	39/64	2	251.00	153.00	○ ○
15.500		2	251.00	153.00	● ● ●
15.600		2	251.00	153.00	○
15.750		2	251.00	153.00	● ○ ●
15.870	5/8	2	251.00	153.00	○
16.000		2	251.00	153.00	● ○ ● ○ ● ●
16.100		2	257.00	159.00	●
16.200		2	257.00	159.00	●
16.250		2	257.00	159.00	●
16.400		2	257.00	159.00	○
16.500		2	257.00	159.00	● ○ ● ○ ●
16.670	21/32	2	257.00	159.00	● ○ ●
16.750		2	257.00	159.00	● ○
16.800		2	257.00	159.00	○ ○
17.000		2	257.00	159.00	● ● ● ●
17.070	43/64	2	263.00	165.00	○ ○
17.250		2	263.00	165.00	●
17.460	11/16	2	263.00	165.00	● ○ ○ ○
17.500		2	263.00	165.00	● ○ ● ● ● ● ●
17.750		2	263.00	165.00	● ○
18.000		2	263.00	165.00	● ● ● ● ●
18.250		2	269.00	171.00	●
18.500		2	269.00	171.00	● ● ●
18.650	47/64	2	269.00	171.00	○
18.750		2	269.00	171.00	●
19.000		2	269.00	171.00	● ● ●
19.050	3/4	2	275.00	177.00	○ ○
19.250		2	275.00	177.00	○

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

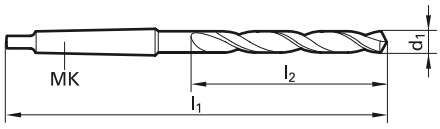
Guhring no.	257	505	551	655	656	357	623
Standard	DIN 341						
Tool material	HSS					HSCO	
Surface	●	○	● >Ø 16,0	Ⓢ	Ⓢ	●	● >Ø 16,0
Type	N	GT50	GT 100	N	GT 100	N	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	136	133	139	138	138
Techn. data page	176	176	176	176	176	177	177



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
19.450	49/64	2	275.00	177.00	○
19.500		2	275.00	177.00	● ● ○ ●
19.750		2	275.00	177.00	●
19.840	25/32	2	275.00	177.00	● ●
20.000		2	275.00	177.00	● ● ● ●
20.250		2	282.00	184.00	●
20.500		2	282.00	184.00	● ○ ●
20.640	13/16	2	282.00	184.00	● ○ ○
21.000		2	282.00	184.00	● ● ● ● ● ●
21.100		2	282.00	184.00	○
21.500		2	289.00	191.00	● ● ○ ○
21.750		2	289.00	191.00	●
21.830	55/64	2	289.00	191.00	○
22.000		2	289.00	191.00	● ● ● ●
22.220	7/8	2	289.00	191.00	●
22.250		2	289.00	191.00	●
22.300		2	289.00	191.00	○
22.500		2	296.00	198.00	● ●
23.000		2	296.00	198.00	● ● ○ ●
23.020	29/32	2	296.00	198.00	○
23.500		3	319.00	198.00	● ○ ○ ○
23.750		3	327.00	206.00	○
23.810	15/16	3	327.00	206.00	●
24.000		3	327.00	206.00	● ○ ● ● ●
24.250		3	327.00	206.00	●
24.500		3	327.00	206.00	●
24.600		3	327.00	206.00	○
24.610		3	327.00	206.00	○
25.000	63/64	3	327.00	206.00	● ● ● ●
25.250		3	335.00	214.00	○ ○
25.500		3	335.00	214.00	●
26.000		3	335.00	214.00	● ● ● ●
26.500		3	335.00	214.00	● ○
26.590	1 3/64	3	343.00	222.00	○ ●
26.750		3	343.00	222.00	●
26.990	1 1/16	3	343.00	222.00	○
27.000		3	343.00	222.00	● ●
27.250		3	343.00	222.00	○
27.380	1 5/64	3	343.00	222.00	○

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

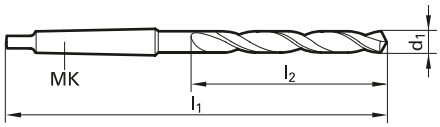
Guhring no.	257	505	551	655	656	357	623
Standard	DIN 341						
Tool material	HSS					HSCO	
Surface	●	○	◒ >Ø 16,0	Ⓢ	Ⓢ	●	◒ >Ø 16,0
Type	N	GT50	GT 100	N	GT 100	N	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	136	133	139	138	138
Techn. data page	176	176	176	176	176	177	177



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
27.500		3	343.00	222.00	●
28.000		3	343.00	222.00	● ○ ●
28.500		3	351.00	230.00	●
28.570	1 1/8	3	351.00	230.00	○
28.900		3	351.00	230.00	○
28.970	1 9/64	3	351.00	230.00	○
29.000		3	351.00	230.00	● ○ ○
29.250		3	351.00	230.00	○
29.370	1 5/32	3	351.00	230.00	○
29.500		3	351.00	230.00	● ○ ○
30.000		3	351.00	230.00	● ● ●
30.500		3	360.00	239.00	● ○
30.560	1 13/64	3	360.00	239.00	○
30.960	1 7/32	3	360.00	239.00	○
31.000		3	360.00	239.00	● ○
31.500		3	360.00	239.00	●
32.000		4	397.00	248.00	● ●
33.000		4	397.00	248.00	● ●
33.500		4	397.00	248.00	●
34.000		4	406.00	257.00	●
35.000		4	406.00	257.00	●
36.000		4	416.00	267.00	●
36.120	1 27/64	4	416.00	267.00	○
36.910	1 29/64	4	416.00	267.00	○
37.000		4	416.00	267.00	●
37.500		4	416.00	267.00	●
38.000		4	426.00	277.00	●
39.000		4	426.00	277.00	●
39.500		4	426.00	277.00	●
40.000		4	426.00	277.00	● ●
40.080	1 37/64	4	436.00	287.00	○
40.880	1 39/64	4	436.00	287.00	○
41.000		4	436.00	287.00	●
41.670	1 41/64	4	436.00	287.00	○
42.000		4	436.00	287.00	●
43.000		4	447.00	298.00	●
43.660	1 23/32	4	447.00	298.00	○
44.000		4	447.00	298.00	● ○
45.000		4	447.00	298.00	●

○ bright ◒ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

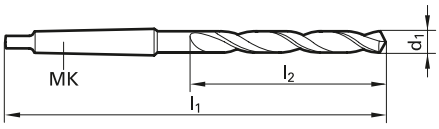
Guhring no.	257	505	551	655	656	357	623
Standard	DIN 341						
Tool material	HSS					HSCO	
Surface			>Ø 16,0	S	S		>Ø 16,0
Type	N	GT50	GT 100	N	GT 100	N	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8	h8
Discount group	132	138	136	133	139	138	138
Techn. data page	176	176	176	176	176	177	177



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
46.830	1 27/32	4	459.00	310.00	●
48.000		4	470.00	321.00	●
49.000		4	470.00	321.00	●
50.000		4	470.00	321.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

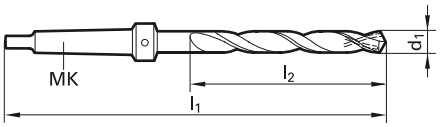
Guhring no.	523
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Tolerance	h8
Discount group	138
Techn. data page	177



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
10.000		2	214.00	116.00	❍
11.000		2	223.00	125.00	❍
12.300	31/64	2	232.00	134.00	❍
12.500		2	232.00	134.00	●
13.000		2	232.00	134.00	❍
14.000		2	240.00	142.00	●
21.000		3	305.00	184.00	❍
22.000		3	312.00	191.00	❍
23.000		3	319.00	198.00	❍
29.000		4	379.00	230.00	❍

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

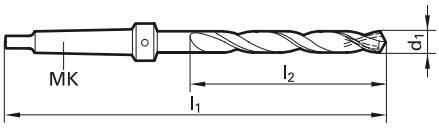
Guhring no.	269
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Tolerance	h8
Discount group	138
Techn. data page	177



d1		MK	l1	l2	Availability
mm	inch		mm	mm	
9.520	3/8	1	197.00	101.00	○
9.920	25/64	1	197.00	101.00	○
10.000		1	197.00	101.00	○
10.320	13/32	1	197.00	101.00	○
10.500		1	197.00	101.00	○
11.000		1	206.00	110.00	○
11.110	7/16	1	206.00	110.00	○
11.500		1	206.00	110.00	○
12.500		1	215.00	119.00	○
12.700	1/2	1	215.00	119.00	○
12.800		1	215.00	119.00	○
13.000		1	215.00	119.00	○
13.200		1	215.00	119.00	○
13.490	17/32	1	223.00	127.00	○
13.500		1	223.00	127.00	○
13.800		1	223.00	127.00	○
14.000		1	223.00	127.00	○
14.250		2	245.00	133.00	○
14.290	9/16	2	245.00	133.00	○
14.500		2	245.00	133.00	○
15.000		2	245.00	133.00	○
15.080	19/32	2	251.00	139.00	○
15.150		2	251.00	139.00	○
15.180		2	251.00	139.00	○
15.250		2	251.00	139.00	○
15.870	5/8	2	251.00	139.00	○
16.000		2	251.00	139.00	○
16.500		2	257.00	145.00	○
16.670	21/32	2	257.00	145.00	○
16.750		2	257.00	145.00	○
17.000		2	257.00	145.00	○
17.100		2	263.00	151.00	○
17.460	11/16	2	263.00	151.00	○
17.500		2	263.00	151.00	○
17.750		2	263.00	151.00	○
18.000		2	263.00	151.00	○
18.260	23/32	2	269.00	157.00	○
18.500		2	269.00	157.00	○
19.000		2	269.00	157.00	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

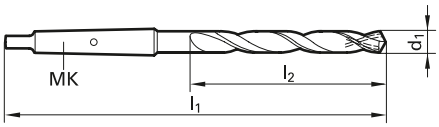
Guhring no.	269
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Tolerance	h8
Discount group	138
Techn. data page	177



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
19.050	3/4	2	275.00	163.00	○
19.200		2	275.00	163.00	○
19.250		2	275.00	163.00	○
19.500		2	275.00	163.00	○
19.750		2	275.00	163.00	○
19.840	25/32	2	275.00	163.00	○
20.250		2	282.00	170.00	○
20.640	13/16	2	282.00	170.00	○
20.750		2	282.00	170.00	○
21.000		2	282.00	170.00	○
21.430	27/32	2	289.00	177.00	○
21.500		2	289.00	177.00	○
22.220	7/8	2	289.00	177.00	○
23.020	29/32	2	296.00	184.00	○

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

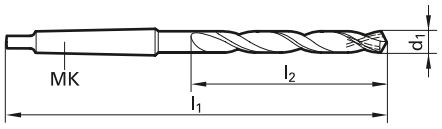
Guhring no.	1101
Standard	Guhring std.
Tool material	HSS
Surface	●
Type	N
Cutting direction	right-hand
Tolerance	h8
Discount group	138
Techn. data page	177



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
10.000		2	223.00	116.00	●
10.500		2	223.00	116.00	○
11.000		2	232.00	125.00	●
11.500		2	232.00	125.00	○
12.000		2	241.00	134.00	●
12.500		2	241.00	134.00	●
13.000		2	241.00	134.00	●
13.500		2	249.00	142.00	●
13.800		2	249.00	142.00	○
14.000		2	249.00	142.00	●
14.750		2	254.00	147.00	○
15.000		2	254.00	147.00	●
15.250		2	260.00	153.00	●
16.000		2	260.00	153.00	●
16.250		2	266.00	159.00	○
17.000		2	266.00	159.00	●
17.500		2	272.00	165.00	●
18.000		2	272.00	165.00	●
19.000		2	278.00	171.00	●
20.000		2	284.00	177.00	●
21.000		2	291.00	184.00	●
22.000		2	298.00	191.00	●
24.000		3	332.00	206.00	●
25.000	63/64	3	332.00	206.00	●
26.000		3	340.00	214.00	●
28.000		3	348.00	222.00	●
29.000		3	356.00	230.00	●
30.000		3	356.00	230.00	●
32.000		4	409.00	248.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

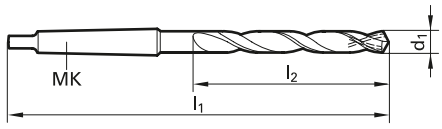
Guhring no.	270	271	272	370	371	372
Standard	Guhring std.					
Tool material	HSS			HSCO		
Surface	●	●	●	●	●	●
Type	N	N	N	GT 100	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	138	138	138	138	138	138
Techn. data page	178	178	178	178	178	179



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
10.000		2	233.00	116.00	● ○ ○
10.500		2	233.00	116.00	○
10.720	27/64	2	242.00	125.00	○
11.000		2	242.00	125.00	● ○ ○ ● ○
11.110	7/16	2	242.00	125.00	○
11.500		2	242.00	125.00	○
11.510	29/64	2	242.00	125.00	○
11.910	15/32	2	251.00	134.00	○
12.000		2	251.00	134.00	● ●
12.300	31/64	2	251.00	134.00	○ ○
12.500		2	251.00	134.00	○ ○ ○ ○
12.700	1/2	2	251.00	134.00	○ ○
12.800		2	251.00	134.00	○
13.000		2	251.00	134.00	● ○ ● ○
13.200		2	251.00	134.00	○ ○
13.490		2	259.00	142.00	○ ○
13.500		2	259.00	142.00	● ○ ● ● ○
13.800		2	259.00	142.00	○
14.000		2	259.00	142.00	● ○ ● ○ ●
14.250		2	264.00	147.00	○
14.290	9/16	2	264.00	147.00	○ ○ ○ ○
14.500		2	264.00	147.00	○ ○ ○
14.750		2	264.00	147.00	○
15.000		2	264.00	147.00	● ○ ● ○
15.080	19/32	2	270.00	153.00	○ ○
15.500		2	270.00	153.00	● ○ ○
15.870	5/8	2	270.00	153.00	○
16.000		2	270.00	153.00	● ○ ● ○ ○
16.250		2	276.00	159.00	●
16.500		2	276.00	159.00	● ○ ○ ○
16.670	21/32	2	276.00	159.00	○ ○
17.000		2	276.00	159.00	● ○ ○ ● ○ ○
17.250		2	282.00	165.00	○
17.460	11/16	2	282.00	165.00	○ ○
17.500		2	282.00	165.00	● ○ ● ○
18.000		2	282.00	165.00	● ○ ●
18.250		3	307.00	171.00	○
18.260	23/32	3	307.00	171.00	○
18.500		3	307.00	171.00	● ○ ○ ● ○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

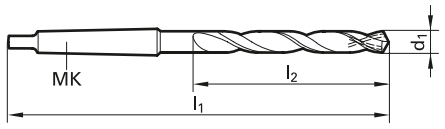
Guhring no.	270	271	272	370	371	372
Standard	Guhring std.					
Tool material	HSS			HSCO		
Surface	○	○	○	○	○	○
Type	N	N	N	GT 100	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	138	138	138	138	138	138
Techn. data page	178	178	178	178	178	179



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
19.000		3	307.00	171.00	● ●
19.050	3/4	3	313.00	177.00	○
19.500		3	313.00	177.00	● ○ ○
19.840	25/32	3	313.00	177.00	○ ○
20.000		3	313.00	177.00	● ○ ○ ●
20.250		3	320.00	184.00	○
20.500		3	320.00	184.00	● ○
20.640	13/16	3	320.00	184.00	○ ○ ○
21.000		3	320.00	184.00	● ● ○
21.500		3	327.00	191.00	● ○ ○
22.000		3	327.00	191.00	● ○ ●
22.220	7/8	3	327.00	191.00	○
22.500		3	334.00	198.00	○ ○ ○
23.000		3	334.00	198.00	● ○
23.020	29/32	3	334.00	198.00	○ ○
23.750		3	342.00	206.00	○
23.810	15/16	3	342.00	206.00	○ ○ ○
24.000		3	342.00	206.00	● ● ●
24.250		3	342.00	206.00	○
24.610	31/32	3	342.00	206.00	○ ○
25.000	63/64	3	342.00	206.00	●
25.400	1	3	350.00	214.00	● ○
26.000		3	350.00	214.00	● ○ ○
26.500		3	350.00	214.00	●
26.990	1 1/16	4	385.00	222.00	○ ● ○
27.000		4	385.00	222.00	● ○
27.780	1 3/32	4	385.00	222.00	○
28.000		4	385.00	222.00	●
28.250		4	393.00	230.00	○
28.570	1 1/8	4	393.00	230.00	○ ○
28.750		4	393.00	230.00	○
29.000		4	393.00	230.00	● ○ ○
29.370	1 5/32	4	393.00	230.00	○
29.500		4	393.00	230.00	○ ○ ○ ○
30.000		4	393.00	230.00	● ○ ○ ○ ○
30.160		4	402.00	239.00	○
30.500		4	402.00	239.00	○
30.960	1 7/32	4	402.00	239.00	○ ○
31.000		4	402.00	239.00	● ○

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

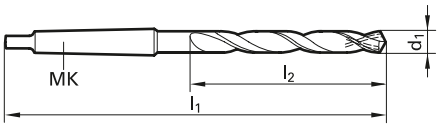
Guhring no.	270	271	272	370	371	372
Standard	Guhring std.					
Tool material	HSS			HSCO		
Surface	○	○	○	○	○	○
Type	N	N	N	GT 100	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8	h8	h8
Discount group	138	138	138	138	138	138
Techn. data page	178	178	178	178	178	179



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
31.750	1 1/4	4	411.00	248.00	○
32.000		4	421.00	248.00	● ○ ● ○
32.250		4	421.00	248.00	○
32.500		4	421.00	248.00	○
32.540	1 9/32	4	421.00	248.00	○ ○
33.000		4	421.00	248.00	● ○
33.340	1 5/16	4	421.00	248.00	○
34.000		4	430.00	257.00	● ○ ○ ○
34.130	1 11/32	4	430.00	257.00	○ ○
34.920	1 3/8	4	430.00	257.00	○ ○
35.000		4	430.00	257.00	●
40.000		4	450.00	277.00	●
44.000		4	471.00	298.00	○
44.450		4	471.00	298.00	○ ○

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

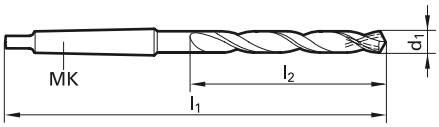
Guhring no.	374	375	376
Standard		Guhring std.	
Tool material		HSCO	
Surface	●	●	●
Type	GT 100	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8
Discount group	138	138	138
Techn. data page	179	179	179



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
11.000		2	312.00	195.00	● ○ ○
11.110	7/16	2	312.00	195.00	○
11.510	29/64	2	312.00	195.00	○
12.000		2	322.00	205.00	●
12.300	31/64	2	322.00	205.00	○
12.500		2	322.00	205.00	● ○
12.700	1/2	2	322.00	205.00	○
12.800		2	322.00	205.00	○
13.000		2	322.00	205.00	● ○
13.500		2	337.00	220.00	○
14.000		2	337.00	220.00	● ● ○
14.290	9/16	2	337.00	220.00	○
15.000		2	337.00	220.00	●
15.080	19/32	2	347.00	230.00	○
16.000		2	347.00	230.00	●
16.500		2	347.00	230.00	○ ○
17.000		2	347.00	230.00	●
17.460	11/16	2	362.00	245.00	○
17.500		2	362.00	245.00	●
18.000		2	362.00	245.00	● ○
18.260	23/32	3	381.00	245.00	○
18.500		3	381.00	245.00	●
19.000		3	381.00	245.00	○
19.840	25/32	3	396.00	260.00	○ ○
20.000		3	396.00	260.00	●
21.000		3	396.00	260.00	● ○
21.430	27/32	3	406.00	270.00	● ○ ○
21.500		3	406.00	270.00	○ ○
23.020	29/32	3	406.00	270.00	○
24.000		3	426.00	290.00	○
24.500		3	426.00	290.00	●
24.610	31/32	3	426.00	290.00	○
25.000	63/64	3	426.00	290.00	○
25.400	1	3	426.00	290.00	○
26.500		3	426.00	290.00	○ ○
26.990	1 1/16	4	468.00	305.00	○
27.780	1 3/32	4	468.00	305.00	○
28.570	1 1/8	4	468.00	305.00	● ○
28.750		4	468.00	305.00	○

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

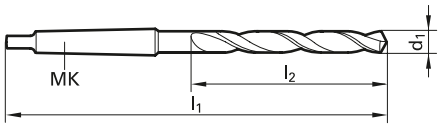
Guhring no.	374	375	376
Standard		Guhring std.	
Tool material		HSCO	
Surface	○	○	○
Type	GT 100	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8
Discount group	138	138	138
Techn. data page	179	179	179



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability		
29.000		4	468.00	305.00	❍		❍
29.370	1 5/32	4	468.00	305.00	❍		
30.960	1 7/32	4	483.00	320.00	❍	❍	
32.250		4	493.00	320.00	❍		
32.540	1 9/32	4	493.00	320.00	❍	❍	
33.340	1 5/16	4	493.00	320.00		❍	
34.000		4	513.00	340.00	❍	❍	

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◍ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

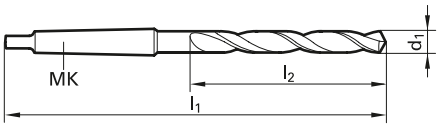
Guhring no.	266	525	526	620
Standard	DIN 1870			
Tool material	HSS			HSCO
Surface	●	○	◐ >Ø 16,0	◐ >Ø 16,0
Type	N	GT50	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	134	138	136	138
Techn. data page	179	180	180	180



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
8.000		1	265.00	165.00	● ●
8.200		1	265.00	165.00	●
8.500		1	265.00	165.00	● ○ ●
8.600		1	275.00	175.00	○
8.700		1	275.00	175.00	○ ●
8.800		1	275.00	175.00	○ ○
9.000		1	275.00	175.00	● ○ ●
9.500		1	275.00	175.00	● ○ ●
9.520	3/8	1	285.00	185.00	● ● ●
9.800		1	285.00	185.00	●
10.000		1	285.00	185.00	● ○ ● ●
10.200		1	285.00	185.00	● ● ●
10.250		1	285.00	185.00	●
10.320	13/32	1	285.00	185.00	●
10.500		1	285.00	185.00	● ○ ● ●
10.720	27/64	1	300.00	195.00	○
10.800		1	300.00	195.00	○ ○
11.000		1	300.00	195.00	● ● ●
11.110	7/16	1	300.00	195.00	● ●
11.400		1	300.00	195.00	○
11.500		1	300.00	195.00	● ● ●
11.510	29/64	1	300.00	195.00	○ ○
11.750		1	300.00	195.00	● ●
11.800		1	300.00	195.00	●
12.000		1	310.00	205.00	● ○ ● ●
12.200		1	310.00	205.00	●
12.300	31/64	1	310.00	205.00	● ●
12.500		1	310.00	205.00	● ○ ● ●
12.700	1/2	1	310.00	205.00	● ●
12.800		1	310.00	205.00	○
13.000		1	310.00	205.00	● ○ ● ●
13.500		1	325.00	220.00	● ○ ● ●
13.750		1	325.00	220.00	●
13.800		1	325.00	220.00	●
14.000		1	325.00	220.00	● ● ● ●
14.200		2	340.00	220.00	●
14.290	9/16	2	340.00	220.00	● ● ●
14.500		2	340.00	220.00	● ● ●
15.000		2	340.00	220.00	● ● ● ●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

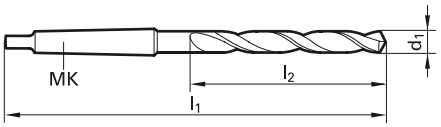
Guhring no.	266	525	526	620
Standard	DIN 1870			
Tool material	HSS			HSCO
Surface	●	○	◑ >Ø 16,0	◑ >Ø 16,0
Type	N	GT50	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	134	138	136	138
Techn. data page	179	180	180	180



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
15.080	19/32	2	355.00	230.00	●
15.250		2	355.00	230.00	●
15.500		2	355.00	230.00	● ○ ● ●
15.750		2	355.00	230.00	●
15.800		2	355.00	230.00	●
15.870	5/8	2	355.00	230.00	●
16.000		2	355.00	230.00	● ● ● ●
16.250		2	355.00	230.00	●
16.500		2	355.00	230.00	● ● ●
16.670	21/32	2	355.00	230.00	●
17.000		2	355.00	230.00	● ●
17.460	11/16	2	370.00	245.00	●
17.500		2	370.00	245.00	● ● ●
17.750		2	370.00	245.00	●
18.000		2	370.00	245.00	● ● ● ●
18.500		2	370.00	245.00	● ● ●
18.650	47/64	2	370.00	245.00	○
19.000		2	370.00	245.00	● ● ●
19.500		2	385.00	260.00	● ○ ●
19.750		2	385.00	260.00	●
20.000		2	385.00	260.00	● ● ●
20.500		2	385.00	260.00	● ●
20.640	13/16	2	385.00	260.00	●
21.000		2	385.00	260.00	● ○ ● ●
21.430	27/32	2	405.00	270.00	●
21.500		2	405.00	270.00	● ●
21.830		2	405.00	270.00	○
22.000		2	405.00	270.00	● ● ●
22.500		2	405.00	270.00	● ○
22.620		2	405.00	270.00	○
23.000		2	405.00	270.00	● ● ● ●
23.020	29/32	2	405.00	270.00	○
23.500		3	425.00	270.00	●
24.000		3	440.00	290.00	● ● ●
24.300		3	440.00	290.00	●
24.380		3	440.00	290.00	○
24.500		3	440.00	290.00	● ○
25.000	63/64	3	440.00	290.00	● ●
25.500		3	440.00	290.00	● ○ ○

○ bright ◑ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

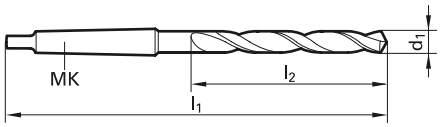
Guhring no.	266	525	526	620
Standard	DIN 1870			
Tool material	HSS			HSCO
Surface	●	○	● >Ø 16,0	● >Ø 16,0
Type	N	GT50	GT 100	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	134	138	136	138
Techn. data page	179	180	180	180



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability			
26.000		3	440.00	290.00	●	○	●	●
26.500		3	440.00	290.00	●	○	●	
27.000		3	460.00	305.00	●			
27.180		3	460.00	305.00				○
27.500		3	460.00	305.00		○		
28.000		3	460.00	305.00	●	●	●	
28.500		3	460.00	305.00		○	○	
29.000		3	460.00	305.00		○	●	
29.370	1 5/32	3	460.00	305.00				○
30.000		3	460.00	305.00	●		●	●
30.500		3	480.00	320.00	●			
31.000		3	480.00	320.00	●	○		
32.000		4	505.00	320.00	●			
33.000		4	505.00	320.00	●	●		
34.000		4	530.00	340.00	●			
35.000		4	530.00	340.00	●			
36.000		4	530.00	340.00	●			
38.000		4	555.00	360.00	●			
39.000		4	555.00	360.00	●			
40.000		4	555.00	360.00	●			
42.000		4	555.00	360.00	●			
45.000		4	585.00	385.00	●			
45.240	1 25/32	4	585.00	385.00	○			
48.000		4	605.00	405.00	●			
50.000		4	605.00	405.00	●			

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

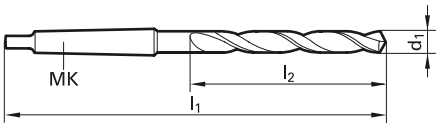
Guhring no.	267	527	542	621
Standard	DIN 1870			
Tool material	HSS			HSCO
Surface	●	◑ >Ø 16,0	○	◑ >Ø 16,0
Type	N	GT 100	GT50	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	138	136	138	138
Techn. data page	180	180	181	181



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
8.000		1	330.00	210.00	● ●
8.400		1	330.00	210.00	◑
8.500		1	330.00	210.00	● ● ○
8.600		1	345.00	220.00	○
8.800		1	345.00	220.00	○
8.900		1	345.00	220.00	◑
9.000		1	345.00	220.00	● ● ○
9.500		1	345.00	220.00	● ● ○
9.520	3/8	1	360.00	235.00	◑ ◑
10.000		1	360.00	235.00	● ● ●
10.200		1	360.00	235.00	●
10.320	13/32	1	360.00	235.00	◑
10.500		1	360.00	235.00	● ● ○ ●
10.700		1	375.00	250.00	○
10.720	27/64	1	375.00	250.00	◑
11.000		1	375.00	250.00	● ● ○ ●
11.110	7/16	1	375.00	250.00	●
11.500		1	375.00	250.00	● ● ○ ●
11.510	29/64	1	375.00	250.00	◑ ◑
11.750		1	375.00	250.00	● ○
11.800		1	375.00	250.00	● ●
11.910	15/32	1	395.00	260.00	◑
12.000		1	395.00	260.00	● ● ○ ●
12.500		1	395.00	260.00	● ● ○ ●
12.700	1/2	1	395.00	260.00	● ●
13.000		1	395.00	260.00	● ● ○ ●
13.490	17/32	1	410.00	275.00	◑
13.500		1	410.00	275.00	● ● ○ ●
13.700		1	410.00	275.00	◑
13.800		1	410.00	275.00	●
13.890	35/64	1	410.00	275.00	◑
14.000		1	410.00	275.00	● ● ○ ●
14.290	9/16	2	425.00	275.00	◑ ●
14.500		2	425.00	275.00	● ● ○ ●
15.000		2	425.00	275.00	● ● ○ ●
15.480	39/64	2	445.00	295.00	◑
15.500		2	445.00	295.00	● ●
16.000		2	445.00	295.00	● ● ○ ●
16.270		2	445.00	295.00	◑

○ bright ◑ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

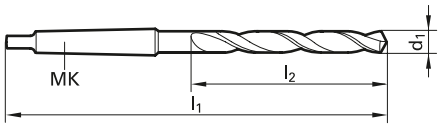
Guhring no.	267	527	542	621
Standard	DIN 1870			
Tool material	HSS			HSCO
Surface	●	>Ø 16,0	○	>Ø 16,0
Type	N	GT 100	GT50	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	138	136	138	138
Techn. data page	180	180	181	181



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
16.500		2	445.00	295.00	● ●
16.900		2	445.00	295.00	○
17.000		2	445.00	295.00	● ● ○
17.070	43/64	2	465.00	310.00	○ ○
17.500		2	465.00	310.00	● ● ○
17.800		2	465.00	310.00	○
18.000		2	465.00	310.00	● ● ●
18.500		2	465.00	310.00	● ● ●
18.650	47/64	2	465.00	310.00	○
19.000		2	465.00	310.00	● ● ●
19.050	3/4	2	490.00	325.00	○ ○
19.450	49/64	2	490.00	325.00	●
19.500		2	490.00	325.00	● ●
20.000		2	490.00	325.00	● ● ○ ●
20.240	51/64	2	490.00	325.00	○
20.500		2	490.00	325.00	● ○
20.640	13/16	2	490.00	325.00	○
21.000		2	490.00	325.00	● ● ○
21.030	53/64	2	490.00	325.00	○
21.430	27/32	2	515.00	345.00	○ ○ ○
21.500		2	515.00	345.00	● ○
21.830	55/64	2	515.00	345.00	● ○
22.000		2	515.00	345.00	● ● ●
22.500		2	515.00	345.00	○
22.620	57/64	2	515.00	345.00	○
22.800		2	515.00	345.00	○
23.000		2	515.00	345.00	● ● ○
23.020	29/32	2	515.00	345.00	○ ○
23.420	59/64	3	535.00	345.00	●
23.500		3	535.00	345.00	○
23.750		3	555.00	365.00	○
23.810	15/16	3	555.00	365.00	○ ○
24.000		3	555.00	365.00	● ● ○
24.210	61/64	3	555.00	365.00	○
24.500		3	555.00	365.00	● ○ ○
24.610	31/32	3	555.00	365.00	○
25.000	63/64	3	555.00	365.00	● ●
25.500		3	555.00	365.00	○
25.800	1 1/64	3	555.00	365.00	○

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

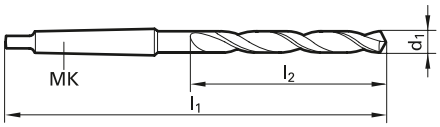
Guhring no.	267	527	542	621
Standard	DIN 1870			
Tool material	HSS			HSCO
Surface	bright	>Ø 16,0	bright	>Ø 16,0
Type	N	GT 100	GT50	GT 100
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	h8	h8	h8	h8
Discount group	138	136	138	138
Techn. data page	180	180	181	181



d1 mm	d1 inch	MK	l1 mm	l2 mm	Availability
26.000		3	555.00	365.00	● ● ❍
26.190	1 1/32	3	555.00	365.00	❍
26.500		3	555.00	365.00	● ●
27.000		3	580.00	385.00	❍
27.500		3	580.00	385.00	❍
28.000		3	580.00	385.00	● ● ❍
28.750		3	580.00	385.00	❍
29.000		3	580.00	385.00	● ❍
29.500		3	580.00	385.00	❍ ● ❍
30.000		3	580.00	385.00	● ● ❍
31.000		3	610.00	410.00	● ●
32.000		4	635.00	410.00	●
34.000		4	665.00	430.00	●
40.000		4	695.00	460.00	●
45.000		4	735.00	490.00	●

❍ bright ◯ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

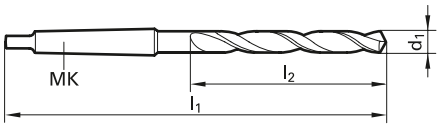
Guhring no.	563	566
Standard	Guhring std.	
Tool material	HSS	
Surface	◓	◓ >Ø 16,0
Type	GT 100	GT 100
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	181	181



d1 mm	MK	l1 mm	l2 mm	Availability
6.000	1	200.00	120.00	●
6.500	1	200.00	120.00	●
7.000	1	200.00	120.00	●
7.500	1	200.00	120.00	❍
8.000	1	500.00	420.00	●
8.500	1	500.00	420.00	●
9.000	1	500.00	420.00	●
9.500	1	500.00	420.00	●
10.000	1	500.00	420.00	●
11.000	1	500.00	420.00	●
12.000	1	500.00	420.00	●
13.000	1	500.00	420.00	●
14.000	1	500.00	420.00	●
15.000	2	500.00	400.00	●
16.000	2	500.00	400.00	●
17.000	2	500.00	400.00	●
18.000	2	500.00	400.00	●
19.000	2	500.00	400.00	●
20.000	2	500.00	400.00	●
21.000	2	500.00	400.00	●
22.000	2	500.00	400.00	●
35.000	4	500.00	350.00	●
40.000	4	500.00	350.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

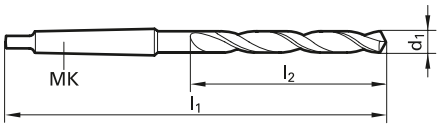
Guhring no.	293	564
Standard	Guhring std.	
Tool material	HSS	
Surface	>Ø 16,0	
Type	GT 100	GT 100
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	181	182



d1 mm	MK	l1 mm	l2 mm	Availability	
6.000	1	300.00	220.00		●
6.500	1	300.00	220.00		●
7.000	1	300.00	220.00		●
8.000	1	350.00	270.00		●
8.500	1	350.00	270.00		●
9.000	1	350.00	270.00		●
10.000	1	350.00	270.00		●
14.000	1	600.00	500.00	●	
15.000	2	600.00	500.00	●	
16.000	2	600.00	500.00	●	
17.000	2	600.00	500.00	●	
18.000	2	600.00	500.00	●	
19.000	2	600.00	500.00	●	
20.000	2	600.00	500.00	●	
21.000	2	600.00	500.00	●	
22.000	2	600.00	500.00	●	
23.000	2	600.00	500.00	●	
24.000	3	600.00	475.00	●	
25.000	3	600.00	475.00	●	
26.000	3	600.00	475.00	●	
28.000	3	600.00	475.00	●	
30.000	3	600.00	475.00	●	
32.000	4	600.00	450.00	●	
35.000	4	600.00	450.00	●	
38.000	4	600.00	450.00	●	
40.000	4	600.00	450.00	●	

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

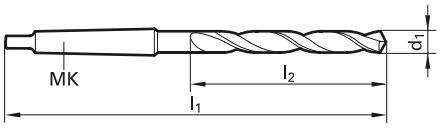
Guhring no.	**565**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	>Ø 16,0
Type	**GT 100**
Cutting direction	**right-hand**
Tolerance	**h8**
Discount group	**138**
Techn. data page	**182**



d1 mm	MK	l1 mm	l2 mm	Availability
6.000	1	425.00	345.00	●
6.500	1	425.00	345.00	●
7.000	1	425.00	345.00	●
7.500	1	425.00	345.00	●
8.000	1	425.00	345.00	●
8.500	1	425.00	345.00	●
9.000	1	425.00	345.00	●
10.000	1	425.00	345.00	●
11.000	1	425.00	345.00	●
12.000	1	425.00	345.00	●
13.000	1	425.00	345.00	●
14.000	1	425.00	345.00	●
15.000	2	425.00	325.00	●
16.000	2	425.00	325.00	●
17.000	2	425.00	325.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

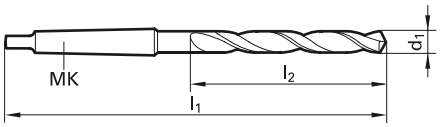
Guhring no.	298
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	GT 100
Cutting direction	right-hand
Tolerance	h8
Discount group	138
Techn. data page	182



d1 mm	MK	l1 mm	l2 mm	Availability
14.000	1	750.00	650.00	●
15.000	2	750.00	650.00	●
16.000	2	750.00	650.00	●
18.000	2	750.00	650.00	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

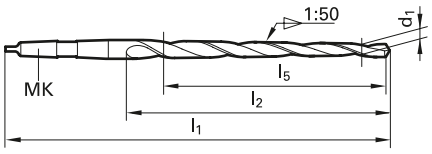
Guhring no.	299
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	GT 100
Cutting direction	right-hand
Tolerance	h8
Discount group	138
Techn. data page	182



d1 mm	MK	l1 mm	l2 mm	Availability
14.000	1	1000.00	850.00	●
15.000	2	1000.00	850.00	●
16.000	2	1000.00	850.00	●
18.000	2	1000.00	850.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

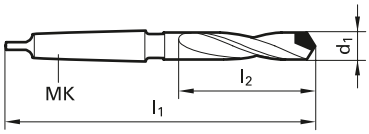
Guhring no.	532
Standard	DIN 1898
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Tolerance	
Discount group	138
Techn. data page	182



d1	MK	l1	l2	l5	Availability
mm		mm	mm	mm	
5.000	1	155.00	81.00	73.00	◑
6.000	1	187.00	108.00	105.00	●
8.000	1	227.00	149.00	145.00	●
10.000	1	257.00	180.00	175.00	●
12.000	2	315.00	219.00	210.00	●
13.000	2	325.00	229.00	220.00	●
14.000	2	325.00	229.00	220.00	●
16.000	2	335.00	239.00	230.00	●
20.000	3	377.00	263.00	250.00	●
25.000	3	427.00	311.00	300.00	●

○ bright ◑ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

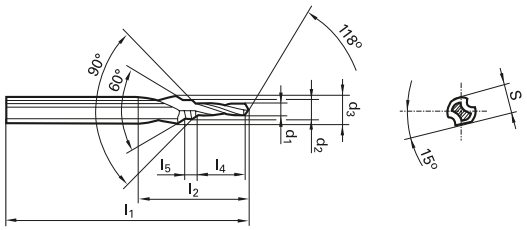
Guhring no.	**705**
Standard	**DIN 8041**
Tool material	**Carbide**
Surface	◯
Type	**N**
Cutting direction	**right-hand**
Tolerance	**h8**
Discount group	**102**
Techn. data page	**183**



d1 mm	MK	l1 mm	l2 mm	Availability
8.500	1	135.00	45.00	●
10.000	1	140.00	50.00	●
10.200	1	140.00	50.00	●
10.500	1	140.00	50.00	◯
11.000	1	140.00	50.00	●
11.500	1	146.00	56.00	●
12.000	1	146.00	56.00	●
13.000	1	146.00	56.00	●
13.500	2	168.00	63.00	●
14.000	2	168.00	63.00	●
14.500	2	168.00	63.00	●
15.000	2	168.00	63.00	●
15.500	2	175.00	70.00	●
16.000	2	175.00	70.00	●
16.500	2	175.00	70.00	●
17.000	2	175.00	70.00	●
17.500	2	185.00	80.00	●
18.000	2	185.00	80.00	●
19.000	2	185.00	80.00	●
19.500	3	215.00	90.00	●
20.000	3	215.00	90.00	●
21.000	3	215.00	90.00	●
21.500	3	215.00	90.00	●
22.000	3	215.00	90.00	●
23.000	3	225.00	100.00	●
24.000	3	225.00	100.00	●
24.500	3	225.00	100.00	●
25.000	3	225.00	100.00	●
26.000	4	260.00	110.00	●
26.500	4	260.00	110.00	●
27.000	4	260.00	110.00	●
28.000	4	260.00	110.00	●
30.000	4	275.00	125.00	●
32.000	4	275.00	125.00	●
33.000	4	290.00	140.00	●
38.000	4	310.00	160.00	●
40.000	4	310.00	160.00	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

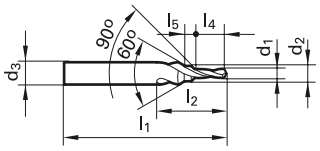
Guhring no.	274	574
Standard	Guhring std.	
Tool material	HSS	
Surface	●	●
Type	N	N
Form	for countersinks form D	for countersinks form DR
Cutting direction	right-hand	right-hand
Discount group	138	138
Techn. data page	184	184



d3 h7	d2	d1 h8	s	l1	l2	l4	l5	for	Availability	
mm	mm	mm	mm	mm	mm	mm	mm	thread		
8.000	4.300	3.300	6.75	63.00	23.00	11.00	1.60	M 4	●	●
10.000	5.300	4.200	8.45	67.00	27.00	13.00	2.15	M 5	●	●
12.500	6.400	5.000	10.45	71.00	33.00	16.00	2.90	M 6	●	●
14.000	8.400	6.800	12.50	88.00	41.00	19.50	3.50	M 8	●	●
16.000	10.500	8.500	14.85	94.00	47.00	23.00	4.70	M10	●	●
20.000	13.000	10.200	18.45	105.00	59.00	28.00	6.50	M12	●	●
25.000	17.000	14.000	23.40	132.00	67.00	33.00	8.30	M16	●	●
31.500	21.000	17.500	29.35	145.00	76.50	38.00	10.35	M20	●	●
40.000	25.000	21.000	36.50	160.00	90.00	45.00	12.00	M24	●	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

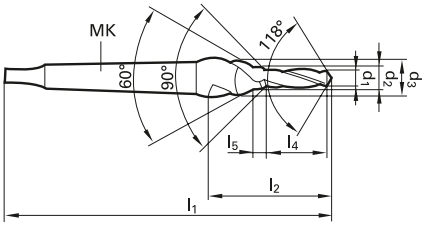
Guhring no.	575
Standard	Guhring std.
Tool material	HSS
Surface	●
Type	N
Form	for countersinks form D
Cutting direction	right-hand
Discount group	138
Techn. data page	184



d3 h7	d2	d1 h8	l1	l2	l4	l5	for	Availability
mm	mm	mm	mm	mm	mm	mm	thread	
8.000	4.300	3.300	63.00	23.00	11.00	1.60	M 4	●
10.000	5.300	4.200	67.00	27.00	13.00	2.15	M 5	●
12.500	6.400	5.000	71.00	33.00	16.00	2.90	M 6	●
14.000	8.400	6.800	88.00	41.00	19.50	3.50	M 8	●
16.000	10.500	8.500	94.00	47.00	23.00	4.70	M10	●
20.000	13.000	10.200	105.00	59.00	28.00	6.50	M12	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

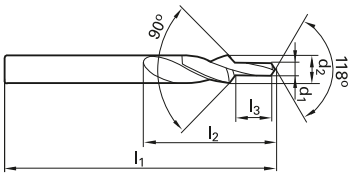
Guhring no.	576
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Form	for countersinks form D
Cutting direction	right-hand
Discount group	138
Techn. data page	184



d3 h7	d2	d1 h8	MK	l1	l2	l4	l5	for	Availability
mm	mm	mm		mm	mm	mm	mm	thread	
14.000	8.400	6.800	1	110.00	41.00	19.50	3.50	M 8	●
16.000	10.500	8.500	2	131.00	47.00	23.00	4.70	M10	●
20.000	13.000	10.200	2	145.00	59.00	28.00	6.50	M12	●
25.000	17.000	14.000	3	172.00	67.00	33.00	8.30	M16	●
31.500	21.000	17.500	3	184.00	76.50	38.00	10.35	M20	●
40.000	25.000	21.000	4	222.00	90.00	45.00	12.00	M24	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

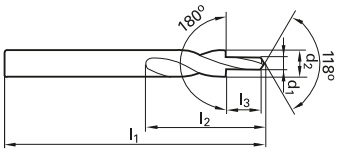
Guhring no.	378	1147
Standard	Guhring std.	
Tool material	HSS	
Surface	○	○
Type	N	N
Form	fine tolerances	medial tolerances
Cutting direction	right-hand	right-hand
Discount group	138	138
Techn. data page	184	185



d2	d1	l1	l2	l3	for	Availability	
mm	mm	mm	mm	mm	thread		
6.000	3.200	66.00	28.00	9.00	M 3	●	
6.600	3.400	70.00	31.00	9.00	M 3		●
8.000	4.300	79.00	37.00	11.00	M 4	●	
9.000	4.500	84.00	40.00	11.00	M 4		●
10.000	5.300	89.00	43.00	13.00	M 5	●	
11.000	5.500	95.00	47.00	13.00	M 5		●
11.500	6.400	95.00	47.00	15.00	M 6	●	
13.000	6.600	102.00	51.00	15.00	M 6		●
15.000	8.400	111.00	56.00	19.00	M 8	●	
17.200	9.000	123.00	62.00	19.00	M 8		●
19.000	10.500	127.00	64.00	23.00	M10	●	
21.500	11.000	141.00	70.00	23.00	M10		●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

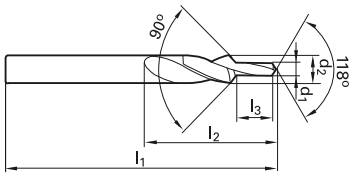
Guhring no.	379
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Form	medial tolerances
Cutting direction	right-hand
Discount group	138
Techn. data page	185



d2	d1	l1	l2	l3	for	Availability
mm	mm	mm	mm	mm	thread	
6.000	3.400	66.00	28.00	9.00	M 3	●
8.000	4.500	79.00	37.00	11.00	M 4	●
10.000	5.500	89.00	43.00	13.00	M 5	●
11.000	6.600	95.00	47.00	15.00	M 6	●
15.000	9.000	111.00	56.00	19.00	M 8	●
18.000	11.000	123.00	62.00	23.00	M10	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

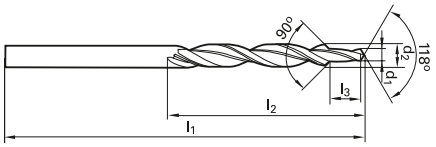
Guhring no.	380
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Form	for tapping size holes
Cutting direction	right-hand
Discount group	138
Techn. data page	185



d2	d1	l1	l2	l3	for	Availability
mm	mm	mm	mm	mm	thread	
3.400	2.500	52.00	20.00	8.80	M 3	●
4.500	3.300	58.00	24.00	11.40	M 4	●
5.500	4.200	66.00	28.00	13.60	M 5	●
6.600	5.000	70.00	31.00	16.50	M 6	●
9.000	6.800	84.00	40.00	21.00	M 8	●
11.000	8.500	95.00	47.00	25.50	M10	●
13.500	10.200	107.00	54.00	30.00	M12	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

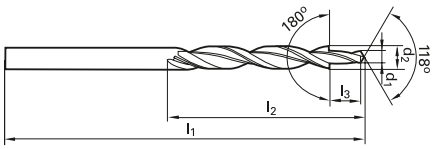
Guhring no.	536	569	636	638
Standard	DIN 8374		Guhring std.	
Tool material	HSS			
Surface	○	○	○	○
Type	N	N	N	N
Form	A	B	medial tole-	fine tolerances
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	138	138	138	138
Techn. data page	185	185	186	186



d2	d1	l1	l2	l3	for	Availability			
mm	mm	mm	mm	mm	thread				
6.000	3.200	93.00	57.00	9.00	M 3	●			●
6.600	3.400	101.00	63.00	9.00	M 3			●	
7.500	3.400	109.00	69.00	9.00	M 3		●		
8.000	4.300	117.00	75.00	11.00	M 4	●			●
9.000	4.500	125.00	81.00	11.00	M 4			●	
9.700	4.500	133.00	87.00	11.00	M 4		●		
10.000	5.300	133.00	87.00	13.00	M 5	●			
11.000	5.500	142.00	94.00	13.00	M 5			●	
11.500	6.400	142.00	94.00	15.00	M 6	●			
12.000	5.500	151.00	101.00	13.00	M 5		●		
13.000	6.600	151.00	101.00	15.00	M 6			●	
14.500	6.600	169.00	114.00	15.00	M 6		●		
15.000	8.400	169.00	114.00	19.00	M 8	●			
17.200	9.000	191.00	130.00	19.00	M 8			●	
19.000	9.000	198.00	135.00	19.00	M 8		●		

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

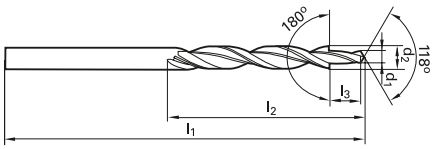
Guhring no.	538	738
Standard	DIN 8376	Guhring std.
Tool material	HSS	Solid carbide
Surface	●	○
Type	N	N
Form	medial tolerances	medial tolerances
Cutting direction	right-hand	right-hand
Discount group	138	102
Techn. data page	186	186



d2	d1	l1	l2	l3	for	Availability	
mm	mm	mm	mm	mm	thread		
6.000	3.400	93.00	57.00	9.00	M 3	●	●
8.000	4.500	117.00	75.00	11.00	M 4	●	●
10.000	5.500	133.00	87.00	13.00	M 5	●	●
11.000	6.600	142.00	94.00	15.00	M 6	●	●
15.000	9.000	169.00	114.00	19.00	M 8	●	●
18.000	11.000	191.00	130.00	23.00	M10	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

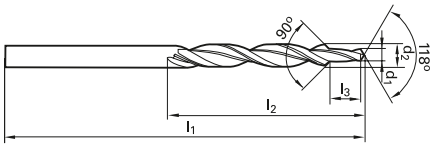
Guhring no.	514
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	N
Form	
Cutting direction	right-hand
Discount group	138
Techn. data page	186



d2 mm	d1 mm	l1 mm	l2 mm	l3 mm	for thread	Availability
5.900	3.200	93.00	57.00	11.00	M 3	●
7.400	4.300	109.00	69.00	13.00	M 4	●
8.000	4.800	117.00	75.00	13.00	M 4	●
9.400	5.300	125.00	81.00	16.00	M 5	●
10.000	5.800	133.00	87.00	16.00	M 5	●
10.400	6.400	133.00	87.00	19.00	M 6	●
11.000	7.000	142.00	94.00	19.00	M 6	●
13.500	8.400	160.00	108.00	22.00	M 8	●
16.500	10.500	184.00	125.00	25.00	M10	●
17.500	11.500	191.00	130.00	25.00	M10	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

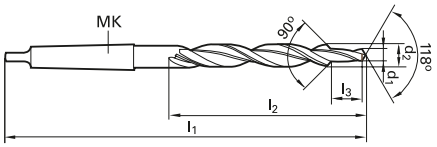
Guhring no.	540	739
Standard	DIN 8378	Guhring std.
Tool material	HSS	Solid carbide
Surface	●	○
Type	N	N
Form	for tapping size holes	for tapping size holes
Cutting direction	right-hand	right-hand
Discount group	138	102
Techn. data page	187	187



d2	d1	l1	l2	l3	for	Availability	
mm	mm	mm	mm	mm	thread		
3.400	2.500	70.00	39.00	8.80	M 3	●	
4.500	3.300	80.00	47.00	11.40	M 4	●	●
5.500	4.200	93.00	57.00	13.60	M 5	●	●
6.600	5.000	101.00	63.00	16.50	M 6	●	●
9.000	6.800	125.00	81.00	21.00	M 8	●	●
11.000	8.500	142.00	94.00	25.50	M10	●	●
13.500	10.200	160.00	108.00	30.00	M12	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

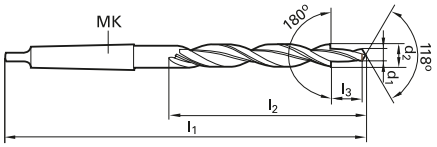
Guhring no.	637	537
Standard	Guhring std.	
Tool material	HSS	
Surface	●	●
Type	N	N
Form	fine tolerances	medial tolerances
Cutting direction	right-hand	right-hand
Discount group	138	138
Techn. data page	187	187



d2	d1	MK	l1	l2	l3	for	Availability
mm	mm		mm	mm	mm	thread	
11.000	5.500	1	175.00	94.00	13.00	M 5	○
11.500	6.400	1	175.00	94.00	15.00	M 6	●
15.000	8.400	2	212.00	114.00	19.00	M 8	●
17.200	9.000	2	228.00	130.00	19.00	M 8	●
19.000	10.500	2	233.00	135.00	23.00	M10	●
21.500	11.000	2	248.00	150.00	23.00	M10	●
23.000	13.000	2	253.00	155.00	27.00	M12	●
26.000	14.000	3	286.00	165.00	27.00	M12	●
29.000	16.000	3	296.00	175.00	31.00	M14	○
30.000	17.000	3	296.00	175.00	35.00	M16	●

○ bright ◍ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

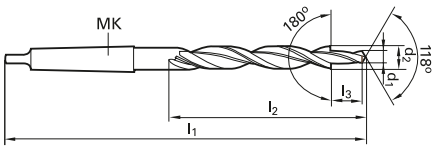
Guhring no.	639
Standard	Guhring std.
Tool material	HSS
Surface	●
Type	N
Form	fine tolerances
Cutting direction	right-hand
Discount group	138
Techn. data page	187



d2	d1	MK	l1	l2	l3	for	Availability
mm	mm		mm	mm	mm	thread	
18.000	10.500	2	228.00	130.00	23.00	M10	●
20.000	13.000	2	238.00	140.00	27.00	M12	●
26.000	17.000	3	286.00	165.00	35.00	M16	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

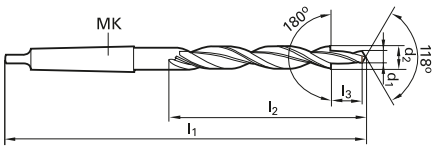
Guhring no.	539
Standard	DIN 8377
Tool material	HSS
Surface	◯
Type	N
Form	medial tolerances
Cutting direction	right-hand
Discount group	138
Techn. data page	188



d2	d1	MK	l1	l2	l3	for	Availability
mm	mm		mm	mm	mm	thread	
10.000	5.500	1	168.00	87.00	13.00	M 5	●
11.000	6.600	1	175.00	94.00	15.00	M 6	●
15.000	9.000	2	212.00	114.00	19.00	M 8	●
18.000	11.000	2	228.00	130.00	23.00	M10	●
20.000	13.500	2	238.00	140.00	27.00	M12	●
26.000	17.500	3	286.00	165.00	35.00	M16	●
30.000	20.000	3	296.00	175.00	39.00	M18	❍
33.000	22.000	4	334.00	185.00	43.00	M20	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

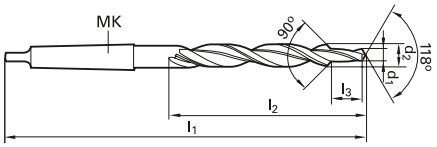
Guhring no.	520
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	N
Form	
Cutting direction	right-hand
Discount group	138
Techn. data page	188



d2	d1	MK	l1	l2	l3	for	Availability
mm	mm		mm	mm	mm	thread	
9.400	5.300	1	162.00	81.00	16.00	M 5	◯
10.000	5.800	1	168.00	87.00	16.00	M 5	◯
10.400	6.400	1	168.00	87.00	19.00	M 6	◯
11.000	7.000	1	175.00	94.00	19.00	M 6	●
13.500	8.400	1	189.00	108.00	22.00	M 8	●
14.500	9.500	2	212.00	114.00	22.00	M 8	◯
16.500	10.500	2	223.00	125.00	25.00	M10	●
17.500	11.500	2	228.00	130.00	25.00	M10	◯
19.000	13.000	2	233.00	135.00	28.00	M12	●
20.000	14.000	2	238.00	140.00	28.00	M12	●
23.000	15.000	2	253.00	155.00	30.00	M14	●
24.000	16.000	3	281.00	160.00	30.00	M14	◯
25.000	17.000	3	281.00	160.00	33.00	M16	●
26.000	18.000	3	286.00	165.00	33.00	M16	●
28.000	19.000	3	291.00	170.00	36.00	M18	◯
29.000	20.000	3	296.00	175.00	36.00	M18	◯
31.000	21.000	3	301.00	180.00	39.00	M20	◯
33.000	23.000	4	334.00	185.00	39.00	M20	◯

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

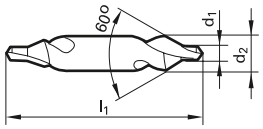
Guhring no.	541
Standard	DIN 8379
Tool material	HSS
Surface	◯
Type	N
Form	for tapping size holes
Cutting direction	right-hand
Discount group	138
Techn. data page	188



d2	d1	MK	l1	l2	l3	for	Availability
mm	mm		mm	mm	mm	thread	
9.000	6.800	1	162.00	81.00	21.00	M 8	●
11.000	8.500	1	175.00	94.00	25.50	M10	●
13.500	10.200	1	189.00	108.00	30.00	M12	●
15.500	12.000	2	218.00	120.00	34.50	M14	●
17.500	14.000	2	228.00	130.00	38.50	M16	●
20.000	15.500	2	238.00	140.00	43.50	M18	●
22.000	17.500	2	248.00	150.00	47.50	M20	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

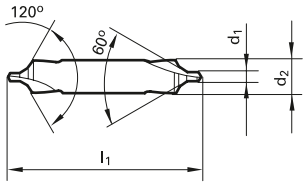
Guhring no.	**594**
Standard	**ASA**
Tool material	**HSS**
Surface	○
Form	**A**
Cutting direction	**right-hand**
Discount group	**138**
Techn. data page	**189**



size	d1	d2	l1	Code no.	Availability
	inch	mm	mm		
1	3/64	3.170	31.30	1.190	○
2	5/64	4.760	47.20	1.980	●
3	7/64	6.350	50.40	2.780	●
4	1/8	7.940	53.50	3.170	●
5	3/16	11.110	69.40	4.760	●
6	7/32	12.700	75.80	5.560	●
7	1/4	15.870	82.10	6.350	●
8	5/16	19.050	88.50	7.940	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

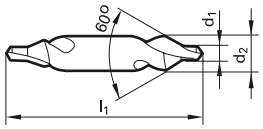
Guhring no.	**595**
Standard	**ASA**
Tool material	**HSS**
Surface	○
Form	**B**
Cutting direction	**right-hand**
Discount group	**138**
Techn. data page	**189**



size	d1	d2	l1	Code no.	Availability
	inch	mm	mm		
11	3/64	3.170	31.30	1.190	●
12	1/16	4.760	47.20	1.590	◑
13	3/32	6.350	50.40	2.380	◑
14	7/64	7.940	53.50	2.780	●
15	5/32	11.110	69.40	3.970	●
16	3/16	12.700	75.80	4.760	●
17	7/32	15.870	82.10	5.560	●
18	1/4	19.050	88.50	6.350	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

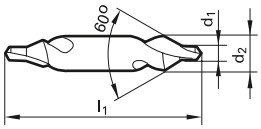
Guhring no.	292	294
Standard	BS 328	
Tool material	HSS	
Surface	◯	◯
Form	A	A
Cutting direction	right-hand	left-hand
Discount group	138	138
Techn. data page	189	189



size	d1	d2	l1	Code no.	Availability	
	inch	mm	mm			
1	3/64	3.170	38.00	1.190	●	●
2	1/16	4.760	44.00	1.590	●	●
3	3/32	6.350	51.00	2.380	●	●
4	1/8	7.940	57.00	3.170	●	●
5	3/16	11.110	63.00	4.760	●	❍
6	1/4	15.870	76.00	6.350	●	❍
7	5/16	19.050	89.00	7.940	●	❍

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	581	582	583	584
Standard	DIN 333			
Tool material	HSS			
Carbide grade				
Surface	○	○	○	○
Form	A	A	R	R
Cutting direction	right-hand	left-hand	right-hand	left-hand
Discount group	132	138	138	138
Techn. data page	189	190	190	190



d1	d2	l1	Availability			
mm	mm	mm				
0.500	3.150	25.00	●	●	●	
0.800	3.150	25.00	●	●	●	●
1.000	3.150	31.50	●	●	●	❍
1.250	3.150	31.50	●	●	●	●
1.600	4.000	35.50	●	●	●	●
2.000	5.000	40.00	●	●	●	●
2.400	6.300	45.00				❍
2.500	6.300	45.00	●	●	●	●
3.150	8.000	50.00	●	●	●	●
4.000	10.000	56.00	●	●	●	●
5.000	12.500	63.00	●	●	●	●
6.300	16.000	71.00	●	●	●	
8.000	20.000	80.00	●	❍	●	
10.000	25.000	100.00	●	❍	●	
12.500	31.500	125.00	●	❍	●	

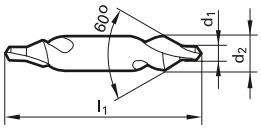
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

590	613	614	381	736
	DIN 333			Guhring std.
HSS			HSCO	Solid carbide
				K10/K20
○	S	S	○	○
A	A	R	A	A
right-hand	right-hand	right-hand	right-hand	right-hand
138	133	139	138	102
190	190	191	191	191

Availability				
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●		●
○				
○				

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

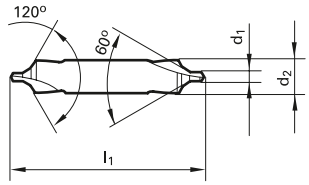
Guhring no.	281	282	283	284
Standard	DIN 333			
Tool material	HSS			
Carbide grade				
Surface	◯	◯	◯	◯
Form	A	A	R	R
Cutting direction	right-hand	left-hand	right-hand	left-hand
Discount group	138	138	138	138
Techn. data page	191	191	192	192



d1	d2	l1	Availability			
mm	mm	mm				
0.500	3.150	25.00	●		●	
0.800	3.150	25.00		❍	●	
1.000	3.150	31.50	●		●	
1.250	4.000	35.50	●	●	●	
1.600	5.000	40.00	●	●	●	❍
2.000	6.300	45.00	●	❍	●	❍
2.500	8.000	50.00	●	●	●	●
3.150	10.000	56.00	●	●	●	❍
4.000	12.500	63.00	●	●	●	●
5.000	16.000	71.00	●	●	●	
6.300	20.000	80.00	●		●	
8.000	25.000	100.00	●		●	
10.000	31.500	125.00	●		❍	

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

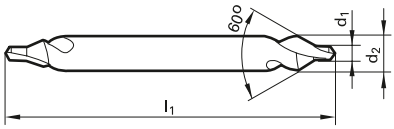
Guhring no.	585	586	591
Standard		DIN 333	
Tool material		HSS	
Carbide grade			
Surface	◯	◯	◯
Form	B	B	B
Cutting direction	right-hand	left-hand	right-hand
Discount group	138	138	138
Techn. data page	192	192	192



d1	d2	l1	Availability		
mm	mm	mm			
1.000	4.000	35.50	●	❍	❍
1.250	5.000	40.00	●	●	
1.600	6.300	45.00	●	●	❍
2.000	8.000	50.00	●	●	❍
2.500	10.000	56.00	●	●	●
3.150	11.200	60.00	●	●	●
4.000	14.000	67.00	●	●	●
5.000	18.000	75.00	●		●
6.300	20.000	80.00	●	●	●
8.000	25.000	100.00	●	●	
10.000	31.500	125.00	●	●	❍

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

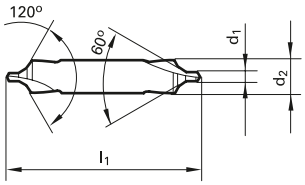
Guhring no.	280
Standard	Guhring std.
Tool material	HSS
Carbide grade	
Surface	◯
Form	A
Cutting direction	right-hand
Discount group	138
Techn. data page	193



d1 mm	d2 mm	l1 mm	Availability
1.000	4.000	120.00	●
1.600	5.000	120.00	●
2.000	6.000	120.00	●
2.500	8.000	120.00	●
3.150	10.000	120.00	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

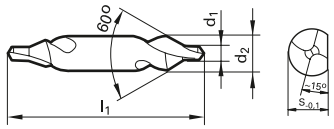
Guhring no.	285
Standard	Guhring std.
Tool material	HSS
Carbide grade	
Surface	◯
Form	B
Cutting direction	right-hand
Discount group	138
Techn. data page	193



d1 mm	d2 mm	l1 mm	Availability
1.000	6.300	40.00	●
1.600	8.000	50.00	○
2.000	10.000	56.00	●
2.500	11.200	63.00	●
3.150	14.000	71.00	●
4.000	16.000	80.00	●
5.000	20.000	90.00	●
6.300	25.000	100.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

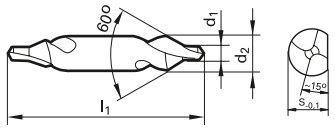
Guhring no.	587	588
Standard	DIN 333	
Tool material	HSS	
Surface	◯	◯
Form	A	R
Cutting direction	right-hand	right-hand
Discount group	138	138
Techn. data page	193	193



d1 mm	d2 mm	l1 mm	s mm	Availability	
1.000	3.150	31.50	2.35		❍
1.600	4.000	35.50	3.25	●	
2.000	5.000	40.00	4.20	●	●
2.500	6.300	45.00	5.35	●	●
3.150	8.000	50.00	6.95	●	●
4.000	10.000	56.00	8.40	●	●
5.000	12.500	63.00	10.95	●	●
6.300	16.000	71.00	14.00	●	●
8.000	20.000	80.00	17.90	❍	●
10.000	25.000	100.00	22.50	●	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

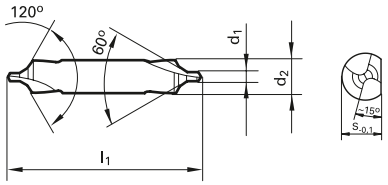
Guhring no.	287	288
Standard	DIN 333	
Tool material	HSS	
Surface	◯	◯
Form	A	R
Cutting direction	right-hand	right-hand
Discount group	138	138
Techn. data page	193	194



d1 mm	d2 mm	l1 mm	s mm	Availability	
1.600	5.000	40.00	4.20	❍	❍
2.000	6.300	45.00	5.35	●	●
2.500	8.000	50.00	6.85	●	●
3.150	10.000	56.00	8.40	●	●
4.000	12.500	63.00	10.65	●	●
5.000	16.000	71.00	13.65	●	❍
6.300	20.000	80.00	17.40	❍	●
8.000	25.000	100.00	21.90	❍	❍
10.000	31.500	125.00	27.10	❍	

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

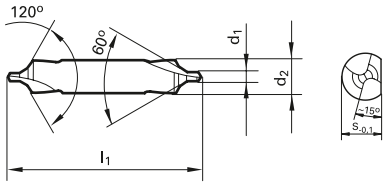
Guhring no.	589
Standard	DIN 333
Tool material	HSS
Surface	○
Form	B
Cutting direction	right-hand
Discount group	138
Techn. data page	194



d1 mm	d2 mm	l1 mm	s mm	Availability
1.600	6.300	45.00	5.35	●
2.000	8.000	50.00	6.95	●
2.500	10.000	56.00	8.40	●
3.150	11.200	60.00	10.00	●
4.000	14.000	67.00	12.65	●
5.000	18.000	75.00	16.40	●
6.300	20.000	80.00	17.90	●
8.000	25.000	100.00	22.50	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

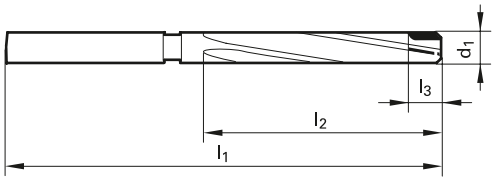
Guhring no.	**289**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	◯
Form	**B**
Cutting direction	**right-hand**
Discount group	**138**
Techn. data page	**194**



d1	d2	l1	s	Availability
mm	mm	mm	mm	
1.600	8.000	50.00	6.50	❍
2.000	10.000	56.00	7.95	❍
2.500	11.200	63.00	9.50	❍
3.150	14.000	71.00	12.00	●
4.000	16.000	80.00	14.40	●
5.000	20.000	90.00	18.40	❍

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

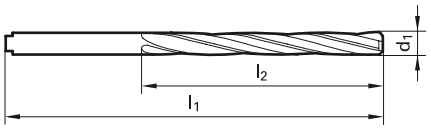
Guhring no.	750
Standard	Guhring std.
Tool material	Carbide
Carbide grade	K10/K20
Surface	◯
Type	N
Cutting direction	right-hand
Tolerance	h8
Discount group	102
Techn. data page	195



d1	d0 ≥	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
3.800	2.800	96.00	64.00		●
4.800	3.500	108.00	74.00		●
5.000	3.500	108.00	74.00		●
5.800	4.200	116.00	80.00		●
6.000	4.200	116.00	80.00		●
7.800	5.600	142.00	100.00		●
8.000	5.600	142.00	100.00		●
11.750	8.400	184.00	134.00	16.00	●
13.000	9.100	184.00	134.00	16.00	◯
14.000	9.800	194.00	142.00	19.00	◯
15.000	10.500	202.00	147.00	19.00	◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

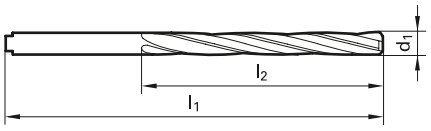
Guhring no.	**533**
Standard	**DIN 344**
Tool material	**HSS**
Surface	●
Type	**N**
Cutting direction	**right-hand**
Tolerance	**h8**
Discount group	**138**
Techn. data page	**195**



d1 mm	d0 ≥	l1 mm	l2 mm	Availability
3.800	2.800	96.00	64.00	●
4.000	2.800	96.00	64.00	●
4.100	2.800	96.00	64.00	●
4.400	3.200	102.00	69.00	●
4.500	3.200	102.00	69.00	●
4.600	3.200	102.00	69.00	●
4.750	3.200	102.00	69.00	●
4.800	3.500	108.00	74.00	●
4.900	3.500	108.00	74.00	●
5.000	3.500	108.00	74.00	●
5.050	3.500	108.00	74.00	●
5.100	3.500	108.00	74.00	●
5.300	3.500	108.00	74.00	●
5.400	4.200	116.00	80.00	●
5.500	4.200	116.00	80.00	●
5.550	4.200	116.00	80.00	○
5.750	4.200	116.00	80.00	●
5.800	4.200	116.00	80.00	●
5.850	4.200	116.00	80.00	●
5.900	4.200	116.00	80.00	●
6.000	4.200	116.00	80.00	●
6.100	4.200	124.00	86.00	●
6.200	4.200	124.00	86.00	●
6.250	4.200	124.00	86.00	○
6.300	4.200	124.00	86.00	●
6.400	4.200	124.00	86.00	●
6.500	4.200	124.00	86.00	●
6.700	4.200	124.00	86.00	●
6.800	4.900	133.00	93.00	●
6.850	4.900	133.00	93.00	○
6.900	4.900	133.00	93.00	●
7.000	4.900	133.00	93.00	●
7.150	4.900	133.00	93.00	●
7.200	4.900	133.00	93.00	●
7.250	4.900	133.00	93.00	●
7.500	4.900	133.00	93.00	●
7.600	5.600	142.00	100.00	●
7.800	5.600	142.00	100.00	●
7.950	5.600	142.00	100.00	○

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

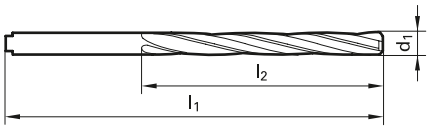
Guhring no.	**533**
Standard	**DIN 344**
Tool material	**HSS**
Surface	○
Type	**N**
Cutting direction	**right-hand**
Tolerance	**h8**
Discount group	**138**
Techn. data page	**195**



d1 mm	d0 ≥	l1 mm	l2 mm	Availability
8.000	5.600	142.00	100.00	●
8.050	5.600	142.00	100.00	●
8.100	5.600	142.00	100.00	●
8.150	5.600	142.00	100.00	●
8.200	5.600	142.00	100.00	●
8.250	5.600	142.00	100.00	○
8.300	5.600	142.00	100.00	●
8.400	5.600	142.00	100.00	●
8.500	5.600	142.00	100.00	●
8.600	6.300	151.00	107.00	●
8.700	6.300	151.00	107.00	●
8.800	6.300	151.00	107.00	●
8.850	6.300	151.00	107.00	●
9.000	6.300	151.00	107.00	●
9.100	6.300	151.00	107.00	○
9.200	6.300	151.00	107.00	○
9.300	6.300	151.00	107.00	●
9.400	6.300	151.00	107.00	●
9.500	6.300	151.00	107.00	●
9.650	7.000	162.00	116.00	●
9.750	7.000	162.00	116.00	●
9.800	7.000	162.00	116.00	●
9.900	7.000	162.00	116.00	●
10.000	7.000	162.00	116.00	●
10.100	7.000	162.00	116.00	●
10.200	7.000	162.00	116.00	●
10.300	7.000	162.00	116.00	●
10.500	7.000	162.00	116.00	●
10.600	7.000	162.00	116.00	○
10.700	7.700	173.00	125.00	●
10.750	7.700	173.00	125.00	●
11.000	7.700	173.00	125.00	●
11.250	7.700	173.00	125.00	○
11.300	7.700	173.00	125.00	●
11.750	8.400	184.00	134.00	●
11.800	8.400	184.00	134.00	●
12.000	8.400	184.00	134.00	●
12.100	8.400	184.00	134.00	●
12.200	8.400	184.00	134.00	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

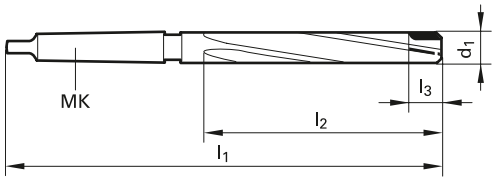
Guhring no.	533
Standard	DIN 344
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Tolerance	h8
Discount group	138
Techn. data page	195



d1 mm	d0 ≥	l1 mm	l2 mm	Availability
12.500	8.400	184.00	134.00	●
12.750	9.100	184.00	134.00	●
13.000	9.100	184.00	134.00	●
13.500	9.800	194.00	142.00	○
13.750	9.800	194.00	142.00	●
14.000	9.800	194.00	142.00	●
15.000	10.500	202.00	147.00	●
15.750	11.200	211.00	153.00	●
15.870	11.200	211.00	153.00	○
16.000	11.200	211.00	153.00	●
17.000	11.900	218.00	159.00	●
18.000	12.600	226.00	165.00	●
20.000	14.000	242.00	177.00	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

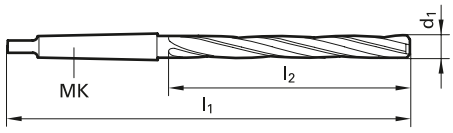
Guhring no.	729
Standard	Guhring std.
Tool material	Carbide
Carbide grade	K10/K20
Surface	◯
Type	N
Cutting direction	right-hand
Tolerance	h8
Discount group	102
Techn. data page	195



d1	d0 ≥	MK	l1	l2	l3	Availability
mm	mm		mm	mm	mm	
26.700	19.000	3	291.00	170.00	25.00	◯
28.700	21.000	3	296.00	175.00	25.00	●
29.700	22.000	3	296.00	175.00	25.00	●
30.600	23.000	3	301.00	180.00	25.00	◯
31.600	24.000	4	334.00	185.00	25.00	◯
32.600	25.000	4	334.00	185.00	25.00	◯
33.000	25.000	4	334.00	185.00	25.00	◯
33.600	26.000	4	339.00	190.00	25.00	●
34.000	26.000	4	339.00	190.00	25.00	◯
34.600	27.000	4	339.00	190.00	25.00	◯
36.000	28.000	4	344.00	195.00	25.00	◯
37.600	30.000	4	349.00	200.00	25.00	◯
38.600	31.000	4	349.00	200.00	25.00	●
39.000	31.000	4	349.00	200.00	25.00	◯
39.600	32.000	4	349.00	200.00	25.00	◯
40.000	32.000	4	349.00	200.00	25.00	◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

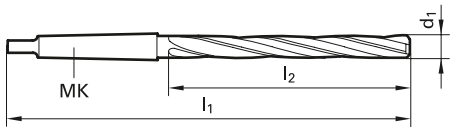
Guhring no.	534	634
Standard	DIN 343	
Tool material	HSS	HSCO
Surface	●	●
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	195	195



d1	d0 ≥	MK	l1	l2	Availability
mm	mm		mm	mm	
7.800	5.600	1	156.00	75.00	●
8.000	5.600	1	156.00	75.00	●
8.100	5.600	1	156.00	75.00	●
8.500	5.600	1	156.00	75.00	❍
8.700	6.300	1	162.00	81.00	❍
8.800	6.300	1	162.00	81.00	●
9.000	6.300	1	162.00	81.00	❍ ❍
9.200	6.300	1	162.00	81.00	❍
9.700	7.000	1	168.00	87.00	●
9.800	7.000	1	168.00	87.00	● ●
9.900	7.000	1	168.00	87.00	❍
10.000	7.000	1	168.00	87.00	●
10.100	7.000	1	168.00	87.00	●
10.200	7.000	1	168.00	87.00	●
10.750	7.700	1	175.00	94.00	● ●
11.000	7.700	1	175.00	94.00	●
11.100	7.700	1	175.00	94.00	❍
11.250	7.700	1	175.00	94.00	❍
11.500	7.700	1	175.00	94.00	●
11.750	8.400	1	182.00	101.00	● ●
11.800	8.400	1	182.00	101.00	●
12.000	8.400	1	182.00	101.00	● ●
12.200	8.400	1	182.00	101.00	●
12.300	8.400	1	182.00	101.00	●
12.500	8.400	1	182.00	101.00	● ❍
12.700	9.100	1	182.00	101.00	❍
12.750	9.100	1	182.00	101.00	● ●
13.000	9.100	1	182.00	101.00	● ●
13.250	9.800	1	189.00	108.00	●
13.500	9.800	1	189.00	108.00	●
13.750	9.800	1	189.00	108.00	●
13.800	9.800	1	189.00	108.00	●
14.000	9.800	1	189.00	108.00	● ●
14.100	10.500	2	212.00	114.00	●
14.200	10.500	2	212.00	114.00	●
14.450	10.500	2	212.00	114.00	❍
14.500	10.500	2	212.00	114.00	●
14.750	10.500	2	212.00	114.00	● ●
15.000	10.500	2	212.00	114.00	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

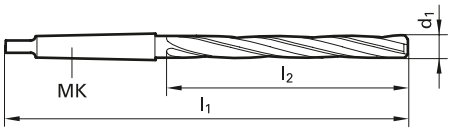
Guhring no.	534	634
Standard	DIN 343	
Tool material	HSS	HSCO
Surface	◯	◯
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	195	195



d1 mm	d0 ≥ mm	MK	l1 mm	l2 mm	Availability	
15.250	11.200	2	218.00	120.00	●	
15.500	11.200	2	218.00	120.00	●	
15.750	11.200	2	218.00	120.00	●	●
16.000	11.200	2	218.00	120.00	●	●
16.150	11.900	2	223.00	125.00	●	
16.200	11.900	2	223.00	125.00	●	
16.250	11.900	2	223.00	125.00	●	
16.500	11.900	2	223.00	125.00	●	●
16.750	11.900	2	223.00	125.00	●	◯
17.000	11.900	2	223.00	125.00	●	◯
17.500	12.600	2	228.00	130.00	●	
17.750	12.600	2	228.00	130.00	●	
18.000	12.600	2	228.00	130.00	●	●
18.100	13.300	2	233.00	135.00	●	
18.250	13.300	2	233.00	135.00	●	
18.500	13.300	2	233.00	135.00	●	
18.700	13.300	2	233.00	135.00	●	
18.750	13.300	2	233.00	135.00	●	
18.800	13.300	2	233.00	135.00	◯	
19.000	13.300	2	233.00	135.00	●	
19.250	14.000	2	238.00	140.00	●	
19.500	14.000	2	238.00	140.00	●	
19.700	14.000	2	238.00	140.00	●	●
19.750	14.000	2	238.00	140.00	●	
20.000	14.000	2	238.00	140.00	●	●
20.100	14.600	2	243.00	145.00	◯	
20.200	14.600	2	243.00	145.00	●	
20.250	14.600	2	243.00	145.00	●	
20.500	14.600	2	243.00	145.00	●	
20.700	14.600	2	243.00	145.00	●	
21.000	14.600	2	243.00	145.00	●	●
21.500	15.300	2	248.00	150.00	●	
21.700	15.300	2	248.00	150.00	●	
21.750	15.300	2	248.00	150.00	●	
22.000	15.300	2	248.00	150.00	●	◯
22.250	15.300	2	248.00	150.00	●	
22.400	15.300	2	248.00	150.00	◯	
22.500	16.000	2	253.00	155.00	●	
22.700	16.000	2	253.00	155.00	●	

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

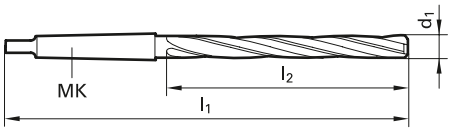
Guhring no.	534	634
Standard	DIN 343	
Tool material	HSS	HSCO
Surface	○	○
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	195	195



d1	d0 ≥	MK	l1	l2	Availability	
mm	mm		mm	mm		
23.000	16.000	2	253.00	155.00	●	●
23.500	16.000	2	253.00	155.00	●	
23.700	16.600	3	281.00	160.00	●	
24.000	16.600	3	281.00	160.00	●	●
24.200	16.600	3	281.00	160.00	●	
24.500	17.300	3	281.00	160.00	●	
24.700	17.300	3	281.00	160.00	●	
24.750	17.300	3	281.00	160.00	●	
25.000	17.300	3	281.00	160.00	●	●
25.250	18.000	3	286.00	165.00	●	
25.500	18.000	3	286.00	165.00	●	
25.600	18.000	3	286.00	165.00	○	
25.700	18.000	3	286.00	165.00	●	
26.000	18.000	3	286.00	165.00	●	●
26.500	18.000	3	286.00	165.00	●	
26.700	18.600	3	291.00	170.00	●	
27.000	18.600	3	291.00	170.00	●	
27.500	18.600	3	291.00	170.00	●	
27.700	19.300	3	291.00	170.00	●	
28.000	19.300	3	291.00	170.00	●	
28.700	20.000	3	296.00	175.00	●	
29.000	20.000	3	296.00	175.00	●	
29.250	20.500	3	296.00	175.00	○	
29.500	20.500	3	296.00	175.00	●	
29.700	20.500	3	296.00	175.00	●	
29.750	20.500	3	296.00	175.00	●	
30.000	20.500	3	296.00	175.00	●	
30.500	21.000	3	301.00	180.00	●	
30.600	21.000	3	301.00	180.00	●	
31.000	21.000	3	301.00	180.00	●	
31.600	22.000	4	334.00	185.00	●	
32.000	22.000	4	334.00	185.00	●	
32.600	23.000	4	334.00	185.00	●	
33.000	23.000	4	334.00	185.00	●	
33.600	24.000	4	339.00	190.00	●	
34.000	24.000	4	339.00	190.00	●	
34.600	25.000	4	339.00	190.00	●	
35.000	25.000	4	339.00	190.00	●	
35.600	25.500	4	344.00	195.00	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

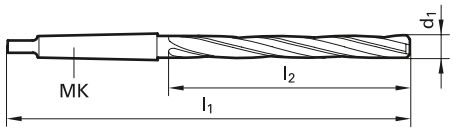
Guhring no.	534	634
Standard	DIN 343	
Tool material	HSS	HSCO
Surface	○	○
Type	N	N
Cutting direction	right-hand	right-hand
Tolerance	h8	h8
Discount group	138	138
Techn. data page	195	195



d1	d0 ≥	MK	l1	l2	Availability
mm	mm		mm	mm	
36.000	25.500	4	344.00	195.00	●
36.600	26.000	4	344.00	195.00	●
37.600	26.500	4	349.00	200.00	●
38.000	26.500	4	349.00	200.00	●
39.000	27.000	4	349.00	200.00	●
39.600	28.000	4	349.00	200.00	●
40.000	28.000	4	349.00	200.00	●
44.000	30.500	4	359.00	210.00	●
44.600	31.000	4	359.00	210.00	●
45.000	31.000	4	359.00	210.00	●
50.000	34.500	4	369.00	220.00	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

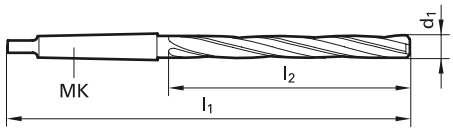
Guhring no.	635
Standard	DIN 1864
Tool material	HSCO
Surface	○
Type	N
Cutting direction	right-hand
Tolerance	h8
Discount group	138
Techn. data page	196



d1 mm	d0 ≥ mm	MK	l1 mm	l2 mm	Availability
8.000	5.600	1	181.00	100.00	❍
10.000	7.000	1	197.00	116.00	❍
11.750	8.400	1	215.00	134.00	❍
12.500	8.400	1	215.00	134.00	●
12.750	9.100	1	215.00	134.00	❍
14.000	9.800	1	223.00	142.00	❍
15.000	10.500	2	245.00	147.00	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

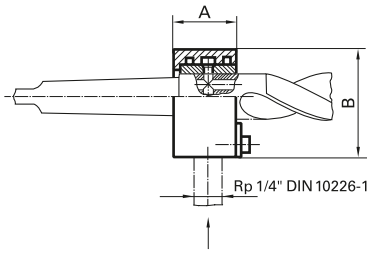
Guhring no.	555
Standard	DIN 1864
Tool material	HSS
Surface	○
Type	N
Cutting direction	right-hand
Tolerance	h8
Discount group	138
Techn. data page	196



d1 mm	d0 ≥ mm	MK	l1 mm	l2 mm	Availability
5.000	3.500	1	155.00	74.00	○
8.000	5.600	1	181.00	100.00	○
8.800	6.300	1	188.00	107.00	○
9.000	6.300	1	188.00	107.00	○
9.700	7.000	1	197.00	116.00	○
9.800	7.000	1	197.00	116.00	●
10.000	7.000	1	197.00	116.00	●
10.100	7.000	1	197.00	116.00	○
10.500	7.000	1	197.00	116.00	○
11.000	7.700	1	206.00	125.00	○
11.100	7.700	1	206.00	125.00	○
11.750	8.400	1	215.00	134.00	●
12.000	8.400	1	215.00	134.00	●
12.750	9.100	1	215.00	134.00	●
13.000	9.100	1	215.00	134.00	●
13.750	9.800	1	223.00	142.00	●
14.000	9.800	1	223.00	142.00	●
15.000	10.500	2	245.00	147.00	●
15.750	11.200	2	251.00	153.00	●
16.000	11.200	2	251.00	153.00	●
16.750	11.900	2	257.00	159.00	●
17.750	12.600	2	263.00	165.00	●
19.000	13.300	2	269.00	171.00	●
19.700	14.000	2	275.00	177.00	●
20.000	14.000	2	275.00	177.00	●
20.700	14.600	2	282.00	184.00	●
21.000	14.600	2	282.00	184.00	○
21.700	15.300	2	289.00	191.00	○
22.000	15.300	2	289.00	191.00	●
22.700	16.000	2	296.00	198.00	●
23.000	16.000	2	296.00	198.00	○
23.700	16.600	3	327.00	206.00	○
24.000	16.600	3	327.00	206.00	●
25.000	17.300	3	327.00	206.00	●
25.700	18.000	3	335.00	214.00	●
30.000	20.500	3	351.00	230.00	●
31.000	21.000	3	360.00	239.00	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	230
Standard	Guhring std.
Discount group	138
Techn. data page	



B	A	Code no.	Availability
mm	mm		
40.000	28.50	3.001	❍
50.000	29.50	3.002	❍
60.000	29.50	3.003	❍
90.000	40.00	3.004	❍
120.000	40.00	3.005	❍

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Additional charges for intermediate sizes for high speed steel twist drills

from quantity	gross additional charges per item depending on shank diameter (mm)						
	up to 1.06	1.07 up to 2.12	2.13 up to 8.50	8.51 up to 23.02	23.03 up to 31.75	31.76 up to 50.80	50.81 up to 100.00
5	●	●	●	●	●	●	●
6	●	●	●	●	●	●	●
7	●	●	●	●	●	●	●
8	●	●	●	●	●	●	●
9	●	●	●	●	●	●	●
10	●	●	●	●	●	●	●
11	●	●	●	●	●	●	●
15	●	●	●	●	●	●	●
20	●	●	●	●	●	●	●
25	●	●	●	●	●	●	●
30	●	●	●	●	●	●	●
40	●	●	●	●	●	●	●
50	●	●	●	●	●	●	
70	●	●	●	●	●	●	
100	●	●	●	●			

Additional charges for intermediate sizes for carbide twist drills

from quantity	gross additional charges per item depending on shank diameter (mm)			
	up to 1.06	1.07 up to 2.12	2.13 up to 8.50	8.51 up to 25.00
3	●	●	●	●
4	●	●	●	●
5	●	●	●	●
6	●	●	●	●
7	●	●	●	●
8	●	●	●	●
9	●	●	●	●
10	●	●	●	●
11	●	●	●	●
15	●	●	●	●
20	●	●	●	●
25	●	●	●	●
30	●	●	●	●
40	●	●	●	●
50	●	●	●	●
75	●	●	●	●
100	●	●	●	●

Additional charges for thinned chisel edge (to DIN 1412. form A)

from quantity	gross additional charges per item depending on shank diameter (mm)		
	2.36 up to 4.25	4.26 up to 8.50	8.51 up to 14.00
5	●	●	●
6	●	●	●
7	●	●	●
8	●	●	●
9	●	●	●
10	●	●	●
11	●	●	●
15	●	●	●
20	●	●	●
25	●	●	●
30	●	●	●
40	●	●	●
50	●	●	●
75	●	●	●
100	●	●	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Additional charges for closer diameter tolerance, for h7 straight shank

from quantity	gross additional charges per item depending on shank diameter (mm)							
	1.00 up to 2.12	2.13 up to 4.25	4.26 up to 8.50	8.51 up to 14.00	14.01 up to 23.02	23.03 up to 31.75	31.76 up to 50.80	50.81 up to 60.00
5	●	●	●	●	●	●	●	●
6	●	●	●	●	●	●	●	●
7	●	●	●	●	●	●	●	●
8	●	●	●	●	●	●	●	●
9	●	●	●	●	●	●	●	●
10	●	●	●	●	●	●	●	●
11	●	●	●	●	●	●	●	●
15	●	●	●	●	●	●	●	●
20	●	●	●	●	●	●	●	●
25	●	●	●	●	●	●	●	●
30	●	●	●	●	●	●	●	●
40	●	●	●	●	●	●	●	●
50	●	●	●	●	●	●	●	
70	●	●	●	●	●	●	●	
100	●	●	●	●	●	●		

Additional charges for tangs for straight shank high speed twist drills (tang to DIN 1809)

from quantity	gross additional charges per item depending on shank diameter (mm)			
	tang grinding		tang milling	
	3.01 up to 10.60	10.61 up to 16.00	16.01 up to 23.60	23.61 up to 30.00
5	●	●	●	●
6	●	●	●	●
7	●	●	●	●
8	●	●	●	●
9	●	●	●	●
10	●	●	●	●
11	●	●	●	●
15	●	●	●	●
20	●	●	●	●
25	●	●	●	●
30	●	●	●	●
40	●	●	●	●
50	●	●	●	●
75	●	●	●	●
100	●	●	●	●

Additional charges for tangs for straight shank carbide twist drills (tang to DIN 1809)

from quantity	gross additional charges per item depending on shank diameter (mm)	
	tang grinding	
	3.01 up to 10.60	16.01 up to 16.00
3	●	●
4	●	●
5	●	●
6	●	●
7	●	●
8	●	●
9	●	●
10	●	●
11	●	●
15	●	●
20	●	●
25	●	●
30	●	●
40	●	●
50	●	●
75	●	●
100	●	●

Additional charges for additional marking for all twist drills with a diameter > 4.0 mm

from quantity	gross additional charges per item
5	●
6	●
7	●
8	●
9	●
10	●
11	●
15	●
20	●
25	●
30	●
40	●
50	●
75	●
100	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Additional charges for grinding of flat to DIN 6535 form HE on straight shank

from quantity	gross additional charges per item depending on shank diameter (mm)							
	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00
3	●	●	●	●	●	●	●	●
10	●	●	●	●	●	●	●	●
20	●	●	●	●	●	●	●	●
30	●	●	●	●	●	●	●	●
50	●	●	●	●	●	●	●	●
100	●	●	●	●	●	●	●	●

Additional charges for intermediate sizes for high speed steel core drills

from quantity	gross additional charges per item depending on core drill diameter (mm) (calculated on the next size up diameter)
5	●
6	●
7	●
8	●
9	●
10	●
11	●
15	●
20	●

Additional charges for intermediate sizes for carbide core drills

from quantity	gross additional charges per item depending on core drill diameter (mm) (calculated on the next size up diameter)
3	●
4	●
5	●
6	●
7	●
8	●
9	●
10	●
11	●
15	●
20	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Quality control requirements for twist drills (not micro-precision

The QS principle encourages requests for inspection records or certificates of conformity to be supplied with ordered tools. We will gladly do this. But as the setting-up of inspection records is particularly time consuming and costly - special marking on a specified number of tools, the provision of measuring records, the entry of measured data in special forms - and we do not wish to incorporate these costs in our overhead costs, we have chosen to charge the prices below in relation to the quantity ordered. Surely you will appreciate this.

inspected number of items / inspection criteria	1	up to 3	up to 5	up to 10	up to 15	up to 20	up to 30	up to 50	up to 100
	net prices for the inspected number of items per inspection criteria								
drill diameter	●	●	●	●	●	●	●	●	●
tapering of diameter	●	●	●	●	●	●	●	●	●
shank diameter	●	●	●	●	●	●	●	●	●
driving tangs, knock-out tangs	●	●	●	●	●	●	●	●	●
taper shank	●	●	●	●	●	●	●	●	●
concentricity tolerance	●	●	●	●	●	●	●	●	●
web thickness	●	●	●	●	●	●	●	●	●
land width	●	●	●	●	●	●	●	●	●
difference in height of cutting edge	●	●	●	●	●	●	●	●	●
total pitch deviation	●	●	●	●	●	●	●	●	●
point angle	●	●	●	●	●	●	●	●	●
side rake angle	●	●	●	●	●	●	●	●	●
clearance angle	●	●	●	●	●	●	●	●	●
point grinds	●	●	●	●	●	●	●	●	●
chisel edge	●	●	●	●	●	●	●	●	●
optical	●	●	●	●	●	●	●	●	●
marking of inspected tools	●	●	●	●	●	●	●	●	●

	net prices for the inspected number of items for all inspection criteria								
	●	●	●	●	●	●	●	●	●
	plus cost of inspection report								
total price	●	●	●	●	●	●	●	●	●

Quality control requirements for micro-precision drills

inspected number of items / inspection criteria	1	up to 3	up to 5	up to 10	up to 15	up to 20	up to 30	up to 50	up to 100
	net prices for the inspected number of items per inspection criteria								
total length	●	●	●	●	●	●	●	●	●
step length	●	●	●	●	●	●	●	●	●
coaxiality	●	●	●	●	●	●	●	●	●
shank diameter	●	●	●	●	●	●	●	●	●
land width	●	●	●	●	●	●	●	●	●
web thickness	●	●	●	●	●	●	●	●	●
point angle	●	●	●	●	●	●	●	●	●
clearance angle	●	●	●	●	●	●	●	●	●
optical	●	●	●	●	●	●	●	●	●
marking of inspected tools	●	●	●	●	●	●	●	●	●

	net prices for the inspected number of items for all inspection criteria								
	●	●	●	●	●	●	●	●	●
	plus cost of inspection report								
total price	●	●	●	●	●	●	●	●	●

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Quality control requirements for step drills

inspected number of items / inspection criteria	1	up to 3	up to 5	up to 10	up to 15	up to 20	up to 30	up to 50	up to 100
	net prices for the inspected number of items per inspection criteria								
total length	●	●	●	●	●	●	●	●	●
step length	●	●	●	●	●	●	●	●	●
drill and step diameter	●	●	●	●	●	●	●	●	●
shank diameter	●	●	●	●	●	●	●	●	●
concentricity tolerance	●	●	●	●	●	●	●	●	●
tapering of diameter	●	●	●	●	●	●	●	●	●
land width	●	●	●	●	●	●	●	●	●
point angle	●	●	●	●	●	●	●	●	●
major angle	●	●	●	●	●	●	●	●	●
clearance angle	●	●	●	●	●	●	●	●	●
point grind	●	●	●	●	●	●	●	●	●
coaxiality	●	●	●	●	●	●	●	●	●
optical	●	●	●	●	●	●	●	●	●
marking of inspected tools	●	●	●	●	●	●	●	●	●

	net prices for the inspected number of items for all inspection criteria								
	●	●	●	●	●	●	●	●	●
	plus cost of inspection report								
total price	●	●	●	●	●	●	●	●	●

Quality control requirements for centre drills

inspected number of items / inspection criteria	1	up to 3	up to 5	up to 10	up to 15	up to 20	up to 30	up to 50	up to 100
	net prices for the inspected number of items per inspection criteria								
total length/drill length	●	●	●	●	●	●	●	●	●
shank diameter	●	●	●	●	●	●	●	●	●
drill diameter	●	●	●	●	●	●	●	●	●
chamfer angle/radius	●	●	●	●	●	●	●	●	●
rake angle	●	●	●	●	●	●	●	●	●
clearance angle	●	●	●	●	●	●	●	●	●
optical	●	●	●	●	●	●	●	●	●
marking of inspected tools	●	●	●	●	●	●	●	●	●

	net prices for the inspected number of items for all inspection criteria								
	●	●	●	●	●	●	●	●	●
	plus cost of inspection report								
total price	●	●	●	●	●	●	●	●	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Quality control requirements for core drills

inspected number of items / inspection criteria	1	up to 3	up to 5	up to 10	up to 15	up to 20	up to 30	up to 50	up to 100
	net prices for the inspected number of items per inspection criteria								
drill diameter	●	●	●	●	●	●	●	●	●
shank diameter	●	●	●	●	●	●	●	●	●
taper shank	●	●	●	●	●	●	●	●	●
total length/flute length	●	●	●	●	●	●	●	●	●
pitch	●	●	●	●	●	●	●	●	●
rake angle	●	●	●	●	●	●	●	●	●
clearance angle	●	●	●	●	●	●	●	●	●
chamfer lead	●	●	●	●	●	●	●	●	●
optical	●	●	●	●	●	●	●	●	●
marking of inspected tools	●	●	●	●	●	●	●	●	●

	net prices for the inspected number of items for all inspection criteria								
	●	●	●	●	●	●	●	●	●
	plus cost of inspection report								
total price	●	●	●	●	●	●	●	●	●

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Versatile

For deep holes from ∅ 0.9 to 40.00 mm
up to max. 3000 mm overall length

EB 800 EB 80 ZB 80 EB 100

GUHRING

GUN DRILLS

GUHRING

EB 100 single-fluted gun drills

Standard	Type	Tool illustration		Drilling depth	Tool material	Surface	d1		Guhring no.	Discount group	Standard range page
Guhring std.	EB 100		NEW	25xD	Solid carbide	a	1,000	- 12,000	5646	123	669
Guhring std.	EB 100		NEW	50xD	Solid carbide	a	1,000	- 8,000	5647	123	670
Guhring std.	EB 100		NEW	75xD	Solid carbide	a	1,000	- 6,000	5648	123	671

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EB 100 single-fluted gun drills

Standard	Type	Tool illustration	Flute length (mm)	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	EB 100		45.00	Solid carbide	◯	1,200 - 3,200	5024	123	672
Guhring std.	EB 100		45.00	Solid carbide	A	2,000 - 3,200	5632	123	672
Guhring std.	EB 100		80.00	Solid carbide	◯	1,200 - 5,000	5020	123	673
Guhring std.	EB 100		80.00	Solid carbide	A	2,000 - 5,000	5633	123	673
Guhring std.	EB 100		120.00	Solid carbide	◯	1,500 - 5,000	5026	123	674
Guhring std.	EB 100		120.00	Solid carbide	A	2,000 - 5,000	5637	123	674
Guhring std.	EB 100		160.00	Solid carbide	◯	1,500 - 8,000	5021	123	675
Guhring std.	EB 100		160.00	Solid carbide	A	2,000 - 8,000	5638	123	675

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EB 80 single-fluted gun drills

Standard	Type	Tool illustration	Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	EB 80		20xD	Carbide	S	4,000 - 12,000	5018	123	676
Guhring std.	EB 80		20xD	Carbide	C	3,970 - 12,700	5639	123	676
Guhring std.	EB 80		30xD	Carbide	S	4,000 - 12,000	5460	123	677
Guhring std.	EB 80		30xD	Carbide	C	3,970 - 12,700	5640	123	677
Guhring std.	EB 80		40xD	Carbide	S	4,000 - 12,000	5022	123	678
Guhring std.	EB 80		40xD	Carbide	C	3,970 - 12,700	5641	123	678
Guhring std.	EB 80		80xD	Carbide	S	4,950 - 11,950	5023	123	679
Guhring std.	EB 80		80xD	Carbide	C	4,950 - 12,650	5642	123	679

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Standard	Type	Tool illustration	Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
EB 800 single-fluted gun drills with indexable inserts									
Guhring std.	EB 800		30xD	Carbide	S	12,000 - 24,000	5644	123	681
Inserts for single-fluted gun drills EB 800									
Guhring std.		NEW		Solid carbide	S	12,000 - 40,000	5029	123	682
Supporting strips for Single-fluted gun drills EB 800									
Guhring std.		NEW		Solid carbide	S	12,000 - 40,000	5030	123	690
Clamping screws									
Guhring std.						-	4071	140	698
Torx screwdriver									
Guhring std.						-	1612	140	699

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

ZB 80 two-fluted gun drills

Standard	Type	Tool illustration	Drilling depth	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	ZB 80		30xD	Carbide	◯	8,000 - 12,000	5019	123	700
Guhring std.	ZB 80		30xD	Carbide	◯	8,000 - 12,000	5643	123	700

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Standard	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Drill bushes								
Guhring std.		NEW	HSS		0,900 - 40,000	5747	123	701
Guhring std.		NEW	Solid carbide		0,900 - 40,000	5748	123	701
Adjustment screws without sealing element								
Guhring std.		NEW			M 6 X0,5 - M16 x1,5	5754	123	703
Adjustment screws with sealing element								
Guhring std.		NEW			M 6 X0,5 - M24 x1,5	5755	123	704
Sealing disks for single-fluted gun drills								
Guhring std.		NEW	Vulkollan			5752	123	706
Sealing disks for gun drills with 2 cutting lips								
Guhring std.		NEW	Vulkollan			5753	123	708
Steady rest bushings for single- and double-fluted gun drills								
Guhring std.		NEW	Vulkollan			5749	123	709
Moulded steady rest bushings for single-fluted gun drills								
Guhring std.		NEW	Vulkollan			5750	123	711

Standard	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page

Moulded steady rest bushing for two-fluted gun drills

Guhring std.		NEW	**Vulkollan**		**5751**	123	713

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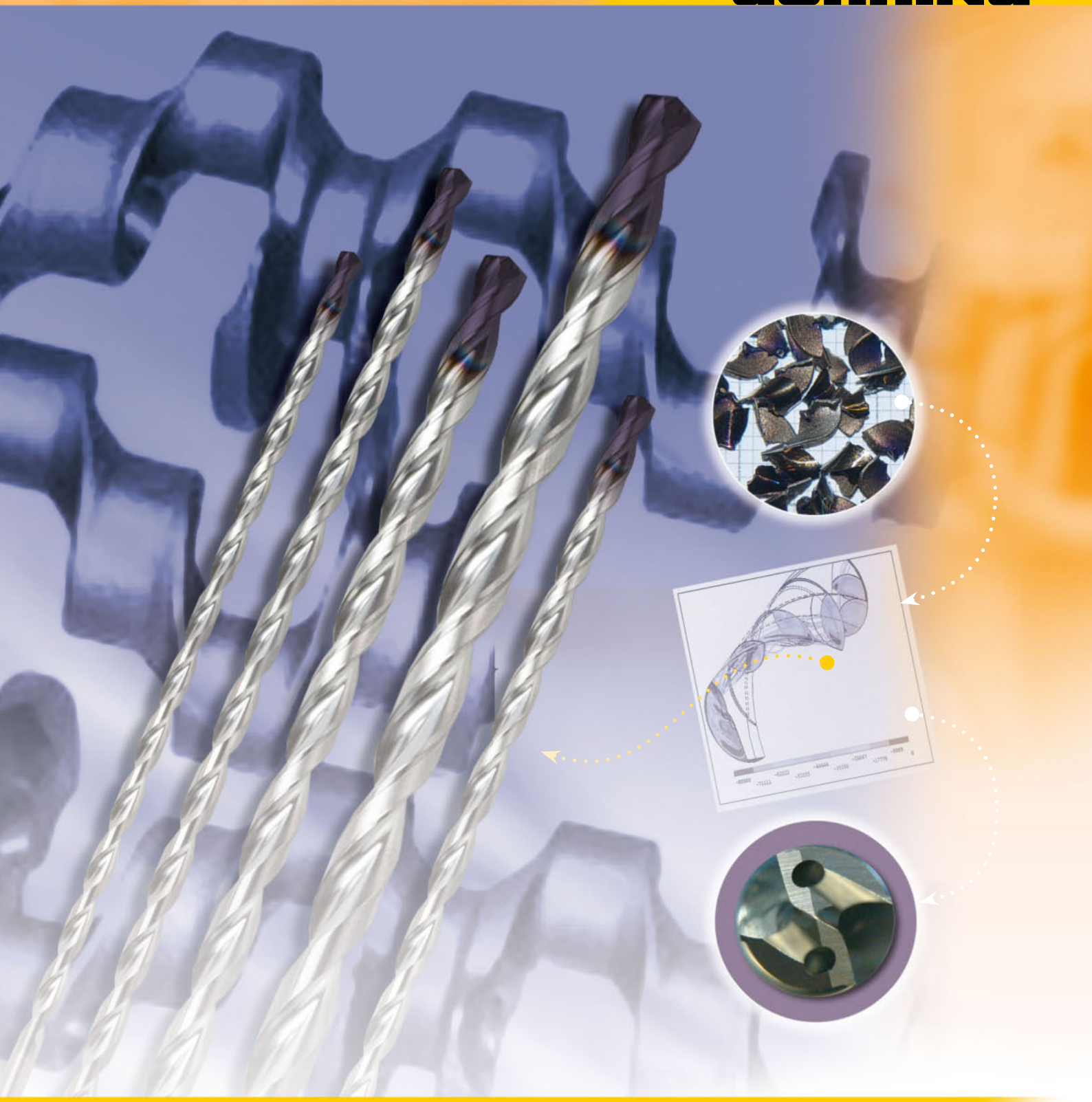

CARBIDE DEEP HOLE DRILLS

The solid carbide deep hole drill was developed for the production of oil galleries in crankshafts and for many other applications such as pump housings, con-rods and injector bodies. The drill excels thanks to a 10-fold increase in feed rate in comparison with conventional gun drills and is designed for conventional cooling as well as MQL.

Drill Ø mm from	Feed column no. 11	12	13	14	15	16	17	18
	f (mm/rev.)							
1.50	0.002	0.004	0.006	0.008	0.012	0.020	0.032	0.045
2.00	0.003	0.005	0.007	0.010	0.016	0.028	0.046	0.055
2.50	0.004	0.006	0.008	0.012	0.018	0.030	0.054	0.070
4.00	0.005	0.007	0.010	0.016	0.025	0.043	0.065	0.085
6.00	0.007	0.009	0.013	0.024	0.035	0.061	0.085	0.120
8.00	0.010	0.014	0.022	0.032	0.045	0.068	0.100	0.150
10.00	0.012	0.016	0.028	0.040	0.055	0.075	0.120	0.160
14.00	0.020	0.025	0.035	0.050	0.065	0.085	0.130	0.180
18.00	0.025	0.030	0.040	0.055	0.070	0.095	0.145	0.200
20.00	0.026	0.035	0.045	0.060	0.080	0.110	0.180	0.250
24.00	0.027	0.036	0.047	0.065	0.085	0.130	0.185	0.300
28.00	0.028	0.038	0.049	0.068	0.090	0.140	0.195	0.350
30.00	0.030	0.040	0.050	0.070	0.100	0.150	0.200	0.400
35.00	0.035	0.045	0.055	0.075	0.120	0.180	0.250	0.450
40.00	0.040	0.050	0.060	0.080	0.150	0.200	0.300	0.500

*The feed rates always relate to tools with the recommended coating. In some cases the successful application of un-coated tools cannot be guaranteed.

STOP All deep hole drills must have support for the pilot hole. Deep hole drills must never operate at full speed without support in the machine shop.

The sequence of operations for deep hole drilling

- production of pilot hole (L = 1.5 x D, tolerance G9)
- enter at low revolutions, approx. 200 rev./min, feed rate approx. 500 mm/min. With tools for drilling depths in excess than 40 x D enter the pilot hole revolving in left hand direction.
- setting of coolant pressure and revolutions
- uninterrupted drilling to required drilling depth without wood pecking. When applying gun drills with increased length-diameter-ratio , we recommend machining with reduced cutting parameters (approx. 75% of the optimal cutting speed) up to a drilling depth of approx. 25 mm.
- switching off coolant supply after reaching the required hole depth
- withdrawal in top gear with stationary spindle

Material dependent coolants
○ air
● neat oil
◍ soluble oil

Please note the coolant values on page 726!

Application advice
- For drilling depths in excess than 40 x D we recommend the use of two or more gun drills, e. g. Ø 10 x 400 mm and Ø 9.95 x 800 mm.
- Gun drills for drilling depths of more than 40 x D should enter the pilot hole revolving in the left hand direction.
- When changing tools for drilling depths of more than 40 x D, the tool can be damped by switching on coolant supply for just one second.
- For machining of long-chipping materials we recommend the use of gun drills with polished flutes.
- Generally we recommend the use of soluble oil with a minimum oil content of 10 %.
- Single-fluted gun drills for long-chipping aluminium should be supplied with point grind 180° and coolant chamber.
- When spotting in aluminium with an Si-content of less than 1%, i.e. with recommended cutting rates v_c > 160 m/min we recommend to advance to the final speed in several steps. In addition, a deeper pilot hole of approximately 3 x D should be produced.

EB100

single-fluted gun drill
solid carbide
0.9 ... 12.0

Material group	Material examples Figures in bold = material no. to DIN EN 10 027	Tens.str. Hardness N/mm²	Cool-ant	recom. coating*	≤35xD v_c m/min	≤35xD Feed col. no.	>35xD v_c m/min	>35xD Feed col. no.
Common structural steels	**1.0035** S185, **1.0486** P275N, **1.0345** P235GH, **1.0425**	≤500	◍		100	15	95	14
	1.0050 E295), **1.0070** E360, **1.8937** P500NH	≤1000	◍		85	15	80	14
Free-cutting steels	**1.0718** 11SMnPb30, **1.0736** 11SMn37	≤850	◍		90	15	85	14
	1.0727 46S20, **1.0728** 60S20, **1.0757** 46SPb20	≤1000	◍		80	15	75	14
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E	≤700	◍		90	14	85	13
	1.0503 C45, **1.1191** C45E	≤850	◍		80	14	75	13
	1.0601 C60, **1.1221** C60E	≤1000	◍		75	14	70	13
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000	◍		75	14	70	13
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400	◍	A	65	14	60	13
Unalloyed case hard. steels	**1.0301**, **1.1121** C10E	≤850	◍	A	80	15	75	14
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000	●		75	14	70	13
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400	●		65	14	60	13
Nitriding steels	**1.8504** 34CrAl6	≤1000	◍		75	14	70	13
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400	●	A	65	14	60	13
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850	◍		75	13	70	12
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419**, **1.2767**	≤1400	●	A	65	13	60	12
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400	●	A	55	12	50	11
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4	≤350 HB	●	A	65	13	60	12
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105**	≤900	●		55	14	50	13
austenitic	**1.4301** X5CrNi18-10, **1.4541** X6CrNiTi18-10, **1.4571**	≤1100	●	A	45	14	40	13
martensitic	**1.4057** X20CrNi172, **1.4122** X39CrMo17-1, **1.4521**	≤1500	●		35	14	35	13
Hardened steels	–	≤48 HRC	●		30	13	25	12
		≤66 HRC	●		25	10	20	11
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000	●		35	12	30	11
Cast iron	**0.6010** EN-GJL-100, **0.6020** EN-GJL-200	≤240 HB	◍ ○		85	16	80	15
	0.6025 EN-GJL-250, **0.6035** EN-GJL-350	≤350 HB	◍ ○		80	16	75	15
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7, **0.8035** EN-GJMW-350-4	≤240 HB	◍		80	15	75	14
malleable cast iron	**0.7070** EN-GJS-700-2, **0.8170** EN-GJMB-700-2	≤350 HB	◍		70	15	65	14
Chilled cast iron	–	≤350 HB	◍		55	14	50	13
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850	●		35	12	30	11
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184**	≤1400	●	A	30	12	25	11
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400	◍		150	17	140	16
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245**, **3.4365**	≤650	◍		120	17	115	16
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600	◍		150	18	140	17
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600	◍		130	18	120	17
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05**	≤400	○		110	17	100	16
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500	◍	A	75	15	70	14
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410**	≤600	◍		120	18	115	17
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600	◍		90	18	85	17
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176**	≤600	◍ ●		95	17	90	16
	2.0790 CuNi18Zn19Pb	≤850	●		75	17	70	16
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850	●		70	17	65	16
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000	●		60	17	55	16
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150	○		75	15	70	14
Thermoplastics	Plexiglas, Hostalen, Novodur, Makralon	≤100	◍ ○		70	15	65	14
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)	≤220 HB	◍ ○					
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6	≤300 HB	◍ ○					
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000	◍ ○					
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400	◍ ○					
Kevlar	Kevlar	≤1000	○		60	14	55	13
Glass, carbon concentr. plastics	GFK/CFK	≤1000	○		50	14	45	13

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Procedure
In order to achieve optimal machining results when producing deep holes with type RT 100 T especially spotting on radii or on an uneven surface structure, we recommend the following machining steps:

1. Initial milling of surface, i.e. with Guhring's centre cutting Ratio end mill RF 100 U. The surface must be machined at right angles to the entry angle of the drilling operation.
2. Production of a cylindrical pilot hole (tolerance G9) with a minimum drilling depth of 1 x D. For this operation we recommend our Ratio drills RT 100 U or RT 100 F respectively. Thanks to a 140° point angle and a m7 tolerance on diameter these Ratio drills are especially suitable for this machining task.
3. Entry of spiral-flute deep hole drill RT 100 T in the pilot hole at a speed of approx. 300 rev./min and with a feed rate of approx. 500 mm/min.
4. Setting of coolant pressure and speed.
5. Continuous drilling to complete hole depth without wood pecking.
6. For through holes with plain - i.e. 90° - exit, reduce feed rate v_f to 50 % approx. 1 mm prior to break-through.
7. For through holes with oblique exit, reduce the feed rate v_f to 40% approx. 1 mm prior to break-through.
8. After reaching hole depth stop machine spindle and coolant supply, withdrawal in top gear.

Ratio end mill type RF 100 U, Guhring no. 3736
Thanks to its unequal helix angle, Guhring's FIRE-coated Ratio end mill RF 100 U offers highest feed rates and tool life for finishing and roughing operations in steel and cast materials as well as Ti- and Ni-alloys. Further information about the range can be found in Guhring's current main catalogue.

Ratio drill RT 100 U, Guhring no. 2477
Ratio drill RT 100 F, Guhring no. 1660
Thanks to their special cutting edge geometry, Guhring's Ratio drills excel with very good self-centering characteristics and alignment accurate holes. Type U is especially suitable for the machining of steel and high-alloyed AlSi-alloys, type F for high-alloyed, stainless, acid- and heat-resistant steels, Al and Al-alloys, Mg and Mg-alloys as well as Ti and Ti-alloys.

EB80

single-fluted gun drill
solid carbide head
2.0 ... 40.0

ZB80

two-fluted gun drill
solid carbide head
6.0 ... 27.0

EB800

single-fluted gun drill
with indexable inserts
12.0 ... 40.0

recom. coating*	≤35xD v_c m/min	≤35xD Feed col. no.	>35xD v_c m/min	>35xD Feed col. no.
S	100	14	95	13
	85	14	80	13
S	90	14	85	13
	80	14	75	13
	90	13	85	12
S	80	13	75	12
	75	13	70	12
	75	13	70	12
S	65	13	60	12
S	80	14	75	13
	75	13	70	12
S	65	13	60	12
	75	13	70	12
C	65	13	60	12
	75	12	70	11
C	65	12	60	11
C	55	11	50	11
C	65	12	60	12
	55	13	50	12
C	45	13	40	12
	35	13	35	12
	30	12	25	11
C	25	11	20	11
C	35	11	30	11
	85	15	80	14
	80	15	75	14
	80	14	75	13
	70	14	65	13
	55	13	50	12
C	35	11	30	11
	30	11	25	11
	150	16	140	15
	120	15	115	14
	150	16	140	15
	130	16	120	15
	110	16	100	15
C	75	14	70	13
	120	17	115	16
	90	17	85	16
	95	16	90	15
	75	16	70	15
	70	16	65	15
	60	16	55	15
	75	14	70	13
	70	14	65	13
	60	13	55	12
	50	13	45	12

recom. coating*	≤35xD v_c m/min	≤35xD Feed col. no.	>35xD v_c m/min	>35xD Feed col. no.
	85	18	80	17
	80	18	75	17
	75	17	70	16
	70	17	65	16
	65	16	60	15
	120	18	115	17
	110	18	105	17
	135	18	130	17
	120	17	115	16
	130	18	125	17
	120	18	115	17
	110	17	105	16
	110	17	105	16
	95	17	90	16
	95	17	90	16

recom. coating*	≤35xD v_c m/min	≤35xD Feed col. no.	>35xD v_c m/min	>35xD Feed col. no.
S	90	15	85	15
	80	15	75	15
S	85	16	80	16
	75	16	70	16
	85	15	80	15
S	80	15	75	15
	75	15	70	15
	75	15	70	15
S	65	15	60	15
S	80	15	75	15
	75	15	70	15
S	70	15	65	15
	70	15	65	15
S	60	15	55	15
	65	14	60	14
S	60	14	55	14
S	55	14	50	14
S	65	15	60	15
	50	14	45	14
F	45	14	40	14
	40	14	35	14
	30	13	25	13
S	25	12	20	12
F	25	13	20	13
	85	16	80	16
	80	16	75	16
	75	16	70	16
S	70	16	65	16
	55	15	50	15
F	35	13	30	13
	30	12	25	12
	140	16	135	16
	125	16	120	16
	170	17	165	17
	140	17	135	17
	115	16	110	16
F	75	15	70	15
	120	17	115	17
	90	17	85	17
	95	17	90	17
	75	17	70	17
	70	17	65	17
	60	17	55	17
	75	16	70	16
	70	16	65	16
	60	15	55	15
	50	15	45	15

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

EB 100 single-fluted gun drills

Single-fluted gun drill
drilling depth 25xD
with standard point geometry
Head form G
Solid carbide shank with tapered MQL shank
end fro d1 = 3 mm or d2 = 6 mm
for all materials

Guhring no.	5646
Standard	Guhring std.
Tool material	Solid carbide
Surface	a
Type	EB 100
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	669

EB 100 single-fluted gun drills

Single-fluted gun drill
drilling depth 50xD
with standard point geometry
Head form G
Solid carbide shank with tapered MQL shank
end fro d1 = 3 mm or d2 = 6 mm
for all materials

Guhring no.	5647
Standard	Guhring std.
Tool material	Solid carbide
Surface	a
Type	EB 100
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	670

EB 100 single-fluted gun drills

Single-fluted gun drill
drilling depth 75xD
with standard point geometry
Head form G
Solid carbide shank with tapered MQL shank
end fro d1 = 3 mm or d2 = 6 mm
for all materials

Guhring no.	5648
Standard	Guhring std.
Tool material	Solid carbide
Surface	a
Type	EB 100
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	671

EB 100 single-fluted gun drills

Single-fluted gun drill
flute length 45 mm
with standard point geometry
Head form G
for all materials

Guhring no.	5024
Standard	Guhring std.
Tool material	Solid carbide
Surface	○
Type	EB 100
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	672

EB 100 single-fluted gun drills

Single-fluted gun drill
flute length 45 mm
with standard point geometry
Head form G
for alloyed and high alloyed steels

Guhring no.	5632
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	EB 100
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	672

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

EB 100 single-fluted gun drills

Single-fluted gun drill
flute length 80 mm
with standard point geometry
Head form G
for all materials

Guhring no.	5020
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	EB 100
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	673

EB 100 single-fluted gun drills

Single-fluted gun drill
flute length 80 mm
with standard point geometry
Head form G
for alloyed and high alloyed steels

Guhring no.	5633
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	EB 100
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	673

EB 100 single-fluted gun drills

Single-fluted gun drill
flute length 120 mm
with standard point geometry
Head form G
for all materials

Guhring no.	5026
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	EB 100
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	674

EB 100 single-fluted gun drills

Single-fluted gun drill
flute length 120 mm
with standard point geometry
Head form G
for alloyed and high alloyed steels

Guhring no.	5637
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	EB 100
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	674

EB 100 single-fluted gun drills

Single-fluted gun drill
flute length 160 mm
with standard point geometry
Head form G
for all materials

Guhring no.	5021
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	EB 100
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	675

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EB 100 single-fluted gun drills

Single-fluted gun drill
flute length 160 mm
with standard point geometry
Head form G
for alloyed and high alloyed steels

Guhring no.	5638
Standard	Guhring std.
Tool material	Solid carbide
Surface	A
Type	EB 100
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	675

EB 80 single-fluted gun drills

Single-fluted gun drill
drilling depth 20xD
with standard point geometry
with lateral chip breakers
with recessed coolant chamber
Head form G
for long-chipping materials

Guhring no.	5018
Standard	Guhring std.
Tool material	Carbide
Surface	S
Type	EB 80
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	676

EB 80 single-fluted gun drills

Single-fluted gun drill
drilling depth 20xD
with standard point geometry
Head form G
for alloyed and high alloyed steels

Guhring no.	5639
Standard	Guhring std.
Tool material	Carbide
Surface	C
Type	EB 80
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	676

EB 80 single-fluted gun drills

Single-fluted gun drill
drilling depth 30xD
with standard point geometry
with lateral chip breakers
with recessed coolant chamber
Head form G
for long-chipping materials

Guhring no.	5460
Standard	Guhring std.
Tool material	Carbide
Surface	S
Type	EB 80
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	677

EB 80 single-fluted gun drills

Single-fluted gun drill
drilling depth 30xD
with standard point geometry
Head form G
for alloyed and high alloyed steels

Guhring no.	5640
Standard	Guhring std.
Tool material	Carbide
Surface	C
Type	EB 80
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	677

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

EB 80 single-fluted gun drills

Single-fluted gun drill
drilling depth 40xD
with standard point geometry
with lateral chip breakers
with recessed coolant chamber
Head form G
for long-chipping materials

Guhring no.	5022
Standard	Guhring std.
Tool material	Carbide
Surface	S
Type	EB 80
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	678

EB 80 single-fluted gun drills

Single-fluted gun drill
drilling depth 40xD
with standard point geometry
Head form G
for alloyed and high alloyed steels

Guhring no.	5641
Standard	Guhring std.
Tool material	Carbide
Surface	C
Type	EB 80
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	678

EB 80 single-fluted gun drills

Single-fluted gun drill
drilling depth 80xD
with standard point geometry
with lateral chip breakers
with recessed coolant chamber
Head form G
for long-chipping materials

* max. flute length per tool
40 x D, for larger drilling depths apply Guhring no. 5022 as first tool.

Guhring no.	5023
Standard	Guhring std.
Tool material	Carbide
Surface	S
Type	EB 80
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	679

EB 80 single-fluted gun drills

Single-fluted gun drill
drilling depth 80xD
with standard point geometry
Head form G
for alloyed and high alloyed steels

* max. flute length per tool
40 x D, for larger drilling depths apply Guhring no. 5641 as first tool.

Guhring no.	5642
Standard	Guhring std.
Tool material	Carbide
Surface	C
Type	EB 80
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	679

EB 800 single-fluted gun drills with indexable inserts

Single-fluted gun drill
drilling depth 30xD
with indexable inserts
with interchangeable supporting strips
for all materials

Guhring no.	5644
Standard	Guhring std.
Tool material	Carbide
Surface	S
Type	EB 800
Cutting direction	right-hand
Point geometry	
Point angle °	
Web thinned ≥Ø	
Standard range page	681

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ZB 80 two-fluted gun drills

Two-fluted gun drills
drilling depth 30xD
with special point geometry
4-facet gun drills
for aluminium
for highest cutting parameters

Guhring no.	5019
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	ZB 80
Cutting direction	right-hand
Form	
Tolerance	h5
Discount group	123
Standard range page	700

ZB 80 two-fluted gun drills

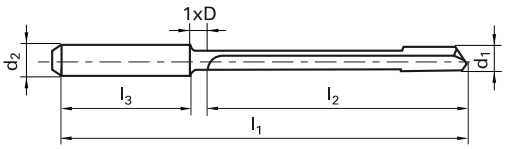
Two-fluted gun drills
drilling depth 30xD
with special point geometry
4-facet gun drills
for cast materials
for highest cutting parameters

Guhring no.	5643
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	ZB 80
Cutting direction	right-hand
Form	
Tolerance	h5
Discount group	123
Standard range page	700

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5646
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K30/K40
Surface	a
Type	EB 100
Drilling depth	25xD
Cutting direction	right-hand
Tolerance	h5
Discount group	123
Techn. data page	664

NEW

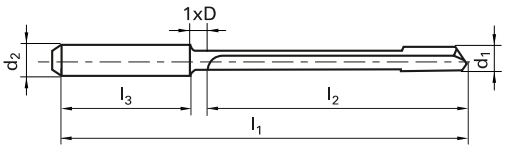


d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
1.000		3.000	60.00	30.00	28.00	●
1.500		4.000	80.00	50.00	28.00	●
1.590	1/16	4.000	80.00	50.00	28.00	●
1.980	5/64	4.000	100.00	70.00	28.00	●
2.000		4.000	100.00	70.00	28.00	●
2.380	3/32	4.000	100.00	70.00	28.00	●
2.500		4.000	115.00	85.00	28.00	●
2.780	7/64	4.000	115.00	85.00	28.00	●
3.000		6.000	145.00	105.00	36.00	●
3.170	1/8	6.000	145.00	105.00	36.00	●
3.500		6.000	145.00	105.00	36.00	●
3.970	5/32	6.000	160.00	120.00	36.00	●
4.000		6.000	160.00	120.00	36.00	●
5.000		6.000	220.00	180.00	36.00	●
5.560	7/32	6.000	220.00	180.00	36.00	●
6.000		6.000	220.00	180.00	36.00	●
6.350	1/4	8.000	260.00	210.00	36.00	●
7.000		8.000	260.00	210.00	36.00	●
7.140	9/32	8.000	285.00	240.00	36.00	●
8.000		8.000	285.00	240.00	36.00	●
9.000		10.000	350.00	300.00	40.00	●
10.000		10.000	350.00	300.00	40.00	●
11.000		12.000	420.00	360.00	45.00	●
12.000		12.000	420.00	360.00	45.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	5647
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K30/K40
Surface	a
Type	EB 100
Drilling depth	50xD
Cutting direction	right-hand
Tolerance	h5
Discount group	123
Techn. data page	664

NEW

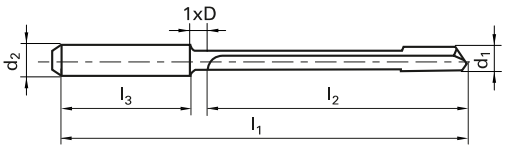


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
1.000		3.000	85.00	55.00	28.00	●
1.500		4.000	120.00	85.00	28.00	●
1.590	1/16	4.000	120.00	85.00	28.00	●
1.980	5/64	4.000	160.00	130.00	28.00	●
2.000		4.000	160.00	130.00	28.00	●
2.380	3/32	4.000	160.00	130.00	28.00	●
2.500		4.000	185.00	155.00	28.00	●
2.780	7/64	4.000	185.00	155.00	28.00	●
3.000		6.000	230.00	190.00	36.00	●
3.170	1/8	6.000	230.00	190.00	36.00	●
3.500		6.000	230.00	190.00	36.00	●
3.970	5/32	6.000	260.00	220.00	36.00	●
4.000		6.000	260.00	220.00	36.00	●
5.000		6.000	370.00	330.00	36.00	●
5.560	7/32	6.000	370.00	330.00	36.00	●
6.000		6.000	370.00	330.00	36.00	●
6.350	1/4	8.000	430.00	385.00	36.00	●
7.000		8.000	430.00	385.00	36.00	●
7.140	9/32	8.000	485.00	440.00	36.00	●
8.000		8.000	485.00	440.00	36.00	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5648
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K30/K40
Surface	a
Type	EB 100
Drilling depth	75xD
Cutting direction	right-hand
Tolerance	h5
Discount group	123
Techn. data page	664

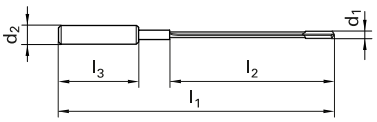
NEW

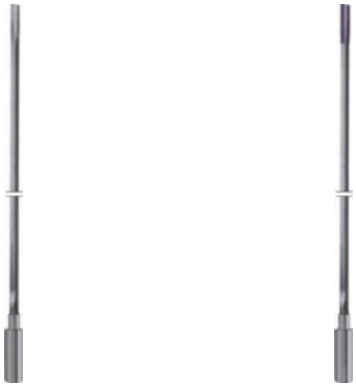


d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
1.000		3.000	110.00	80.00	28.00	●
1.500		4.000	155.00	125.00	28.00	●
1.590	1/16	4.000	155.00	125.00	28.00	●
1.980	5/64	4.000	220.00	190.00	28.00	●
2.000		4.000	220.00	190.00	28.00	●
2.380	3/32	4.000	220.00	190.00	28.00	●
2.500		4.000	255.00	220.00	28.00	●
2.780	7/64	4.000	255.00	220.00	28.00	●
3.000		6.000	320.00	280.00	36.00	●
3.170	1/8	6.000	320.00	280.00	36.00	●
3.500		6.000	320.00	280.00	36.00	●
3.970	5/32	6.000	360.00	320.00	36.00	●
4.000		6.000	360.00	320.00	36.00	●
5.000		6.000	525.00	485.00	36.00	●
5.560	7/32	6.000	525.00	485.00	36.00	●
6.000		6.000	525.00	485.00	36.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	5024	5632
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K30/K40	
Surface	○	A
Type	EB 100	EB 100
Drilling depth	45.00	45.00
Cutting direction	right-hand	right-hand
Tolerance	h5	h5
Discount group	123	123
Techn. data page	664	664

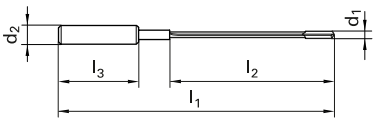


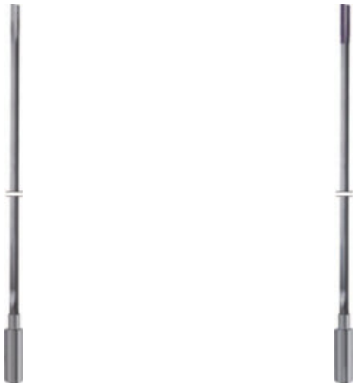


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
1.200		4.000	90.00	45.00	28.00	●	
1.500		4.000	90.00	45.00	28.00	●	
1.600		4.000	90.00	45.00	28.00	●	
2.000		4.000	90.00	45.00	28.00	●	●
2.500		10.000	100.00	45.00	40.00	●	●
2.700		10.000	100.00	45.00	40.00	●	●
3.000		10.000	100.00	45.00	40.00	●	●
3.200		10.000	100.00	45.00	40.00	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5020	5633
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K30/K40	
Surface	○	A
Type	EB 100	EB 100
Drilling depth	80.00	80.00
Cutting direction	right-hand	right-hand
Tolerance	h5	h5
Discount group	123	123
Techn. data page	665	665

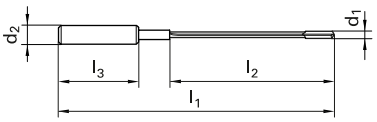


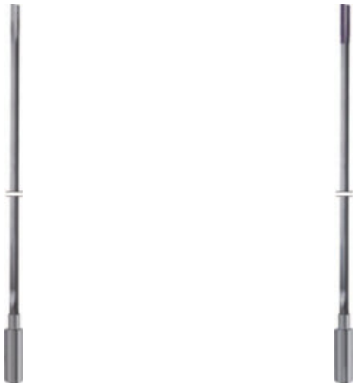


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
1.200		4.000	125.00	80.00	28.00	●	
1.500		4.000	125.00	80.00	28.00	●	
1.600		4.000	125.00	80.00	28.00	●	
2.000		4.000	125.00	80.00	28.00	●	●
2.500		10.000	135.00	80.00	40.00	●	●
2.700		10.000	135.00	80.00	40.00	●	●
3.000		10.000	135.00	80.00	40.00	●	●
3.200		10.000	135.00	80.00	40.00	●	●
3.500		10.000	135.00	80.00	40.00	●	●
4.000		10.000	135.00	80.00	40.00	●	●
4.200		10.000	135.00	80.00	40.00	●	●
4.500		10.000	135.00	80.00	40.00	●	●
5.000		10.000	135.00	80.00	40.00	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	5026	5637
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K30/K40	
Surface	○	A
Type	EB 100	EB 100
Drilling depth	120.00	120.00
Cutting direction	right-hand	right-hand
Tolerance	h5	h5
Discount group	123	123
Techn. data page	665	665

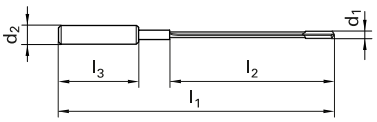


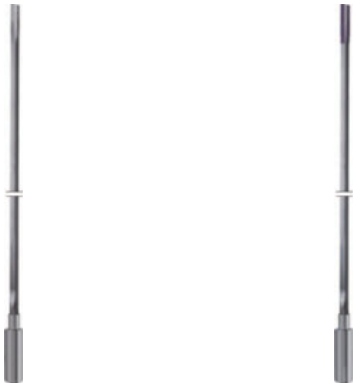


d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
1.500		4.000	165.00	120.00	28.00	●	
1.600		4.000	165.00	120.00	28.00	●	
2.000		4.000	165.00	120.00	28.00	●	●
2.500		10.000	175.00	120.00	40.00	●	●
2.700		10.000	175.00	120.00	40.00	◑	●
3.000		10.000	175.00	120.00	40.00	●	●
3.200		10.000	175.00	120.00	40.00	●	●
3.500		10.000	175.00	120.00	40.00	●	●
4.000		10.000	175.00	120.00	40.00	●	●
4.200		10.000	175.00	120.00	40.00	●	●
4.500		10.000	175.00	120.00	40.00	●	●
5.000		10.000	175.00	120.00	40.00	●	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5021	5638
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K30/K40	
Surface	○	A
Type	EB 100	EB 100
Drilling depth	160.00	160.00
Cutting direction	right-hand	right-hand
Tolerance	h5	h5
Discount group	123	123
Techn. data page	665	666

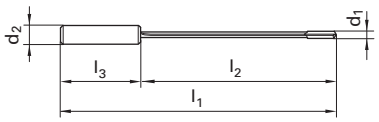




d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
1.500		4.000	205.00	160.00	28.00	●	
1.600		4.000	205.00	160.00	28.00	●	
2.000		4.000	205.00	160.00	28.00	●	●
2.500		10.000	215.00	160.00	40.00	●	●
2.700		10.000	215.00	160.00	40.00	○	●
3.000		10.000	215.00	160.00	40.00	●	●
3.200		10.000	215.00	160.00	40.00	●	●
3.500		10.000	215.00	160.00	40.00	●	●
4.000		10.000	215.00	160.00	40.00	●	●
4.200		10.000	215.00	160.00	40.00	●	●
4.500		10.000	215.00	160.00	40.00	●	●
5.000		10.000	215.00	160.00	40.00	●	●
6.000		16.000	225.00	160.00	48.00	●	●
8.000		16.000	225.00	160.00	48.00	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

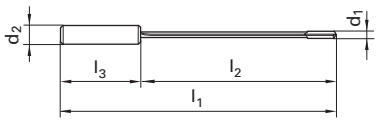
Guhring no.	5018	5639
Standard	Guhring std.	
Tool material	Carbide	
Carbide grade	K15	K30/K40
Surface	S	C
Type	EB 80	EB 80
Drilling depth	20xD	20xD
Cutting direction	right-hand	right-hand
Tolerance	h5	h5
Discount group	123	123
Techn. data page	666	666



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability
3.970	5/32	10.000	150.00	100.00	40.00	●
4.000		12.000	150.00	100.00	45.00	❍ ●
4.200		12.000	160.00	110.00	45.00	❍
4.500		12.000	170.00	120.00	45.00	●
5.000		16.000	180.00	130.00	48.00	● ●
5.156	13/64	16.000	180.00	130.00	48.00	●
5.500		16.000	190.00	140.00	48.00	●
6.000		16.000	210.00	160.00	48.00	● ●
6.350	1/4	16.000	220.00	170.00	48.00	●
6.500		16.000	220.00	170.00	48.00	●
7.000		16.000	235.00	185.00	48.00	● ●
7.938	5/16	16.000	260.00	210.00	48.00	●
8.000		16.000	260.00	210.00	48.00	● ●
9.000		16.000	280.00	230.00	48.00	● ●
9.525	3/8	16.000	290.00	240.00	48.00	●
10.000		20.000	320.00	260.00	50.00	● ●
11.000		20.000	340.00	290.00	50.00	●
11.113	7/16	20.000	340.00	290.00	50.00	●
12.000		20.000	370.00	310.00	50.00	● ●
12.700	1/2	20.000	385.00	330.00	50.00	●

❍ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

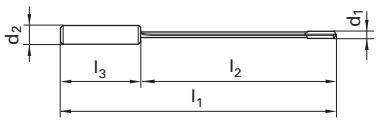
Guhring no.	5460	5640
Standard	Guhring std.	
Tool material	Carbide	
Carbide grade	K15	K30/K40
Surface	S	C
Type	EB 80	EB 80
Drilling depth	30xD	30xD
Cutting direction	right-hand	right-hand
Tolerance	h5	h5
Discount group	123	123
Techn. data page	666	666



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
3.970	5/32	10.000	200.00	155.00	40.00		●
4.000		12.000	200.00	155.00	45.00	●	●
4.200		12.000	210.00	165.00	45.00	❍	
4.500		12.000	220.00	175.00	45.00	●	
5.000		16.000	230.00	182.00	48.00	●	●
5.156	13/64	16.000	230.00	182.00	48.00		●
5.500		16.000	245.00	197.00	48.00	❍	
6.000		16.000	260.00	212.00	48.00	●	●
6.350	1/4	16.000	275.00	227.00	48.00		●
6.500		16.000	275.00	227.00	48.00	●	
7.000		16.000	290.00	242.00	48.00	●	●
7.938	5/16	16.000	320.00	272.00	48.00		●
8.000		16.000	320.00	272.00	48.00	●	●
9.000		16.000	350.00	302.00	48.00	●	●
9.525	3/8	16.000	380.00	330.00	48.00		●
10.000		20.000	400.00	350.00	50.00	●	●
11.000		20.000	430.00	380.00	50.00		●
11.113	7/16	20.000	430.00	380.00	50.00		●
12.000		20.000	450.00	400.00	50.00	●	●
12.700	1/2	20.000	500.00	450.00	50.00		●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

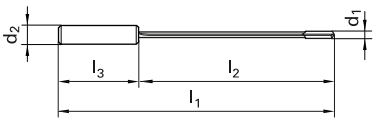
Guhring no.	5022	5641
Standard	Guhring std.	
Tool material	Carbide	
Carbide grade	K15	K30/K40
Surface	S	C
Type	EB 80	EB 80
Drilling depth	40xD	40xD
Cutting direction	right-hand	right-hand
Tolerance	h5	h5
Discount group	123	123
Techn. data page	667	667



d1 mm	d1 inch	d2 mm	l1 mm	l2 mm	l3 mm	Availability	
3.970	5/32	10.000	230.00	185.00	40.00		●
4.000		12.000	230.00	185.00	45.00	●	●
4.200		12.000	240.00	195.00	45.00	●	
4.500		12.000	250.00	205.00	45.00	●	
5.000		16.000	280.00	232.00	48.00	●	●
5.156	13/64	16.000	280.00	232.00	48.00		●
5.500		16.000	300.00	252.00	48.00	●	
6.000		16.000	320.00	272.00	48.00	●	●
6.350	1/4	16.000	340.00	292.00	48.00		●
6.500		16.000	340.00	292.00	48.00	●	
7.000		16.000	370.00	322.00	48.00	●	●
7.938	5/16	16.000	420.00	372.00	48.00		●
8.000		16.000	420.00	372.00	48.00	●	●
9.000		16.000	450.00	402.00	48.00	❍	●
9.525	3/8	16.000	480.00	432.00	48.00		●
10.000		20.000	510.00	460.00	50.00	●	●
11.000		20.000	550.00	500.00	50.00		●
11.113	7/16	20.000	550.00	500.00	50.00		●
12.000		20.000	600.00	550.00	50.00	●	●
12.700	1/2	20.000	635.00	585.00	50.00		●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

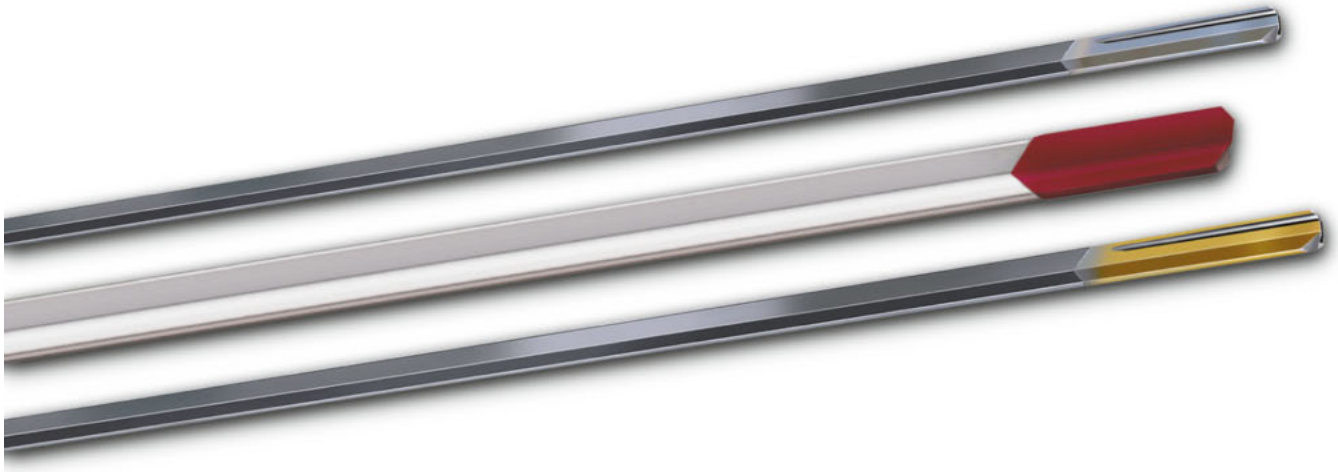
Guhring no.	5023	5642
Standard	Guhring std.	
Tool material	Carbide	
Carbide grade	K15	K30/K40
Surface	S	C
Type	EB 80	EB 80
Drilling depth	80xD	80xD
Cutting direction	right-hand	right-hand
Tolerance	h5	h5
Discount group	123	123
Techn. data page	667	667



d1		d2	l1	l2	l3	Availability	
mm	inch	mm	mm	mm	mm		
4.950		16.000	480.00	432.00	48.00	●	●
5.106		16.000	480.00	432.00	48.00		●
5.950	15/64	16.000	560.00	512.00	48.00	●	●
6.300		16.000	590.00	542.00	48.00		●
6.950		16.000	650.00	602.00	48.00		●
7.888		16.000	740.00	692.00	48.00		●
7.950		16.000	740.00	692.00	48.00	●	●
8.950		16.000	820.00	772.00	48.00		●
9.475		16.000	870.00	822.00	48.00		●
9.950		20.000	910.00	860.00	50.00	●	●
10.950		20.000	995.00	945.00	50.00		●
11.063		20.000	995.00	945.00	50.00		●
11.950		20.000	1080.00	1030.00	50.00	●	●
12.650		20.000	1140.00	1090.00	50.00		●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Your tailor-made single-fluted EB 80 gun drills with brazed solid carbide head! Guhring's super quick offer makes it possible: Special tools within 10 working days!



Design options:

- nominal diameter range 2.0 - 13.9 mm in increments of 0.1 mm
- nominal diameter range 14.0 - 22.0 mm in increments of 0.5 mm
- total length up to 1200 mm, flute length min. 20xD
- head form G
- standard drivers
- carbide grade K15
- bright finish with standard point grind for cast materials and aluminium
- TiN-coating with longitudinal chip breaker for long-chipping steels
- TiCN-coating with standard point grind for alloyed and high-alloyed steels (delivery time 15 working days)

New: Now available for inch sizes from $^{5}/_{32}$ to 1!

The dimensions for Guhring single-fluted gun drills EB 80

Ø nominal mm	in increments of mm	head form	total length	
2.00…13.90	0.1	G	≤ 7.5 mm Ø: 650 max	Prices on inquiry
4.00…13.90	0.1	C	> 7.5 mm Ø: 1200 max	
14.00…22.00	0.5	G	1200 max	
14.00…22.00	0.5	C		

Tool material:	Solid carbide/K15
Surface:	◯ / Ⓢ / Ⓒ

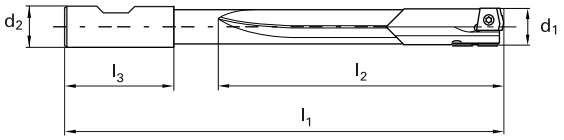
Standard head lengths (mm)

Ø-range	length	Ø-range	length
2.00…2.49	15	10.00…10.99	35
2.50…2.99	18	11.00…17.00	40
3.00…3.99	20	17.01…20.00	45
4.00…5.19	25	20.01…23.00	50
5.20…6.99	30	23.01…26.00	55
7.00…9.99	35	26.01…40.00	65

Flute length: min. 20 x D

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ AlTiN SuperA

Guhring no.	5644
Standard	Guhring std.
Tool material	Carbide
Carbide grade	K20/K40
Surface	S
Type	EB 800
Drilling depth	30xD
Cutting direction	right-hand
Tolerance	h8
Discount group	123
Techn. data page	667

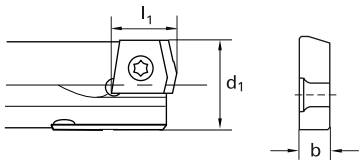


d1		d2	l1	l2	l3	Availability
mm	inch	mm	mm	mm	mm	
12.000		20.000	446.00	384.00	50.00	●
12.700	1/2	20.000	468.00	384.00	50.00	●
14.000		20.000	510.00	448.00	50.00	●
15.000		56.000	548.00	480.00	56.00	●
16.000		25.000	580.00	512.00	56.00	●
18.000		25.000	644.00	576.00	56.00	●
20.000		32.000	712.00	640.00	60.00	●
24.000		32.000	840.00	768.00	60.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	5029
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Cutting direction	right-hand
Discount group	123
Techn. data page	

NEW

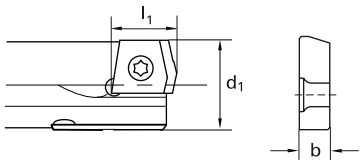


d1	l1	b	Availability
mm	mm	mm	
12.000	10.00	2.800	●
12.100	10.00	2.800	●
12.200	10.00	2.800	●
12.300	10.00	2.800	●
12.400	10.00	2.800	●
12.500	10.00	2.800	●
12.600	10.00	2.800	●
12.700	10.00	2.800	●
12.800	10.00	2.800	●
12.900	10.00	2.800	●
13.000	10.00	2.800	●
13.100	10.00	2.800	●
13.200	10.00	2.800	●
13.300	10.00	2.800	●
13.400	10.00	2.800	●
13.500	10.00	2.800	●
13.600	10.00	2.800	●
13.700	10.00	2.800	●
13.800	10.00	2.800	●
13.900	10.00	2.800	●
14.000	10.00	2.800	●
14.100	10.00	2.800	●
14.200	10.00	2.800	●
14.300	10.00	2.800	●
14.400	10.00	2.800	●
14.500	10.00	2.800	●
14.600	10.00	2.800	●
14.700	10.00	2.800	●
14.800	10.00	2.800	●
14.900	10.00	2.800	●
15.000	10.00	2.800	●
15.100	10.00	2.800	●
15.200	10.00	2.800	●
15.300	10.00	2.800	●
15.400	10.00	2.800	●
15.500	10.00	2.800	●
15.600	10.00	2.800	●
15.700	10.00	2.800	●
15.800	10.00	2.800	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**5029**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Surface	**S**
Cutting direction	**right-hand**
Discount group	**123**
Techn. data page	

NEW

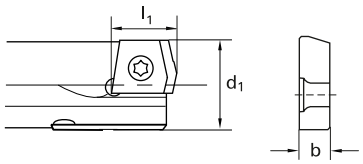


d1	l1	b	Availability
mm	mm	mm	
15.900	10.00	2.800	●
16.000	12.00	3.000	●
16.100	12.00	3.000	●
16.200	12.00	3.000	●
16.300	12.00	3.000	●
16.400	12.00	3.000	●
16.500	12.00	3.000	●
16.600	12.00	3.000	●
16.700	12.00	3.000	●
16.800	12.00	3.000	●
16.900	12.00	3.000	●
17.000	12.00	3.000	●
17.100	12.00	3.000	●
17.200	12.00	3.000	●
17.300	12.00	3.000	●
17.400	12.00	3.000	●
17.500	12.00	3.000	●
17.600	12.00	3.000	●
17.700	12.00	3.000	●
17.800	12.00	3.000	●
17.900	12.00	3.000	●
18.000	12.00	3.000	●
18.100	12.00	3.000	●
18.200	12.00	3.000	●
18.300	12.00	3.000	●
18.400	12.00	3.000	●
18.500	12.00	3.000	●
18.600	12.00	3.000	●
18.700	12.00	3.000	●
18.800	12.00	3.000	●
18.900	12.00	3.000	●
19.000	12.00	3.000	●
19.100	12.00	3.000	●
19.200	12.00	3.000	●
19.300	12.00	3.000	●
19.400	12.00	3.000	●
19.500	12.00	3.000	●
19.600	12.00	3.000	●
19.700	12.00	3.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	5029
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Cutting direction	right-hand
Discount group	123
Techn. data page	

NEW



d1	l1	b	Availability
mm	mm	mm	
19.800	12.00	3.000	●
19.900	12.00	3.000	●
20.000	15.00	4.000	●
20.100	15.00	4.000	●
20.200	15.00	4.000	●
20.300	15.00	4.000	●
20.400	15.00	4.000	●
20.500	15.00	4.000	●
20.600	15.00	4.000	●
20.700	15.00	4.000	●
20.800	15.00	4.000	●
20.900	15.00	4.000	●
21.000	15.00	4.000	●
21.100	15.00	4.000	●
21.200	15.00	4.000	●
21.300	15.00	4.000	●
21.400	15.00	4.000	●
21.500	15.00	4.000	●
21.600	15.00	4.000	●
21.700	15.00	4.000	●
21.800	15.00	4.000	●
21.900	15.00	4.000	●
22.000	15.00	4.000	●
22.100	15.00	4.000	●
22.200	15.00	4.000	●
22.300	15.00	4.000	●
22.400	15.00	4.000	●
22.500	15.00	4.000	●
22.600	15.00	4.000	●
22.700	15.00	4.000	●
22.800	15.00	4.000	●
22.900	15.00	4.000	●
23.000	15.00	4.000	●
23.100	15.00	4.000	●
23.200	15.00	4.000	●
23.300	15.00	4.000	●
23.400	15.00	4.000	●
23.500	15.00	4.000	●
23.600	15.00	4.000	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**5029**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Surface	S
Cutting direction	**right-hand**
Discount group	**123**
Techn. data page	

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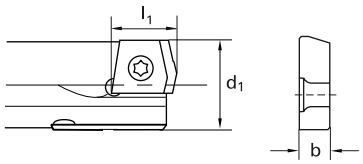
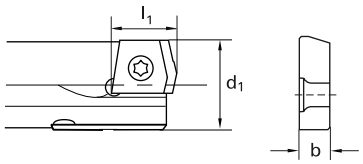


d1	l1	b	Availability
mm	mm	mm	
23.700	15.00	4.000	●
23.800	15.00	4.000	●
23.900	15.00	4.000	●
24.000	15.00	4.000	●
24.100	15.00	4.000	●
24.200	15.00	4.000	●
24.300	15.00	4.000	●
24.400	15.00	4.000	●
24.500	15.00	4.000	●
24.600	15.00	4.000	●
24.700	15.00	4.000	●
24.800	15.00	4.000	●
24.900	15.00	4.000	●
25.000	15.00	4.000	●
25.100	15.00	4.000	●
25.200	15.00	4.000	●
25.300	15.00	4.000	●
25.400	15.00	4.000	●
25.500	15.00	4.000	●
25.600	15.00	4.000	●
25.700	15.00	4.000	●
25.800	15.00	4.000	●
25.900	15.00	4.000	●
26.000	16.00	5.000	●
26.100	16.00	5.000	●
26.200	16.00	5.000	●
26.300	16.00	5.000	●
26.400	16.00	5.000	●
26.500	16.00	5.000	●
26.600	16.00	5.000	●
26.700	16.00	5.000	●
26.800	16.00	5.000	●
26.900	16.00	5.000	●
27.000	16.00	5.000	●
27.100	16.00	5.000	●
27.200	16.00	5.000	●
27.300	16.00	5.000	●
27.400	16.00	5.000	●
27.500	16.00	5.000	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Guhring no.	5029
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Cutting direction	right-hand
Discount group	123
Techn. data page	

NEW

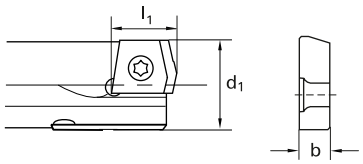


d1	l1	b	Availability
mm	mm	mm	
27.600	16.00	5.000	●
27.700	16.00	5.000	●
27.800	16.00	5.000	●
27.900	16.00	5.000	●
28.000	16.00	5.000	●
28.100	16.00	5.000	●
28.200	16.00	5.000	●
28.300	16.00	5.000	●
28.400	16.00	5.000	●
28.500	16.00	5.000	●
28.600	16.00	5.000	●
28.700	16.00	5.000	●
28.800	16.00	5.000	●
28.900	16.00	5.000	●
29.000	16.00	5.000	●
29.100	16.00	5.000	●
29.200	16.00	5.000	●
29.300	16.00	5.000	●
29.400	16.00	5.000	●
29.500	16.00	5.000	●
29.600	16.00	5.000	●
29.700	16.00	5.000	●
29.800	16.00	5.000	●
29.900	16.00	5.000	●
30.000	18.00	6.000	●
30.100	18.00	6.000	●
30.200	18.00	6.000	●
30.300	18.00	6.000	●
30.400	18.00	6.000	●
30.500	18.00	6.000	●
30.600	18.00	6.000	●
30.700	18.00	6.000	●
30.800	18.00	6.000	●
30.900	18.00	6.000	●
31.000	18.00	6.000	●
31.100	18.00	6.000	●
31.200	18.00	6.000	●
31.300	18.00	6.000	●
31.400	18.00	6.000	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**5029**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Surface	**S**
Cutting direction	**right-hand**
Discount group	**123**
Techn. data page	

NEW

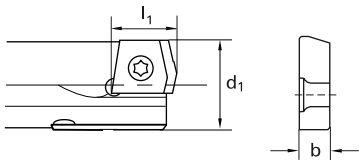


d1	l1	b	Availability
mm	mm	mm	
31.500	18.00	6.000	●
31.600	18.00	6.000	●
31.700	18.00	6.000	●
31.800	18.00	6.000	●
31.900	18.00	6.000	●
32.000	18.00	6.000	●
32.100	18.00	6.000	●
32.200	18.00	6.000	●
32.300	18.00	6.000	●
32.400	18.00	6.000	●
32.500	18.00	6.000	●
32.600	18.00	6.000	●
32.700	18.00	6.000	●
32.800	18.00	6.000	●
32.900	18.00	6.000	●
33.000	18.00	6.000	●
33.100	18.00	6.000	●
33.200	18.00	6.000	●
33.300	18.00	6.000	●
33.400	18.00	6.000	●
33.500	18.00	6.000	●
33.600	18.00	6.000	●
33.700	18.00	6.000	●
33.800	18.00	6.000	●
33.900	18.00	6.000	●
34.000	19.00	6.500	●
34.100	19.00	6.500	●
34.200	19.00	6.500	●
34.300	19.00	6.500	●
34.400	19.00	6.500	●
34.500	19.00	6.500	●
34.600	19.00	6.500	●
34.700	19.00	6.500	●
34.800	19.00	6.500	●
34.900	19.00	6.500	●
35.000	19.00	6.500	●
35.100	19.00	6.500	●
35.200	19.00	6.500	●
35.300	19.00	6.500	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Guhring no.	5029
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Cutting direction	right-hand
Discount group	123
Techn. data page	

NEW

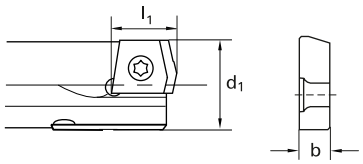


d1 mm	l1 mm	b mm	Availability
35.400	19.00	6.500	●
35.500	19.00	6.500	●
35.600	19.00	6.500	●
35.700	19.00	6.500	●
35.800	19.00	6.500	●
35.900	19.00	6.500	●
36.000	19.00	6.500	●
36.100	19.00	6.500	●
36.200	19.00	6.500	●
36.300	19.00	6.500	●
36.400	19.00	6.500	●
36.500	19.00	6.500	●
36.600	19.00	6.500	●
36.700	19.00	6.500	●
36.800	19.00	6.500	●
36.900	19.00	6.500	●
37.000	19.00	6.500	●
37.100	19.00	6.500	●
37.200	19.00	6.500	●
37.300	19.00	6.500	●
37.400	19.00	6.500	●
37.500	19.00	6.500	●
37.600	19.00	6.500	●
37.700	19.00	6.500	●
37.800	19.00	6.500	●
37.900	19.00	6.500	●
38.000	20.00	7.000	●
38.100	20.00	7.000	●
38.200	20.00	7.000	●
38.300	20.00	7.000	●
38.400	20.00	7.000	●
38.500	20.00	7.000	●
38.600	20.00	7.000	●
38.700	20.00	7.000	●
38.800	20.00	7.000	●
38.900	20.00	7.000	●
39.000	20.00	7.000	●
39.100	20.00	7.000	●
39.200	20.00	7.000	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5029
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Cutting direction	right-hand
Discount group	123
Techn. data page	

NEW

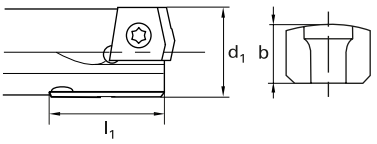


d1	l1	b	Availability
mm	mm	mm	
39.300	20.00	7.000	●
39.400	20.00	7.000	●
39.500	20.00	7.000	●
39.600	20.00	7.000	●
39.700	20.00	7.000	●
39.800	20.00	7.000	●
39.900	20.00	7.000	●
40.000	20.00	7.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	5030
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Cutting direction	
Discount group	123
Techn. data page	

NEW

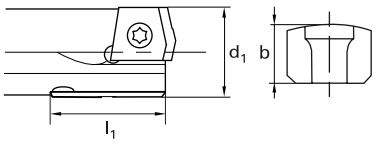


d1	l1	b	Availability
mm	mm	mm	
12.000	19.95	2.150	●
12.100	19.95	2.200	●
12.200	19.95	2.250	●
12.300	19.95	2.300	●
12.400	19.95	2.350	●
12.500	19.95	2.150	●
12.600	19.95	2.200	●
12.700	19.95	2.250	●
12.800	19.95	2.300	●
12.900	19.95	2.350	●
13.000	19.95	2.150	●
13.100	19.95	2.200	●
13.200	19.95	2.250	●
13.300	19.95	2.300	●
13.400	19.95	2.350	●
13.500	19.95	2.150	●
13.600	19.95	2.200	●
13.700	19.95	2.250	●
13.800	19.95	2.300	●
13.900	19.95	2.350	●
14.000	19.95	2.150	●
14.100	19.95	2.200	●
14.200	19.95	2.250	●
14.300	19.95	2.300	●
14.400	19.95	2.350	●
14.500	19.95	2.150	●
14.600	19.95	2.200	●
14.700	19.95	2.250	●
14.800	19.95	2.300	●
14.900	19.95	2.350	●
15.000	19.95	2.150	●
15.100	19.95	2.200	●
15.200	19.95	2.250	●
15.300	19.95	2.300	●
15.400	19.95	2.350	●
15.500	19.95	2.150	●
15.600	19.95	2.200	●
15.700	19.95	2.250	●
15.800	19.95	2.300	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**5030**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Surface	(S)
Cutting direction	
Discount group	**123**
Techn. data page	

NEW

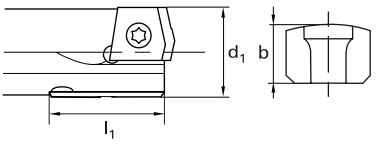


d1	l1	b	Availability
mm	mm	mm	
15.900	19.95	2.350	●
16.000	20.00	2.850	●
16.100	20.00	2.900	●
16.200	20.00	2.950	●
16.300	20.00	3.000	●
16.400	20.00	3.050	●
16.500	20.00	2.850	●
16.600	20.00	2.900	●
16.700	20.00	2.950	●
16.800	20.00	3.000	●
16.900	20.00	3.050	●
17.000	20.00	2.850	●
17.100	20.00	2.900	●
17.200	20.00	2.950	●
17.300	20.00	3.000	●
17.400	20.00	3.050	●
17.500	20.00	2.850	●
17.600	20.00	2.900	●
17.700	20.00	2.950	●
17.800	20.00	3.000	●
17.900	20.00	3.050	●
18.000	20.00	2.850	●
18.100	20.00	2.900	●
18.200	20.00	2.950	●
18.300	20.00	3.000	●
18.400	20.00	3.050	●
18.500	20.00	2.850	●
18.600	20.00	2.900	●
18.700	20.00	2.950	●
18.800	20.00	3.000	●
18.900	20.00	3.050	●
19.000	20.00	2.850	●
19.100	20.00	2.900	●
19.200	20.00	2.950	●
19.300	20.00	3.000	●
19.400	20.00	3.050	●
19.500	20.00	2.850	●
19.600	20.00	2.900	●
19.700	20.00	2.950	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no.	5030
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Cutting direction	
Discount group	123
Techn. data page	

NEW

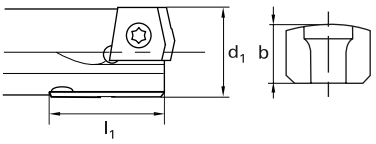


d1	l1	b	Availability
mm	mm	mm	
19.800	20.00	3.000	●
19.900	20.00	3.050	●
20.000	25.00	3.350	●
20.100	25.00	3.400	●
20.200	25.00	3.450	●
20.300	25.00	3.500	●
20.400	25.00	3.550	●
20.500	25.00	3.350	●
20.600	25.00	3.400	●
20.700	25.00	3.450	●
20.800	25.00	3.500	●
20.900	25.00	3.550	●
21.000	25.00	3.350	●
21.100	25.00	3.400	●
21.200	25.00	3.450	●
21.300	25.00	3.500	●
21.400	25.00	3.550	●
21.500	25.00	3.350	●
21.600	25.00	3.400	●
21.700	25.00	3.450	●
21.800	25.00	3.500	●
21.900	25.00	3.550	●
22.000	25.00	3.350	●
22.100	25.00	3.400	●
22.200	25.00	3.450	●
22.300	25.00	3.500	●
22.400	25.00	3.550	●
22.500	25.00	3.350	●
22.600	25.00	3.400	●
22.700	25.00	3.450	●
22.800	25.00	3.500	●
22.900	25.00	3.550	●
23.000	25.00	3.350	●
23.100	25.00	3.400	●
23.200	25.00	3.450	●
23.300	25.00	3.500	●
23.400	25.00	3.550	●
23.500	25.00	3.350	●
23.600	25.00	3.400	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5030
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Cutting direction	
Discount group	123
Techn. data page	

NEW

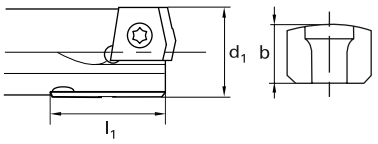


d1	l1	b	Availability
mm	mm	mm	
23.700	25.00	3.450	●
23.800	25.00	3.500	●
23.900	25.00	3.550	●
24.000	25.00	3.350	●
24.100	25.00	3.400	●
24.200	25.00	3.450	●
24.300	25.00	3.500	●
24.400	25.00	3.550	●
24.500	25.00	3.350	●
24.600	25.00	3.400	●
24.700	25.00	3.450	●
24.800	25.00	3.500	●
24.900	25.00	3.550	●
25.000	25.00	3.350	●
25.100	25.00	3.400	●
25.200	25.00	3.450	●
25.300	25.00	3.500	●
25.400	25.00	3.550	●
25.500	25.00	3.350	●
25.600	25.00	3.400	●
25.700	25.00	3.450	●
25.800	25.00	3.500	●
25.900	25.00	3.550	●
26.000	25.00	3.850	●
26.100	25.00	3.900	●
26.200	25.00	3.950	●
26.300	25.00	4.000	●
26.400	25.00	4.050	●
26.500	25.00	3.850	●
26.600	25.00	3.900	●
26.700	25.00	3.950	●
26.800	25.00	4.000	●
26.900	25.00	4.050	●
27.000	25.00	3.850	●
27.100	25.00	3.900	●
27.200	25.00	3.950	●
27.300	25.00	4.000	●
27.400	25.00	4.050	●
27.500	25.00	3.850	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Guhring no.	5030
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Cutting direction	
Discount group	123
Techn. data page	

NEW

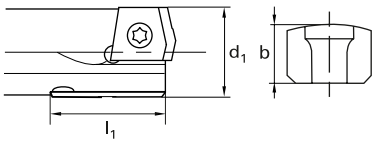


d1	l1	b	Availability
mm	mm	mm	
27.600	25.00	3.900	●
27.700	25.00	3.950	●
27.800	25.00	4.000	●
27.900	25.00	4.050	●
28.000	25.00	3.850	●
28.100	25.00	3.900	●
28.200	25.00	3.950	●
28.300	25.00	4.000	●
28.400	25.00	4.050	●
28.500	25.00	3.850	●
28.600	25.00	3.900	●
28.700	25.00	3.950	●
28.800	25.00	4.000	●
28.900	25.00	4.050	●
29.000	25.00	3.850	●
29.100	25.00	3.900	●
29.200	25.00	3.950	●
29.300	25.00	4.000	●
29.400	25.00	4.050	●
29.500	25.00	3.850	●
29.600	25.00	3.900	●
29.700	25.00	3.950	●
29.800	25.00	4.000	●
29.900	25.00	4.050	●
30.000	30.00	4.350	●
30.100	30.00	4.400	●
30.200	30.00	4.450	●
30.300	30.00	4.500	●
30.400	30.00	4.550	●
30.500	30.00	4.350	●
30.600	30.00	4.400	●
30.700	30.00	4.450	●
30.800	30.00	4.500	●
30.900	30.00	4.550	●
31.000	30.00	4.350	●
31.100	30.00	4.400	●
31.200	30.00	4.450	●
31.300	30.00	4.500	●
31.400	30.00	4.550	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5030
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Cutting direction	
Discount group	123
Techn. data page	

NEW

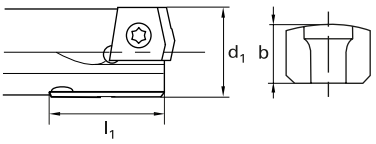


d1	l1	b	Availability
mm	mm	mm	
31.500	30.00	4.350	●
31.600	30.00	4.400	●
31.700	30.00	4.450	●
31.800	30.00	4.500	●
31.900	30.00	4.550	●
32.000	30.00	4.350	●
32.100	30.00	4.400	●
32.200	30.00	4.450	●
32.300	30.00	4.500	●
32.400	30.00	4.550	●
32.500	30.00	4.350	●
32.600	30.00	4.400	●
32.700	30.00	4.450	●
32.800	30.00	4.500	●
32.900	30.00	4.550	●
33.000	30.00	4.350	●
33.100	30.00	4.400	●
33.200	30.00	4.450	●
33.300	30.00	4.500	●
33.400	30.00	4.550	●
33.500	30.00	4.350	●
33.600	30.00	4.400	●
33.700	30.00	4.450	●
33.800	30.00	4.500	●
33.900	30.00	4.550	●
34.000	30.00	4.850	●
34.100	30.00	4.900	●
34.200	30.00	4.950	●
34.300	30.00	5.000	●
34.400	30.00	5.050	●
34.500	30.00	4.850	●
34.600	30.00	4.900	●
34.700	30.00	4.950	●
34.800	30.00	5.000	●
34.900	30.00	5.050	●
35.000	30.00	4.850	●
35.100	30.00	4.900	●
35.200	30.00	4.950	●
35.300	30.00	5.000	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Guhring no.	5030
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Cutting direction	
Discount group	123
Techn. data page	

NEW

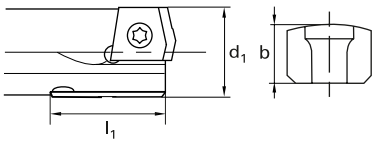


d1 mm	l1 mm	b mm	Availability
35.400	30.00	5.050	●
35.500	30.00	4.850	●
35.600	30.00	4.900	●
35.700	30.00	4.950	●
35.800	30.00	5.000	●
35.900	30.00	5.050	●
36.000	30.00	4.850	●
36.100	30.00	4.900	●
36.200	30.00	4.950	●
36.300	30.00	5.000	●
36.400	30.00	5.050	●
36.500	30.00	4.850	●
36.600	30.00	4.900	●
36.700	30.00	4.950	●
36.800	30.00	5.000	●
36.900	30.00	5.050	●
37.000	30.00	4.850	●
37.100	30.00	4.900	●
37.200	30.00	4.950	●
37.300	30.00	5.000	●
37.400	30.00	5.050	●
37.500	30.00	4.850	●
37.600	30.00	4.900	●
37.700	30.00	4.950	●
37.800	30.00	5.000	●
37.900	30.00	5.050	●
38.000	30.00	5.350	●
38.100	30.00	5.400	●
38.200	30.00	5.450	●
38.300	30.00	5.500	●
38.400	30.00	5.550	●
38.500	30.00	5.350	●
38.600	30.00	5.400	●
38.700	30.00	5.450	●
38.800	30.00	5.500	●
38.900	30.00	5.550	●
39.000	30.00	5.350	●
39.100	30.00	5.400	●
39.200	30.00	5.450	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5030
Standard	Guhring std.
Tool material	Solid carbide
Surface	S
Cutting direction	
Discount group	123
Techn. data page	

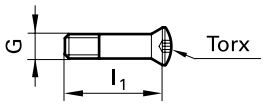
NEW



d1	l1	b	Availability
mm	mm	mm	
39.300	30.00	5.500	●
39.400	30.00	5.550	●
39.500	30.00	5.350	●
39.600	30.00	5.400	●
39.700	30.00	5.450	●
39.800	30.00	5.500	●
39.900	30.00	5.550	●
40.000	30.00	5.600	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**4071**
Standard	**Guhring std.**
Discount group	**140**
Techn. data page	



G	l1	Torx	Code no.	Availability
	mm			
M 1,6	4.00	T5	1.600	●
M 3	6.40	T9	3.002	●
M 4	7.70	T15	4.001	●

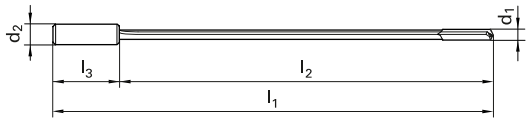
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	**1612**
Standard	**Guhring std.**
Discount group	**140**
Techn. data page	

Torx	Code no.	Availability
T5	5.001	●
T7	7.001	●
T8	8.001	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

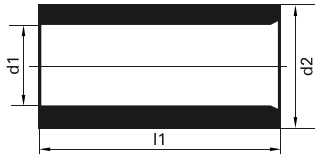
Guhring no.	5019	5643
Standard	Guhring std.	
Tool material	Carbide	
Carbide grade	K15	
Surface	◯	◯
Type	ZB 80	ZB 80
Drilling depth	30xD	30xD
Cutting direction	right-hand	right-hand
Tolerance	h5	h5
Discount group	123	123
Techn. data page	668	668



d1		d2	l1	l2	l3	Availability	
mm	inch	mm	mm	mm	mm		
8.000		16.000	330.00	280.00	48.00	●	●
10.000		20.000	390.00	340.00	50.00	●	●
12.000		20.000	450.00	400.00	50.00	●	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

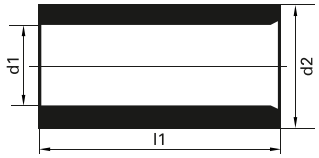
Guhring no.	5747	5748
Standard	Guhring std.	
Tool material	HSS	Solid carbide
Discount group	123	123
Techn. data page		
	NEW	NEW



d1 mm	d2 mm	l1 mm	Availability	
0.900	3.000	9.00	●	●
1.600	4.000	9.00	●	●
2.000	5.000	9.00	●	●
3.000	6.000	12.00	●	●
3.100	6.000	12.00	●	
3.300	6.000	12.00	●	
3.400	7.000	12.00	●	
3.500	7.000	12.00	●	
3.700	7.000	12.00	●	
3.750	7.000	12.00		●
3.800	7.000	12.00	●	
4.000	7.000	12.00	●	●
4.100	8.000	12.00	●	
4.300	8.000	12.00	●	
4.600	8.000	12.00	●	
4.800	8.000	12.00	●	
5.000	8.000	12.00	●	●
5.020	8.000	12.00	●	
5.100	10.000	16.00	●	
5.300	10.000	16.00	●	
5.600	10.000	16.00	●	
5.800	10.000	16.00	●	
6.000	10.000	16.00	●	●
6.100	12.000	16.00	●	
6.300	12.000	16.00	●	
6.600	12.000	16.00	●	
6.800	12.000	16.00	●	
7.100	12.000	16.00	●	
7.400	12.000	16.00	●	
7.600	12.000	16.00	●	
7.800	12.000	16.00	●	
7.830	12.000	16.00	●	
8.000	12.000	16.00	●	●
8.020	12.000	16.00	●	
8.100	15.000	20.00	●	
8.500	15.000	20.00	●	
8.800	15.000	20.00	●	
9.100	15.000	20.00	●	
9.500	15.000	20.00	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	5747	5748
Standard	Guhring std.	
Tool material	HSS	Solid carbide
Discount group	123	123
Techn. data page		
	NEW	NEW

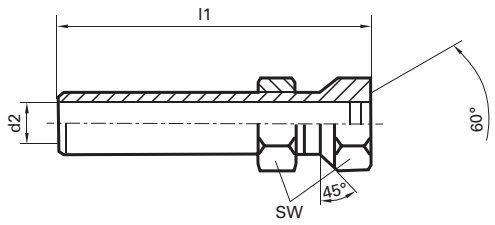


d1 mm	d2 mm	l1 mm	Availability	
9.800	15.000	20.00	●	
10.000	15.000	20.00	●	●
10.100	18.000	20.00	●	
10.600	18.000	20.00	●	
11.100	18.000	20.00	●	
11.600	18.000	20.00	●	
12.000	18.000	20.00	●	●
12.020	18.000	20.00	●	
12.100	22.000	28.00	●	
12.600	22.000	28.00	●	
12.700	22.000	28.00	●	
12.800	22.000	28.00	●	
14.000	22.000	28.00	●	●
16.000	26.000	28.00	●	●
19.000	30.000	36.00	●	
20.000	30.000	36.00		●
24.000	35.000	36.00	●	●
30.000	42.000	45.00	●	●
34.000	48.000	45.00	●	●
40.000	55.000	55.00	●	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	**5754**
Standard	**Guhring std.**
Discount group	**123**
	Minimum order quantity 5 pieces

NEW

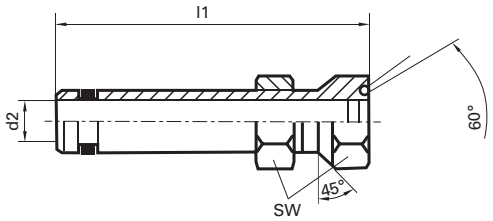


for threads	d2	l1	SW	Code no.	Availability
	mm	mm			
M 6 X0,5	3.500	26.00	9.00	6.000	●
M10 X1	6.000	38.00	13.00	10.000	●
M16 X1,5	10.000	57.00	22.00	16.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**5755**
Standard	**Guhring std.**
Discount group	**123**
	Minimum order quantity 5 pieces

NEW



for threads	d2	l1	SW	Code no.	Availability
	mm	mm			
M 6 X0,5	3.500	45.00	9.00	6.000	●
M10 X1	6.000	50.00	13.00	10.000	●
M16 X1,5	10.000	65.00	22.00	16.000	●
M24 X1,5	16.000	90.00	30.00	24.000	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

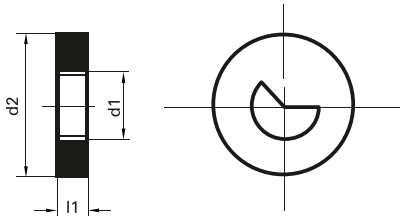
Code no.	for gun drill with diameter nominal d1	
	from mm	to mm
1,900	2.000	2.099
2,000	2.100	2.199
2,100	2.200	2.299
2,200	2.300	2.399
2,300	2.400	2.499
2,400	2.500	2.599
2,500	2.600	2.699
2,600	2.700	2.799
2,700	2.800	2.899
2,800	2.900	3.099
3,000	3.100	3.359
3,200	3.360	3.459
3,300	3.460	3.559
3,400	3.560	3.799
3,600	3.800	3.959
3,700	3.960	4.259
4,000	4.260	4.499
4,200	4.500	4.749
4,500	4.750	4.999
4,700	5.000	5.249
5,000	5.250	5.499
5,200	5.500	5.749
5,500	5.750	5.999
5,700	6.000	6.249
6,000	6.250	6.449
6,200	6.450	6.749
6,500	6.750	6.999
6,700	7.000	7.299
7,000	7.300	7.599
7,300	7.600	7.799
7,500	7.800	7.999
7,700	8.000	8.299
8,000	8.300	8.699
8,400	8.700	8.999
8,700	9.000	9.299
9,000	9.300	9.699

Code no.	for gun drill with diameter nominal d1	
	from mm	to mm
9,400	9.700	9.999
9,700	10.000	10.299
10,000	10.300	10.799
10,500	10.800	11.299
11,000	11.300	11.799
11,500	11.800	12.399
12,000	12.400	12.899
12,500	12.900	13.399
13,000	13.400	13.899
13,500	13.900	14.399
14,000	14.400	14.899
14,500	14.900	15.399
15,000	15.400	15.899
15,500	15.900	16.399
16,000	16.400	16.899
16,500	16.900	17.399
17,000	17.400	17.899
17,500	17.900	18.399
18,000	18.400	19.509
19,000	19.510	20.509
20,000	20.510	21.509
21,000	21.510	22.609
22,000	22.610	23.609
23,000	23.610	24.609
24,000	24.610	25.609
25,000	25.610	26.609
26,000	26.610	27.609
27,000	27.610	28.609
28,000	28.610	29.609
29,000	29.610	30.609
30,000	30.610	32.609
32,000	32.610	34.699
34,000	34.700	36.699
36,000	36.700	38.699
38,000	38.700	40.000

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	5752
Standard	Guhring std.
Tool material	Vulkollan
Discount group	123
	Minimum order quantity 5 pieces

NEW

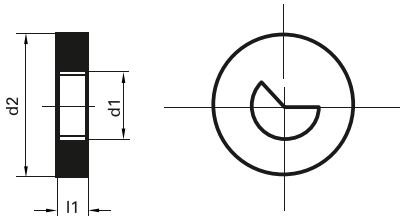


d1 mm	d2 mm	l1 mm	Code no.	Availability
3,100-3,359	20.000	4.00	3.000	●
3,460-3,559	20.000	4.00	3.300	●
3,560-3,799	20.000	4.00	3.400	●
3,800-3,959	20.000	4.00	3.600	●
3,960-4,259	20.000	4.00	3.700	●
4,260-4,499	20.000	4.00	4.000	●
4,500-4,749	20.000	4.00	4.200	●
4,750-4,999	20.000	4.00	4.500	●
5,000-5,249	20.000	4.00	4.700	●
5,250-5,499	32.000	4.00	5.000	●
5,500-5,749	32.000	4.00	5.200	●
5,750-5,999	32.000	4.00	5.500	●
6,000-6,249	32.000	4.00	5.700	●
6,250-6,449	32.000	4.00	6.000	●
6,450-6,749	32.000	4.00	6.200	●
6,750-6,999	32.000	4.00	6.500	●
7,000-7,299	32.000	4.00	6.700	●
7,300-7,599	32.000	4.00	7.000	●
7,600-7,799	32.000	4.00	7.300	●
7,800-7,999	32.000	4.00	7.500	●
8,000-8,299	32.000	4.00	7.700	●
8,300-8,699	32.000	4.00	8.000	●
8,700-8,999	32.000	4.00	8.400	●
9,000-9,299	32.000	4.00	8.700	●
9,300-9,699	32.000	4.00	9.000	●
9,700-9,999	32.000	4.00	9.400	●
10,000-10,299	32.000	4.00	9.700	●
10,300-10,799	32.000	4.00	10.000	●
10,800-11,299	32.000	4.00	10.500	●
11,300-11,799	32.000	4.00	11.000	●
11,800-12,399	32.000	4.00	11.500	●
12,400-12,899	32.000	4.00	12.000	●
13,900-14,399	32.000	4.00	13.500	●
15,900-16,399	40.000	4.00	15.500	●
19,510-20,509	40.000	4.00	19.000	●
23,610-24,609	40.000	4.00	23.000	●
25,610-26,609	40.000	4.00	25.000	●
29,610-30,609	90.000	4.00	29.000	●
32,610-34,699	90.000	4.00	32.000	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5752
Standard	Guhring std.
Tool material	Vulkollan
Discount group	123
	Minimum order quantity 5 pieces

NEW

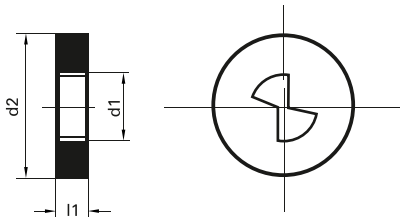


d1	d2	l1	Code no.	Availability
mm	mm	mm		
38,700-40,000	90.000	4.00	38.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**5753**
Standard	**Guhring std.**
Tool material	**Vulkollan**
Discount group	**123**
	Minimum order quantity 5 pieces

NEW

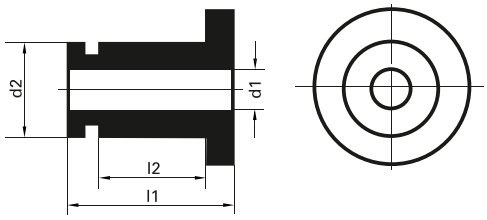


d1	d2	l1	Code no.	Availability
mm	mm	mm		
6,000-6,249	32.000	4.00	5.700	●
8,000-8,299	32.000	4.00	7.700	●
10,000-10,299	32.000	4.00	9.700	●
11,800-12,399	32.000	4.00	11.500	●
13,900-14,399	32.000	4.00	13.500	●
15,900-16,399	40.000	4.00	15.500	●
19,510-20,509	40.000	4.00	19.000	●
23,610-24,609	40.000	4.00	23.000	●
25,610-26,609	40.000	4.00	25.000	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5749
Standard	Guhring std.
Tool material	Vulkollan
Discount group	123
	Minimum order quantity 5 pieces

NEW

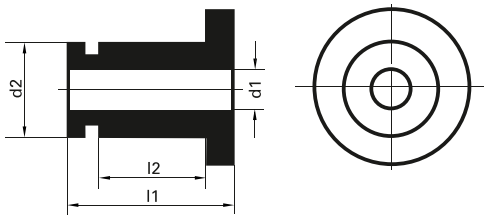


d1 mm	d2 mm	l1 mm	l2 mm	Code no.	Availability
3,960-4,259	20.000	22.00	12.00	203.700	●
6,000-6,249	20.000	22.00	12.00	205.700	●
10,000-10,299	20.000	22.00	12.00	209.700	●
3,100-3,359	30.000	26.00	13.00	303.000	●
3,460-3,559	30.000	26.00	13.00	303.300	●
3,560-3,799	30.000	26.00	13.00	303.400	●
3,800-3,959	30.000	26.00	13.00	303.600	●
3,960-4,259	30.000	26.00	13.00	303.700	●
4,260-4,499	30.000	26.00	13.00	304.000	●
4,500-4,749	30.000	26.00	13.00	304.200	●
4,750- 4,999	30.000	26.00	13.00	304.500	●
5,000- 5,249	30.000	26.00	13.00	304.700	●
5,250-5,499	30.000	26.00	13.00	305.000	●
5,500-5,749	30.000	26.00	13.00	305.200	●
5,750- 5,999	30.000	26.00	13.00	305.500	●
6,000-6,249	30.000	26.00	13.00	305.700	●
8,000-8,299	30.000	26.00	13.00	307.700	●
10,000-10,299	30.000	26.00	13.00	309.700	●
11,800-12,399	30.000	26.00	13.00	311.500	●
13,900-14,399	30.000	26.00	13.00	313.500	●
15,400-15,899	30.000	26.00	13.00	315.000	●
15,900-16,399	30.000	26.00	13.00	315.500	●
17,900-18,399	30.000	26.00	13.00	316.600	●
17,900-18,399	30.000	26.00	13.00	317.500	●
19,510-20,509	30.000	26.00	13.00	319.000	●
23,610-24,609	30.000	26.00	13.00	323.000	●
5,000-5,249	45.000	26.00	16.00	404.700	●
7,800-7,999	45.000	26.00	16.00	407.500	●
8,000-8,299	45.000	26.00	16.00	407.700	●
9,700-9,999	45.000	26.00	16.00	409.400	●
10,000-10,299	45.000	26.00	16.00	409.700	●
11,800-12,399	45.000	26.00	16.00	411.500	●
17,900-18,399	45.000	26.00	16.00	417.500	●
18,400-19,509	45.000	26.00	16.00	418.000	●
19,510-20,509	45.000	26.00	16.00	419.000	●
24,610-25,609	45.000	26.00	16.00	424.000	●
25,610-26,609	45.000	26.00	16.00	425.000	●
26,610-27,609	45.000	26.00	16.00	426.000	●
27,610-28,609	45.000	26.00	16.00	427.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	5749
Standard	Guhring std.
Tool material	Vulkollan
Discount group	123
	Minimum order quantity 5 pieces

NEW

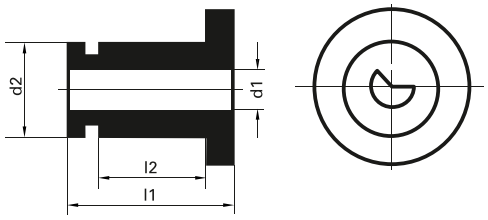


d1	d2	l1	l2	Code no.	Availability
mm	mm	mm	mm		
29,610-30,609	45.000	26.00	16.00	429.000	●
32,610-34,699	45.000	26.00	16.00	432.000	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5750
Standard	Guhring std.
Tool material	Vulkollan
Discount group	123
	Minimum order quantity 5 pieces

NEW

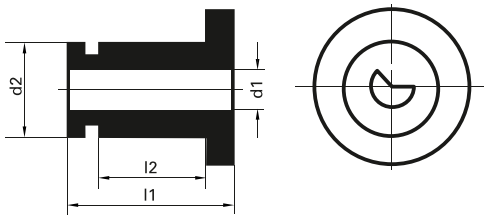


d1 mm	d2 mm	l1 mm	l2 mm	Code no.	Availability
3,960-4,259	20.000	20.00	12.00	203.700	●
5,000-5,249	20.000	20.00	12.00	204.700	●
8,300-8,699	20.000	20.00	12.00	208.000	●
11,800-12,399	20.000	20.00	12.00	211.500	●
3,100-3,359	30.000	26.00	13.00	303.000	●
3,460-3,559	30.000	26.00	13.00	303.300	●
3,560-3,799	30.000	26.00	13.00	303.400	●
3,800-3,959	30.000	26.00	13.00	303.600	●
3,960-4,259	30.000	26.00	13.00	303.700	●
4,260-4,499	30.000	26.00	13.00	304.000	●
4,500-4,749	30.000	26.00	13.00	304.200	●
4,750-4,999	30.000	26.00	13.00	304.500	●
5,000-5,249	30.000	26.00	13.00	304.700	●
5,250-5,499	30.000	26.00	13.00	305.000	●
5,500-5,749	30.000	26.00	13.00	305.200	●
5,750-5,999	30.000	26.00	13.00	305.500	●
6,000-6,249	30.000	26.00	13.00	305.700	●
6,250-6,449	30.000	26.00	13.00	306.000	●
6,450-6,749	30.000	26.00	13.00	306.200	●
6,750-6,999	30.000	26.00	13.00	306.500	●
7,000-7,299	30.000	26.00	13.00	306.700	●
7,300-7,599	30.000	26.00	13.00	307.000	●
7,600-7,799	30.000	26.00	13.00	307.300	●
7,800-7,999	30.000	26.00	13.00	307.500	●
8,000-8,299	30.000	26.00	13.00	307.700	●
8,300-8,699	30.000	26.00	13.00	308.000	●
8,700-8,999	30.000	26.00	13.00	308.400	●
9,000-9,299	30.000	26.00	13.00	308.700	●
9,300-9,699	30.000	26.00	13.00	309.000	●
9,700-9,999	30.000	26.00	13.00	309.400	●
10,000-10,299	30.000	26.00	13.00	309.700	●
10,300-10,799	30.000	26.00	13.00	310.000	●
10,800-11,299	30.000	26.00	13.00	310.500	●
11,300-11,799	30.000	26.00	13.00	311.000	●
11,800-12,399	30.000	26.00	13.00	311.500	●
12,400-12,899	30.000	26.00	13.00	312.000	●
13,900-14,399	30.000	26.00	13.00	313.500	●
15,400-15,899	30.000	26.00	13.00	315.000	●
15,900-16,399	30.000	26.00	13.00	315.500	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**5750**
Standard	**Guhring std.**
Tool material	**Vulkollan**
Discount group	**123**
	Minimum order quantity 5 pieces

NEW

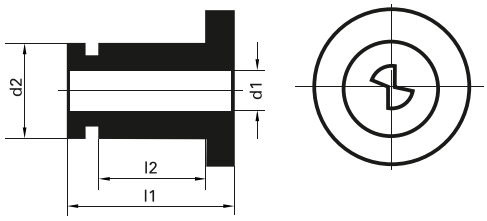


d1	d2	l1	l2	Code no.	Availability
mm	mm	mm	mm		
19,510-20,509	30.000	26.00	13.00	319.000	●
23,610-24,609	45.000	26.00	16.00	423.000	●
25,610-26,609	45.000	26.00	16.00	425.000	●
29,610-30,609	45.000	26.00	16.00	429.000	●
32,610-34,699	45.000	26.00	16.00	432.000	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	5751
Standard	Guhring std.
Tool material	Vulkollan
Discount group	123
	Minimum order quantity 5 pieces

NEW



d1	d2	l1	l2	Code no.	Availability
mm	mm	mm	mm		
6,000-6,249	20.000	20.00	12.00	205.700	●
10,000-10,299	20.000	20.00	12.00	209.700	●
8,000-8,299	30.000	26.00	13.00	307.700	●
9,700-9,999	30.000	26.00	13.00	309.400	●
11,800-12,399	30.000	26.00	13.00	311.500	●
15,400-15,899	30.000	26.00	13.00	315.000	●
15,900-16,399	30.000	26.00	13.00	315.500	●
17,900-18,399	30.000	26.00	13.00	316.600	●
17,900-18,399	30.000	26.00	13.00	317.500	●
13,900-14,399	45.000	26.00	16.00	413.500	●
19,510-20,509	45.000	26.00	16.00	419.000	●
23,610-24,609	45.000	26.00	16.00	423.000	●
24,610-25,609	45.000	26.00	16.00	424.000	●
25,610-26,609	45.000	26.00	16.00	425.000	●
26,610-27,609	45.000	26.00	16.00	426.000	●
27,610-28,609	45.000	26.00	16.00	427.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

suitable for almost every material,

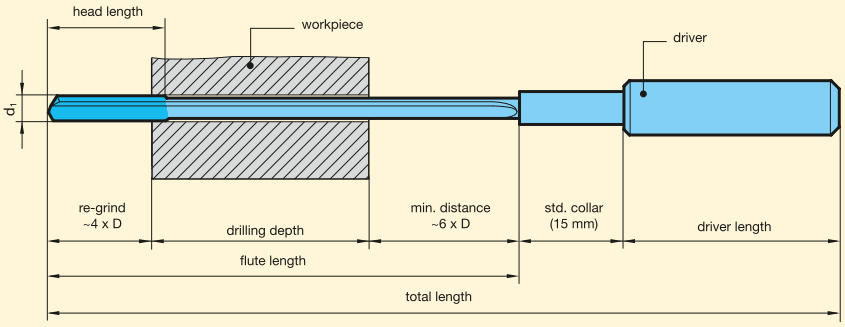
Stock program from Ø 1,0 to 12,0 mm

Special solutions from Ø 0,9 to 12,0 mm, flute length max. 500 mm

For certain materials a coating is required, as the successful application of gun drills with a bright surface finish cannot be guaranteed.
For coating definitions see GuhringNavigator.

S TiN-coat F FIRE M MolyGlide A TiAlN SuperA a TiAlN nanoA

The dimensions required to calculate the length for conventional machine tools



EB 100
Head forms

(Position of supporting strips.
Special head forms
on request.)

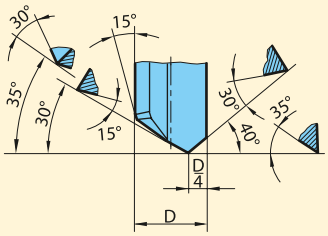
suitable for all materials,
but for smaller hole tolerances

suitable for difficult-to-machine
materials, i. e. high-alloyed steel

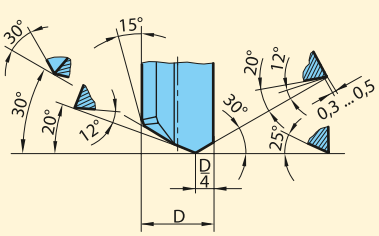
EB 100
Standard point grinds

(special point grinds
on request)

Ø 2…4.00 mm



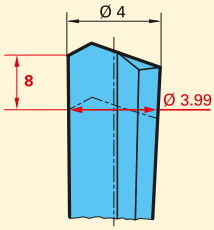
Ø > 4.01…20 mm



EB 100
Back taper ratio

1:800 (standard)

(dimensions
in mm)



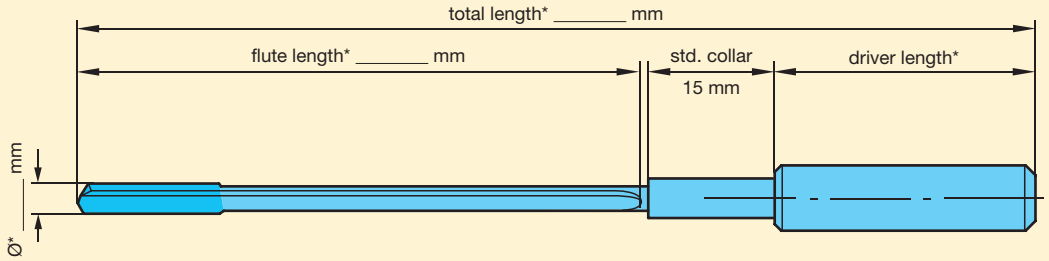
Fax Inquiry / Order
simply photo-copy, complete and fax…

❑ **Inquiry** ❑ **Order** ❑ **Repeat order, no. of initial order**

Deep hole gun drill: ❑ **EB 100**

Required no. of pieces: Tool _____ pieces

* Ø 0,9 - 12,0 mm
Flute length max. 500 mm
Total length and driver length are dependent on the driver selected



Drawing of lay-out

required in special cases only

Driver: ❑ **no** ❑ **Code no. _____** ❑ **to enclosed drawing**

Coating: ❑ **TiN** Ⓢ ❑ **Fire** Ⓕ ❑ **MolyGlide** Ⓜ ❑ **TiAlN nanoA** Ⓐ ❑ **TiAlN SuperA** Ⓐ ❑ _____

Workpiece: **Drilling depth: ____ Hole tolerance: _____ Material/designation: _____ _____**

Machine type: ❑ **Deep hole drilling machine** ❑ **Conventional machine tool**
❑ **Pilot hole** ❑ **Drilling bush**

Coolant: ❑ **Deep hole drilling oil** ❑ **Soluble oil**
Pressure _____ bar Quantity _____ l/min

Company: _____ **Company stamp:**

Telephone/fax: _____

Contact: _____ **Signature:** _____

suitable for almost every material,

Stock program from Ø 3,97 to 12,7 mm

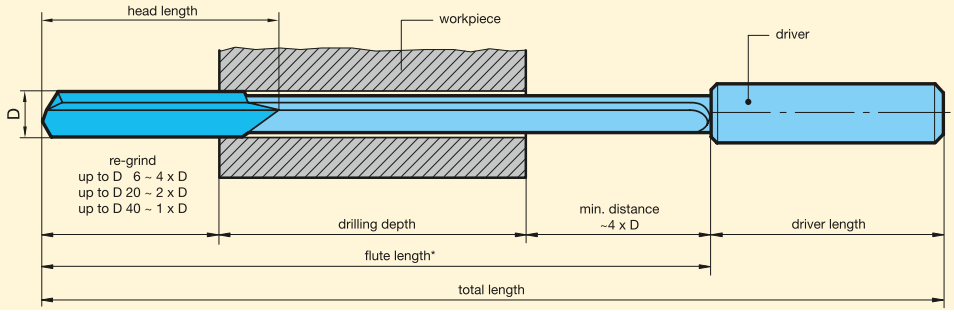
Special solutions from Ø 2,0 to 40,0 mm, total length max. 3000 mm

For certain materials a coating is required, as the successful application of gun drills with a bright surface finish cannot be guaranteed.
For coating definitions see GuhringNavigator.
On request we can apply PCD or PCB cutting edges from Ø 6.0 – 20.00 mm. This improves the tool life in AlSi alloys many times over.

(S) TiN (F) FIRE (M) MolyGlide (C) TiCN

The dimensions required to calculate the length for conventional machine tools

* max. flute length per tool
40 x D, for larger drilling depths apply two tools.
(i.e. Ø 10 x 450 and Ø 9.95 x 850 mm)



EB 80 Head forms (position of supporting strips)

Standard designs

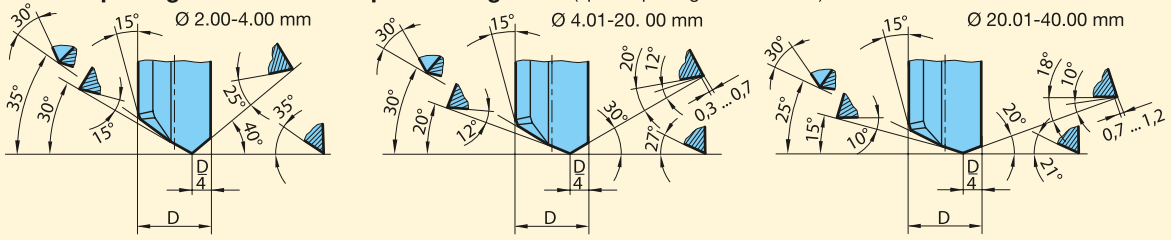
G Suitable for all materials, but for smaller hole tolerances

C Primarily suitable for aluminium. Nominal tool diameter measurable.

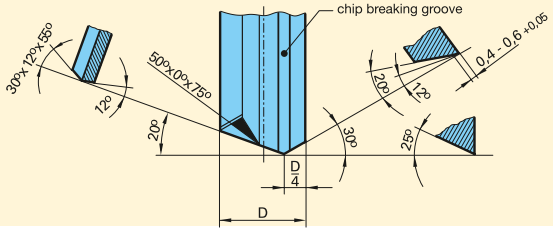
Special designs e.g.

E **A** **D**

EB 80 standard point grinds without chip breaker groove (special point grinds available)



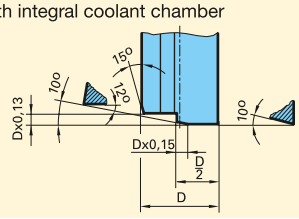
EB 80 special point grind with chip breaker groove (standard Guhring no. 5018, 5460, 5022 and 5023)



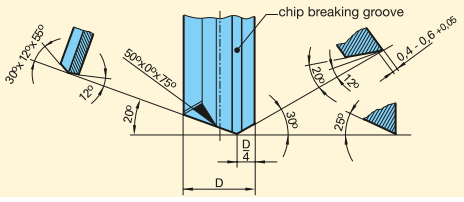
Standard head lengths (mm)			
Ø-range	length	Ø-range	length
2.00…2.49	15	10.00…10.99	35
2.50…2.99	18	11.00…17.00	40
3.00…3.99	20	17.01…20.00	45
4.00…5.19	25	20.01…23.00	50
5.20…6.99	30	23.01…26.00	55
7.00…9.99	35	26.01…40.00	65

Special point grind examples for single-fluted EB 80 (additional point grinds on request)

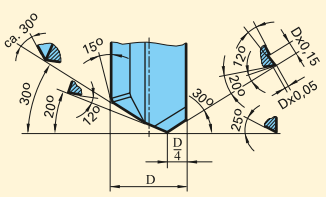
with integral coolant chamber



with chip breaking groove



chip breaking groove with chip guiding step



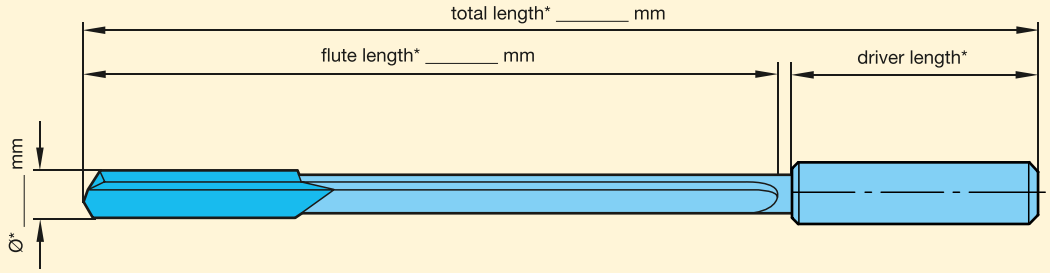
Fax Inquiry / Order
simply photo-copy, complete and fax...

❑ **Inquiry** ❑ **Order** ❑ **Repeat order, no. of initial order**

Deep hole gun drill: ❑ **EB 80**

Required no. of pieces: Tool_____ pieces

* Ø 2,0 - 40,0 mm
Total length max. 3000 mm
Total length, flute length and driver length
are dependent on the driver selected



Drawing of lay-out

required in special cases only

Driver: ❑ **no** ❑ **Code no.** _____ ❑ **to enclosed drawing**

Coating: ❑ **TiN** (S) ❑ **Fire** (F) ❑ **TiCN** (C) ❑ **MolyGlide** (M) ❑ _____

Workpiece: **Drilling depth:** ___ **Hole tolerance:** _____ **Material/designation:** _____

Machine type: ❑ **Deep hole drilling machine** ❑ **Conventional machine tool**
❑ **Pilot hole** ❑ **Drilling bush**

Coolant: ❑ **Deep hole drilling oil** ❑ **Soluble oil**
Pressure _____ **bar** **Quantity** _____ **l/min**

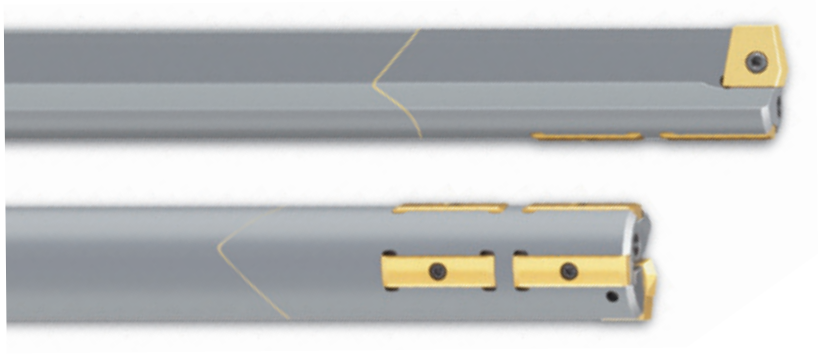
Company: _____ **Company stamp:**

Telephone/fax: _____

Contact: _____ **Signature:** _____

suitable for almost every material,

Stock program from Ø 12.0 to 24.0 mm TiN-coated version,
Special solutions from Ø 12.0 to 40.0 mm, total length max. 3000 mm



Guhring single-fluted gun drills with interchangeable inserts and supporting strips are also produced as special tools according to customer requirements. They are suitable for nearly every material and available from diameter 16.0 to 40.0 mm up to a maximum total length of 3000 mm.

Your special advantages are:

- The interchangeable component technology for inserts and supporting strips makes any combination of carbide grade and coating possible.
- The precision interchangeable inserts and supporting strips eliminate complicated adjustments.
- The precision supporting strips are produced in a special carbide for your individual deep drilling task. They can be reverse-fitted, providing double tool life. In addition, they can be provided with any of the Guhring coatings.
- Thanks to the precision insert seatings and the interchangeable inserts there is only a small number of interchangeable components. The tool is therefore extremely rigid.
- Expensive stoppages are eliminated because the worn components can be replaced without removing the tool from the machine.
- The expensive re-grinding process is eliminated thanks to the interchangeable insert technology.
- The application orientated selection of the most suitable interchangeable insert always ensures optimal chip breaking – even in problematic materials.
- Specifically optimised to your individual deep drilling task, the precision inter-changeable inserts are also produced in a special carbide. In addition, all Gühring coatings are available.
- Within the diameter range it is possible to modify the nominal diameter at any time by simply interchanging the individual components.
- The driver is produced in heat-treatable steel acc. to:
  - DIN 6535 HA
  - DIN 6535 HB
  - DIN 6535 HE
  - DIN 1835 E

  Also, all the forms generally required for deep drilling machines are possible to be manufactured.

Every single-fluted gun drill EB 800 with interchangeable parts – from the ex-stock range as well as special tools – can be modified in the diameter range below.

Size	Diameter range (mm)	Size	Diameter range (mm)	Size	Diameter range (mm)
0.00	12.00 - 12.49	2.05	22.50 - 22.99	4.06	33.00 - 33.49
0.01	12.50 - 12.99	2.06	23.00 - 23.49	4.07	33.50 - 33.99
0.02	13.00 - 13.49	2.07	23.50 - 23.99	5.00	34.00 - 34.49
0.03	13.50 - 13.99	2.08	24.00 - 24.49	5.01	34.50 - 34.99
0.04	14.00 - 14.49	2.09	24.50 - 24.99	5.02	35.00 - 35.49
0.05	14.50 - 14.99	2.10	25.00 - 25.49	5.03	35.50 - 35.99
0.06	15.00 - 15.49	2.11	25.50 - 25.99	5.04	36.00 - 36.49
0.07	15.50 - 15.99	3.00	26.00 - 26.49	5.05	36.50 - 36.99
1.00	16.00 - 16.49	3.01	26.50 - 26.99	5.06	37.00 - 37.49
1.01	16.50 - 16.99	3.02	27.00 - 27.49	5.07	37.50 - 37.99
1.02	17.00 - 17.49	3.03	27.50 - 27.99	6.00	38.00 - 38.49
1.03	17.50 - 17.99	3.04	28.00 - 28.49	6.01	38.50 - 38.99
1.04	18.00 - 18.49	3.05	28.50 - 28.99	6.02	39.00 - 39.49
1.05	18.50 - 18.99	3.06	29.00 - 29.49	6.03	39.50 - 40.00
1.06	19.00 - 19.49	3.07	29.50 - 29.99		
1.07	19.50 - 19.99	4.00	30.00 - 30.49		
2.00	20.00 - 20.49	4.01	30.50 - 30.99		
2.01	20.50 - 20.99	4.02	31.00 - 31.49		
2.02	21.00 - 21.49	4.03	31.50 - 31.99		
2.03	21.50 - 21.99	4.04	32.00 - 32.49		
2.04	22.00 - 22.49	4.05	32.50 - 32.99		

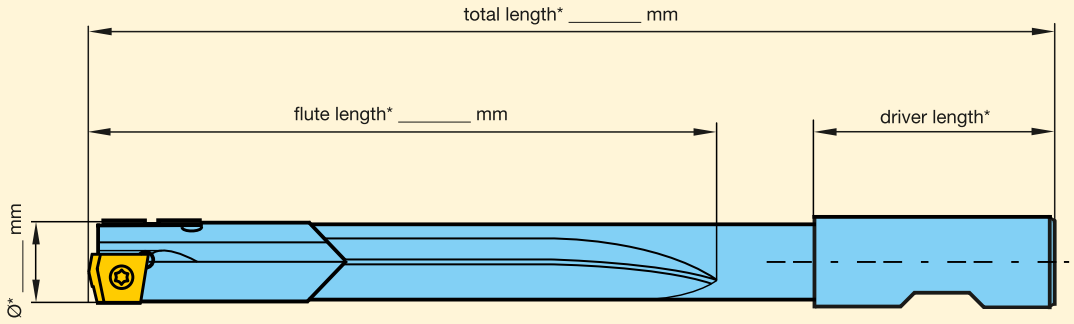
Fax Inquiry / Order
simply photo-copy, complete and fax...

❑ **Inquiry** ❑ **Order** ❑ **Repeat order, no. of initial order**

Deep hole gun drill: ❑ **EB 800**

Required no. of pieces: **Tool** _____ **pieces**
Interchangeable inserts _____ **pieces**
Guiding bar _____ **pieces**

* Ø 12,0 - 40,0 mm
Flute length min. 15 x D
Total length max. 3000 mm
Total length and driver length are dependent on the driver selected



Drawing of lay-out

required in special cases only

Driver: ❑ **no** ❑ **Code no.** _____ ❑ **to enclosed drawing**

Coating: ❑ **TiN** Ⓢ ❑ **Fire** Ⓕ ❑ **MolyGlide** Ⓜ ❑ **TiCN** Ⓒ ❑ **TiAlN** Ⓐ ❑ **TiAlN SuperA** Ⓐ ❑ **TiAlN nanoA** ⓐ

Workpiece: **Drilling depth:** _____ **Hole tolerance:** _____ **Material/designation:** _____

Surface finish: _____ **Projecting edges :** ❑ **no** ❑ **yes** _____

Machine type: ❑ **Deep hole drilling machine** ❑ **Conventional machine tool**
❑ **Pilot hole** ❑ **Drilling bush**

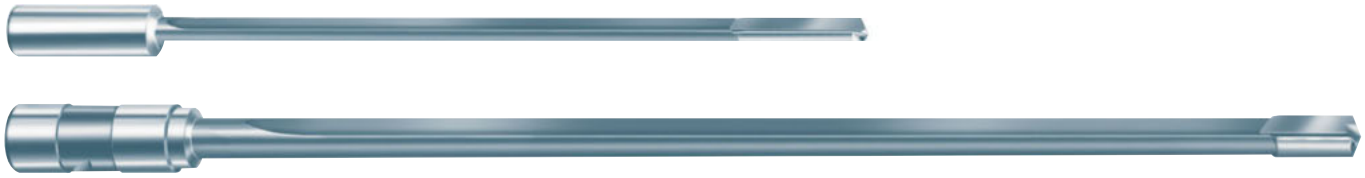
Coolant: ❑ **Deep hole drilling oil** ❑ **Soluble oil**
Pressure _____ **bar** **Quantity** _____ **l/min**

Company: _____ **Company stamp:**

Telephone/fax: _____

Contact: _____ **Signature:** _____

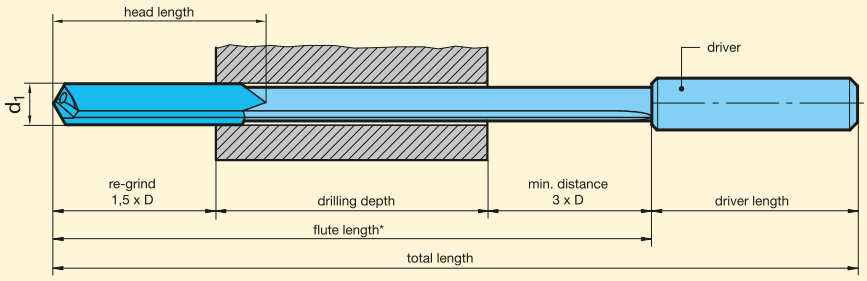
suitable for cast iron, aluminium and short-chipping non-ferrous metals
Stock program from Ø 8,0 to 12 mm for drilling depth to 30 x D
Special solutions from Ø 6,0 to 27,0 mm, total length max. 1000 mm



MolyGlide
For certain materials a coating is required, as the successful application of gun drills with a bright surface finish cannot be guaranteed. For chilled cast iron and Al cast alloys with a Si-content above 10% we recommend our MolyGlide-coating. However, two-fluted gun drills type ZB80 can only be coated with MolyGlide up to an overall length of maximum 500 mm due to the technical production process. See also the GuhringNavigator.

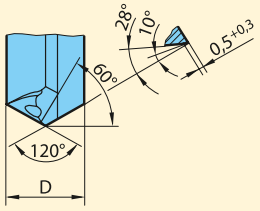
The dimensions required to calculate the length for conventional machine tools

* max. flute length per tool 40 x D, for larger drilling depths apply two tools. (i.e. Ø 10 x 450 and Ø 9.95 x 850 mm)

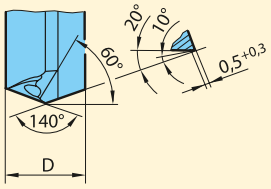


ZB 80
Standard point grinds
(special point grinds available)

Point grind G for machining cast iron

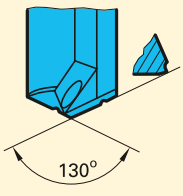


Point grind A for machining aluminium

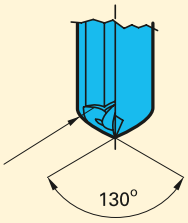


ZB 80
Special point grinds, e.g.:

Aluminium



Cast iron



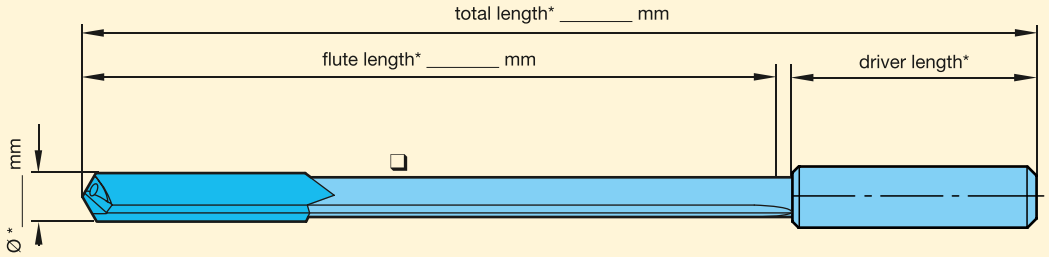
Fax Inquiry / Order
simply photo-copy, complete and fax...

❑ **Inquiry** ❑ **Order** ❑ **Repeat order, no. of initial order**

Deep hole gun drill: ❑ **ZB 80**

Required no. of pieces: Tool _____ pieces

* Ø 6,0 - 27,0 mm
Total length max. 1000 mm
Total length, flute length and driver length
are dependent on the driver selected.



Drawing of lay-out

required in special cases only

Driver: ❑ **no** ❑ **Code no.**_____ ❑ **to enclosed drawing**

Coating: ❑ **MolyGlide** Ⓜ ❑ **TiN** Ⓢ ❑ **TiCN** Ⓒ ❑ **bright** ◯ ❑ _____

Workpiece: **Drilling depth:** _____ **Hole tolerance:** _____ **Material/designation:** _____

Machine type: ❑ **Deep hole drilling machine** ❑ **Conventional machine tool**
❑ **Pilot hole** ❑ **Drilling bush**

Coolant: ❑ **Deep hole drilling oil** ❑ **Soluble oil**
Pressure _____ **bar** **Quantity** _____ **l/min**

Company: _____ **Company stamp:**

Telephone/fax: _____

Contact: _____ **Signature:** _____

Grinding machine TBM 116 for single-fluted gun drills

TBM 116 is a manually operated, universal grinding machine. Its compact design combined with Guhring's single-fluted gun drill grinding system and Guhring's double grinding wheel makes this a perfect unit to re-grind single-fluted gun drills. It is especially suitable for the re-grinding of a small to medium number of items of varying diameters and lengths. Furthermore, it also allows the fairly simple addition of transverse chip breakers to single-fluted gun drills as well as other modifications.

Supplied items:
Grinding machine with two high-powered light units as well as two 220 V sockets (grinding system and grinding wheel not included).

Machine data:
Input power requirements 380 V/50 Hz, Grinding wheel 2850 rev./min, Max. diameter of grinding wheel 150 mm.
Article no.: 600 127 170

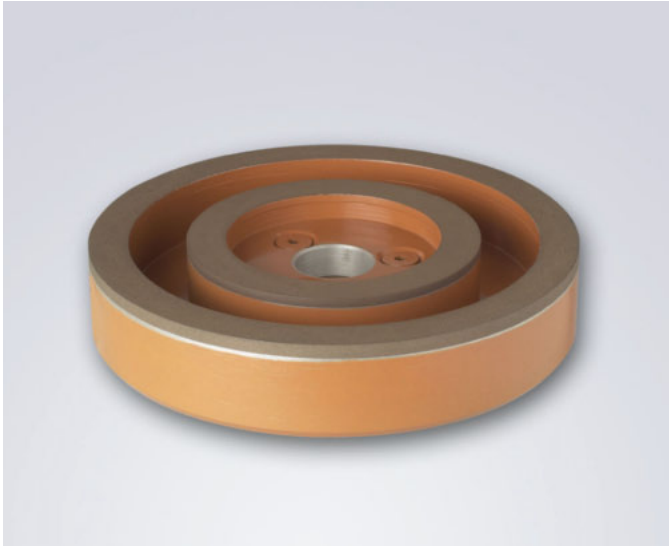
Grinding machine TBV 116 for single-fluted gun drills for Ø 3 till 30 mm

The fixture is designed for the re-grinding of single-fluted gun drills in the diameter range from 3 mm to 30 mm. It is ideally suitable for standard and special point grinds. A minimum flute length is of no importance thanks to a short center sleeve. In addition, the fixture is supplied with a supporting bar for long tools. TBV 116 is therefore truely universal and can be applied on any commercial, manual tool grinding machine.
With TBV 116 we recommend our double grinding wheel DSS 125.

Attention:
Single-fluted gun drills have a flute spacing angle of 120° and can therefore not be clamped in a collet in a separate unit. You could possibly destroy the tool.
Article no.: 600 127 171

Double grinding wheel DSS 125

The DSS double grinding wheel is a firmly clamped and balanced grinding wheel set. It consists of a rough outer diamond disc, with which the main proprtion of wear is removed and a fine diamond disc that then gives a good finish to the cutting edges. It is advisable to use a cleaning stone from time to time remove any grinding dust, otherwise too much heat is created and the carbide cutting edge destroyed.



The DSS 125 consists of:
- an outer disc Ø 125 mm, coating width 10 mm, coating thickness 3 mm, hole Ø 20 mm, grade D 126,
- an inner disc Ø 75 mm, coating width 10 mm, coating thickness 2 mm, hole Ø 20 mm, grade D 46

Article no.: 400 110 098

Grinding machine TBV 216 for single-fluted gun drills for Ø 1 to 6 mm

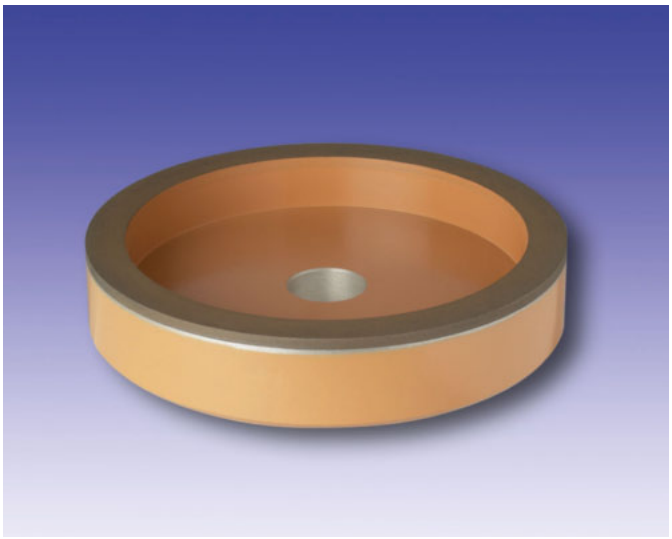
The new TBV 216 universal grinding fixture for small diameter single-fluted gun drills from 1.0 to 6.0 mm and a maximum length of 350 mm is simple to handle and enables the re-grinding or modifying of single-fluted gun drills in only four operations. Grinding is achieved with a 3-axis swivel mechansim, enabling the grinding of various point angles. It is possible to adjust and if necessary correct any angle individually.
We recommend the application of our single grinding wheel ESS 125.

Supplied items:
- A set of guide bushes with the diameters 1.0 / 1.5 / 2.0 / 2.5 / 3.0 / 3.5 mm
- Various adaptors
- Centering microscope
- Spotlight and magnifier

Article no: 600 132 346

Single grinding wheel ESS 125

The ESS 125 grinding wheel is a fine diamond wheel that gives the cutting edges a good finish. It is advisable to remove the grinding dust from the wheel with a cleaning stone from time to time, otherwise too much heat is created destroying the carbide cutting edge.



The ESS 125 consists of:
- a disc Ø 125 mm, coating width 10 mm, coating thickness 3 mm, hole Ø 20 mm, grade D 25

Article no.: 400 119 203

A brief introduction to the subject of deep hole gun drilling

In the machining world, drilling depths of 10 x D and deeper are regarded as deep hole drilling operations, whereby smaller drilling depths can naturally also be produced with gun drills. Advantage is taken of the positive side effects, as for example good surface quality, low deviation from concentricity and optimised alignment accuracy.

High pressure cooling - has become a matter of course.

In recent years, internal cooling has established itself for all drilling tools. Coolants are now living up to their name and being supplied via coolant ducts to where they are urgently required. Considerable improvements in tool life and less breakages have been achieved by this measure for twist drills, taps etc.

Every conventional machine tool currently on the market can be supplied with high pressure internal cooling and is therefore also suitable for deep hole drilling.

The share of gun drills on machining centres, lathes etc. is forever gaining more importance. The process is therefore increasing in popularity in the machining world.

STOP

All gun drills must have support for the pilot hole.

Gun drills must never operate at full speed without support in the machine shop.

Deep hole drilling is not a closed book, but can be mastered by anybody as long as certain conditions are adhered to.

Recommended cutting rates for the application of Guhring gun drills can be found on the pages for the individual types!

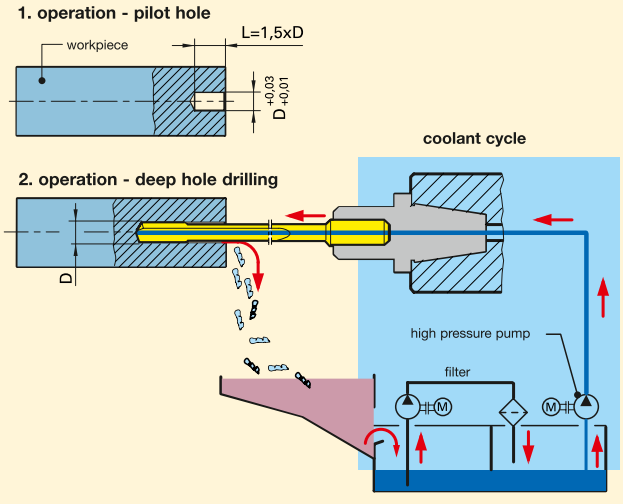
Typical procedure with all gun drills on conventional machine tools:

- production of pilot hole (L = 1.5 x D, tolerance H8)
- enter at low revolutions, approx. 200 rev./min, feed rate approx. 500 mm/min. With tools for drilling depths in excess than 40 x D enter the pilot hole revolving in left hand direction.
- setting of coolant pressure and revolutions
- uninterrupted drilling to required drilling depth without wood pecking. When applying gun drills with increased length-diameter-ratio, we recommend machining with reduced cutting parameters (approx. 75% of the optimal cutting speed) up to a drilling depth of approx. 25 mm.
- switching off coolant supply after reaching the required hole depth
- withdrawal in top gear with stationary spindle

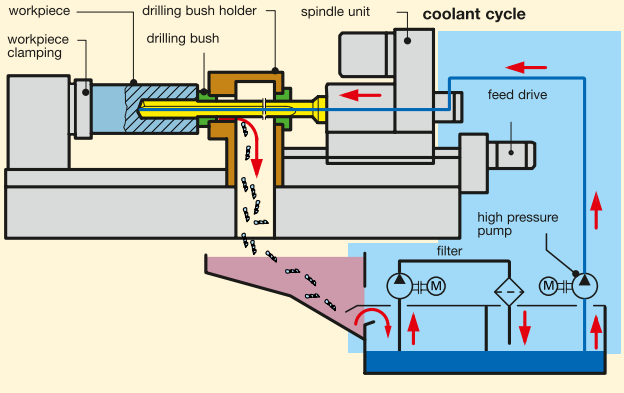
Application advice

- For drilling depths in excess than 40 x D we recommend the use of two or more gun drills, e. g. Ø 10 x 400 mm and Ø 9.95 x 800 mm.
- Gun drills for drilling depths of more than 40 x D should enter the pilot hole revolving in the left hand direction.
- When changing tools for drilling depths of more than 40 x D, the tool can be damped by switching on coolant supply for just one second.
- For machining of long-chipping materials we recommend the use of gun drills with polished flutes.
- Generally we recommend the use of soluble oil with a minimum oil content of 10 %.
- Single-fluted gun drills for long-chipping aluminium should be supplied with point grind 180° and coolant chamber.
- When spotting in aluminium with an Si-content of less than 1%, i.e. with recommended cutting rates v_c > 160 m/min we recommend to advance to the final speed in several steps. In addition, a deeper pilot hole of approximately 3 x D should be produced.

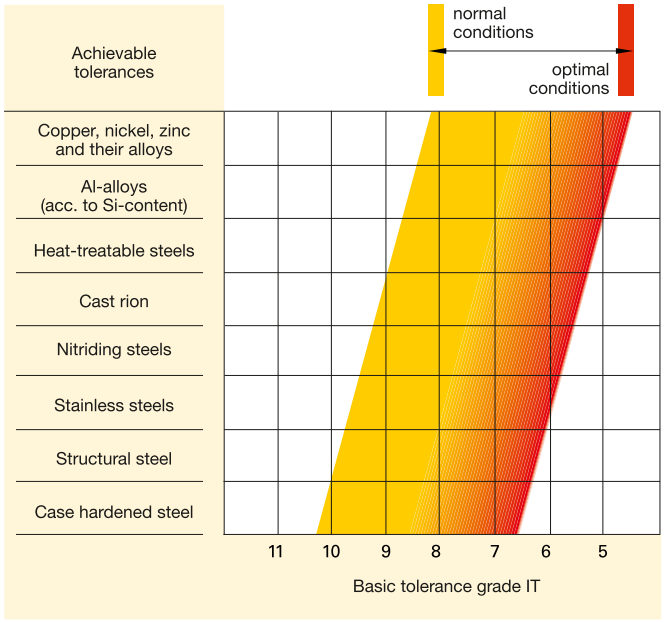
Deep hole drilling on conventional machine tools



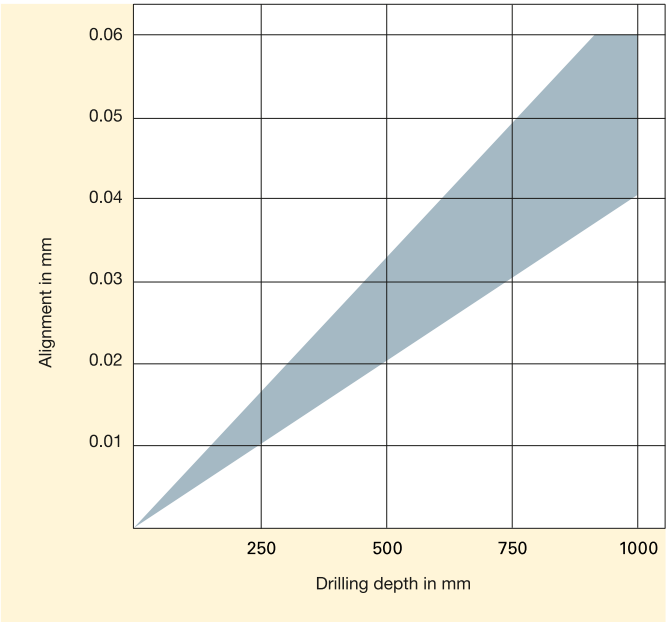
Deep hole drilling machines



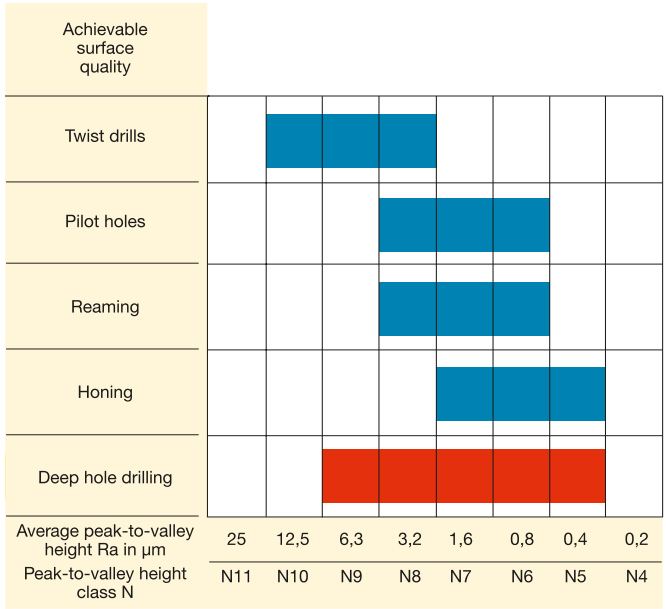
Basic tolerances*
The application of single-fluted gun drills can achieve a lower basic tolerance, as the cutting forces at the cutting edge are absorbed by the supporting strips, unlike twist drills where the slightest deviation of the two cutting edges causes a larger hole.



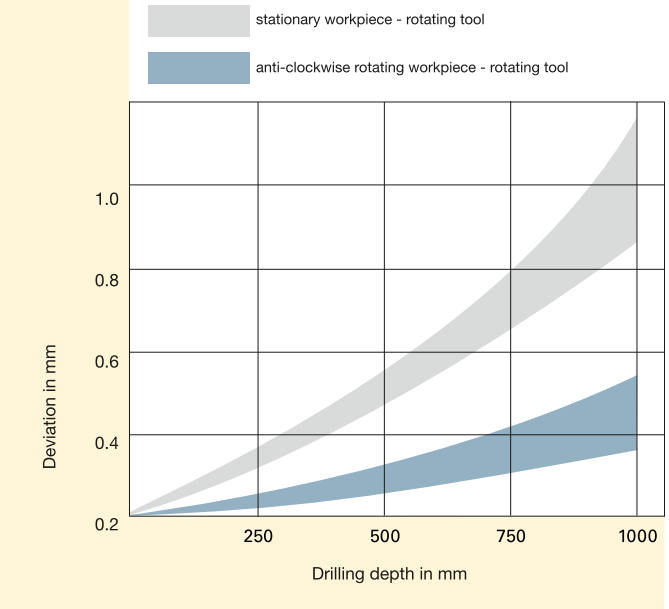
Alignment accuracy*
Because brazed single-fluted gun drills always have the precision carbide head brazed on to a flexible tube, the tool achieves very accurate aligned holes remaining unaffected by possible concentricity errors.
However, extreme material fluctuations and other influencing factors can impair the alignment accuracy.



Surface quality*
The forces at the cutting edge are absorbed by the support bushes, which in return burnishes the surface.
Lubrication between the supporting strips and hole surface is therefore very important.
The better the lubricant, the better the surface quality.



Deviation from concentricity*
When a hole is produced with, for example, a commercial twist drill, the quality of the point grind affects the concentricity of the hole. An imbalance of forces is created at the cutting edges. With gun drills, these cutting forces are absorbed by the supporting strips, resulting in excellent concentricity.



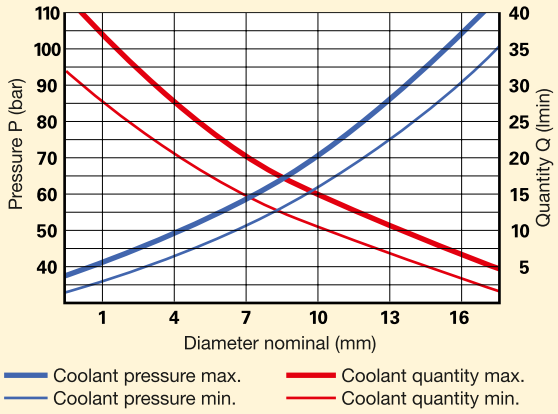
* gun drills with two cutting edges – straight-fluted as well as spiral-fluted – achieve approx. 50% of the values stated

Please note:

- All gun drills must be applied with internal cooling, either air, water or oil. Without internal cooling the chips cannot be evacuated.
- All gun drills can be applied with oil as the medium for internal cooling. However, in this case a 30% higher pressure is required in order to achieve the same coolant volume.
- When MQL is applied with gun drills an increase in pressure may be necessary for smaller nominal diameters de pendent on the pressure of the MQL system.
- If the cooling lubricant data is insufficient the cutting parameters may be reduced. Pressure boosting systems are also possible.

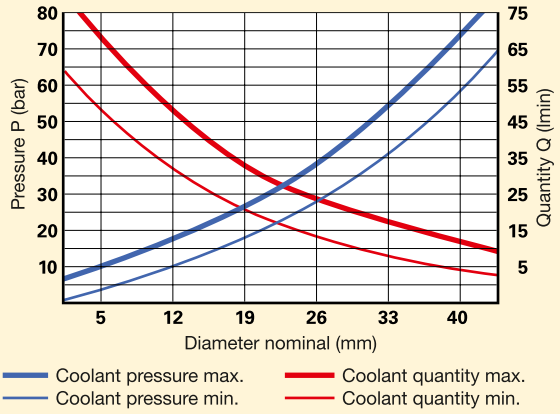
Coolant values EB 100

(Recommended values for soluble oil)



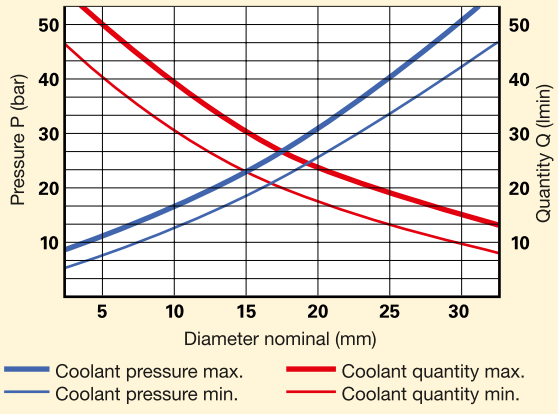
Coolant values EB 80

(Recommended values for soluble oil)



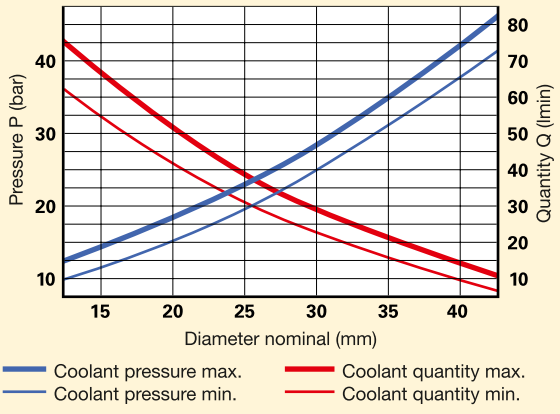
Coolant values ZB 80

(Recommended values for soluble oil)



Coolant values EB 800

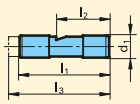
(Recommended values for soluble oil)



The range of drivers introduced below is available ex stock. However, it only represents a small selection of drivers from our complete range. We naturally also produce individual drivers of the highest precision to customer drawings. Attention! EB 100 requires drivers with positioning lugs. Further information on request.

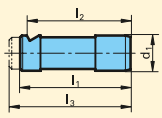
Drivers for deep drilling machines

1



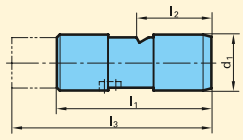
code no.	d_1	l_1	l_2	l_3
1.1	10	40	24	-
1.2	10	40	24	45
1.3	10	40	24	55
1.4	16	45	31,2	-
1.5	25	70	34	-
1.6	25	70	34	78

2



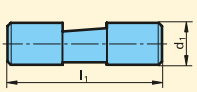
code no.	d_1	l_1	l_2	l_3
2.1	16	50	47	-
2.2	16	50	47	55
2.3	16	50	47	70

3



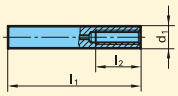
code no.	d_1	l_1	l_2	l_3
3.1	25	70	34	100

4



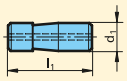
code no.	d_1	l_1
4.1	19,05	70

5



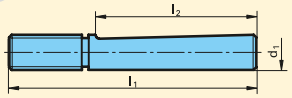
code no.	d_1	l_1	l_2
5.1	10	60	20
5.2	16	80	28
5.3	25	100	50

6



code no.	d_1 (inch)	l_1
6.1	1/2	38
6.2	3/4	70

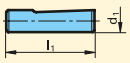
7



code no.	d_1	l_1	l_2
7.1	16	112	73
7.2	20	126	82

Drivers to DIN 1835

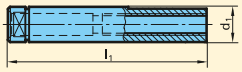
9 form E



code no.	d_1	l_1
9.1	8	36
9.2	10	40
9.3	12	45
9.4	16	48
9.5	20	50
9.6	25	56
9.7	32	60
9.8	40	70

Drivers to VDI draft

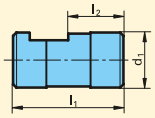
12



code no.	d_1	l_1
12.1	10	68
12.2	16	90
12.3	25	112

Drivers to Speed-Bit-System

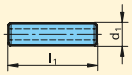
13



code no.	d_1	l_1	l_2
13.1	16	40	16
13.2	25	50	25

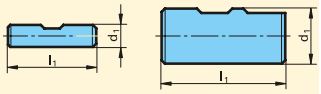
Drivers to DIN 6535

10 form HA



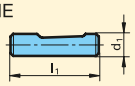
code no.	d_1	l_1
10.1	8	36
10.2	10	40
10.3	12	45
10.4	16	48
10.5	20	50
10.6	25	56
10.7	32	60
10.8	40	70

8 form HB with code no. 8.6, 8.7, 8.8



code no.	d_1	l_1
8.1	8	36
8.2	10	40
8.3	12	45
8.4	16	48
8.5	20	50
8.6	25	56
8.7	32	60
8.8	40	70

11 form HE



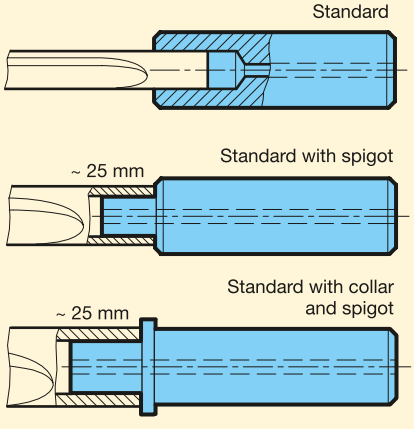
code no.	d_1	l_1
11.1	8	36
11.2	10	40
11.3	12	45
11.4	16	48
11.5	20	50
11.6	25	56
11.7	32	60
11.8	40	70

Driver variations to suit gun drill tubes

Solution for nom.-Ø < driver-Ø (difference must be appr. 6 mm):
tube shank installed in driver

Solution for nom.-Ø ≠ driver-Ø (close to parallel):
tube shank installed over spigot

Solution for nom.-Ø > driver-Ø:
tube shank installed over spigot, inside-Ø of tube shank >driver-Ø,
tube shank fits against collar shoulder.



Complete Program

Tapping, fluteless tapping
and thread milling

GUHRING

THREADING TOOLS

Very special

Specialists for micro and
hard machining

GUHRING

The Guhring colour code

The Guhring colour-code simplifies the selection of the optimal Guhring threading tool for the workpiece material.
The structure of the compass pages for taps and thread milling cutters is corresponding to this colour-code.

General steels

Material no. to DIN EN 10 027	Abbreviation
Common structural steels	
1.0035	S 185 (St 33)
1.0039	S 235 JRH
1.0036	S 235JRG1+CR
1.0060	E 335 (St 60-2)
Free-cutting steels	
1.0718	11SMnPb30
1.0721	10S20
1.0758	60SPb20
1.0726	35S20
Case hardened steels	
1.0401	(C 15)
1.7016	17 CR3
1.7131	16MnCr5
1.5919	15CrNi6
Unalloyed heat-treatable steels	
1.0402	C 22
1.1151	C22E (Ck 22)
1.0503	C 45
1.1191	C45E (Ck 45)

High tensile steels

Material no. to DIN EN 10 027	Abbreviation
Alloyed heat-treatable steels	
1.6511	36 CrNiMo 4
1.7033	34 Cr 4
1.7225	42 CrMo 4
Tool steels	
1.2316	X 36 CrMo 17
1.2067	10 S20
High speed steels	
1.3343	HS 6-5-2
1.3344	HS 6-5-3
1.3243	HS 6-5-2-5
1.3247	HS 2-19-1-8
Hardened steels	
The above mentioned materials hardened to 45…62 HRC	

Acid-/stainl. resist. steels

Material no. to DIN EN 10 027	Abbreviation
Sulphured stainless steels	
1.4005	X 12 CrS 13
1.4104	X 14 CrMo S 17
1.4105	X 6 CrMo S 17
1.4305	X 8CrNi S 18-9
Austenitic stainless steels	
1.4300	X 12 CrNi 18-8
1.4301	X 5 CrNi 18-10
1.4541	X 6 CrNiTi 18-10
Martensitic stainless steels	
1.4057	X 17 CrNi 16-2
1.4112	X 90 CrMoV 18
1.4006	X 12 Cr 13

Universell

Material no. to DIN EN 10 027	Abbreviation
Common structural steels	
1.0035	S185 (St33)
1.0421	St 52.0
1.0067	RSt 37-1
1.0425	P265GH
Free-cutting steels	
1.0711	9S20
1.0718	11SMnPb30
1.0727	46S20
1.0728	(60 S 20)
Case hardened steels	
1.7131	16MnCr5
1.6523	21NiCrMo2-2
1.7321	20MoCr4
1.7325	25MoCr4
Unalloyed heat-treatable steels	
1.0402	C22
1.1151	C22E
1.0503	C45
1.0601	C60
Nitriding steels	
1.8504	34CrAl6
1.8507	34CrAlMo5
1.8509	41CrAlMo7
1.8515	31CrMo12
1.8550	34CrAlNi4
Spher. graphite iron	
0.7040	EN-GJS-400-15
0.7060	EN-GJS-600-3

Al and Al-alloys

Material no.	Abbreviation
Al and al-alloys	
3.0250	Al 99,5H
3.0280	AL 99,8H
3.3308	Al99,9Mg0.5
Al wrought alloys	
3.2315	AlMgSi1
3.1655	AlCuMgPb
3.4335	AlZn4,5Mg1
Al cast alloys ≤ 10% Si	
3.2134	GD-AlSi5Cu1Mg
3.2162	GD-AlSi8Cu3
3.2373	G-AlSi9Mg
Al cast alloys > 10% Si	
3.2581	G-AlSi12
3.2583	G-AlSi12Cu
3.2581	G-AlSi10Mg

Cast materials

Material no.	Abbreviation
Cast iron	
0.6015 (GG15)	EN-GJL-150
0.6025 (GG25)	EN-GJL-250
0.6040 (GG40)	EN-JLZ
Spheroidal grahpite iron and malleable cast iron	
0.7040 (GGG40)	EN-GJS-400-15
0.7060 (GGG60)	EN-GJS-600-3
0.8035	EN-GJMW-350-4
0.8135	EN-GJMB-350-10
Compacted graphite iron	
–	EN-GJV250
	EN-GJV350
	EN-GJV400
	EN-GJV500

Non-ferrous metals

Material no.	Abbreviation
Brass, short-chipping	
2.0380	CuZn39Pb2
2.0401	CuZn39Pb3
2.0410	CuZn43Pb2
Brass, long-chipping	
2.0250	CuZn20
2.0280	CuZn33
2.0332	CuZn37Pb0,5

Plastics

Material no.	Abbreviation
Duroplastics	
–	Bakelite
	Resopal
	Pertinax
	Moltopren
Thermoplastics	
–	Plexiglass
	Hostalen
	Novodur
	Makralon
Glass/carbon re-inforced	
–	Polypropylene glass fibre carbon fibre

Magnesium-alloys

Material no.	Abbreviation
Magnesium-alloys	
3.5200	MgMn2
3.5612	MgAl6Zn
3.5812	MgAl8Zn
3.5812.05	GDMgAl8Zn1
3.5612.05	GDMgAl6Zn1
3.5662.01	GMgAl6

Special-alloys

Material no.	Abbreviation
Titanium	
3.7025	Ti
3.7065	Ti
Titanium-alloys	
3.7115	TiAl 5Sn2
3.7165	TiAl 6 V4
Special-alloys	
2.4610	Hastelloy C4
2.4876	Incoloy 800
2.4816	Inconel 600
2.4668	Inconel 718
2.4634	Nimonic 105
	CuNi12Zn24
	CuNi18Zn20

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Hand taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 352	N		ISO 2 / 6H		HSS	◯	M 1 - M45	861	118	822
DIN 352	N	A	ISO 2 / 6H		HSS	◯	M 1 - M68	862	118	822
DIN 352	N	D	ISO 2 / 6H		HSS	◯	M 1 - M68	863	118	822
DIN 352	N	C	ISO 2 / 6H		HSS	◯	M 1 - M36	864	118	822
DIN 352	N		ISO 2 / 6H		HSS	◯	M 2 - M 9	882	118	824
DIN 352	N	D	ISO 2 / 6H		HSS	◯	M 2 - M12	883	118	824
DIN 352	N	C	ISO 2 / 6H		HSS	◯	M 1 - M36	864	118	822
DIN 352	N-LH		ISO 2 / 6H		HSS	◯	M 2,2 - M22	904	118	825
DIN 352	N-LH	A	ISO 2 / 6H		HSS	◯	M14 - M16	905	118	825
DIN 352	N-LH	D	ISO 2 / 6H		HSS	◯	M14 - M16	906	118	825
DIN 352	N-LH	C	ISO 2 / 6H		HSS	◯	M 2 - M20	907	118	825
DIN 352	VA		ISO 2 / 6H		HSS-E	◯	M 2 - M20	853	118	826
DIN 352	VA	A	ISO 2 / 6H		HSS-E	◯	M 2 - M20	854	118	826
DIN 352	VA	D	ISO 2 / 6H		HSS-E	◯	M 2 - M20	855	118	826
DIN 352	VA	C	ISO 2 / 6H		HSS-E	◯	M 2 - M20	856	118	826

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Hand taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 352	H		ISO 2 / 6H		HSS-E	●	M 2 - M20	857	118	827
DIN 352	H	A	ISO 2 / 6H		HSS-E	●	M 2 - M20	858	118	827
DIN 352	H	D	ISO 2 / 6H		HSS-E	●	M 2,2 - M20	859	118	827
DIN 352	H	C	ISO 2 / 6H		HSS-E	●	M 2,2 - M20	860	118	827
DIN 352	H		ISO 2 / 6H		HSS-E-PM	●	M 3 - M12	1818	118	828
DIN 352	H	A	ISO 2 / 6H		HSS-E-PM	●	M 8 - M10	1819	118	828
DIN 352	H	D	ISO 2 / 6H		HSS-E-PM	●	M 4 - M12	1820	118	828

Hand taps for ISO metric fine threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 2181	N		ISO 2 / 6H		HSS	○	M 2,3X0,25 - M36 X1,5	884	118	829
DIN 2181	N	D	ISO 2 / 6H		HSS	○	M 2 X0,25 - M52 X1,5	885	118	829
DIN 2181	N	C	ISO 2 / 6H		HSS	○	M 2 X0,25 - M34 X1,5	886	118	829

Hand taps for UNC-threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
~ DIN 352	N		2B		HSS	○	NR. 1 -64 - 2 -4,5	981	118	831
~ DIN 352	N	A	2B		HSS	○	NR. 1 -64 - 2 -4,5	982	118	831
~ DIN 352	N	D	2B		HSS	○	NR. 1 -64 - 2 -4,5	983	118	831

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Hand taps for UNC-threads										
~ DIN 352	N	C	2B		HSS	◯	NR. 1 -64 - 2 -4,5	984	118	831
Hand taps for UNF-threads										
~ DIN 2181	N		2B		HSS	◯	NR. 1 -72 - 1 3/8 -1	985	118	832
~ DIN 2181	N	D	2B		HSS	◯	NR. 0 -80 - 1 1/2 -1	986	118	832
~ DIN 2181	N	C	2B		HSS	◯	NR. 2 -64 - 1 1/2 -1	987	118	832
Hand taps for BSW-threads										
~ DIN 352	N				HSS	◯	W 1/8 - W2	954	118	833
~ DIN 352	N	A			HSS	◯	W 1/16 - W2	955	118	833
~ DIN 352	N	D			HSS	◯	W 3/32 - W2	956	118	833
~ DIN 352	N	C			HSS	◯	W 1/8 - W2	957	118	833
Hand taps for BSP-threads										
DIN 5157	N				HSS	◯	G 1/8 - G2	958	118	834
DIN 5157	N	D			HSS	◯	G 1/8 - G2	959	118	834
DIN 5157	N	C			HSS	◯	G 1/8 - G2	960	118	834

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Machine taps for ISO metric threads										
DIN 352	N R15	C	ISO 2 / 6H		HSS-E	◯	M 2,2 - M20	992	103	835
DIN 352	N R40	C	ISO 2 / 6H		HSS-E	◯	M 2 - M22	993	103	835
DIN 352	N	C	ISO 2 / 6H		HSS-E	◯	M 2 - M24	995	103	836
DIN 352	N	B	ISO 2 / 6H		HSS-E	◯	M 2 - M24	991	103	837
Machine taps for ISO metric fine threads										
DIN 2181	N	C	ISO 2 / 6H		HSS-E	◯	M 5 X0,5 - M10 X1	997	103	838
DIN 2181	N R40	C	ISO 2 / 6H		HSS-E	◯	M 6 X0,75 - M12 X1,5	1970	103	838
Machine taps for PG-threads for electr. conduits										
DIN 40432	N	B			HSS-E	◯	PG 7 - PG 16	980	103	839
DIN 40432	N	C			HSS-E	◯	PG 7 - PG 29	979	103	839
Machine taps for NPT-threads										
Guhring std.	N	C			HSS-E	◯	1/16 - 2	973	103	840

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 371	Ti	B	4HX		NEW	HSS-E-PM	C	MJ 3X0,5 - MJ 16X2	1057	103	841
DIN 371/ DIN 376	Ti R15	C	4HX		NEW	HSS-E-PM	C	MJ 3X0,5 - MJ 16X2	1061	103	841
DIN 371/ DIN 376	Ni R10	C	4HX		NEW	HSS-E-PM	A	MJ 3X0,5 - MJ 16X2	1065	103	841
DIN 371	N R40	C(K)	ISO 2 / 6H			HSS-E	S	M 5 - M10	174	103	842
DIN 371	H R40	C	ISO 2 / 6H			HSS-E	S	M 2 - M10	361	103	842
DIN 371	N R40	C	ISO 2 / 6H			HSS-E		M 2 - M10	783	103	842
DIN 371	N L40-LH	C	ISO 2 / 6H			HSS-E		M 3 - M10	786	103	842
DIN 371	N	C	ISO 3 / 6G			HSS-E		M 3 - M10	795	103	843
DIN 371	N R15	C	ISO 3 / 6G			HSS-E		M 2 - M10	799	103	843
DIN 371	N	C	ISO 2 / 6H			HSS-E		M 1 - M10	806	103	843
DIN 371	N R15	C	ISO 2 / 6H			HSS-E		M 2 - M10	809	103	843
DIN 371	N R40	C	ISO 2 / 6H			HSS-E		M 2 - M10	810	103	843
DIN 371	H R40	C	ISO 2 / 6H			HSS-E		M 2 - M10	811	103	843
DIN 371	Al R45	C	ISO 2 / 6H			HSS-E		M 1,6 - M10	812	103	843
DIN 371	VA R40	C	ISO 2 / 6H			HSS-E		M 3 - M10	814	103	843

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 371	N R40	C	ISO 2 / 6H		HSS-E	○	M 2 - M10	836	103	844
DIN 371	VA R15	C	ISO 2 / 6H		HSS-E	○	M 2 - M10	843	103	844
DIN 371	N R40	C	ISO 3 / 6G		HSS-E	○	M 3 - M10	844	103	844
DIN 371	N R40	C	ISO 2 / 6H		HSS-E	○	M 2 - M10	889	103	844
DIN 371	N R15	C	ISO 2 / 6H		HSS-E	S	M 2 - M10	913	103	845
DIN 371	N R40	C	ISO 2 / 6H		HSS-E	S	M 2 - M10	914	103	845
DIN 371	N R15	C	ISO 2 / 6H		HSS-E	○	M 2 - M10	946	103	845
DIN 371	H R40	C	ISO 2 / 6H		HSS-E	●	M 2 - M10	947	103	845
DIN 371	N R40	C	ISO 2 / 6H		HSS-E	C	M 3 - M10	1252	103	845
DIN 371	H R40	C	ISO 2 / 6H		HSS-E	C	M 2 - M10	1916	103	845
DIN 371	N R40	C	ISO 2 / 6H		HSS-E	M	M 3 - M10	2425	103	845
DIN 371	N R40	C	ISO 2 / 6H		HSS-E	S	M 2 - M10	2440	103	845
DIN 371	N R40	E	ISO 2 / 6H		HSS-E	○	M 3 - M10	2790	103	846
DIN 371	H R40	C	ISO 2 / 6H		HSS-E	○	M 2 - M10	2850	103	846
DIN 371	VA R40	C	ISO 2 / 6H		HSS-E	○	M 3 - M10	2862	103	846

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 371	VA R15	C	ISO 2 / 6H		HSS-E	S	M 3 - M10	2896	103	847
DIN 371	H R40	C	ISO 3 / 6G		HSS-E		M 2 - M10	2984	103	847
DIN 371	H R40	C	ISO 3 / 6G		HSS-E		M 2 - M10	2985	103	847
DIN 371	H R40	C	ISO 3 / 6G		HSS-E	S	M 2 - M10	2986	103	847
DIN 371	N R40	C	ISO 3 / 6G		HSS-E		M 3 - M10	2994	103	847
DIN 371	N R40	C	ISO 3 / 6G		HSS-E	S	M 3 - M10	2995	103	847
DIN 371	N R15	C	ISO 2 / 6H	NEW	HSS-E	C	M 3 - M20	4154	103	847
DIN 371	N R15	E	ISO 2 / 6H	NEW	HSS-E	C	M 3 - M20	4155	103	847
DIN 371	VA R40	C	ISO 2 / 6H		HSS-E-PM	S	M 3 - M10	59	103	848
DIN 371	N R50	C	ISO 2 / 6H		HSS-E-PM	S	M 3 - M10	767	103	848
DIN 371	H R15	C	ISO 2 / 6H		HSS-E-PM		M 3 - M10	872	103	849
DIN 371	VA R40	C	ISO 2 / 6H		HSS-E-PM		M 3 - M10	909	103	849
DIN 371	N R40	C	ISO 2 / 6H		HSS-E-PM	S	M 2 - M10	1288	103	849
DIN 371	N R40	C	ISO 2 / 6H		HSS-E-PM	C	M 2 - M20	1290	103	849
DIN 371	H R15	C	ISO 2 / 6H		HSS-E-PM	A	M 3 - M10	1577	103	849

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 376	H	C	6HX	NEW	HSS-E	C	M16 - M39	778	103	850
DIN 376	VA R15	C	ISO 2 / 6H		HSS-E	○	M12 - M24	785	103	850
DIN 376	N L40-LH	C	ISO 2 / 6H		HSS-E	○	M12 - M20	787	103	850
DIN 376	VA R40	C	ISO 2 / 6H		HSS-E	○	M12 - M30	825	103	850
DIN 376	N R40	C	ISO 2 / 6H		HSS-E	C	M12 - M16	1254	103	851
DIN 376	VA R40	C	ISO 2 / 6H		HSS-E	○	M12 - M24	2863	103	851
DIN 376	VA R15	C	ISO 2 / 6H		HSS-E	S	M12 - M24	2895	103	851
DIN 376	VA R40	C	ISO 2 / 6H		HSS-E-PM	S	M12 - M20	60	103	851
DIN 376	VA R40	C	ISO 2 / 6H		HSS-E-PM	○	M12 - M24	910	103	851
DIN 376	H R15	C	ISO 2 / 6H		HSS-E-PM	○	M12 - M20	935	103	851
DIN 376	N R50	C	ISO 2 / 6H		HSS-E-PM	S	M12 - M20	1098	103	851
DIN 376	N R40	C	ISO 2 / 6H		HSS-E-PM	S	M12 - M20	1289	103	851
DIN 376	H R15	C	ISO 2 / 6H		HSS-E-PM	A	M12 - M20	1578	103	851
DIN 371	VA R50	C	6HX		HSS-E-PM	S	M 3 - M10	761	103	852
DIN 376	VA R50	C	6HX		HSS-E-PM	S	M12 - M20	763	103	852

○ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
~ DIN 371	N	B	6HX		Solid carbide	C	M 5 - M12	942	103	853
DIN 371	N	B	ISO 2 / 6H		HSS-E	S	M 3 - M10	313	103	854
DIN 371	H	B	ISO 2 / 6H		HSS-E		M 2 - M10	733	103	854
DIN 371	H AZ	C	ISO 2 / 6H		HSS-E		M 2 - M10	788	103	854
DIN 371	N-LH	B	ISO 2 / 6H		HSS-E		M 3 - M10	789	103	854
DIN 371	H AZ	B	ISO 2 / 6H		HSS-E		M 2 - M10	791	103	855
DIN 371	N	B	ISO 1 / 4H		HSS-E		M 2 - M10	794	103	855
DIN 371	N	B	ISO 3 / 6G		HSS-E		M 2 - M10	796	103	855
DIN 371	N	B	ISO 3 / 6G		HSS-E		M 4 - M 8	797	103	855
DIN 371	Ms	E	ISO 2 / 6H		HSS-E		M 3 - M10	800	103	855
DIN 371	N	D	ISO 2 / 6H		HSS-E		M 2 - M10	801	103	855
DIN 371	N	B	ISO 2 / 6H		HSS-E		M 2 - M10	802	103	855
DIN 371	N	B	ISO 2 / 6H		HSS-E		M 1,4 - M10	803	103	855
DIN 371	H	B	ISO 2 / 6H		HSS-E		M 2 - M10	804	103	855
DIN 371	Al	B	ISO 2 / 6H		HSS-E		M 2 - M10	805	103	855

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 371	GG	C	6HX		HSS-E	●	M 3 - M10	807	103	856
DIN 371	N L15	D	ISO 2 / 6H		HSS-E	○	M 3 - M10	808	103	856
DIN 371	N	B	ISO 3 / 6G		HSS-E	○	M 1,4 - M10	837	103	856
DIN 371	N	B	ISO 2 / 6H		HSS-E	○	M 1,4 - M10	838	103	856
DIN 371	N	B	ISO 2 / 6H		HSS-E	○	M 1 - M 7	839	103	857
DIN 371	N	B	ISO 3 / 6G		HSS-E	○	M 3 - M 8	869	103	857
DIN 371	N	B	ISO 2 / 6H		HSS-E	S	M 1,4 - M10	912	103	857
DIN 371	GG	C	6HX		HSS-E	S	M 3 - M10	930	103	857
DIN 371	N	B	ISO 2 / 6H		HSS-E	●	M 1 - M10	945	103	857
DIN 371	N	B	ISO 2 / 6H		HSS-E	C	M 3 - M10	1246	103	857
DIN 371	VA	B	ISO 2 / 6H		HSS-E	○	M 2 - M10	1870	103	857
DIN 371	VA AZ	B	ISO 2 / 6H		HSS-E	○	M 3 - M10	1871	103	857
DIN 371	GGT	C	ISO 2 / 6H		HSS-E	S	M 3,5 - M10	1875	103	857
DIN 371	H	B	ISO 2 / 6H		HSS-E	C	M 2 - M10	1914	103	857
DIN 371	GG	C	6HX		HSS-E	A	M 3 - M10	1918	103	858

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 371	VA	B	ISO 2 / 6H		HSS-E	S	M 3 - M10	2086	103	858
DIN 371	N	B	ISO 2 / 6H		HSS-E	A+M	M 3 - M10	2427	103	858
DIN 371	H	B	ISO 3 / 6G		HSS-E	○	M 2 - M10	2465	103	859
DIN 371	H	B	ISO 3 / 6G		HSS-E	S	M 2 - M10	2710	103	859
DIN 371	VA	B	ISO 2 / 6H		HSS-E	●	M 3 - M10	2869	103	859
DIN 371	N	B	ISO 2 / 6H		HSS-E	●	M 2 - M10	2876	103	859
DIN 371	H	B	ISO 2 / 6H		HSS-E	●	M 2 - M10	2941	103	859
DIN 371	N	B	ISO 3 / 6G		HSS-E	●	M 2 - M10	2990	103	859
DIN 371	N	B	ISO 3 / 6G		HSS-E	S	M 3 - M10	2991	103	859
DIN 371	H	B	ISO 2 / 6H		HSS-E-PM	S	M 3 - M10	57	103	860
DIN 371	H	B	ISO 2 / 6H		HSS-E-PM	○	M 3 - M10	875	103	860
DIN 371	VA	B	ISO 2 / 6H		HSS-E-PM	○	M 2 - M10	877	103	861
DIN 371	VA	B	ISO 2 / 6H	NEW	HSS-E-PM	C	M 2 - M12	1002	103	861
DIN 371	Ms	E	ISO 3 / 6G		HSS-E-PM	○	M 3 - M10	1084	103	861
DIN 371	N	B	ISO 2 / 6H		HSS-E-PM	S	M 2 - M10	1285	103	861

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 371	N	B	ISO 2 / 6H		HSS-E-PM	C	M 3 - M20	1287	103	861
DIN 371	H	B	ISO 2 / 6H		HSS-E-PM	A	M 3 - M10	1575	103	861
DIN 376	N-LH	B	ISO 2 / 6H		HSS-E	○	M12 - M20	790	103	862
DIN 376	VA AZ	B	ISO 2 / 6H		HSS-E	○	M12 - M16	792	103	862
DIN 376	AI	B	ISO 2 / 6H		HSS-E	○	M12 - M24	817	103	862
DIN 376	H AZ	B	ISO 2 / 6H		HSS-E	○	M12 - M18	849	103	862
DIN 376	N	B	ISO 2 / 6H		HSS-E	C	M12 - M16	1249	103	863
DIN 376	H	B	ISO 2 / 6H		HSS-E-PM	S	M12 - M24	58	103	863
DIN 376	VA	B	ISO 2 / 6H		HSS-E-PM	○	M12 - M20	879	103	863
DIN 376	N	B	ISO 2 / 6H		HSS-E-PM	S	M12 - M20	1286	103	863
DIN 376	H	B	ISO 2 / 6H		HSS-E-PM	A	M12 - M30	1576	103	863
DIN 371/ DIN 376	Ti	B	6HX		HSS-E-PM	C	M 3 - M16	2901	103	863
DIN 371/ DIN 376	Ti R15	C	6HX		HSS-E-PM	C	M 3 - M16	2909	103	863
DIN 371/ DIN 376	Ni	B	6HX		HSS-E-PM	A	M 3 - M16	2916	103	863
DIN 371/ DIN 376	Ni R10	C	6HX		HSS-E-PM	A	M 3 - M16	2920	103	863

○ bright ◯ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	N R40	C	ISO 2 / 6H		HSS-E	○	M 3 - M20	888	103	864
DIN 376	N R40	C(K)	ISO 2 / 6H		HSS-E	S	M 5 - M30	196	103	865
DIN 376	N R15	C	ISO 2 / 6H		HSS-E	S	M 3,5 - M24	916	103	865
DIN 376	N R40	E	ISO 2 / 6H		HSS-E	○	M 4 - M16	2791	103	865
DIN 376	H R40	C	ISO 2 / 6H		HSS-E	●	M 4 - M30	2851	103	865
DIN 376	N	B	ISO 2 / 6H		HSS-E	○	M 4 - M16	846	103	866
DIN 376	GGT	C	ISO 2 / 6H		HSS-E	S	M 4 - M18	1876	103	866
DIN 376	VA	B	ISO 2 / 6H		HSS-E	●	M 4 - M24	2870	103	866
Guhring std.	N R40	C	6HX	NEW	HSS-E	S	M 3 - M20	4153	103	867
DIN 371/ DIN 376	H	D	6HX		HSS-E-PM	C	M 3 - M16	1201	103	868
~ DIN 371	H	D	ISO 2 / 6H		Solid carbide	C	M 3 - M16	2944	103	869
DIN 376	H R40	C	ISO 2 / 6H		HSS-E	S	M 3 - M30	362	103	870
DIN 376	N R40	C	ISO 2 / 6H		HSS-E	●	M 3 - M30	784	103	870
DIN 376	N	C	ISO 2 / 6H		HSS-E	○	M 1,6 - M48	818	103	870
DIN 376	N R15	C	ISO 2 / 6H		HSS-E	○	M 3 - M30	821	103	870

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 376	N R40	C	ISO 2 / 6H		HSS-E	○	M 3 - M30	822	103	870
DIN 376	H R40	C	ISO 2 / 6H		HSS-E	○	M 3 - M30	823	103	871
DIN 376	Al R45	C	ISO 2 / 6H		HSS-E	○	M 3 - M24	824	103	871
DIN 376	N R40	C	ISO 2 / 6H		HSS-E	●	M 3 - M36	826	103	871
DIN 376	N R40	C	ISO 3 / 6G		HSS-E	○	M 3 - M24	848	103	871
DIN 376	N R40	C	ISO 2 / 6H		HSS-E	○	M 3 - M24	890	103	871
DIN 376	N R40	C	ISO 2 / 6H		HSS-E	(S)	M 3 - M30	917	103	871
DIN 376	N R15	C	ISO 2 / 6H		HSS-E	●	M 3 - M20	949	103	871
DIN 376	H R40	C	ISO 2 / 6H		HSS-E	●	M 3 - M30	950	103	871
DIN 376	H R40	C	ISO 2 / 6H		HSS-E	(C)	M 3 - M30	1917	103	871
DIN 376	N R40	C	ISO 2 / 6H		HSS-E	(A)+(M)	M 3 - M16	2426	103	871
DIN 376	N R40	C	6HX		HSS-E	(S)	M 3 - M24	2441	103	871
DIN 376	N	B	ISO 2 / 6H		HSS-E	(S)	M 3 - M24	315	103	872
DIN 376	H	B	ISO 2 / 6H		HSS-E	●	M 3 - M24	734	103	872
DIN 376	N	D	ISO 2 / 6H		HSS-E	○	M 2 - M27	813	103	872

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown (A) TiAlN (a) TiAlN nanoA (A) TiAlN SuperA

Machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 376	N	B	ISO 2 / 6H		HSS-E	○	M 1,6 - M48	815	103	873
DIN 376	H	B	ISO 2 / 6H		HSS-E	○	M 3 - M24	816	103	873
DIN 376	GG	C	6HX		HSS-E	●	M 3 - M30	819	103	873
DIN 376	N L15	D	ISO 2 / 6H		HSS-E	○	M 3 - M22	820	103	873
DIN 376	N	B	ISO 3 / 6G		HSS-E	○	M 2 - M45	845	103	873
DIN 376	N	B	ISO 2 / 6H		HSS-E	○	M 3 - M10	847	103	873
DIN 376	N	B	ISO 2 / 6H		HSS-E	(S)	M 1,8 - M52	915	103	873
DIN 376	GG	C	6HX		HSS-E	(S)	M 3 - M24	931	103	874
DIN 376	N	B	ISO 2 / 6H		HSS-E	◌	M 2,5 - M36	948	103	874
DIN 376	VA	B	ISO 2 / 6H		HSS-E	○	M 3 - M30	1872	103	874
DIN 376	H	B	ISO 2 / 6H		HSS-E	(C)	M 3 - M24	1915	103	875
DIN 376	GG	C	6HX		HSS-E	(A)	M 3 - M20	1919	103	875
DIN 376	VA	B	6HX		HSS-E	(S)	M 3 - M30	2087	103	875
DIN 376	N	B	ISO 2 / 6H		HSS-E	(A)+(M)	M 3 - M16	2428	103	875
DIN 376	N	B	ISO 2 / 6H		HSS-E	◌	M 3 - M36	2877	103	875

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 376	H	B	ISO 2 / 6H		HSS-E	●	M 3 - M24	2942	103	875
Guhring std.	N	B	ISO 2 / 6H		HSS-E	○	M 3 - M20	998	103	876

Machine taps for ISO metric fine threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 374	VA R50	C	6HX		HSS-E-PM	(S)	M 8 X1 - M20 X1,5	764	103	877
DIN 374	N R40	C(K)	ISO 2 / 6H		HSS-E	(S)	M 6 X0,7 - M24 X1,5	273	103	878
DIN 374	N	C	ISO 3 / 6G		HSS-E	○	M 6 X0,75 - M63 X1,5	829	103	878
DIN 374	N	C	ISO 2 / 6H		HSS-E	○	M 3 X0,35 - M38 X1,5	830	103	878
DIN 374	N R15	C	ISO 2 / 6H		HSS-E	○	M 5 X0,5 - M30 X2	833	103	878
DIN 374	N R40	C	ISO 2 / 6H		HSS-E	○	M 3 X0,35 - M30 X2	834	103	878
DIN 374	H R40	C	ISO 2 / 6H		HSS-E	○	M 8 X0,75 - M24 X1,5	835	103	879
DIN 374	N R40	C	ISO 2 / 6H		HSS-E	(S)	M 3 X0,35 - M24 X2	852	103	879
DIN 374	N R40	C	ISO 3 / 6G		HSS-E	(S)	M 8 X1 - M20 X1,5	1049	103	879
DIN 374	VA R15	C	ISO 2 / 6H		HSS-E	◐	M 4 X0,5 - M20 X2	1874	103	879
DIN 374	N R15	C	ISO 2 / 6H		HSS-E	(S)	M 4 X0,5 - M30 X2	1971	103	879
DIN 374	N R40	C	ISO 2 / 6H		HSS-E	○	M 6 X0,75 - M24 X2	2424	103	879

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown (A) TiAlN (a) TiAlN nanoA (A) TiAlN SuperA

Machine taps for ISO metric fine threads

Standard	Type	Form	Tolerance	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 374	N R40	E	ISO 2 / 6H			HSS-E	○	M10 X1 - M14 X1,5	2792	103	879
DIN 374	N R15	C	ISO 2 / 6H			HSS-E	●	M 4 X0,5 - M30 X2	2838	103	879
DIN 374	N R40	C	ISO 2 / 6H			HSS-E	●	M 5 X0,5 - M30 X1,5	2843	103	879
DIN 374	H R40	C	ISO 2 / 6H			HSS-E	●	M 6 X0,75 - M24 X1,5	2852	103	879
DIN 374	N R40	C	ISO 2 / 6H			HSS-E	●	M 5 X0,5 - M30 X2	2853	103	879
DIN 374	VA R40	C	ISO 2 / 6H			HSS-E	●	M 3 X0,35 - M24 X1,5	2864	103	882
DIN 374	VA R15	C	ISO 2 / 6H			HSS-E	Ⓢ	M 4 X0,5 - M24 X1,5	2897	103	882
DIN 374	H R40	C	ISO 2 / 6H			HSS-E	●	M 6 X0,75 - M20 X1,5	2940	103	882
DIN 374	H R40	C	ISO 3 / 6G			HSS-E	○	M 8 X1 - M20 X1,5	2987	103	882
DIN 374	H R40	C	ISO 3 / 6G			HSS-E	●	M 8 X1 - M20 X1,5	2988	103	882
DIN 374	H R40	C	ISO 3 / 6G			HSS-E	Ⓢ	M 8 X1 - M20 X1,5	2989	103	883
DIN 374	N R40	C	ISO 3 / 6G			HSS-E	○	M 8 X1 - M20 X1,5	2998	103	883
DIN 374	N R40	C	ISO 3 / 6G			HSS-E	●	M 8 X1 - M18 X1,5	2999	103	883
DIN 374	N R15	C	ISO 2 / 6H		NEW	HSS-E	Ⓒ	M 8 X1 - M16 X1,5	4156	103	883
DIN 374	N R15	E	ISO 2 / 6H		NEW	HSS-E	Ⓒ	M 8 X1 - M16 X1,5	4157	103	883

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Machine taps for ISO metric fine threads

Standard	Type	Form	Tolerance	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 374	H R15	C	ISO 2 / 6H			HSS-E-PM	○	M 8 X1 - M16 X1,5	874	103	883
DIN 374	VA R40	C	ISO 2 / 6H			HSS-E-PM	○	M 8 X1 - M20 X1,5	936	103	883
DIN 374	VA R40	C	ISO 2 / 6H		NEW	HSS-E-PM	S	M12 X1,5 - M20 X1,5	1004	103	883
DIN 374	N R50	C	ISO 2 / 6H			HSS-E-PM	S	M 8 X1 - M20 X1,5	1100	103	883
DIN 374	N R40	C	ISO 2 / 6H			HSS-E-PM	S	M 8 X1 - M24 X2	1292	103	883
DIN 374	GG	C	6HX			HSS-E	A	M 3 X0,3 - M24 X1,5	169	103	884
DIN 374	N	B	ISO 3 / 6G			HSS-E	○	M 6 X0,7 - M20 X1,5	316	103	884
DIN 374	H	B	ISO 2 / 6H			HSS-E	○	M 3 X0,35 - M30 X1,5	828	103	884
DIN 374	GG	C	6HX			HSS-E	●	M 3 X0,35 - M30 X1,5	831	103	884
DIN 374	VA	B	ISO 2 / 6H			HSS-E	○	M 6 X0,75 - M24 X2	1873	103	884
DIN 374	VA	B	ISO 2 / 6H			HSS-E	◐	M 3 X0,35 - M24 X1,5	2871	103	885
DIN 374	N	B	ISO 2 / 6H			HSS-E	A+M	M 5 X0,5 - M24 X1,5	2878	103	885
DIN 374	N	B	ISO 2 / 6H			HSS-E	◐	M 3 X0,35 - M50 X1,5	2879	103	885
DIN 374	H	B	ISO 2 / 6H			HSS-E	●	M 3 X0,35 - M20 X1,5	2943	103	885
DIN 374	H	B	ISO 3 / 6G			HSS-E	◐	M 8 X1 - M20 X1,5	2982	103	885

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Machine taps for ISO metric fine threads

Standard	Type	Form	Tolerance	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 374	H	B	ISO 3 / 6G			HSS-E	S	M 8 X1 - M20 X1,5	2983	103	885
DIN 374	N	B	ISO 3 / 6G			HSS-E		M 8 X1 - M18 X1,5	2992	103	885
DIN 374	N	B	ISO 3 / 6G			HSS-E	S	M 8 X1 - M18 X1,5	2993	103	885
DIN 374	VA	B	ISO 2 / 6H			HSS-E-PM		M 8 X1 - M14 X1,5	887	103	885
DIN 374	VA	B	ISO 2 / 6H		NEW	HSS-E-PM	S	M 4 X0,5 - M20 X1,5	1001	103	885
DIN 374	N	B	6HX			Solid carbide	C	M14 X1,25 - M16 X1,5	944	103	886
DIN 374	N	B	ISO 2 / 6H			HSS-E		M 3 X0,35 - M45 X1,5	827	103	887
DIN 374	N	B	ISO 2 / 6H			HSS-E	S	M 3 X0,35 - M36 X1,5	832	103	887
DIN 374	GG	C	6HX			HSS-E	S	M 3 X0,35 - M22 X1,5	932	103	887
DIN 374	N	B	ISO 2 / 6H			HSS-E		M 3 X0,35 - M32 X1,5	2888	103	889
DIN 374	N	B	ISO 2 / 6H			HSS-E-PM	S	M 8 X1 - M24 X2	1291	103	889
~ DIN 371	N	B	6HX			Solid carbide	C	M 5 X0,5 - M12 X1,5	943	103	890
DIN 371	Ti	B	4HX		NEW	HSS-E-PM	C	MJ 6X0,5 - MJ 10X1,25	1058	103	891
DIN 371	Ti R15	C	4HX		NEW	HSS-E-PM	C	MJ 6X0,5 - MJ 10X1,25	1062	103	891
DIN 371	Ni R10	C	4HX		NEW	HSS-E-PM	A	MJ 6X0,5 - MJ 10X1,25	1066	103	891

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Type	Form	Tolerance	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Machine taps for ISO metric fine threads											
DIN 371	Ti	B	6HX		NEW	HSS-E-PM	C	M 3 X0,35 - M10 X1	2903	103	892
DIN 371	Ti R15	C	6HX		NEW	HSS-E-PM	C	M 3 X0,35 - M10 X1	2910	103	892
DIN 371	Ni	B	6HX			HSS-E-PM	A	M 3 X0,35 - M10 X1,25	2917	103	892
DIN 371	Ni R10	C	6HX			HSS-E-PM	A	M 3 X0,35 - M10 X1,25	2921	103	892
DIN 371	H	D	6HX		NEW	HSS-E-PM	C	M 8 X1 - M12 X1,5	4161	103	893
~ DIN 371	H	D	ISO 2 / 6H			Solid carbide	C	M 6 X0,5 - M12 X1,5	1161	103	894
Machine taps for UNC-threads											
~ DIN 371	N R40	C	2B			HSS-E		NR. 2 -56 - 3/8 -16	876	103	895
~ DIN 371	N R40	C(K)	2B			HSS-E	S	NR.10 -24 - 3/8 -16	1837	103	895
~ DIN 371	N	C	2B			HSS-E		NR. 3 -48 - 3/8 -16	1977	103	895
~ DIN 371	N R15	C	2B			HSS-E		NR. 3 -48 - 3/8 -16	1978	103	895
~ DIN 371	VA R40	C	2B			HSS-E		NR. 2 -56 - 3/8 -16	1981	103	895
~ DIN 371	N R15	C	2B			HSS-E		NR. 4 -40 - 3/8 -16	2839	103	896
~ DIN 371	N R40	C	2B			HSS-E		NR. 2 -56 - 3/8 -16	2844	103	896
~ DIN 371	N R40	C	2B			HSS-E		NR. 3 -48 - 3/8 -16	2854	103	896

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Machine taps for UNC-threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
~ DIN 371	N R40	C	2B		HSS-E	●	NR. 2 -56 - 3/8 -16	2855	103	896
~ DIN 371	VA R40	C	2B		HSS-E	●	NR. 2 -56 - 3/8 -16	2865	103	896
~ DIN 376	N R40	C	2B		HSS-E	○	7/16-14 - 1 - 8	881	103	897
~ DIN 376	N	C	2B		HSS-E	○	7/16-14 - 1 - 8	1982	103	897
~ DIN 376	N R15	C	2B		HSS-E	○	7/16-14 - 7/8 - 9	1983	103	897
~ DIN 376	VA R40	C	2B		HSS-E	○	7/16-14 - 7/8 - 9	1986	103	897
~ DIN 376	N R15	C	2B		HSS-E	●	1/2 -13 - 1 - 8	2840	103	897
~ DIN 376	N R40	C	2B		HSS-E	●	7/16-14 - 1 - 8	2845	103	898
~ DIN 376	N R40	C	2B		HSS-E	○	7/16-14 - 1 - 8	2856	103	898
~ DIN 376	N R40	C	2B		HSS-E	●	7/16-14 - 7/8 - 9	2857	103	898
~ DIN 376	VA R40	C	2B		HSS-E	●	7/16-14 - 7/8 - 9	2866	103	898
~ DIN 371	N	B	2B		HSS-E	○	NR. 1 -6 - 3/8 -16	873	103	899
~ DIN 371	GG	C	2B		HSS-E	●	NR. 3 -48 - 3/8 -16	1979	103	899
~ DIN 371	VA	B	2B		HSS-E	○	NR. 4 -40 - 3/8 -16	1980	103	899
~ DIN 371	VA	B	2B		HSS-E	●	NR. 4 -40 - 3/8 -16	2872	103	899

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Machine taps for UNC-threads

Standard	Type	Form	Tolerance	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
~ DIN 371	N	B	2B			HSS-E	A + M	NR. 4 -40 - NR.12 -2	2880	103	899
~ DIN 371	N	B	2B			HSS-E		NR. 4 -40 - 3/8 -16	2881	103	900
~ DIN 371	N	B	2B			HSS-E		NR. 3 -4 - 3/8 -16	2889	103	900
~ DIN 371	Ti	B	2BX			HSS-E-PM	C	NR. 6 -3 - 3/8 -16	2905	103	900
~ DIN 371	Ni	B	2BX			HSS-E-PM	A	NR. 6 -32 - 3/8 -16	2918	103	900
~ DIN 376	N	B	2B			HSS-E		7/16-14 - 1 1/4 -7	878	103	901
~ DIN 376	GG	C	2B			HSS-E		7/16-14 - 3/4 -10	1984	103	901
~ DIN 376	VA	B	2B			HSS-E		1/2 -13 - 1 - 8	1985	103	901
~ DIN 376	VA	B	2B			HSS-E		1/2 -13 - 1 - 8	2873	103	901
~ DIN 376	N	B	2B			HSS-E		7/16-14 - 1 - 8	2883	103	901
~ DIN 376	N	B	2B			HSS-E		1/2 -13 - 1 1/4 -	2890	103	902
~ DIN 371 / ~ DIN 376	Ti R15	C	2BX			HSS-E-PM	C	NR. 4 -40 - 5/8 -11	2912	103	903
~ DIN 371 / ~ DIN 376	Ni R10	C	2BX			HSS-E-PM	A	NR. 4 -40 - 5/8 -11	2922	103	903
~ DIN 371 / ~ DIN 376	Ti	B	3BX		NEW	HSS-E-PM	C	NR. 6 -32 - 5/8 -11	1059	103	904
~ DIN 371 / ~ DIN 376	Ti R15	C	3BX		NEW	HSS-E-PM	C	NR. 6 -32 - 5/8 -11	1063	103	904

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Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Machine taps for UNC-threads										
~ DIN 371 / ~ DIN 376	Ni R10	C	3BX	NEW	HSS-E-PM	A	NR. 6 -32 - 5/8 -11	1067	103	904
Machine taps for UNF-threads										
~ DIN 374	N R40	C	2B		HSS-E		NR. 3 -56 - 1 -12	911	103	905
~ DIN 374	N R40	C(K)	2B		HSS-E	S	NR.10 -32 - 1 -12	1838	103	905
~ DIN 374	N	C	2B		HSS-E		NR. 3 -56 - 1 -12	1987	103	905
~ DIN 374	N R15	C	2B		HSS-E		NR. 3 -56 - 1 -12	1988	103	905
~ DIN 374	VA R15	C	2B		HSS-E		NR.10 -32 - 5/8 -18	1991	103	905
~ DIN 374	N R15	C	2B		HSS-E		3/8 -24 - 3/4 -16	2841	103	906
~ DIN 374	N R40	C	2B		HSS-E		NR.10 -32 - 7/8 -14	2846	103	906
~ DIN 374	N R40	C	2B		HSS-E		NR. 8 -36 - 7/8 -14	2858	103	907
~ DIN 374	N R40	C	2B		HSS-E		NR. 4 -48 - 7/8 -14	2859	103	907
~ DIN 374	VA R40	C	2B		HSS-E		1/4 -28 - 1 -12	2867	103	907
~ DIN 374	VA R40	C	2B		HSS-E		NR. 3 -56 - 7/8 -14	2868	103	907
~ DIN 374	VA R15	C	2B		HSS-E	S	NR. 4 -48 - 1 -12	2898	103	907
~ DIN 374	N	B	2B		HSS-E		NR. 3 -56 - 1 1/4 -12	908	103	908

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Type	Form	Tolerance	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Machine taps for UNF-threads											
~ DIN 374	GG	C	2B			HSS-E	●	NR. 3 -56 - 1 -12	1989	103	908
~ DIN 374	VA	B	2B			HSS-E	○	NR. 3 -56 - 3/8 -24	1990	103	909
~ DIN 374	VA	B	2B			HSS-E	◍	NR. 6 -40 - 7/8 -14	2874	103	909
~ DIN 374	N	B	2B			HSS-E	A+M	NR. 4 -48 - 1 -12	2884	103	909
~ DIN 374	N	B	2B			HSS-E	◍	NR. 4 -48 - 7/8 -14	2885	103	909
~ DIN 374	N	B	2B			HSS-E	◍	NR. 3 -56 - 1 1/8 -1	2891	103	909
~ DIN 371	Ti	B	2BX			HSS-E-PM	C	NR. 6 -4 - 3/8 -24	2907	103	910
~ DIN 371	Ni	B	2BX			HSS-E-PM	A	NR. 6 -40 - 3/8 -24	2919	103	910
~ DIN 371 / ~ DIN 374	Ti R15	C	2BX			HSS-E-PM	C	NR. 4 -48 - 5/8 -18	2914	103	910
~ DIN 371 / ~ DIN 374	Ni R10	C	2BX			HSS-E-PM	A	NR. 4 -48 - 5/8 -18	2923	103	910
~ DIN 371 / ~ DIN 374	Ti	B	3BX		NEW	HSS-E-PM	C	NR. 6 -40 - 5/8 -18	1060	103	911
~ DIN 371 / ~ DIN 374	Ti R15	C	3BX		NEW	HSS-E-PM	C	NR. 6 -40 - 5/8 -18	1064	103	911
~ DIN 371 / ~ DIN 374	Ni R10	C	3BX		NEW	HSS-E-PM	A	NR. 6 -40 - 5/8 -18	1068	103	911
Machine taps for BSW-threads											
~ DIN 376	N R40	C				HSS-E	◍	W 3/8 - W1	2848	103	912

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Machine taps for BSW-threads										
~ DIN 371	N R40	C			HSS-E		W 1/8 - W 3/8	2847	103	913
~ DIN 376	N	B			HSS-E		W 7/16 - W1	2893	103	913
~ DIN 371	N	B			HSS-E		W 1/8 - W 3/8	2892	103	914
Machine taps for BSP-threads										
DIN 5156	VA R40	C		NEW	HSS-E-PM	S	G 1/16 - G 1/2	4159	103	915
DIN 5156	N R40	C(K)			HSS-E	S	G 1/8 - G1 1/2	937	103	916
DIN 5156	N	C			HSS-E		G 1/16 - G2	963	103	916
DIN 5156	N R15	C			HSS-E		G 1/8 - G1	964	103	916
DIN 5156	N R40	C			HSS-E		G 1/16 - G1 1/2	965	103	917
DIN 5156	VA R40	C			HSS-E		G 1/16 - G1 1/2	968	103	917
DIN 5156	N R15	C			HSS-E		G 1/8 - G1	2842	103	917
DIN 5156	N R40	C			HSS-E		G 1/8 - G1	2849	103	917
DIN 5156	N R40	C			HSS-E		G 1/8 - G1	2860	103	917
DIN 5156	N R40	C			HSS-E		G 1/8 - G2	2861	103	917
DIN 5156	N R15	E		NEW	HSS-E	C	G 1/16 - G1	4158	103	917

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Machine taps for BSP-threads										
DIN 5156	VA R40	C			HSS-E-PM	○	G 1/8 - G 1/2	939	103	917
DIN 5156	GG	C			HSS-E	●	G 1/16 - G2	961	103	918
DIN 5156	N	B			HSS-E	○	G 1/8 - G2	962	103	918
DIN 5156	VA	B			HSS-E	○	G 1/16 - G 7/8	967	103	919
DIN 5156	VA	B			HSS-E	◌	G 1/8 - G1	2875	103	919
DIN 5156	N	B			HSS-E	A+M	G 1/8 - G 5/8	2886	103	919
DIN 5156	N	B			HSS-E	◌	G 1/8 - G2	2887	103	919
DIN 5156	N	B			HSS-E	◌	G 1/8 - G1	2894	103	919
DIN 5156	VA	B			HSS-E-PM	○	G 1/8 - G 1/8	938	103	919
Machine taps for NPT-threads										
Guhring std.	VA R25	C			HSS-E	S	1/8 - 3/4	1088	103	920
Guhring std.	VA R25	C			HSS-E	◌	1/8 - 3/4	1087	103	920
Machine taps for NPTF-threads										
Guhring std.	VA R25	C		NEW	HSS-E	S	1/16 - 1	4127	103	921

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Machine taps for EG-threads

Standard	Type	Form	Tolerance	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 40435	N R40	C	6H mod		NEW	HSS-E	S	EG M 4 - EG M16	1011	103	922
DIN 40435	N	B	6H mod		NEW	HSS-E	S	EG M 4 - EG M16	1010	103	923

Oil feed taps for ISO metric threads

DIN 371	N R15	C	ISO 2 / 6H			HSS-E		M 5 - M10	1891	103	924
DIN 371	VA R40	C	ISO 2 / 6H			HSS-E		M 5 - M10	1892	103	924
DIN 371	N R40	C	ISO 2 / 6H			HSS-E		M 5 - M10	1893	103	924
DIN 371	H R40	C	ISO 2 / 6H			HSS-E		M 5 - M10	1894	103	925
DIN 371	N R15	C	ISO 2 / 6H			HSS-E	S	M 5 - M10	2436	103	925
DIN 371	N R40	C	ISO 2 / 6H			HSS-E	S	M 5 - M10	2438	103	925
DIN 371	N R40	C	ISO 2 / 6H			HSS-E	A+M	M 5 - M10	2514	103	925
DIN 371	N R50	C	ISO 2 / 6H			HSS-E-PM	C	M 5 - M10	1152	103	925
DIN 371	H R15	C	6HX			HSS-E-PM	C	M 6 - M10	1188	103	925
DIN 376	N R15	C	ISO 2 / 6H			HSS-E		M12 - M16	1898	103	926
DIN 376	VA R40	C	ISO 2 / 6H			HSS-E		M12 - M20	1899	103	926
DIN 376	H R40	C	ISO 2 / 6H			HSS-E		M12 - M20	1901	103	927

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Oil feed taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration		Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
DIN 376	N R15	C	ISO 2 / 6H			HSS-E	S	M12	-	M20	2437	103	927
DIN 376	N R40	C	ISO 2 / 6H			HSS-E	S	M12	-	M20	2439	103	927
DIN 376	H R15	C	6HX			HSS-E-PM	C	M12	-	M24	1194	103	927
DIN 376	N R50	C	ISO 2 / 6H			HSS-E-PM	S	M12	-	M20	1293	103	927
DIN 371	H	C	6HX			Solid carbide		M 3	-	M10	969	103	928
DIN 371	N R15	C	6HX			Solid carbide		M 3	-	M10	971	103	928
DIN 371	H	E	6HX		NEW	Solid carbide		M 3	-	M10	1008	103	929
DIN 371	H	C	6HX			Solid carbide		M 5	-	M10	1858	103	929
DIN 371	H	C	6HX			Solid carbide	A	M 5	-	M10	2311	103	929
DIN 371	H	C	6HX			Solid carbide	A	M 5	-	M10	2506	103	929
DIN 371	N R15	C	6HX			Solid carbide	A	M 5	-	M10	2510	103	929
DIN 371	N R15	C	6HX			Solid carbide	M	M 5	-	M10	2516	103	929
DIN 376	H	C	6HX			Solid carbide		M12	-	M20	1859	103	930
DIN 376	H	C	6HX			Solid carbide		M12	-	M20	1883	103	930
DIN 371	GG	C	6HX			HSS-E	A	M 5	-	M10	318	103	931

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Oil feed taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 371	GG	C	6HX			HSS-E	●	M 5 - M10	1890	103	931
DIN 371	N	B	ISO 2 / 6H			HSS-E	A+M	M 5 - M10	2517	103	931
DIN 371	H	C	6HX			HSS-E-PM	C	M 5 - M10	302	103	931
DIN 371	H	E	6HX			HSS-E-PM	C	M 5 - M10	1091	103	931
DIN 376	GG	C	6HX			HSS-E	A	M12 - M20	319	103	932
DIN 376	GG	C	6HX			HSS-E	●	M12 - M20	1897	103	932
DIN 376	N AZ	E	ISO 2 / 6H			HSS-E	A+M	M 5 - M12	2899	103	933
DIN 376	H	C	6HX			HSS-E-PM	C	M10 - M14	297	103	933
DIN 376	H	E	6HX		NEW	HSS-E-PM	C	M10 - M20	4165	103	933
DIN 371	VA R50	C	6HX			HSS-E-PM	C	M 5 - M10	1139	103	934
DIN 376	VA R50	C	6HX			HSS-E-PM	C	M12 - M20	1142	103	934

Oil feed taps for ISO metric fine threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 374	VA R50	C	6HX		HSS-E-PM	C	M 8 X1 - M20 X1,5	1144	103	935
DIN 374	N R15	C	ISO 2 / 6H		HSS-E	○	M 5 X0,5 - M20 X1,5	1905	103	936
DIN 374	VA R40	C	ISO 2 / 6H		HSS-E	○	M 5 X0,5 - M16 X1,5	1906	103	936

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Oil feed taps for ISO metric fine threads

Standard	Type	Form	Tolerance	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 374	H R40	C	ISO 2 / 6H			HSS-E	○	M 6 X0,75 - M20 X1,5	1907	103	936
DIN 374	H R15	C	6HX			HSS-E-PM	C	M 6 X0,75 - M24 X1,5	1200	103	936
DIN 374	N R50	C	ISO 2 / 6H			HSS-E-PM	S	M 8 X1 - M20 X1,5	1294	103	936
DIN 374	GG	C	6HX			HSS-E	A	M 8 X1 - M24 X1,5	347	103	937
DIN 374	GG	C	6HX			HSS-E	●	M 8 X1 - M20 X1,5	1904	103	937
DIN 374	H	E	6HX		NEW	HSS-E-PM	C	M 5 X0,5 - M16 X1,5	1007	103	937
DIN 374	H	C	6HX			HSS-E-PM	C	M 5 X0,5 - M16 X1,5	1090	103	937
DIN 371	H	C	6HX			Solid carbide	○	M 5 X0,5 - M10 X1	972	103	938
DIN 371	N L15	D	6HX			Solid carbide	○	M 4 X0,5 - M 8 X1	975	103	938
DIN 371	N R15	C	6HX			Solid carbide	○	M 4 X0,5 - M10 X1	977	103	938
DIN 371	H	C	6HX			Solid carbide	○	M 5 X0,5 - M10 X1	1861	103	939
DIN 374	H	C	6HX			Solid carbide	○	M12 X1,5 - M20 X1,5	974	103	939
DIN 374	N L15	D	6HX			Solid carbide	○	M12 X1,5 - M18 X1,5	976	103	939
DIN 374	N R15	C	6HX			Solid carbide	○	M12 X1,5 - M20 X1,5	978	103	939
DIN 374	H	E	6HX		NEW	Solid carbide	○	M10 X1 - M16 X1,5	1009	103	939

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Oil feed taps for ISO metric fine threads										
DIN 374	H	C	6HX		Solid carbide	◯	M12 X1,5 - M20 X1,5	1860	103	939
Oil feed taps for UNC threads										
~ DIN 371	GG	C	2B		HSS-E	A	NR.10 -24 - 3/8 -16	1085	103	940
~ DIN 376	GG	C	2B		HSS-E	A	7/16-14 - 7/8 - 9	1086	103	940
Oil feed taps for UNF threads										
~ DIN 374	GG	C	2B		HSS-E	A	NR.10 -32 - 7/8 -14	1082	103	941
Machine nut taps for ISO metric threads										
DIN 357	N		ISO 2 / 6H		HSS-E	◯	M 3 - M30	851	103	942
Machine combination drill taps for ISO metric threads										
Guhring std.	N	D	ISO 2 / 6H		HSS-E	◯	M 3 - M12	1839	103	943

Fluteless machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
~ DIN 371	N	C	6HX		HSS-E	S	M 2	-	M10	921	103	944
~ DIN 371	N	C	6GX		HSS-E	S	M 2	-	M10	920	103	944
~ DIN 371	N	C	6HX		HSS-E-PM	S	M 2	-	M10	1255	103	944
~ DIN 371	N	C	6HX		HSS-E-PM	Cb	M 2	-	M10	1347	103	945
~ DIN 371	N	C	6GX		HSS-E-PM	S	M 2	-	M10	903	103	945
~ DIN 371	N	C	6GX		HSS-E-PM	Cb	M 2,5	-	M 8	1565	103	945
~ DIN 376	N	C	6HX		HSS-E	S	M12	-	M18	925	103	945
~ DIN 376	N	C	6GX		HSS-E	S	M12	-	M20	924	103	945
~ DIN 376	N	C	6HX		HSS-E-PM	S	M12	-	M20	1256	103	945
~ DIN 376	N	C	6GX		HSS-E-PM	S	M12	-	M20	952	103	945
~ DIN 376	N	C	6GX		HSS-E-PM	Cb	M14	-	M20	1567	103	945

Fluteless machine taps for ISO metric fine threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
~ DIN 371	N	C	6GX		HSS-E	S	M10 X1	-	M10 X1	1280	103	946
~ DIN 371	N	C	6HX		HSS-E-PM	S	M 8 X1	-	M10 X1	1257	103	946
~ DIN 371	N	C	6HX		HSS-E-PM	Cb	M 8 X1	-	M10 X1	1568	103	947

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Fluteless machine taps for ISO metric fine threads										
~ DIN 371	N	C	6GX		HSS-E-PM	S	M 8 X1 - M10 X1,2	1740	103	947
~ DIN 371	N	C	6GX		HSS-E-PM	Cb	M 8 X1 - M10 X1	1569	103	947
~ DIN 374	N	C	6HX		HSS-E-PM	S	M12 X1 - M24 X2	1258	103	947
~ DIN 374	N	C	6GX		HSS-E-PM	Cb	M12 X1 - M24 X1,5	1580	103	947
~ DIN 374	N	C	6HX		HSS-E	S	M 8 X1 - M24 X1,5	929	103	948
~ DIN 374	N	C	6GX		HSS-E	S	M 8 X1 - M18 X1,5	928	103	948
Fluteless machine taps for UNC-threads										
~ DIN 371	N	C	2BX		HSS-E	S	NR.10 -24 - 3/8 -16	2273	103	949
~ DIN 376	N	C	2BX		HSS-E	S	7/16-14 - 7/8 - 9	2274	103	949
Fluteless machine taps for UNF-threads										
~ DIN 371	N	C	2BX		HSS-E	S	NR.10 -32 - 3/8 -24	1283	103	950
~ DIN 374	N	C	2BX		HSS-E	S	NR.10 -32 - 1 -12	2275	103	951
Fluteless machine taps for BSP-threads										
DIN 2189	N	C			HSS-E	S	G 1/8 - G1 1/4	966	103	952

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Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Oil feed fluteless taps f. ISO metric threads										
~ DIN 371	N	C	6HX		Solid carbide	S	M 5 - M16	2518	103	953

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Fluteless machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
~ DIN 371	N	C	6HX		HSS-E-PM	S	M 3 - M10	322	103	954
~ DIN 376	N	C	6HX		HSS-E-PM	S	M12 - M16	339	103	954
~ DIN 371	N	C	6HX		HSS-E	C	M 3 - M10	2012	103	955
~ DIN 371	N	C	6HX		HSS-E	S	M 3 - M10	919	103	956
~ DIN 371	N	C	6HX		HSS-E	P	M 3 - M10	1587	103	956
~ DIN 371	N	C	6GX		HSS-E	S	M 3 - M10	918	103	956
~ DIN 371	N	C	6GX		HSS-E	P	M 3 - M10	1588	103	956
~ DIN 371	N	C	6HX		HSS-E-PM	S	M 3 - M10	1266	103	957
~ DIN 371	N	C	6HX		HSS-E-PM	P	M 3 - M10	1599	103	957
~ DIN 371	N	C	6GX		HSS-E-PM	P	M 3 - M10	1705	103	957
~ DIN 376	N	C	6HX		HSS-E	C	M12 - M20	2013	103	957
~ DIN 376	N	C	6GX		HSS-E	P	M12 - M20	1590	103	957
~ DIN 376	N	C	6HX		HSS-E-PM	S	M12 - M20	1267	103	957
~ DIN 376	N	C	6HX		HSS-E-PM	P	M12 - M20	1707	103	957
~ DIN 376	N	C	6GX		HSS-E-PM	P	M12 - M20	1708	103	957

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Fluteless machine taps for ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
~ DIN 376	N	C	6HX		HSS-E	S	M 6 - M39	923	103	958
~ DIN 376	N	C	6HX		HSS-E	P	M 6 - M20	1589	103	958
~ DIN 376	N	C	6GX		HSS-E	S	M 6 - M20	922	103	958

Fluteless machine taps for ISO metric fine threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
~ DIN 371	N	C	6HX		HSS-E-PM	S	M 6 X0,75 - M10 X1,25	1284	103	959
~ DIN 374	N	C	6HX		HSS-E	P	M12 X1 - M24 X1,5	1593	103	960
~ DIN 374	N	C	6GX		HSS-E	P	M12 X1 - M24 X1,5	1594	103	960
~ DIN 374	N	C	6HX		HSS-E-PM	S	M12 X1 - M24 X2	1269	103	960
~ DIN 374	N	C	6HX		HSS-E-PM	P	M12 X1 - M24 X1,5	1711	103	960
~ DIN 374	N	C	6GX		HSS-E-PM	P	M12 X1 - M24 X1,5	1712	103	960
~ DIN 371	N	C	6HX		HSS-E	S	M 6 X0,75 - M10 X1,25	1275	103	961
~ DIN 371	N	C	6HX		HSS-E	P	M 8 X1 - M10 X1	1591	103	961
~ DIN 371	N	C	6GX		HSS-E	S	M 8 X1 - M10 X1	1277	103	961
~ DIN 371	N	C	6GX		HSS-E	P	M 8 X1 - M10 X1	1592	103	961
~ DIN 371	N	C	6HX		HSS-E-PM	S	M 8 X1 - M10 X1,25	1268	103	961

bright | steam tempered | nitrided lands | nitrided | golden brown | TiAlN | TiAlN nanoA | TiAlN SuperA

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Fluteless machine taps for ISO metric fine threads										
~ DIN 371	N	C	6GX		HSS-E-PM	P	M 8 X1 - M10 X1	1710	103	962
~ DIN 374	N	C	6HX		HSS-E-PM	S	M 8 X1 - M20 X1,5	333	103	963
~ DIN 374	N	C	6HX		HSS-E	S	M 6 X0,75 - M24 X1,5	927	103	964
~ DIN 374	N	C	6HX		HSS-E	C	M 6 X0,75 - M20 X1,5	2008	103	964
~ DIN 374	N	C	6GX		HSS-E	S	M 8 X1 - M22 X1,5	926	103	964
Fluteless machine taps for UNC-threads										
~ DIN 376	N	C	2BX		HSS-E	S	1/2 -13 - 3/4 -10	1583	103	965
~ DIN 371	N	C	2BX		HSS-E	S	NR. 4 -40 - 3/8 -16	1582	103	965
Fluteless machine taps for UNF-threads										
~ DIN 371	N	C	2BX		HSS-E	S	NR. 4 -48 - 3/8 -24	1584	103	966
~ DIN 374	N	C	2BX		HSS-E	S	7/16-20 - 3/4 -16	1585	103	966
Fluteless machine taps for BSP-threads										
DIN 2189	N	C			HSS-E	S	G 1/16 - G 3/4	1586	103	967
Oil feed fluteless taps f. ISO metric threads										
~ DIN 371	N	E	6HX		Solid carbide	A	M 3 - M10	1927	103	968

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Oil feed fluteless taps f. ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration		Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
~ DIN 371	N	C	6HX			Solid carbide	A	M 3	-	M10	1972	103	968
~ DIN 371	N	C	6GX		NEW	HSS-E	Cb	M 5	-	M20	4146	103	969
~ DIN 371	N	C	6HX			HSS-E	S	M 5	-	M10	2442	103	969
~ DIN 371	N	C	6HX			HSS-E	C	M 5	-	M10	2446	103	969
~ DIN 371	N	C	6HX			HSS-E	Cb	M 5	-	M20	2515	103	969
~ DIN 371	N	C	6GX			HSS-E	S	M 5	-	M10	2443	103	969
~ DIN 371	N	C	6GX			HSS-E	C	M 5	-	M10	2447	103	970
~ DIN 371	N	C	6HX			HSS-E-PM	S+	M 5	-	M10	323	103	970
~ DIN 376	N	C	6HX			Solid carbide	A	M12	-	M20	1931	103	971
~ DIN 376	N	C	6HX			HSS-E	S	M12	-	M16	2444	103	971
~ DIN 376	N	C	6HX			HSS-E	C	M12	-	M16	2448	103	971
~ DIN 376	N	C	6GX			HSS-E	S	M12	-	M16	2445	103	971
~ DIN 376	N	C	6HX			HSS-E-PM	S+	M12	-	M16	342	103	971
~ DIN 371	N	E	6HX			HSS-E-PM	S	M 3	-	M10	1725	103	972
~ DIN 371	N	C	6HX			HSS-E-PM	C	M 5	-	M10	1270	103	972

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Oil feed fluteless taps f. ISO metric threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
~ DIN 371	N	C	6HX		HSS-E-PM	A	M 5 - M10	1717	103	972
~ DIN 371	N	E	6GX		HSS-E-PM	S	M 3 - M10	1726	103	972
~ DIN 371	N	C	6GX		HSS-E-PM	C	M 5 - M10	1713	103	973
~ DIN 371	N	C	6GX		HSS-E-PM	A	M 5 - M10	1718	103	973
~ DIN 376	N	E	6HX		HSS-E-PM	S	M12 - M20	1727	103	973
~ DIN 376	N	C	6HX		HSS-E-PM	C	M12 - M20	1271	103	973
~ DIN 376	N	C	6HX		HSS-E-PM	A	M12 - M20	1719	103	973
~ DIN 376	N	E	6GX		HSS-E-PM	S	M12 - M20	1728	103	973
~ DIN 376	N	C	6GX		HSS-E-PM	C	M12 - M20	1714	103	973
~ DIN 376	N	C	6GX		HSS-E-PM	A	M12 - M20	1720	103	973
Guhring std.	N	C	6HX	NEW ≤M5	HSS-E-PM	S	M 3 - M20	4143	103	974

Oil feed fluteless taps f. ISO metric fine threads

Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
~ DIN 371	N	C	6HX	NEW	HSS-E	Cb	M 8 X1 - M16 X1,5	4147	103	975
~ DIN 371	N	C	6GX	NEW	HSS-E	Cb	M 8 X1 - M16 X1,5	4151	103	975
~ DIN 371	N	E	6HX		HSS-E-PM	S	M 8 X1 - M10 X1,2	1729	103	976

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Oil feed fluteless taps f. ISO metric fine threads

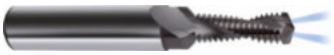
Standard	Type	Form	Tolerance	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
~ DIN 371 / ~ DIN 376	N	C	6HX		Solid carbide	A	M10 X1 - M24 X1,5	1581	103	977
~ DIN 371	N	C	6HX		HSS-E-PM	C	M 8 X1 - M10 X1,25	1272	103	978
~ DIN 371	N	C	6HX		HSS-E-PM	A	M 8 X1 - M10 X1,2	1721	103	978
~ DIN 371	N	E	6GX		HSS-E-PM	S	M 8 X1 - M10 X1,2	1730	103	978
~ DIN 371	N	C	6GX		HSS-E-PM	C	M 8 X1 - M10 X1,2	1715	103	979
~ DIN 374	N	E	6HX		HSS-E-PM	S	M12 X1 - M24 X1,5	1731	103	979
~ DIN 374	N	C	6HX		HSS-E-PM	C	M12 X1 - M24 X2	1273	103	979
~ DIN 374	N	C	6HX		HSS-E-PM	A	M12 X1,25 - M24 X1,5	1723	103	979
~ DIN 374	N	E	6GX		HSS-E-PM	S	M12 X1 - M24 X1,5	1732	103	979
~ DIN 374	N	C	6GX		HSS-E-PM	C	M12 X1 - M24 X1,5	1716	103	979
~ DIN 374	N	C	6HX		HSS-E-PM	S+	M 8 X1 - M16 X1,5	338	103	980
Guhring std.	N	C	6HX	NEW	HSS-E-PM	S	M 8 X1 - M16 X1,5	4145	103	981

Oil feed fluteless taps f. BSP-threads

DIN 2189	N	C		NEW	HSS-E	Cb	G 1/16 - G1	4152	103	982

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

Thread milling cutters for ISO metric threads

Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1			Guhring no.	Discount group	Standard range page
Guhring std.	DTMC SP		Solid carbide	○	1,5xD	M 3	-	M16	3774	108	984
Guhring std.	DTMC SP		Solid carbide	C	1,5xD	M 3	-	M16	3776	108	985
Guhring std.	DTMC SP		Solid carbide	○	1,5xD	M 4	-	M16	3775	108	985
Guhring std.	DTMC SP		Solid carbide	C	1,5xD	M 4	-	M16	3777	108	985
Guhring std.	DTMC SP		Solid carbide	○	2xD	M 3	-	M16	3778	108	986
Guhring std.	DTMC SP		Solid carbide	C	2xD	M 3	-	M16	3780	108	987
Guhring std.	DTMC SP		Solid carbide	○	2xD	M 4	-	M16	3779	108	987
Guhring std.	DTMC SP		Solid carbide	C	2xD	M 4	-	M16	3781	108	987
Guhring std.	DTMC SP		Solid carbide	○	2,5xD	M 4	-	M16	3782	108	988
Guhring std.	DTMC SP		Solid carbide	C	2,5xD	M 3	-	M16	3784	108	989
Guhring std.	DTMC SP		Solid carbide	○	2,5xD	M 4	-	M16	3783	108	989
Guhring std.	DTMC SP		Solid carbide	C	2,5xD	M 4	-	M16	3785	108	989

Thread milling cutters for ISO metric fine threads

Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1			Guhring no.	Discount group	Standard range page
Guhring std.	DTMC SP		Solid carbide	C	1,5xD	M 4 X0,5	-	M16 X1,5	3788	108	990
Guhring std.	DTMC SP		Solid carbide	○	1,5xD	M 6 X0,75	-	M16 X1,5	3787	108	991

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Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1	Guhring no.	Discount group	Standard range page
Thread milling cutters for ISO metric fine threads									
Guhring std.	DTMC SP		Solid carbide	C	1,5xD	M 6 X0,75 - M16 X1,5	3789	108	991
Guhring std.	DTMC SP		Solid carbide	○	2xD	M 4 X0,5 - M16 X1,5	3790	108	992
Guhring std.	DTMC SP		Solid carbide	C	2xD	M 4 X0,5 - M 6 X0,75	3792	108	993
Guhring std.	DTMC SP		Solid carbide	○	2xD	M 6 X0,75 - M16 X1,5	3791	108	993
Guhring std.	DTMC SP		Solid carbide	C	2xD	M 6 X0,75 - M16 X1,5	3793	108	993
Thread milling cutters for UNC-threads									
Guhring std.	DTMC SP	NEW	Solid carbide	○	2xD	1/4 -20 - 5/8 -11	4138	108	994
Guhring std.	DTMC SP	NEW	Solid carbide	C	2xD	1/4 -20 - 5/8 -11	4139	108	994
Thread milling cutters for UNF-threads									
Guhring std.	DTMC SP	NEW	Solid carbide	○	2xD	1/4 -28 - 5/8 -18	4140	108	995
Guhring std.	DTMC SP	NEW	Solid carbide	C	2xD	1/4 -28 - 5/8 -18	4141	108	995

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1	Guhring no.	Discount group	Standard range page
Thread milling cutters for ISO metric threads									
Guhring std.	TM SP		Solid carbide	○	2xD	M 6 - M20 X1,5	3734	108	996
Guhring std.	TM SP		Solid carbide	C	2xD	M 6 - M20 X1,5	3737	108	996
Guhring std.	TM SP		Solid carbide	A	2xD	M 6 - M20	3743	108	996
Guhring std.	TM SP	NEW	Solid carbide	○	2xD	M 6 - M20	4132	108	997
Guhring std.	TM SP	NEW	Solid carbide	C	2xD	M 6 - M20	4133	108	997
Guhring std.	TM SP		Solid carbide	○	2xD	M 6 - M20	3735	108	998
Guhring std.	TM SP		Solid carbide	C	2xD	M 6 - M20	3740	108	998
Guhring std.	TM SP		Solid carbide	A	2xD	M 6 - M20	3744	108	998
Thread milling cutters for BSP-threads									
Guhring std.	TM SP		Solid carbide	○	2xD	G 1/8 - G 3/8	3745	108	999
Guhring std.	TM SP		Solid carbide	C	2xD	G 1/8 - G 3/8	3748	108	999
Guhring std.	TM SP		Solid carbide	A	2xD	G 1/8 - G 3/8	3751	108	999
Guhring std.	TM SP		Solid carbide	○	2xD	G 1/8 - G 3/8	3746	108	1000
Guhring std.	TM SP		Solid carbide	C	2xD	G 1/8 - G 3/8	3750	108	1000
Guhring std.	TM SP		Solid carbide	A	2xD	G 1/8 - G 3/8	3752	108	1000

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Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1	Guhring no.	Discount group	Standard range page
Thread milling cutters for NPT-threads									
Guhring std.	TM SP		Solid carbide	○		1/16 - 3/8	3753	108	1001
Guhring std.	TM SP		Solid carbide	C		1/16 - 3/8	3754	108	1001
Guhring std.	TM SP		Solid carbide	A		1/16 - 3/8	3755	108	1001
Thread milling cutters for NPTF-threads									
Guhring std.	TM SP		Solid carbide	○		1/16 - 3/8	3756	108	1002
Guhring std.	TM SP		Solid carbide	C		1/16 - 3/8	3757	108	1002
Guhring std.	TM SP		Solid carbide	A		1/16 - 3/8	3758	108	1002
Thread milling cutters for UNC-threads									
Guhring std.	TM SP	NEW	Solid carbide	○	2xD	NR.10 -24 - 5/8 -11	4134	108	1003
Guhring std.	TM SP	NEW	Solid carbide	C	2xD	NR.10 -24 - 5/8 -11	4135	108	1003
Thread milling cutters for UNF-threads									
Guhring std.	TM SP	NEW	Solid carbide	○	2xD	NR.10 -32 - 5/8 -18	4136	108	1004
Guhring std.	TM SP	NEW	Solid carbide	C	2xD	NR.10 -32 - 5/8 -18	4137	108	1004

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1	Guhring no.	Discount group	Standard range page

Thread milling cutters for ISO metric threads

Guhring std.	TMC SP		Solid carbide	○	1,5xD	M 3 - M20	3510	108	1006
Guhring std.	TMC SP		Solid carbide	C	1,5xD	M 3 - M20	3525	108	1007
Guhring std.	TMC SP		Solid carbide	A	1,5xD	M 3 - M20	3543	108	1007
Guhring std.	TMC SP		Solid carbide	○	2xD	M 3 - M20	3511	108	1008
Guhring std.	TMC SP		Solid carbide	C	2xD	M 3 - M20	3526	108	1009
Guhring std.	TMC SP		Solid carbide	A	2xD	M 3 - M20	3544	108	1009
Guhring std.	TMC SP		Solid carbide	○	2,5xD	M 3 - M16	3759	108	1010
Guhring std.	TMC SP		Solid carbide	C	2,5xD	M 3 - M20	3760	108	1011
Guhring std.	TMC SP		Solid carbide	A	2,5xD	M 3 - M20	3761	108	1011

Thread milling cutters for ISO metric fine threads

Guhring std.	TMC SP		Solid carbide	○	1,5xD	M 4 X0,5 - M16 X1,5	3512	108	1012
Guhring std.	TMC SP		Solid carbide	C	1,5xD	M 4 X0,5 - M16 X1,5	3527	108	1012
Guhring std.	TMC SP		Solid carbide	A	1,5xD	M 4 X0,5 - M16 X1,5	3545	108	1012
Guhring std.	TMC SP		Solid carbide	○	2xD	M 4 X0,5 - M16 X1,5	3513	108	1013
Guhring std.	TMC SP		Solid carbide	C	2xD	M 4 X0,5 - M16 X1,5	3528	108	1013

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Thread milling cutters for ISO metric fine threads

Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1	Guhring no.	Discount group	Standard range page
Guhring std.	TMC SP		Solid carbide	A	2xD	M 4 X0,5 - M16 X1,5	3546	108	1013
Guhring std.	TMC SP		Solid carbide	○	2,5xD	M 4 X0,5 - M16 X1,5	3762	108	1014
Guhring std.	TMC SP		Solid carbide	C	2,5xD	M 4 X0,5 - M16 X1,5	3763	108	1014
Guhring std.	TMC SP		Solid carbide	A	2,5xD	M 4 X0,5 - M16 X1,5	3764	108	1014

Thread milling cutters for UNC-threads

Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1	Guhring no.	Discount group	Standard range page
Guhring std.	TMC SP		Solid carbide	○	1,5xD	1/4 -20 - 1/2 -13	3516	108	1015
Guhring std.	TMC SP		Solid carbide	C	1,5xD	1/4 -20 - 1/2 -13	3534	108	1015
Guhring std.	TMC SP		Solid carbide	○	2xD	1/4 -20 - 1/2 -13	3517	108	1016
Guhring std.	TMC SP		Solid carbide	C	2xD	1/4 -20 - 1/2 -13	3535	108	1016
Guhring std.	TMC SP		Solid carbide	A	2xD	1/4 -20 - 1/2 -13	3550	108	1016

Thread milling cutters for UNF-threads

Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1	Guhring no.	Discount group	Standard range page
Guhring std.	TMC SP		Solid carbide	○	1,5xD	1/4 -28 - 1/2 -20	3518	108	1017
Guhring std.	TMC SP		Solid carbide	C	1,5xD	1/4 -28 - 1/2 -20	3536	108	1017
Guhring std.	TMC SP		Solid carbide	A	1,5xD	1/4 -28 - 1/2 -20	3551	108	1017
Guhring std.	TMC SP		Solid carbide	○	2xD	1/4 -28 - 1/2 -20	3519	108	1018

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1	Guhring no.	Discount group	Standard range page
Thread milling cutters for UNF-threads									
Guhring std.	TMC SP		Solid carbide	C	2xD	1/4 -28 - 1/2 -20	3537	108	1018
Guhring std.	TMC SP		Solid carbide	A	2xD	1/4 -28 - 1/2 -20	3552	108	1018
Thread milling cutters for BSP-threads									
Guhring std.	TMC SP		Solid carbide	○	1,5xD	G 1/8 - G 3/8	3514	108	1020
Guhring std.	TMC SP		Solid carbide	C	1,5xD	G 1/4 - G 3/8	3529	108	1021
Guhring std.	TMC SP		Solid carbide	A	1,5xD	G 1/8 - G 3/8	3547	108	1021
Guhring std.	TMC SP		Solid carbide	○	2xD	G 1/8 - G 3/8	3515	108	1022
Guhring std.	TMC SP		Solid carbide	C	2xD	G 1/8 - G 3/8	3533	108	1023
Guhring std.	TMC SP		Solid carbide	A	2xD	G 1/8 - G 3/8	3548	108	1023
Guhring std.	TMC SP		Solid carbide	○	2,5xD	G 1/8 - G 1/4	3765	108	1024
Thread milling cutters for NPT-threads									
Guhring std.	TMC SP		Solid carbide	○		1/8 - 3/8	3520	108	1026
Guhring std.	TMC SP		Solid carbide	C		1/8 - 3/8	3538	108	1027
Guhring std.	TMC SP		Solid carbide	A		1/8 - 3/8	3553	108	1027

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Thread milling cutters for NPTF-threads

Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1	Guhring no.	Discount group	Standard range page
Guhring std.	TMC SP		Solid carbide	◯	1/8	- 3/8	3521	108	1028
Guhring std.	TMC SP		Solid carbide	C	1/8	- 3/8	3539	108	1029
Guhring std.	TMC SP		Solid carbide	A	1/8	- 3/8	3554	108	1029

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1	Guhring no.	Discount group	Standard range page
Thread milling cutters for ISO metric threads									
Guhring std.	TMU SP		Solid carbide	○	M 1	- M 3,5	3523	108	1030
Guhring std.	TMU SP		Solid carbide	C	M 1	- M 3,5	3541	108	1030
Guhring std.	TMU SP		Solid carbide	A	M 1	- M 3,5	3556	108	1030
Thread milling cutters for UN-threads									
Guhring std.	TMU UN		Solid carbide	○	UN 12	- UN 24	3595	108	1031
Guhring std.	TMU UN		Solid carbide	C	UN 10	- UN 9	3596	108	1031
Guhring std.	TMU UN		Solid carbide	A	UN 12	- UN 24	3597	108	1031
Thread milling cutters for BSP-threads									
Guhring std.	TMU SP		Solid carbide	○	G 11	- G 19	3524	108	1032
Guhring std.	TMU SP		Solid carbide	C	G 11	- G 19	3542	108	1032
Guhring std.	TMU SP		Solid carbide	A	G 11	- G 19	3557	108	1032
Thread milling cutters for NPT-threads									
Guhring std.	TMU SP		Solid carbide	○	NPT 11,5	- NPT 14	3768	108	1033
Guhring std.	TMU SP		Solid carbide	C	NPT 11,5	- NPT 14	3769	108	1033
Guhring std.	TMU SP		Solid carbide	A	NPT 11,5	- NPT 14	3770	108	1033

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Thread milling cutters for NPTF-threads

Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1	Guhring no.	Discount group	Standard range page
Guhring std.	TMU SP		Solid carbide	C	NPTF 11,5	- NPTF 14	3772	108	1034
Guhring std.	TMU SP		Solid carbide	A	NPTF 11,5	- NPTF 14	3773	108	1034

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Standard	Type	Tool illustration	Tool material	Surface	Thread length	d1	Guhring no.	Discount group	Standard range page

Thread milling cutters for ISO metric threads

Guhring std.	TMU SP		NEW	Solid carbide	◯	0,500 - 3,000	4162	108	1035
Guhring std.	TMU SP		NEW	Solid carbide	C	0,500 - 3,000	4163	108	1035

Die nuts for ISO metric threads

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	B		HSS	○	lapped M 1 - M10	125	103	1036
Guhring std.	B		HSS	○	M 2,2 - M12	121	103	1037

Dies for ISO metric threads

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 382			HSS	○	M 5 - M52	139	103	1038
DIN EN 22568	B		HSS-E	●	lapped M 2 - M22	130	103	1039
DIN 382			HSS	○	M 3 - M16	140	103	1040
DIN EN 22568	B		HSS	○	M 1 - M30	151	103	1041
DIN EN 22568	B		HSS	○	lapped M 4 - M12	153	103	1041
DIN EN 22568	B		HSS	○	lapped M 4 - M27	155	103	1041
DIN EN 22568	B		HSS	○	M 3 - M33	156	103	1041
DIN EN 22568	B		HSS	○	M 3 - M30	152	103	1042

Dies for ISO metric fine threads

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN EN 22568	B		HSS	○	M 2,6X0,25 - M22 X1,5	161	103	1043
DIN EN 22568	B		HSS	○	M 3 X0,3 - M30 X2	162	103	1043
DIN EN 22568	B		HSS	○	lapped M 4,5X0,5 - M27 X1,5	163	103	1043

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Dies for UNC-threads								
DIN EN 22568	B		HSS	○	NR. 4 -40 - 7/16-14	181	103	1045
DIN EN 22568	B		HSS	○	NR. 8 -32 - 3/4 -10	182	103	1045
Dies for UNF-threads								
DIN EN 22568	B		HSS	○	NR.10 -32 - 7/8 -14	185	103	1046
Dies for BSW-threads								
DIN EN 22568	B		HSS	○	W 1/8 - W1 5/8	172	103	1047
Dies for BSP-threads								
DIN EN 24231	B		HSS	○	G 1/8 - G1	175	103	1048
DIN EN 24231	B		HSS	○	G 1/8 - G1 1/2	176	103	1048
Dies for R-threads BSPT								
DIN EN 24230	B		HSS	○	R 1/8 - R2	198	103	1049
Dies for NPT-threads								
DIN EN 22568	B		HSS	○	1/8 - 1	190	103	1050
DIN EN 22568	B		HSS	○	1/8 - 3/4	191	103	1050

The Guhring colour code

The Guhring colour-code simplifies the selection of the optimal Guhring threading tool for the workpiece material.
The structure of the compass pages for taps and thread milling cutters is corresponding to this colour-code.

General steels

Material no. to DIN EN 10 027	Abbreviation
Common structural steels	
1.0035	S 185 (St 33)
1.0039	S 235 JRH
1.0036	S 235JRG1+CR
1.0060	E 335 (St 60-2)
Free-cutting steels	
1.0718	11SMnPb30
1.0721	10S20
1.0758	60SPb20
1.0726	35S20
Case hardened steels	
1.0401	(C 15)
1.7016	17 CR3
1.7131	16MnCr5
1.5919	15CrNi6
Unalloyed heat-treatable steels	
1.0402	C 22
1.1151	C22E (Ck 22)
1.0503	C 45
1.1191	C45E (Ck 45)

High tensile steels

Material no. to DIN EN 10 027	Abbreviation
Alloyed heat-treatable steels	
1.6511	36 CrNiMo 4
1.7033	34 Cr 4
1.7225	42 CrMo 4
Tool steels	
1.2316	X 36 CrMo 17
1.2067	10 S20
High speed steels	
1.3343	HS 6-5-2
1.3344	HS 6-5-3
1.3243	HS 6-5-2-5
1.3247	HS 2-19-1-8
Hardened steels	
The above mentioned materials hardened to 45…62 HRC	

Acid-/stainl. resist. steels

Material no. to DIN EN 10 027	Abbreviation
Sulphured stainless steels	
1.4005	X 12 CrS 13
1.4104	X 14 CrMo S 17
1.4105	X 6 CrMo S 17
1.4305	X 8CrNi S 18-9
Austenitic stainless steels	
1.4300	X 12 CrNi 18-8
1.4301	X 5 CrNi 18-10
1.4541	X 6 CrNiTi 18-10
Martensitic stainless steels	
1.4057	X 17 CrNi 16-2
1.4112	X 90 CrMoV 18
1.4006	X 12 Cr 13

Universell

Material no. to DIN EN 10 027	Abbreviation
Common structural steels	
1.0035	S185 (St33)
1.0421	St 52.0
1.0067	RSt 37-1
1.0425	P265GH
Free-cutting steels	
1.0711	9S20
1.0718	11SMnPb30
1.0727	46S20
1.0728	(60 S 20)
Case hardened steels	
1.7131	16MnCr5
1.6523	21NiCrMo2-2
1.7321	20MoCr4
1.7325	25MoCr4
Unalloyed heat-treatable steels	
1.0402	C22
1.1151	C22E
1.0503	C45
1.0601	C60
Nitriding steels	
1.8504	34CrAl6
1.8507	34CrAlMo5
1.8509	41CrAlMo7
1.8515	31CrMo12
1.8550	34CrAlNi4
Spher. graphite iron	
0.7040	EN-GJS-400-15
0.7060	EN-GJS-600-3

Al and Al-alloys

Material no.	Abbreviation
Al and al-alloys	
3.0250	Al 99,5H
3.0280	AL 99,8H
3.3308	Al99,9Mg0.5
Al wrought alloys	
3.2315	AlMgSi1
3.1655	AlCuMgPb
3.4335	AlZn4,5Mg1
Al cast alloys ≤ 10% Si	
3.2134	GD-AlSi5Cu1Mg
3.2162	GD-AlSi8Cu3
3.2373	G-AlSi9Mg
Al cast alloys > 10% Si	
3.2581	G-AlSi12
3.2583	G-AlSi12Cu
3.2581	G-AlSi10Mg

Cast materials

Material no.	Abbreviation
Cast iron	
0.6015 (GG15)	EN-GJL-150
0.6025 (GG25)	EN-GJL-250
0.6040 (GG40)	EN-JLZ
Spheroidal grahpite iron and malleable cast iron	
0.7040 (GGG40)	EN-GJS-400-15
0.7060 (GGG60)	EN-GJS-600-3
0.8035	EN-GJMW-350-4
0.8135	EN-GJMB-350-10
Compacted graphite iron	
–	EN-GJV250
	EN-GJV350
	EN-GJV400
	EN-GJV500

Non-ferrous metals

Material no.	Abbreviation
Brass, short-chipping	
2.0380	CuZn39Pb2
2.0401	CuZn39Pb3
2.0410	CuZn43Pb2
Brass, long-chipping	
2.0250	CuZn20
2.0280	CuZn33
2.0332	CuZn37Pb0,5

Plastics

Material no.	Abbreviation
Duroplastics	
–	Bakelite
	Resopal
	Pertinax
	Moltopren
Thermoplastics	
–	Plexiglass
	Hostalen
	Novodur
	Makralon
Glass/carbon re-inforced	
–	Polypropylene glass fibre carbon fibre

Magnesium-alloys

Material no.	Abbreviation
Magnesium-alloys	
3.5200	MgMn2
3.5612	MgAl6Zn
3.5812	MgAl8Zn
3.5812.05	GDMgAl8Zn1
3.5612.05	GDMgAl6Zn1
3.5662.01	GMgAl6

Special-alloys

Material no.	Abbreviation
Titanium	
3.7025	Ti
3.7065	Ti
Titanium-alloys	
3.7115	TiAl 5Sn2
3.7165	TiAl 6 V4
Special-alloys	
2.4610	Hastelloy C4
2.4876	Incoloy 800
2.4816	Inconel 600
2.4668	Inconel 718
2.4634	Nimonic 105
	CuNi12Zn24
	CuNi18Zn20

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	Example		
What thread do you want to produce?	M8		
What material do you have to machine?	Free-cutting steel, 1.0718 11SMnPb30		
To which material group does your material belong? Selection see left "colour-ring guide"	Gen. steels ≤ 800 N/mm²	all malleable materials	all millable materials
What tool can you use? Selection see below "Suitablility of threading tools"	Taps	Fluteless taps	Thread milling cutters
Further tool selection:	Taps compass, pages for gen. steels ≤ 800 N/mm²	Taps compass, no further selection necessary	Thread milling cutters compass, pages for "Steels and Ni-alloys"
What hole type do you want to produce? Selection through hole/blind hole	Through hole	with external coolant: no further selection necessary with internal coolant: note radial or axial coolant exit	no further selection necessary
What thread type is required? Selection in column "Thread type"	M	M	M
What thread tolerance is required? Selection in column "Tolerance zone"	ISO 2/6H	6HX	no further selection necessary
What are the tool dimensions? Selection in column "Dimensions to DIN ..."	DIN 371	~DIN 371	no further selection necessary
What thread depth do you want to produce?	2 x D Selection in the head of table	2 x D Table "Fluteless taps with oil grooves"	2 x D Selection in column "Thread depth"
The most suitable tool is:	Guhring no. 945 steam tempered type N/B HSS-E	Guhring no. 919 TiN type N/C HSS-E	Guhring no. 3326 TiCN type TMC SP solid carbide

Suitability of threading tools		Taps	Fluteless taps	Thread milling cutters
Machine	Machining centre	+++	+++	+++
Machining	wide range of application	++	++ (suitable only for malleable materials)	++
	high thread quality	++	+++	++
	high process reliability	++	+++	+++
	simple handling	++	++	+ (3D programming necessary)
Tool	cost-effectiv	+++	++	+*
	tool life	++	++ (no regrinding possible)	++

+++ optimal suitability ++very good suitability + good suitability * only for solid carbide tools

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Suitable for conventional machining with quick change tapping chucks

Through holes

General steels

Material no. to DIN EN 10 027 — Abbreviation

Structural steels

1.0035	S 185 (St 33)
1.0039	S 235 JRH
1.0036	S 235JRG1+CR
1.0060	E 335 (St 60-2)

Free-cutting steels

1.0718	11SMnPb30
1.0721	10S20
1.0758	60SPb20
1.0726	35S20

Case hardened steels

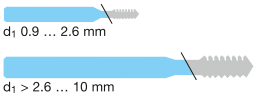
1.0401	(C 15)
1.7016	17 CR3
1.7131	16MnCr5
1.5919	15CrNi6

Unalloyed heat-treabable steels

1.0402	C 22
1.1151	C22E (Ck 22)
1.0503	C 45
1.1191	C45E (Ck 45)

Shank designs

DIN 371



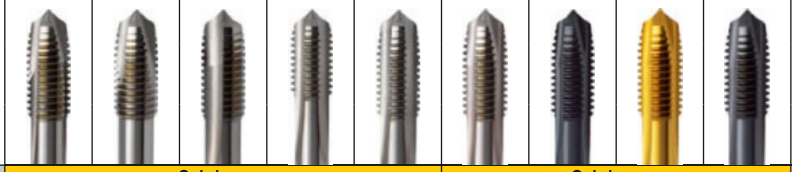
DIN 376 / DIN 374 / DIN 5156

* Taps Guhring no. 829 and 316 (DIN 374 MF. tolerance ISO 3/6G) include the diameters for the production of threads for electrical fittings to DIN 60 423. See price section.

Type clarification

NR15 = Type N, 15° RH spiral
NR40 = Type N, 40° RH spiral
NL15 = Type N, 15° LH spiral
NL40 = Type N, 40° LH spiral

Tools with colour-ring

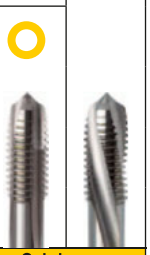


Thread depth	≤1,5xD					≤3xD			
Tool material	HSS-E					HSS-E			
Type/form	N/B	N/B	N/B	N/C	N/D	N/B	N/B	N/B	N/B
Surface finish	○	○	○	○	○	○	●	S	C
Cooling	☒	☒	☒	☒	☒	☒	☒	☒	☒

Thread type	Tolerance zone	Dim. to DIN 2184-1	Guhring no. Ø-range *Prices on page*					Guhring no. Ø-range *Prices on page*			
M	**ISO 1 4H**	**DIN 371**						**794** M2 – M10 *855*			
	ISO 2 6H		**838** M1,4 – M10 *856*	**839** M1 – M10 *857*	**802** M2 – M8 *855*	**806** M1 – M10 *843*	**801** M2 – M10 *855*	**803** M1,4 – M10 *855*	**945** M1 – M10 *857*	**912** M1,4 – M10 *857*	**1246** M3 – M10 *857*
	ISO 3 6G		**869** M2 – M10 *857*	**796** M2 – M10 *855*	**797** M2 – M8 *855*	**795** M3 – M10 *843*		**837** M1,4 – M10 *856*			
	ISO 2 6H	**DIN 376**	**846** M3 – M20 *866*	**847** M3 – M10 *873*		**818** M1,6 – M52 *870*	**813** M2 – M27 *872*	**815** M1,6 – M36 *873*	**948** M2 – M52 *874*	**915** M1,6 – M52 *873*	**1249** M12 – M16 *863*
	ISO 3 6G							**845** M2 – 48 *873*			
MF	**ISO 2 6H**	**DIN 374**				**830** M3x0,35 – M45x1,5 *878*		**827** M3x0,35 – M45x1,5 *887*	**2888** M3x0,35 – M36x1,5 *889*	**832** M3x0,35 – M36x1,5 *887*	
	ISO 3 6G					**829 *** M6x0,75 – M63x1,5 *878*		**316 *** M6x0,75 – M20x1,5 *884*			
UNC	**2B**	**~ DIN 371**				**1977** Nr.2-56 – 3/8"-16 *895*		**873** Nr.1-64 – 3/8"-16 *899*	**2889** Nr.2-56 – 3/8"-16 *900*		
	2B	**~ DIN 376**				**1982** 7/16"-14 – 1"-8 *897*		**878** 7/16"-14 – 1 1/2"-6 *901*	**2890** 7/16"-14 – 1 1/2"-6 *902*		
UNF	**2B**	**~ DIN 374**				**1987** Nr.3-56 – 1"-12 *905*		**908** Nr.1-72 – 1 1/2"-12 *908*	**2891** Nr.3-56 – 1 1/4"-12 *909*		
BSW	**–**	**~ DIN 371**							**2892** W1/8" – W3/8" *914*		
	–	**~ DIN 376**							**2893** W7/16" – W1" *913*		
G BSP	**–**	**DIN 5156**				**963** G1/16" – G2" *916*		**962** G1/16" – G2" *918*	**2894** G1/8" – G1 1/2" *919*		

bright — steam tempered — nitrided lands — nitrided — golden brown — A TiAlN — a TiAlN nanoA — A AlTiN SuperA

Blind holes

≤3xD		≤1,5xD						≤3xD						
HSS-E		HSS-E						HSS-E						
N/B	NL15/D	N/C	NR15/C	NR15/C	NR15/C	NR15/C	NR15/C	NR40/C	NR40/C	NR40/C	NR40/C	NL40/C	NR40/C	NR40/C
◯	◯	◯	◯	◉	Ⓢ	◯	Ⓢ	◯	◉	Ⓢ	Ⓒ	◯	◯	Ⓢ
☒	☒	☒	☒	☒	☒	a	a	☒	☒	☒	☒	☒	a	a
LH spiral												LH spiral		
														
Guhring no. Ø-range *Prices on page*		**Guhring no.** Ø-range *Prices on page*						**Guhring no.** Ø-range *Prices on page*						
789 M3 – M10 *854*	**808** M3 – M10 *856*	**806** M1 – M10 *843*	**809** M2 – M10 *843*	**946** M2 – M10 *845*	**913** M2 – M10 *845*	**1891** M5 – M10 *924*	**2436** M5 – M10 *925*	**810** M2 – M10 *843*	**783** M2 – M10 *842*	**914** M2 – M10 *845*	**1252** M3 – M10 *845*	**786** M3 – M10 *842*	**1893** M5 – M10 *924*	**2438** M5 – M10 *925*
		795 M3 – M10 *843*	**799** M2 – M10 *843*					**844** M3 – M10 *844*						
790 M12 – M20 *862*	**820** M3 – M22 *873*	**818** M1,6 – M52 *870*	**821** M3 – M30 *870*	**949** M3 – M22 *871*	**916** M3 – M27 *865*	**1898** M12 – M20 *926*	**2437** M12 – M20 *972*	**822** M3 – M30 *870*	**784** M3 – M30 *870*	**917** M3 – M30 *871*	**1254** M12 – M16 *851*	**787** M12 – M20 *850*		**2439** M12 – M20 *927*
								848 M3 – M27 *871*						
		830 M3x0,35 – M45x1,5 *878*	**833** M4x0,50 – M30x2 *878*	**2838** M4x0,50 – M30x2 *879*	**1971** M4x0,50 – M30x2 *879*	**1905** M5x0,50 – M20x1,5 *936*		**834** M3x0,35 – M30x2 *878*	**2843** M3x0,35 – M30x2 *879*	**852** M3x0,35 – M24x2 *879*				
		829 * M6x0,75 – M63x1,5 *878*												
		1977 Nr.2-56 – 3/8“-16 *895*	**1978** Nr.2-56 – 3/8“-16 *895*	**2839** Nr.2-56 – 3/8“-16 *896*				**876** Nr.2-56 – 3/8“-16 *895*	**2844** Nr.2-56 – 3/8“-16 *896*					
		1982 7/16“-14 – 1“-8 *897*	**1983** 7/16“-14 – 1“-8 *897*	**2840** 7/16“-14 – 1“-8 *897*				**881** 7/16“-14 – 1“-8 *897*	**2845** 7/16“-14 – 1“-8 *898*					
		1987 Nr.3-56 – 1“-12 *905*	**1988** Nr.3-56 – 1“-12 *905*	**2841** Nr.10-32 – 3/4“-16 *906*				**911** Nr.3-56 – 1“-12 *905*	**2846** Nr.6-40 – 1“-12 *906*					
									2847 W1/8“ – W3/8“ *913*					
									2848 W3/8“ – W1“ *912*					
		963 G1/16“ – G2“ *916*	**964** G1/16“ – G1“ *916*	**2842** G1/8“ – G1“ *917*				**965** G1/16“ – G1 1/2“ *917*	**2849** G1/8“ – G1“ *917*					

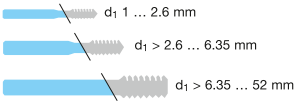
Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Gerneral steels

Material no. to DIN EN 10 027	Abbreviation
Structural steels	
1.0035	S 185 (St 33)
1.0039	S 235 JRH
1.0036	S 235JRG1+CR
1.0060	E 335 (St 60-2)
Free-cutting steels	
1.0718	11SMnPb30
1.0721	10S20
1.0758	60SPb20
1.0726	35S20
Case hardened steels	
1.0401	(C 15)
1.7016	17 CR3
1.7131	16MnCr5
1.5919	15CrNi6
Unalloyed heat-treabable steels	
1.0402	C 22
1.1151	C22E (Ck 22)
1.0503	C 45
1.1191	C45E (Ck 45)

Shank designs

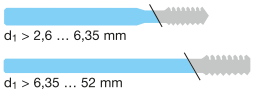
DIN 352 / DIN 2181



DIN 357 / Guhring std. no. 998

DIN 40 432 / Guhring std. no. 973

Guhring std. no. 888



Type clarification

NR15 = Type N, 15° RH spiral
NR28 = Type N, 28° RH spiral
NR40 = Type N, 40° RH spiral
NL15 = Type N, 15° LH spiral

Through holes

Thread depth	≤1,5xD		
Tool material	HSS-E		
Type/form	N/C	N/C	N/-
Surface finish	◯	◯	◯
Cooling	☒	☒	☒
			Machine nut taps

Thread type	Tolerance zone	Dim. to DIN 2184-2	Other dim.	Guhring no. Ø-range *Prices on page*		
M	**ISO 2 6H**	**DIN 352**	–	**995** M2 – M24 *836*		
	ISO 2 6H	–	**DIN 357**			**851** M3 – M30 *943*
	ISO 2 6H	–	**Werks-norm**			
MF	**ISO 2 6H**	**DIN 2181**	–	**997** M5x0,50 – M12x1,5 *838*		
Pg	–	**DIN 40 432**	–	**979** Pg7 – Pg48 *839*		
NPT	–	–	**Werks-norm**		**973** 1/16" – 2" *840*	

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Blind holes

≤1,5xD	≤3xD		≤1,5xD			≤3xD	
HSS-E	HSS-E		HSS-E			HSS-E	
NR28/D	N/B	N/B	N/C	N/C	NR15/C	NR40/C	NR40/C
◯	◯	◯	◯	◯	◯	◯	◯
☒	☒	☒	☒	☒	☒	☒	☒
combination drill		machine nut tap					extra long tap
Guhring no. Ø-range *Prices on page*	**Guhring no.** Ø-range *Prices on page*		**Guhring no.** Ø-range *Prices on page*			**Guhring no.** Ø-range *Prices on page*	
	991 M2 – M24 *837*		**995** M2 – M24 *836*		**992** M2 – M22 *835*	**993** M2 – M22 *835*	
1839 M3 – M12 *943*		**998** M3 – M20 *876*					**888** M3 – M20 *846*
			997 M5x0,50 – M12x1,5 *838*			**1970** M5x0,50 – M12x1,5 *838*	
	980 Pg7 – Pg21 *839*		**979** Pg7 – Pg48 *839*				
				973 1/16" – 2" *840*			

High tensile steels

Material no. nach DIN EN 10 027 | Kurzbezeichnung

Alloyed heat-treabable steels

1.6511	36 CrNiMo 4
1.7033	34 Cr 4
1.7225	42 CrMo 4

Tool steels

1.2316	X 36 CrMo 17
1.2067	10 S20

High speed steels

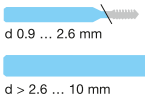
1.3343	HS 6-5-2
1.3344	HS 6-5-3
1.3243	HS 6-5-2-5
1.3247	HS 2-19-1-8

Hardened steels

All steel examples are hardened to 45 … 62 HRC

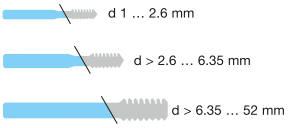
Shank designs

DIN 371



DIN 376 / DIN 374

DIN 352



Type clarification

AZ = with interrupted threads
HR15 = Type H, 15° RH spiral
HR40 = Type H, 40° RH spiral

*Tools also suitable for: short-chipping non-ferrous metals, case hardened and nitriding steels.

a With internal cooling, tools with axial coolant duct are, as a rule, only suitable for the machining of blind holes. Without internal cooling, i.e. external cooling, the tools are also suitable for through holes.

Through holes

Thread depth	≤1,5xD		≤3xD	
Tool material	HSS-E	HSS-E-PM	HSS-E	
Type/form	H/C	H/C	H/B	H/B
Surface finish	C	C	○	●
Cooling	a	a	☒	☒

Tools with colour-ring

Thread type	Tolerance zone	Dim. to DIN 2184-1	Guhring no. Ø-range *Prices on page*		Guhring no. Ø-range *Prices on page*	
M	ISO 2 6H	DIN 371			**804** M2 – M10 *855*	**733** M2 – M10 *854*
	ISO 3 6G				**2465** M2 – M10 *859*	
	6HX			**302** * M5 – M10 *931*		
	ISO 2 6H	DIN 376			**816** M3 – M24 *873*	**734** M3 – M24 *872*
	6HX		**778** M16 – M39 *850* NEW	**297** * M10 – M14 *933*		
MF	ISO 2 6H	DIN 374			**828** M3x0,35 – M26x1,5 *884*	
	ISO 3 6G					**2982** M8x1 – M20x1,5 *885*
	6HX			**1090** * M5x0,5 – M16x1,5 *937*		

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤3xD

HSS-E				HSS-E-PM		
H/B	H/B	H/B	H AZ/B	H/B	H/B	H/B
●	(S)	(C)	○	○	(S)	(A)
☒	☒	☒	☒	☒	☒	☒
Guhring no. Ø-range *Prices on page*						
2941 M2 – M10 *859*		**1914** M2 – M10 *857*	**791** M2 – M10 *855*	**875** M3 – M10 *860*	**57** M3 – M10 *860*	**1575** M6 – M10 *861*
	2710 M2 – M10 *859*					
2942 M3 – M24 *875*		**1915** M3 – M24 *875*	**849** M12 – M20 *862*		**58** M12 – M24 *863*	**1576** M12 – M30 *863*
2943 M3x0,35 – M24x1,5 *885*						
	2983 M8x1 – M20x1,5 *885*					

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

High tensile steels

Material no. to DIN EN 10 027 — Abbreviation

Alloyed heat-treabable steels

1.6511	36 CrNiMo 4
1.7033	34 Cr 4
1.7225	42 CrMo 4

Tool steels

1.2316	X 36 CrMo 17
1.2067	10 S20

High speed steels

1.3343	HS 6-5-2
1.3344	HS 6-5-3
1.3243	HS 6-5-2-5
1.3247	HS 2-19-1-8

Hardened steels

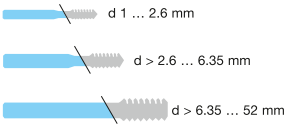
All steel examples are hardened to 45 … 62 HRC

Shank designs

DIN 371

DIN 376 / DIN 374

DIN 352



Type clarification

AZ = with interrupted threads
HR15 = Type H, 15° RH spiral
HR40 = Type H, 40° RH spiral

*Tools also suitable for: short-chipping non-ferrous metals, case hardened and nitriding steels.

a With internal cooling, tools with axial coolant duct are, as a rule, only suitable for the machining of blind holes. Without internal cooling, i.e. external cooling, the tools are also suitable for through holes.

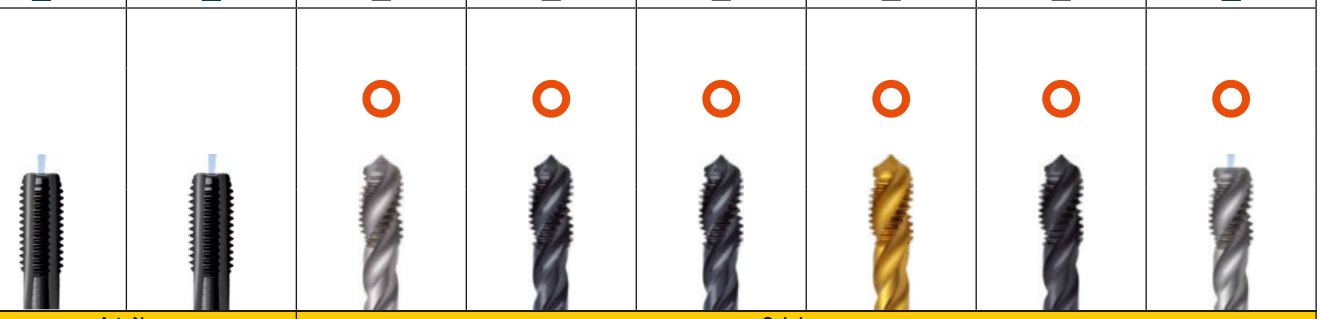
Blind holes

Thread depth	≤1,5xD			
Tool material	HSS-E	HSS-E-PM		
Type/form	H/C	HR15/C	HR15/C	HR15/C
Surface finish	C	○	A	C
Cooling	a	⊠	⊠	a
	Tools with colour-ring			blanke Schneiden

Thread type	Tolerance zone	Dim. to DIN 2184-1	Guhring no. Ø-range *Prices on page*			
M	**ISO 2 6H**	**DIN 371**		**872** M3 – M10 *849*	**1577** M6 – M10 *849*	
	ISO 3 6G					
	6HX					**1188** M6 – M10 *925*
	ISO 2 6H	**DIN 376**		**935** M12 – M20 *851*	**1578** M12 – M20 *851*	
	6HX		**778** M16 – M39 *850* NEW			**1194** M12 – M24 *927*
MF	**ISO 2 6H**	**DIN 374**		**874** M8x1 – M20x1,5 *883*		
	ISO 3 6G					
	6HX					**1200** M6x0,75 – M24x1,5 *936*

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Blind holes

≤1,5xD		≤3xD					
HSS-E-PM		HSS-E					
H/C	H/E	HR40/C	HR40/C	HR40/C	HR40/C	HR40/C	HR40/C
C	C	○	●	◍	S	C	○
a	a	☒	☒	☒	☒	☒	a
							
Art.-Nr. Ø-range *Prices on page*		**Guhring no.** Ø-range *Prices on page*					
		811 M2 – M10 *843*	**947** M2 – M10 *845*	**2850** M2 – M10 *846*	**361** M2 – M10 *842*	**1916** M2 – M10 *845*	**1894** M5 – M10 *925*
		2984 M2 – M10 *847*		**2985** M2 – M10 *847*	**2986** M2 – M10 *847*		
302 * M5 – M10 *931*	**1091** * M5 – M10 *931*						
		823 M3 – M30 *871*	**950** M3 – M30 *871*	**2851** M4 – M30 *865*	**362** M3 – M30 *870*	**1917** M3 – M30 *871*	**1901** M12 – M20 *927*
297 * M10 – M14 *933*	**4165** M10 – M12 *933*						
		835 M6x0,75 – M24x1,5 *879*	**2940** M6x0,75 – M24x1,5 *882*	**2852** M6x0,75 – M24x1,5 *879*			**1907** M6x0,75 – M20x1,5 *936*
		2987 M8x1 – M20x1,5 *882*		**2988** M8x1 – M20x1,5 *882*	**2989** M8x1 – M20x1,5 *883*		
1090 * M5x0,5 – M16x1,5 *937*	**1007** * M5x0,5 – M16x1,5 *937*						

40° spiral flute tap with conical rear clearance

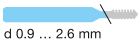
C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

High tensile steels

Material no. to DIN EN 10 027	Abbreviation
Alloyed heat-treabable steels	
1.6511	36 CrNiMo 4
1.7033	34 Cr 4
1.7225	42 CrMo 4
Tool steels	
1.2316	X 36 CrMo 17
1.2067	10 S20
High speed steels	
1.3343	HS 6-5-2
1.3344	HS 6-5-3
1.3243	HS 6-5-2-5
1.3247	HS 2-19-1-8
Hardened steels	
All steel examples are hardened to 45 … 62 HRC	

Shank designs

DIN 371



Through holes and blind holes

Thread depth			≤1,5xD	
Tool material			HSS-E-PM	VHM
Type/form			H/D	H/D	H/D
Surface finish			C	C	C
Cooling			☒	≤ M12 ☒	☒
Rec. parameters **for HSS-E-PM taps** **Guhring no. 1201** **v_c ≤ 2 - 8 m/min** **for solid carbide taps** **Guhring no. 2944** **v_c ≤ 2 m/min**			45…55 HRC	Shank tolerance h6 ≤ 62 HRC	Shank tolerance h6
Thread type	Tolerance zone	Dim. to	**Guhring no.** Ø-range *Prices on page*		
M	**6HX**	**DIN 371**	**1201** M3 – M16 *868*		
	ISO 2 6H	**Guhring std.**		**2944** M3 – M16 *869*	
MF	**ISO 2 6H**	**Guhring std.**			**1161** M6x0,5 – M12x1,5 *894*
MF	**6HX**	**DIN 371**	**4161** M8x1 – M12x1,5 *893* NEW		

bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A AlTiN SuperA

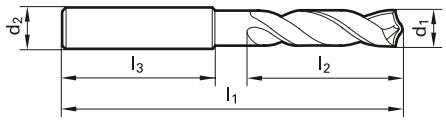
Special tapping size hole diameter for hard machining with Guhring no. 2944

Thread size	Tapping size hole Ø		Core diameter of int. thread			
			min.		max.	
	to DIN 336 mm	with Guh. no. 2944 mm	to DIN 336 mm	with Guh. no. 2944 mm	to DIN 336 mm	with Guh. no. 2944 mm
M3	2.50	2.60	2.495	2.559	2.599	2.699
M4	3.30	3.40	3.242	3.342	3.422	3.522
M5	4.20	4.30	4.134	4.234	4.334	4.434
M6	5.00	5.10	4.917	5.017	5.153	5.253
M8	6.80	6.90	6.647	6.747	6.912	7.012
M10	8.50	8.60	8.376	8.476	8.676	8.776
M12	10.20	10.40	10.106	10.206	10.441	10.541
M16	12.00	14.10	13.835	15.935	14.210	16.310

Special tapping size hole diameter for hard machining with Guhring no. 1161

Thread size	Tapping size hole Ø		Core diameter of int. thread			
			min.		max.	
	to DIN 336 mm	with Guh. no. 1161 mm	to DIN 336 mm	with Guh. no. 1161 mm	to DIN 336 mm	with Guh. no. 1161 mm
M6x0,5	5.50	5.60	5.459	5.559	5.599	5.699
M8x1	7.00	7.10	6.917	7.017	7.153	7.253
M10x1	9.00	9.10	8.917	9.017	9.153	9.253
M12x1	11.00	11.10	10.917	11.017	11.153	11.253
M12x1,5	10.50	10.60	10.376	10.476	10.676	10.776

Tool material	**Solid carbide**
Carbide grade	K
Type	H
Surface finish	A
DIN	DIN 6537
Shank form	HA
Guhring no.	**1946**



The Guhring drill for tapping size holes in hardened materials!

Guhring's hard drill enables the efficient and process reliable production of holes in hardened steels up to 62 HRC. Convex cutting edges give the tool its extremely high rigidity and ensure an optimal chip fracture. The flute profile is optimised for hard machining and evacuates the swarf safely from the hole. The Guhring hard drill is available as standard tool with straight shank to DIN 6535 HA in the diameter range from 2.6 to 14.1 mm.

d1	d2	l1	l2	l3	Availability
mm	mm	mm	mm	mm	
2.600	6.000	62.00	20.00	36.00	●
3.000	6.000	62.00	20.00	36.00	●
3.400	6.000	62.00	20.00	36.00	●
4.000	6.000	66.00	24.00	36.00	●
4.300	6.000	66.00	24.00	36.00	●
5.000	6.000	66.00	28.00	36.00	●
5.100	6.000	66.00	28.00	36.00	●
5.600	6.000	66.00	28.00	36.00	●
6.000	6.000	66.00	28.00	36.00	●
6.900	8.000	79.00	34.00	36.00	●
7.100	8.000	79.00	34.00	36.00	●
8.000	8.000	79.00	41.00	36.00	●
8.600	10.000	89.00	47.00	40.00	●
9.100	10.000	89.00	47.00	40.00	●
10.000	10.000	89.00	47.00	40.00	●
10.400	12.000	102.00	55.00	45.00	●
10.600	12.000	102.00	55.00	45.00	●
11.100	12.000	102.00	55.00	45.00	●
12.000	12.000	102.00	55.00	45.00	●
14.100	16.000	115.00	65.00	48.00	●

Cutting rates at 3 x D with Guhring no. 1946

	Hardness	HRC 40…48	HRC 48 … 62
	Cutting speed v_c	40 m/min	30 m/min
drill Ø in mm	Feed rate	f (mm/rev):	f (mm/rev):
	2.6	0.032	0.025
	3.4	0.040	0.032
	4.3	0.050	0.040
	5.1	0.050	0.040
	5.6	0.050	0.040
	6.9	0.070	0.055
	7.1	0.070	0.055
	8.6	0.090	0.070
	9.1	0.090	0.070
	10.4	0.110	0.090
	10.5	0.110	0.090
	11.0	0.120	0.100
	14.1	0.120	0.100

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Through holes

Stainless/acid.-resist. steels

Material no. to DIN EN 10 027 — Abbreviation

Sulphured stainless steels

1.4005	X 12 CrS 13
1.4104	X 14 CrMo S 17
1.4105	X 6 CrMo S 17
1.4305	X 8CrNi S 18-9

Austenitic stainless steels

1.4300	X 12 CrNi 18-8
1.4301	X 5 CrNi 18-10
1.4541	X 6 CrNiTi 18-10

Martensitic stainless steels

1.4057	X 17 CrNi 16-2
1.4112	X 90 CrMoV 18
1.4006	X 12 Cr 13

Shank designs

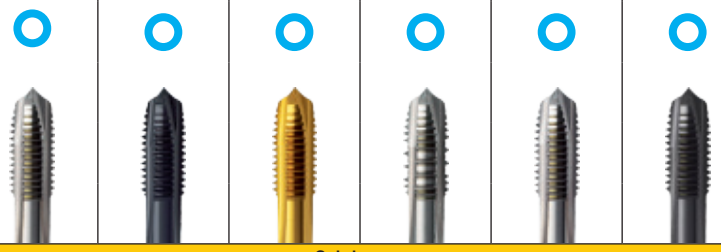
d_1 0,9 … 2,6 mm

d_1 > 2,6 … 10 mm

DIN 376 / DIN 374 / DIN 5156

Type clarification

VA AZ = with interrupted threads
VA R15 = Type VA, 15° RH spiral
VA R40 = Type VA, 40° RH spiral
VA R50 = Type VA, 50° RH spiral

Thread depth	≤3xD					
Tool material	HSS-E				HSS-E-PM	
Type/form	VA/B	VA/B	VA/B	VA AZ/B	VA/B	VA/B
Surface finish	○	●	S	○	○	C
Cooling	☒	☒	☒	☒	☒	☒
Tools with colour-ring						
Thread type	Tolerance zone	Dim. to DIN 2184-1	Guhring no. Ø-range *Prices on page*					
M	**ISO 2 6H**	**DIN 371**	**1870** M2 – M10 *857*	**2869** M3 – M10 *859*	**2086** M3 – M10 *858*	**1871** M3 – M10 *857*	**877** M2 – M10 *861*	**1002** M2 – M12 *861*
	6HX							
	ISO 2 6H	**DIN 376**	**1872** M3 – M30 *874*	**2870** M3 – M30 *866*		**792** M12 – M16 *862*	**879** M12 – M20 *863*	
	6HX				**2087** M3 – M30 *875*			
MF	**ISO 2 6H**	**DIN 374**	**1873** M3x0,35 – M24x2 *884*	**2871** M3x0,35 – M24x1,5 *885*	**1001** M4x0,50 – M20x1,5 *885*		**887** M8x1 – M16x1,5 *885*	
	6HX							
UNC	**2B**	**DIN ~ 371**	**1980** Nr.3-48 – 3/8"-16 *899*	**2872** Nr.4-40 – 3/8"-16 *899*				
	2B	**DIN ~ 376**	**1985** 7/16"-14 – 1"-8 *901*	**2873** 1/2"-13 – 1"-8 *901*				
UNF	**2B**	**DIN ~ 374**	**1990** Nr.3-56 – 1"-12 *909*	**2874** Nr.4-48 – 1"-12 *909*				
BSP	**–**	**DIN 5156**	**967** G 1/16 – G7/8" *919*	**2875** G 1/8 – G1" *919*			**938** G 1/8 – G1/4" *919*	
NPT	**-**	**Werksnorm**						
NPTF	**-**	**Werksnorm**						

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Blind holes

≤1,5xD				≤3xD						
HSS-E				HSS-E			HSS-E-PM			
VA R25/C	VA R15/C	VA R15/C	VA R25/C	VA R40/C	VA R40/C	VA R40/C	VA R40/C	VA R40/C	VA R50/C	VA R50/C
○	○	S	S	○	○	○	○	S	S	C
☒	☒	☒	☒	☒	☒	a	☒	☒	☒	a
									only suitable with synchro tapping shank tolerance h6	
Art.-Nr. Ø-range *Prices on page*				Guhring no. Ø-range *Prices on page*						
	843 M3 – M10 *844*	**2896** M3 – M10 *847*		**814** M3 – M10 *843*	**2862** M3 – M10 *846*	**1892** M5 – M10 *924*	**909** M3 – M10 *849*	**59** M3 – M10 *848*		
									761 M3 – M10 *852*	**1139** M5 – M10 *934*
	785 M12 – M24 *850*	**2895** M12 – M24 *851*		**825** M12 – M24 *850*	**2863** M12 – M24 *851*	**1899** M12 – M20 *926*	**910** M12 – M24 *851*	**60** M12 – M20 *851*		
									763 M12 – M20 *822*	**1142** M12 – M20 *934*
	1874 M4x0,5 – M22x2 *879*	**2897** M4x0,5 – M24x1,5 *882*			**2864** M3x0,35 – M24x1,5 *882*	**1906** M5x0,5 – M20x1,5 *936*	**936** M8x1 – M20x1,5 *883*	**1004** M12x1,5 – M20x1,5 *883* NEW		
									764 M8x1 – M20x1,5 *877*	**1144** M8x1 – M20x1,5 *935*
				1981 Nr.2-56 – 3/8"-16 *895*	**2865** Nr.2-56 – 3/8"-16 *896*					
				1986 7/16"-14 – 7/8"-9 *897*	**2866** 7/16"-14 – 7/8"-9 *898*					
	1991 Nr.3-56 – 1"-12 *905*	**2898** Nr.3-56 – 1"-12 *907*		**2867** Nr.6-56 – 1"-12 *907*	**2868** Nr.3-56 – 1"-12 *907*					
					968 G 1/16 – G1 1/2" *917*		**939** G 1/8 – G1/2" *917*		**4159** G 1/16 – G1/2" *915* NEW	
1087 1/16 – 3/4 *920*			**1088** 1/16 – 3/4 *920*							
			4127 1/16 – 1 *921* NEW							

40° spiral flute tap with conical rear clearance

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Suitable for CNC machining centres with synchro tapping chucks for extended tool life.

Through holes

Universal

Material no. to DIN EN 10 027 — Abbreviation

Structural steels

1.0035	S185 (St33)
1.0421	St 52.0
1.0067	RSt 37-1
1.0425	P265GH

Free-cutting steels

1.0711	9S20
1.0718	11SMnPb30
1.0727	46S20
1.0728	(60 S 20)

Case hardened steels

1.7131	16MnCr5
1.6523	21NiCrMo2-2
1.7321	20MoCr4
1.7325	25MoCr4

Unalloyed heat-treatable steels

1.0402	C22
1.1151	C22E
1.0503	C45
1.0601	C60

Nitriding steels

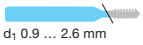
1.8504	34CrAl6
1.8507	34CrAlMo5
1.8509	41CrAlMo7
1.8515	31CrMo12
1.8550	34CrAlNi4

Spheroidal graphite iron

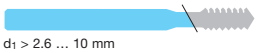
0.7040	EN-GJS-400-15
0.7060	EN-GJS-600-3

Shank designs

DIN 371



d_1 0.9 … 2.6 mm



d_1 > 2.6 … 10 mm

DIN 376 / DIN 374 / DIN 5156

Type clarification

(K) = rake angle correction
NR40 = Type N, 40° RH spiral
NR50 = Type N, 50° RH spiral

Tools with colour-ring

Thread depth	≤3xD						
Tool material	HSS-E				HSS-E-PM		Solid carbide*
Type/form	N/B	N/B	N/B	N/B	N/B	N/B	N/B
Surface finish		S	A+M	A+M	S	C	C
Cooling	☒	☒	☒	r	☒	☒	☒
					universal		Shank tolerance h6

Thread type	Tolerance zone	Dim. to DIN 2184-1	Guhring no. Ø-range *Prices on page*						
M	**ISO 2 6H**	**DIN 371**	**2876** M2 – M10 *859*	**313** M3 – M10 *854*	**2427** M3 – M10 *858*	**2517** M5 – M10 *931*	**1285** M2 – M10 *861*	**1287** M3 – M20 *861*	
	ISO 3 6G		**2990** M2 – M10 *859*	**2991** M3 – M10 *859*					
	6HX	**~ DIN 371/ *Guhring std.**							**942** M5 – M12 *859*
	ISO 2 6H	**DIN 376**	**2877** M3 – M36 *875*	**315** M3 – M24 *872*	**2428** M3 – M16 *875*		**1286** M12 – M20 *863*		
MF	**6HX**	**~ DIN 371**							**943** M5x0,5 – M12x1,5 *890*
	ISO 2 6H	**DIN 374**	**2879** M3x0,35 – M52x1,5 *885*		**2878** M3x0,35 – M24x1,5 *885*		**1291** M8x1 – M24x2 *889*		
	6HX								**944** M14x1 – M16x1,5 *886*
	ISO 3 6G		**2992** M8x1 – M18x1,5 *885*	**2993** M8x1 – M18x1,5 *885*					
UNC	**2B**	**DIN ~ 371**	**2881** Nr.4-40 – 3/8"-16 *900*		**2880** Nr.4-40 – 3/8"-16 *899*				
	2B	**DIN ~ 376**	**2883** 7/16"-14 – 1"-8 *901*						
UNF	**2B**	**DIN ~ 374**	**2885** Nr.4-48 – 1"-12 *909*		**2884** Nr.4-48 – 1"-12 *909*				
G BSP	**–**	**DIN 5156**	**2887** G 1/8 – G2" *919*		**2886** G 1/8 – G1" *919*				
EG M	**6H mod.**	**DIN 40435**		**1010** M4 – M16 *923*					

bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A AlTiN SuperA

Blind holes

≤3xD

HSS-E									HSS-E-PM			
NR15/C	NR15/E	NR40/C	NR40/C	NR40/C	NR40/C	NR40/C	NR40/E	NR40/C(K)	NR40/C	NR40/C	NR50/C	NR50/C
C	C	○	●	S	A+M	A+M	○	S	S	C	S	C
☒	☒	☒	☒	☒	☒	a	☒	☒	☒	☒	☒	a
											universal	
Guhring no. Ø-range *Prices on page*												
4154 M5 – M10 *847*	**4155** M5 – M10 *847*	**889** M2 – M10 *844*	**836** M2 – M10 *844*	**2440** M3 – M10 *845*	**2425** M3 – M10 *845*	**2514** M5 – M10 *945*	**2790** M4 – M10 *846*	**174** M5 – M10 *842*	**1288** M2 – M10 *849*	**1290** M2 – M20 *849*	**767** M3 – M10 *848*	**1152** M5 – M10 *925*
			2994 M3 – M10 *847*	**2995** M3 – M10 *847*								
				4153* M3 – M20 *867*								
		890 M3 – M24 *871*	**826** M3 – M36 *871*	**2441** M3 – M24 *871*	**2426** M3 – M16 *871*		**2791** M4 – M16 *865*	**196** M5 – M30 *865*	**1289** M12 – M20 *851*		**1098** M12 – M20 *851*	**1293** M12 – M20 *927*
4156 M8x1 – M16x1,5 *883*	**4157** M8x1 – M16x1,5 *883*	**2424** M5x0,5 – M24x2 *879*	**2853** M5x0,5 – M30x2 *879*				**2792** M8x1 – M14x1,5 *879*	**273** M5x0,5 – M24x1,5 *878*	**1292** M8x1 – M24x2 *883*		**1100** M8x1 – M20x1,5 *883*	**1294** M8x1 – M20x1,5 *936*
		2998 M8x1 – M20x1,5 *883*	**2999** M10x1 – M20x1,5 *883*	**1049** M8x1 – M20x1,5 *879*								
		2854 Nr.2-56 – 3/8"-16 *896*	**2855** Nr.2-56 – 3/8"-16 *896*					**1837** Nr.10-24 – 3/8"-16 *895*				
		2856 7/16"-14 – 1"-8 *898*	**2857** 7/16"-14 – 7/8"-9 *898*									
		2858 Nr.3-56 – 1"-12 *907*	**2859** Nr.3-56 – 1"-12 *907*					**1838** Nr.10-32 – 1"-12 *905*				
	4158 G 1/16 – G1" *917*	**2860** G 1/16 – G1 1/2 " *917*	**2861** G 1/16 – G2" *917*					**937** G 1/8 – G1 1/2 " *916*				
				1011 M4 – M16 *922*								

40° spiral flute tap with conical rear clearance

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

*** Guhring std.**

Al and Al-alloys

Material no. Abbreviation

Al and Al-alloys

3.0250 Al 99,5H
3.0280 AL 99,8H
3.3308 Al99,9Mg0,5

Al wrought alloys

3.2315 AlMgSi1
3.1655 AlCuMgPb
3.4335 AlZn4,5Mg1

Al cast alloys ≤ 10% Si

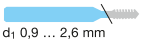
3.2134 GD-AlSi5Cu1Mg
3.2162 GD-AlSi8Cu3
3.2373 G-AlSi9Mg

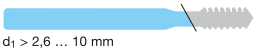
Al cast alloys > 10% Si

3.2581 G-AlSi12
3.2583 G-AlSi12Cu
3.2581 G-AlSi10Mg

Shank designs

DIN 371





DIN 376 / DIN 374 / DIN 5156

Type clarification

Al = for aluminium
AlR15 = for Al, 15° RH spiral
AlR45 = for Al, 45° RH spiral
NR15 = Type N, 15° RH spiral
NL15 = Type N, 15° LH spiral

* < M5 without coolant ducts

Through holes

Thread depth	1,5			≤3xD
Tool material	HSS-E			HSS-E
Type/form	N/B	H/C	H/C	Al/B
Surface finish	○	C	C	○
Cooling	☒	a	a	☒
	for machining sheet metal			

○ Tools with colour-ring

Thread type	Tolerance zone	Dim. to DIN 2184-1	Guhring no. Ø-range *Prices on page*			
M	**ISO 2 6H**	**DIN 371**	**838** M1,4 – M10 *856*			**805** M2 – M10 *855*
	ISO 3 6G		**869** M2 – M10 *857*			
	6HX				**302** M5 – M10 *931*	
	ISO 2 6H	**DIN 376**	**846** M3 – M20 *866*			**817** M12 – M24 *862*
	6HX			**778** M16 – M39 *850* NEW	**297** M10 – M14 *933*	
MF	**ISO 2 6H**	**DIN 371**				
	ISO 2 6H	**DIN 374**				
	6HX				**1090** M8x1 – M12x1,5 *937*	

Blind holes

	1,5			≤3xD
	HSS-E			HSS-E
	H/C	H/C	H/E	AlR45/B
	C	C	C	○
	a	a	a	☒

Thread type	Tolerance zone	Dim. to DIN 2184-1	Guhring no. Ø-range *Prices on page*			
M	**ISO 2 6H**	**DIN 371**				**812** M1,6 – M10 *843*
	ISO 3 6G					
	6HX			**302** M5 – M10 *931*	**1091** M5 – M10 *931*	
	ISO 2 6H	**DIN 376**				**824** M3 – M24 *871*
	6HX		**778** M16 – M39 *850* NEW	**297** M10 – M12 *933*	**4165** M10 – M12 *933*	
MF	**ISO 2 6H**	**DIN 371**				
	ISO 2 6H	**DIN 374**				
	6HX			**1090** M8x1 – M12x1,5 *937*	**1007** M8x1 – M16x1,5 *937*	

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Through holes

Blind holes

Thread depth	≤3xD		≤3xD				
Tool material	Solid carbide		Solid carbide				
Type/form	H/C	NL15/D	H/C	H/E	H/C	NR15/C	NR15/C
Surface finish	◯	◯	◯	◯	◯	◯	Ⓜ
Cooling	r	r	a	a	r	a	a
	Shank tolerance h6	Shank tolerance h6	Shank tolerance h6	Shank tolerance h6	Shank tolerance h6	Shank tolerance h6	Shank tolerance h6
Tools with colour-ring							
Thread type / Tolerance zone / Dim. to DIN 2184-1	Guhring no. Ø-range *Prices on page*		Guhring no. Ø-range *Prices on page*				
M / **6HX** / **DIN 371**	**1858** M5 – M10 *929*		**969** * M3 – M10 *928*	**1008** M3 – M10 *929*	**1858** M5 – M10 *929*	**971** * M3 – M10 *928*	**2516** M5 – M10 *929*
6HX / **DIN 376**	**1859** M12 – M20 *930*		**1883** M12 – M20 *930*		**1859** M12 – M20 *930*		
MF / **6HX** / **DIN 371**	**1861** M5x0,5 – M10x1 *939*	**975** * M4x0,5 – M10x1 *938*	**972** * M4x0,5 – M10x1 *938*	**1009** M10x1 – M16x1,5 *939*	**1861** M5x0,5 – M10x1 *939*	**977** * M4x0,5 – M10x1 *938*	
6HX / **DIN 374**	**1860** M12x1,5 – M20x1,5 *939*	**976** M12x1,5 – M18x1,5 *939*	**974** M12x1,5 – M16x1,5 *939*		**1860** M12x1,5 – M16x1,5 *939*	**978** M12x1,5 – M20x1,5 *939*	

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Through holes and blind holes

Cast materials

Material no.	Abbreviation
Cast iron	
0.6015 (GG15)	EN-GJL-150
0.6025 (GG25)	EN-GJL-250
0.6040 (GG40)	EN-JLZ
Spheroidal graphite & malleable cast iron	
0.7040 (GGG40)	EN-GJS-400-15
0.7060 (GGG60)	EN-GJS-600-3
0.8035	EN-GJMW-350-4
0.8135	EN-GJMB-350-10
Cast iron with vermicular graphite	
–	EN-GJV250
	EN-GJV350
	EN-GJV400
	EN-GJV500

Shank designs

DIN 371

d_1 0,9 … 2.6 mm

d_1 > 2.6 … 10 mm

DIN 376 / DIN 374 / DIN 5156

Type clarification

GG = for cast iron
GGT = for dry machining grey cast iron
NR15 = Typ N, 15° RH spiral

a With internal cooling, tools with axial coolant duct are, as a rule, only suitable for the machining of blind holes. Without internal cooling, i.e. external cooling, the tools are also suitable for through holes.

** < M5 without coolant ducts

Thread depth	≤3xD								
Tool material	HSS-E								
Type/form	H/C	H/C	H/E	GG/C	GG/C	GG/C	GG/C	GGT/C	GGT/C
Surface finish	C	C	C	●	S	A	●	S	A
Cooling	a	a	a	☒	☒	a	a	☒	☒
Tools with colour-ring									

Thread type	Tolerance zone	Dim. to DIN 2184-1	Guhring no. Ø-range *Prices on page*								
M	**ISO 2 6H**	**DIN 371**								**1875** M3 – M10 *857*	
	6HX			**302** M5 – M10 *931*	**1091** M5 – M10 *931*	**807** M3 – M10 *856*	**930** M3 – M10 *857*	**318** M5 – M10 *931*	**1890** M5 – M10 *931*		**1918** M3 – M10 *858*
	ISO 2 6H	**DIN 376**								**1876** M3 – M30 *866*	
	6HX		NEW **778** M16 – M39 *850*	**297** M10 – M14 *933*	NEW **4165** M10 – M20 *933*	**819** M3 – M30 *873*	**931** M3 – M30 *874*	**319** M12 – M20 *932*	**1897** M12 – M20 *932*	*875*	**1919** M3 – M20
MF	**6HX**	**DIN 371**									
	6HX	**DIN 374**		**1090** M8x1 – M12x1,5 *937*	**1007** M8x1 – M16x1,5 *937*	**831** M3x0,35 – M30x1,5 *884*	**932** M3x0,35 – M30x1,5 *887*	**347** M8x1 – M24x1,5 *937*	**1904** M8x1 – M20x1,5 *937*		**169** M3x0,35 – M24x1,5 *884*
UNC	**2B**	**~ DIN 371**				**1979** Nr.2-56 – $^{3}/_{8}$"-16 *899*		**1085** Nr.10-24 – $^{3}/_{8}$"-16 *940*			
	2B	**~ DIN 376**				**1984** $^{7}/_{16}$"-14 – 1"-8 *901*		**1086** $^{7}/_{16}$"-14 – $^{7}/_{8}$"-9 *940*			
UNF	**2B**	**~ DIN 374**				**1989** Nr.3-56 – 1"-12 *908*		**1082** Nr.10-32 – $^{7}/_{8}$"-14 *941*			
G BSP	**–**	**DIN 5156**				**961** G $^{1}/_{16}$ – G2" *918*					

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

≤3xD

Solid carbide*

H/C	H/E	H/C	H/C	H/C	NR15/C
○	○	○	A	A	A
a	a	r	r	a	a
Schafttoleranz h6	Schafttoleranz h6	Schafttoleranz h6	Schafttoleranz h6	Schafttoleranz h6	Schafttoleranz h6
Guhring no. Ø-range *Prices on page*					
969 * M3 – M10 *928*	**1008** M3 – M10 *928*	**1858** M5 – M10 *929*	**2311** M5 – M10 *929*	**2506** M5 – M10 *929*	**2510** M5 – M10 *929*
1883 M12 – M20 *930*		**1859** M12 – M20 *930*			
972 * M4x0,5 – M10x1 *938*	**1009** M10x1 – M16x1,5 *939*	**1861** M5x0,5 – M10x1 *939*			
974 M12x1,5 – M20x1,5 *939*		**1860** M12x1,5 – M20x1,5 *939*			

Magnesium-alloys

Material no. Abbreviation

Magnesium-alloys

3.5200	MgMn2
3.5612	MgAl6Zn
3.5812	MgAl8Zn
3.5812.05	GDMgAl8Zn1
3.5612.05	GDMgAl6Zn1
3.5662.01	GMgAl6

Shank designs

DIN 376

Type clarification

NAZ = with interrupted threads

a With internal cooling, tools with axial coolant duct are, as a rule, only suitable for the machining of blind holes. Without internal cooling, i.e. external cooling, the tools are also suitable for through holes.

Thread depth	≤3xD
Tool material	HSS-E
Type/form	NAZ/E
Surface finish	A + M
Cooling	a

Thread type	Tolerance zone	Dim. to DIN 2184-1	Guhring no. Ø-range *Prices on page*
M	**ISO 2 6H**	**DIN 371**	
	6HX		
	ISO 2 6H	**DIN 376**	**2899** M5 – M12 **933**
	6HX		

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Special alloys

Material no.	Abbreviation
Titanium	
3.7025	Ti
3.7065	Ti
Titanium-alloys	
3.7115	TiAl 5Sn2
3.7165	TiAl 6 V4
Special alloys	
2.4610	Hastelloy C4
2.4876	Incoloy 800
2.4816	Inconel 600
2.4668	Inconel 718
2.4634	Nimonic 105
	CuNi12Zn24
	CuNi18Zn20

Shank designs

DIN 371

d_1 0.9 ... 2.6 mm

d_1 > 2.6 ... 10 mm

Type clarification

TiR30 = for titanium, 30° RH spiral
NiR15 = for nickel, 15° RH spiral

Through holes | **Blind holes**

Thread depth			≤2xD		≤2xD	
Tool material			HSS-E-PM		HSS-E-PM	
Type/form			Ti/B	Ni/B	TiR15/C	NiR10/C
Surface finish			C	A	C	A
Cooling			☒	☒	☒	☒
Thread type	Tolerance zone	Dim. to	Guhring no. Ø-range *Prices on page*		Guhring no. Ø-range *Prices on page*	
M	**6HX**	**DIN 371**	**2901** M3 – M10 *863*	**2916** M3 – M10 *863*	**2909** M3 – M10 *863*	**2920** M3 – M10 *863*
	6HX	**DIN 376**	**2901** M12 – M16 *863*	**2916** M12 – M16 *863*	**2909** M12 – M16 *863*	**2920** M12 – M16 *863*
MF	**6HX**	**DIN 371**	**2903** M3x0,35 – M10x1 *892*	**2917** M3x0,35 – M10x1,25 *892*	**2910** M3x0,35 – M10x1 *892*	**2921** M3x0,35 – M10x1,25 *892*
UNC	**2BX**	**~ DIN 371**	**2905** Nr.6-32 – 3/8"-16 *900*	**2918** Nr.6-32 – 3/8"-16 *900*	**2912** Nr.4-40 – 3/8"-16 *903*	**2922** Nr.4-40 – 3/8"-16 *903*
	2BX	**~ DIN 376**			**2912** 7/16"-14 – 5/8"-11 *903*	**2922** 7/16"-14 – 5/8"-11 *903*
UNF	**2BX**	**~ DIN 371**	**2907** Nr.6-40 – 3/8"-24 *910*	**2919** Nr.6-40 – 3/8"-24 *910*	**2914** Nr.4-48 – 3/8"-24 *910*	**2923** Nr.4-48 – 3/8"-24 *910*
	2BX	**~ DIN 376**			**2914** 7/16"-20 – 5/8"-18 *910*	**2923** 7/16"-20 – 5/8"-18 *910*

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A AlTiN SuperA

Special alloys

Material no.	Abbreviation
Titanium	
3.7025	Ti
3.7065	Ti
Titanium-alloys	
3.7115	TiAl 5Sn2
3.7165	TiAl 6 V4
Special alloys	
2.4610	Hastelloy C4
2.4876	Incoloy 800
2.4816	Inconel 600
2.4668	Inconel 718
2.4634	Nimonic 105
	CuNi12Zn24
	CuNi18Zn20

Shank designs

DIN 371

d_1 0.9 ... 2.6 mm

d_1 > 2.6 ... 10 mm

Type clarification

TiR30 = for titanium, 30° RH spiral
NiR15 = for nickel, 15° RH spiral

Through holes **Blind holes**

			Through holes	Blind holes	
		Thread depth	≤2xD	≤2xD	
		Tool material	HSS-E-PM	HSS-E-PM	
		Type/form	Ti/Ni/B	TiR15/C	NiR10/C
		Surface finish	C	C	A
		Cooling	☒	☒	☒
Thread type	Tolerance zone	Dim. to	**Guhring no.** Ø-range *Prices on page*	**Guhring no.** Ø-range *Prices on page*	
MJ	**4HX**	**DIN 371**	**1057** M3 – M10 *841*	**1061** M3 – M10 *841*	**1065** M3 – M10 *841*
	4HX	**DIN 376**	**1057** M12 – M16 *841*	**1061** M12 – M16 *841*	**1065** M12 – M16 *841*
MJF	**4HX**	**DIN 371**	**1058** M6x0,5 – M10x1,25 *891*	**1062** M6x0,5 – M10x1,25 *891*	**1066** M6x0,5 – M10x1,25 *891*
UNJC	**3BX**	**~ DIN 371**	**1059** Nr.6-32 – 3/8"-16 *904*	**1063** Nr.6-32 – 3/8"-16 *904*	**1067** Nr.6-32 – 3/8"-16 *904*
	3BX	**~ DIN 376**	**1059** 7/16"-14 – 5/8"-11 *904*	**1063** 7/16"-14 – 5/8"-11 *904*	**1067** 7/16"-14 – 5/8"-11 *904*
UNJF	**3BX**	**~ DIN 371**	**1060** Nr.6-40 – 3/8"-24 *911*	**1064** Nr.6-40 – 3/8"-24 *911*	**1068** Nr.4-48 – 3/8"-24 *911*
	3BX	**~ DIN 376**	**1060** 7/16"-20 – 5/8"-18 *911*	**1064** 7/16"-20 – 5/8"-18 *911*	**1068** 7/16"-20 – 5/8"-18 *911*

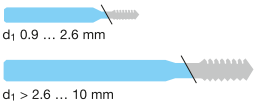
C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Non-ferrous metals

Material no.	Abbreviation
Brass, short-chipping	
2.0380	CuZn39Pb2
2.0401	CuZn39Pb3
2.0410	CuZn43Pb2
Brass, long-chipping	
2.0250	CuZn20
2.0280	CuZn33
2.0332	CuZn37Pb0,5

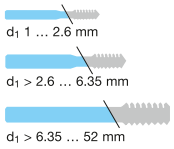
Shank designs

DIN 371



DIN 376 / DIN 374

DIN 352



* < M5 without coolant ducts

Type clarification

Ms = for brass
NR15 = Tyep N, 15° RH spiral
NR40 = Type N, 40° RH spiral

	Through holes			Blind holes		
Thread depth	≤3xD			≤3xD		
Tool material	HSS-E			HSS-E		
Type/form	N/B	N/B	N/B	NR15/C	NR40/C	NR15/C
Surface finish	○	○	○	○	○	○
Cooling	☒	☒	☒	☒	☒	a
		for machining sheet metal				
Tools with colour-ring					○	○
Thread type	Tolerance zone	Dim. to DIN 2184-1	Guhring no. Ø-range *Prices on page*			Guhring no. Ø-range *Prices on page*		
M	**ISO 2 6H**	**DIN 371**		**839** M1 – M10 *857*	**838** M1,4 – M10 *856*	**809** M2 – M10 *843*	**889** M2 – M10 *844*	**1891** M5 – M10 *924*
	6HX							
	ISO 3 6G			**796** M2 – M10 *855*	**869** M2 – M10 *857*			
	ISO 2 6H	**DIN 376**		**847** M3 – M10 *873*	**846** M3 – M20 *866*	**821** M3 – M30 *870*	**890** M3 – M24 *871*	**1898** M12 – M20 *926*
	6HX							
MF	**6HX**	**DIN 371**						
	6HX	**DIN 374**						
M short version	**ISO 2 6H**	**Dim. to DIN 2184-2 DIN 352**	**991** M2 – M24					

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Through holes

HSS-E	Solid carbide*
Ms/E	H/C
◯	◯
☒	r
	Shank tolerance h6
Guhring no. Ø-range *Prices on page*	
800 M3 – M10 *855*	
	1858 M5 – M10 *929*
1084 M3 – M10 *861*	

Blind holes

HSS-E	Solid carbide*			
Ms/E	NR15/C	H/C	H/E	H/C
◯	◯	◯	◯	◯
☒	a	a	a	r
	Shank tolerance h6	Shank tolerance h6	Shank tolerance h6	Shank tolerance h6
Guhring no. Ø-range *Prices on page*				
800 M3 – M10 *855*				
	971* M3 – M10 *928*	**969*** M3 – M10 *928*	**1008** M3 – M10 *929*	**1858** M5 – M10 *929*
1084 M3 – M10 861				
		1883 M12 – M20 *930*		
		972* M4x0,5 – M10x1 *849*	**1009** M10x1 – M16x1,5 *939*	
		974 M12x1,5 – M16x1,5 *883*		

Plastics

Material no. Abbreviation

Duroplastics

– Bakelit
Resopal
Pertinax
Moltopren

Thermoplastics

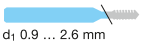
– Plexiglas
Hostalen
Novodur
Makralon

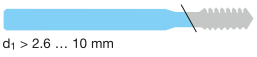
Glass-/carbon-reinforced plastics

– Polypropylen
GFK
CFK

Shank designs

DIN 371





DIN 376 / DIN 374

Type clarification

HAZ = with interrupted threads
NL15 = Type N, 15° LH spiral
NR15 = Type N, 15° RH spiral

* < M5 without coolant ducts

Through holes **Blind holes**

			Through holes			Blind holes				
Thread depth			≤3xD			≤3xD				
Tool material			HSS-E	Solid carbide*		HSS-E	Solid carbide*			
Type/form			HAZ/C	NL15/C	H/C	HAZ/C	NR15/C	H/C	H/E	H/C
Surface finish			●	○	○	●	○	○	○	○
Cooling			☒	r	r	☒	a	a	a	r
				Shank tolerance h6	Shank tolerance h6		Shank tolerance h6	Shank tolerance h6	Shank tolerance h6	Shank tolerance h6
Thread type	Tolerance zone	Dim. to DIN 2184-1	Guhring no. Ø-range *Prices on page*			Guhring no. Ø-range *Prices on page*				
M	**ISO 2 6H**	**DIN 371**	**788** M2 – M10 *854*			**788** M2 – M10 *854*				
	6HX				**1858** M5 – M10 *929*		**971 *** M3 – M10 *928*	**969 *** M3 – M10 *928*	**1008** M3 – M10 *929*	**1858** M5 – M10 *929*
	6HX	**DIN 376**			**1859** M12 – M20 *930*			**1883** M12 – M20 *930*		**1859** M12 – M20 *930*
MF	**6HX**	**DIN 371**		**975 *** M4x0,5 – M10x1 *938*	**1861** M5x0,5 – M10x1 *939*		**977 *** M4x0,5 – M10x1 *938*	**972 *** M4x0,5 – M10x1 *938*	**1009** M10x1 – M16x1,5 *939*	**1861** M5x0,5 – M10x1 *939*
	6HX	**DIN 374**		**976** M12x1,5 – M18x1,5 *939*	**1860** M12x1,5 – M16x1,5 *939*		**978** M12x1,5 – M20x1,5 *939*	**974** M12x1,5 – M16x1,5 *939*		**1860** M12x1,5 – M20x1,5 *939*

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Material group		Tens. strength MPa (N/mm²)	Hardness HB	Cutting speed v_c m/min*		
				HSS-E	HSS-E-PM	Solid carbide
	Structural steels	≤ 850	–	10 - 15	15 - 20	30 - 50
	Free-cutting steels	≤ 1000	–	10 - 20	15 - 25	30 - 50
	Unalloyed case hardened steels	≤ 750	–	10 - 15	15 - 20	30 - 50
	Unalloyed heat-treatable steels	≤ 850	–	10 - 15	15 - 20	30 - 50
	Alloyed case hardened steels	≥ 850 ... 1200	–	8 - 12	10 - 15	25 - 40
	Alloyed heat-treatable steels	≥ 850 ... 1200	–	8 - 12	10 - 15	25 - 40
	Alloyed tool steels	≤ 1000	–	6 - 10	8 - 12	25 - 40
	High speed tool steels	≥ 650 ... 1000	–	6 - 10	8 - 12	25 - 40
	Stainless- and acid-resistant steels, sulphured	≤ 850	–	6 - 12	8 - 15	30 - 50
	austenitic	≤ 850	–	6 - 12	8 - 15	30 - 50
	martensitic	≤ 850	–	6 - 12	8 - 15	30 - 50
	Structural steels	≤ 800	–	10 - 15	15 - 20	30 - 50
	Free-cutting steels	≤ 1000	–	10 - 20	15 - 25	30 - 50
	Case hardened steels	≤ 1000	–	10 - 15	15 - 20	30 - 50
	Heat-treatable steels	≤ 1200	–	10 - 15	15 - 20	30 - 50
	Nitriding steels	≤ 1200	–	10 - 15	15 - 20	30 - 50
	Spheroidal graphite iron	–	≤ 240	10 - 20	15 - 25	30 - 50
	Aluminium and Al-alloys	≤ 400	–	15 - 20	20 - 25	30 - 50
	Al wrought alloys	≤ 400	–	15 - 20	20 - 25	30 - 50
	Al cast alloys ≤ 10 % Si	≤ 600	–	15 - 20	20 - 25	30 - 50
	> 10 % Si	≤ 600	–	15 - 20	20 - 25	25 - 40
	Cast iron	–	≤ 240	15 - 20	20 - 25	30 - 40
	Spheroidal graphite iron	–	≤ 240	15 - 20	20 - 25	30 - 40
	Malleable cast iron	–	< 300	15 - 20	20 - 25	30 - 40
	Brass, short-chipping	≤ 600	–	10 - 15	15 - 20	25 - 30
	long-chipping	≤ 600	–	10 - 15	15 - 20	25 - 30
	Plastics	–	–	5 - 10	7 -12	10 - 20
	Magnesium-alloys	≤ 450	–	30 - 50	-	40 - 60
	Titanium and Ti-alloys	≤ 1200	–	-	2 - 8	-
	Ni-alloys	≤ 1200	–	-	2 - 8	-

* With coated tools cutting speed may be increased by up to 50%.

Application alternatives

If the optimal tap for your application is not available, perhaps you can use a tap with another colour ring. The table below gives you a view to possible alternatives.

We recommend a machining test with the selected alternative tool! Cutting speed, tool life and machining quality may not fit the performance of the otimally suited tool.

		possibly can be replaced by tools with colour ring ...					
Tools with colour ring ...			–		++		–
		–		–	+	–	–
		–	–		+	–	–
		++	+	+			+
		+	–	–	+		–
		–	–	–	+	–	

++ optimally suited + limited suited – not suited

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

General steels

Material no. to DIN EN 10 027 | Abbreviation

Structural steels

1.0035	S 185 (St 33)
1.0039	S 235 JRH
1.0036	S 235JRG1+CR
1.0060	E 335 (St 60-2)

Free-cutting steels

1.0718	11SMnPb30
1.0721	10S20
1.0758	60SPb20
1.0726	35S20

Case hardened steels

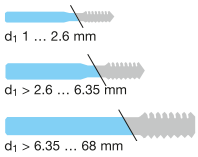
1.0401	(C 15)
1.7016	17 CR3
1.7131	16MnCr5
1.5919	15CrNi6

Unalloyed heat-treabable steels

1.0402	C 22
1.1151	C22E (Ck 22)
1.0503	C 45
1.1191	C45E (Ck 45)

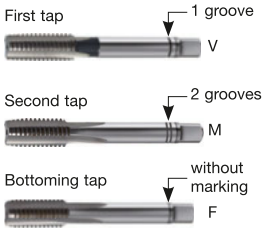
Shank designs

DIN 352 / DIN 2181



DIN 5157

Designation



Through holes and blind holes

Tool material	HSS							
Type	N	N	N	N	N	N-LH	N-LH	N-LH
Surface finish	○	○	○	○	○	○	○	○
Designation	V	M	F	V	F	V	M	F

The hand tap sets Guhring no. 861. 882 and 904 are also suitable for

- **high tensile steels ≤ 800...1200 N/mm²**
- **for stainless and acid-resistant steels**

Thread type	Tolerance zone	Dim. to DIN 2184-2	Guhring no. Ø-range *Prices on page*		
M	**ISO 2 6H**	**DIN 352**	**861 (Set)** consisting of: **862** **863** **864** M1 – M36 *822*	**882 (Set)** consisting of: **883** **864** M2 – M12 *824*	**904 (Set)** consisting of: **905** **906** **907** M2.2 – M22 *895*
MF	**ISO 2 6H**	**DIN 2181**		**884 (Set)** consisting of: **885** **886** M2x0.25 – M52x1.5 *829*	
UNC	**2B**	**~ DIN 352**	**981 (Set)** consisting of: **982** **983** **984** Nr.1-64 – 2"-4.5 *831*		
UNF	**2B**	**~ DIN 2181**		**985 (Set)** consisting of: **986** **987** Nr.1-72 – 1 3/8 "-12 *832*	
BSW	**–**	**~ DIN 352**	**954 (Set)** consisting of: **955** **956** **957** W1/16" – W2" *833*		
G BSP	**–**	**DIN 5157**		**958 (Set)** consisting of: **959** **960** G1/8" – G2" *834*	

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Through holes and blind holes

High tensile steels

Material no. to DIN EN 10 027 — Abbreviation

Alloyed heat-treabable steels

1.6511	36 CrNiMo 4
1.7033	34 Cr 4
1.7225	42 CrMo 4

Tool steels

1.2316	X 36 CrMo 17
1.2067	10 S20

High speed steels

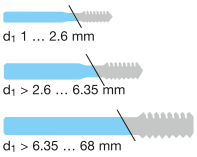
1.3343	HS 6-5-2
1.3344	HS 6-5-3
1.3243	HS 6-5-2-5
1.3247	HS 2-19-1-8

Hardened steels

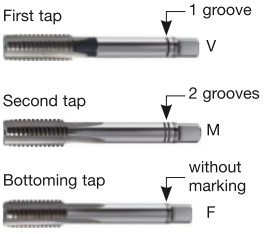
All steel examples are hardened to 45 … 62 HRC

Shank designs

DIN 352 / DIN 2181



Designation



HSS-E			HSS-E-PM		
H	H	H	H	H	H
●	●	●	●	●	●
V	M	F	V	M	F
Guhring no. Ø-range *Prices on page*					
857 (Set) consisting of: **858** **859** **860** M2 – M20 *827*			**1818 (Set)** consisting of: **1819** **1820** M3 – M12 *828*		

Stainl./acid-resist. steels

Material no. to DIN EN 10 027 — Abbreviation

Sulphured stainless steels

1.4005	X 12 CrS 13
1.4104	X 14 CrMo S 17
1.4105	X 6 CrMo S 17
1.4305	X 8CrNi S 18-9

Austenitic stainless steels

1.4300	X 12 CrNi 18-8
1.4301	X 5 CrNi 18-10
1.4541	X 6 CrNiTi 18-10

Martensitic stainless steels

1.4057	X 17 CrNi 16-2
1.4112	X 90 CrMoV 18
1.4006	X 12 Cr 13

HSS-E		
VA	VA	VA
○	○	○
V	M	F
Guhring no. Ø-range *Prices on page*		
853 (Set) consisting of: **854** **855** **856** M2 – M20 *826*		

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Material examples

Suitable malleable materials see table "Cutting recommendations".

Shank designs

~DIN 371

d_1 2 ... 2.6 mm

d_1 3 ... 10 mm

~DIN 376 / ~DIN 374 / DIN 2189

◯ Generally the application of bright fluteless taps is not recommended. Guhring offers bright fluteless taps in its standard range only as basic tools for a cost efficient coating to customer specific requirements.

* < Ø M5 = without coolant ducts

Through holes and blind holes

Tool material	HSS-E				
Type/form	N/C	N/C	N/C	N/C	N/C
Surface finish	S	P	C	S	C
Cooling	☒	☒	☒	a	r
Rec. parameters see table "Cutting recommendations"					

Thread type	Tolerance zone	Dim. to	Guhring no. Ø-range *Prices on page*				
M	**6HX**	**DIN 2174 ~ DIN 371**	**919** M3 – M10 *956*	**1587** M3 – M10 *956*	**2012** M3 – M10 *955*	**2442** M5 – M10 *969*	**2446** M5 – M10 *969*
	6GX		**918** M3 – M10 *956*	**1588** M3 – M10 *956*		**2443** M5 – M10 *969*	**2447** M5 – M10 *970*
	6HX	**DIN 2174 ~ DIN 376 *Guhring std.**	**923** M6 – M39 *958*	**1589** M6 – M20 *958*	**2013** M12 – M20 *957*	**2444** M12 – M16 *971*	**2448** M12 – M16 *971*
	6GX		**922** M6 – M20 *958*	**1590** M12 – M20 *957*		**2445** M12 – M16 *971*	
MF	**6HX**	**DIN 2174 ~ DIN 371**	**1275** M6 x 0,75 – M10x1,25 *961*	**1591** M8 x 1 – M10 x 1 *961*			
	6GX		**1277** M8 x 1 – M10 x 1 *961*	**1592** M8 x 1 – M10 x 1 *961*			
	6HX	**DIN 2174 ~ DIN 374 *Guhring std.**	**927** M6 x 0,75 – M24 x 1,5 *964*	**1593** M12 x 1 – M24 x 1,5 *960*	**2008** M6 x0,75 – M20 x 1,5 *964*		
	6GX		**926** M8 x 1 – M24 x 1,5 *964*	**1594** M12 x 1 – M24 x 1,5 *960*			
UNC	**2BX**	**DIN 2184-1 ~ DIN 371**	**1582** Nr.4-40 – $^3/_8$" - 16 *965*				
	2BX	**DIN 2184-1 ~ DIN 376**	**1583** $^7/_{16}$"-14 – $^3/_4$" - 10 *965*				
UNF	**2BX**	**DIN 2184-1 ~ DIN 371**	**1584** Nr.4-48 – $^3/_8$" - 24 *966*				
	2BX	**DIN 2184-1 ~ DIN 374**	**1585** $^7/_{16}$" - 20 – $^3/_4$" - 16 *966*				
BSP	**–**	**DIN 2184-1 DIN 2189**	**1586** $G^1/_{16}$" – $G^3/_4$" *967*				

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

HSS-E	HSS-E-PM								Solid carbide	
N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/E	N/C	N/E
Cb	S	S	P	S+	S	C	A	S	A	A
a	☒	☒	☒	r	a	r	r	a	r	r
					≤M5 ☒				Shank tolerance h6	Shank tolerance h6
Guhring no. Ø-range *Prices on page*										
2515 M5 – M20 *969*	**322** M3 – M10 *954*	**1266** M3 – M10 *957*	**1599** M3 – M10 *957*	**323** M5 – M10 *970*		**1270** M5 – M10 *972*	**1717** M5 – M10 *972*	**1725*** M3 – M10 *972*	**1972*** M3 – M10 *968*	**1927*** M3 – M10 *968*
4146 M5 – M20 *969*			**1705** M3 – M10 *957*			**1713** M5 – M10 *973*	**1718** M5 – M10 *973*	**1726** M3 – M10 *972*		
	339 M12 – M16 *954*	**1267** M12 – M20 *957*	**1707** M12 – M20 *957*	**342** M12 – M16 *971*	**4143*** M3 – M20 *974*	**1271** M12 – M20 *973*	**1719** M12 – M20 *973*	**1727** M12 – M20 *973*	**1931** M12 – M20 *971*	
			1708 M12 – M20 *957*			**1714** M12 – M20 *973*	**1720** M12 – M20 *973*	**1728** M12 – M20 *973*		
4147 M8 x 1 – M16x1,5 *975*	**1284** M6 x 0,75 – M10 x 1,25 *959*	**1268** M8 x 1 – M10 x 1,25 *961*				**1272** M8 x 1 – M10 x 1,25 *978*	**1721** M8 x 1 – M10 x 1,25 *978*	**1729** M8 x 1 – M10 x 1,25 *976*	**1581** M10 x 1 *977*	
4151 M8 x 1 – M16 x 1,5 *975*			**1710** M8 x 1 – M10 x 1 *963*			**1715** M8 x 1 – M10 x 1,25 *979*		**1730** M8 x 1 – M10 x 1,25 *978*		
	333 M8 x 1 – M20 x 1,50 *963*	**1269** M12 x 1 – M24 x 2 *960*	**1711** M12 x 1 – M24 x 1,5 *960*	**338** M8 x 1 – M16 x 1,5 *980*	**4145*** M8x1 – M16 x 1,5 *981*	**1273** M12 x 1 – M24 x 2 *979*	**1723** M12 x 1 – M24 x 1,5 *979*	**1731** M12 x 1 – M24 x 1,5 *979*	**1581** M12 x 1 – M24 x 1,5 *977*	
			1712 M12 x 1 – M24 x 1,5 *960*			**1716** M12 x 1 – M24 x 1,5 *979*		**1732** M12 x 1 – M24 x 1,5 *979*		
4152 G1/16“ – G1“ *982*										

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

≤ 1 x D — Through holes and blind holes

> 1 x D — Blind holes

Material examples

Suitable malleable materials see table "Cutting recommendations".

Shank designs

~DIN 371

d_1 2 ... 2,6 mm

d_1 3 ... 10 mm

~DIN 376 / ~DIN 374 / DIN 2189

◯ Generally the application of bright fluteless taps is not recommended. Guhring offers bright fluteless taps in its standard range only as basic tools for a cost efficient coating to customer specific requirements.

Tool material	HSS-E			Solid carbide
Type/form	N/C	N/C	N/C	N/C
Surface finish	S	S	Cb	S
Cooling	☒	☒	☒	a
Rec. parameters see table "Cutting recommendations"				Shank tolerance h6

Thread type	Tolerance zone	Dim. to	Guhring no. Ø-range *Prices on page*			
M	6HX	DIN 2174 ~ DIN 371	**921** M2 – M10 *944*	**1255** M2 – M10 *944*	**1347** M2 – M10 *945*	**2518** M5 – M16 *953*
	6GX		**920** M2 – M10 *944*	**903** M2 – M10 *945*	**1565** M2 – M10 *945*	
	6HX	DIN 2174 ~ DIN 376	**925** M12 – M20 *945*	**1256** M12 – M20 *945*	**1566** M12 – M20	
	6GX		**924** M12 – M20 *945*	**952** M12 – M20 *945*	**1567** M12 – M20 *945*	
MF	6HX	DIN 2174 ~ DIN 371	**1279** M8 x 1 – M10 x 1	**1257** M8 x 1 – M10 x 1,25 *946*	**1568** M8 x 1 – M10 x 1 *947*	
	6GX		**1280** M8 x 1 – M10 x 1 *946*	**1740** M8 x 1 – M10 x 1,25 *947*	**1569** M8 x 1 – M10 x 1 *947*	
	6HX	DIN 2174 ~ DIN 374	**929** M8 x 1 – M24 x 1,5 *948*	**1258** M12 x 1 – M24 x 2 *947*		
	6GX		**928** M8 x 1 – M24 x 1,5 *948*		**1580** M12 x 1 – M24 x 1,5 *947*	
UNC	2BX	DIN 2184-1 ~ DIN 371	**2273** Nr.10-24 – 3/8" - 16 *949*			
	2BX	DIN 2184-1 ~ DIN 376	**2274** 7/16"-14 – 7/8" - 9 *949*			
UNF	2BX	DIN 2184-1 ~ DIN 371	**1283** Nr.10-32 – 3/8" - 24 *950*			
	2BX	DIN 2184-1 ~ DIN 374	**2275** Nr.10-32 – 1"-12 *951*			
BSP	–	DIN 2184-1 DIN 2189	**966** G1/16" – G11/4" *952*			

a With internal cooling, tools with axial coolant duct are, as a rule, only suitable for the machining of blind holes. Without internal cooling, i.e. external cooling, the tools are also suitable for through holes.

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Thanks to the development of modern tool materials, geometries, coatings and recently the Guhring developed improved tool surface the scope of malleable materials able to be fluteless tapped is expanding. The table “Cutting rate recommendations” below provides an overview of materials that can be machined with Guhring’s “Profile” fluteless taps. In many cases, a test in harder or more brittle materials is worth while in order to benefit from the advantages of fluteless tapping in these materials. Please contact our technicians for advice.

Cutting rate recommendations

Material group		Tens. strength MPa (N/mm²)	Hardness HB	Cutting speed v_c m/min*		
				HSS-E	HSS-E-PM	Solid carbide
	Structural steels	≤ 850	–	10 - 15	15 - 20	20 - 30
	Free-cutting steels	≤ 1000	–	10 - 20	15 - 25	20 - 30
	Unalloyed case hardened steels	≤ 750	–	10 - 15	15 - 20	20 - 30
	Unalloyed heat-treatable steels	≤ 850	–	10 - 15	15 - 20	20 - 30
	Alloyed case hardened steels	≥ 850 ... 1200	–	8 - 12	10 - 15	15 - 20
	Alloyed heat-treatable steels	≥ 850 ... 1200	–	8 - 12	10 - 15	15 - 20
	Alloyed tool steels	≤ 1000	–	6 - 10	8 - 12	10 - 15
	High speed tool steels	≥ 650 ... 1000	–	6 - 10	8 - 12	10 - 15
	Stainless- and acid-resistant steels, sulphured	≤ 850	–	6 - 12	8 - 15	12 - 20
	austenitic	≤ 850	–	4 - 8	8 - 15	12 - 20
	martensitic	≤ 850	–	4 - 8	8 - 15	12 - 20
	Structural steels	≤ 800	–	10 - 15	15 - 20	20 - 30
	Free-cutting steels	≤ 1000	–	10 - 20	15 - 25	20 - 30
	Case hardened steels	≤ 1000	–	10 - 15	15 - 20	20 - 30
	Heat-treatable steels	≤ 1200	–	10 - 15	15 - 20	20 - 30
	Nitriding steels	≤ 1200	–	10 - 15	15 - 20	20 - 30
	Spheroidal graphite iron	–	≤ 240	10 - 20	15 - 25	20 - 30
	Aluminium and Al-alloys	≤ 400	–	15 - 20	20 - 25	30 - 50
	Al wrought alloys	≤ 400	–	15 - 20	20 - 25	30 - 50
	Al cast alloys ≤ 10 % Si	≤ 600	–	15 - 20	20 - 25	30 - 50
	> 10 % Si	≤ 600	–	–	–	–
	Cast iron	–	≤ 240	–	–	–
	Spheroidal graphite iron	–	≤ 240	15 - 20	20 - 25	30 - 40
	Malleable cast iron	–	< 300	15 - 20	20 - 25	30 - 40
	Brass, short-chipping	≤ 600	–	10 - 15	15 - 20	25 - 30
	long-chipping	≤ 600	–	10 - 15	15 - 20	25 - 30
	Plastics	–	–	–	–	–
	Magnesium-alloys	≤ 450	–	–	–	–
	Titanium and Ti-alloys	≤ 1200	–	2 - 6	2 - 8	8 - 12
	Ni-alloys	≤ 1200	–	2 - 6	2 - 8	8 - 12

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Material examples

Material no. Abbreviation

Al and Al-alloys

3.0250	Al 99,5H
3.0280	AL 99,8H
3.3308	Al99,9Mg0,5

Al wrought alloys

3.2315	AlMgSi1
3.1655	AlCuMgPb
3.4335	AlZn4,5Mg1

Al cast alloys ≤ 10% Si

3.2134	GD-AlSi5Cu1Mg
3.2162	GD-AlSi8Cu3
3.2373	G-AlSi9Mg

Material examples

Material no. Abbreviation

Cast iron

0.6015 (GG15)	EN-GJL-150
0.6025 (GG25)	EN-GJL-250
0.6040 (GG40)	EN-JLZ

Spheroidal graphite cast iron

0.7040 (GGG40)	EN-GJS-400-15
0.7060 (GGG60)	EN-GJS-600-3

Material examples

Material no. Abbreviation

Brass, short-chipping

2.0380	CuZn39Pb2
2.0401	CuZn39Pb3
2.0410	CuZn43Pb2

Brass, long-chipping

2.0250	CuZn20
2.0280	CuZn33
2.0332	CuZn37Pb0,5

Material examples

Material no. Abbreviation

Duroplastics

–	Bakelit
	Resopal
	Pertinax
	Moltopren

Thermoplastics

–	Plexiglas
	Hostalen
	Novodur
	Makralon

Material examples

Material no. Abbreviation

Magnesium-alloys

3.5200	MgMn2
3.5612	MgAl6Zn
3.5812	MgAl8Zn
3.5812.05	GDMgAl8Zn1
3.5612.05	GDMgAl6Zn1
3.5662.01	GMgAl6

Material examples

Material no. Abbreviation

Titanium

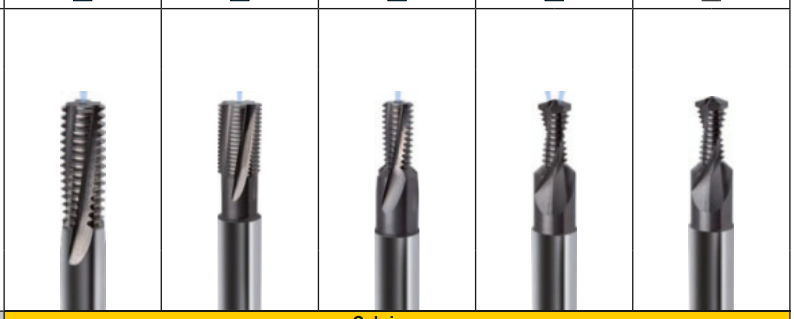
3.7025	Ti
3.7065	Ti

Through holes and blind holes

Tool material	Solid carbide				
Type	TM SP	TMU SP	TMC SP	DTMC SP	DTMC SP
Surface finish	○	○	○	○ / c	○ / c
Cooling	a	a	a	a	☒

Rec. parameters

see table "Cutting recommendations"



Thread type	Thread depth	Guhring no. Ø-range *Preisseite*				
M	1,5 x D	NEW **3734** **4132** M6 - M20 *996* *997*		**3510** M3 - M20 *1006*	**3775** **3777** M4 - M16 *985* *985*	**3774** **3776** M3 - M16 *984* *985*
	2,0 x D	**3734** **4132** M6 - M20 *996* *997*		**3511** M3 - M20 *1008*	**3779** **3781** M4 - M16 *987* *987*	**3778** **3780** M3 - M16 *986* *987*
	2,5 x D	**3735** M6 - M20 *998*		**3759** M3 - M20 *1010*	**3783** **3785** M4 - M16 *989* *989*	**3782** **3784** M3 - M16 *988* *989*
	16/20/25/ 33 mm		**3523** Ø10xM1 - Ø20xM3,5 *1030*			
	Außengewinde-fräsen		NEW **4162** Ø10xM0,5 - Ø20xM3 *1035*			
MF	1,5 x D			**3512** M4x0,5 - M16x1,5 *1012*	**3787** **3789** M6x0,75 - M16x1,5 *991* *991*	**3788** M4x0,5 - M16x1,5 *990* *990*
	2,0 x D			**3513** M4x0,5 - M16x1,5 *1013*	**3791** **3793** M6x0,75..M16x1,5 *993* *993*	**3790** **3792** M4x0,5 - M16x1,5 *992* *993*
	2,5 x D			**3762** M4x0,5 - M16x1,5 *1014*		
	16/20/25/ 33 mm		**3523** Ø10xM1 - Ø20xM3,5 *1030*			
UNC	1,5 x D		**3595** Ø10xUN24-Ø20xUN7 *1031*	**3516** 1/4-20 - 1/2-13 *1015*	NEW	NEW
	2,0 x D	NEW **4134** Nr.10-24 - 5/8-11 *1003*		**3517** 1/4-20 - 1/2-13 *1016*	**4139** 1/4-20 - 5/8-11 *994*	**4138** 1/4-20 - 5/8-11 *994*
UNF	1,5 x D		**3595** Ø10xUN24-Ø20xUN7 *1031*	**3518** 1/4-28 - 1/2-20 *1017*	NEW	NEW
	2,0 x D	NEW **4136** Nr.10-32 - 5/8-18 *1004*		**3519** 1/4-28 - 1/2-20 *1018*	**4141** 1/4-28 - 5/8-18 *995*	**4140** 1/4-28 - 5/8-18 *995*
G BSP	1,5 x D			**3514** G1/8 - G3/8 *1020*		
	2,0 x D	**3745** G1/8 - G3/8 *999*		**3515** G1/8 - G3/8 *1022*		
	2,5 x D	**3746** G1/8 - G3/8 *1000*		**3765** G1/8 - G3/8 *1024*		
	16/20/25/ 33 mm		**3524** Ø10xG19 - Ø20xG11 *1032*			
NPT	std. length	**3753** 1/16 - 3/8 *1001*	**3768** Ø14,5x14-Ø18,5x11,5 *1033*	**3520** 1/8 - 3/8 *1026*		
NPTF	std. length	**3756** 1/16 - 3/8 *1002*		**3521** 1/8 - 3/8 *1028*		

a With internal cooling, tools with axial coolant duct are, as a rule, only suitable for the machining of blind holes. Without internal cooling, i.e. external cooling, the tools are also suitable for through holes.

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Material examples

Material no. Abbreviation

Structural steels

1.0035	S 185 (St 33)
1.0039	S 235 JRH
1.0036	S 235JRG1+CR
1.0060	E 335 (St 60-2)

Free cutting steels

1.0718	11SMnPb30
1.0721	10S20
1.0758	60SPb20
1.0726	35S20

Case hardened steels

1.0401	(C 15)
1.7016	17 CR3
1.7131	16MnCr5
1.5919	15CrNi6

Unalloyed heat-treatable steels

1.0402	C 22
1.1151	C22E (Ck 22)
1.0503	C 45
1.1191	C45E (Ck 45)

Material examples

Material no. Abbreviation

Alloyed heat-treatable steels

1.6511	36 CrNiMo 4
1.7033	34 Cr 4
1.7225	42 CrMo 4

Tool steels

1.2316	X 36 CrMo 17
1.2067	10 S20

High speed steels

1.3343	HS 6-5-2
1.3344	HS 6-5-3
1.3243	HS 6-5-2-5
1.3247	HS 2-19-1-8

Hardened steels

All steel examples are hardened to 45 … 62 HRC

Material examples

Material no. Abbreviation

Sulphured steels

1.4005	X 12 CrS 13
1.4104	X 14 CrMo S 17
1.4105	X 6 CrMo S 17
1.4305	X 8CrNi S 18-9

Austenitic steels

1.4300	X 12 CrNi 18-8
1.4301	X 5 CrNi 18-10
1.4541	X 6 CrNiTi 18-10

Martensitic steels

1.4057	X 17 CrNi 16-2
1.4112	X 90 CrMoV 18
1.4006	X 12 Cr 13

Material examples

Material no. Abbreviation

Special alloys

2.4610	Hastelloy C4
2.4876	Incoloy 800
2.4816	Inconel 600
2.4668	Inconel 718
2.4634	Nimonic 105
	CuNi12Zn24
	CuNi18Zn20

Through holes and blind holes

Tool material	Solid carbide		
Type	TM SP	TMU SP	TMC SP
Surface finish	C	C	C
Cooling	a	a	a

Rec. parameters

see table "Cutting recommendations"

Thread type	Thread depth	Guhring no. Ø-range *Prices on page*		
M	1,5 x D			**3525** M3 - M20 *1007*
	2,0 x D	**3737** **4133** M6 - M20 *996* *997*		**3526** M3 - M20 *1009*
	2,5 x D	**3740** M6 - M20 *998*		**3760** M3 - M20 *1011*
	16/20/25/ 33 mm		**3541** Ø10xM1 - Ø20xM3,5 *1030*	
	external thread milling		**4163** Ø10xM0,5 - Ø20xM3 NEW *1035*	
MF	1,5 x D			**3527** M4x0.5 - M16x1.5 *1012*
	2,0 x D			**3528** M4x0.5 - M16x1.5 *1013*
	2,5 x D			**3763** M4x0.5 - M16x1.5 *1014*
	16/20/25/ 33 mm		**3541** Ø10xM1 - Ø20xM3,5 *1030*	
UNC	1,5 x D		**3596** Ø10xUN24-Ø20xUN7 *1031*	**3534** 1/4-20 - 1/2-13 *1015*
	2,0 x D	**4135** Nr.10-24 - 5/8-11 NEW *1003*		**3535** 1/4-20 - 1/2-13 *1016*
UNF	1,5 x D		**3596** Ø10xUN24-Ø20xUN7 *1031*	**3536** 1/4-28 - 1/2-20 *1017*
	2,0 x D	**4137** Nr.10-32 - 5/8-18 NEW *1004*		**3537** 1/4-28 - 1/2-20 *1018*
G BSP	1,5 x D			**3529** G1/8 - G3/8 *1021*
	2,0 x D	**3748** G1/8 - G3/8 *999*		**3533** G1/8 - G3/8 *1024*
	2,5 x D	**3750** G1/8 - G3/8 *1001*		
	16/20/25/ 33 mm		**3542** Ø10xG19 - Ø20xG11 *1032*	
NPT	std. length	**3754** 1/16 - 3/8 *1001*	**3769** Ø14,5x14-Ø18,5x11,5 *1033*	**3538** 1/8 - 3/8 *1027*
NPTF	std. length	**3757** 1/16 - 3/8 *1002*	**3772** Ø14,5x14-Ø18,5x11,5 *1034*	**3539** 1/8 - 3/8 *1029*

a With internal cooling, tools with axial coolant duct are, as a rule, only suitable for the machining of blind holes. Without internal cooling, i.e. external cooling, the tools are also suitable for through holes.

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Material examples

Material no. Abbreviation

Al cast alloys > 10% Si

3.2581	G-AlSi12
3.2583	G-AlSi12Cu
3.2581	G-AlSi10Mg

Material examples

Material no. Abbreviation

Malleable cast iron

0.8035	EN-GJMW-350-4
0.8040	EN-GJMW-400-5
0.8135	EN-GJMB-350-10

Spheroidal graphite iron

0.7040 (GGG40)	EN-GJS-400-15
0.7060 (GGG40)	EN-GJS-600-3

Cast iron with vermicular graphite

–	GGV

Material examples

Material no. Abbreviation

Glass-/carbon-reinforced plastics

–	Polypropylen GFK CFK

Material examples

Material no. Abbreviation

Titanium-alloys

3.7115	TiAl 5Sn2
3.7165	TiAl 6 V4

Through holes and blind holes

Rec. parameters

see table "Cutting recommendations"

Tool material	Solid carbide		
Type	TM SP	TMU SP	TMC SP
Surface finish	A	A	A
Cooling	a	a	a

Thread type	Thread depth	Guhring no. Ø-range *Prices on page*		
M	1,5 x D			**3543** M3 - M20 *1007*
	2,0 x D	**3743** M6 - M20 *996*		**3544** M3 - M20 *1009*
	2,5 x D	**3744** M6 - M20 *998*		**3761** M3 - M20 *1011*
	16/20/25/ 33 mm		**3556** Ø10xM1 - Ø20xM3,5 *1030*	
MF	1,5 x D			**3545** M4x0.5 - M16x1.5 *1012*
	2,0 x D			**3546** M4x0.5 - M16x1.5 *1013*
	2,5 x D			**3764** M4x0.5 - M16x1.5 *1014*
	16/20/25/ 33 mm		**3556** Ø10xM1 - Ø20xM3,5 *1030*	
UNC	1,5 x D		**3597** Ø10xUN24-Ø20xUN7 *1031*	
	2,0 x D			**3550** 1/4-20 - 1/2-13 *1016*
UNF	1,5 x D		**3597** Ø10xUN24-Ø20xUN7 *1031*	**3551** 1/4-28 - 1/2-20 *1017*
	2,0 x D			**3552** 1/4-28 - 1/2-20 *1018*
G BSP	1,5 x D			**3547** G1/8 - G3/8 *1021*
	2,0 x D	**3751** G1/8 - G3/8 *999*		**3548** G1/8 - G3/8 *1023*
	2,5 x D	**3752** G1/8 - G3/8 *1000*		
	16/20/25/ 33 mm		**3557** Ø10xG19 - Ø20xG11 *1032*	
NPT	std. length	**3755** 1/16 - 3/8 *1001*	**3770** Ø14,5x14-Ø18,5x11,5 *1033*	**3553** 1/8 - 3/8 *1027*
NPTF	std. length	**3758** 1/16 - 3/8 *1002*	**3773** Ø14,5x14-Ø18,5x11,5 *1034*	**3554** 1/8 - 3/8 *1029*

a With internal cooling, tools with axial coolant duct are, as a rule, only suitable for the machining of blind holes. Without internal cooling, i.e. external cooling, the tools are also suitable for through holes.

bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A AlTiN SuperA

Material group		Tensile strength MPa (N/mm²)	Hardness HB	Cutting speed v_c (m/min)	Feed per tooth f_z (mm)	Feed for drill per revolution f_b (mm)
	Structural steels	≤ 850	–	80 - 120	0,02 - 0,10	–
	Free-cutting steels	≤ 1000	–	80 - 120	0,02 - 0,10	–
	Unalloyed case hardened steels	≤ 750	–	80 - 120	0,02 - 0,10	–
	Unalloyed heat-treatable steels	≤ 850	–	80 - 120	0,02 - 0,10	–
	Alloyed case hardened steels	≥ 850 ... 1200	–	60 - 80	0,01 - 0,08	–
	Alloyed heat-treatable steels	≥ 850 ... 1200	–	60 - 80	0,01 - 0,08	–
	Alloyed tool steels	≤ 1000	–	60 - 80	0,01 - 0,08	–
	High speed tool steels	≥ 650 ... 1000	–	60 - 80	0,01 - 0,08	–
	Stainless- and acid-resistant steels. sulphured	≤ 850	–	50 - 80	0,02 - 0,10	–
	austenitic	≤ 850	–	50 - 70	0,02 - 0,10	–
	martensitic	≤ 850	–	50 - 70	0,02 - 0,10	–
	Structural steels	≤ 800	–	80 - 100	0,02 - 0,10	–
	Free-cutting steels	≤ 1000	–	80 - 100	0,02 - 0,10	–
	Case hardened steels	≤ 1000	–	80 - 100	0,02 - 0,10	–
	Heat-treatable steels	≤ 1200	–	80 - 100	0,02 - 0,10	–
	Nitriding steels	≤ 1200	–	80 - 100	0,02 - 0,10	–
	Spheroidal graphite iron	–	≤ 240	80 - 120	0,02 - 0,10	0,05 - 0,20
	Aluminium and Al-alloys	≤ 400	–	150 - 300	0,05 - 0,20	0,05 - 0,25
	Al wrought alloys	≤ 400	–	150 - 300	0,05 - 0,20	0,05 - 0,25
	Al cast alloys ≤ 10 % Si	≤ 600	–	150 - 300	0,05 - 0,20	0,05 - 0,40
	> 10 % Si	≤ 600	–	100 - 200	0,05 - 0,20	0,05 - 0,30
	Cast iron	–	≤ 240	100 - 150	0,05 - 0,15	0,05 - 0,25
	Spheroidal graphite iron	–	≤ 240	80 - 120	0,05 - 0,15	0,05 - 0,20
	Malleable cast iron	–	< 300	80 - 120	0,05 - 0,15	0,05 - 0,20
	Brass. short-chipping	≤ 600	–	150 - 250	0,05 - 0,25	0,05 - 0,40
	long-chipping	≤ 600	–	150 - 250	–	0,05 - 0,25
	Plastics	–	–	100 - 200	0,05 - 0,25	0,05 - 0,40
	Magnesium-alloys	≤ 450	–	150 - 300	0,05 - 0,25	0,05 - 0,40
	Titanium and Ti-alloys	≤ 1200	–	40 - 60	0,01 - 0,08	–
	Ni-alloys	≤ 1200	–	40 - 60	0,01 - 0,08	–

The surface of a thread milling cutter does not influence the cutting data, but the suitability for materials:

- ◯ easy-to-machine materials
- (C) steels and Ni-alloys
- (A) abrasive materials

Formula of calculation

$$v_c = \frac{d \cdot \pi \cdot n}{1000}$$

$$n = \frac{v_c \cdot 1000}{d \cdot \pi}$$

$$v_f = n \cdot z \cdot f_z$$

$$v_m = \frac{v_f \cdot (D - d)}{D}$$

$$v_b = n \cdot f_b$$

v_c = cutting speed
v_f = contour feed
v_m = centre point path feed
n = revolutions
z = number of teeth
f_z = feed per tooth
f_b = feed for drill per revolution*
v_b = drill feed rate*
D = Ø nom. of thread [mm]
d = milling cutter nom. Ø [mm]
* for drill/thread milling

Guhring Thread Mill: CNC programming made easy

Guhring's Thread Mill software considerably simplifies CNC programming. With the assistance of a clear input mask, the user enters all the required data, i.e. thread mill type, thread type and diameter, machine parameters etc. and with this data produces the relevant CNC program.

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

General steels

Material no. to DIN EN 10 027 | Abbreviation

Structural steels

1.0035	S 185 (St 33)
1.0039	S 235 JRH
1.0036	S 235JRG1+CR
1.0060	E 335 (St 60-2)

Free-cutting steels

1.0718	11SMnPb30
1.0721	10S20
1.0758	60SPb20
1.0726	35S20

Case hardened steels

1.0401	(C 15)
1.7016	17 CR3
1.7131	16MnCr5
1.5919	15CrNi6

Unalloyed heat-treabable steels

1.0402	C 22
1.1151	C22E (Ck 22)
1.0503	C 45
1.1191	C45E (Ck 45)

High tensile steels

Material no. to DIN EN 10 027 | Abbreviation

Alloyed heat-treabable steels

1.6511	36 CrNiMo 4
1.7033	34 Cr 4
1.7225	42 CrMo 4

Tool steels

1.2316	X 36 CrMo 17
1.2067	10 S20

High speed tool steels

1.3343	HS 6-5-2
1.3344	HS 6-5-3
1.3243	HS 6-5-2-5
1.3247	HS 2-19-1-8

Stainl./acid resist. steels

Material no. to DIN EN 10 027 | Abbreviation

Sulphured stainless steels

1.4005	X 12 CrS 13
1.4104	X 14 CrMo S 17
1.4105	X 6 CrMo S 17
1.4305	X 8CrNi S 18-9

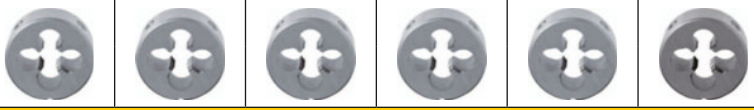
Austenitic stainless steels

1.4300	X 12 CrNi 18-8
1.4301	X 5 CrNi 18-10
1.4541	X 6 CrNiTi 18-10

Martensitic stainless steels

1.4057	X 17 CrNi 16-2
1.4112	X 90 CrMoV 18
1.4006	X 12 Cr 13

Tool material	HSS					HSS-E
Surface finish	○	○	○	○	○	●
	–	–	lapped	lapped	–	lapped
Chamfer	without	with*	with*	with*	with*	with*
* Dies for metric and metric fine threads > M2.6 with chamfer				for brass	left-hand thread	



Thread type	Tolerance zone	Dim. to DIN 2184-2	Guhring no. Ø-range *Prices on page*					
M	**6g**	**DIN EN 22568**	**151** M1 – M39 *1041*	**152** M3 – M52 *1042*	**153** M3 – M27 *1041*	**155** M3 – M24 *1041*	**156** M3 – M33 *1041*	**130** M2 – M20 *1039*
	6g	**DIN 382**	**139** M3,5 – M52 Hexagonal *1038*	**140** M3 – M16 Hexagonal *1040*				
	6g	**Guhring std.**		**121**** M2,2 – M12 *1037*	**125**** M1,1 – M10 *1036*			
MF	**6g**	**DIN EN 22568**	**161** M2,3x0,25 – M56x1,50 *1043*	**162** M3x0,35 – M33x3 *1043*	**163** M4,5x0,5 – M48x3 *1043*			
UNC	**–**	**DIN EN 22568**	**181** Nr. 2-56 – 7/16-14 *1045*	**182** Nr. 8-32 – 2-4,5 *1045*				
UNF	**–**	**DIN EN 22568**		**185** Nr. 6-40 – 1 3/8"-12 *1046*				
BSW	**–**	**DIN EN 22568**		**172** W 3/16" – W 3/4" *1047*				
G BSP thread	**–**	**DIN EN 24231**	**175** G 1/8" – G 1 3/4" *1048*	**176** G 1/8" – G 2 1/4" *1048*				
R-BSPT thread	**–**	**DIN EN 24230**		**198** R 1/8" – R 1 1/4" *1049*				
NPT-thread	**–**	**DIN EN 22568**	**190** 1/8" – 1 *1050*	**191** 1/8" – 3/4" *1050*				

** Guhring no. 121 with additional clearance hole
Guhring no. 125 with screw holes
Guhring no. 126 with bell form

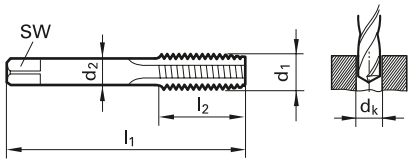
○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Material group		Tens. strength MPa (N/mm2)	Hardness HB	Cutting speed vc m/min	
				HSS	HSS-E
	Structural steels	≤ 800	–	8 - 12	–
	Free-cutting steels	≤ 1000	–	10 - 14	–
	Unalloyed case hardened steels	≤ 750	–	6 - 10	–
	Unalloyed heat-treatable steels	≤ 850	–	6 - 10	–
	Alloyed case hardened steels	≥ 850 ... 1200	–	–	5 - 8
	Alloyed heat-treatable steels	≥ 850 ... 1200	–	–	5 - 8
	Alloyed tool steels	≤ 1000	–	–	5 - 8
	High speed tool steels	≥ 650 ... 1000	–	–	5 - 8
	Stainless- and acid-resistant steels, sulphured	≤ 850	–	–	4 - 6
	austenitic	≤ 850	–	–	4 - 6
	martensitic	≤ 850	–	–	4 - 6
	Structural steels	≤ 800	–	8 - 12	–
	Free-cutting steels	≤ 1000	–	10 - 14	–
	Case hardened steels	≤ 1000	–	6 - 10	–
	Heat-treatable steels	≤ 1200	–	6 - 10	–
	Nitriding steels	≤ 1200	–	–	5 - 8
	Spheroidal graphite iron	–	≤ 240	5 - 8	–
	Aluminium and Al-alloys	≤ 400	–	10 - 20	–
	Al wrought alloys	≤ 400	–	10 - 20	–
	Al cast alloys ≤ 10 % Si	≤ 600	–	10 - 15	–
	> 10 % Si	≤ 600	–	10 - 12	–
	Cast iron	–	≤ 240	5 - 8	–
	Spheroidal graphite iron	–	≤ 240	5 - 8	–
	Malleable cast iron	–	< 300	5 - 8	–
	Brass, short-chipping	≤ 600	–	5 - 8	–
	long-chipping	≤ 600	–	20 - 30	–
	Plastics	–	–	12 - 18	–
	Magnesium-alloys	≤ 450	–	10 - 20	–
	Titanium and Ti-alloys	≤ 1200	–	–	2 - 6
	Ni-alloys	≤ 1200	–	–	2 - 6

Material group	Material example	Helix angle	Lubricant
Structural steels	St 37-2, St 50-2 etc.	17 - 22°	Cutting oil
Free-cutting steels	9 S Mn 28, 9 S MnPb 28 etc.	17 - 22°	Cutting oil
Case hardened steels	C 15, Ck 15, 16 MnCr 5 etc.	17 - 22°	Cutting oil, special cutting oil
Heat-treatable steels	C 35 Pb, C 45 etc.	13 - 18°	Cutting oil, special cutting oil
Stainless- and acidresistant steels	x12 CrMoS 17, x12 CrNiS 188 etc.	13 - 18°	Special cutting oil
Grey cast iron	GG 15, GG25	8 - 12°	Cutting oil, petroleum
Brass, short-chipping, Ms58	CuZn 39 Pb 2, CuZn 40 Pb 2	10 - 12°	Cutting oil
Brass, long-chipping, Ms60	CuZn 20, CuZn 37	3 - 7°	Cutting oil
Al-alloys, long-chipping	AlCuMg 1, AlMg 3 Si	23 - 28°	Special cutting oil, petroleum
Al-alloys, short-chipping	GD-AlSi 8 Cu 3, GD AlSi 12	13 - 18°	Special cutting oil, petroleum

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

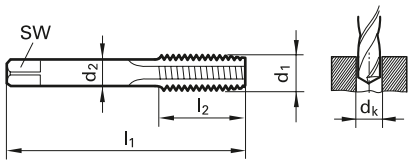
Guhring no.	861	862	863	864
Standard	DIN 2184-2			
Standard	DIN 352			
Tool material	HSS			
Surface	◯	◯	◯	◯
Type	N	N	N	N
Description	Set of taps	F	S	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	118	118	118	118
Techn. data page	810	810	810	810



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 1	0.25	2.500	2.10	0.750	32.00	5.50	● ● ● ●
M 1,1	0.25	2.500	2.10	0.850	32.00	5.50	● ◯ ◯ ◯
M 1,2	0.25	2.500	2.10	0.950	32.00	5.50	● ◯ ●
M 1,4	0.30	2.500	2.10	1.100	32.00	7.00	● ● ● ●
M 1,6	0.35	2.500	2.10	1.250	32.00	8.00	● ● ●
M 1,7	0.35	2.500	2.10	1.350	32.00	8.00	● ● ●
M 1,8	0.35	2.500	2.10	1.450	32.00	8.00	● ◯ ◯ ●
M 2	0.40	2.800	2.10	1.600	36.00	8.00	● ● ● ●
M 2,3	0.40	2.800	2.10	1.900	36.00	9.00	● ◯ ◯ ●
M 2,5	0.45	2.800	2.10	2.050	40.00	9.00	● ● ● ●
M 2,6	0.45	2.800	2.10	2.150	40.00	9.00	◯ ◯
M 3	0.50	3.500	2.70	2.500	40.00	10.00	● ● ● ●
M 3,5	0.60	4.000	3.00	2.900	45.00	12.00	● ◯ ●
M 4	0.70	4.500	3.40	3.300	45.00	12.00	● ● ● ●
M 4,5	0.75	6.000	4.90	3.700	50.00	14.00	● ◯ ●
M 5	0.80	6.000	4.90	4.200	50.00	14.00	● ● ● ●
M 6	1.00	6.000	4.90	5.000	56.00	16.00	● ● ● ●
M 7	1.00	6.000	4.90	6.000	56.00	16.00	● ◯ ◯ ●
M 8	1.25	6.000	4.90	6.800	63.00	17.00	● ● ● ●
M 9	1.25	7.000	5.50	7.800	63.00	17.00	● ◯ ◯
M10	1.50	7.000	5.50	8.500	70.00	20.00	● ● ● ●
M11	1.50	8.000	6.20	9.500	70.00	20.00	◯ ● ●
M12	1.75	9.000	7.00	10.200	75.00	24.00	● ● ● ●
M14	2.00	11.000	9.00	12.000	80.00	26.00	● ● ● ●
M16	2.00	12.000	9.00	14.000	80.00	26.00	● ● ● ●
M18	2.50	14.000	11.00	15.500	95.00	30.00	● ● ● ●
M20	2.50	16.000	12.00	17.500	95.00	32.00	● ● ● ●
M22	2.50	18.000	14.50	19.500	100.00	32.00	● ● ● ◯
M24	3.00	18.000	14.50	21.000	110.00	36.00	● ● ● ●
M27	3.00	20.000	16.00	24.000	110.00	36.00	● ● ● ●
M30	3.50	22.000	18.00	26.500	125.00	40.00	● ● ● ●
M36	4.00	28.000	22.00	32.000	150.00	50.00	● ● ● ●
M42	4.50	32.000	24.00	37.500	150.00	56.00	◯ ◯
M45	4.50	36.000	29.00	40.500	160.00	58.00	● ◯ ◯
M56	5.50	45.000	35.00	50.500	180.00	70.00	◯
M60	5.50	45.000	35.00	54.500	200.00	70.00	◯ ◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

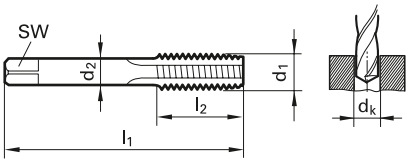
Guhring no.	861	862	863	864
Standard	DIN 2184-2			
Standard	DIN 352			
Tool material	HSS			
Surface	◯	◯	◯	◯
Type	N	N	N	N
Description	Set of taps	F	S	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	118	118	118	118
Techn. data page	810	810	810	810



d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M64	6.00	50.000	39.00	58.000	220.00	75.00	❍	
M68	6.00	50.000	39.00	62.000	220.00	75.00	❍	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

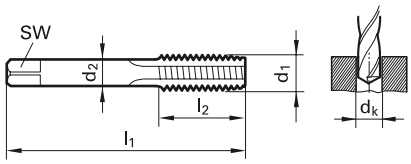
Guhring no.	882	883	864
Standard		DIN 2184-2	
Standard		DIN 352	
Tool material		HSS	
Surface	◯	◯	◯
Type	N	N	N
Description	Set of taps	F	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand
Discount group	118	118	118
Techn. data page	810	810	810



d1	P	d2	SW	dk	l1	l2	Availability		
	mm	mm		mm	mm	mm			
M 1	0.25	2.500	2.10	0.750	32.00	5.50			●
M 1,1	0.25	2.500	2.10	0.850	32.00	5.50			◯
M 1,2	0.25	2.500	2.10	0.950	32.00	5.50			●
M 1,4	0.30	2.500	2.10	1.100	32.00	7.00			●
M 1,6	0.35	2.500	2.10	1.250	32.00	8.00			●
M 1,7	0.35	2.500	2.10	1.350	32.00	8.00			●
M 1,8	0.35	2.500	2.10	1.450	32.00	8.00			●
M 2	0.40	2.800	2.10	1.600	36.00	8.00	●	◯	●
M 2,2	0.45	2.800	2.10	1.750	36.00	9.00		◯	
M 2,3	0.40	2.800	2.10	1.900	36.00	9.00	◯	◯	●
M 2,5	0.45	2.800	2.10	2.050	40.00	9.00	◯	◯	●
M 2,6	0.45	2.800	2.10	2.150	40.00	9.00	◯	◯	
M 3	0.50	3.500	2.70	2.500	40.00	10.00	●	●	●
M 3,5	0.60	4.000	3.00	2.900	45.00	12.00		●	●
M 4	0.70	4.500	3.40	3.300	45.00	12.00	●	●	●
M 4,5	0.75	6.000	4.90	3.700	50.00	14.00			●
M 5	0.80	6.000	4.90	4.200	50.00	14.00	●		●
M 6	1.00	6.000	4.90	5.000	56.00	16.00	●	●	●
M 7	1.00	6.000	4.90	6.000	56.00	16.00	●	●	●
M 8	1.25	6.000	4.90	6.800	63.00	17.00	●		●
M 9	1.25	7.000	5.50	7.800	63.00	17.00	●	◯	
M10	1.50	7.000	5.50	8.500	70.00	20.00			●
M11	1.50	8.000	6.20	9.500	70.00	20.00			●
M12	1.75	9.000	7.00	10.200	75.00	24.00		◯	●
M14	2.00	11.000	9.00	12.000	80.00	26.00			●
M16	2.00	12.000	9.00	14.000	80.00	26.00			●
M18	2.50	14.000	11.00	15.500	95.00	30.00			●
M20	2.50	16.000	12.00	17.500	95.00	32.00			●
M22	2.50	18.000	14.50	19.500	100.00	32.00			◯
M24	3.00	18.000	14.50	21.000	110.00	36.00			●
M27	3.00	20.000	16.00	24.000	110.00	36.00			●
M30	3.50	22.000	18.00	26.500	125.00	40.00			●
M36	4.00	28.000	22.00	32.000	150.00	50.00			●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

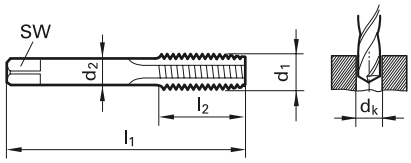
Guhring no.	904	905	906	907
Standard	DIN 2184-2			
Standard	DIN 352			
Tool material	HSS			
Surface	◯	◯	◯	◯
Type	N-LH	N-LH	N-LH	N-LH
Description	Set of taps	F	S	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	left-hand	left-hand	left-hand	left-hand
Discount group	118	118	118	118
Techn. data page	810	810	810	810



d1	P	d2	SW	dk	l1	l2	Availability			
	mm	mm		mm	mm	mm				
M 2	0.40	2.800	2.10	1.600	36.00	8.00				❍
M 2,2	0.45	2.800	2.10	1.750	36.00	9.00	❍			❍
M 3	0.50	3.500	2.70	2.500	40.00	10.00				❍
M 4	0.70	4.500	3.40	3.300	45.00	12.00	❍			
M 5	0.80	6.000	4.90	4.200	50.00	14.00	❍			
M 6	1.00	6.000	4.90	5.000	56.00	16.00	●			❍
M 8	1.25	6.000	4.90	6.800	63.00	17.00	❍			❍
M10	1.50	7.000	5.50	8.500	70.00	20.00	❍			❍
M12	1.75	9.000	7.00	10.200	75.00	24.00	●			❍
M14	2.00	11.000	9.00	12.000	80.00	26.00	❍	❍	❍	❍
M16	2.00	12.000	9.00	14.000	80.00	26.00	❍	❍	❍	❍
M18	2.50	14.000	11.00	15.500	95.00	30.00	❍			
M20	2.50	16.000	12.00	17.500	95.00	32.00	●			❍
M22	2.50	18.000	14.50	19.500	100.00	32.00	❍			

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

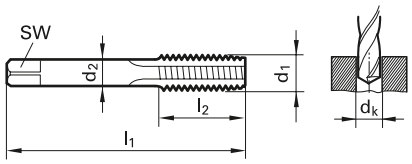
Guhring no.	853	854	855	856
Standard	DIN 2184-2			
Standard	DIN 352			
Tool material	HSS-E			
Surface	◯	◯	◯	◯
Type	VA	VA	VA	VA
Description	Set of taps	F	S	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	118	118	118	118
Techn. data page	811	811	811	811



d1	P	d2	SW	dk	l1	l2	Availability			
	mm	mm		mm	mm	mm				
M 2	0.40	2.800	2.10	1.600	36.00	8.00	●	❍	❍	●
M 2,2	0.45	2.800	2.10	1.750	36.00	9.00			❍	
M 2,3	0.40	2.800	2.10	1.900	36.00	9.00				❍
M 2,5	0.45	2.800	2.10	2.050	40.00	9.00	●	❍	❍	
M 2,6	0.45	2.800	2.10	2.150	40.00	9.00	❍	❍	❍	❍
M 3	0.50	3.500	2.70	2.500	40.00	10.00	●	❍	●	●
M 4	0.70	4.500	3.40	3.300	45.00	12.00	●	❍	●	●
M 5	0.80	6.000	4.90	4.200	50.00	14.00	●	❍	●	●
M 6	1.00	6.000	4.90	5.000	56.00	16.00	●	❍	●	●
M 8	1.25	6.000	4.90	6.800	63.00	17.00	●	❍	●	●
M10	1.50	7.000	5.50	8.500	70.00	20.00	●	❍	❍	❍
M12	1.75	9.000	7.00	10.200	75.00	24.00	●	❍	❍	●
M14	2.00	11.000	9.00	12.000	80.00	26.00		❍	❍	❍
M16	2.00	12.000	9.00	14.000	80.00	26.00	●	❍	●	❍
M18	2.50	14.000	11.00	15.500	95.00	30.00				❍
M20	2.50	16.000	12.00	17.500	95.00	32.00	●	❍	❍	❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

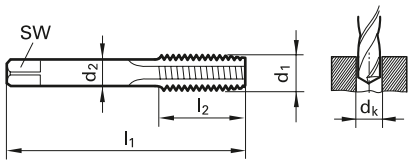
Guhring no.	857	858	859	860
Standard	DIN 2184-2			
Standard	DIN 352			
Tool material	HSS-E			
Surface	●	●	●	●
Type	H	H	H	H
Description	Set of taps	F	S	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	118	118	118	118
Techn. data page	811	811	811	811



d1	P	d2	SW	dk	l1	l2	Availability			
	mm	mm		mm	mm	mm				
M 2	0.40	2.800	2.10	1.600	36.00	8.00	●	●		
M 2,2	0.45	2.800	2.10	1.750	36.00	9.00	❍	●	●	●
M 2,5	0.45	2.800	2.10	2.050	40.00	9.00		●		
M 3	0.50	3.500	2.70	2.500	40.00	10.00	●	❍	❍	●
M 3,5	0.60	4.000	3.00	2.900	45.00	12.00				❍
M 4	0.70	4.500	3.40	3.300	45.00	12.00	●	●	●	❍
M 5	0.80	6.000	4.90	4.200	50.00	14.00	●	●	❍	●
M 6	1.00	6.000	4.90	5.000	56.00	16.00	●	●	●	●
M 8	1.25	6.000	4.90	6.800	63.00	17.00	●	●	●	●
M10	1.50	7.000	5.50	8.500	70.00	20.00	●	●	●	●
M12	1.75	9.000	7.00	10.200	75.00	24.00	●	❍	❍	❍
M14	2.00	11.000	9.00	12.000	80.00	26.00	●	❍	●	●
M16	2.00	12.000	9.00	14.000	80.00	26.00	●	●	❍	❍
M18	2.50	14.000	11.00	15.500	95.00	30.00	❍	❍	❍	
M20	2.50	16.000	12.00	17.500	95.00	32.00	●	❍	❍	❍

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

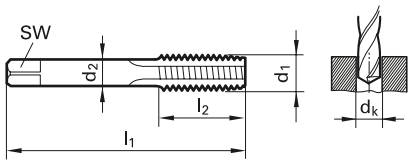
Guhring no.	1818	1819	1820
Standard		DIN 2184-2	
Standard		DIN 352	
Tool material		HSS-E-PM	
Surface	●	●	●
Type	H	H	H
Description	Set of taps	F	S
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand
Discount group	118	118	118
Techn. data page	811	811	811



d1	P	d2	SW	dk	l1	l2	Availability		
	mm	mm		mm	mm	mm			
M 3	0.50	3.500	2.70	2.500	40.00	10.00	●		
M 4	0.70	4.500	3.40	3.300	45.00	12.00	●		❍
M 5	0.80	6.000	4.90	4.200	50.00	14.00	●		❍
M 6	1.00	6.000	4.90	5.000	56.00	16.00	●		
M 8	1.25	6.000	4.90	6.800	63.00	17.00	●	❍	❍
M10	1.50	7.000	5.50	8.500	70.00	20.00	●	●	❍
M12	1.75	9.000	7.00	10.200	75.00	24.00	●		❍

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◒ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

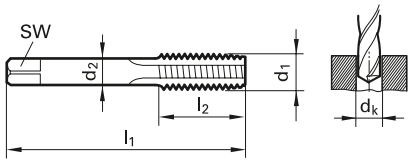
Guhring no.	884	885	886
Standard		DIN 2184-2	
Standard		DIN 2181	
Tool material		HSS	
Surface	◯	◯	◯
Type	N	N	N
Description	Set of taps	F	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand
Discount group	118	118	118
Techn. data page	810	810	810



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability		
	mm		mm	mm	mm				
M 2 X0,25	2.800	2.10	1.750	36.00	7.00	2.001		◯	●
M 2,2X0,25	2.800	2.10	1.950	36.00	7.00	2.201		◯	◯
M 2,3X0,25	2.800	2.10	2.050	36.00	7.00	2.301	◯	◯	◯
M 2,6X0,35	2.800	2.10	2.250	40.00	7.00	2.602	◯	●	◯
M 3 X0,35	3.500	2.70	2.650	40.00	7.00	3.002		◯	●
M 4 X0,35	4.500	3.40	3.650	45.00	8.00	4.002	◯	◯	◯
M 4 X0,5	4.500	3.40	3.500	45.00	8.00	4.003		●	●
M 5 X0,5	6.000	4.90	4.500	50.00	10.00	5.003	●	●	
M 6 X0,5	6.000	4.90	5.500	56.00	13.00	6.003		◯	●
M 6 X0,75	6.000	4.90	5.200	56.00	13.00	6.004	●	◯	●
M 7 X0,75	6.000	4.90	6.200	56.00	13.00	7.004		◯	
M 8 X0,5	6.000	4.90	7.500	56.00	14.00	8.003	◯	◯	
M 8 X0,75	6.000	4.90	7.200	56.00	14.00	8.004	●	◯	●
M 8 X1	6.000	4.90	7.000	56.00	17.00	8.005	●	●	●
M 9 X1	7.000	5.50	8.000	63.00	17.00	9.005	◯	◯	●
M10 X0,75	7.000	5.50	9.200	63.00	17.00	10.004		◯	◯
M10 X1	7.000	5.50	9.000	63.00	17.00	10.005	●	●	●
M10 X1,25	7.000	5.50	8.800	63.00	20.00	10.006	●	●	●
M11 X1	8.000	6.20	10.000	63.00	20.00	11.005		◯	
M12 X1	9.000	7.00	11.000	70.00	20.00	12.005	●	●	●
M12 X1,25	9.000	7.00	10.800	70.00	20.00	12.006	●	●	●
M12 X1,5	9.000	7.00	10.500	70.00	20.00	12.007	●	●	●
M14 X1	11.000	9.00	13.000	70.00	20.00	14.005	●	●	
M14 X1,25	11.000	9.00	12.800	70.00	20.00	14.006	●	◯	●
M14 X1,5	11.000	9.00	12.500	70.00	20.00	14.007	●	●	●
M15 X1	12.000	9.00	14.000	70.00	20.00	15.005			●
M15 X1,5	12.000	9.00	13.500	70.00	20.00	15.007		◯	
M16 X1	12.000	9.00	15.000	70.00	22.00	16.005	●	◯	●
M16 X1,5	12.000	9.00	14.500	70.00	22.00	16.007	●	●	●
M18 X1	14.000	11.00	17.000	80.00	22.00	18.005	●	◯	◯
M18 X1,5	14.000	11.00	16.500	80.00	22.00	18.007	●	●	●
M18 X2	14.000	11.00	16.000	80.00	22.00	18.008		◯	◯
M20 X1	16.000	12.00	19.000	80.00	22.00	20.005	◯		
M20 X1,5	16.000	12.00	18.500	80.00	22.00	20.007	●	●	●
M20 X2	16.000	12.00	18.000	80.00	22.00	20.008	●	◯	◯
M22 X1	18.000	14.50	21.000	80.00	22.00	22.005		◯	

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

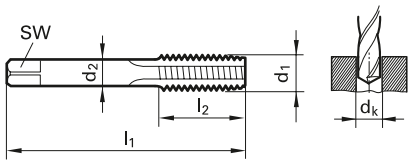
Guhring no.	884	885	886
Standard		DIN 2184-2	
Standard		DIN 2181	
Tool material		HSS	
Surface	◯	◯	◯
Type	N	N	N
Description	Set of taps	F	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand
Discount group	118	118	118
Techn. data page	810	810	810



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability		
	mm		mm	mm	mm				
M22 X1,5	18.000	14.50	20.500	80.00	22.00	22.007	●	◯	●
M22 X2	18.000	14.50	20.000	80.00	22.00	22.008			◯
M24 X1	18.000	14.50	23.000	90.00	22.00	24.005		◯	
M24 X1,5	18.000	14.50	22.500	90.00	22.00	24.007	●	◯	◯
M24 X2	18.000	14.50	22.000	90.00	22.00	24.008	●		◯
M26 X1,5	18.000	14.50	24.500	90.00	22.00	26.007	◯		
M27 X1,5	20.000	16.00	25.500	90.00	22.00	27.007	●	◯	
M27 X2	20.000	16.00	25.000	90.00	22.00	27.008	●		
M30 X1	22.000	18.00	29.000	90.00	22.00	30.005		◯	
M30 X1,5	22.000	18.00	28.500	90.00	22.00	30.007	●		
M30 X2	22.000	18.00	28.000	90.00	22.00	30.008	●		
M32 X1,5	22.000	18.00	30.500	90.00	22.00	32.007		◯	
M34 X1,5	28.000	22.00	32.500	100.00	25.00	34.007		◯	●
M35 X1,5	28.000	22.00	33.500	100.00	25.00	35.007	●	◯	
M36 X1,5	28.000	22.00	34.500	100.00	25.00	36.007	◯	◯	
M38 X1,5	28.000	22.00	36.500	100.00	25.00	38.007		◯	
M45 X1,5	36.000	29.00	43.500	110.00	25.00	45.007		◯	
M52 X1,5	40.000	32.00	50.500	140.00	32.00	52.007		◯	

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

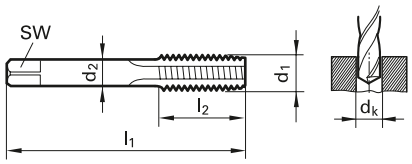
Guhring no.	981	982	983	984
Standard	DIN 2184-2			
Standard	~ DIN 352			
Tool material	HSS			
Surface	◯	◯	◯	◯
Type	N	N	N	N
Description	Set of taps	F	S	B
Tolerance	2B	2B	2B	2B
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	118	118	118	118
Techn. data page	810	810	810	810



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability			
	mm		mm	mm	mm					
NR. 1 -64	2.800	2.10	1.550	36.00	8.00	1.854	●	◯	◯	◯
NR. 2 -56	2.800	2.10	1.850	36.00	9.00	2.184		●	●	●
NR. 3 -48	2.800	2.10	2.100	40.00	9.00	2.515		◯	◯	◯
NR. 4 -40	3.500	2.70	2.350	40.00	11.00	2.845	●	●	●	●
NR. 5 -40	4.000	3.00	2.650	40.00	11.00	3.175		●	●	●
NR. 6 -32	4.000	3.00	2.850	45.00	12.00	3.505	●	●	◯	●
NR. 8 -32	4.500	3.40	3.500	45.00	13.00	4.166	●	●	◯	●
NR.10 -24	6.000	4.90	3.900	50.00	14.00	4.826	●	◯	●	●
NR.12 -24	6.000	4.90	4.500	56.00	16.00	5.486	◯	◯	◯	◯
1/4 -20	6.000	4.90	5.100	56.00	16.00	6.350	●	◯	◯	●
5/16-18	6.000	4.90	6.600	63.00	18.00	7.938	●	◯	◯	●
3/8 -16	7.000	5.50	8.000	70.00	20.00	9.525	●	◯		●
7/16-14	8.000	6.20	9.400	70.00	22.00	11.113	●	◯	◯	●
1/2 -13	9.000	7.00	10.800	75.00	25.00	12.700	●	◯	◯	●
9/16-12	11.000	9.00	12.200	80.00	30.00	14.288	●	◯	◯	◯
5/8 -11	12.000	9.00	13.500	80.00	30.00	15.875	●	◯	◯	●
3/4 -10	16.000	12.00	16.500	95.00	33.00	19.050	●	◯		●
7/8 - 9	18.000	14.50	19.500	100.00	35.00	22.225		◯	◯	
1 - 8	18.000	14.50	22.250	110.00	38.00	25.400	●	◯		
1 1/8 - 7	22.000	18.00	25.000	125.00	44.00	28.575		◯		◯
1 1/4 - 7	22.000	18.00	28.000	125.00	44.00	31.750		◯	◯	
1 3/8 - 6	28.000	22.00	30.750	150.00	50.00	34.925		◯	◯	◯
1 1/2 - 6	32.000	24.00	34.000	150.00	50.00	38.100		◯	◯	
1 3/4 - 5	36.000	29.00	39.500	160.00	58.00	44.450	◯	◯	◯	◯
2 -4,5	40.000	32.00	45.000	180.00	65.00	50.800	◯	◯	◯	◯

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

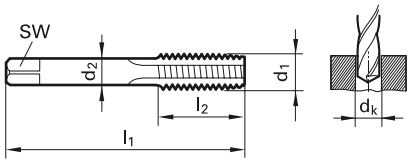
Guhring no.	985	986	987
Standard		DIN 2184-2	
Standard		~ DIN 2181	
Tool material		HSS	
Surface	◯	◯	◯
Type	N	N	N
Description	Set of taps	F	B
Tolerance	2B	2B	2B
Cutting direction	right-hand	right-hand	right-hand
Discount group	118	118	118
Techn. data page	810	810	810



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability		
	mm		mm	mm	mm				
NR. 0 -80	2.500	2.10	1.250	32.00	8.00	1.524		◯	
NR. 1 -72	2.800	2.10	1.550	36.00	8.00	1.854	◯	◯	
NR. 2 -64	2.800	2.10	1.850	36.00	9.00	2.184	◯	◯	◯
NR. 3 -56	2.800	2.10	2.150	40.00	9.00	2.515	◯	◯	◯
NR. 4 -48	3.500	2.70	2.400	40.00	10.00	2.845	●	◯	◯
NR. 5 -44	4.000	3.00	2.700	40.00	10.00	3.175	◯	◯	◯
NR. 6 -40	4.000	3.00	2.950	45.00	11.00	3.505		◯	◯
NR. 8 -36	4.500	3.40	3.500	45.00	12.00	4.166	◯	◯	◯
NR.10 -32	6.000	4.90	4.100	50.00	14.00	4.826	●	●	●
NR.12 -28	6.000	4.90	4.600	56.00	16.00	5.486	◯	●	◯
1/4 -28	6.000	4.90	5.500	56.00	17.00	6.350	●	●	●
5/16-24	6.000	4.90	6.900	63.00	17.00	7.938	●	◯	●
3/8 -24	7.000	5.50	8.500	63.00	18.00	9.525	●	●	●
7/16-20	8.000	6.20	9.900	70.00	20.00	11.113	●	◯	●
1/2 -20	9.000	7.00	11.500	70.00	20.00	12.700	●	◯	●
9/16-18	11.000	9.00	12.900	70.00	20.00	14.288	●	◯	●
5/8 -18	12.000	9.00	14.500	70.00	20.00	15.875	●	●	
3/4 -16	16.000	12.00	17.500	80.00	22.00	19.050	●	◯	●
7/8 -14	18.000	14.50	20.400	80.00	22.00	22.225	●	◯	
1 -12	18.000	14.50	23.250	90.00	22.00	25.400		◯	
1 1/8 -12	22.000	18.00	26.500	90.00	22.00	28.575		◯	
1 1/4 -12	22.000	18.00	29.500	90.00	22.00	31.750		◯	
1 3/8 -12	28.000	22.00	32.750	125.00	30.00	34.925	◯	◯	◯
1 1/2 -12	32.000	24.00	36.000	125.00	30.00	38.100		◯	◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

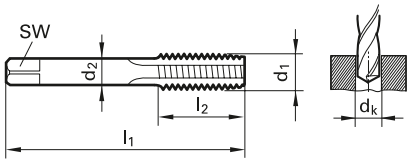
Guhring no.	954	955	956	957
Standard	DIN 2184-2			
Standard	~ DIN 352			
Tool material	HSS			
Surface	◯	◯	◯	◯
Type	N	N	N	N
Description	Set of taps	F	S	B
Tolerance				
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	118	118	118	118
Techn. data page	810	810	810	810



d1	P	d2	SW	dk	l1	l2	Code no.	Availability			
	G/inch	mm		mm	mm	mm					
W 1/16	60.00	2.500	2.10	1.200	32.00	8.00	1.587		◯		
W 3/32	48.00	2.800	2.10	1.800	40.00	9.00	2.381		◯	◯	
W 1/8	40.00	4.000	3.00	2.500	40.00	11.00	3.175	◯	◯	◯	◯
W 5/32	32.00	4.500	3.40	3.200	45.00	13.00	3.969		◯	◯	●
W 3/16	24.00	6.000	4.90	3.600	50.00	14.00	4.762		◯	◯	●
W 7/32	24.00	6.000	4.90	4.500	56.00	16.00	5.556		◯		◯
W 1/4	20.00	6.000	4.90	5.100	56.00	16.00	6.350	●	◯	◯	●
W 5/16	18.00	6.000	4.90	6.500	63.00	18.00	7.938	●	◯	◯	●
W 3/8	16.00	7.000	5.50	7.900	70.00	20.00	9.525	●		◯	◯
W 7/16	14.00	8.000	6.20	9.200	70.00	22.00	11.113		◯	◯	
W 1/2	12.00	9.000	7.00	10.500	75.00	25.00	12.700	●	◯	◯	◯
W 9/16	12.00	11.000	9.00	12.000	80.00	30.00	14.287		◯	◯	◯
W 5/8	11.00	12.000	9.00	13.500	80.00	30.00	15.876	●	◯	◯	◯
W 3/4	10.00	16.000	12.00	16.250	95.00	33.00	19.051	◯		◯	◯
W 7/8	9.00	18.000	14.50	19.250	100.00	35.00	22.226	◯	◯	◯	
W1	8.00	18.000	14.50	22.000	110.00	38.00	25.401				◯
W1 1/4	7.00	22.000	18.00	27.750	125.00	44.00	31.751	◯		◯	
W1 3/8	6.00	28.000	22.00	30.500	150.00	50.00	34.926	◯	◯		◯
W1 1/2	6.00	32.000	24.00	33.500	150.00	50.00	38.101	●	◯	◯	
W1 5/8	5.00	32.000	24.00	35.500	150.00	58.00	41.277	◯	◯	◯	◯
W1 3/4	5.00	36.000	29.00	39.000	160.00	58.00	44.452	●	◯	◯	◯
W2	4.50	40.000	32.00	44.500	180.00	65.00	50.802	●	◯	◯	◯

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

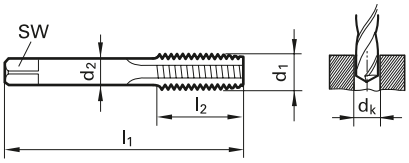
Guhring no.	958	959	960
Standard		DIN 2184-2	
Standard		DIN 5157	
Tool material		HSS	
Surface	◯	◯	◯
Type	N	N	N
Description	Set of taps	F	B
Tolerance			
Cutting direction	right-hand	right-hand	right-hand
Discount group	118	118	118
Techn. data page	810	810	810



d1	P	d2	SW	dk	l1	l2	Code no.	Availability		
	G/inch	mm		mm	mm	mm				
G 1/8	28.00	7.000	5.50	8.800	63.00	20.00	9.728	●	●	●
G 1/4	19.00	11.000	9.00	11.800	70.00	20.00	13.157	●	●	●
G 3/8	19.00	12.000	9.00	15.250	70.00	22.00	16.662	●	●	●
G 1/2	14.00	16.000	12.00	19.000	80.00	22.00	20.955	●	●	●
G 5/8	14.00	18.000	14.50	21.000	80.00	22.00	22.911			●
G 3/4	14.00	20.000	16.00	24.500	90.00	22.00	26.441	●	●	●
G 7/8	14.00	22.000	18.00	28.250	90.00	22.00	30.201		●	●
G1	11.00	25.000	20.00	30.750	100.00	30.00	33.249	●	◯	●
G1 1/8	11.00	28.000	22.00	35.500	125.00	30.00	37.897			◯
G1 1/4	11.00	32.000	24.00	39.500	125.00	40.00	41.910	●	◯	●
G1 3/8	11.00	36.000	29.00	41.750	125.00	40.00	44.323	◯	◯	◯
G1 1/2	11.00	36.000	29.00	45.250	140.00	40.00	47.803	●	◯	●
G1 3/4	11.00	40.000	32.00	51.000	140.00	40.00	53.746	◯	◯	
G2	11.00	45.000	35.00	57.000	160.00	40.00	59.614	●	◯	◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

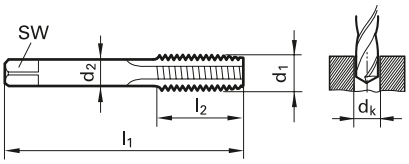
Guhring no.	992	993
Standard	DIN 2184-2	
Standard	DIN 352	
Tool material	HSS-E	
Surface	◯	◯
Type	N R15	N R40
Form	C	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	789	789



d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M 2	0.40	2.800	2.10	1.600	36.00	8.00		●
M 2,2	0.45	2.800	2.10	1.750	36.00	9.00	❍	❍
M 2,5	0.45	2.800	2.10	2.050	40.00	9.00	●	●
M 2,6	0.45	2.800	2.10	2.150	40.00	9.00	❍	❍
M 3	0.50	3.500	2.70	2.500	40.00	6.00	●	●
M 3,5	0.60	4.000	3.00	2.900	45.00	7.00		❍
M 4	0.70	4.500	3.40	3.300	45.00	7.50	●	●
M 5	0.80	6.000	4.90	4.200	50.00	8.50	●	●
M 6	1.00	6.000	4.90	5.000	56.00	11.00	●	●
M 7	1.00	6.000	4.90	6.000	56.00	11.00	●	●
M 8	1.25	6.000	4.90	6.800	63.00	14.00	●	●
M10	1.50	7.000	5.50	8.500	70.00	16.00	●	●
M12	1.75	9.000	7.00	10.200	75.00	18.50	●	●
M14	2.00	11.000	9.00	12.000	80.00	20.00	●	
M18	2.50	14.000	11.00	15.500	95.00	25.00	❍	●
M20	2.50	16.000	12.00	17.500	95.00	25.00	●	●
M22	2.50	18.000	14.50	19.500	100.00	27.00		❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

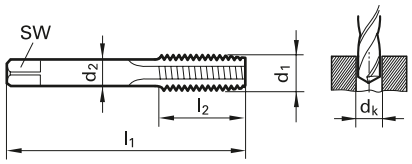
Guhring no.	995
Standard	DIN 2184-2
Standard	DIN 352
Tool material	HSS-E
Surface	◯
Type	N
Form	C
Tolerance	ISO 2 / 6H
Cutting direction	right-hand
Discount group	103
Techn. data page	789



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 2	0.40	2.800	2.10	1.600	36.00	8.00	◯
M 2,2	0.45	2.800	2.10	1.750	36.00	9.00	◯
M 2,3	0.40	2.800	2.10	1.900	36.00	9.00	●
M 2,5	0.45	2.800	2.10	2.050	40.00	9.00	●
M 2,6	0.45	2.800	2.10	2.150	40.00	9.00	◯
M 3	0.50	3.500	2.70	2.500	40.00	10.00	●
M 3,5	0.60	4.000	3.00	2.900	45.00	7.00	●
M 4	0.70	4.500	3.40	3.300	45.00	7.50	●
M 5	0.80	6.000	4.90	4.200	50.00	8.50	●
M 6	1.00	6.000	4.90	5.000	56.00	11.00	●
M 7	1.00	6.000	4.90	6.000	56.00	16.00	◯
M 8	1.25	6.000	4.90	6.800	63.00	14.00	●
M10	1.50	7.000	5.50	8.500	70.00	16.00	●
M12	1.75	9.000	7.00	10.200	75.00	18.50	●
M16	2.00	12.000	9.00	14.000	80.00	20.00	●
M24	3.00	18.000	14.50	21.000	110.00	36.00	◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

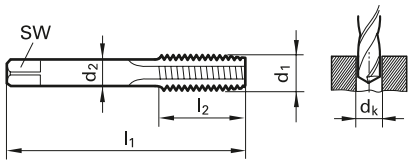
Guhring no.	991
Standard	DIN 2184-2
Standard	DIN 352
Tool material	HSS-E
Surface	◯
Type	N
Form	B
Tolerance	ISO 2 / 6H
Cutting direction	right-hand
Discount group	103
Techn. data page	789



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 2	0.40	2.800	2.10	1.600	36.00	8.00	●
M 2,2	0.45	2.800	2.10	1.750	36.00	9.00	◯
M 2,3	0.40	2.800	2.10	1.900	36.00	9.00	●
M 2,5	0.45	2.800	2.10	2.050	40.00	9.00	●
M 2,6	0.45	2.800	2.10	2.150	40.00	9.00	●
M 3	0.50	3.500	2.70	2.500	40.00	10.00	●
M 3,5	0.60	4.000	3.00	2.900	45.00	12.00	●
M 4	0.70	4.500	3.40	3.300	45.00	12.00	●
M 4,5	0.75	6.000	4.90	3.700	50.00	14.00	●
M 5	0.80	6.000	4.90	4.200	50.00	14.00	●
M 6	1.00	6.000	4.90	5.000	56.00	16.00	●
M 7	1.00	6.000	4.90	6.000	56.00	16.00	◯
M 8	1.25	6.000	4.90	6.800	63.00	17.00	●
M10	1.50	7.000	5.50	8.500	70.00	20.00	●
M12	1.75	9.000	7.00	10.200	75.00	24.00	●
M14	2.00	11.000	9.00	12.000	80.00	26.00	●
M16	2.00	12.000	9.00	14.000	80.00	26.00	●
M20	2.50	16.000	12.00	17.500	95.00	32.00	◯
M22	2.50	18.000	14.50	19.500	100.00	32.00	◯
M24	3.00	18.000	14.50	21.000	110.00	36.00	◯

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

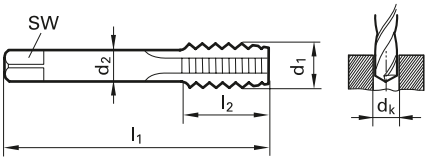
Guhring no.	997	1970
Standard	DIN 2184-2	
Standard	DIN 2181	
Tool material	HSS-E	
Surface	◯	◯
Type	N	N R40
Form	C	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	789	789



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability	
	mm		mm	mm	mm			
M 5 X0,5	6.000	4.90	4.500	50.00	5.00	5.003	❍	
M 6 X0,75	6.000	4.90	5.200	56.00	8.00	6.004		❍
M 7 X0,75	6.000	4.90	6.200	56.00	8.00	7.004	❍	
M 8 X0,5	6.000	4.90	7.500	56.00	8.00	8.003		❍
M 8 X0,75	6.000	4.90	7.200	56.00	8.00	8.004		❍
M 8 X1	6.000	4.90	7.000	63.00	11.00	8.005	●	●
M10 X0,75	7.000	5.50	9.200	63.00	11.00	10.004		❍
M10 X1	7.000	5.50	9.000	63.00	11.00	10.005	●	●
M11 X1	8.000	6.20	10.000	63.00	11.00	11.005		❍
M12 X1	9.000	7.00	11.000	70.00	11.00	12.005		❍
M12 X1,5	9.000	7.00	10.500	70.00	16.00	12.007		❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

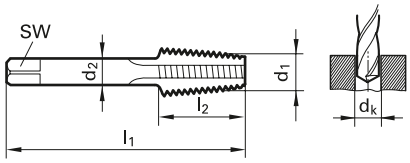
Guhring no.	980	979
Standard	DIN 2184-2	
Standard	DIN 40432	
Tool material	HSS-E	
Surface	◯	◯
Type	N	N
Form	B	C
Tolerance		
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	789	789



d1	P	d2	SW	dk	l1	l2	Code no.	Availability	
	G/inch	mm		mm	mm	mm			
PG 7	20.00	9.000	7.00	11.500	70.00	22.00	12.500	●	●
PG 9	18.00	12.000	9.00	14.000	70.00	22.00	15.200	●	●
PG 11	18.00	14.000	11.00	17.250	80.00	22.00	18.600	●	●
PG 13,5	18.00	16.000	12.00	19.000	80.00	22.00	20.400	●	●
PG 16	18.00	18.000	14.50	21.250	80.00	22.00	22.500	●	●
PG 21	16.00	22.000	18.00	27.000	90.00	22.00	28.300		●
PG 29	16.00	28.000	22.00	35.500	100.00	25.00	37.000		●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

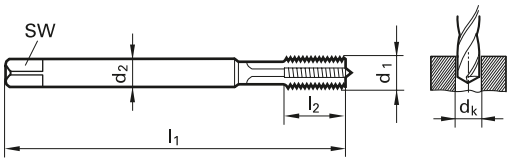
Guhring no.	973
Standard	
Standard	Guhring std.
Tool material	HSS-E
Surface	◯
Type	N
Form	C
Tolerance	
Cutting direction	right-hand
Discount group	103
Techn. data page	789



d1	P	d2	SW	dk	l1	l2	Code no.	Availability
	G/inch	mm		mm	mm	mm		
1/16	27.00	6.000	4.90	6.150	56.00	14.00	8.190	●
1/8	27.00	7.000	5.50	8.400	63.00	15.00	10.620	●
1/4	18.00	11.000	9.00	11.100	63.00	21.00	14.140	●
3/8	18.00	12.000	9.00	14.300	70.00	21.00	17.570	●
1/2	14.00	16.000	12.00	17.900	80.00	27.00	21.900	●
3/4	14.00	20.000	16.00	23.300	100.00	27.00	27.230	●
1	11.50	25.000	20.00	29.000	110.00	32.00	34.180	●
1 1/4	11.50	32.000	24.00	37.700	125.00	33.00	42.900	●
1 1/2	11.50	36.000	29.00	43.700	140.00	33.00	48.940	●
2	11.50	36.000	29.00	55.600	160.00	33.00	61.000	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

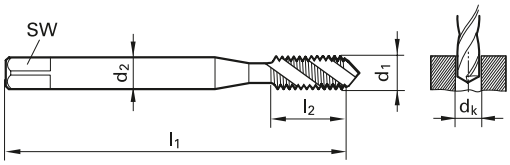
Guhring no.	1057	1061	1065
Standard		DIN 2184-1	
Standard	DIN 371	DIN 371/DIN 376	
Tool material		HSS-E-PM	
Surface	C	C	A
Type	Ti	Ti R15	Ni R10
Form	B	C	C
Tolerance	4HX	4HX	4HX
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	805	805	805
	NEW	NEW	NEW



d1	P	d2	SW	dk	l1	l2	Availability		
	mm	mm		mm	mm	mm			
MJ 3X0,5	0.50	3.500	2.70	2.500	56.00	10.00	●	●	●
MJ 4X0,7	0.70	4.500	3.40	3.300	63.00	12.00	●	●	●
MJ 5X0,8	0.80	6.000	4.90	4.200	70.00	14.00	●	●	●
MJ 6X1	1.00	6.000	4.90	5.000	80.00	16.00	●	●	●
MJ 8X1,25	1.25	8.000	6.20	6.800	90.00	17.00	●	●	●
MJ10X1,5	1.50	10.000	8.00	8.500	100.00	20.00	●	●	●
MJ12X1,75	1.75	9.000	7.00	10.200	110.00	24.00	●	●	●
MJ16X2	2.00	12.000	9.00	14.000	110.00	26.00	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	174	361	783	786
Standard	DIN 2184-1			
Standard	DIN 371			
Tool material	HSS-E			
Surface	(S)	(S)	●	○
Type	N R40	H R40	N R40	N L40-LH
Form	C(K)	C	C	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	left-hand
Discount group	103	103	103	103
Techn. data page	799	793	787	787

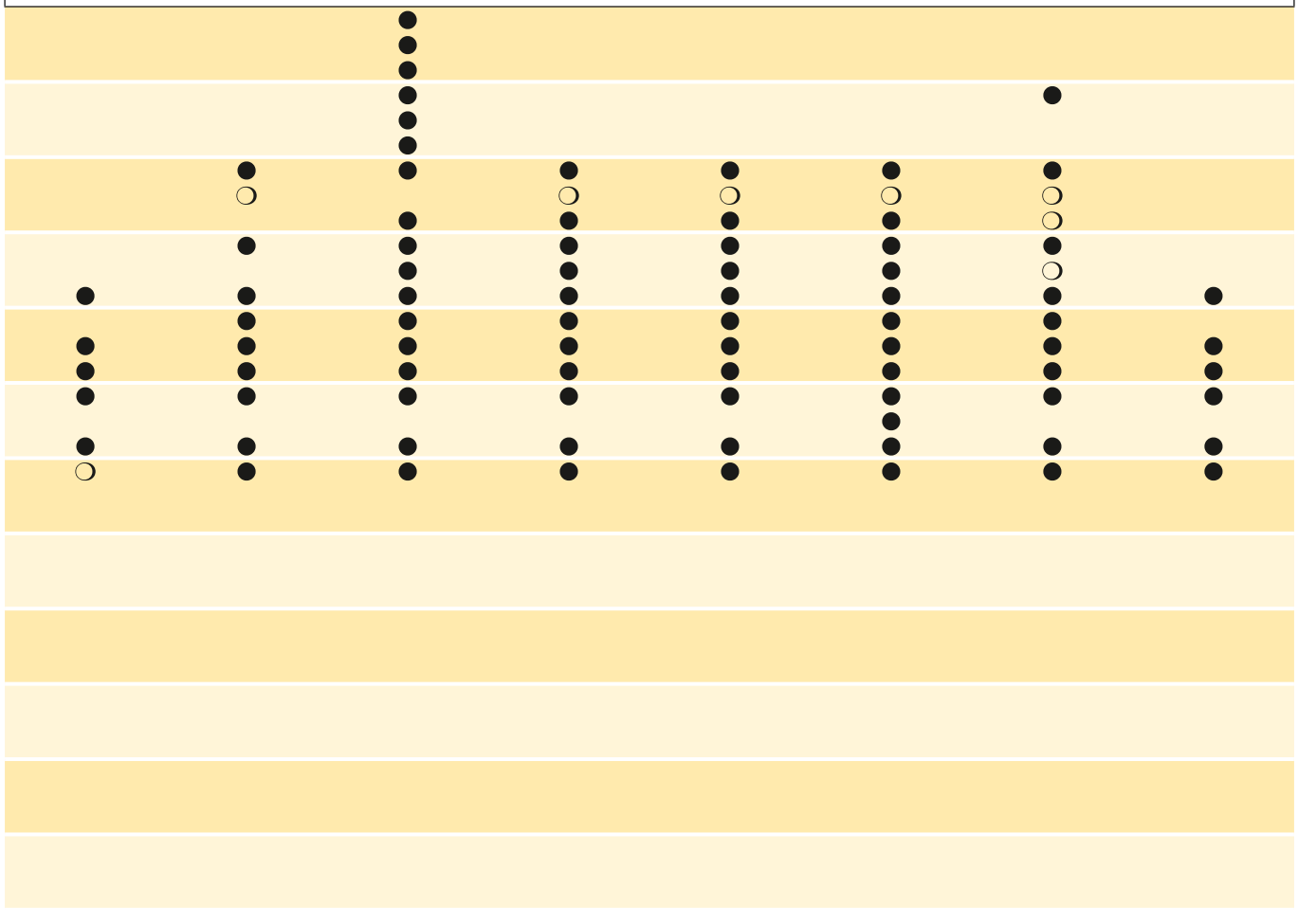


d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 1	0.25	2.500	2.10	0.750	40.00	5.50	
M 1,2	0.25	2.500	2.10	0.950	40.00	5.50	
M 1,4	0.30	2.500	2.10	1.100	40.00	7.00	
M 1,6	0.35	2.500	2.10	1.250	40.00	4.50	
M 1,7	0.35	2.500	2.10	1.350	40.00	4.50	
M 1,8	0.35	2.500	2.10	1.450	40.00	4.50	
M 2	0.40	2.800	2.10	1.600	45.00	4.50	● ●
M 2,2	0.45	2.800	2.10	1.750	45.00	5.00	
M 2,3	0.40	2.800	2.10	1.900	45.00	4.50	○
M 2,5	0.45	2.800	2.10	2.050	50.00	5.00	● ●
M 2,6	0.45	2.800	2.10	2.150	50.00	5.00	
M 3	0.50	3.500	2.70	2.500	56.00	6.00	● ● ●
M 3,5	0.60	4.000	3.00	2.900	56.00	7.00	●
M 4	0.70	4.500	3.40	3.300	63.00	7.50	● ● ●
M 5	0.80	6.000	4.90	4.200	70.00	8.50	● ● ● ●
M 6	1.00	6.000	4.90	5.000	80.00	11.00	● ● ● ●
M 7	1.00	7.000	5.50	6.000	80.00	11.00	●
M 8	1.25	8.000	6.20	6.800	90.00	14.00	● ● ● ●
M10	1.50	10.000	8.00	8.500	100.00	16.00	● ● ● ●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown (A) TiAlN (a) TiAlN nanoA (A) TiAlN SuperA

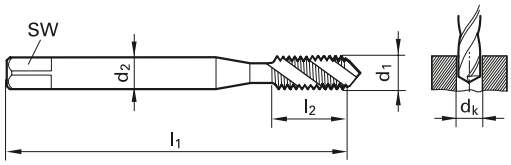
795	799	806	809	810	811	812	814
DIN 2184-1							
DIN 371							
HSS-E							
○	○	○	○	○	○	○	○
N	N R15	N	N R15	N R40	H R40	Al R45	VA R40
C	C	C	C	C	C	C	C
ISO 3 / 6G	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103
786	787	787	787	787	793	800	797

Availability



C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	836	843	844	889
Standard	DIN 2184-1			
Standard	DIN 371			
Tool material	HSS-E			
Surface	◍	◍	○	○
Type	N R40	VA R15	N R40	N R40
Form	C	C	C	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 3 / 6G	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103
Techn. data page	799	797	787	799



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 2	0.40	2.800	2.10	1.600	45.00	4.50	● ● ●
M 2,2	0.45	2.800	2.10	1.750	45.00	5.00	●
M 2,3	0.40	2.800	2.10	1.900	45.00	4.50	●
M 2,5	0.45	2.800	2.10	2.050	50.00	5.00	◍ ●
M 2,6	0.45	2.800	2.10	2.150	50.00	5.00	●
M 3	0.50	3.500	2.70	2.500	56.00	6.00	● ● ● ●
M 3,5	0.60	4.000	3.00	2.900	56.00	7.00	● ●
M 4	0.70	4.500	3.40	3.300	63.00	7.50	● ● ● ●
M 5	0.80	6.000	4.90	4.200	70.00	8.50	● ● ● ●
M 6	1.00	6.000	4.90	5.000	80.00	11.00	● ● ● ●
M 7	1.00	7.000	5.50	6.000	80.00	11.00	
M 8	1.25	8.000	6.20	6.800	90.00	14.00	● ● ● ●
M10	1.50	10.000	8.00	8.500	100.00	16.00	● ● ● ●

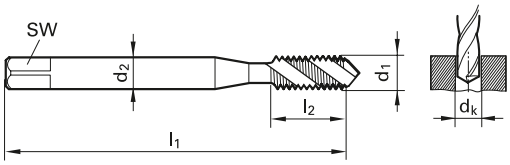
○ bright ◍ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

913	914	946	947	1252	1916	2425	2440
DIN 2184-1							
DIN 371							
HSS-E							
S	S	○	●	C	C	M	S
N R15	N R40	N R15	H R40	N R40	H R40	N R40	N R40
C	C	C	C	C	C	C	C
ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103
787	787	787	793	787	793	799	799

Availability							
●	●	●	●		●		●
	○						
○	○						
●	●						
○	●	●					
●	●	●	●	○	●	●	●
●	●		○		●		
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
			●				
●	●	●	●	●	●	●	●
●	●	●	●	○	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	2790	2850	2862
Standard		DIN 2184-1	
Standard		DIN 371	
Tool material		HSS-E	
Surface	○	◍	◍
Type	N R40	H R40	VA R40
Form	E	C	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	799	793	796



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 2	0.40	2.800	2.10	1.600	45.00	4.50	●
M 2,3	0.40	2.800	2.10	1.900	45.00	4.50	○
M 2,5	0.45	2.800	2.10	2.050	50.00	5.00	●
M 2,6	0.45	2.800	2.10	2.150	50.00	5.00	●
M 3	0.50	3.500	2.70	2.500	56.00	6.00	● ● ●
M 3,5	0.60	4.000	3.00	2.900	56.00	7.00	●
M 4	0.70	4.500	3.40	3.300	63.00	7.50	● ● ●
M 5	0.80	6.000	4.90	4.200	70.00	8.50	● ● ●
M 6	1.00	6.000	4.90	5.000	80.00	11.00	● ● ●
M 7	1.00	7.000	5.50	6.000	80.00	11.00	○
M 8	1.25	8.000	6.20	6.800	90.00	14.00	● ● ●
M10	1.50	10.000	8.00	8.500	100.00	16.00	● ● ●
M12	1.75	9.000	7.00	10.200	110.00	18.50	
M16	2.00	12.000	9.00	14.000	110.00	20.00	
M20	2.50	16.000	12.00	17.500	140.00	25.00	

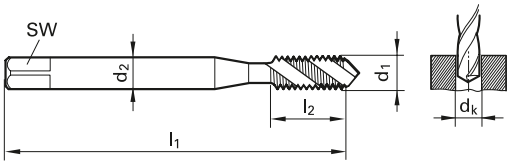
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

2896	2984	2985	2986	2994	2995	4154	4155
DIN 2184-1							
DIN 371							
HSS-E							
S	○	●	S	●	S	C	C
VA R15	H R40	H R40	H R40	N R40	N R40	N R15	N R15
C	C	C	C	C	C	C	E
ISO 2 / 6H	ISO 3 / 6G	ISO 3 / 6G	ISO 3 / 6G	ISO 3 / 6G	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103
797	793	793	793	799	799	799	799
						NEW	NEW

Availability							
	❍	●	❍				
		●	●				
●	❍	●	●	●	●	●	●
●	❍	●	●	●	●	●	●
●	❍	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
						●	●
						●	●
						●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	59	767
Standard	DIN 2184-1	
Standard	DIN 371	
Tool material	HSS-E-PM	
Surface	S	S
Type	VA R40	N R50
Form	C	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	797	799



d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M 2	0.40	2.800	2.10	1.600	45.00	4.50		
M 3	0.50	3.500	2.70	2.500	56.00	6.00	●	●
M 4	0.70	4.500	3.40	3.300	63.00	7.50	●	●
M 5	0.80	6.000	4.90	4.200	70.00	8.50	●	●
M 6	1.00	6.000	4.90	5.000	80.00	11.00	●	●
M 8	1.25	8.000	6.20	6.800	90.00	14.00	●	●
M10	1.50	10.000	8.00	8.500	100.00	16.00	●	●
M12	1.75	9.000	7.00	10.200	110.00	18.50		
M16	2.00	12.000	9.00	14.000	110.00	20.00		
M20	2.50	16.000	12.00	17.500	140.00	25.00		

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

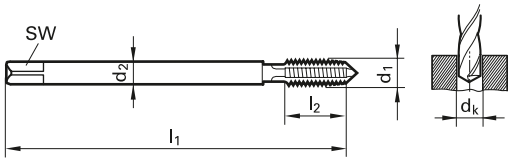
872	909	1288	1290	1577
		DIN 2184-1		
		DIN 371		
		HSS-E-PM		
○	○	S	C	A
H R15	VA R40	N R40	N R40	H R15
C	C	C	C	C
ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103
792	797	799	799	792

Availability				
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
			●	
			●	
			●	
			●	
			●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	778	785	787	825
Standard	DIN 2184-1			
Standard	DIN 376			
Tool material	HSS-E			
Surface	C			
Type	H	VA R15	N L40-LH	VA R40
Form	C	C	C	C
Tolerance	6HX	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	left-hand	right-hand
Discount group	103	103	103	103
Techn. data page	792	797	787	797

NEW



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M12	1.75	9.000	7.00	10.200	110.00	18.50	● ● ●
M14	2.00	11.000	9.00	12.000	110.00	20.00	● ● ●
M16	2.00	12.000	9.00	14.000	110.00	20.00	● ● ● ●
M18	2.50	14.000	11.00	15.500	125.00	25.00	❍ ●
M20	2.50	16.000	12.00	17.500	140.00	25.00	● ● ● ●
M22	2.50	18.000	14.50	19.500	140.00	27.00	●
M24	3.00	18.000	14.50	21.000	160.00	30.00	● ● ●
M27	3.00	20.000	16.00	24.000	160.00	30.00	●
M30	3.50	22.000	18.00	26.500	180.00	35.00	● ●
M33	3.50	25.000	20.00	29.500	180.00	35.00	●
M36	4.00	28.000	22.00	32.000	200.00	40.00	●
M39	4.00	32.000	24.00	35.000	200.00	40.00	●

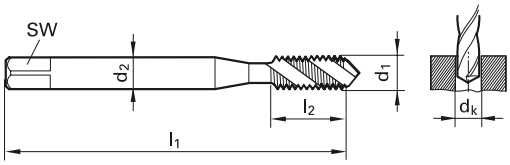
○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1254	2863	2895	60	910	935	1098	1289	1578
DIN 2184-1								
DIN 376								
HSS-E			HSS-E-PM					
C	⬤	S	S	○	○	S	S	A
N R40	VA R40	VA R15	VA R40	VA R40	H R15	N R50	N R40	H R15
C	C	C	C	C	C	C	C	C
ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103	103
787	797	797	797	797	792	799	799	792

Availability								
●	●	●	●	●	●	●	●	●
○	●		●	●		●	●	
○	●	●	●	●	●	●	●	●
	●	○		○			●	
	●	●	●	●	●	●	●	●
	●	●						
	●	●		●				

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

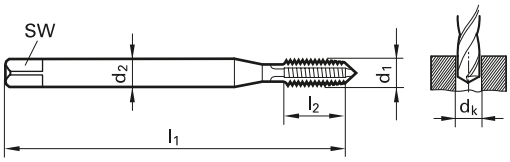
Guhring no.	761	763
Standard	DIN 2184-1	
Standard	DIN 371	DIN 376
Tool material	HSS-E-PM	
Surface	S	S
Type	VA R50	VA R50
Form	C	C
Tolerance	6HX	6HX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	797	797



d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M 3	0.50	3.500	2.70	2.500	56.00	2.50	●	
M 4	0.70	4.500	3.40	3.300	63.00	3.50	●	
M 5	0.80	6.000	4.90	4.200	70.00	4.00	●	
M 6	1.00	6.000	4.90	5.000	80.00	5.00	●	
M 8	1.25	8.000	6.20	6.800	90.00	6.30	●	
M10	1.50	10.000	8.00	8.500	100.00	7.50	●	
M12	1.75	9.000	7.00	10.200	110.00	8.80		●
M14	2.00	11.000	9.00	12.000	110.00	10.00		●
M16	2.00	12.000	9.00	14.000	110.00	10.00		●
M20	2.50	16.000	12.00	17.500	140.00	12.50		●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

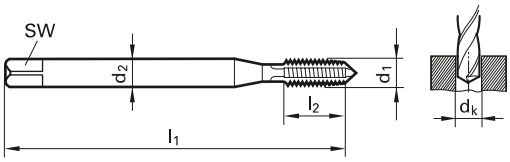
Guhring no.	942
Standard	DIN 2184-1
Standard	~ DIN 371
Tool material	Solid carbide
Surface	C
Type	N
Form	B
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	798



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 5	0.80	6.000	4.90	4.200	70.00	12.00	●
M 6	1.00	6.000	4.90	5.000	80.00	15.00	●
M 8	1.25	8.000	6.20	6.800	90.00	19.00	●
M10	1.50	10.000	8.00	8.500	100.00	22.00	❍
M12	1.75	12.000	9.00	10.200	110.00	26.50	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	313	733	788	789
Standard	DIN 2184-1			
Standard	DIN 371			
Tool material	HSS-E			
Surface	(S)	●	●	○
Type	N	H	H AZ	N-LH
Form	B	B	C	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	left-hand
Discount group	103	103	103	103
Techn. data page	798	790	808	787



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 1,4	0.30	2.500	2.10	1.100	40.00	7.00	
M 1,6	0.35	2.500	2.10	1.250	40.00	8.00	
M 1,7	0.35	2.500	2.10	1.350	40.00	8.00	
M 1,8	0.35	2.500	2.10	1.450	40.00	8.00	
M 2	0.40	2.800	2.10	1.600	45.00	8.00	● ●
M 2,2	0.45	2.800	2.10	1.750	45.00	9.00	◑ ●
M 2,3	0.40	2.800	2.10	1.900	45.00	9.00	
M 2,5	0.45	2.800	2.10	2.050	50.00	9.00	● ●
M 2,6	0.45	2.800	2.10	2.150	50.00	9.00	●
M 3	0.50	3.500	2.70	2.500	56.00	10.00	● ● ● ○
M 3,5	0.60	4.000	3.00	2.900	56.00	12.00	● ◑
M 4	0.70	4.500	3.40	3.300	63.00	12.00	● ● ● ○
M 5	0.80	6.000	4.90	4.200	70.00	14.00	● ● ● ●
M 6	1.00	6.000	4.90	5.000	80.00	16.00	● ● ● ●
M 7	1.00	7.000	5.50	6.000	80.00	16.00	
M 8	1.25	8.000	6.20	6.800	90.00	17.00	● ● ● ●
M10	1.50	10.000	8.00	8.500	100.00	20.00	● ● ◑ ●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

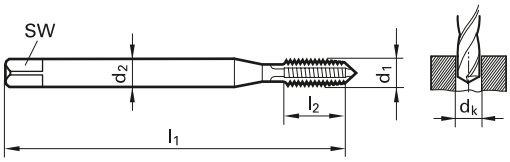
791	794	796	797	800	801	802	803	804	805
DIN 2184-1									
DIN 371									
HSS-E									
○	○	○	○	○	○	○	○	○	○
H AZ	N	N	N	Ms	N	N	N	H	Al
B	B	B	B	E	D	B	B	B	B
ISO 2 / 6H	ISO 1 / 4H	ISO 3 / 6G	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103	103	103
791	786	786	786	807	786	786	786	790	800

Availability

							●		
● ○	●	○			● ○	●	●	● ●	● ○
●	●	○			● ○	●	●	● ●	● ●
● ○ ●	● ●	● ●	●	● ●	● ○ ●	● ●	●	● ● ●	● ●
● ●	● ● ○	● ●	●	● ●	● ●	● ●	●	● ●	● ●
● ●	● ●	○ ●	●	● ●	● ●	○ ○	●	● ●	● ●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	807	808	837	838
Standard	DIN 2184-1			
Standard	DIN 371			
Tool material	HSS-E			
Surface	●	○	○	○
Type	GG	N L15	N	N
Form	C	D	B	B
Tolerance	6HX	ISO 2 / 6H	ISO 3 / 6G	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103
Techn. data page	802	787	786	786

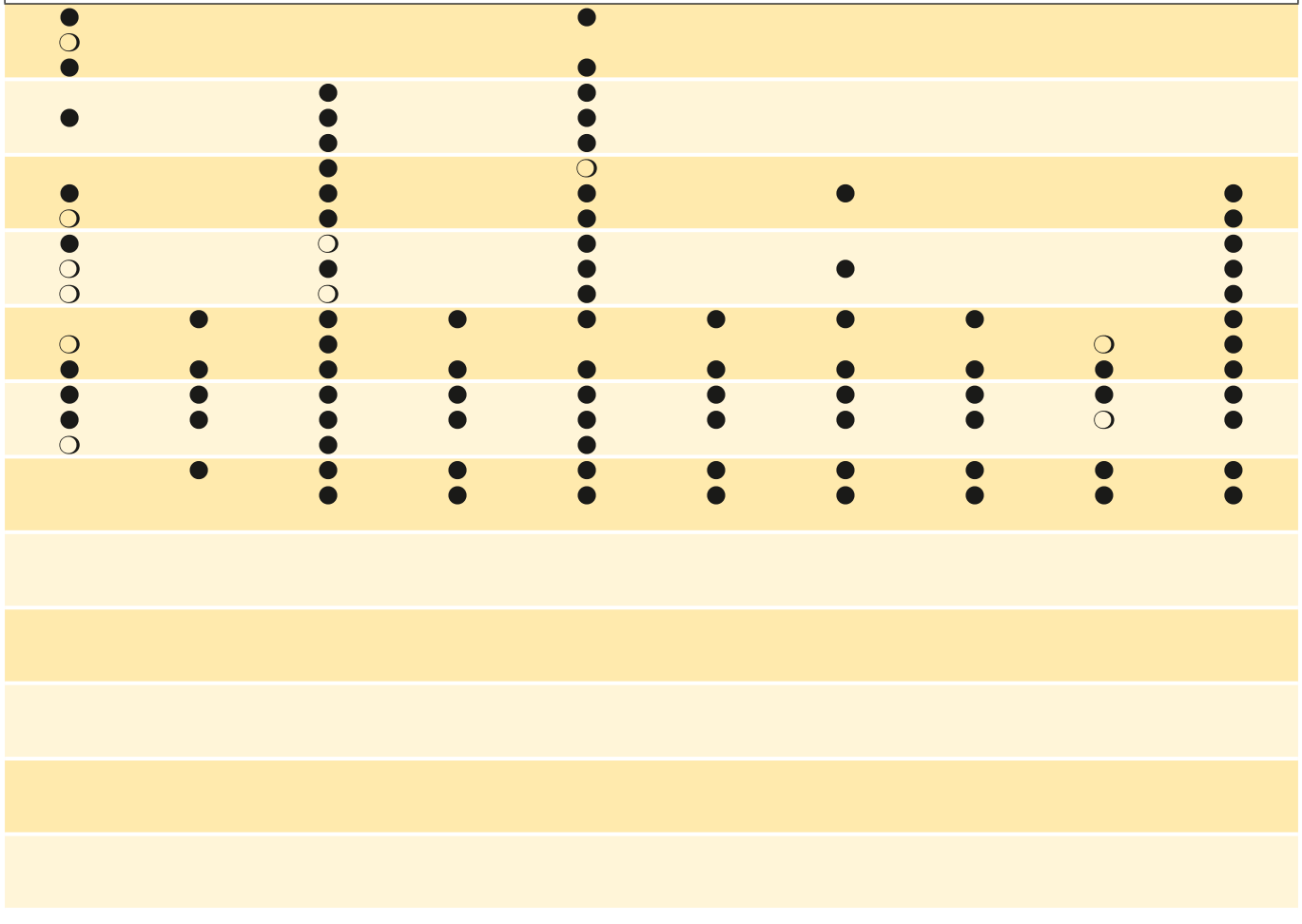


d1	P	d2	SW	dk	l1	l2	Availability			
	mm	mm		mm	mm	mm				
M 1	0.25	2.500	2.10	0.750	40.00	5.50				
M 1,1	0.25	2.500	2.10	0.850	40.00	5.50				
M 1,2	0.25	2.500	2.10	0.950	40.00	5.50				
M 1,4	0.30	2.500	2.10	1.100	40.00	7.00			●	●
M 1,6	0.35	2.500	2.10	1.250	40.00	8.00			●	●
M 1,7	0.35	2.500	2.10	1.350	40.00	8.00				●
M 1,8	0.35	2.500	2.10	1.450	40.00	8.00				
M 2	0.40	2.800	2.10	1.600	45.00	8.00			●	●
M 2,2	0.45	2.800	2.10	1.750	45.00	9.00			◑	●
M 2,3	0.40	2.800	2.10	1.900	45.00	9.00				◑
M 2,5	0.45	2.800	2.10	2.050	50.00	9.00			●	●
M 2,6	0.45	2.800	2.10	2.150	50.00	9.00				◑
M 3	0.50	3.500	2.70	2.500	56.00	10.00	●	●	●	◑
M 3,5	0.60	4.000	3.00	2.900	56.00	12.00	●	◑	●	●
M 4	0.70	4.500	3.40	3.300	63.00	12.00	●	◑	●	●
M 5	0.80	6.000	4.90	4.200	70.00	14.00	●	●	●	●
M 6	1.00	6.000	4.90	5.000	80.00	16.00	●	●	●	●
M 7	1.00	7.000	5.50	6.000	80.00	16.00				
M 8	1.25	8.000	6.20	6.800	90.00	17.00	●	●	●	●
M10	1.50	10.000	8.00	8.500	100.00	20.00	●	●	●	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

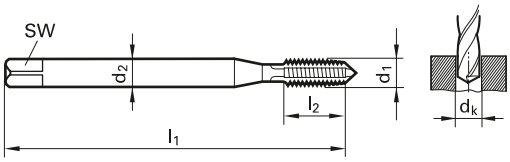
839	869	912	930	945	1246	1870	1871	1875	1914
DIN 2184-1									
DIN 371									
HSS-E									
○	○	S	S	●	C	○	○	S	C
N	N	N	GG	N	N	VA	VA AZ	GGT	H
B	B	B	C	B	B	B	B	C	B
ISO 2 / 6H	ISO 3 / 6G	ISO 2 / 6H	6HX	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103	103	103
786	786	786	802	786	786	796	796	802	791

Availability



C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1918	2086	2427
Standard		DIN 2184-1	
Standard		DIN 371	
Tool material		HSS-E	
Surface	A	S	A+M
Type	GG	VA	N
Form	C	B	B
Tolerance	6HX	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	802	796	798



d1	P	d2	SW	dk	l1	l2	Availability		
	mm	mm		mm	mm	mm			
M 2	0.40	2.800	2.10	1.600	45.00	8.00			
M 2,5	0.45	2.800	2.10	2.050	50.00	9.00			
M 3	0.50	3.500	2.70	2.500	56.00	10.00	●	●	●
M 3,5	0.60	4.000	3.00	2.900	56.00	12.00	❍		❍
M 4	0.70	4.500	3.40	3.300	63.00	12.00	●	●	●
M 5	0.80	6.000	4.90	4.200	70.00	14.00	●	●	●
M 6	1.00	6.000	4.90	5.000	80.00	16.00	●	●	●
M 8	1.25	8.000	6.20	6.800	90.00	17.00	●	●	●
M10	1.50	10.000	8.00	8.500	100.00	20.00	●	●	●

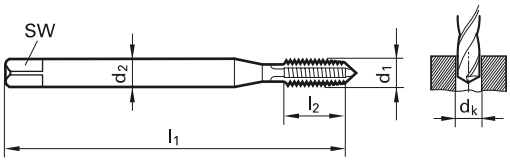
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

2465	2710	2869	2876	2941	2990	2991
DIN 2184-1						
DIN 371						
HSS-E						
○	(S)	◍	◍	●	◍	(S)
H	H	VA	N	H	N	N
B	B	B	B	B	B	B
ISO 3 / 6G	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 3 / 6G	ISO 3 / 6G
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103
790	791	796	798	791	798	798

Availability						
❍	●		●	●	●	
❍	●			●		
❍	●	●	●	●	●	●
●	●	●	●	●	●	●
❍	●	●	●	●	●	●
❍	●	●	●	●	●	●
●	●	●	●	●	●	●
❍	●	●	●	●	●	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no.	57	875
Standard	DIN 2184-1	
Standard	DIN 371	
Tool material	HSS-E-PM	
Surface	S	○
Type	H	H
Form	B	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	791	791



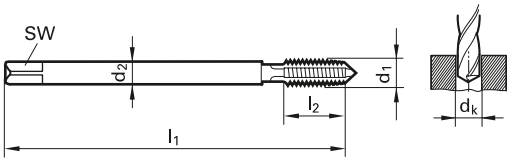
d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M 2	0.40	2.800	2.10	1.600	45.00	8.00		
M 2,5	0.45	2.800	2.10	2.050	50.00	9.00		
M 3	0.50	3.500	2.70	2.500	56.00	10.00	●	●
M 4	0.70	4.500	3.40	3.300	63.00	12.00	●	●
M 5	0.80	6.000	4.90	4.200	70.00	14.00	●	●
M 6	1.00	6.000	4.90	5.000	80.00	16.00	●	●
M 8	1.25	8.000	6.20	6.800	90.00	17.00	●	●
M10	1.50	10.000	8.00	8.500	100.00	20.00	●	●
M12	1.75	9.000	7.00	10.200	110.00	24.00		
M16	2.00	12.000	9.00	14.000	110.00	26.00		
M20	2.50	16.000	12.00	17.500	140.00	32.00		

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

877	1002	1084	1285	1287	1575
DIN 2184-1					
DIN 371					
HSS-E-PM					
○	C	○	S	C	A
VA	VA	Ms	N	N	H
B	B	E	B	B	B
ISO 2 / 6H	ISO 2 / 6H	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103
796	796	807	798	798	791
	NEW				

Availability					
●	●		●		
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
	●	●	●	●	●
	●	●	●	●	●

Guhring no.	790	792	817	849
Standard	DIN 2184-1			
Standard	DIN 376			
Tool material	HSS-E			
Surface	◯	◯	◯	◯
Type	N-LH	VA AZ	AI	H AZ
Form	B	B	B	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	left-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103
Techn. data page	787	796	800	791



d1	P	d2	SW	dk	l1	l2	Availability			
	mm	mm		mm	mm	mm				
M 3	0.50	3.500	2.70	2.500	56.00	10.00				
M 4	0.70	4.500	3.40	3.300	63.00	12.00				
M 5	0.80	6.000	4.90	4.200	70.00	14.00				
M 6	1.00	6.000	4.90	5.000	80.00	16.00				
M 8	1.25	8.000	6.20	6.800	90.00	17.00				
M10	1.50	10.000	8.00	8.500	100.00	20.00				
M12	1.75	9.000	7.00	10.200	110.00	24.00	●	●	●	●
M14	2.00	11.000	9.00	12.000	110.00	26.00	❍	❍	❍	❍
M16	2.00	12.000	9.00	14.000	110.00	26.00	●	❍	●	●
M18	2.50	14.000	11.00	15.500	125.00	30.00			❍	❍
M20	2.50	16.000	12.00	17.500	140.00	32.00	●		●	
M22	2.50	18.000	14.50	19.500	140.00	32.00			❍	
M24	3.00	18.000	14.50	21.000	160.00	36.00			❍	
M30	3.50	22.000	18.00	26.500	180.00	40.00				

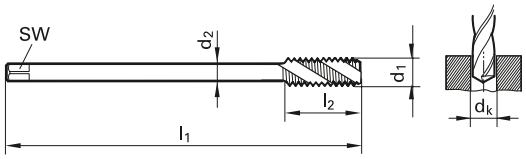
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1249	58	879	1286	1576	2901	2909	2916	2920
			DIN 2184-1					
		DIN 376				DIN 371/DIN 376		
HSS-E	HSS-E-PM							
C	S	○	S	A	C	C	A	A
N	H	VA	N	H	Ti	Ti R15	Ni	Ni R10
B	B	B	B	B	B	C	B	C
ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	6HX	6HX	6HX	6HX
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103	103
786	791	796	798	791	804	804	804	804

Availability								
					●	●	●	●
					●	●	●	●
●	●	●	●	●	●	●	●	●
○	●	●	●	●				
●	●	●	○	●	●	●	●	●
	●	●	●	●				
	●			●				

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

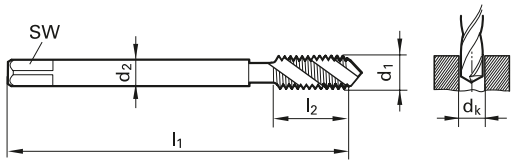
Guhring no.	888
Standard	
Standard	Guhring std.
Tool material	HSS-E
Surface	◯
Type	N R40
Form	C
Tolerance	ISO 2 / 6H
Cutting direction	right-hand
Discount group	103
Techn. data page	789



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 3	0.50	3.500	2.70	2.500	90.00	6.00	●
M 4	0.70	4.500	3.40	3.300	125.00	7.50	●
M 5	0.80	6.000	4.90	4.200	140.00	8.50	●
M 6	1.00	6.000	4.90	5.000	160.00	11.00	●
M 8	1.25	6.000	4.90	6.800	180.00	14.00	●
M10	1.50	7.000	5.50	8.500	200.00	16.00	●
M12	1.75	9.000	7.00	10.200	220.00	18.50	●
M14	2.00	11.000	9.00	12.000	220.00	20.00	●
M16	2.00	12.000	9.00	14.000	220.00	20.00	●
M20	2.50	16.000	12.00	17.500	280.00	25.00	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

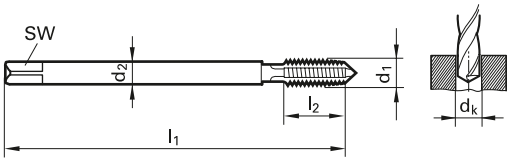
Guhring no.	196	916	2791	2851
Standard	DIN 2184-1			
Standard	DIN 376			
Tool material	HSS-E			
Surface	S	S	○	●
Type	N R40	N R15	N R40	H R40
Form	C(K)	C	E	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103
Techn. data page	799	787	799	793



d1	P	d2	SW	dk	l1	l2	Availability			
	mm	mm		mm	mm	mm				
M 3,5	0.60	2.500	2.10	2.900	56.00	7.00		○		
M 4	0.70	2.800	2.10	3.300	63.00	7.50		●	●	●
M 5	0.80	3.500	2.70	4.200	70.00	8.50	●	●	●	●
M 6	1.00	4.500	3.40	5.000	80.00	11.00	●	●	●	●
M 8	1.25	6.000	4.90	6.800	90.00	14.00	●	●	●	●
M10	1.50	7.000	5.50	8.500	100.00	16.00	●	●	●	●
M12	1.75	9.000	7.00	10.200	110.00	18.50	●	●	●	●
M14	2.00	11.000	9.00	12.000	110.00	20.00		○	●	●
M16	2.00	12.000	9.00	14.000	110.00	20.00	●	●	●	●
M18	2.50	14.000	11.00	15.500	125.00	25.00		○		○
M20	2.50	16.000	12.00	17.500	140.00	25.00	●	●		●
M22	2.50	18.000	14.50	19.500	140.00	27.00		○		
M24	3.00	18.000	14.50	21.000	160.00	30.00	●	●		●
M30	3.50	22.000	18.00	26.500	180.00	35.00	●			●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	846	1876	2870
Standard		DIN 2184-1	
Standard		DIN 376	
Tool material		HSS-E	
Surface	○	(S)	●
Type	N	GGT	VA
Form	B	C	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	800	802	796

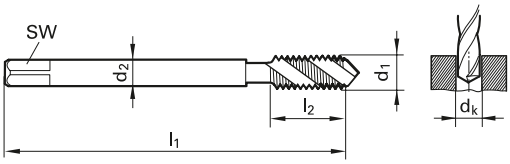


d1	P	d2	SW	dk	l1	l2	Availability		
	mm	mm		mm	mm	mm			
M 4	0.70	2.800	2.10	3.300	63.00	12.00	●	○	●
M 5	0.80	3.500	2.70	4.200	70.00	14.00		●	●
M 6	1.00	4.500	3.40	5.000	80.00	16.00		○	●
M 8	1.25	6.000	4.90	6.800	90.00	17.00	●	●	●
M10	1.50	7.000	5.50	8.500	100.00	20.00		●	●
M12	1.75	9.000	7.00	10.200	110.00	24.00	●	●	●
M14	2.00	11.000	9.00	12.000	110.00	26.00	○	●	●
M16	2.00	12.000	9.00	14.000	110.00	26.00	○	●	●
M18	2.50	14.000	11.00	15.500	125.00	30.00		○	●
M20	2.50	16.000	12.00	17.500	140.00	32.00			●
M24	3.00	18.000	14.50	21.000	160.00	36.00			●

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4153
Standard	
Standard	Guhring std.
Tool material	HSS-E
Surface	S
Type	N R40
Form	C
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	799

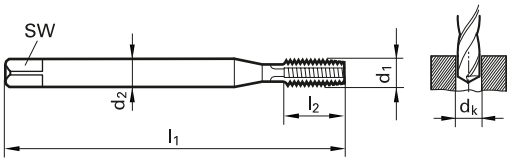
NEW



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 3	0.50	3.500	2.70	2.500	112.00	6.00	●
M 4	0.70	2.800	2.10	3.300	112.00	7.50	●
M 5	0.80	3.500	2.70	4.200	125.00	8.50	●
M 6	1.00	4.500	3.40	5.000	125.00	11.00	●
M 8	1.25	6.000	4.90	6.800	140.00	14.00	●
M10	1.50	7.000	5.50	8.500	160.00	16.00	●
M12	1.75	9.000	7.00	10.200	180.00	18.50	●
M16	2.00	12.000	9.00	14.000	220.00	20.00	●
M20	2.50	16.000	12.00	17.500	280.00	25.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

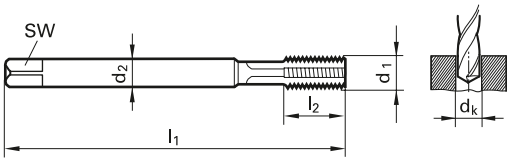
Guhring no.	1201
Standard	DIN 2184-1
Standard	DIN 371/DIN 376
Tool material	HSS-E-PM
Surface	C
Type	H
Form	D
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	794



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 3	0.50	3.500	2.70	2.600	56.00	10.00	●
M 4	0.70	4.500	3.40	3.400	63.00	12.00	●
M 5	0.80	6.000	4.90	4.300	70.00	14.00	●
M 6	1.00	6.000	4.90	5.100	80.00	16.00	●
M 8	1.25	8.000	6.20	6.900	90.00	17.00	●
M10	1.50	10.000	8.00	8.600	100.00	20.00	●
M12	1.75	12.000	9.00	10.400	110.00	24.00	●
M14	2.00	11.000	9.00	12.100	110.00	26.00	●
M16	2.00	12.000	9.00	14.100	110.00	26.00	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

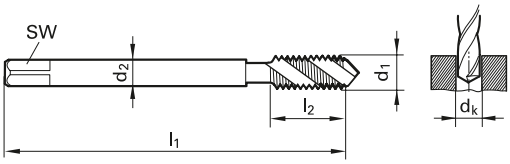
Guhring no.	2944
Standard	Guhring std.
Standard	~ DIN 371
Tool material	Solid carbide
Surface	C
Type	H
Form	D
Tolerance	ISO 2 / 6H
Cutting direction	right-hand
Discount group	103
Techn. data page	794



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 3	0.50	3.500	2.70	2.600	56.00	12.00	●
M 4	0.70	4.500	3.40	3.400	63.00	14.00	●
M 5	0.80	6.000	4.90	4.300	70.00	17.00	●
M 6	1.00	6.000	4.90	5.100	80.00	20.00	●
M 8	1.25	8.000	6.20	6.900	90.00	20.00	●
M10	1.50	10.000	8.00	8.600	100.00	24.00	●
M12	1.75	12.000	9.00	10.400	110.00	28.00	●
M16	2.00	16.000	12.00	14.100	110.00	40.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	362	784	818	821	822
Standard	DIN 2184-1				
Standard	DIN 376				
Tool material	HSS-E				
Surface	S	◯	◯	◯	◯
Type	H R40	N R40	N	N R15	N R40
Form	C	C	C	C	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	793	787	787	787	787



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 1,6	0.35	1.200		1.250	40.00	4.50	●
M 1,7	0.35	1.200		1.350	40.00	4.50	●
M 2	0.40	1.400		1.600	45.00	4.50	●
M 2,2	0.45	1.600		1.750	45.00	5.00	❍
M 2,3	0.40	1.600		1.900	45.00	4.50	❍
M 2,5	0.45	1.800		2.050	50.00	5.00	●
M 2,6	0.45	1.800		2.150	50.00	5.00	❍
M 3	0.50	2.200		2.500	56.00	6.00	● ❍ ● ● ●
M 3,5	0.60	2.500	2.10	2.900	56.00	7.00	❍ ❍ ❍
M 4	0.70	2.800	2.10	3.300	63.00	7.50	● ● ● ● ●
M 5	0.80	3.500	2.70	4.200	70.00	8.50	● ● ● ● ●
M 6	1.00	4.500	3.40	5.000	80.00	11.00	● ● ● ● ●
M 7	1.00	5.500	4.30	6.000	80.00	11.00	❍ ●
M 8	1.25	6.000	4.90	6.800	90.00	14.00	● ● ● ● ●
M10	1.50	7.000	5.50	8.500	100.00	16.00	● ● ● ● ●
M12	1.75	9.000	7.00	10.200	110.00	18.50	● ● ● ● ●
M14	2.00	11.000	9.00	12.000	110.00	20.00	● ● ● ● ●
M16	2.00	12.000	9.00	14.000	110.00	20.00	● ● ● ● ●
M18	2.50	14.000	11.00	15.500	125.00	25.00	● ● ● ❍ ●
M20	2.50	16.000	12.00	17.500	140.00	25.00	● ● ● ● ●
M22	2.50	18.000	14.50	19.500	140.00	27.00	● ● ● ●
M24	3.00	18.000	14.50	21.000	160.00	30.00	● ● ● ● ●
M27	3.00	20.000	16.00	24.000	160.00	30.00	● ❍ ●
M30	3.50	22.000	18.00	26.500	180.00	35.00	● ● ● ● ●
M36	4.00	28.000	22.00	32.000	200.00	40.00	●
M42	4.50	32.000	24.00	37.500	200.00	45.00	●
M48	5.00	36.000	29.00	43.000	250.00	50.00	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

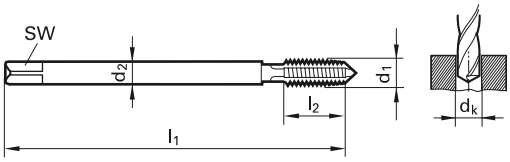
823	824	826	848	890	917	949	950	1917	2426	2441
DIN 2184-1										
DIN 376										
HSS-E										
○	○	●	○	○	S	●	●	C	A+M	S
H R40	Al R45	N R40	N R40	N R40	N R40	N R15	H R40	H R40	N R40	N R40
C	C	C	C	C	C	C	C	C	C	C
ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	6HX
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103	103	103	103
793	800	799	787	799	787	787	793	793	799	799

Availability

●	●	●	●	●	●	○	●	●	○	●
○				○	●	○	○			
●	●	●	●	●	●	●	●	○	○	●
●	●	●	●	●	●	○	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●
			●	●	●					
●	●	●	●	●	●	●	●	●	○	●
●	●	●	●	●	●	○	●	●	●	●
●	●	●	●	●	●	●	●	●	○	●
●	●	●	●	●	●		●	●	●	●
●	○	●	○	●	●	●	●	●		●
●	○	●	●	●	●		○	●		●
		●			●		●	●		

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	315	734	813
Standard		DIN 2184-1	
Standard		DIN 376	
Tool material		HSS-E	
Surface	S	◯	◯
Type	N	H	N
Form	B	B	D
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	798	790	786



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 1,6	0.35	1.200		1.250	40.00	8.00	
M 1,8	0.35	1.200		1.450	40.00	8.00	
M 2	0.40	1.400		1.600	45.00	8.00	◯
M 2,2	0.45	1.600		1.750	45.00	9.00	
M 2,3	0.40	1.600		1.900	45.00	9.00	
M 2,5	0.45	1.800		2.050	50.00	9.00	●
M 2,6	0.45	1.800		2.150	50.00	9.00	◯
M 3	0.50	2.200		2.500	56.00	10.00	● ◯ ◯
M 3,5	0.60	2.500	2.10	2.900	56.00	12.00	
M 4	0.70	2.800	2.10	3.300	63.00	12.00	● ● ●
M 5	0.80	3.500	2.70	4.200	70.00	14.00	● ● ●
M 6	1.00	4.500	3.40	5.000	80.00	16.00	● ● ●
M 7	1.00	5.500	4.30	6.000	80.00	16.00	
M 8	1.25	6.000	4.90	6.800	90.00	17.00	● ● ●
M10	1.50	7.000	5.50	8.500	100.00	20.00	● ◯ ●
M12	1.75	9.000	7.00	10.200	110.00	24.00	● ● ●
M14	2.00	11.000	9.00	12.000	110.00	26.00	● ● ◯
M16	2.00	12.000	9.00	14.000	110.00	26.00	● ● ◯
M18	2.50	14.000	11.00	15.500	125.00	30.00	● ◯ ◯
M20	2.50	16.000	12.00	17.500	140.00	32.00	● ● ◯
M22	2.50	18.000	14.50	19.500	140.00	32.00	◯
M24	3.00	18.000	14.50	21.000	160.00	36.00	● ◯
M27	3.00	20.000	16.00	24.000	160.00	36.00	◯
M30	3.50	22.000	18.00	26.500	180.00	40.00	
M33	3.50	25.000	20.00	29.500	180.00	40.00	
M36	4.00	28.000	22.00	32.000	200.00	50.00	
M39	4.00	32.000	24.00	35.000	200.00	50.00	
M42	4.50	32.000	24.00	37.500	200.00	56.00	
M45	4.50	36.000	29.00	40.500	220.00	58.00	
M48	5.00	36.000	29.00	43.000	250.00	65.00	
M52	5.00	40.000	32.00	47.000	250.00	65.00	

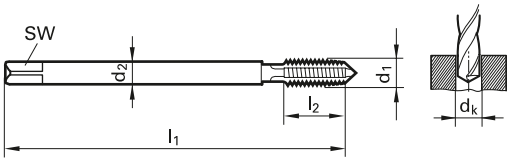
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

815	816	819	820	845	847	915
DIN 2184-1						
DIN 376						
HSS-E						
○	○	●	○	○	○	S
N	H	GG	N L15	N	N	N
B	B	C	D	B	B	B
ISO 2 / 6H	ISO 2 / 6H	6HX	ISO 2 / 6H	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103
786	790	802	787	786	786	786

Availability						
●				○		○
●				○		●
						○
●						○
●						●
●						○
●	●	○	●	●	○	●
●						○
●	●	●	○	●	○	●
●	●	●	○	●	○	●
●						○
●	●	●	●	●	●	●
●	●	●	○	●	○	●
●	●	●	○	○		●
●	●	●	○	●		●
●		●	○	○		●
●		○				●
●		●				●
●		●				●
●						●
●						●
						○
				●		●
●						●
						●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	931	948	1872
Standard		DIN 2184-1	
Standard		DIN 376	
Tool material		HSS-E	
Surface	S	●	○
Type	GG	N	VA
Form	C	B	B
Tolerance	6HX	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	802	786	796



d1	P	d2	SW	dk	l1	l2	Availability		
	mm	mm		mm	mm	mm			
M 2,5	0.45	1.800		2.050	50.00	9.00		●	
M 2,6	0.45	1.800		2.150	50.00	9.00		●	
M 3	0.50	2.200		2.500	56.00	10.00	○	○	●
M 3,5	0.60	2.500	2.10	2.900	56.00	12.00		●	
M 4	0.70	2.800	2.10	3.300	63.00	12.00	●	●	●
M 5	0.80	3.500	2.70	4.200	70.00	14.00	●	●	●
M 6	1.00	4.500	3.40	5.000	80.00	16.00	●	●	●
M 8	1.25	6.000	4.90	6.800	90.00	17.00	●	●	●
M10	1.50	7.000	5.50	8.500	100.00	20.00	●	●	●
M12	1.75	9.000	7.00	10.200	110.00	24.00	●	●	●
M14	2.00	11.000	9.00	12.000	110.00	26.00	●	●	●
M16	2.00	12.000	9.00	14.000	110.00	26.00	●	●	●
M18	2.50	14.000	11.00	15.500	125.00	30.00	●	●	●
M20	2.50	16.000	12.00	17.500	140.00	32.00	●	●	●
M22	2.50	18.000	14.50	19.500	140.00	32.00		○	
M24	3.00	18.000	14.50	21.000	160.00	36.00	●	●	●
M27	3.00	20.000	16.00	24.000	160.00	36.00			
M30	3.50	22.000	18.00	26.500	180.00	40.00		●	●
M36	4.00	28.000	22.00	32.000	200.00	50.00		●	

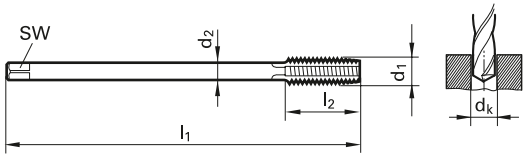
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1915	1919	2087	2428	2877	2942
DIN 2184-1					
DIN 376					
HSS-E					
C	A	S	A+M	○	●
H	GG	VA	N	N	H
B	C	B	B	B	B
ISO 2 / 6H	6HX	6HX	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103
791	802	796	798	798	791

Availability					
○	○	●	○	●	○
○	○	●	○	●	○
●	●	●	○	●	●
●	●	●	○	●	●
●	●	●	○	●	●
●	●	●	●	●	●
●	●	●	○	●	●
○	●	○	●	●	○
●		●		●	●
		●		●	
		○		●	
				●	
				●	
				●	
				●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

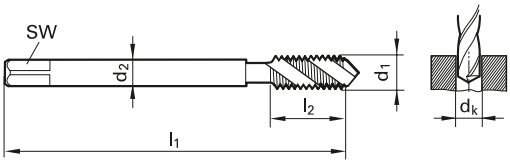
Guhring no.	998
Standard	
Standard	Guhring std.
Tool material	HSS-E
Surface	◯
Type	N
Form	B
Tolerance	ISO 2 / 6H
Cutting direction	right-hand
Discount group	103
Techn. data page	789



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 3	0.50	2.200		2.500	70.00	18.00	●
M 4	0.70	2.800	2.10	3.300	90.00	22.00	●
M 5	0.80	3.500	2.70	4.200	100.00	24.00	●
M 6	1.00	4.500	3.40	5.000	110.00	25.00	●
M 8	1.25	6.000	4.90	6.800	125.00	28.00	●
M10	1.50	7.000	5.50	8.500	140.00	30.00	●
M12	1.75	9.000	7.00	10.200	180.00	35.00	●
M14	2.00	11.000	9.00	12.000	200.00	35.00	●
M16	2.00	12.000	9.00	14.000	200.00	40.00	●
M20	2.50	16.000	12.00	17.500	250.00	45.00	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

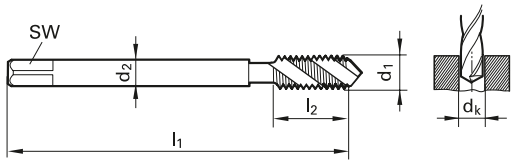
Guhring no.	764
Standard	DIN 2184-1
Standard	DIN 374
Tool material	HSS-E-PM
Surface	S
Type	VA R50
Form	C
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	787



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 8 X1	6.000	4.90	7.000	90.00	5.00	8.005	●
M10 X1	7.000	5.50	9.000	90.00	5.00	10.005	●
M12 X1	9.000	7.00	11.000	100.00	5.00	12.005	●
M12 X1,5	9.000	7.00	10.500	100.00	7.50	12.007	●
M14 X1,5	11.000	9.00	12.500	100.00	7.50	14.007	●
M16 X1,5	12.000	9.00	14.500	100.00	7.50	16.007	●
M18 X1,5	14.000	11.00	16.500	110.00	7.50	18.007	○
M20 X1,5	16.000	12.00	18.500	125.00	7.50	20.007	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	273	829	830	833	834
Standard	DIN 2184-1				
Standard	DIN 374				
Tool material	HSS-E				
Surface	S	○	○	○	○
Type	N R40	N	N	N R15	N R40
Form	C(K)	C	C	C	C
Tolerance	ISO 2 / 6H	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	799	786	786	787	787

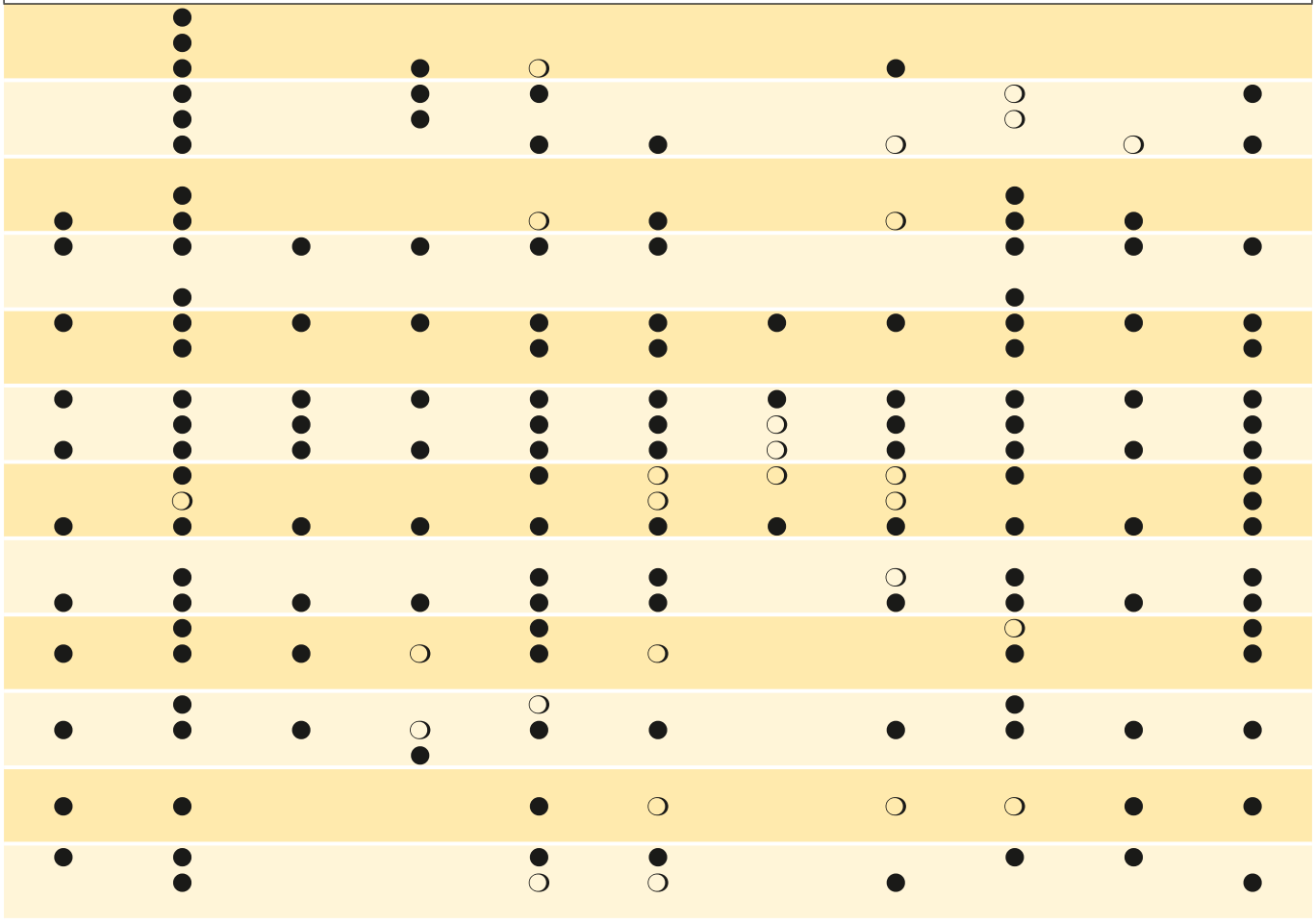


d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 3 X0,35	2.200		2.650	56.00	4.00	3.002	○
M 3,5X0,35	2.500	2.10	3.150	56.00	4.00	3.502	
M 4 X0,5	2.800	2.10	3.500	63.00	5.00	4.003	●
M 5 X0,5	3.500	2.70	4.500	70.00	5.00	5.003	◑ ●
M 6 X0,5	4.500	3.40	5.500	80.00	5.00	6.003	●
M 6 X0,75	4.500	3.40	5.200	80.00	8.00	6.004	○ ● ● ● ●
M 7 X0,75	5.500	4.30	6.200	80.00	8.00	7.004	
M 8 X0,5	6.000	4.90	7.500	80.00	8.00	8.003	
M 8 X0,75	6.000	4.90	7.200	80.00	8.00	8.004	● ●
M 8 X1	6.000	4.90	7.000	90.00	11.00	8.005	● ● ● ● ●
M 9 X1	7.000	5.50	8.000	90.00	11.00	9.005	
M10 X0,75	7.000	5.50	9.200	90.00	11.00	10.004	
M10 X1	7.000	5.50	9.000	90.00	11.00	10.005	● ● ● ● ●
M10 X1,25	7.000	5.50	8.800	100.00	14.00	10.006	● ● ● ● ●
M11 X1	8.000	6.20	10.000	90.00	11.00	11.005	
M12 X1	9.000	7.00	11.000	100.00	11.00	12.005	● ● ● ●
M12 X1,25	9.000	7.00	10.800	100.00	16.00	12.006	● ● ● ● ●
M12 X1,5	9.000	7.00	10.500	100.00	16.00	12.007	● ● ● ● ●
M14 X1	11.000	9.00	13.000	100.00	11.00	14.005	● ● ●
M14 X1,25	11.000	9.00	12.800	100.00	15.00	14.006	◑ ● ●
M14 X1,5	11.000	9.00	12.500	100.00	15.00	14.007	● ● ● ● ●
M15 X1	12.000	9.00	14.000	100.00	11.00	15.005	
M16 X1	12.000	9.00	15.000	100.00	11.00	16.005	◑ ●
M16 X1,5	12.000	9.00	14.500	100.00	15.00	16.007	● ● ● ● ●
M18 X1	14.000	11.00	17.000	110.00	12.00	18.005	●
M18 X1,5	14.000	11.00	16.500	110.00	16.00	18.007	● ● ● ● ●
M18 X2	14.000	11.00	16.000	125.00	20.00	18.008	
M20 X1	16.000	12.00	19.000	125.00	12.00	20.005	●
M20 X1,5	16.000	12.00	18.500	125.00	16.00	20.007	● ○ ● ● ●
M20 X2	16.000	12.00	18.000	140.00	20.00	20.008	
M22 X1	18.000	14.50	21.000	125.00	12.00	22.005	
M22 X1,5	18.000	14.50	20.500	125.00	16.00	22.007	● ● ● ● ●
M22 X2	18.000	14.50	20.000	140.00	22.00	22.008	
M24 X1,5	18.000	14.50	22.500	140.00	16.00	24.007	● ● ● ●
M24 X2	18.000	14.50	22.000	140.00	22.00	24.008	● ● ●
M25 X1,5	18.000	14.50	23.500	140.00	20.00	25.007	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

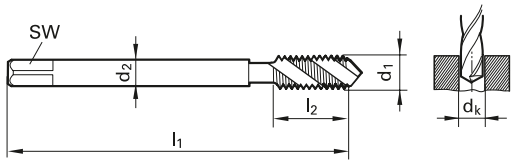
835	852	1049	1874	1971	2424	2792	2838	2843	2852	2853
DIN 2184-1										
DIN 374										
HSS-E										
○	Ⓢ	Ⓢ	●	Ⓢ	○	○	●	●	●	●
H R40	N R40	N R40	VA R15	N R15	N R40	N R40	N R15	N R40	H R40	N R40
C	C	C	C	C	C	E	C	C	C	C
ISO 2 / 6H	ISO 2 / 6H	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103	103	103	103
793	787	799	797	787	799	799	787	787	793	799

Availability



Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	273	829	830	833	834
Standard	DIN 2184-1				
Standard	DIN 374				
Tool material	HSS-E				
Surface	S	○	○	○	○
Type	N R40	N	N	N R15	N R40
Form	C(K)	C	C	C	C
Tolerance	ISO 2 / 6H	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	799	786	786	787	787



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M26 X1,5	18.000	14.50	24.500	140.00	20.00	26.007	● ●
M27 X1,5	20.000	16.00	25.500	140.00	20.00	27.007	●
M27 X2	20.000	16.00	25.000	140.00	28.00	27.008	● ●
M28 X1,5	20.000	16.00	26.500	140.00	20.00	28.007	◑ ●
M30 X1,5	22.000	18.00	28.500	150.00	20.00	30.007	● ● ●
M30 X2	22.000	18.00	28.000	150.00	20.00	30.008	● ● ●
M32 X1,5	22.000	18.00	30.500	150.00	25.00	32.007	◑ ●
M35 X1,5	28.000	22.00	33.500	170.00	25.00	35.007	●
M36 X1,5	28.000	22.00	34.500	170.00	25.00	36.007	●
M38 X1,5	28.000	22.00	36.500	170.00	25.00	38.007	●
M40 X1,5	32.000	24.00	38.500	170.00	25.00	40.007	●
M50 X1,5	36.000	29.00	48.500	190.00	27.00	50.007	●
M63 X1,5	50.000	39.00	61.500	275.00	25.00	63.007	●

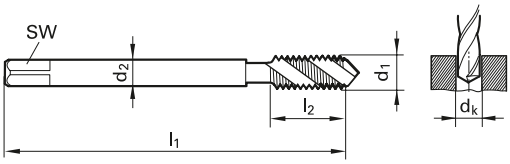
○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

835	852	1049	1874	1971	2424	2792	2838	2843	2852	2853
DIN 2184-1										
DIN 374										
HSS-E										
○	(S)	(S)	●	(S)	○	○	●	●	●	●
H R40	N R40	N R40	VA R15	N R15	N R40	N R40	N R15	N R40	H R40	N R40
C	C	C	C	C	C	E	C	C	C	C
ISO 2 / 6H	ISO 2 / 6H	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103	103	103	103
793	787	799	797	797	799	799	787	787	793	799

Availability										
				●			○	●		●
				●			●	●		●
										●
										●
										●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no.	2864	2897	2940	2987	2988
Standard	DIN 2184-1				
Standard	DIN 374				
Tool material	HSS-E				
Surface	◐	Ⓢ	●	○	◐
Type	VA R40	VA R15	H R40	H R40	H R40
Form	C	C	C	C	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 3 / 6G	ISO 3 / 6G
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	797	797	793	793	793



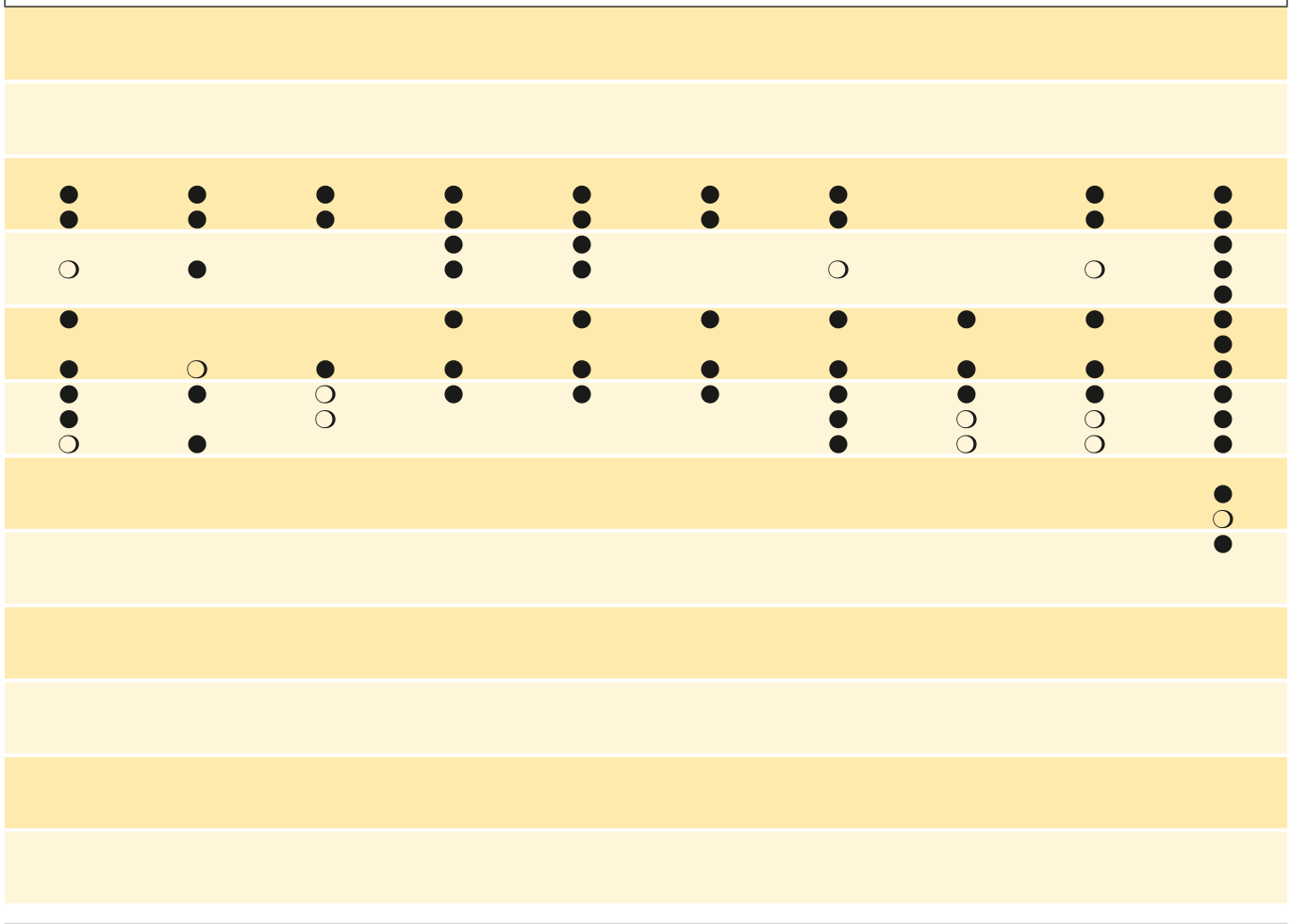
d1 X P	d2	SW	dk	l1	l2	Code no.
	mm		mm	mm	mm	
M 3 X0,35	2.200		2.650	56.00	4.00	3.002
M 4 X0,5	2.800	2.10	3.500	63.00	5.00	4.003
M 5 X0,5	3.500	2.70	4.500	70.00	5.00	5.003
M 6 X0,5	4.500	3.40	5.500	80.00	5.00	6.003
M 6 X0,75	4.500	3.40	5.200	80.00	8.00	6.004
M 8 X0,5	6.000	4.90	7.500	80.00	8.00	8.003
M 8 X0,75	6.000	4.90	7.200	80.00	8.00	8.004
M 8 X1	6.000	4.90	7.000	90.00	11.00	8.005
M10 X1	7.000	5.50	9.000	90.00	11.00	10.005
M10 X1,25	7.000	5.50	8.800	100.00	14.00	10.006
M12 X1	9.000	7.00	11.000	100.00	11.00	12.005
M12 X1,25	9.000	7.00	10.800	100.00	16.00	12.006
M12 X1,5	9.000	7.00	10.500	100.00	16.00	12.007
M14 X1,25	11.000	9.00	12.800	100.00	15.00	14.006
M14 X1,5	11.000	9.00	12.500	100.00	15.00	14.007
M16 X1,5	12.000	9.00	14.500	100.00	15.00	16.007
M18 X1,5	14.000	11.00	16.500	110.00	16.00	18.007
M20 X1,5	16.000	12.00	18.500	125.00	16.00	20.007
M20 X2	16.000	12.00	18.000	140.00	20.00	20.008
M22 X1,5	18.000	14.50	20.500	125.00	16.00	22.007
M24 X1,5	18.000	14.50	22.500	140.00	16.00	24.007
M24 X2	18.000	14.50	22.000	140.00	22.00	24.008

Availability				
●				
●	●			
●	●			
●	●			
●	●	●		
●				
●		○		
●	○	○	●	●
●	●	●		
●	●			
●	○	○		
●	●	●		●
●	○		○	○
●	●			○
●		●	○	○
	●			
●	●			
●	○			

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

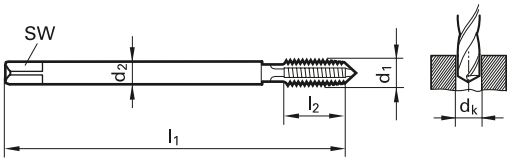
2989	2998	2999	4156	4157	874	936	1004	1100	1292
DIN 2184-1									
DIN 374									
HSS-E					HSS-E-PM				
S	○	●	C	C	○	○	S	S	S
H R40	N R40	N R40	N R15	N R15	H R15	VA R40	VA R40	N R50	N R40
C	C	C	C	E	C	C	C	C	C
ISO 3 / 6G	ISO 3 / 6G	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103	103	103
793	799	799	799	799	792	797	797	799	799
			NEW	NEW			NEW		

Availability



C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	169	316	828	831	1873
Standard	DIN 2184-1				
Standard	DIN 374				
Tool material	HSS-E				
Surface	A	○	○	●	○
Type	GG	N	H	GG	VA
Form	C	B	B	C	B
Tolerance	6HX	ISO 3 / 6G	ISO 2 / 6H	6HX	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	802	786	790	802	796



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability				
	mm		mm	mm	mm						
M 3 X0,35	2.200		2.650	56.00	7.00	3.002	○		●	●	
M 4 X0,5	2.800	2.10	3.500	63.00	8.00	4.003	○		●	○	
M 5 X0,5	3.500	2.70	4.500	70.00	10.00	5.003	○		●	○	
M 6 X0,5	4.500	3.40	5.500	80.00	13.00	6.003			●		
M 6 X0,75	4.500	3.40	5.200	80.00	13.00	6.004	○	●	●	○	●
M 7 X0,75	5.500	4.30	6.200	80.00	13.00	7.004					○
M 8 X0,75	6.000	4.90	7.200	80.00	14.00	8.004			●	○	
M 8 X1	6.000	4.90	7.000	90.00	17.00	8.005	○	●	●	●	●
M 9 X1	7.000	5.50	8.000	90.00	17.00	9.005				○	
M10 X1	7.000	5.50	9.000	90.00	17.00	10.005	●	●	●	●	●
M12 X1	9.000	7.00	11.000	100.00	20.00	12.005			●	●	●
M12 X1,5	9.000	7.00	10.500	100.00	20.00	12.007	●	●	●	●	●
M14 X1,5	11.000	9.00	12.500	100.00	20.00	14.007	●		●	●	●
M16 X1,5	12.000	9.00	14.500	100.00	22.00	16.007	●	●	●	●	●
M18 X1	14.000	11.00	17.000	110.00	25.00	18.005					●
M18 X1,5	14.000	11.00	16.500	110.00	25.00	18.007	●		●	●	●
M20 X1,5	16.000	12.00	18.500	125.00	25.00	20.007	●	●	●	●	
M22 X1,5	18.000	14.50	20.500	125.00	25.00	22.007	●		○	●	
M24 X1,5	18.000	14.50	22.500	140.00	28.00	24.007	○			●	○
M24 X2	18.000	14.50	22.000	140.00	28.00	24.008					○
M26 X1,5	18.000	14.50	24.500	140.00	28.00	26.007					
M27 X1,5	20.000	16.00	25.500	140.00	28.00	27.007				●	
M27 X2	20.000	16.00	25.000	140.00	28.00	27.008					
M28 X1,5	20.000	16.00	26.500	140.00	28.00	28.007					
M30 X1,5	22.000	18.00	28.500	150.00	28.00	30.007			○	●	
M30 X2	22.000	18.00	28.000	150.00	28.00	30.008					
M32 X1,5	22.000	18.00	30.500	150.00	28.00	32.007					
M36 X1,5	28.000	22.00	34.500	170.00	30.00	36.007					
M40 X1,5	32.000	24.00	38.500	170.00	30.00	40.007					
M42 X1,5	32.000	24.00	40.500	170.00	30.00	42.007					
M45 X1,5	36.000	29.00	43.500	180.00	32.00	45.007					
M48 X1,5	36.000	29.00	46.500	190.00	32.00	48.007					
M50 X1,5	36.000	29.00	48.500	190.00	32.00	50.007					

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

2871	2878	2879	2943	2982	2983	2992	2993	887	1001
DIN 2184-1									
DIN 374									
HSS-E									HSS-E-PM
○	A+M	○	●	○	S	○	S	○	S
VA	N	N	H	H	H	N	N	VA	VA
B	B	B	B	B	B	B	B	B	B
ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 3 / 6G	ISO 3 / 6G	ISO 3 / 6G	ISO 3 / 6G	ISO 2 / 6H	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103	103	103
796	798	798	791	790	791	798	798	796	796
									NEW

Availability									
●		●	○						●
●			●						●
●	○	●	●						●
●	○	●	○						●
●		●		○	●	●	●	○	●
●	○	●	●	○	●	●	●	●	●
●		●				○	●		●
●		●	●		●			●	●
●	○	●	●		●	●	●	○	●
	○	●		○	○	○	●		●
●	○	●	●	●	●				●
●	○	○							
		●							
		●							
		○							
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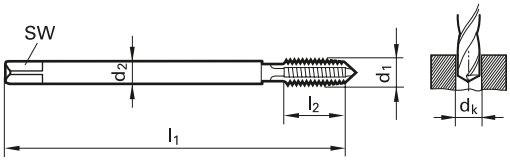
		●							
		●							
		●							
		●							

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

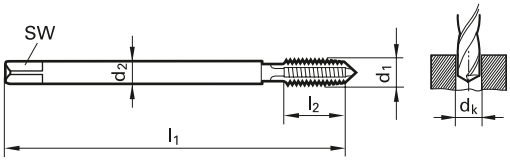
Guhring no.	944
Standard	DIN 2184-1
Standard	DIN 374
Tool material	Solid carbide
Surface	C
Type	N
Form	B
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	798



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M14 X1,25	11.000	9.00	12.800	100.00	19.00	14.006	○
M14 X1,5	11.000	9.00	12.500	100.00	22.00	14.007	●
M16 X1	12.000	9.00	15.000	100.00	15.00	16.005	○
M16 X1,5	12.000	9.00	14.500	100.00	22.00	16.007	●

○ bright ◔ steam tempered ◒ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

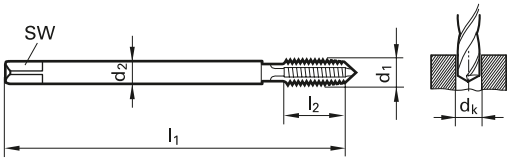
Guhring no.	827	832	932
Standard		DIN 2184-1	
Standard		DIN 374	
Tool material		HSS-E	
Surface	◯	S	S
Type	N	N	GG
Form	B	B	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H	6HX
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	786	786	802



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability		
	mm		mm	mm	mm				
M 3 X0,35	2.200		2.650	56.00	7.00	3.002	◯	◯	◯
M 3,5X0,35	2.500	2.10	3.150	56.00	8.00	3.502	◯	●	
M 4 X0,5	2.800	2.10	3.500	63.00	8.00	4.003	●	●	◯
M 5 X0,5	3.500	2.70	4.500	70.00	10.00	5.003	●	●	●
M 6 X0,5	4.500	3.40	5.500	80.00	13.00	6.003	●	●	
M 6 X0,75	4.500	3.40	5.200	80.00	13.00	6.004	●	●	●
M 7 X0,75	5.500	4.30	6.200	80.00	13.00	7.004	●	●	
M 8 X0,5	6.000	4.90	7.500	80.00	14.00	8.003	●	●	
M 8 X0,75	6.000	4.90	7.200	80.00	14.00	8.004	●	◯	
M 8 X1	6.000	4.90	7.000	90.00	17.00	8.005	●	●	●
M 9 X1	7.000	5.50	8.000	90.00	17.00	9.005	●	●	
M10 X0,75	7.000	5.50	9.200	90.00	17.00	10.004	●	●	
M10 X1	7.000	5.50	9.000	90.00	17.00	10.005	●	●	●
M10 X1,25	7.000	5.50	8.800	100.00	20.00	10.006	●	●	●
M11 X1	8.000	6.20	10.000	90.00	20.00	11.005	●	●	
M12 X1	9.000	7.00	11.000	100.00	20.00	12.005	●	●	●
M12 X1,25	9.000	7.00	10.800	100.00	20.00	12.006	●	●	●
M12 X1,5	9.000	7.00	10.500	100.00	20.00	12.007	●	●	●
M14 X1	11.000	9.00	13.000	100.00	20.00	14.005	●	●	
M14 X1,25	11.000	9.00	12.800	100.00	20.00	14.006	●	◯	●
M14 X1,5	11.000	9.00	12.500	100.00	20.00	14.007	●	●	●
M15 X1	12.000	9.00	14.000	100.00	20.00	15.005	●	◯	
M15 X1,5	12.000	9.00	13.500	100.00	20.00	15.007	●	●	
M16 X1	12.000	9.00	15.000	100.00	22.00	16.005	●	◯	
M16 X1,5	12.000	9.00	14.500	100.00	22.00	16.007	●	●	●
M18 X1	14.000	11.00	17.000	110.00	25.00	18.005	●	◯	
M18 X1,5	14.000	11.00	16.500	110.00	25.00	18.007	●	●	●
M18 X2	14.000	11.00	16.000	125.00	30.00	18.008	●	◯	
M20 X1	16.000	12.00	19.000	125.00	25.00	20.005	●	●	
M20 X1,5	16.000	12.00	18.500	125.00	25.00	20.007	●	●	●
M20 X2	16.000	12.00	18.000	140.00	32.00	20.008	●	◯	
M22 X1	18.000	14.50	21.000	125.00	25.00	22.005		◯	
M22 X1,5	18.000	14.50	20.500	125.00	25.00	22.007	●	◯	●
M22 X2	18.000	14.50	20.000	140.00	32.00	22.008	●	◯	
M24 X1	18.000	14.50	23.000	140.00	28.00	24.005	●	●	
M24 X1,5	18.000	14.50	22.500	140.00	28.00	24.007	●	◯	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

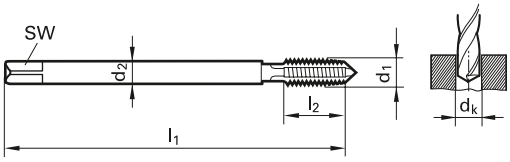
Guhring no.	827	832	932
Standard		DIN 2184-1	
Standard		DIN 374	
Tool material		HSS-E	
Surface	○	(S)	(S)
Type	N	N	GG
Form	B	B	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H	6HX
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	786	786	802



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability	
	mm		mm	mm	mm			
M24 X2	18.000	14.50	22.000	140.00	28.00	24.008	●	●
M26 X1,5	18.000	14.50	24.500	140.00	28.00	26.007	●	●
M27 X1,5	20.000	16.00	25.500	140.00	28.00	27.007	●	
M27 X2	20.000	16.00	25.000	140.00	28.00	27.008	●	●
M28 X1,5	20.000	16.00	26.500	140.00	28.00	28.007	●	●
M30 X1,5	22.000	18.00	28.500	150.00	28.00	30.007	●	●
M30 X2	22.000	18.00	28.000	150.00	28.00	30.008	●	●
M32 X1,5	22.000	18.00	30.500	150.00	28.00	32.007	●	○
M33 X1,5	25.000	20.00	31.500	160.00	30.00	33.007	●	●
M35 X1,5	28.000	22.00	33.500	170.00	30.00	35.007	●	
M36 X1,5	28.000	22.00	34.500	170.00	30.00	36.007	●	●
M38 X1,5	28.000	22.00	36.500	170.00	30.00	38.007	●	
M40 X1,5	32.000	24.00	38.500	170.00	30.00	40.007	●	
M45 X1,5	36.000	29.00	43.500	180.00	32.00	45.007	●	

○ bright ◔ steam tempered ◒ nitrided lands ● nitrided ◉ golden brown (A) TiAlN (a) TiAlN nanoA (A) TiAlN SuperA

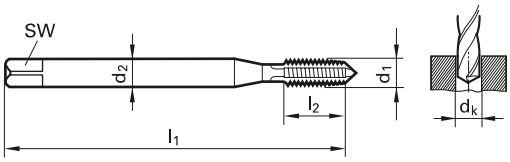
Guhring no.	2888	1291
Standard	DIN 2184-1	
Standard	DIN 374	
Tool material	HSS-E	HSS-E-PM
Surface	○	(S)
Type	N	N
Form	B	B
Tolerance	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	786	798



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability	
	mm		mm	mm	mm			
M 3 X0,35	2.200		2.650	56.00	7.00	3.002	●	
M 4 X0,5	2.800	2.10	3.500	63.00	8.00	4.003	○	
M 5 X0,5	3.500	2.70	4.500	70.00	10.00	5.003	●	
M 6 X0,5	4.500	3.40	5.500	80.00	13.00	6.003	●	
M 6 X0,75	4.500	3.40	5.200	80.00	13.00	6.004	●	
M 8 X0,5	6.000	4.90	7.500	80.00	14.00	8.003	●	
M 8 X0,75	6.000	4.90	7.200	80.00	14.00	8.004	●	
M 8 X1	6.000	4.90	7.000	90.00	17.00	8.005	●	●
M10 X0,75	7.000	5.50	9.200	90.00	17.00	10.004	●	
M10 X1	7.000	5.50	9.000	90.00	17.00	10.005	●	●
M10 X1,25	7.000	5.50	8.800	100.00	20.00	10.006	●	●
M12 X1	9.000	7.00	11.000	100.00	20.00	12.005	●	●
M12 X1,25	9.000	7.00	10.800	100.00	20.00	12.006	●	●
M12 X1,5	9.000	7.00	10.500	100.00	20.00	12.007	●	●
M14 X1	11.000	9.00	13.000	100.00	20.00	14.005	●	
M14 X1,25	11.000	9.00	12.800	100.00	20.00	14.006	○	○
M14 X1,5	11.000	9.00	12.500	100.00	20.00	14.007	●	●
M16 X1	12.000	9.00	15.000	100.00	22.00	16.005	●	
M16 X1,5	12.000	9.00	14.500	100.00	22.00	16.007	●	●
M18 X1	14.000	11.00	17.000	110.00	25.00	18.005	●	
M18 X1,5	14.000	11.00	16.500	110.00	25.00	18.007	●	●
M20 X1	16.000	12.00	19.000	125.00	25.00	20.005	●	
M20 X1,5	16.000	12.00	18.500	125.00	25.00	20.007	●	●
M20 X2	16.000	12.00	18.000	140.00	32.00	20.008	○	
M22 X1,5	18.000	14.50	20.500	125.00	25.00	22.007	○	○
M22 X2	18.000	14.50	20.000	140.00	32.00	22.008	●	
M24 X1,5	18.000	14.50	22.500	140.00	28.00	24.007	●	○
M24 X2	18.000	14.50	22.000	140.00	28.00	24.008	●	●
M27 X1,5	20.000	16.00	25.500	140.00	28.00	27.007	○	
M30 X1,5	22.000	18.00	28.500	150.00	28.00	30.007	●	
M30 X2	22.000	18.00	28.000	150.00	28.00	30.008	●	
M32 X1,5	22.000	18.00	30.500	150.00	28.00	32.007	○	

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

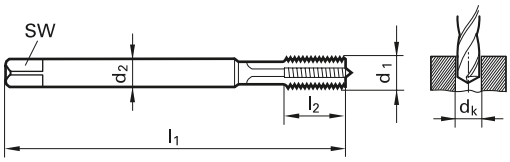
Guhring no.	943
Standard	DIN 2184-1
Standard	~ DIN 371
Tool material	Solid carbide
Surface	C
Type	N
Form	B
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	798



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 5 X0,5	6.000	4.90	4.500	70.00	7.50	5.003	●
M 6 X0,5	6.000	4.90	5.500	80.00	7.50	6.003	○
M 6 X0,75	6.000	4.90	5.200	80.00	11.50	6.004	●
M 8 X1	8.000	6.20	7.000	90.00	15.00	8.005	●
M10 X1	10.000	8.00	9.000	90.00	15.00	10.005	●
M10 X1,25	10.000	8.00	8.800	100.00	19.00	10.006	●
M12 X1	12.000	9.00	11.000	100.00	15.00	12.005	○
M12 X1,25	12.000	9.00	10.800	100.00	19.00	12.006	●
M12 X1,5	12.000	9.00	10.500	100.00	22.00	12.007	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

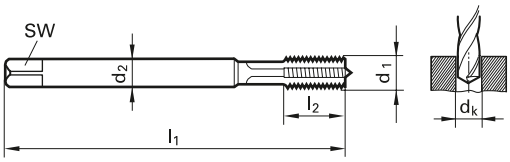
Guhring no.	1058	1062	1066
Standard	DIN 2184-1		
Standard	DIN 371		
Tool material	HSS-E-PM		
Surface	C	C	A
Type	Ti	Ti R15	Ni R10
Form	B	C	C
Tolerance	4HX	4HX	4HX
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	805	805	805
	NEW	NEW	NEW



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability		
	mm		mm	mm	mm				
MJ 6X0,5	6.000	4.90	5.500	80.00	11.00	6.003	●	●	●
MJ 6X0,75	6.000	4.90	5.200	80.00	11.00	6.004	●	●	●
MJ 8X0,5	8.000	6.20	7.500	80.00	14.00	8.003			●
MJ 8X0,75	8.000	6.20	7.200	80.00	14.00	8.004		●	●
MJ 8X1	8.000	6.20	7.000	90.00	14.00	8.005	●	○	●
MJ10X1	10.000	8.00	9.000	90.00	16.00	10.005	●	●	●
MJ10X1,25	10.000	8.00	8.800	100.00	20.00	10.006	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	2903	2910	2917	2921
Standard	DIN 2184-1			
Standard	DIN 371			
Tool material	HSS-E-PM			
Surface	C	C	A	A
Type	Ti	Ti R15	Ni	Ni R10
Form	B	C	B	C
Tolerance	6HX	6HX	6HX	6HX
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103
Techn. data page	804	804	804	804
	NEW	NEW		

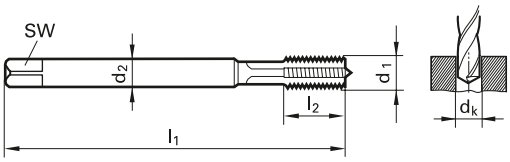


d1 X P	d2	SW	dk	l1	l2	Code no.	Availability			
	mm		mm	mm	mm					
M 3 X0,35	3.500	2.70	2.650	56.00	6.00	3.002	○	●	●	●
M 4 X0,5	4.500	3.40	3.500	63.00	7.50	4.003	●	●	●	○
M 5 X0,5	6.000	4.90	4.500	70.00	8.50	5.003	●	●		●
MJ 6X0,5	6.000	4.90	5.500	80.00	11.00	6.003	○	●	●	○
MJ 6X0,75	6.000	4.90	5.200	80.00	11.00	6.004	●	●	●	●
MJ 8X0,5	8.000	6.20	7.500	80.00	14.00	8.003			●	○
MJ 8X0,75	8.000	6.20	7.200	80.00	14.00	8.004	●	●	●	○
MJ 8X1	8.000	6.20	7.000	90.00	14.00	8.005	●	●	●	●
MJ10X1	10.000	8.00	9.000	90.00	16.00	10.005	○	●	●	●
MJ10X1,25	10.000	8.00	8.800	100.00	20.00	10.006			○	○

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4161
Standard	DIN 2184-1
Standard	DIN 371
Tool material	HSS-E-PM
Surface	C
Type	H
Form	D
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	794

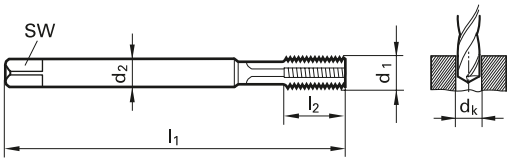
NEW



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 8 X1	8.000	6.20	7.000	90.00	17.00	8.005	●
M10 X1	10.000	8.00	9.000	90.00	17.00	10.005	●
M12 X1	12.000	9.00	11.000	100.00	20.00	12.005	●
M12 X1,50	12.000	9.00	10.500	100.00	20.00	12.007	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

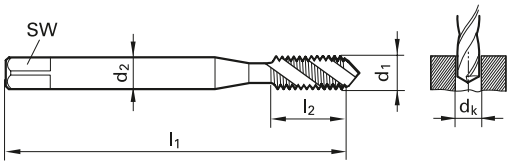
Guhring no.	1161
Standard	Guhring std.
Standard	~ DIN 371
Tool material	Solid carbide
Surface	C
Type	H
Form	D
Tolerance	ISO 2 / 6H
Cutting direction	right-hand
Discount group	103
Techn. data page	794



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 6 X0,5	6.000	4.90	5.600	80.00	15.00	6.003	●
M 8 X1	8.000	6.20	7.100	90.00	18.00	8.005	●
M10 X1	10.000	8.00	9.100	90.00	22.00	10.005	●
M12 X1	12.000	9.00	11.100	100.00	25.00	12.005	●
M12 X1,5	12.000	9.00	10.600	100.00	28.00	12.007	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

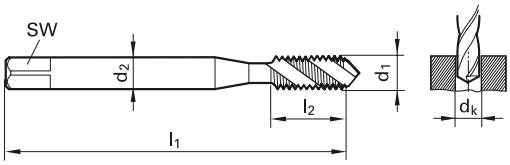
Guhring no.	876	1837	1977	1978	1981
Standard	DIN 2184-1				
Standard	~ DIN 371				
Tool material	HSS-E				
Surface	○	(S)	○	○	○
Type	N R40	N R40	N	N R15	VA R40
Form	C	C(K)	C	C	C
Tolerance	2B	2B	2B	2B	2B
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	787	799	786	787	797



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
NR. 2 -56	2.800	2.10	1.850	45.00	5.00	2.184	● ● ●
NR. 3 -48	2.800	2.10	2.100	50.00	6.00	2.515	○ ○
NR. 4 -40	3.500	2.70	2.350	56.00	7.00	2.845	● ● ● ●
NR. 5 -40	3.500	2.70	2.650	56.00	7.00	3.175	● ○ ● ○
NR. 6 -32	4.000	3.00	2.850	56.00	8.00	3.505	● ● ●
NR. 8 -32	4.500	3.40	3.500	63.00	8.00	4.166	● ○ ○ ●
NR.10 -24	6.000	4.90	3.900	70.00	11.00	4.826	● ● ○ ●
NR.12 -24	6.000	4.90	4.500	80.00	11.00	5.486	○ ○ ○ ○
1/4 -20	7.000	5.50	5.100	80.00	13.00	6.350	● ● ● ● ●
5/16-18	8.000	6.20	6.600	90.00	14.00	7.938	● ● ○ ● ●
3/8 -16	10.000	8.00	8.000	100.00	16.00	9.525	● ● ○ ● ●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

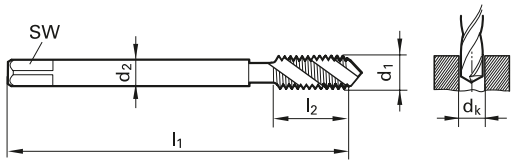
Guhring no.	2839	2844	2854	2855	2865
Standard	DIN 2184-1				
Standard	~ DIN 371				
Tool material	HSS-E				
Surface	●	●	○	●	●
Type	N R15	N R40	N R40	N R40	VA R40
Form	C	C	C	C	C
Tolerance	2B	2B	2B	2B	2B
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	787	787	799	799	797



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
NR. 2 -56	2.800	2.10	1.850	45.00	5.00	2.184	● ● ● ●
NR. 3 -48	2.800	2.10	2.100	50.00	6.00	2.515	●
NR. 4 -40	3.500	2.70	2.350	56.00	7.00	2.845	● ● ● ● ●
NR. 5 -40	3.500	2.70	2.650	56.00	7.00	3.175	●
NR. 6 -32	4.000	3.00	2.850	56.00	8.00	3.505	❍ ❍ ● ●
NR. 8 -32	4.500	3.40	3.500	63.00	8.00	4.166	● ● ● ●
NR.10 -24	6.000	4.90	3.900	70.00	11.00	4.826	❍ ● ❍ ● ●
NR.12 -24	6.000	4.90	4.500	80.00	11.00	5.486	❍
1/4 -20	7.000	5.50	5.100	80.00	13.00	6.350	● ● ● ●
5/16-18	8.000	6.20	6.600	90.00	14.00	7.938	● ● ● ●
3/8 -16	10.000	8.00	8.000	100.00	16.00	9.525	● ● ● ● ●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

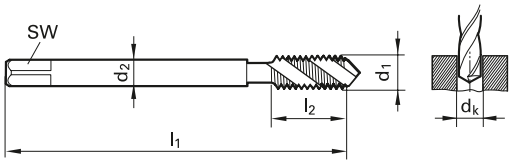
Guhring no.	881	1982	1983	1986	2840
Standard	DIN 2184-1				
Standard	~ DIN 376				
Tool material	HSS-E				
Surface	○	○	○	○	●
Type	N R40	N	N R15	VA R40	N R15
Form	C	C	C	C	C
Tolerance	2B	2B	2B	2B	2B
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	787	787	787	787	787



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability				
	mm		mm	mm	mm						
7/16-14	8.000	6.20	9.400	100.00	18.00	11.113	●	○	○	●	
1/2 -13	9.000	7.00	10.800	110.00	20.00	12.700	●	●	○	●	●
9/16-12	11.000	9.00	12.200	110.00	21.00	14.288	○	○	○	○	○
5/8 -11	12.000	9.00	13.500	110.00	24.00	15.875	●	○	●	●	
3/4 -10	14.000	11.00	16.500	125.00	25.00	19.050	●	●		●	
7/8 - 9	18.000	14.50	19.500	140.00	28.00	22.225	●	●	○	●	●
1 - 8	18.000	14.50	22.250	160.00	32.00	25.400	●	○			●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

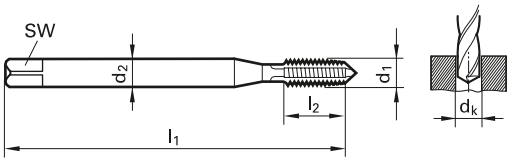
Guhring no.	2845	2856	2857	2866
Standard	DIN 2184-1			
Standard	~ DIN 376			
Tool material	HSS-E			
Surface	●	○	●	●
Type	N R40	N R40	N R40	VA R40
Form	C	C	C	C
Tolerance	2B	2B	2B	2B
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103
Techn. data page	787	799	799	797



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability			
	mm		mm	mm	mm					
7/16-14	8.000	6.20	9.400	100.00	18.00	11.113	●	●	●	●
1/2 -13	9.000	7.00	10.800	110.00	20.00	12.700	●	●	●	●
9/16-12	11.000	9.00	12.200	110.00	21.00	14.288	●	●	○	
5/8 -11	12.000	9.00	13.500	110.00	24.00	15.875	●	●	●	●
3/4 -10	14.000	11.00	16.500	125.00	25.00	19.050	●	●	●	●
7/8 - 9	18.000	14.50	19.500	140.00	28.00	22.225	●	●	●	●
1 - 8	18.000	14.50	22.250	160.00	32.00	25.400	●	●		

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

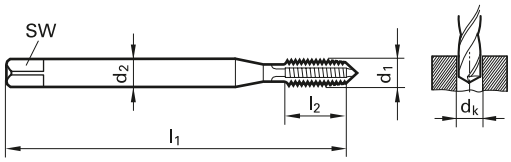
Guhring no.	873	1979	1980	2872	2880
Standard	DIN 2184-1				
Standard	~ DIN 371				
Tool material	HSS-E				
Surface	○	●	○	◍	A+M
Type	N	GG	VA	VA	N
Form	B	C	B	B	B
Tolerance	2B	2B	2B	2B	2B
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	786	802	796	796	798



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
NR. 1 -64	2.800	2.10	1.550	45.00	8.00	1.854	○
NR. 2 -56	2.800	2.10	1.850	45.00	9.00	2.184	●
NR. 3 -48	2.800	2.10	2.100	50.00	9.00	2.515	● ○
NR. 4 -40	3.500	2.70	2.350	56.00	11.00	2.845	● ● ● ○
NR. 5 -40	3.500	2.70	2.650	56.00	11.00	3.175	● ● ○
NR. 6 -32	4.000	3.00	2.850	56.00	12.00	3.505	● ● ● ●
NR. 8 -32	4.500	3.40	3.500	63.00	13.00	4.166	● ○ ● ● ○
NR.10 -24	6.000	4.90	3.900	70.00	14.00	4.826	● ● ● ● ○
NR.12 -24	6.000	4.90	4.500	80.00	16.00	5.486	● ○ ● ○
1/4 -20	7.000	5.50	5.100	80.00	16.00	6.350	● ● ● ●
5/16-18	8.000	6.20	6.600	90.00	18.00	7.938	● ● ● ●
3/8 -16	10.000	8.00	8.000	100.00	20.00	9.525	● ● ● ●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

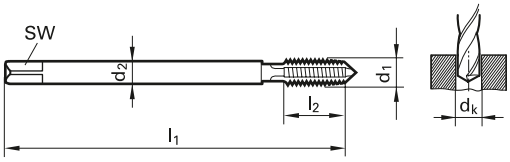
Guhring no.	2881	2889	2905	2918
Standard	DIN 2184-1			
Standard	~ DIN 371			
Tool material	HSS-E		HSS-E-PM	
Surface	○	○	C	A
Type	N	N	Ti	Ni
Form	B	B	B	B
Tolerance	2B	2B	2BX	2BX
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103
Techn. data page	798	786	804	804



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability			
	mm		mm	mm	mm					
NR. 3 -48	2.800	2.10	2.100	50.00	9.00	2.515		❍		
NR. 4 -40	3.500	2.70	2.350	56.00	11.00	2.845	●	❍		
NR. 5 -40	3.500	2.70	2.650	56.00	11.00	3.175	❍			
NR. 6 -32	4.000	3.00	2.850	56.00	12.00	3.505	●	●	●	●
NR. 8 -32	4.500	3.40	3.500	63.00	13.00	4.166	●	●	❍	●
NR.10 -24	6.000	4.90	3.900	70.00	14.00	4.826	●	●	●	●
NR.12 -24	6.000	4.90	4.500	80.00	16.00	5.486	●	❍	●	●
1/4 -20	7.000	5.50	5.100	80.00	16.00	6.350	●	●	●	●
5/16-18	8.000	6.20	6.600	90.00	18.00	7.938	●	●	●	●
3/8 -16	10.000	8.00	8.000	100.00	20.00	9.525	●	●	●	●

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

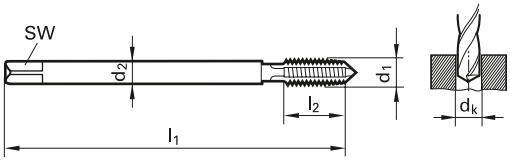
Guhring no.	878	1984	1985	2873	2883
Standard	DIN 2184-1				
Standard	~ DIN 376				
Tool material	HSS-E				
Surface	○	●	○	◍	◍
Type	N	GG	VA	VA	N
Form	B	C	B	B	B
Tolerance	2B	2B	2B	2B	2B
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	786	802	796	796	798



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability				
	mm		mm	mm	mm						
7/16-14	8.000	6.20	9.400	100.00	22.00	11.113	●	●			●
1/2 -13	9.000	7.00	10.800	110.00	25.00	12.700	●	●	●	●	●
9/16-12	11.000	9.00	12.200	110.00	30.00	14.288		●	❍		
5/8 -11	12.000	9.00	13.500	110.00	30.00	15.875	●	●	●	●	●
3/4 -10	14.000	11.00	16.500	125.00	33.00	19.050	●	●	●		●
7/8 - 9	18.000	14.50	19.500	140.00	35.00	22.225	●		●		●
1 - 8	18.000	14.50	22.250	160.00	38.00	25.400	●		●	●	❍
1 1/8 - 7	22.000	18.00	25.000	180.00	44.00	28.575	❍				
1 1/4 - 7	22.000	18.00	28.000	180.00	44.00	31.750	●				

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

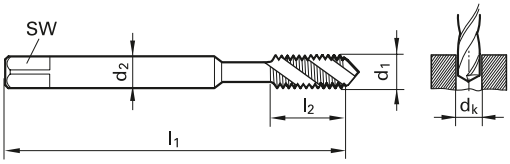
Guhring no.	2890
Standard	DIN 2184-1
Standard	~ DIN 376
Tool material	HSS-E
Surface	◯
Type	N
Form	B
Tolerance	2B
Cutting direction	right-hand
Discount group	103
Techn. data page	786



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
1/2 -13	9.000	7.00	10.800	110.00	25.00	12.700	●
5/8 -11	12.000	9.00	13.500	110.00	30.00	15.875	●
3/4 -10	14.000	11.00	16.500	125.00	33.00	19.050	●
7/8 - 9	18.000	14.50	19.500	140.00	35.00	22.225	●
1 - 8	18.000	14.50	22.250	160.00	38.00	25.400	❍
1 1/8 - 7	22.000	18.00	25.000	180.00	44.00	28.575	❍
1 1/4 - 7	22.000	18.00	28.000	180.00	44.00	31.750	❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

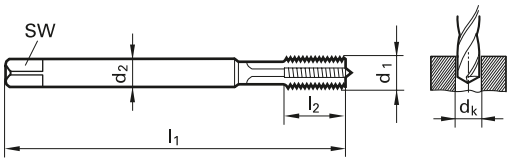
Guhring no.	2912	2922
Standard	DIN 2184-1	
Standard	~ DIN 371 / ~ DIN 376	
Tool material	HSS-E-PM	
Surface	C	A
Type	Ti R15	Ni R10
Form	C	C
Tolerance	2BX	2BX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	804	804



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability	
	mm		mm	mm	mm			
NR. 4 -40	3.500	2.70	2.350	56.00	11.00	2.845	●	●
NR. 5 -40	3.500	2.70	2.650	56.00	11.00	3.175	○	●
NR. 6 -32	4.000	3.00	2.850	56.00	12.00	3.505	●	●
NR. 8 -32	4.500	3.40	3.500	63.00	13.00	4.166	●	●
NR.10 -24	6.000	4.90	3.900	70.00	14.00	4.826	●	●
NR.12 -24	6.000	4.90	4.500	80.00	16.00	5.486	●	●
1/4 -20	7.000	5.50	5.100	80.00	16.00	6.350	●	●
5/16-18	8.000	6.20	6.600	90.00	18.00	7.938	○	●
3/8 -16	10.000	8.00	8.000	100.00	20.00	9.525	●	●
7/16-14	8.000	6.20	9.400	100.00	22.00	11.113	○	●
1/2 -13	9.000	7.00	10.800	110.00	25.00	12.700	●	●
5/8 -11	12.000	9.00	13.500	110.00	30.00	15.875	●	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

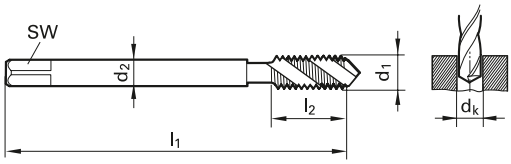
Guhring no.	1059	1063	1067
Standard	DIN 2184-1		
Standard	~ DIN 371 / ~ DIN 376		
Tool material	HSS-E-PM		
Surface	C	C	A
Type	Ti	Ti R15	Ni R10
Form	B	C	C
Tolerance	3BX	3BX	3BX
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	805	805	805
	NEW	NEW	NEW



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability		
	mm		mm	mm	mm				
NR. 6 -32	4.000	3.00	2.850	56.00	12.00	3.505	●	○	●
NR. 8 -32	4.500	3.40	3.500	63.00	13.00	4.166	●	●	●
NR.10 -24	6.000	4.90	3.900	70.00	14.00	4.826	●	●	●
NR.12 -24	6.000	4.90	4.500	80.00	16.00	5.486	●	●	●
1/4 -20	7.000	5.50	5.100	80.00	16.00	6.350	○	●	●
5/16-18	8.000	6.20	6.600	90.00	18.00	7.938	●	●	●
3/8 -16	10.000	8.00	8.000	100.00	20.00	9.525	●	●	●
7/16-14	8.000	6.20	9.400	100.00	22.00	11.113	●	●	●
1/2 -13	9.000	7.00	10.800	110.00	25.00	12.700	●	●	●
5/8 -11	12.000	9.00	13.500	110.00	30.00	15.875	●	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

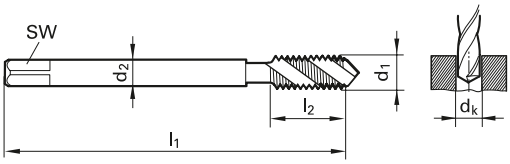
Guhring no.	911	1838	1987	1988	1991
Standard	DIN 2184-1				
Standard	~ DIN 374				
Tool material	HSS-E				
Surface	○	(S)	○	○	●
Type	N R40	N R40	N	N R15	VA R15
Form	C	C(K)	C	C	C
Tolerance	2B	2B	2B	2B	2B
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	787	799	786	787	797



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability				
	mm		mm	mm	mm						
NR. 3 -56	1.800		2.150	50.00	5.00	2.515	●		○	○	
NR. 4 -48	2.200		2.400	56.00	6.00	2.845			○	○	
NR. 5 -44	2.500	2.10	2.700	56.00	6.00	3.175	○		○		
NR. 6 -40	2.500	2.10	2.950	56.00	6.50	3.505	○		○	○	
NR. 8 -36	2.800	2.10	3.500	63.00	7.00	4.166	●		○	○	
NR.10 -32	3.500	2.70	4.100	70.00	8.50	4.826	●	●	●		●
NR.12 -28	4.000	3.00	4.600	80.00	9.00	5.486	○	●	○	○	
1/4 -28	4.500	3.40	5.500	80.00	9.00	6.350	●	●	○	●	●
5/16-24	6.000	4.90	6.900	90.00	11.00	7.938	●	●	●	●	●
3/8 -24	7.000	5.50	8.500	90.00	11.00	9.525	●	○	●	●	●
7/16-20	8.000	6.20	9.900	100.00	13.00	11.113	●	○	○	○	●
1/2 -20	9.000	7.00	11.500	100.00	13.00	12.700	●	○	○	○	●
9/16-18	11.000	9.00	12.900	100.00	14.00	14.288	●		○	●	
5/8 -18	12.000	9.00	14.500	100.00	15.00	15.875	●	●	●	○	●
3/4 -16	14.000	11.00	17.500	110.00	16.00	19.050	●		●	●	
7/8 -14	18.000	14.50	20.400	125.00	19.00	22.225	●	○	●		
1 -12	18.000	14.50	23.250	140.00	22.00	25.400	○	○	○	○	

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no.	2841	2846
Standard	DIN 2184-1	
Standard	~ DIN 374	
Tool material	HSS-E	
Surface	●	●
Type	N R15	N R40
Form	C	C
Tolerance	2B	2B
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	787	787



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
NR. 3 -56	1.800		2.150	50.00	5.00	2.515	
NR. 4 -48	2.200		2.400	56.00	6.00	2.845	
NR. 5 -44	2.500	2.10	2.700	56.00	6.00	3.175	
NR. 6 -40	2.500	2.10	2.950	56.00	6.50	3.505	
NR. 8 -36	2.800	2.10	3.500	63.00	7.00	4.166	
NR.10 -32	3.500	2.70	4.100	70.00	8.50	4.826	●
NR.12 -28	4.000	3.00	4.600	80.00	9.00	5.486	○
1/4 -28	4.500	3.40	5.500	80.00	9.00	6.350	●
5/16-24	6.000	4.90	6.900	90.00	11.00	7.938	●
3/8 -24	7.000	5.50	8.500	90.00	11.00	9.525	● ●
7/16-20	8.000	6.20	9.900	100.00	13.00	11.113	●
1/2 -20	9.000	7.00	11.500	100.00	13.00	12.700	● ●
5/8 -18	12.000	9.00	14.500	100.00	15.00	15.875	●
3/4 -16	14.000	11.00	17.500	110.00	16.00	19.050	● ●
7/8 -14	18.000	14.50	20.400	125.00	19.00	22.225	○
1 -12	18.000	14.50	23.250	140.00	22.00	25.400	

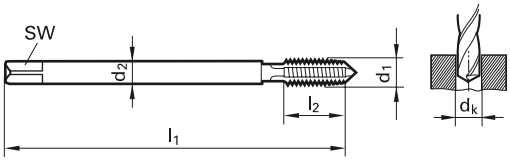
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

2858	2859	2867	2868	2898
DIN 2184-1				
~ DIN 374				
HSS-E				
○	◍	○	◍	Ⓢ
N R40	N R40	VA R40	VA R40	VA R15
C	C	C	C	C
2B	2B	2B	2B	2B
right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103
799	799	797	797	797

Availability				
	❍		❍	
	●		●	●
	●		❍	❍
❍				❍
				❍
	●		●	●
❍	●	❍	❍	❍
●	●		●	❍
●	●	●	●	●
	●		●	❍
	●		●	❍
	●		●	❍
	●		●	❍
❍	●	●	●	❍
		❍		❍

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	908	1989
Standard	DIN 2184-1	
Standard	~ DIN 374	
Tool material	HSS-E	
Surface	○	●
Type	N	GG
Form	B	C
Tolerance	2B	2B
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	786	802



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability	
	mm		mm	mm	mm			
NR. 3 -56	1.800		2.150	50.00	9.00	2.515	○	○
NR. 4 -48	2.200		2.400	56.00	10.00	2.845	○	○
NR. 5 -44	2.500	2.10	2.700	56.00	10.00	3.175	○	
NR. 6 -40	2.500	2.10	2.950	56.00	11.00	3.505	○	○
NR. 8 -36	2.800	2.10	3.500	63.00	12.00	4.166	○	
NR.10 -32	3.500	2.70	4.100	70.00	14.00	4.826	●	
NR.12 -28	4.000	3.00	4.600	80.00	16.00	5.486	●	●
1/4 -28	4.500	3.40	5.500	80.00	16.00	6.350	●	●
5/16-24	6.000	4.90	6.900	90.00	18.00	7.938	●	●
3/8 -24	7.000	5.50	8.500	90.00	18.00	9.525	●	●
7/16-20	8.000	6.20	9.900	100.00	22.00	11.113	●	●
1/2 -20	9.000	7.00	11.500	100.00	20.00	12.700	●	●
9/16-18	11.000	9.00	12.900	100.00	22.00	14.288	●	●
5/8 -18	12.000	9.00	14.500	100.00	22.00	15.875	●	
3/4 -16	14.000	11.00	17.500	110.00	25.00	19.050	●	●
7/8 -14	18.000	14.50	20.400	125.00	25.00	22.225	●	●
1 -12	18.000	14.50	23.250	140.00	28.00	25.400	●	○
1 1/8 -12	22.000	18.00	26.500	150.00	28.00	28.575	●	
1 1/4 -12	22.000	18.00	29.500	150.00	28.00	31.750	●	

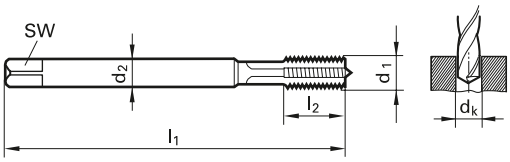
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1990	2874	2884	2885	2891
DIN 2184-1				
~ DIN 374				
HSS-E				
○	○	A+M	○	○
VA	VA	N	N	N
B	B	B	B	B
2B	2B	2B	2B	2B
right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103
796	796	798	798	786

Availability				
❍				❍
❍		❍	❍	
	●	❍	❍	❍
●	●			●
●	❍	❍	●	●
●	●	❍		
●		●	●	●
				●
				●
	❍	❍	●	
	❍	●	❍	●
		❍		
				●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

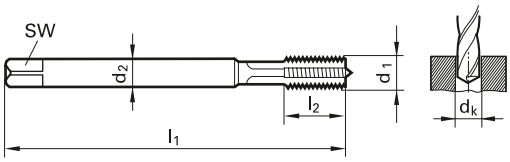
Guhring no.	2907	2919	2914	2923
Standard	DIN 2184-1			
Standard	~ DIN 371		~ DIN 371 / ~ DIN 374	
Tool material	HSS-E-PM			
Surface	C	A	C	A
Type	Ti	Ni	Ti R15	Ni R10
Form	B	B	C	C
Tolerance	2BX	2BX	2BX	2BX
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103
Techn. data page	804	804	804	804



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability			
	mm		mm	mm	mm					
NR. 4 -48	3.500	2.70	2.400	56.00	10.00	2.845			●	●
NR. 5 -44	3.500	2.70	2.700	56.00	10.00	3.175			●	●
NR. 6 -40	4.000	3.00	2.950	56.00	11.00	3.505	●	❍	❍	●
NR. 8 -36	4.500	3.40	3.500	63.00	12.00	4.166	●	●	●	●
NR.10 -32	6.000	4.90	4.100	70.00	14.00	4.826	●	●	●	●
NR.12 -28	6.000	4.90	4.600	80.00	16.00	5.486	●	❍	●	●
1/4 -28	7.000	5.50	5.500	80.00	16.00	6.350	●	●	●	●
5/16-24	8.000	6.20	6.900	90.00	17.00	7.938	●	●	❍	●
3/8 -24	10.000	8.00	8.500	90.00	16.00	9.525	●	❍	●	●
7/16-20	8.000	6.20	9.900	100.00	22.00	11.113			●	●
1/2 -20	9.000	7.00	11.500	100.00	20.00	12.700			●	●
5/8 -18	12.000	9.00	14.500	100.00	22.00	15.875			●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

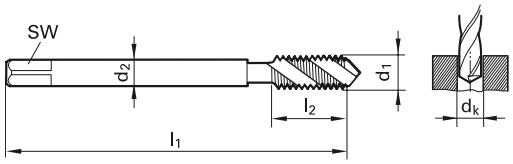
Guhring no.	1060	1064	1068
Standard	DIN 2184-1		
Standard	~ DIN 371 / ~ DIN 374		
Tool material	HSS-E-PM		
Surface	C	C	A
Type	Ti	Ti R15	Ni R10
Form	B	C	C
Tolerance	3BX	3BX	3BX
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	805	805	805
	NEW	NEW	NEW



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability		
	mm		mm	mm	mm				
NR. 6 -40	4.000	3.00	2.950	56.00	12.00	3.505	●	●	●
NR. 8 -36	4.500	3.40	3.500	63.00	13.00	4.166	●	●	●
NR.10 -32	6.000	4.90	4.100	70.00	14.00	4.826	●	●	●
NR.12 -28	6.000	4.90	4.600	80.00	16.00	5.486	●	●	●
1/4 -28	7.000	5.50	5.500	80.00	16.00	6.350	●	●	●
5/16-24	8.000	6.20	6.900	90.00	18.00	7.938	●	●	●
3/8 -24	10.000	8.00	8.500	100.00	20.00	9.525	●	●	●
7/16-20	8.000	6.20	9.900	100.00	22.00	11.113	●	●	●
1/2 -20	9.000	7.00	11.500	100.00	20.00	12.700	●	●	●
5/8 -18	12.000	9.00	14.500	100.00	22.00	15.875	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

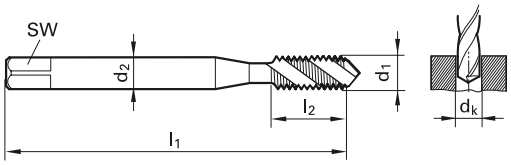
Guhring no.	2848
Standard	DIN 2184-1
Standard	~ DIN 376
Tool material	HSS-E
Surface	◯
Type	N R40
Form	C
Tolerance	
Cutting direction	right-hand
Discount group	103
Techn. data page	787



d1	P	d2	SW	dk	l1	l2	Code no.	Availability
	G/inch	mm		mm	mm	mm		
W 3/8	16.00	7.000	5.50	7.900	100.00	16.00	9.525	●
W 7/16	14.00	8.000	6.20	9.200	100.00	18.00	11.113	●
W 1/2	12.00	9.000	7.00	10.500	110.00	20.00	12.700	●
W 9/16	12.00	11.000	9.00	12.000	110.00	21.00	14.287	◯
W 5/8	11.00	12.000	9.00	13.500	110.00	24.00	15.876	●
W 3/4	10.00	14.000	11.00	16.250	125.00	25.00	19.051	●
W 7/8	9.00	18.000	14.50	19.250	140.00	28.00	22.226	●
W1	8.00	18.000	14.50	22.000	160.00	32.00	25.401	◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

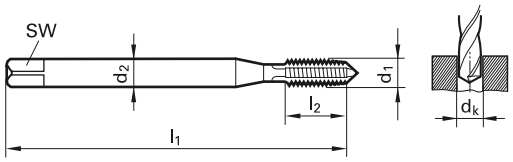
Guhring no.	2847	2893
Standard	DIN 2184-1	
Standard	~ DIN 371	~ DIN 376
Tool material	HSS-E	
Surface	●	●
Type	N R40	N
Form	C	B
Tolerance		
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	787	786



d1	P	d2	SW	dk	l1	l2	Code no.	Availability	
	G/inch	mm		mm	mm	mm			
W 1/8	40.00	3.500	2.70	2.500	56.00	7.00	3.175	●	
W 3/16	24.00	6.000	4.90	3.600	70.00	11.00	4.762	●	
W 1/4	20.00	7.000	5.50	5.100	80.00	13.00	6.350	●	
W 5/16	18.00	8.000	6.20	6.500	90.00	14.00	7.938	●	
W 3/8	16.00	10.000	8.00	7.900	100.00	16.00	9.525	●	
W 7/16	14.00	8.000	6.20	9.200	100.00	22.00	11.113		●
W 1/2	12.00	9.000	7.00	10.500	110.00	25.00	12.700		●
W 9/16	12.00	11.000	9.00	12.000	110.00	30.00	14.287		○
W 5/8	11.00	12.000	9.00	13.500	110.00	30.00	15.876		●
W 3/4	10.00	14.000	11.00	16.250	125.00	33.00	19.051		●
W 7/8	9.00	18.000	14.50	19.250	140.00	35.00	22.226		○
W1	8.00	18.000	14.50	22.000	160.00	38.00	25.401		○

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	2892
Standard	DIN 2184-1
Standard	~ DIN 371
Tool material	HSS-E
Surface	◯
Type	N
Form	B
Tolerance	
Cutting direction	right-hand
Discount group	103
Techn. data page	786

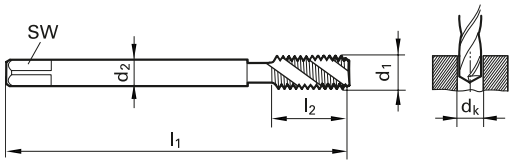


d1	P	d2	SW	dk	l1	l2	Code no.	Availability
	G/inch	mm		mm	mm	mm		
W 1/8	40.00	3.500	2.70	2.500	56.00	11.00	3.175	●
W 5/32	32.00	4.500	3.40	3.200	63.00	13.00	3.969	●
W 3/16	24.00	6.000	4.90	3.600	70.00	14.00	4.762	●
W 1/4	20.00	7.000	5.50	5.100	80.00	16.00	6.350	●
W 5/16	18.00	8.000	6.20	6.500	90.00	18.00	7.938	●
W 3/8	16.00	10.000	8.00	7.900	100.00	20.00	9.525	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4159
Standard	DIN 2184-1
Standard	DIN 5156
Tool material	HSS-E-PM
Surface	S
Type	VA R40
Form	C
Tolerance	
Cutting direction	right-hand
Discount group	103
Techn. data page	797

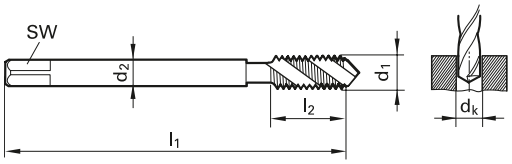
NEW



d1	P	d2	SW	dk	l1	l2	Code no.	Availability
	G/inch	mm		mm	mm	mm		
G 1/16	28.00	6.000	4.90	6.800	90.00	4.50	7.723	●
G 1/8	28.00	7.000	5.50	8.800	90.00	4.50	9.728	●
G 1/4	19.00	11.000	9.00	11.800	100.00	6.70	13.157	●
G 3/8	19.00	12.000	9.00	15.250	100.00	6.70	16.662	●
G 1/2	14.00	16.000	12.00	19.000	125.00	9.10	20.955	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	937	963	964
Standard		DIN 2184-1	
Standard		DIN 5156	
Tool material		HSS-E	
Surface	(S)	○	○
Type	N R40	N	N R15
Form	C(K)	C	C
Tolerance			
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	799	786	787



d1	P	d2	SW	dk	l1	l2	Code no.	Availability		
	G/inch	mm		mm	mm	mm				
G 1/16	28.00	6.000	4.90	6.800	90.00	11.00	7.723		○	
G 1/8	28.00	7.000	5.50	8.800	90.00	11.00	9.728	●	●	●
G 1/4	19.00	11.000	9.00	11.800	100.00	14.00	13.157	●	●	●
G 3/8	19.00	12.000	9.00	15.250	100.00	14.00	16.662	●	●	●
G 1/2	14.00	16.000	12.00	19.000	125.00	18.00	20.955	●	●	●
G 5/8	14.00	18.000	14.50	21.000	125.00	18.00	22.911		●	
G 3/4	14.00	20.000	16.00	24.500	140.00	20.00	26.441	●	●	●
G 7/8	14.00	22.000	18.00	28.250	150.00	22.00	30.201	◐		
G1	11.00	25.000	20.00	30.750	160.00	24.00	33.249	●	●	●
G1 1/8	11.00	28.000	22.00	35.500	170.00	24.00	37.897	◐		
G1 1/4	11.00	32.000	24.00	39.500	170.00	25.00	41.910		●	
G1 3/8	11.00	36.000	29.00	41.750	180.00	27.00	44.323		◐	
G1 1/2	11.00	36.000	29.00	45.250	190.00	27.00	47.803	◐	●	
G2	11.00	45.000	35.00	57.000	220.00	32.00	59.614		●	

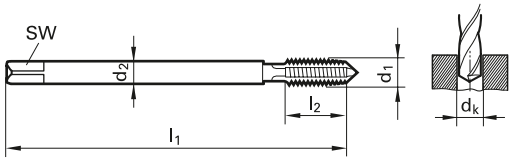
○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

965	968	2842	2849	2860	2861	4158	939
DIN 2184-1							
DIN 5156							
HSS-E							HSS-E-PM
○	●	●	●	○	●	C	○
N R40	VA R40	N R15	N R40	N R40	N R40	N R15	VA R40
C	C	C	C	C	C	E	C
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103
787	797	787	787	799	799	799	797
						NEW	

Availability							
●	○					●	
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
				○			
●	●	●	●	●	●	●	
	○				○		
●	●	●	●	●	●	●	
●	●				●		
	○						
●	●				●		
					●		

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	961	962
Standard	DIN 2184-1	
Standard	DIN 5156	
Tool material	HSS-E	
Surface	●	○
Type	GG	N
Form	C	B
Tolerance		
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	802	786



d1	P	d2	SW	dk	l1	l2	Code no.	Availability	
	G/inch	mm		mm	mm	mm			
G 1/16	28.00	6.000	4.90	6.800	90.00	18.00	7.723	❍	
G 1/8	28.00	7.000	5.50	8.800	90.00	18.00	9.728	●	●
G 1/4	19.00	11.000	9.00	11.800	100.00	20.00	13.157	●	●
G 3/8	19.00	12.000	9.00	15.250	100.00	22.00	16.662	●	●
G 1/2	14.00	16.000	12.00	19.000	125.00	25.00	20.955	●	●
G 5/8	14.00	18.000	14.50	21.000	125.00	25.00	22.911		❍
G 3/4	14.00	20.000	16.00	24.500	140.00	28.00	26.441	●	●
G 7/8	14.00	22.000	18.00	28.250	150.00	28.00	30.201		
G1	11.00	25.000	20.00	30.750	160.00	30.00	33.249	●	●
G1 1/8	11.00	28.000	22.00	35.500	170.00	30.00	37.897	❍	
G1 1/4	11.00	32.000	24.00	39.500	170.00	30.00	41.910	●	●
G1 3/8	11.00	36.000	29.00	41.750	180.00	32.00	44.323	❍	
G1 1/2	11.00	36.000	29.00	45.250	190.00	32.00	47.803	●	●
G2	11.00	45.000	35.00	57.000	220.00	40.00	59.614	●	●

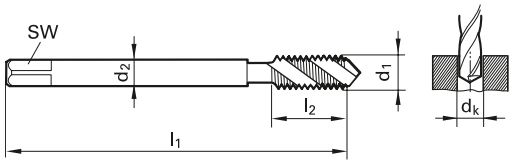
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

967	2875	2886	2887	2894	938
DIN 2184-1					
DIN 5156					
HSS-E					HSS-E-PM
○	●	A+M	●	●	○
VA	VA	N	N	N	VA
B	B	B	B	B	B
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103
796	796	798	798	786	796

Availability					
❍					
●	●	●	●	●	●
●	●		●	●	
●	●		●	●	
●		❍			
●	●		●	●	
●			●		
			●		
			●		
			●		
			●		

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1088	1087
Standard		
Standard	Guhring std.	
Tool material	HSS-E	
Surface	S	
Type	VA R25	VA R25
Form	C	C
Tolerance		
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	797	797

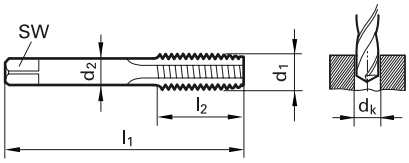


d1	P	d2	SW	dk	l1	l2	Code no.	Availability	
	G/inch	mm		mm	mm	mm			
1/8	27.00	11.000	9.00	8.500	90.00	15.00	10.620	●	●
1/4	18.00	14.000	11.00	11.200	100.00	21.00	14.140	●	●
3/8	18.00	16.000	12.00	14.400	110.00	21.00	17.570	●	●
1/2	14.00	18.000	14.50	18.000	125.00	27.00	21.900	●	●
3/4	14.00	22.000	18.00	23.400	140.00	27.00	27.230	●	●

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4127
Standard	
Standard	Guhring std.
Tool material	HSS-E
Surface	S
Type	VA R25
Form	C
Tolerance	
Cutting direction	right-hand
Discount group	103
Techn. data page	797

NEW

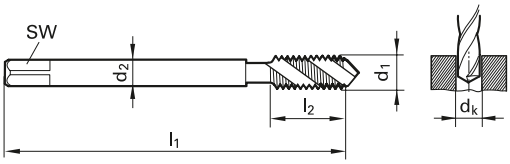


d1	P	d2	SW	dk	l1	l2	Code no.	Availability
	G/inch	mm		mm	mm	mm		
1/16	27.00	8.000	6.20	6.250	90.00	14.00	8.190	●
1/8	27.00	11.000	9.00	8.500	90.00	15.00	10.620	●
1/4	18.00	14.000	11.00	11.200	100.00	21.00	14.140	●
3/8	18.00	16.000	12.00	14.400	110.00	21.00	17.570	●
1/2	14.00	18.000	14.50	18.000	125.00	27.00	21.900	●
3/4	14.00	22.000	18.00	23.400	140.00	27.00	27.230	●
1	11.50	25.000	20.00	29.100	170.00	32.00	34.180	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1011
Standard	
Standard	DIN 40435
Tool material	HSS-E
Surface	S
Type	N R40
Form	C
Tolerance	6H mod
Cutting direction	right-hand
Discount group	103
Techn. data page	799

NEW

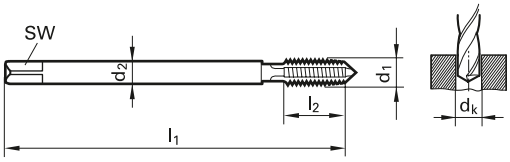


d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
EG M 4	0.70	6.000	4.90	4.200	70.00	7.50	●
EG M 5	0.80	6.000	4.90	5.250	80.00	8.50	●
EG M 6	1.00	8.000	6.20	6.300	90.00	11.00	●
EG M 8	1.25	10.000	8.00	8.400	100.00	14.00	●
EG M10	1.50	9.000	7.00	10.500	100.00	16.00	●
EG M12	1.75	11.000	9.00	12.500	110.00	18.50	●
EG M14	2.00	12.000	9.00	14.500	110.00	20.00	●
EG M16	2.00	14.000	11.00	16.500	125.00	20.00	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	1010
Standard	
Standard	DIN 40435
Tool material	HSS-E
Surface	S
Type	N
Form	B
Tolerance	6H mod
Cutting direction	right-hand
Discount group	103
Techn. data page	798

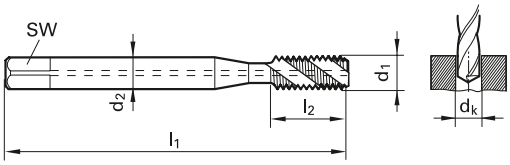
NEW



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
EG M 4	0.70	6.000	4.90	4.200	70.00	12.00	●
EG M 5	0.80	6.000	4.90	5.250	80.00	14.00	●
EG M 6	1.00	8.000	6.20	6.300	90.00	17.00	●
EG M 8	1.25	10.000	8.00	8.400	100.00	20.00	●
EG M10	1.50	9.000	7.00	10.500	100.00	20.00	●
EG M12	1.75	11.000	9.00	12.500	110.00	30.00	●
EG M14	2.00	12.000	9.00	14.500	110.00	26.00	●
EG M16	2.00	14.000	11.00	16.500	125.00	33.00	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1891	1892	1893
Standard		DIN 2184-1	
Standard		DIN 371	
Tool material		HSS-E	
Surface	◯	◯	◯
Type	N R15	VA R40	N R40
Form	C	C	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	806	797	787



d1	P	d2	SW	dk	l1	l2	Availability		
	mm	mm		mm	mm	mm			
M 5	0.80	6.000	4.90	4.200	70.00	8.50	●	●	●
M 6	1.00	6.000	4.90	5.000	80.00	11.00	●	●	●
M 8	1.25	8.000	6.20	6.800	90.00	14.00	●	●	●
M10	1.50	10.000	8.00	8.500	100.00	16.00	●	●	●

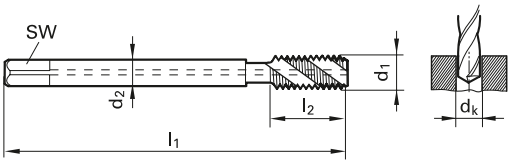
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1894	2436	2438	2514	1152	1188
DIN 2184-1					
DIN 371					
HSS-E				HSS-E-PM	
○	S	S	A+M	C	C
H R40	N R15	N R40	N R40	N R50	H R15
C	C	C	C	C	C
ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	6HX
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103
793	787	787	799	799	792

Availability					
●	○	●	●	●	
●	●	●	●	●	●
●	●	●	●	●	●
○	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1898	1899
Standard	DIN 2184-1	
Standard	DIN 376	
Tool material	HSS-E	
Surface	◯	◯
Type	N R15	VA R40
Form	C	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	806	797



d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M12	1.75	9.000	7.00	10.200	110.00	18.50	●	●
M14	2.00	11.000	9.00	12.000	110.00	20.00	●	◯
M16	2.00	12.000	9.00	14.000	110.00	20.00	◯	●
M18	2.50	14.000	11.00	15.500	125.00	25.00		
M20	2.50	16.000	12.00	17.500	140.00	25.00		◯
M22	2.50	18.000	14.50	19.500	140.00	27.00		
M24	3.00	18.000	14.50	21.000	160.00	30.00		

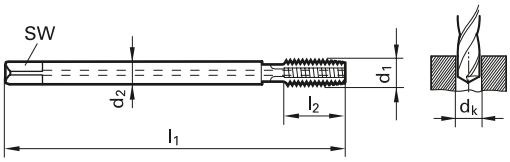
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1901	2437	2439	1194	1293
		DIN 2184-1		
		DIN 376		
HSS-E			HSS-E-PM	
○	S	S	C	S
H R40	N R15	N R40	H R15	N R50
C	C	C	C	C
ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	6HX	ISO 2 / 6H
right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103
793	787	787	792	799

Availability				
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	
			●	
			●	
			●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	969	971
Standard	DIN 2184-1	
Standard	DIN 371	
Tool material	Solid carbide	
Surface	◯	◯
Type	H	N R15
Form	C	C
Tolerance	6HX	6HX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	801	801



d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M 3	0.50	3.500	2.70	2.500	56.00	8.00	●	●
M 4	0.70	4.500	3.40	3.300	63.00	10.00	●	●
M 5	0.80	6.000	4.90	4.200	70.00	10.00	●	●
M 6	1.00	6.000	4.90	5.000	80.00	12.00	●	●
M 8	1.25	8.000	6.20	6.800	90.00	16.00	●	●
M10	1.50	10.000	8.00	8.500	100.00	18.00	●	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

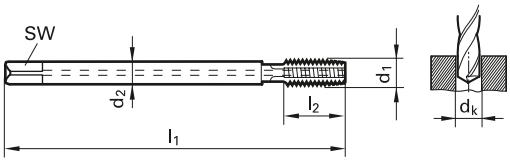
1008	1858	2311	2506	2510	2516
DIN 2184-1					
DIN 371					
Solid carbide					
○	○	A	A	A	M
H	H	H	H	N R15	N R15
E	C	C	C	C	C
6HX	6HX	6HX	6HX	6HX	6HX
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103
801	801	803	803	803	801

NEW

Availability					
●	●	●	●	●	○
●	●	●	●	●	●
●	●	●	●	●	○
●	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

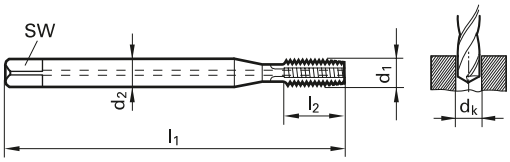
Guhring no.	1859	1883
Standard	DIN 2184-1	
Standard	DIN 376	
Tool material	Solid carbide	
Surface	◯	◯
Type	H	H
Form	C	C
Tolerance	6HX	6HX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	801	801



d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M12	1.75	9.000	7.00	10.200	110.00	22.00	●	●
M14	2.00	11.000	9.00	12.000	110.00	22.00	●	●
M16	2.00	12.000	9.00	14.000	110.00	22.00	●	●
M18	2.50	14.000	11.00	15.500	125.00	24.00	●	●
M20	2.50	16.000	12.00	17.500	140.00	25.00	●	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

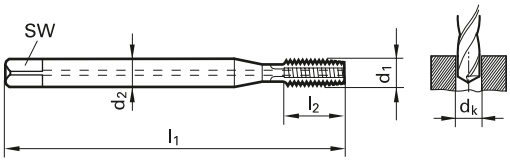
Guhring no.	318	1890	2517	302	1091
Standard	DIN 2184-1				
Standard	DIN 371				
Tool material	HSS-E			HSS-E-PM	
Surface	A	●	A+M	C	C
Type	GG	GG	N	H	H
Form	C	C	B	C	E
Tolerance	6HX	6HX	ISO 2 / 6H	6HX	6HX
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	802	802	798	800	800



d1	P	d2	SW	dk	l1	l2	Availability				
	mm	mm		mm	mm	mm					
M 5	0.80	6.000	4.90	4.200	70.00	14.00	●	●	●	●	●
M 6	1.00	6.000	4.90	5.000	80.00	16.00	●	●	●	●	●
M 8	1.25	8.000	6.20	6.800	90.00	17.00	●	●	●	●	●
M10	1.50	10.000	8.00	8.500	100.00	20.00	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	319	1897
Standard	DIN 2184-1	
Standard	DIN 376	
Tool material	HSS-E	
Surface	A	●
Type	GG	GG
Form	C	C
Tolerance	6HX	6HX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	802	802

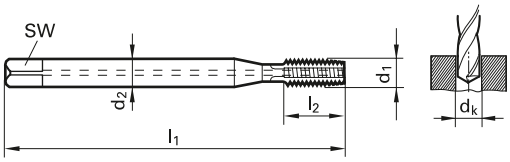


d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M12	1.75	9.000	7.00	10.200	110.00	24.00	●	●
M14	2.00	11.000	9.00	12.000	110.00	26.00	●	●
M16	2.00	12.000	9.00	14.000	110.00	26.00	●	●
M18	2.50	14.000	11.00	15.500	125.00	30.00	●	●
M20	2.50	16.000	12.00	17.500	140.00	32.00	●	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	2899	297	4165
Standard	DIN 2184-1		
Standard	DIN 376		
Tool material	HSS-E	HSS-E-PM	
Surface	A+M	C	C
Type	N AZ	H	H
Form	E	C	E
Tolerance	ISO 2 / 6H	6HX	6HX
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	803	790	793

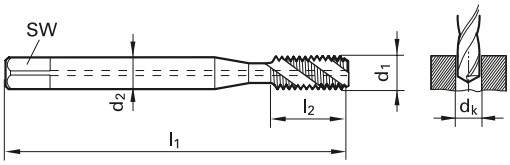
NEW



d1	P	d2	SW	dk	l1	l2	Availability		
	mm	mm		mm	mm	mm			
M 5	0.80	3.500	2.70	4.200	70.00	14.00	○		
M 6	1.00	4.500	3.40	5.000	80.00	16.00	○		
M 8	1.25	6.000	4.90	6.800	90.00	17.00	●		
M10	1.50	7.000	5.50	8.500	100.00	20.00	●	●	●
M12	1.75	9.000	7.00	10.200	110.00	24.00	○	●	●
M14	2.00	11.000	9.00	12.000	110.00	26.00		●	
M16	2.00	12.000	9.00	14.000	110.00	26.00			●
M20	2.50	16.000	12.00	17.500	140.00	32.00			●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

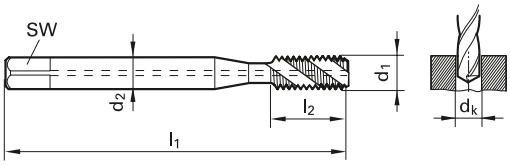
Guhring no.	1139	1142
Standard	DIN 2184-1	
Standard	DIN 371	DIN 376
Tool material	HSS-E-PM	
Surface	C	C
Type	VA R50	VA R50
Form	C	C
Tolerance	6HX	6HX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	797	797



d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M 5	0.80	6.000	4.90	4.200	70.00	4.00	●	
M 6	1.00	6.000	4.90	5.000	80.00	5.00	●	
M 8	1.25	8.000	6.20	6.800	90.00	6.30	●	
M10	1.50	10.000	8.00	8.500	100.00	7.50	●	
M12	1.75	9.000	7.00	10.200	110.00	8.80		●
M14	2.00	11.000	9.00	12.000	110.00	10.00		●
M16	2.00	12.000	9.00	14.000	110.00	10.00		●
M20	2.50	16.000	12.00	17.500	140.00	12.50		●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

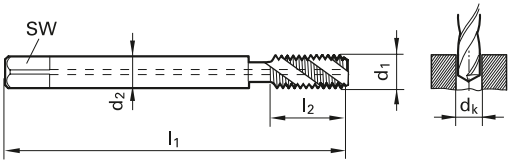
Guhring no.	1144
Standard	DIN 2184-1
Standard	DIN 374
Tool material	HSS-E-PM
Surface	C
Type	VA R50
Form	C
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	797



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 8 X1	6.000	4.90	7.000	90.00	5.00	8.005	●
M10 X1	7.000	5.50	9.000	90.00	5.00	10.005	●
M12 X1	9.000	7.00	11.000	100.00	5.00	12.005	●
M12 X1,5	9.000	7.00	10.500	100.00	7.50	12.007	●
M14 X1,5	11.000	9.00	12.500	100.00	7.50	14.007	●
M16 X1,5	12.000	9.00	14.500	100.00	7.50	16.007	●
M18 X1,5	14.000	11.00	16.500	110.00	7.50	18.007	●
M20 X1,5	16.000	12.00	18.500	125.00	7.50	20.007	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1905	1906	1907	1200	1294
Standard	DIN 2184-1				
Standard	DIN 374				
Tool material	HSS-E			HSS-E-PM	
Surface	○	○	○	C	S
Type	N R15	VA R40	H R40	H R15	N R50
Form	C	C	C	C	C
Tolerance	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	6HX	ISO 2 / 6H
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	787	797	793	792	799

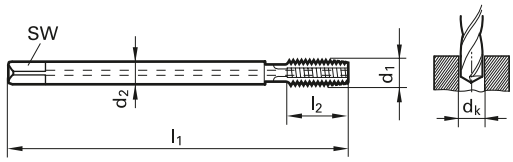


d1 X P	d2	SW	dk	l1	l2	Code no.	Availability				
	mm		mm	mm	mm						
M 5 X0,5	3.500	2.70	4.500	70.00	5.00	5.003	❍	❍			
M 6 X0,5	4.500	3.40	5.500	80.00	5.00	6.003		❍			
M 6 X0,75	4.500	3.40	5.200	80.00	8.00	6.004	❍	●	❍	●	
M 8 X0,75	6.000	4.90	7.200	80.00	8.00	8.004	●	❍	❍	●	
M 8 X1	6.000	4.90	7.000	90.00	11.00	8.005	❍	❍	❍	●	●
M 9 X1	7.000	5.50	8.000	90.00	11.00	9.005				●	
M10 X1	7.000	5.50	9.000	90.00	11.00	10.005	●	●	❍	●	❍
M10 X1,25	7.000	5.50	8.800	100.00	14.00	10.006	●				
M12 X1	9.000	7.00	11.000	100.00	11.00	12.005			❍	●	●
M12 X1,25	9.000	7.00	10.800	100.00	16.00	12.006	●			●	
M12 X1,5	9.000	7.00	10.500	100.00	16.00	12.007	❍	❍	●	●	●
M14 X1	11.000	9.00	13.000	100.00	11.00	14.005	❍				
M14 X1,25	11.000	9.00	12.800	100.00	15.00	14.006	●				
M14 X1,5	11.000	9.00	12.500	100.00	15.00	14.007			❍	●	●
M16 X1	12.000	9.00	15.000	100.00	11.00	16.005	❍				
M16 X1,5	12.000	9.00	14.500	100.00	15.00	16.007	●	❍	●	●	●
M18 X1	14.000	11.00	17.000	110.00	12.00	18.005	●				
M18 X1,5	14.000	11.00	16.500	110.00	16.00	18.007				●	●
M20 X1	16.000	12.00	19.000	125.00	12.00	20.005	●				
M20 X1,5	16.000	12.00	18.500	125.00	16.00	20.007	❍		❍	●	●
M24 X1,5	18.000	14.50	22.500	140.00	16.00	24.007				●	

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	347	1904	1007	1090
Standard	DIN 2184-1			
Standard	DIN 374			
Tool material	HSS-E		HSS-E-PM	
Surface	A	●	C	C
Type	GG	GG	H	H
Form	C	C	E	C
Tolerance	6HX	6HX	6HX	6HX
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103
Techn. data page	802	802	802	802

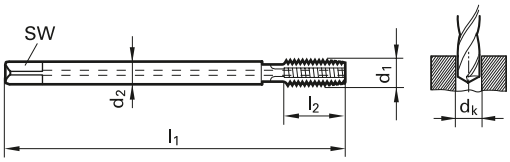
NEW



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability			
	mm		mm	mm	mm					
M 5 X0,50	3.500	2.70	4.500	70.00	10.00	5.003			●	●
M 6 X0,50	4.500	3.40	5.500	80.00	13.00	6.003			●	●
M 6 X0,75	4.500	3.40	5.200	80.00	13.00	6.004			●	●
M 8 X0,75	6.000	4.90	7.200	80.00	14.00	8.004			●	●
M 8 X1	6.000	4.90	7.000	90.00	17.00	8.005	●	●	●	○
M 9 X1	7.000	5.50	8.000	90.00	17.00	9.005			●	
M10 X1	7.000	5.50	9.000	90.00	17.00	10.005	●	●	●	●
M10 X1,25	7.000	5.50	8.800	100.00	20.00	10.006			○	●
M12 X1	9.000	7.00	11.000	100.00	20.00	12.005	●	●	●	○
M12 X1,25	9.000	7.00	10.800	100.00	20.00	12.006			●	●
M12 X1,5	9.000	7.00	10.500	100.00	20.00	12.007	●	●	●	●
M14 X1	11.000	9.00	13.000	100.00	20.00	14.005			●	
M14 X1,25	11.000	9.00	12.800	100.00	20.00	14.006			●	
M14 X1,5	11.000	9.00	12.500	100.00	20.00	14.007	●	●	●	●
M16 X1	12.000	9.00	15.000	100.00	22.00	16.005			●	
M16 X1,5	12.000	9.00	14.500	100.00	22.00	16.007	●	●	●	●
M18 X1,5	14.000	11.00	16.500	110.00	25.00	18.007	●	●		
M20 X1,5	16.000	12.00	18.500	125.00	25.00	20.007	●	●		
M22 X1,5	18.000	14.50	20.500	125.00	25.00	22.007	●			
M24 X1,5	18.000	14.50	22.500	140.00	28.00	24.007	●			

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	972	975	977
Standard		DIN 2184-1	
Standard		DIN 371	
Tool material		Solid carbide	
Surface	○	○	○
Type	H	N L15	N R15
Form	C	D	C
Tolerance	6HX	6HX	6HX
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	803	808	808



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability		
	mm		mm	mm	mm				
M 4 X0,5	4.500	3.40	3.500	63.00	10.00	4.003		●	●
M 5 X0,5	6.000	4.90	4.500	70.00	10.00	5.003	●	●	●
M 6 X0,5	6.000	4.90	5.500	80.00	12.00	6.003			●
M 8 X1	8.000	6.20	7.000	90.00	16.00	8.005	●	●	●
M10 X1	10.000	8.00	9.000	90.00	18.00	10.005	●		●
M12 X1	9.000	7.00	11.000	100.00	22.00	12.005			
M12 X1,5	9.000	7.00	10.500	100.00	22.00	12.007			
M14 X1,5	11.000	9.00	12.500	100.00	22.00	14.007			
M16 X1,5	12.000	9.00	14.500	100.00	22.00	16.007			
M18 X1,5	14.000	11.00	16.500	110.00	24.00	18.007			
M20 X1,5	16.000	12.00	18.500	125.00	25.00	20.007			

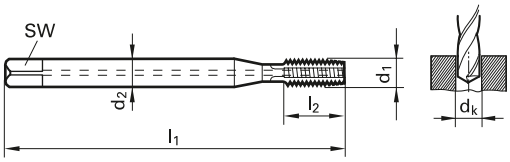
○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1861	974	976	978	1009	1860
DIN 2184-1					
DIN 371			DIN 374		
Solid carbide					
○	○	○	○	○	○
H	H	N L15	N R15	H	H
C	C	D	C	E	C
6HX	6HX	6HX	6HX	6HX	6HX
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103
808	808	808	808	808	808
				NEW	

Availability						
	❍					
	❍ ●				●	
		●	❍	●	●	●
		●	●	●	●	●
		●	●	●	●	●
		●	●	●	●	●
		●	●	❍		●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

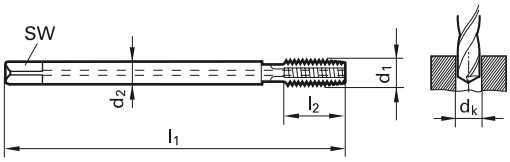
Guhring no.	1085	1086
Standard	DIN 2184-1	
Standard	~ DIN 371	~ DIN 376
Tool material	HSS-E	
Surface	A	A
Type	GG	GG
Form	C	C
Tolerance	2B	2B
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	802	802



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
NR.10 -24	6.000	4.90	3.900	70.00	14.00	4.826	○
NR.12 -24	6.000	4.90	4.500	80.00	16.00	5.486	●
1/4 -20	7.000	5.50	5.100	80.00	16.00	6.350	●
5/16-18	8.000	6.20	6.600	90.00	18.00	7.938	●
3/8 -16	10.000	8.00	8.000	100.00	20.00	9.525	●
7/16-14	8.000	6.20	9.400	100.00	22.00	11.113	○
1/2 -13	9.000	7.00	10.800	110.00	25.00	12.700	●
5/8 -11	12.000	9.00	13.500	110.00	30.00	15.875	●
3/4 -10	14.000	11.00	16.500	125.00	33.00	19.050	●
7/8 - 9	18.000	14.50	19.500	140.00	35.00	22.225	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

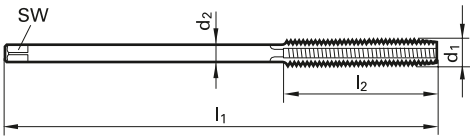
Guhring no.	1082
Standard	DIN 2184-1
Standard	~ DIN 374
Tool material	HSS-E
Surface	A
Type	GG
Form	C
Tolerance	2B
Cutting direction	right-hand
Discount group	103
Techn. data page	802



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
NR.10 -32	3.500	2.70	4.100	70.00	14.00	4.826	○
NR.12 -28	4.000	3.00	4.600	80.00	16.00	5.486	●
1/4 -28	4.500	3.40	5.500	80.00	16.00	6.350	○
5/16-24	6.000	4.90	6.900	90.00	18.00	7.938	○
3/8 -24	7.000	5.50	8.500	90.00	18.00	9.525	●
7/16-20	8.000	6.20	9.900	100.00	22.00	11.113	○
1/2 -20	9.000	7.00	11.500	100.00	20.00	12.700	○
5/8 -18	12.000	9.00	14.500	100.00	22.00	15.875	○
3/4 -16	14.000	11.00	17.500	110.00	25.00	19.050	○
7/8 -14	18.000	14.50	20.400	125.00	25.00	22.225	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

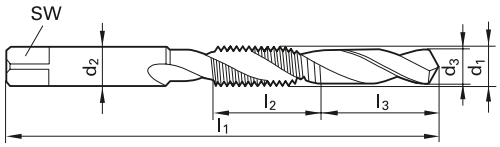
Guhring no.	851
Standard	
Standard	DIN 357
Tool material	HSS-E
Surface	◯
Type	N
Form	
Tolerance	ISO 2 / 6H
Cutting direction	right-hand
Discount group	103
Techn. data page	788



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 3	0.50	2.200		2.500	70.00	22.00	●
M 4	0.70	2.800	2.10	3.300	90.00	25.00	●
M 5	0.80	3.500	2.70	4.200	100.00	28.00	●
M 6	1.00	4.500	3.40	5.000	110.00	32.00	●
M 8	1.25	6.000	4.90	6.800	125.00	40.00	●
M10	1.50	7.000	5.50	8.500	140.00	45.00	●
M12	1.75	9.000	7.00	10.200	180.00	50.00	●
M14	2.00	11.000	9.00	12.000	200.00	56.00	◯
M16	2.00	12.000	9.00	14.000	200.00	63.00	●
M18	2.50	14.000	11.00	15.500	220.00	63.00	◯
M20	2.50	16.000	12.00	17.500	250.00	70.00	●
M24	3.00	18.000	14.50	21.000	280.00	80.00	◯
M30	3.50	22.000	18.00	26.500	315.00	100.00	◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

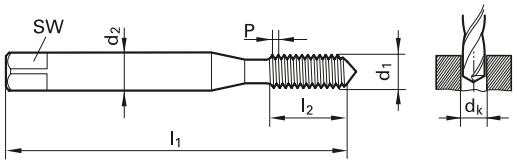
Guhring no.	1839
Standard	Guhring std.
Tool material	HSS-E
Surface	◯
Type	N
Form	D
Cutting direction	right-hand
Tolerance	ISO 2 / 6H
Discount group	103
Techn. data page	789



d1	P	d3	d2	SW	l1	l2	l3	Availability
	mm	mm	mm		mm	mm	mm	
M 3	0.50	2.500	3.500	2.70	62.00	12.00	9.00	●
M 4	0.70	3.300	4.500	3.40	66.00	16.00	10.00	●
M 5	0.80	4.200	6.000	4.90	75.00	18.00	12.00	●
M 6	1.00	5.000	6.000	4.90	81.00	20.00	14.00	●
M 8	1.25	6.800	6.000	4.90	93.00	12.00	20.00	●
M10	1.50	8.500	7.000	5.50	99.00	14.00	22.00	●
M12	1.75	10.200	9.000	7.00	106.00	16.00	25.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	921	920	1255
Standard		DIN 2174	
Standard		~ DIN 371	
Tool material	HSS-E		HSS-E-PM
Surface	S	S	S
Type	N	N	N
Form	C	C	C
Tolerance	6HX	6GX	6HX
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	814	814	814



d1	P	d2	SW	dk	l1	l2
	mm	mm		mm	mm	mm
M 2	0.40	2.800	2.10	1.850	45.00	8.00
M 2,5	0.45	2.800	2.10	2.300	50.00	9.00
M 3	0.50	3.500	2.70	2.800	56.00	10.00
M 3,5	0.60	4.000	3.00	3.250	56.00	12.00
M 4	0.70	4.500	3.40	3.700	63.00	12.00
M 5	0.80	6.000	4.90	4.650	70.00	14.00
M 6	1.00	6.000	4.90	5.550	80.00	16.00
M 8	1.25	8.000	6.20	7.400	90.00	17.00
M10	1.50	10.000	8.00	9.300	100.00	20.00
M12	1.75	9.000	7.00	11.200	110.00	24.00
M14	2.00	11.000	9.00	13.100	110.00	26.00
M16	2.00	12.000	9.00	15.100	110.00	26.00
M18	2.50	14.000	11.00	16.900	125.00	30.00
M20	2.50	16.000	12.00	18.900	140.00	32.00

Availability		
●	●	●
●	●	●
●	●	●
●	●	
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●

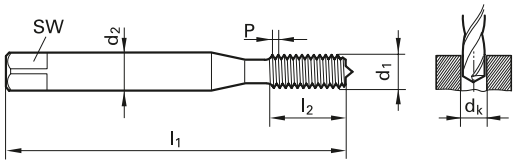
○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1347	903	1565	925	924	1256	952	1567
DIN 2174							
	~ DIN 371				~ DIN 376		
HSS-E-PM			HSS-E		HSS-E-PM		
Cb	S	Cb	S	S	S	S	Cb
N	N	N	N	N	N	N	N
C	C	C	C	C	C	C	C
6HX	6GX	6GX	6HX	6GX	6HX	6GX	6GX
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103
814	814	814	814	814	814	814	814

Availability							
●	●	●					
●	●	○					
●	●	●					
●	●	●					
●	●	●					
○	●						
			●	●	●	●	
			●	○	●	○	○
			●		○	○	●
			○	○	○		
				○	●	○	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1280	1257
Standard	DIN 2174	
Standard	~ DIN 371	
Tool material	HSS-E	HSS-E-PM
Surface	S	S
Type	N	N
Form	C	C
Tolerance	6GX	6HX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	814	814



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability	
	mm		mm	mm	mm			
M 8 X1	8.000	6.20	7.550	90.00	17.00	8.005		●
M 9 X1	9.000	7.00	8.550	90.00	17.00	9.005		●
M10 X1	10.000	8.00	9.550	90.00	17.00	10.005	●	●
M10 X1,25	10.000	8.00	9.400	100.00	20.00	10.006		
M12 X1	9.000	7.00	11.550	100.00	20.00	12.005		
M12 X1,25	9.000	7.00	11.400	100.00	20.00	12.006		
M12 X1,5	9.000	7.00	11.300	100.00	20.00	12.007		
M14 X1	11.000	9.00	13.550	100.00	20.00	14.005		
M14 X1,25	11.000	9.00	13.400	100.00	20.00	14.006		
M14 X1,5	11.000	9.00	13.300	100.00	20.00	14.007		
M16 X1	12.000	9.00	15.550	100.00	22.00	16.005		
M16 X1,5	12.000	9.00	15.300	100.00	22.00	16.007		
M20 X1	16.000	12.00	19.550	125.00	25.00	20.005		
M20 X1,5	16.000	12.00	19.300	125.00	25.00	20.007		
M24 X1,5	18.000	14.50	23.300	140.00	28.00	24.007		
M24 X2	18.000	14.50	23.100	140.00	28.00	24.008		

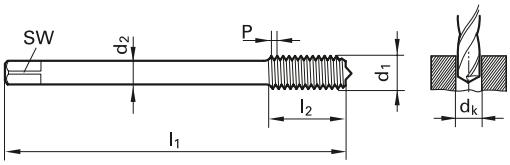
○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1568	1740	1569	1258	1580
		DIN 2174		
	~ DIN 371		~ DIN 374	
		HSS-E-PM		
Cb	S	Cb	S	Cb
N	N	N	N	N
C	C	C	C	C
6HX	6GX	6GX	6HX	6GX
right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103
814	814	814	814	814

Availability				
●	●	●		
●	○	●		
	●			
			○	○
			●	
			●	○
			○	
			●	○
			○	
			○	●
			●	○
			●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

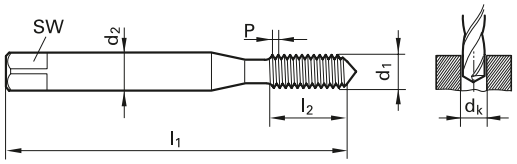
Guhring no.	929	928
Standard	DIN 2174	
Standard	~ DIN 374	
Tool material	HSS-E	
Surface	S	S
Type	N	N
Form	C	C
Tolerance	6HX	6GX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	814	814



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability	
	mm		mm	mm	mm			
M 8 X1	6.000	4.90	7.550	90.00	17.00	8.005	●	●
M10 X1	7.000	5.50	9.550	90.00	17.00	10.005	●	
M12 X1,5	9.000	7.00	11.300	100.00	20.00	12.007		●
M14 X1	11.000	9.00	13.550	100.00	20.00	14.005	●	○
M16 X1,5	12.000	9.00	15.300	100.00	22.00	16.007		○
M18 X1	14.000	11.00	17.550	110.00	25.00	18.005	●	○
M18 X1,5	14.000	11.00	17.300	110.00	25.00	18.007	●	●
M20 X1	16.000	12.00	19.550	125.00	25.00	20.005	○	
M20 X1,5	16.000	12.00	19.300	125.00	25.00	20.007	●	
M22 X1,5	18.000	14.50	21.300	125.00	25.00	22.007	○	
M24 X1,5	18.000	14.50	23.300	140.00	28.00	24.007	○	

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

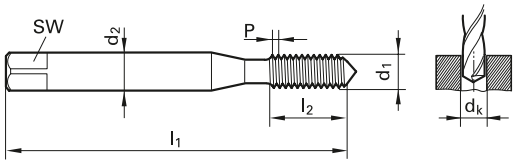
Guhring no.	2273	2274
Standard	DIN 2184-1	
Standard	~ DIN 371	~ DIN 376
Tool material	HSS-E	
Surface	S	S
Type	N	N
Form	C	C
Tolerance	2BX	2BX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	814	814



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability	
	mm		mm	mm	mm			
NR.10 -24	6.000	4.90	4.350	70.00	14.00	4.826	●	
NR.12 -24	6.000	4.90	5.000	80.00	16.00	5.486	●	
1/4 -20	7.000	5.50	5.750	80.00	16.00	6.350	●	
5/16-18	8.000	6.20	7.300	90.00	18.00	7.938	●	
3/8 -16	10.000	8.00	8.800	100.00	20.00	9.525	●	
7/16-14	8.000	6.20	10.300	100.00	22.00	11.113		●
1/2 -13	9.000	7.00	11.800	110.00	25.00	12.700		●
9/16-12	11.000	9.00	13.300	110.00	30.00	14.288		●
5/8 -11	12.000	9.00	14.800	110.00	30.00	15.875		○
3/4 -10	14.000	11.00	17.900	125.00	33.00	19.050		●
7/8 - 9	18.000	14.50	21.000	140.00	35.00	22.225		○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

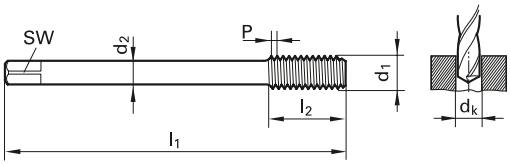
Guhring no.	1283
Standard	DIN 2184-1
Standard	~ DIN 371
Tool material	HSS-E
Surface	S
Type	N
Form	C
Tolerance	2BX
Cutting direction	right-hand
Discount group	103
Techn. data page	814



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
NR.10 -32	6.000	4.90	4.450	70.00	14.00	4.826	●
NR.12 -28	6.000	4.90	5.100	80.00	16.00	5.486	●
1/4 -28	7.000	5.50	5.950	80.00	16.00	6.350	❍
5/16-24	8.000	6.20	7.450	90.00	18.00	7.938	●
3/8 -24	10.000	8.00	9.050	90.00	18.00	9.525	❍

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

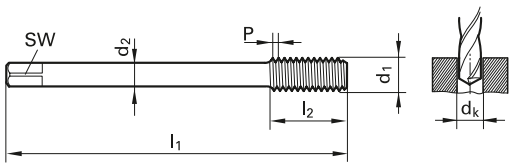
Guhring no.	2275
Standard	DIN 2184-1
Standard	~ DIN 374
Tool material	HSS-E
Surface	S
Type	N
Form	C
Tolerance	2BX
Cutting direction	right-hand
Discount group	103
Techn. data page	814



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
NR.10 -32	3.500	2.70	4.450	70.00	14.00	4.826	●
NR.12 -28	4.000	3.00	5.100	80.00	16.00	5.486	●
1/4 -28	4.500	3.40	5.950	80.00	16.00	6.350	●
5/16-24	6.000	4.90	7.450	90.00	18.00	7.938	❍
3/8 -24	7.000	5.50	9.050	90.00	18.00	9.525	❍
7/16-20	8.000	6.20	10.550	100.00	22.00	11.113	●
5/8 -18	12.000	9.00	15.250	100.00	22.00	15.875	●
3/4 -16	14.000	11.00	18.350	110.00	25.00	19.050	●
7/8 -14	18.000	14.50	21.400	125.00	25.00	22.225	●
1 -12	18.000	14.50	24.450	140.00	28.00	25.400	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

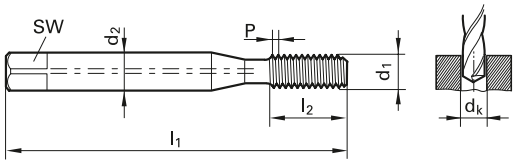
Guhring no.	966
Standard	DIN 2184-1
Standard	DIN 2189
Tool material	HSS-E
Surface	S
Type	N
Form	C
Tolerance	
Cutting direction	right-hand
Discount group	103
Techn. data page	814



d1	P	d2	SW	dk	l1	l2	Code no.	Availability
	G/inch	mm		mm	mm	mm		
G 1/8	28.00	7.000	5.50	9.300	90.00	18.00	9.728	●
G 1/4	19.00	11.000	9.00	12.500	100.00	20.00	13.157	●
G 3/8	19.00	12.000	9.00	16.000	100.00	22.00	16.662	●
G 1/2	14.00	16.000	12.00	20.000	125.00	25.00	20.955	●
G 3/4	14.00	20.000	16.00	25.500	140.00	28.00	26.441	●
G1 1/4	11.00	32.000	24.00	40.750	170.00	30.00	41.910	○

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

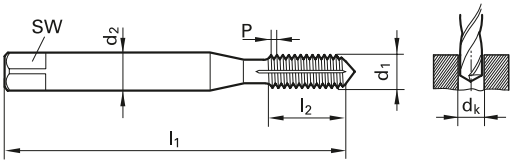
Guhring no.	2518
Standard	DIN 2174
Standard	~ DIN 371
Tool material	Solid carbide
Surface	S
Type	N
Form	C
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	814



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 5	0.80	6.000	4.90	4.650	70.00	8.50	●
M 6	1.00	6.000	4.90	5.550	80.00	11.00	●
M 8	1.25	8.000	6.20	7.400	90.00	14.00	●
M10	1.50	10.000	8.00	9.300	100.00	16.00	●
M12	1.75	9.000	7.00	11.200	110.00	18.50	●
M16	2.00	12.000	9.00	15.100	110.00	20.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

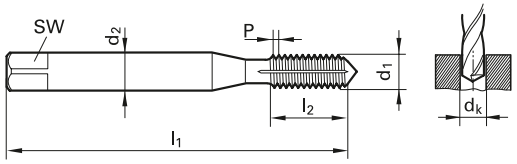
Guhring no.	322	339
Standard	DIN 2174	
Standard	~ DIN 371	~ DIN 376
Tool material	HSS-E-PM	
Surface	S	S
Type	N	N
Form	C	C
Tolerance	6HX	6HX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	813	813



d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M 3	0.50	3.500	2.70	2.800	56.00	6.00	●	
M 4	0.70	4.500	3.40	3.700	63.00	7.50	●	
M 5	0.80	6.000	4.90	4.650	70.00	8.50	●	
M 6	1.00	6.000	4.90	5.550	80.00	11.00	●	
M 8	1.25	8.000	6.20	7.400	90.00	14.00	●	
M10	1.50	10.000	8.00	9.300	100.00	16.00	●	
M12	1.75	9.000	7.00	11.200	110.00	18.50		●
M14	2.00	11.000	9.00	13.100	110.00	20.00		●
M16	2.00	12.000	9.00	15.100	110.00	20.00		●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

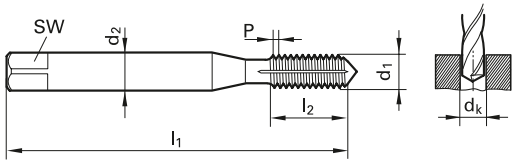
Guhring no.	2012
Standard	DIN 2174
Standard	~ DIN 371
Tool material	HSS-E
Surface	C
Type	N
Form	C
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	812



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 3	0.50	3.500	2.70	2.800	56.00	10.00	●
M 4	0.70	4.500	3.40	3.700	63.00	12.00	●
M 5	0.80	6.000	4.90	4.650	70.00	14.00	●
M 6	1.00	6.000	4.90	5.550	80.00	16.00	●
M 8	1.25	8.000	6.20	7.400	90.00	17.00	●
M10	1.50	10.000	8.00	9.300	100.00	20.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	919	1587	918	1588
Standard	DIN 2174			
Standard	~ DIN 371			
Tool material	HSS-E			
Surface	S	P	S	P
Type	N	N	N	N
Form	C	C	C	C
Tolerance	6HX	6HX	6GX	6GX
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103
Techn. data page	812	812	812	812



d1	P	d2	SW	dk	l1	l2	Availability			
	mm	mm		mm	mm	mm				
M 3	0.50	3.500	2.70	2.800	56.00	10.00	●	●	●	●
M 3,5	0.60	4.000	3.00	3.250	56.00	12.00	●		●	
M 4	0.70	4.500	3.40	3.700	63.00	12.00	●	●	●	●
M 5	0.80	6.000	4.90	4.650	70.00	14.00	●	●	●	●
M 6	1.00	6.000	4.90	5.550	80.00	16.00	●	●	●	●
M 8	1.25	8.000	6.20	7.400	90.00	17.00	●	●	●	●
M10	1.50	10.000	8.00	9.300	100.00	20.00	●	●	●	●
M12	1.75	9.000	7.00	11.200	110.00	24.00				
M14	2.00	11.000	9.00	13.100	110.00	26.00				
M16	2.00	12.000	9.00	15.100	110.00	26.00				
M18	2.50	14.000	11.00	16.900	125.00	30.00				
M20	2.50	16.000	12.00	18.900	140.00	32.00				

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

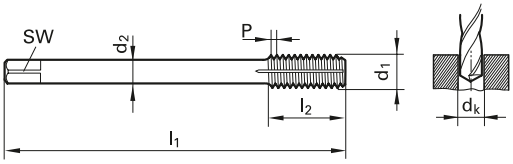
1266	1599	1705	2013	1590	1267	1707	1708
DIN 2174							
	~ DIN 371				~ DIN 376		
HSS-E-PM			HSS-E		HSS-E-PM		
S	P	P	C	P	S	P	P
N	N	N	N	N	N	N	N
C	C	C	C	C	C	C	C
6HX	6HX	6GX	6HX	6GX	6HX	6HX	6GX
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103
813	813	813	812	812	813	813	813

Availability

●	●	○					
●	●	●					
●	●	●					
●	●	●					
●	●	●					
			●	●	●	●	●
				●	○	○	●
			●	○	●	●	○
					●		
			●	○	●	○	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

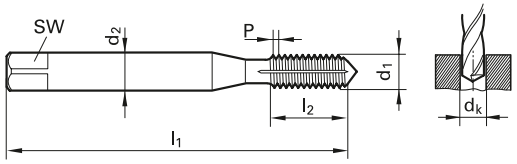
Guhring no.	923	1589	922
Standard		DIN 2174	
Standard		~ DIN 376	
Tool material		HSS-E	
Surface	S	P	S
Type	N	N	N
Form	C	C	C
Tolerance	6HX	6HX	6GX
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	812	812	812



d1	P	d2	SW	dk	l1	l2	Availability		
	mm	mm		mm	mm	mm			
M 6	1.00	4.500	3.40	5.550	80.00	16.00	●	●	●
M 8	1.25	6.000	4.90	7.400	90.00	17.00	●	●	●
M10	1.50	7.000	5.50	9.300	100.00	20.00	●	●	●
M12	1.75	9.000	7.00	11.200	110.00	24.00	●	●	●
M14	2.00	11.000	9.00	13.100	110.00	26.00	●	●	●
M16	2.00	12.000	9.00	15.100	110.00	26.00	●	●	●
M18	2.50	14.000	11.00	16.900	125.00	30.00	●		
M20	2.50	16.000	12.00	18.900	140.00	32.00	●	●	●
M22	2.50	18.000	14.50	20.900	140.00	27.00	●		
M24	3.00	18.000	14.50	22.700	160.00	30.00	●		
M27	3.00	20.000	16.00	25.700	160.00	30.00	●		
M30	3.50	22.000	18.00	28.500	180.00	35.00	●		
M33	3.50	25.000	20.00	31.500	180.00	35.00	●		
M36	4.00	28.000	22.00	34.300	200.00	40.00	●		
M39	4.00	32.000	24.00	37.300	200.00	40.00	●		

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

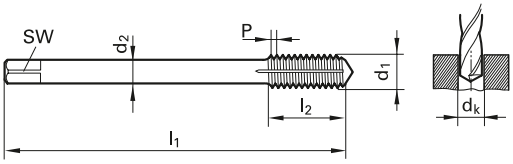
Guhring no.	1284
Standard	DIN 2174
Standard	~ DIN 371
Tool material	HSS-E-PM
Surface	S
Type	N
Form	C
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	813



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 6 X0,75	6.000	4.90	5.650	80.00	8.00	6.004	●
M 8 X0,75	8.000	6.20	7.650	80.00	8.00	8.004	○
M 8 X1	8.000	6.20	7.550	90.00	11.00	8.005	○
M10 X1,25	10.000	8.00	9.400	100.00	14.00	10.006	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

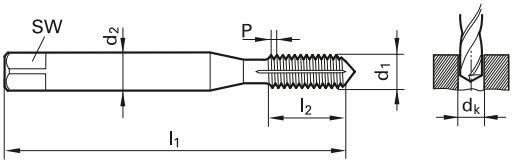
Guhring no.	1593	1594	1269	1711	1712
Standard	DIN 2174				
Standard	~ DIN 374				
Tool material	HSS-E		HSS-E-PM		
Surface	P	P	S	P	P
Type	N	N	N	N	N
Form	C	C	C	C	C
Tolerance	6HX	6GX	6HX	6HX	6GX
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	812	812	813	813	813



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability				
	mm		mm	mm	mm						
M12 X1	9.000	7.00	11.550	100.00	20.00	12.005	○	○	○	○	○
M12 X1,25	9.000	7.00	11.400	100.00	20.00	12.006	○	●	●		●
M12 X1,5	9.000	7.00	11.300	100.00	20.00	12.007	○		○	●	●
M14 X1	11.000	9.00	13.550	100.00	20.00	14.005			●		
M14 X1,25	11.000	9.00	13.400	100.00	20.00	14.006			●		
M14 X1,5	11.000	9.00	13.300	100.00	20.00	14.007	●		●	●	
M16 X1	12.000	9.00	15.550	100.00	22.00	16.005			○		
M16 X1,5	12.000	9.00	15.300	100.00	22.00	16.007	●	●	○	○	●
M18 X1,5	14.000	11.00	17.300	110.00	25.00	18.007	○		●	●	●
M20 X1	16.000	12.00	19.550	125.00	25.00	20.005			●		
M20 X1,5	16.000	12.00	19.300	125.00	25.00	20.007			○	○	○
M22 X1,5	18.000	14.50	21.300	125.00	25.00	22.007			●		
M24 X1,5	18.000	14.50	23.300	140.00	28.00	24.007	○	●	●	○	○
M24 X2	18.000	14.50	23.100	140.00	28.00	24.008			○		

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

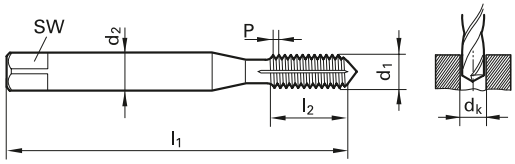
Guhring no.	1275	1591	1277	1592	1268
Standard	DIN 2174				
Standard	~ DIN 371				
Tool material	HSS-E				HSS-E-PM
Surface	S	P	S	P	S
Type	N	N	N	N	N
Form	C	C	C	C	C
Tolerance	6HX	6HX	6GX	6GX	6HX
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	812	812	812	812	813



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 6 X0,75	6.000	4.90	5.650	80.00	13.00	6.004	●
M 8 X0,75	8.000	6.20	7.650	80.00	14.00	8.004	●
M 8 X1	8.000	6.20	7.550	90.00	17.00	8.005	● ● ● ❍ ●
M 9 X1	9.000	7.00	8.550	90.00	17.00	9.005	●
M10 X1	10.000	8.00	9.550	90.00	17.00	10.005	● ● ● ● ❍
M10 X1,25	10.000	8.00	9.400	100.00	20.00	10.006	● ●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

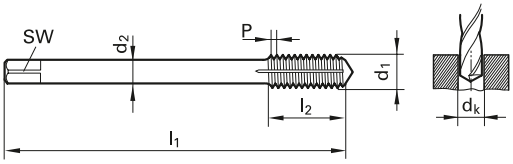
Guhring no.	1710
Standard	DIN 2174
Standard	~ DIN 371
Tool material	HSS-E-PM
Surface	P
Type	N
Form	C
Tolerance	6GX
Cutting direction	right-hand
Discount group	103
Techn. data page	813



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 8 X1	8.000	6.20	7.550	90.00	17.00	8.005	●
M10 X1	10.000	8.00	9.550	90.00	17.00	10.005	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

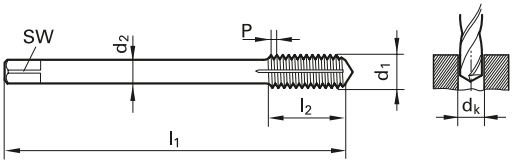
Guhring no.	333
Standard	DIN 2174
Standard	~ DIN 374
Tool material	HSS-E-PM
Surface	S
Type	N
Form	C
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	813



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 8 X1	6.000	4.90	7.550	90.00	11.00	8.005	○
M10 X1	7.000	5.50	9.550	90.00	11.00	10.005	●
M12 X1	9.000	7.00	11.550	100.00	11.00	12.005	○
M12 X1,5	9.000	7.00	11.300	100.00	16.00	12.007	●
M14 X1,5	11.000	9.00	13.300	100.00	15.00	14.007	○
M16 X1,5	12.000	9.00	15.300	100.00	15.00	16.007	●
M18 X1,5	14.000	11.00	17.300	110.00	16.00	18.007	○
M20 X1,5	16.000	12.00	19.300	125.00	16.00	20.007	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

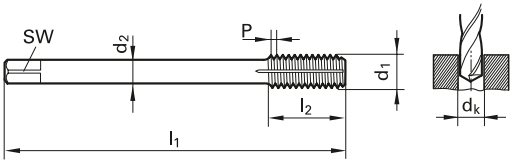
Guhring no.	927	2008	926
Standard		DIN 2174	
Standard		~ DIN 374	
Tool material		HSS-E	
Surface	S	C	S
Type	N	N	N
Form	C	C	C
Tolerance	6HX	6HX	6GX
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	812	812	812



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability		
	mm		mm	mm	mm				
M 6 X0,75	4.500	3.40	5.650	80.00	13.00	6.004	●	○	
M 8 X0,75	6.000	4.90	7.650	80.00	14.00	8.004	●	○	
M 8 X1	6.000	4.90	7.550	90.00	17.00	8.005	●	○	●
M10 X1	7.000	5.50	9.550	90.00	17.00	10.005	●		●
M10 X1,25	7.000	5.50	9.400	100.00	20.00	10.006	●	○	
M12 X1	9.000	7.00	11.550	100.00	20.00	12.005	●	●	●
M12 X1,25	9.000	7.00	11.400	100.00	20.00	12.006	●		
M12 X1,5	9.000	7.00	11.300	100.00	20.00	12.007	●	○	●
M14 X1	11.000	9.00	13.550	100.00	20.00	14.005	●		
M14 X1,5	11.000	9.00	13.300	100.00	20.00	14.007	●		●
M16 X1	12.000	9.00	15.550	100.00	22.00	16.005	●		○
M16 X1,5	12.000	9.00	15.300	100.00	22.00	16.007	●	●	●
M18 X1	14.000	11.00	17.550	110.00	25.00	18.005	●		
M18 X1,5	14.000	11.00	17.300	110.00	25.00	18.007	●	●	●
M20 X1	16.000	12.00	19.550	125.00	25.00	20.005	●		
M20 X1,5	16.000	12.00	19.300	125.00	25.00	20.007	●	○	●
M22 X1,5	18.000	14.50	21.300	125.00	25.00	22.007	●		●
M24 X1,5	18.000	14.50	23.300	140.00	28.00	24.007	●		

○ bright ◔ steam tempered ◒ nitrided lands ● nitrided ◍ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

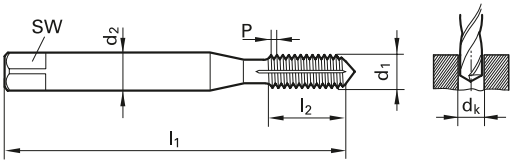
Guhring no.	1583	1582
Standard	DIN 2184-1	
Standard	~ DIN 376	~ DIN 371
Tool material	HSS-E	
Surface	S	S
Type	N	N
Form	C	C
Tolerance	2BX	2BX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	812	812



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability	
	mm		mm	mm	mm			
NR. 4 -40	3.500	2.70	2.550	56.00	11.00	2.845		●
NR. 5 -40	3.500	2.70	2.900	56.00	11.00	3.175		●
NR. 6 -32	4.000	3.00	3.150	56.00	12.00	3.505		●
NR. 8 -32	4.500	3.40	3.800	63.00	13.00	4.166		●
NR.10 -24	6.000	4.90	4.350	70.00	14.00	4.826		●
NR.12 -24	6.000	4.90	5.000	80.00	16.00	5.486		○
1/4 -20	7.000	5.50	5.750	80.00	16.00	6.350		●
5/16-18	8.000	6.20	7.300	90.00	18.00	7.938		●
3/8 -16	10.000	8.00	8.800	100.00	20.00	9.525		●
1/2 -13	9.000	7.00	11.800	110.00	25.00	12.700	●	
9/16-12	11.000	9.00	13.300	110.00	30.00	14.288	●	
5/8 -11	12.000	9.00	14.800	110.00	30.00	15.875	●	
3/4 -10	14.000	11.00	17.900	125.00	33.00	19.050	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

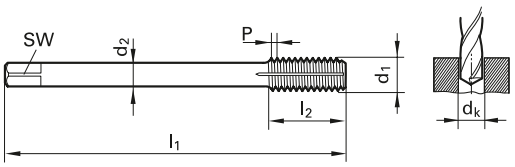
Guhring no.	1584	1585
Standard	DIN 2184-1	
Standard	~ DIN 371	~ DIN 374
Tool material	HSS-E	
Surface	S	S
Type	N	N
Form	C	C
Tolerance	2BX	2BX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	812	812



d1 - P	d2	SW	dk	l1	l2	Code no.	Availability	
	mm		mm	mm	mm			
NR. 4 -48	3.500	2.70	2.600	56.00	10.00	2.845	●	
NR. 5 -44	3.500	2.70	2.900	56.00	10.00	3.175	●	
NR. 6 -40	4.000	3.00	3.200	56.00	11.00	3.505	●	
NR. 8 -36	4.500	3.40	3.850	63.00	12.00	4.166	●	
NR.10 -32	6.000	4.90	4.450	70.00	14.00	4.826	●	
NR.12 -28	6.000	4.90	5.100	80.00	16.00	5.486	●	
1/4 -28	7.000	5.50	5.950	80.00	16.00	6.350	●	
5/16-24	8.000	6.20	7.450	90.00	18.00	7.938	●	
3/8 -24	10.000	8.00	9.050	90.00	18.00	9.525	●	
7/16-20	8.000	6.20	10.550	100.00	22.00	11.113		●
1/2 -20	9.000	7.00	12.100	100.00	20.00	12.700		○
9/16-18	11.000	9.00	13.650	100.00	22.00	14.288		●
5/8 -18	12.000	9.00	15.250	100.00	22.00	15.875		●
3/4 -16	14.000	11.00	18.350	110.00	25.00	19.050		●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

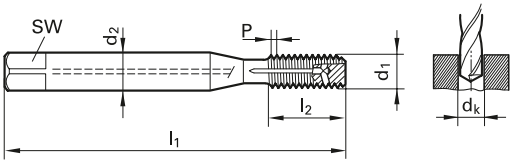
Guhring no.	1586
Standard	DIN 2184-1
Standard	DIN 2189
Tool material	HSS-E
Surface	S
Type	N
Form	C
Tolerance	
Cutting direction	right-hand
Discount group	103
Techn. data page	812



d1	P	d2	SW	dk	l1	l2	Code no.	Availability
	G/inch	mm		mm	mm	mm		
G 1/16	28.00	6.000	4.90	7.300	90.00	18.00	7.723	●
G 1/8	28.00	7.000	5.50	9.300	90.00	18.00	9.728	●
G 1/4	19.00	11.000	9.00	12.500	100.00	20.00	13.157	●
G 3/8	19.00	12.000	9.00	16.000	100.00	22.00	16.662	●
G 1/2	14.00	16.000	12.00	20.000	125.00	25.00	20.955	●
G 3/4	14.00	20.000	16.00	25.500	140.00	28.00	26.441	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1927	1972
Standard	DIN 2174	
Standard	~ DIN 371	
Tool material	Solid carbide	
Surface	A	A
Type	N	N
Form	E	C
Tolerance	6HX	6HX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	813	813

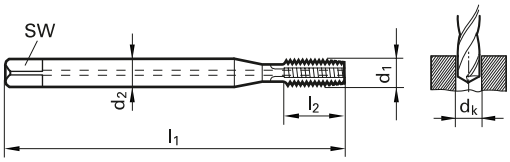


d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M 3	0.50	3.500	2.70	2.800	56.00	6.00	○	●
M 4	0.70	4.500	3.40	3.700	63.00	7.50	●	●
M 5	0.80	6.000	4.90	4.650	70.00	8.50	●	●
M 6	1.00	6.000	4.90	5.550	80.00	11.00	●	●
M 8	1.25	8.000	6.20	7.400	90.00	14.00	●	●
M10	1.50	10.000	8.00	9.300	100.00	16.00	●	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4146	2442	2446	2515	2443
Standard	DIN 2174				
Standard	~ DIN 371				
Tool material	HSS-E				
Surface	Cb	S	C	Cb	S
Type	N	N	N	N	N
Form	C	C	C	C	C
Tolerance	6GX	6HX	6HX	6HX	6GX
Cutting direction	right-hand	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103	103
Techn. data page	813	812	812	813	812

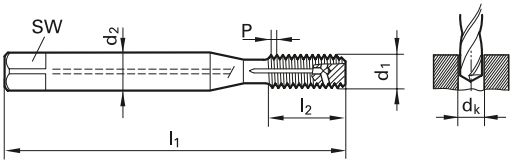
NEW



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 5	0.80	6.000	4.90	4.650	70.00	8.50	● ● ● ● ○
M 6	1.00	6.000	4.90	5.550	80.00	11.00	● ● ● ● ●
M 8	1.25	8.000	6.20	7.400	90.00	14.00	● ● ● ● ●
M10	1.50	10.000	8.00	9.300	100.00	16.00	● ● ● ● ●
M12	1.75	9.000	7.00	11.200	110.00	18.50	● ●
M16	2.00	12.000	9.00	15.100	110.00	20.00	● ●
M20	2.50	16.000	12.00	18.900	140.00	25.00	● ●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	2447	323
Standard	DIN 2174	
Standard	~ DIN 371	
Tool material	HSS-E	HSS-E-PM
Surface	C	S+
Type	N	N
Form	C	C
Tolerance	6GX	6HX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	812	813



d1	P	d2	SW	dk	l1	l2	Availability	
	mm	mm		mm	mm	mm		
M 5	0.80	6.000	4.90	4.650	70.00	8.50	○	●
M 6	1.00	6.000	4.90	5.550	80.00	11.00	●	●
M 8	1.25	8.000	6.20	7.400	90.00	14.00	○	●
M10	1.50	10.000	8.00	9.300	100.00	16.00	●	●
M12	1.75	9.000	7.00	11.200	110.00	18.50		
M14	2.00	11.000	9.00	13.100	110.00	20.00		
M16	2.00	12.000	9.00	15.100	110.00	20.00		
M18	2.50	14.000	11.00	16.900	125.00	25.00		
M20	2.50	16.000	12.00	18.900	140.00	25.00		

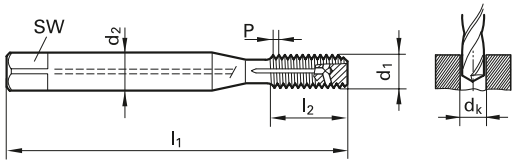
○ bright ◔ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1931	2444	2448	2445	342
		DIN 2174		
		~ DIN 376		
Solid carbide	HSS-E			HSS-E-PM
A	S	C	S	S+
N	N	N	N	N
C	C	C	C	C
6HX	6HX	6HX	6GX	6HX
right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103
813	812	812	812	813

Availability					
●	●	●	●	●	
●	●	○	○	●	
●	●	●	○	●	
○					
○					

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1725	1270	1717	1726
Standard	DIN 2174			
Standard	~ DIN 371			
Tool material	HSS-E-PM			
Surface	S	C	A	S
Type	N	N	N	N
Form	E	C	C	E
Tolerance	6HX	6HX	6HX	6GX
Cutting direction	right-hand	right-hand	right-hand	right-hand
Discount group	103	103	103	103
Techn. data page	813	813	813	813



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 3	0.50	3.500	2.70	2.800	56.00	10.00	● ○
M 4	0.70	4.500	3.40	3.700	63.00	12.00	● ○
M 5	0.80	6.000	4.90	4.650	70.00	14.00	● ● ● ○
M 6	1.00	6.000	4.90	5.550	80.00	16.00	● ● ●
M 8	1.25	8.000	6.20	7.400	90.00	17.00	● ● ● ●
M10	1.50	10.000	8.00	9.300	100.00	20.00	● ● ● ●
M12	1.75	9.000	7.00	11.200	110.00	24.00	
M14	2.00	11.000	9.00	13.100	110.00	26.00	
M16	2.00	12.000	9.00	15.100	110.00	26.00	
M18	2.50	14.000	11.00	16.900	125.00	30.00	
M20	2.50	16.000	12.00	18.900	140.00	32.00	

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1713	1718	1727	1271	1719	1728	1714	1720
DIN 2174							
~ DIN 371				~ DIN 376			
HSS-E-PM							
C	A	S	C	A	S	C	A
N	N	N	N	N	N	N	N
C	C	E	C	C	E	C	C
6GX	6GX	6HX	6HX	6HX	6GX	6GX	6GX
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103	103	103
813	813	813	813	813	813	813	813

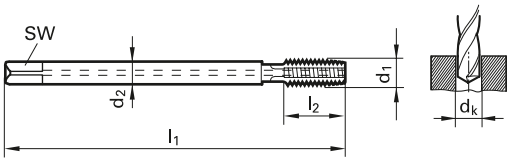
Availability

●	○						
○	●						
●	●						
		●	●	●	●	●	●
		○	○	○	○	●	○
		○	●	●	○	●	●
			●				

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4143
Standard	
Standard	Guhring std.
Tool material	HSS-E-PM
Surface	S
Type	N
Form	C
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	813

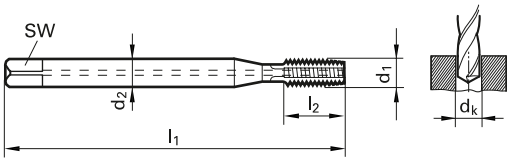
NEW



d1	P	d2	SW	dk	l1	l2	Availability
	mm	mm		mm	mm	mm	
M 3	0.50	3.500	2.70	2.800	112.00	6.00	●
M 4	0.70	2.800	2.10	3.700	112.00	7.50	●
M 5	0.80	3.500	2.70	4.650	125.00	8.50	●
M 6	1.00	4.500	3.40	5.550	125.00	11.00	●
M 8	1.25	6.000	4.90	7.400	140.00	14.00	●
M10	1.50	7.000	5.50	9.300	160.00	16.00	●
M12	1.75	9.000	7.00	11.200	180.00	18.50	●
M16	2.00	12.000	9.00	15.100	220.00	20.00	●
M20	2.50	16.000	12.00	18.900	280.00	25.00	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

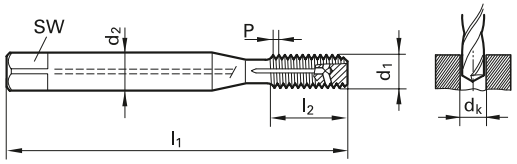
Guhring no.	4147	4151
Standard	DIN 2174	
Standard	~ DIN 371	
Tool material	HSS-E	
Surface	Cb	Cb
Type	N	N
Form	C	C
Tolerance	6HX	6GX
Cutting direction	right-hand	right-hand
Discount group	103	103
Techn. data page	813	813
	NEW	NEW



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability	
	mm		mm	mm	mm			
M 8 X1	8.000	6.20	7.550	90.00	11.00	8.005	●	●
M10 X1	10.000	8.00	9.550	90.00	11.00	10.005	●	●
M10 X1,25	10.000	8.00	9.400	100.00	14.00	10.006	●	●
M12 X1	9.000	7.00	11.550	100.00	11.00	12.005	●	●
M12 X1,50	9.000	7.00	11.300	100.00	16.00	12.007	●	●
M14 X1,50	11.000	9.00	13.300	100.00	15.00	14.007	●	●
M16 X1,50	12.000	9.00	15.300	100.00	15.00	16.007	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

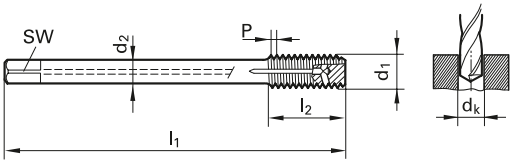
Guhring no.	1729
Standard	DIN 2174
Standard	~ DIN 371
Tool material	HSS-E-PM
Surface	S
Type	N
Form	E
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	813



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 8 X1	8.000	6.20	7.550	90.00	17.00	8.005	●
M10 X1,25	10.000	8.00	9.400	100.00	20.00	10.006	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

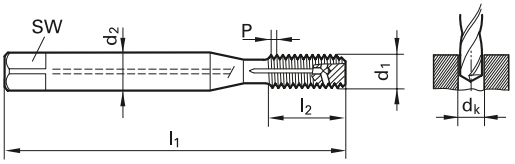
Guhring no.	1581
Standard	DIN 2174
Standard	~ DIN 371 / ~ DIN 376
Tool material	Solid carbide
Surface	A
Type	N
Form	C
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	813



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M10 X1	10.000	8.00	9.550	90.00	11.00	10.005	●
M12 X1	9.000	7.00	11.550	100.00	15.00	12.005	●
M12 X1,5	9.000	7.00	11.300	100.00	15.00	12.007	●
M14 X1	11.000	9.00	13.550	100.00	15.00	14.005	○
M14 X1,25	11.000	9.00	13.400	100.00	15.00	14.006	○
M14 X1,50	11.000	9.00	13.300	100.00	15.00	14.007	●
M16 X1,50	12.000	9.00	15.300	100.00	15.00	16.007	●
M18 X1,5	14.000	11.00	17.300	110.00	15.00	18.007	○
M20 X1,5	16.000	12.00	19.300	125.00	15.00	20.007	●
M24 X1,5	18.000	14.50	23.300	140.00	15.00	24.007	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1272	1721	1730
Standard		DIN 2174	
Standard		~ DIN 371	
Tool material		HSS-E-PM	
Surface	C	A	S
Type	N	N	N
Form	C	C	E
Tolerance	6HX	6HX	6GX
Cutting direction	right-hand	right-hand	right-hand
Discount group	103	103	103
Techn. data page	813	813	813



d1 X P	d2	SW	dk	l1	l2	Code no.	Availability		
	mm		mm	mm	mm				
M 8 X1	8.000	6.20	7.550	90.00	17.00	8.005	●	●	●
M 9 X1	9.000	7.00	8.550	90.00	17.00	9.005	●		
M10 X1	10.000	8.00	9.550	90.00	17.00	10.005	●	❍	❍
M10 X1,25	10.000	8.00	9.400	100.00	20.00	10.006	●	●	●
M12 X1	9.000	7.00	11.550	100.00	20.00	12.005			
M12 X1,25	9.000	7.00	11.400	100.00	20.00	12.006			
M12 X1,5	9.000	7.00	11.300	100.00	20.00	12.007			
M14 X1	11.000	9.00	13.550	100.00	20.00	14.005			
M14 X1,25	11.000	9.00	13.400	100.00	20.00	14.006			
M14 X1,5	11.000	9.00	13.300	100.00	20.00	14.007			
M16 X1	12.000	9.00	15.550	100.00	22.00	16.005			
M16 X1,5	12.000	9.00	15.300	100.00	22.00	16.007			
M18 X1,5	14.000	11.00	17.300	110.00	25.00	18.007			
M20 X1	16.000	12.00	19.550	125.00	25.00	20.005			
M20 X1,5	16.000	12.00	19.300	125.00	25.00	20.007			
M22 X1,5	18.000	14.50	21.300	125.00	25.00	22.007			
M24 X1,5	18.000	14.50	23.300	140.00	28.00	24.007			
M24 X2	18.000	14.50	23.100	140.00	28.00	24.008			

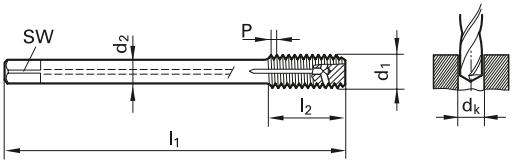
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

1715	1731	1273	1723	1732	1716
DIN 2174					
~ DIN 371			~ DIN 374		
HSS-E-PM					
C	S	C	A	S	C
N	N	N	N	N	N
C	E	C	C	E	C
6GX	6HX	6HX	6HX	6GX	6GX
right-hand	right-hand	right-hand	right-hand	right-hand	right-hand
103	103	103	103	103	103
813	813	813	813	813	813

Availability					
●					
○					
●					
	○	●		●	○
	●	●	●	●	●
	●	●	●	○	●
		○			
		●			
	●	●	●	●	○
		○			
	○	●	●	●	○
	●	●	●	●	○
		○			
		●	●	○	○
	○	●	○	○	○
		○			

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	338
Standard	DIN 2174
Standard	~ DIN 374
Tool material	HSS-E-PM
Surface	S+
Type	N
Form	C
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	813

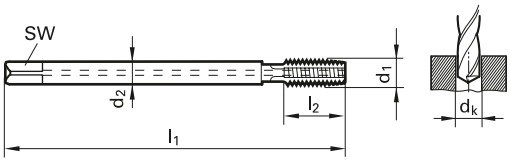


d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 8 X1	6.000	4.90	7.550	90.00	11.00	8.005	●
M10 X1	7.000	5.50	9.550	90.00	11.00	10.005	●
M12 X1	9.000	7.00	11.550	100.00	11.00	12.005	◑
M12 X1,50	9.000	7.00	11.300	100.00	16.00	12.007	●
M14 X1,50	11.000	9.00	13.300	100.00	15.00	14.007	●
M16 X1,50	12.000	9.00	15.300	100.00	15.00	16.007	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4145
Standard	
Standard	Guhring std.
Tool material	HSS-E-PM
Surface	S
Type	N
Form	C
Tolerance	6HX
Cutting direction	right-hand
Discount group	103
Techn. data page	813

NEW

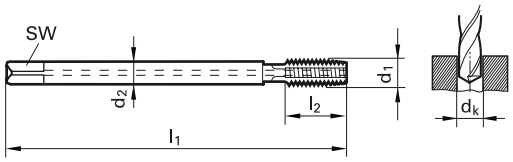


d1 X P	d2	SW	dk	l1	l2	Code no.	Availability
	mm		mm	mm	mm		
M 8 X1	6.000	4.90	7.550	140.00	14.00	8.005	●
M10 X1	7.000	5.50	9.550	160.00	16.00	10.005	●
M10 X1,25	7.000	5.50	9.400	160.00	16.00	10.006	●
M12 X1	9.000	7.00	11.550	180.00	18.50	12.005	●
M12 X1,50	9.000	7.00	11.300	180.00	18.50	12.007	●
M14 X1,50	11.000	9.00	13.300	220.00	20.00	14.007	●
M16 X1,50	12.000	9.00	15.300	220.00	20.00	16.007	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4152
Standard	
Standard	DIN 2189
Tool material	HSS-E
Surface	Cb
Type	N
Form	C
Tolerance	
Cutting direction	right-hand
Discount group	103
Techn. data page	813

NEW



d1	P	d2	SW	dk	l1	l2	Code no.	Availability
	G/inch	mm		mm	mm	mm		
G 1/16	28.00	6.000	4.90	7.300	90.00	11.00	7.723	●
G 1/8	28.00	7.000	5.50	9.300	90.00	11.00	9.728	●
G 1/4	19.00	11.000	9.00	12.500	100.00	14.00	13.157	●
G 3/8	19.00	12.000	9.00	16.000	100.00	14.00	16.662	●
G 1/2	14.00	16.000	12.00	20.000	125.00	18.00	20.955	●
G 3/4	14.00	20.000	16.00	25.500	140.00	20.00	26.441	●
G1	11.00	25.000	20.00	32.000	160.00	24.00	33.249	●

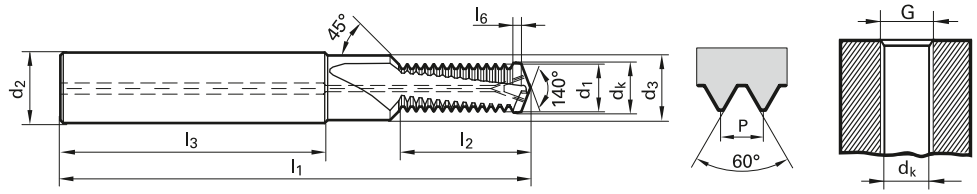
○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

GUHRING

SPECIAL TAPS

Do you require a tap in a special dimension and with a special thread type or tolerance? In addition to our standard catalogue range we provide special solutions tailored to your specific requirements on request!

Guhring no.	3774
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	DTMC SP
Thread length	1,5xD
Cooling	
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816



G	P	d1	d2	d3	dk	l1	l2	l3	l6	Z	Code no.	Availability
	mm	mm	mm	mm	mm	mm	mm	mm	mm			
M 3	0.50	2.400	6.000	3.400	2.500	48.00	5.50	36.00	0.50	2	3.000	●
M 4	0.70	3.200	6.000	4.500	3.300	48.00	6.90	36.00	0.70	2	4.000	●
M 5	0.80	4.000	6.000	5.500	4.200	54.00	8.80	36.00	0.80	2	5.000	◯
M 6	1.00	4.750	8.000	6.600	5.000	62.00	10.90	36.00	1.00	2	6.000	●
M 8	1.25	6.350	10.000	9.000	6.800	74.00	13.70	40.00	1.25	2	8.000	◯
M10	1.50	7.950	12.000	11.000	8.500	80.00	18.00	45.00	1.50	2	10.000	●
M12	1.75	9.950	14.000	13.500	10.200	90.00	20.90	45.00	1.50	2	12.000	◯
M14	2.00	11.200	16.000	15.500	12.000	102.00	23.70	48.00	1.50	2	14.000	
M16	2.00	13.200	18.000	17.500	14.000	102.00	26.00	48.00	1.50	2	16.000	◯

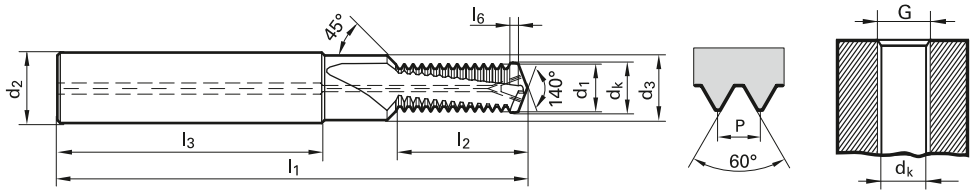
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

3776	3775	3777
	Guhring std.	
	Solid carbide	
K/P	K	K/P
C	○	C
DTMC SP	DTMC SP	DTMC SP
1,5xD	1,5xD	1,5xD
	axial >=M4	axial >=M4
HA	HA	HA
right-hand	right-hand	right-hand
108	108	108
816	816	816

Availability		
❍		
❍	●	●
●	❍	●
●	●	●
❍	●	●
●	●	●
●	❍	●
❍	❍	❍
❍	❍	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3778
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	DTMC SP
Thread length	2xD
Cooling	
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816



G	P	d1	d2	d3	dk	l1	l2	l3	l6	Z	Code no.	Availability
	mm	mm	mm	mm	mm	mm	mm	mm	mm			
M 3	0.50	2.400	6.000	3.400	2.500	48.00	7.00	36.00	0.50	2	3.000	◯
M 4	0.70	3.200	6.000	4.500	3.300	48.00	9.00	36.00	0.70	2	4.000	●
M 5	0.80	4.000	6.000	5.500	4.200	54.00	11.20	36.00	0.80	2	5.000	◯
M 6	1.00	4.750	8.000	6.600	5.000	62.00	13.90	36.00	1.00	2	6.000	●
M 8	1.25	6.350	10.000	9.000	6.800	74.00	18.70	40.00	1.25	2	8.000	●
M10	1.50	7.950	12.000	11.000	8.500	80.00	22.50	45.00	1.50	2	10.000	●
M12	1.75	9.950	14.000	13.500	10.200	90.00	26.10	45.00	1.50	2	12.000	●
M14	2.00	11.200	16.000	15.500	12.000	102.00	31.70	48.00	1.50	2	14.000	
M16	2.00	13.200	18.000	17.500	14.000	102.00	36.00	48.00	1.50	2	16.000	◯

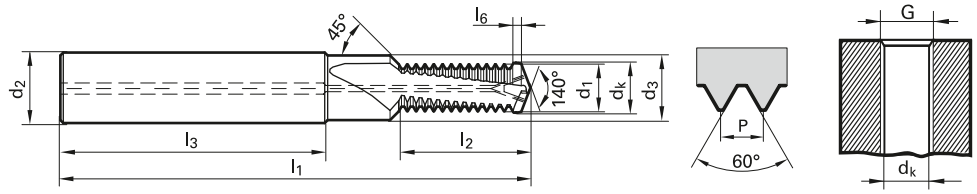
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

3780	3779	3781
	Guhring std.	
	Solid carbide	
K/P	K	K/P
C	○	C
DTMC SP	DTMC SP	DTMC SP
2xD	2xD	2xD
	axial >=M4	axial >=M4
HA	HA	HA
right-hand	right-hand	right-hand
108	108	108
816	816	816

Availability		
●		
○	●	●
○	●	●
○	●	●
●	●	●
○	○	●
●	○	●
○	○	○
○	○	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3782
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	DTMC SP
Thread length	2,5xD
Cooling	
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816



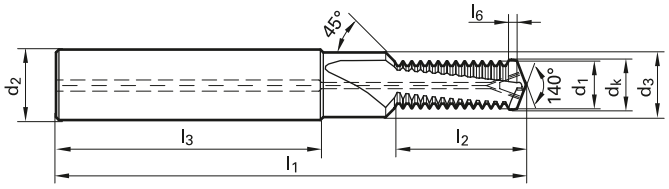
G	P	d1	d2	d3	dk	l1	l2	l3	l6	Z	Code no.	Availability
	mm	mm	mm	mm	mm	mm	mm	mm	mm			
M 3	0.50	2.400	6.000	3.400	2.500	48.00	8.50	36.00	0.50	2	3.000	
M 4	0.70	3.200	6.000	4.500	3.300	48.00	11.10	36.00	0.70	2	4.000	●
M 5	0.80	4.000	6.000	5.500	4.200	54.00	13.60	36.00	0.80	2	5.000	◯
M 6	1.00	4.750	8.000	6.600	5.000	62.00	16.90	36.00	1.00	2	6.000	●
M 8	1.25	6.350	10.000	9.000	6.800	74.00	22.50	40.00	1.25	2	8.000	
M10	1.50	7.950	12.000	11.000	8.500	80.00	27.00	45.00	1.50	2	10.000	●
M12	1.75	9.950	14.000	13.500	10.200	90.00	31.40	45.00	1.50	2	12.000	●
M14	2.00	11.200	16.000	15.500	12.000	102.00	39.70	48.00	1.50	2	14.000	
M16	2.00	13.200	18.000	17.500	14.000	102.00	46.00	48.00	1.50	2	16.000	◯

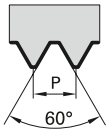
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

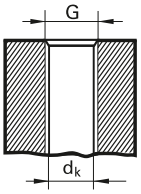
3784	3783	3785
	Guhring std.	
	Solid carbide	
K/P	K	K/P
C	○	C
DTMC SP	DTMC SP	DTMC SP
2,5xD	2,5xD	2,5xD
	axial >=M4	axial >=M4
HA	HA	HA
right-hand	right-hand	right-hand
108	108	108
816	816	816
Availability		
❍		
●	●	❍
❍	●	●
●	●	❍
❍	❍	●
❍	●	●
❍	❍	●
❍		❍
❍	❍	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3788
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	C
Type	DTMC SP
Thread length	1,5xD
Cooling	
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816







G	d1	d2	d3	dk	l1	l2	l3	l6	Z	Code no.	Availability
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M 4 X0,5	3.200	6.000	4.500	3.500	48.00	6.60	36.00	0.50	2	4.003	○
M 5 X0,5	4.000	6.000	5.500	4.500	54.00	8.30	36.00	0.50	2	5.003	○
M 6 X0,75	4.750	8.000	6.600	5.200	62.00	9.90	36.00	0.75	2	6.004	●
M 8 X0,75	6.350	10.000	9.000	7.200	74.00	14.10	40.00	0.75	2	8.004	○
M 8 X1	6.350	10.000	9.000	7.000	74.00	14.30	40.00	1.00	2	8.005	○
M10 X1	7.950	12.000	11.000	9.000	80.00	16.60	45.00	1.00	2	10.005	○
M10 X1,25	7.950	12.000	11.000	8.800	80.00	16.60	45.00	1.25	2	10.006	○
M12 X1	9.950	14.000	13.500	11.000	90.00	20.00	45.00	1.00	2	12.005	○
M12 X1,5	9.950	14.000	13.500	10.500	90.00	21.40	45.00	1.50	2	12.007	○
M14 X1,5	11.200	16.000	15.500	12.500	102.00	23.30	48.00	1.50	2	14.007	○
M16 X1,5	13.200	18.000	17.500	14.500	102.00	26.60	48.00	1.50	2	16.007	○

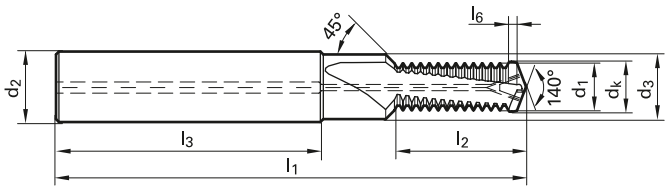
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

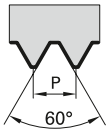
3787	3789
Guhring std.	
Solid carbide	
K	K/P
○	C
DTMC SP	DTMC SP
1,5xD	1,5xD
axial	axial
HA	HA
right-hand	right-hand
108	108
816	816

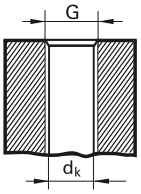
Availability	
●	○
●	○
●	○
●	○
●	○
●	○
●	●
●	●
●	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3790
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	○
Type	DTMC SP
Thread length	2xD
Cooling	
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816







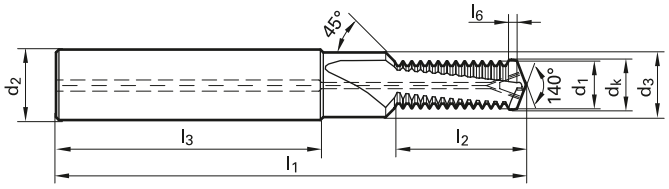
G	d1	d2	d3	dk	l1	l2	l3	l6	Z	Code no.	Availability
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M 4 X0,5	3.200	6.000	4.500	3.500	48.00	8.60	36.00	0.50	2	4.003	○
M 5 X0,5	4.000	6.000	5.500	4.500	54.00	10.80	36.00	0.50	2	5.003	○
M 6 X0,75	4.750	8.000	6.600	5.200	62.00	12.90	36.00	0.75	2	6.004	○
M 8 X0,75	6.350	10.000	9.000	7.200	74.00	17.10	40.00	0.75	2	8.004	○
M 8 X1	6.350	10.000	9.000	7.000	74.00	17.30	40.00	1.00	2	8.005	○
M10 X1	7.950	12.000	11.000	9.000	80.00	21.60	45.00	1.00	2	10.005	○
M10 X1,25	7.950	12.000	11.000	8.800	80.00	21.60	45.00	1.25	2	10.006	○
M12 X1	9.950	14.000	13.500	11.000	90.00	26.00	45.00	1.00	2	12.005	○
M12 X1,5	9.950	14.000	13.500	10.500	90.00	27.40	45.00	1.50	2	12.007	○
M14 X1,5	11.200	16.000	15.500	12.500	102.00	30.80	48.00	1.50	2	14.007	○
M16 X1,5	13.200	18.000	17.500	14.500	102.00	34.10	48.00	1.50	2	16.007	○

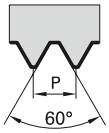
○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

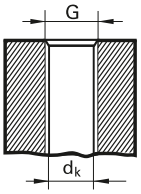
3792	3791	3793
	Guhring std.	
	Solid carbide	
K/P	K	K/P
C	○	C
DTMC SP	DTMC SP	DTMC SP
2xD	2xD	2xD
	axial	axial
HA	HA	HA
right-hand	right-hand	right-hand
108	108	108
816	816	816
Availability		
❍		
❍		
❍	❍	❍
	❍	❍
	❍	●
	❍	❍
	❍	❍
	❍	❍
	❍	●
	❍	❍
	❍	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4138	4139
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	C
Type	DTMC SP	DTMC SP
Thread length	2xD	2xD
Cooling		axial
Shank design	HA	HA
Cutting direction	right-hand	right-hand
Discount group	108	108
Techn. data page	816	816
	NEW	NEW







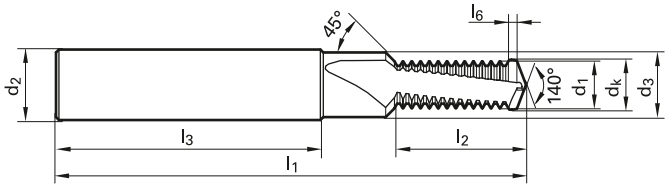
G	d1	d2	d3	dk	l1	l2	l3	l6	Z	Code no.	Availability	
	mm	mm	mm	mm	mm	mm	mm	mm	mm			
1/4 -20	5.000	8.000	6.600	5.100	62.00	14.90	36.00	1.30	2	6.350	●	●
5/16-18	6.250	10.000	9.000	6.600	74.00	18.10	40.00	1.50	2	7.938	●	●
3/8 -16	7.500	12.000	11.000	8.000	80.00	22.10	45.00	1.50	2	9.525	●	●
7/16-14	8.800	12.000	11.000	9.400	80.00	25.00	45.00	1.50	2	11.113	●	●
1/2 -13	10.200	14.000	13.500	10.800	90.00	26.90	45.00	1.50	2	12.700	●	●
9/16-12	11.600	16.000	15.500	12.200	102.00	31.20	48.00	1.50	2	14.288	●	●
5/8 -11	13.000	18.000	17.500	13.500	102.00	36.30	48.00	1.50	2	15.875	●	●

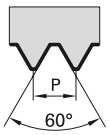
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

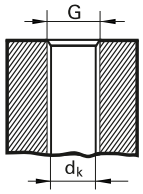
Guhring no.	4140	4141
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	C
Type	DTMC SP	DTMC SP
Thread length	2xD	2xD
Cooling		axial
Shank design	HA	HA
Cutting direction	right-hand	right-hand
Discount group	108	108
Techn. data page	816	816

Drill thread milling cutters

NEW NEW



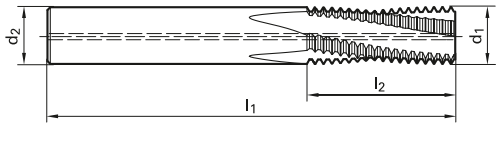


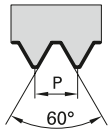


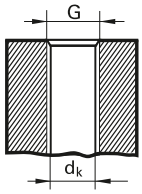
G	d1	d2	d3	dk	l1	l2	l3	l6	Z	Code no.	Availability	
	mm	mm	mm	mm	mm	mm	mm	mm	mm			
1/4 -28	5.000	8.000	6.600	5.500	62.00	12.80	36.00	1.00	2	6.350	●	●
5/16-24	6.250	10.000	9.000	6.900	74.00	18.20	40.00	1.10	2	7.938	●	●
3/8 -24	7.950	12.000	11.000	8.500	80.00	20.60	45.00	1.10	2	9.525	●	●
7/16-20	9.500	12.000	11.000	9.900	80.00	24.70	45.00	1.30	2	11.113	●	●
1/2 -20	10.200	14.000	13.500	11.500	90.00	27.50	45.00	1.30	2	12.700	●	●
9/16-18	11.600	16.000	15.500	12.900	102.00	30.60	48.00	1.50	2	14.288	●	●
5/8 -18	13.000	18.000	17.500	14.500	102.00	33.70	48.00	1.50	2	15.875	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3734	3737	3743
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	K/P
Surface	○	C	A
Type	TM SP	TM SP	TM SP
Thread length	2xD	2xD	2xD
Cooling	axial	axial	axial
Shank design	cil. h6	cil. h6	cil. h6
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



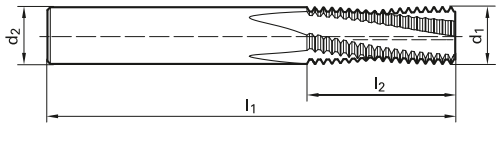


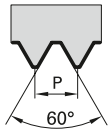


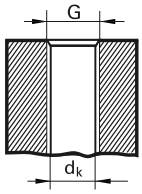
G	P	d1	d2	dk	l1	l2	Z	Code no.	Availability		
	mm	mm	mm	mm	mm	mm					
M 6	1.00	4.800	6.000	5.000	54.00	13.50	3	6.000	●	●	❍
M 8	1.25	6.400	8.000	6.800	62.00	18.10	3	8.000	●	●	❍
M 8 X1	1.00	6.400	8.000	7.000	62.00	17.50	3	8.005	●	●	
M10	1.50	7.950	10.000	8.500	74.00	21.80	3	10.000	●	●	❍
M10 X1	1.00	7.950	10.000	9.000	74.00	21.50	3	10.005	●	●	
M10 X1,25	1.25	7.950	10.000	8.800	74.00	21.90	3	10.006	●	●	
M12	1.75	9.950	10.000	10.200	74.00	25.40	4	12.000	●	●	❍
M14	2.00	11.200	12.000	12.000	90.00	31.00	4	14.000	●	●	❍
M14 X1,50	1.50	11.200	12.000	12.500	90.00	30.80	4	14.007	●	●	
M16	2.00	12.800	14.000	14.000	90.00	35.00	4	16.000	●	●	❍
M16 X1,50	1.50	12.800	14.000	14.500	90.00	33.80	4	16.007	●	●	
M20	2.50	14.950	16.000	17.500	102.00	41.30	4	20.000	●	●	❍
M20 X1,50	1.50	14.950	16.000	18.500	102.00	42.80	4	20.007	●	●	

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4132	4133
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	C
Type	TM SP	TM SP
Thread length	2xD	2xD
Cooling		
Shank design	cil. h6	cil. h6
Cutting direction	right-hand	right-hand
Discount group	108	108
Techn. data page	816	817
	NEW	NEW



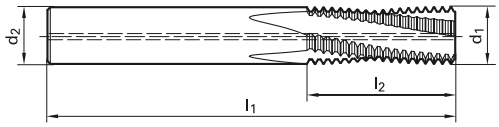


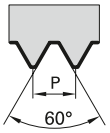


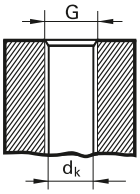
G	P	d1	d2	dk	l1	l2	Z	Code no.	Availability	
	mm	mm	mm	mm	mm	mm				
M 6	1.00	4.800	6.000	5.000	54.00	13.50	3	6.000	●	●
M 8	1.25	6.400	8.000	6.800	62.00	18.10	3	8.000	●	●
M10	1.50	7.950	10.000	8.500	74.00	21.80	3	10.000	●	●
M12	1.75	9.950	10.000	10.200	74.00	25.40	4	12.000	●	●
M14	2.00	11.200	12.000	12.000	90.00	31.00	4	14.000	●	●
M16	2.00	12.800	14.000	14.000	90.00	35.00	4	16.000	●	●
M20	2.50	14.950	16.000	17.500	102.00	41.30	4	20.000	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3735	3740	3744
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	K/P
Surface	○	C	A
Type	TM SP	TM SP	TM SP
Thread length	2,5xD	2,5xD	2,5xD
Cooling	axial	axial	axial
Shank design	cil. h6	cil. h6	cil. h6
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



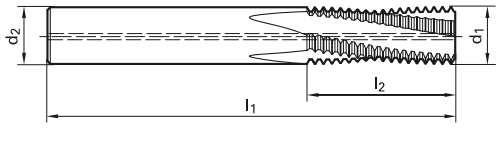


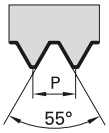


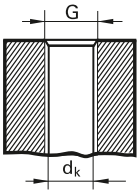
G	P	d1	d2	dk	l1	l2	Z	Code no.	Availability		
	mm	mm	mm	mm	mm	mm					
M 6	1.00	4.800	6.000	5.000	54.00	16.50	3	6.000	●	●	○
M 8	1.25	6.400	8.000	6.800	62.00	21.90	3	8.000	●	●	○
M10	1.50	7.950	10.000	8.500	74.00	26.30	3	10.000	●	●	○
M12	1.75	9.950	10.000	10.200	74.00	32.40	4	12.000	●	●	○
M14	2.00	11.200	12.000	12.000	90.00	37.00	4	14.000	○	○	○
M16	2.00	12.800	14.000	14.000	90.00	43.00	4	16.000	●	●	○
M20	2.50	14.950	16.000	17.500	102.00	48.80	4	20.000	●	●	○

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	3745	3748	3751
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	K/P
Surface	○	C	A
Type	TM SP	TM SP	TM SP
Thread length	2xD	2xD	2xD
Cooling	axial	axial	axial
Shank design	cil. h6	cil. h6	cil. h6
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



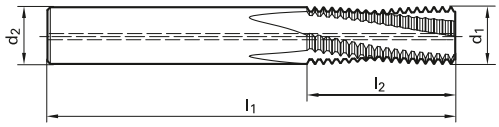


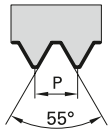


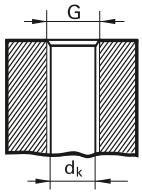
G	P	d1	d2	dk	l1	l2	Z	Code no.	Availability		
	G/inch	mm	mm	mm	mm	mm					
G 1/8	28.00	7.950	8.000	8.800	64.00	21.30	3	9.728	●	●	○
G 1/4	19.00	10.500	12.000	11.800	90.00	28.70	4	13.157	●	●	○
G 3/8	19.00	13.600	14.000	15.250	90.00	35.40	4	16.662	○	●	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3746	3750	3752
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	K/P
Surface	○	C	A
Type	TM SP	TM SP	TM SP
Thread length	2,5xD	2,5xD	2,5xD
Cooling	axial	axial	axial
Shank design	cil. h6	cil. h6	cil. h6
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



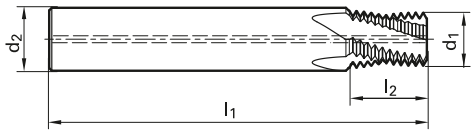


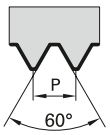


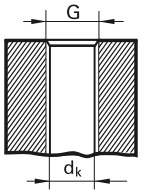
G	P	d1	d2	dk	l1	l2	Z	Code no.	Availability		
	G/inch	mm	mm	mm	mm	mm					
G 1/8	28.00	7.950	8.000	8.800	64.00	24.90	3	9.728	○	○	○
G 1/4	19.00	10.500	12.000	11.800	90.00	35.40	4	13.157	●	●	○
G 3/8	19.00	13.600	14.000	15.250	90.00	43.50	4	16.662	○	●	○

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◍ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	3753	3754	3755
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	K/P
Surface	◯	C	A
Type	TM SP	TM SP	TM SP
Thread length			
Cooling	axial	axial	axial
Shank design	cil. h6	cil. h6	cil. h6
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



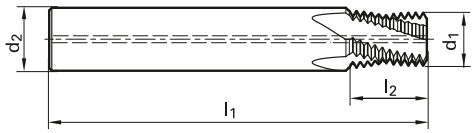


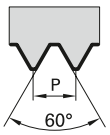


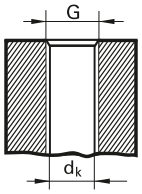
G	P	d1	d2	dk	l1	l2	Z	Code no.	Availability		
	G/inch	mm	mm	mm	mm	mm					
1/16	27.00	5.900	8.000	6.150	54.00	9.90	3	8.190	●	●	❍
1/8	27.00	7.300	8.000	8.400	64.00	9.90	3	10.620	❍	●	❍
1/4	18.00	9.950	12.000	11.100	72.00	19.00	4	14.140	●	●	❍
3/8	18.00	12.500	14.000	14.300	80.00	14.80	4	17.570	❍	●	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3756	3757	3758
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	K/P
Surface	○	C	A
Type	TM SP	TM SP	TM SP
Thread length			
Cooling	axial	axial	axial
Shank design	cil. h6	cil. h6	cil. h6
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



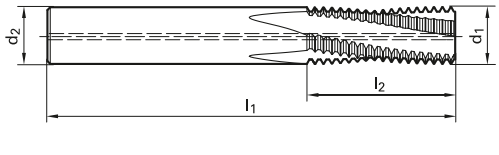


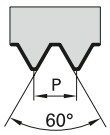


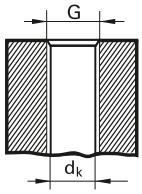
G	P	d1	d2	dk	l1	l2	Z	Code no.	Availability		
	G/inch	mm	mm	mm	mm	mm					
1/16	27.00	5.900	8.000	6.150	54.00	9.90	3	8.190	❍	●	❍
1/8	27.00	7.300	8.000	8.400	64.00	9.90	3	10.620	❍	❍	❍
1/4	18.00	9.950	12.000	11.100	72.00	19.00	4	14.140	❍	●	❍
3/8	18.00	12.500	14.000	14.300	80.00	14.80	4	17.570	❍	●	❍

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4134	4135
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	C
Type	TM SP	TM SP
Thread length	2xD	2xD
Cooling	axial	axial
Shank design	cil. h6	cil. h6
Cutting direction	right-hand	right-hand
Discount group	108	108
Techn. data page	816	817
	NEW	NEW



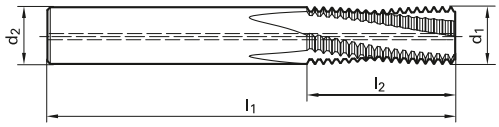


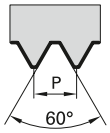


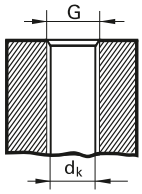
G	d1	d2	dk	l1	l2	Z	Code no.	Availability	
	mm	mm	mm	mm	mm				
NR.10 -24	3.400	6.000	3.900	54.00	11.10	3	4.826	●	●
NR.12 -24	4.100	6.000	4.500	54.00	12.20	3	5.486	●	●
1/4 -20	4.700	6.000	5.100	54.00	14.60	3	6.350	●	●
5/16-18	6.100	8.000	6.600	64.00	17.60	3	7.938	●	●
3/8 -16	7.600	8.000	8.000	64.00	21.40	3	9.525	●	●
7/16-14	9.000	10.000	9.400	74.00	24.50	3	11.113	●	●
1/2 -13	9.950	10.000	10.800	74.00	28.30	4	12.700	●	●
9/16-12	11.400	12.000	12.200	90.00	30.70	4	14.288	●	●
5/8 -11	12.700	14.000	13.500	90.00	35.80	4	15.875	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4136	4137
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	K/P
Surface	◯	C
Type	TM SP	TM SP
Thread length	2xD	2xD
Cooling	axial	axial
Shank design	cil. h6	cil. h6
Cutting direction	right-hand	right-hand
Discount group	108	108
Techn. data page	816	817
	NEW	NEW







G	d1	d2	dk	l1	l2	Z	Code no.	Availability	
	mm	mm	mm	mm	mm				
NR.10 -32	3.800	6.000	4.100	54.00	11.50	3	4.826	●	●
NR.12 -28	4.300	6.000	4.600	54.00	12.20	3	5.486	●	●
1/4 -28	5.100	6.000	5.500	54.00	14.10	3	6.350	●	●
5/16-24	6.300	8.000	6.900	64.00	17.50	3	7.938	●	●
3/8 -24	7.800	8.000	8.500	64.00	20.60	3	9.525	●	●
7/16-20	9.400	10.000	9.900	74.00	24.80	3	11.113	●	●
1/2 -20	9.950	10.000	11.500	74.00	27.30	4	12.700	●	●
9/16-18	11.400	12.000	12.900	90.00	30.30	4	14.288	●	●
5/8 -18	12.700	14.000	14.500	90.00	33.20	4	15.875	●	●

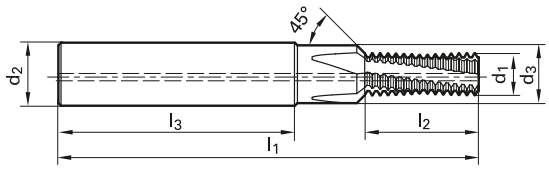
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

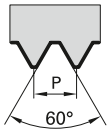
GUHRING

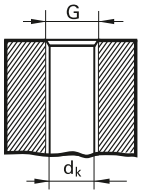
SPECIAL THREAD MILLING CUTTERS

In addition to our standard catalogue range, we also provide your specific solution for an efficient production, for example, with special dimensions and thread types as well as additional options such as de-burring, countersinking, drilling or facing steps.

Guhring no.	3510
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	TMC SP
Thread length	1,5xD
Cooling	axial >=M4
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816







G	P	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M 3	0.50	2.300	6.000	3.400	2.500	48.00	5.30	36.00	3	3.000	●
M 4	0.70	3.000	6.000	4.500	3.300	48.00	7.40	36.00	3	4.000	●
M 5	0.80	4.000	6.000	5.500	4.200	54.00	9.20	36.00	3	5.000	●
M 6	1.00	4.800	8.000	6.600	5.000	62.00	10.50	36.00	3	6.000	●
M 8	1.25	6.400	10.000	9.000	6.800	74.00	13.10	40.00	3	8.000	◯
M10	1.50	7.950	12.000	11.000	8.500	80.00	17.30	45.00	4	10.000	●
M12	1.75	9.950	14.000	13.500	10.200	90.00	20.10	45.00	4	12.000	◯
M14	2.00	11.200	16.000	15.500	12.000	102.00	25.00	48.00	4	14.000	◯
M16	2.00	12.800	18.000	17.500	14.000	102.00	27.00	48.00	4	16.000	◯
M20	2.50	14.500	20.000	21.500	17.500	125.00	33.80	50.00	4	20.000	●

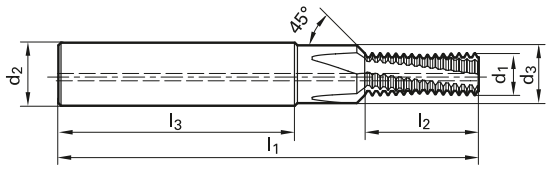
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

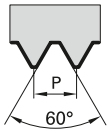
3525	3543
Guhring std.	
Solid carbide	
K/P	K/P
C	A
TMC SP	TMC SP
1,5xD	1,5xD
axial >=M4	axial >=M4
HA	HA
right-hand	right-hand
108	108
817	818

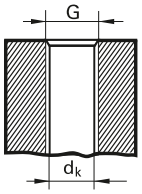
Availability	
●	○
●	○
●	○
●	○
●	○
●	○
●	○
●	○
●	○
●	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3511
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	TMC SP
Thread length	2xD
Cooling	axial >=M4
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816







G	P	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M 3	0.50	2.300	6.000	3.400	2.500	48.00	6.80	36.00	3	3.000	●
M 4	0.70	3.000	6.000	4.500	3.300	48.00	8.80	36.00	3	4.000	●
M 5	0.80	4.000	6.000	5.500	4.200	54.00	10.80	36.00	3	5.000	●
M 6	1.00	4.800	8.000	6.600	5.000	62.00	13.50	36.00	3	6.000	●
M 8	1.25	6.400	10.000	9.000	6.800	74.00	18.10	40.00	3	8.000	●
M10	1.50	7.950	12.000	11.000	8.500	80.00	21.80	45.00	4	10.000	●
M12	1.75	9.950	14.000	13.500	10.200	90.00	25.40	45.00	4	12.000	●
M14	2.00	11.200	16.000	15.500	12.000	102.00	31.00	48.00	4	14.000	●
M16	2.00	12.800	18.000	17.500	14.000	102.00	35.00	48.00	4	16.000	●
M20	2.50	14.500	20.000	21.500	17.500	125.00	41.30	50.00	4	20.000	❍

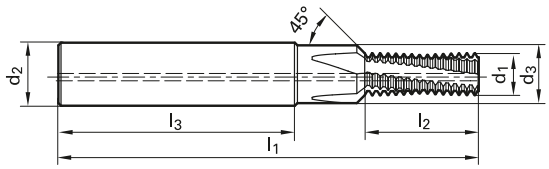
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

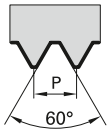
3526	3544
Guhring std.	
Solid carbide	
K/P	K/P
C	A
TMC SP	TMC SP
2xD	2xD
axial >=M4	axial >=M4
HA	HA
right-hand	right-hand
108	108
817	818

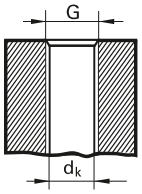
Availability	
●	○
●	○
●	○
●	○
●	○
●	○
●	○
●	○
●	○
●	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3759
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	TMC SP
Thread length	2,5xD
Cooling	axial >=M4
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816







G	P	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M 3	0.50	2.300	6.000	3.400	2.500	48.00	7.80	36.00	3	3.000	◯
M 4	0.70	3.000	6.000	4.500	3.300	48.00	10.90	35.60	3	4.000	●
M 5	0.80	4.000	6.000	5.500	4.200	54.00	13.20	36.00	3	5.000	●
M 6	1.00	4.800	8.000	6.600	5.000	62.00	16.50	36.00	3	6.000	●
M 8	1.25	6.400	10.000	9.000	6.800	74.00	21.90	40.00	3	8.000	●
M10	1.50	7.950	12.000	11.000	8.500	80.00	26.30	45.00	4	10.000	●
M12	1.75	9.950	14.000	13.500	10.200	90.00	32.40	45.00	4	12.000	●
M14	2.00	11.200	16.000	15.500	12.000	102.00	37.00	48.00	4	14.000	◯
M16	2.00	12.800	18.000	17.500	14.000	102.00	43.00	48.00	4	16.000	●
M20	2.50	14.500	20.000	21.500	17.500	125.00	48.80	50.00	4	20.000	

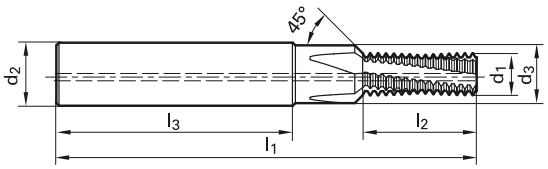
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

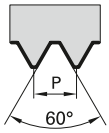
3760	3761
Guhring std.	
Solid carbide	
K/P	K/P
C	A
TMC SP	TMC SP
2,5xD	2,5xD
axial >=M4	axial >=M4
HA	HA
right-hand	right-hand
108	108
817	818

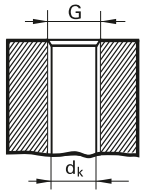
Availability	
●	○
●	○
●	○
●	○
●	○
●	○
●	○
○	○
○	○
●	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3512	3527	3545
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	
Surface	○	C	A
Type	TMC SP	TMC SP	TMC SP
Thread length	1,5xD	1,5xD	1,5xD
Cooling	axial	axial	axial
Shank design	HA	HA	HA
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



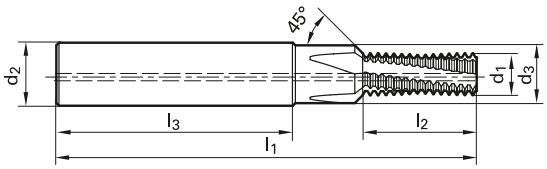


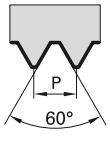


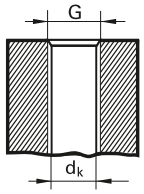
G	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability		
	mm	mm	mm	mm	mm	mm	mm					
M 4 X0,5	3.000	6.000	4.500	3.500	48.00	7.30	36.00	3	4.003	○	○	○
M 5 X0,5	4.000	6.000	5.500	4.500	54.00	8.80	36.00	3	5.003	●	○	○
M 6 X0,5	4.800	8.000	6.600	5.500	62.00	9.80	36.00	3	6.003	●	○	○
M 6 X0,75	4.800	8.000	6.600	5.200	62.00	10.10	36.00	3	6.004	●	●	○
M 8 X0,75	6.400	10.000	9.000	7.200	74.00	13.10	40.00	3	8.004	●	●	○
M 8 X1	6.400	10.000	9.000	7.000	74.00	13.50	40.00	3	8.005	○	●	○
M10 X1	7.950	12.000	11.000	9.000	80.00	16.50	45.00	4	10.005	●	●	○
M10 X1,25	7.950	12.000	11.000	8.800	80.00	16.90	45.00	4	10.006	○	○	○
M12 X1	9.950	14.000	13.500	11.000	90.00	19.50	45.00	4	12.005	●	●	○
M12 X1,5	9.950	14.000	13.500	10.500	90.00	20.30	45.00	4	12.007	●	●	○
M14 X1,5	11.200	16.000	15.500	12.500	102.00	23.30	48.00	4	14.007	●	●	○
M16 X1,5	12.800	18.000	17.500	14.500	102.00	26.30	48.00	4	16.007	●	●	○

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	3513	3528	3546
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	
Surface	○	C	A
Type	TMC SP	TMC SP	TMC SP
Thread length	2xD	2xD	2xD
Cooling	axial	axial	axial
Shank design	HA	HA	HA
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



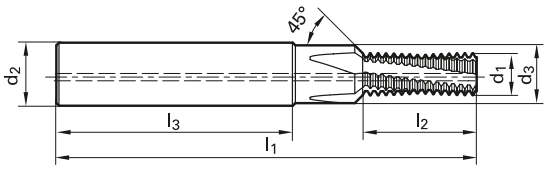


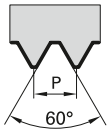


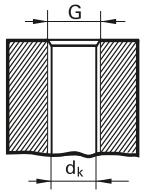
G	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability		
	mm	mm	mm	mm	mm	mm	mm					
M 4 X0,5	3.000	6.000	4.500	3.500	48.00	8.80	36.00	3	4.003	○	○	○
M 5 X0,5	4.000	6.000	5.500	4.500	54.00	10.80	36.00	3	5.003	●	○	○
M 6 X0,5	4.800	8.000	6.600	5.500	62.00	12.80	36.00	3	6.003	●	○	○
M 6 X0,75	4.800	8.000	6.600	5.200	62.00	13.10	36.00	3	6.004	○	○	○
M 8 X0,75	6.400	10.000	9.000	7.200	74.00	16.90	40.00	3	8.004	○	●	○
M 8 X1	6.400	10.000	9.000	7.000	74.00	17.50	40.00	3	8.005	○	●	○
M10 X1	7.950	12.000	11.000	9.000	80.00	21.50	45.00	4	10.005	○	●	○
M10 X1,25	7.950	12.000	11.000	8.800	80.00	21.90	45.00	4	10.006	●	○	○
M12 X1	9.950	14.000	13.500	11.000	90.00	25.50	45.00	4	12.005	●	●	○
M12 X1,5	9.950	14.000	13.500	10.500	90.00	26.30	45.00	4	12.007	●	●	○
M14 X1,5	11.200	16.000	15.500	12.500	102.00	30.80	48.00	4	14.007	●	○	○
M16 X1,5	12.800	18.000	17.500	14.500	102.00	33.80	48.00	4	16.007	●	●	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3762	3763	3764
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	
Surface	○	C	A
Type	TMC SP	TMC SP	TMC SP
Thread length	2,5xD	2,5xD	2,5xD
Cooling	axial	axial	axial
Shank design	HA	HA	HA
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



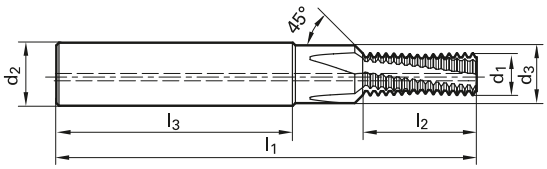


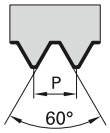


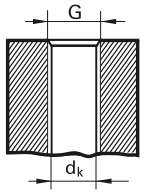
G	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability		
	mm	mm	mm	mm	mm	mm	mm					
M 4 X0,5	3.000	6.000	4.500	3.500	48.00	10.30	36.00	3	4.003	○	●	○
M 5 X0,5	4.000	6.000	5.500	4.500	54.00	12.80	36.00	3	5.003	○	○	○
M 6 X0,5	4.800	8.000	6.600	5.500	62.00	15.30	36.00	3	6.003	○	●	○
M 6 X0,75	4.800	8.000	6.600	5.200	62.00	15.40	36.00	3	6.004	○	○	○
M 8 X0,75	6.400	10.000	9.000	7.200	74.00	20.60	40.00	3	8.004	○	●	○
M 8 X1	6.400	10.000	9.000	7.000	74.00	20.50	40.00	3	8.005	○	●	○
M10 X1	7.950	12.000	11.000	9.000	80.00	25.50	45.00	4	10.005	●	○	○
M10 X1,25	7.950	12.000	11.000	8.800	80.00	25.60	45.00	4	10.006	●	●	○
M12 X1	9.950	14.000	13.500	11.000	90.00	30.50	45.00	4	12.005	●	○	○
M12 X1,5	9.950	14.000	13.500	10.500	90.00	30.80	45.00	4	12.007	○	○	○
M14 X1,5	11.200	16.000	15.500	12.500	102.00	38.30	48.00	4	14.007	○	●	○
M16 X1,5	12.800	18.000	17.500	14.500	102.00	41.30	48.00	4	16.007	○	●	○

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	3516	3534
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	C
Type	TMC SP	TMC SP
Thread length	1,5xD	1,5xD
Cooling	axial	axial
Shank design	HA	HA
Cutting direction	right-hand	right-hand
Discount group	108	108
Techn. data page	816	817



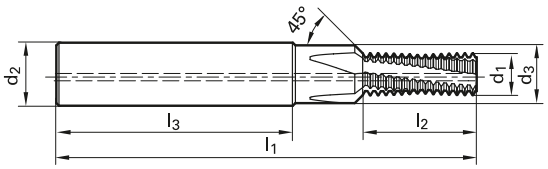


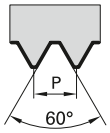


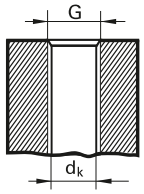
G	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability	
	mm	mm	mm	mm	mm	mm	mm				
1/4 -20	4.800	8.000	6.600	5.100	62.00	12.10	36.00	3	6.350	○	○
5/16-18	5.950	10.000	9.000	6.600	74.00	14.80	40.00	3	7.938	●	○
3/8 -16	7.100	12.000	11.000	8.000	80.00	16.70	45.00	4	9.525	●	○
7/16-14	7.950	12.000	11.000	9.400	80.00	19.00	45.00	4	11.113	○	○
1/2 -13	9.950	14.000	13.500	10.800	90.00	22.50	45.00	4	12.700	○	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3517	3535	3550
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	
Surface	○	C	A
Type	TMC SP	TMC SP	TMC SP
Thread length	2xD	2xD	2xD
Cooling	axial	axial	axial
Shank design	HA	HA	HA
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



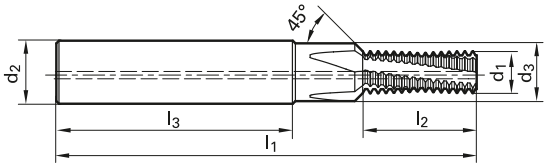


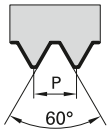


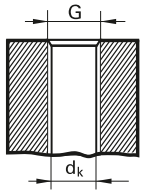
G	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability		
	mm	mm	mm	mm	mm	mm	mm					
1/4 -20	4.800	8.000	6.600	5.100	62.00	14.60	36.00	3	6.350	○	●	○
5/16-18	5.950	10.000	9.000	6.600	74.00	17.60	40.00	3	7.938	○	○	○
3/8 -16	7.100	12.000	11.000	8.000	80.00	21.40	45.00	4	9.525	●	●	○
7/16-14	7.950	12.000	11.000	9.400	80.00	24.50	45.00	4	11.113	○	○	○
1/2 -13	9.950	14.000	13.500	10.800	90.00	28.30	45.00	4	12.700	○	●	○

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	3518	3536	3551
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	
Surface	○	C	A
Type	TMC SP	TMC SP	TMC SP
Thread length	1,5xD	1,5xD	1,5xD
Cooling	axial	axial	axial
Shank design	HA	HA	HA
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



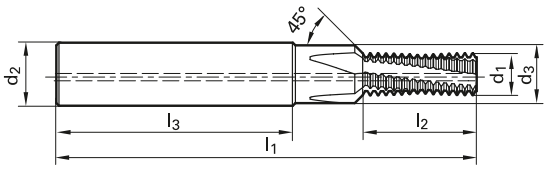


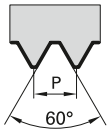


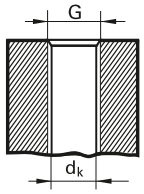
G	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability		
	mm	mm	mm	mm	mm	mm	mm					
1/4 -28	4.800	8.000	6.600	5.500	62.00	11.30	36.00	3	6.350	○	○	○
5/16-24	5.950	10.000	9.000	6.900	74.00	13.20	40.00	3	7.938	●	○	○
3/8 -24	7.950	12.000	11.000	8.500	80.00	16.40	45.00	4	9.525	○	○	○
7/16-20	7.950	12.000	11.000	9.900	80.00	18.40	45.00	4	11.113	●	●	○
1/2 -20	9.950	14.000	13.500	11.500	90.00	21.00	45.00	4	12.700	○	○	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3519	3537	3552
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	
Surface	○	C	A
Type	TMC SP	TMC SP	TMC SP
Thread length	2xD	2xD	2xD
Cooling	axial	axial	axial
Shank design	HA	HA	HA
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818







G	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability		
	mm	mm	mm	mm	mm	mm	mm					
1/4 -28	4.800	8.000	6.600	5.500	62.00	14.10	36.00	3	6.350	●	●	○
5/16-24	5.950	10.000	9.000	6.900	74.00	17.50	40.00	3	7.938	●	●	○
3/8 -24	7.950	12.000	11.000	8.500	80.00	20.60	45.00	4	9.525	○	●	○
7/16-20	7.950	12.000	11.000	9.900	80.00	24.80	45.00	4	11.113	○	●	○
1/2 -20	9.950	14.000	13.500	11.500	90.00	27.30	45.00	4	12.700	○	●	○

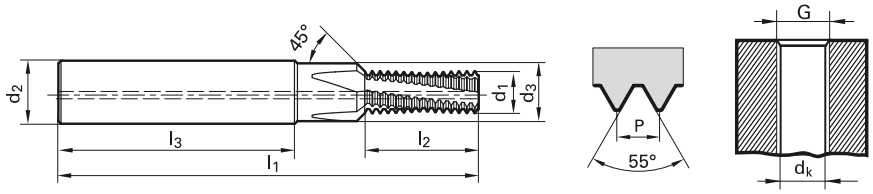
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

GUHRING

SPECIAL TAPS

Do you require a tap in a special dimension and with a special thread type or tolerance? In addition to our standard catalogue range we provide special solutions tailored to your specific requirements on request!

Guhring no.	3514
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	TMC SP
Thread length	1,5xD
Cooling	axial
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816



G	P	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability
	G/inch	mm	mm	mm	mm	mm	mm	mm	mm		
G 1/8	28.00	7.950	12.000	11.000	8.800	80.00	15.90	45.00	4	9.728	●
G 1/4	19.00	9.950	14.000	13.900	11.800	90.00	22.10	45.00	4	13.157	●
G 3/8	19.00	13.600	18.000	17.500	15.250	102.00	27.40	48.00	4	16.662	❍

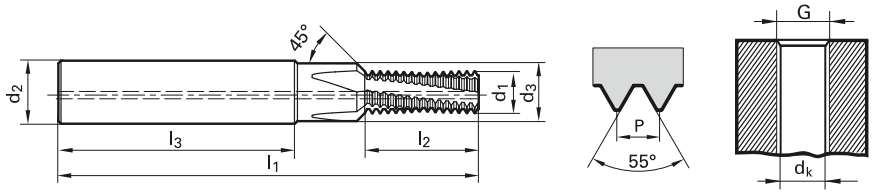
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

3529	3547
Guhring std.	
Solid carbide	
K/P	K/P
C	A
TMC SP	TMC SP
1,5xD	1,5xD
axial	axial
HA	HA
right-hand	right-hand
108	108
817	818

Availability	
●	❍
❍	❍
	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3515
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	TMC SP
Thread length	2xD
Cooling	axial
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816



G	P	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability
	G/inch	mm	mm	mm	mm	mm	mm	mm	mm		
G 1/8	28.00	7.950	12.000	11.000	8.800	80.00	21.30	45.00	4	9.728	◯
G 1/4	19.00	9.950	14.000	13.900	11.800	90.00	28.70	45.00	4	13.157	●
G 3/8	19.00	13.600	18.000	17.500	15.250	102.00	35.40	48.00	4	16.662	◯

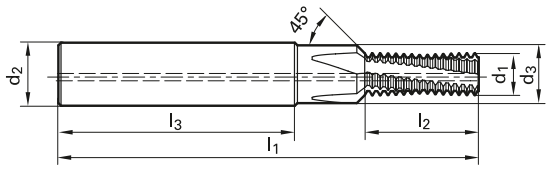
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

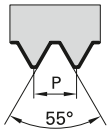
3533	3548
Guhring std.	
Solid carbide	
K/P	K/P
C	A
TMC SP	TMC SP
2xD	2xD
axial	axial
HA	HA
right-hand	right-hand
108	108
817	818

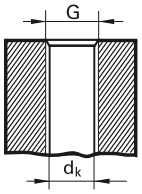
Availability	
●	○
●	○
○	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3765
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	TMC SP
Thread length	2,5xD
Cooling	axial
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816







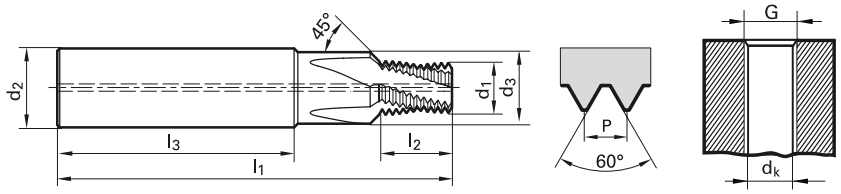
G	P	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability
	G/inch	mm	mm	mm	mm	mm	mm	mm	mm		
G 1/8	28.00	7.950	12.000	11.000	8.800	80.00	24.90	45.00	4	9.728	◯
G 1/4	19.00	9.950	14.000	13.900	11.800	90.00	35.40	45.00	4	13.157	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

OEM

Our OEM division was specifically created to provide direct support for the machine tool industry and has received ongoing development in recent years. Benefit from our know-how of process and tool planning, tool design, process optimisation and after-sales-service.

Guhring no.	3520
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	TMC SP
Thread length	
Cooling	axial
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816



G	P	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability
	G/inch	mm	mm	mm	mm	mm	mm	mm	mm		
1/8	27.00	7.300	12.000	11.000	8.400	70.00	9.90	45.00	4	10.620	❍
1/4	18.00	9.950	16.000	14.500	11.100	80.00	14.80	48.00	4	14.140	❍
3/8	18.00	12.500	18.000	17.500	14.300	80.00	14.80	48.00	4	17.570	❍

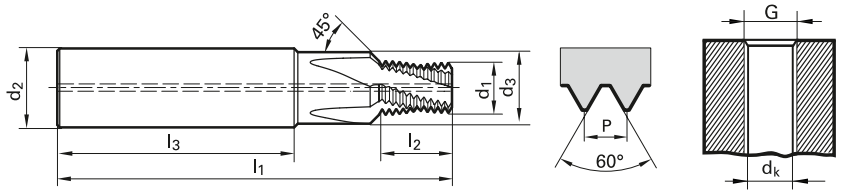
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

3538	3553
Guhring std.	
Solid carbide	
K/P	K/P
C	A
TMC SP	TMC SP
axial	axial
HA	HA
right-hand	right-hand
108	108
817	818

Availability	
❍	❍
●	❍
❍	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3521
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	TMC SP
Thread length	
Cooling	axial
Shank design	HA
Cutting direction	right-hand
Discount group	108
Techn. data page	816



G	P	d1	d2	d3	dk	l1	l2	l3	Z	Code no.	Availability
	G/inch	mm	mm	mm	mm	mm	mm	mm	mm		
1/8	27.00	7.300	12.000	11.000	8.400	70.00	9.90	45.00	4	10.620	◯
1/4	18.00	9.950	16.000	14.500	11.100	80.00	14.80	48.00	4	14.140	◯
3/8	18.00	12.500	18.000	17.500	14.300	80.00	14.80	48.00	4	17.570	◯

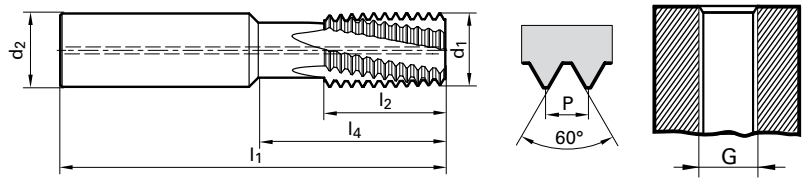
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

3539	3554
Guhring std.	
Solid carbide	
K/P	K/P
C	A
TMC SP	TMC SP
axial	axial
HA	HA
right-hand	right-hand
108	108
817	818

Availability	
●	❍
❍	❍
❍	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

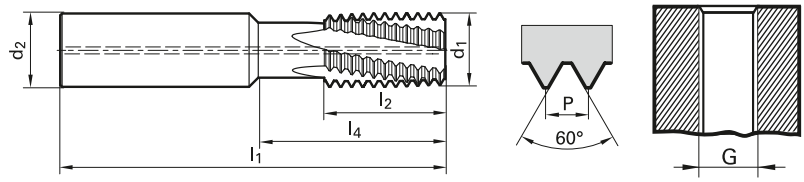
Guhring no.	3523	3541	3556
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	K/P
Surface	○	C	A
Type	TMU SP	TMU SP	TMU SP
Thread length			
Cooling	axial	axial	axial
Shank design	cil. h6	cil. h6	cil. h6
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



G	P	d1	d2	l1	l2	l4	Z	Code no.	Availability		
	mm	mm	mm	mm	mm	mm					
M x 1	1.00	9.950	10.000	70.00	16.00	25.00	4	10.100	●	●	○
M x 1,25	1.25	9.950	10.000	70.00	16.00	25.00	4	10.125	○	●	○
M x 1,5	1.50	9.950	10.000	70.00	16.00	25.00	4	10.150	●	●	○
M x 1	1.00	11.950	12.000	80.00	20.00	31.00	4	12.100	●	●	○
M x 1,25	1.25	11.950	12.000	80.00	20.00	31.00	4	12.125	○	●	○
M x 1,5	1.50	11.950	12.000	80.00	20.00	31.00	4	12.150	●	●	○
M x 1	1.00	15.950	16.000	90.00	25.00	40.00	5	16.100	●	●	
M x 1,5	1.50	15.950	16.000	90.00	25.00	40.00	5	16.150	●	●	○
M x 2	2.00	15.950	16.000	90.00	25.00	40.00	5	16.200	●	●	○
M x 3	3.00	17.950	18.000	102.00	33.00	50.00	5	18.300	●	●	
M x 1	1.00	19.950	20.000	105.00	33.00	50.00	5	20.100	●	○	○
M x 1,5	1.50	19.950	20.000	105.00	33.00	50.00	5	20.150	●	●	○
M x 2	2.00	19.950	20.000	105.00	33.00	50.00	5	20.200	●	●	○
M x 2,5	2.50	19.950	20.000	105.00	33.00	50.00	5	20.250	○	●	○
M x 3	3.00	19.950	20.000	105.00	33.00	50.00	5	20.300	●	●	○
M x 3,5	3.50	19.950	20.000	105.00	33.00	50.00	5	20.350	○	●	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

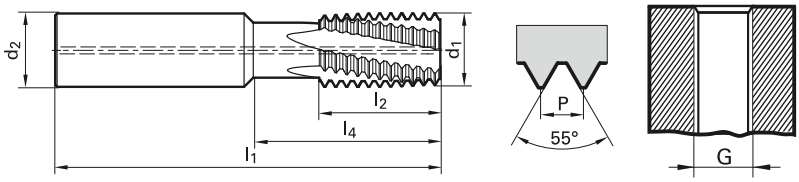
Guhring no.	3595	3596	3597
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	K/P
Surface	○	C	A
Type	TMU UN	TMU UN	TMU UN
Thread length			
Cooling	axial	axial	axial
Shank design	cil. h6	cil. h6	cil. h6
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



G	P	d1	d2	l1	l2	l4	Z	Code no.	Availability		
	G/inch	mm	mm	mm	mm	mm					
UN 24	24.00	9.950	10.000	70.00	16.00	25.00	4	10.240	●	●	○
UN 16	16.00	11.950	12.000	80.00	20.00	31.00	4	12.160	●	●	○
UN 18	18.00	11.950	12.000	80.00	20.00	31.00	4	12.180	●	●	○
UN 20	20.00	11.950	12.000	80.00	20.00	31.00	4	12.200	●	●	○
UN 24	24.00	11.950	12.000	80.00	20.00	31.00	4	12.240	●	●	○
UN 14	14.00	15.950	16.000	90.00	25.00	40.00	5	16.140	●	●	○
UN 16	16.00	15.950	16.000	90.00	25.00	40.00	5	16.160	●	●	○
UN 18	18.00	15.950	16.000	90.00	25.00	40.00	5	16.180	●	●	○
UN 20	20.00	15.950	16.000	90.00	25.00	40.00	5	16.200	●	●	○
UN 20	8.00	19.950	20.000	105.00	33.00	50.00	5	20.080	●	●	○
UN 12	12.00	19.950	20.000	105.00	33.00	50.00	5	20.120	●	●	○
UN 14	14.00	19.950	20.000	105.00	33.00	50.00	5	20.140	●	●	○
UN 16	16.00	19.950	20.000	105.00	33.00	50.00	5	20.160	●	●	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

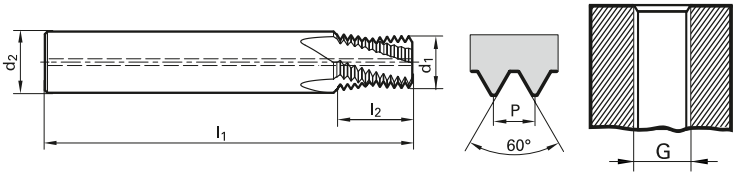
Guhring no.	3524	3542	3557
Standard	Guhring std.		
Tool material	Solid carbide		
Carbide grade	K	K/P	K/P
Surface	○	C	A
Type	TMU SP	TMU SP	TMU SP
Thread length			
Cooling	axial	axial	axial
Shank design	cil. h6	cil. h6	cil. h6
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



G	P	d1	d2	l1	l2	l4	Z	Code no.	Availability		
	G/inch	mm	mm	mm	mm	mm					
G 19	19.00	9.950	10.000	70.00	16.00	25.00	4	10.190	●	●	○
G 14	14.00	15.950	16.000	90.00	25.00	40.00	5	16.140	●	●	○
G 11	11.00	19.950	20.000	105.00	33.00	50.00	5	20.110	●	●	○

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

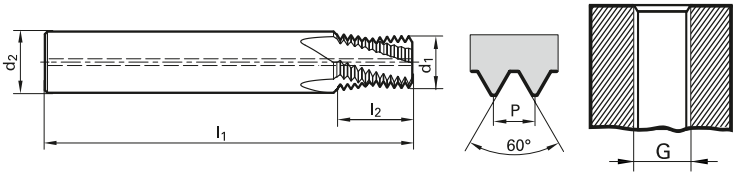
Guhring no.	3768	3769	3770
Standard		Guhring std.	
Tool material		Solid carbide	
Carbide grade	K	K/P	K/P
Surface	○	C	A
Type	TMU SP	TMU SP	TMU SP
Thread length			
Cooling	axial	axial	axial
Shank design	cil. h6	cil. h6	cil. h6
Cutting direction	right-hand	right-hand	right-hand
Discount group	108	108	108
Techn. data page	816	817	818



G	P	d1	d2	l1	l2	Z	Code no.	Availability		
	G/inch	mm	mm	mm	mm					
NPT 14	14.00	14.500	16.000	90.00	19.05	5	21.900	●	●	○
NPT 11,5	11.50	18.500	20.000	90.00	23.19	5	34.180	○	●	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	3772	3773
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	K/P
Surface	C	A
Type	TMU SP	TMU SP
Thread length		
Cooling	axial	axial
Shank design	cil. h6	cil. h6
Cutting direction	right-hand	right-hand
Discount group	108	108
Techn. data page	817	818

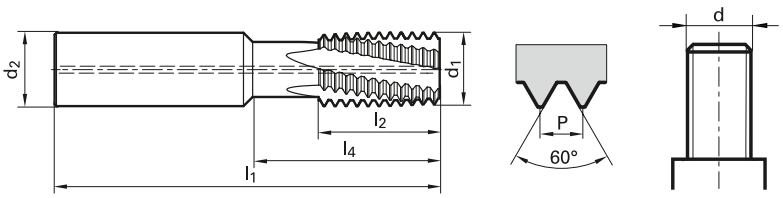


G	P	d1	d2	l1	l2	Z	Code no.	Availability	
	G/inch	mm	mm	mm	mm				
NPTF 14	14.00	14.500	16.000	90.00	19.05	5	21.900	●	○
NPTF 11,5	11.50	18.500	20.000	90.00	23.19	5	34.180	○	○

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4162	4163
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	C
Type	TMU SP	TMU SP
Thread length		
Cooling	axial	axial
Shank design	cil. h6	cil. h6
Cutting direction	right-hand	right-hand
Discount group	108	108
Techn. data page	816	817

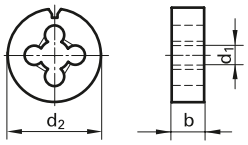
NEW NEW



P	d	d1	d2	l1	l2	l4	Z	Code no.	Availability	
mm	mm	mm	mm	mm	mm	mm				
0.50	10.000	9.950	10.000	70.00	16.00	25.00	4	10.050	●	●
0.75	10.000	9.950	10.000	70.00	16.00	25.00	4	10.075	●	●
1.00	12.000	11.950	12.000	80.00	20.00	31.00	4	12.100	●	●
1.25	12.000	11.950	12.000	80.00	20.00	31.00	4	12.125	●	●
1.50	12.000	11.950	12.000	80.00	20.00	31.00	4	12.150	●	●
1.50	16.000	15.950	16.000	90.00	25.00	40.00	5	16.150	●	●
2.00	16.000	15.950	16.000	90.00	25.00	40.00	5	16.200	●	●
2.50	16.000	15.950	16.000	90.00	25.00	40.00	5	16.250	●	●
3.00	20.000	19.950	20.000	105.00	33.00	50.00	5	20.300	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

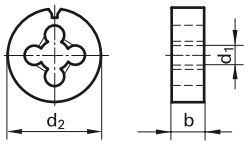
Guhring no.	125
Standard	Guhring std.
Tool material	HSS
Surface	◯
	lapped
Spiral entry	>M 2.6
Chamfer lead	1,75xP
Cutting direction	right-hand
Tolerance	6g
Discount group	103
Techn. data page	820



d1	P	d2	b	workpce Ø	Code no.	Availability
	mm	mm	mm	mm		
M 1	0.25	16.000	2.00	0.970	1.000	◯
M 1,1	0.25	16.000	2.00	1.070	1.100	◯
M 1,2	0.25	16.000	2.00	1.170	1.200	◯
M 1,6	0.35	16.000	2.60	1.540	1.600	◯
M 2	0.40	16.000	3.50	1.940	2.000	●
M 2,2	0.45	16.000	3.50	2.130	2.200	◯
M 3	0.50	16.000	3.50	2.920	3.000	●
M 4	0.70	20.000	5.00	3.910	4.020	◯
M 5	0.80	20.000	7.00	4.900	5.000	●
M 6	1.00	20.000	7.00	5.880	6.000	●
M10	1.50	30.000	11.00	9.850	10.000	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

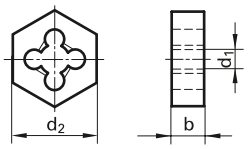
Guhring no.	121
Standard	Guhring std.
Tool material	HSS
Surface	◯
Spiral entry	>M 2.6
Chamfer lead	1,75xP
Cutting direction	right-hand
Tolerance	6g
Discount group	103
Techn. data page	820



d1	P	d2	b	workpce Ø	Code no.	Availability
	mm	mm	mm	mm		
M 2,2	0.45	16.000	5.00	2.130	2.200	❍
M 3	0.50	16.000	5.00	2.920	3.010	●
M 4	0.70	20.000	5.00	3.910	4.020	●
M 5	0.80	16.000	5.00	4.900	5.010	●
M 5	0.80	20.000	7.00	4.900	5.000	●
M 6	1.00	16.000	5.00	5.880	6.010	●
M 6	1.00	20.000	7.00	5.880	6.000	●
M 8	1.25	25.000	9.00	7.870	8.000	●
M10	1.50	30.000	11.00	9.850	10.000	●
M12	1.75	38.000	14.00	11.830	12.000	❍

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

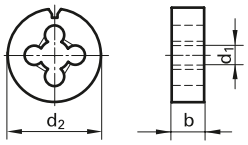
Guhring no.	139
Standard	DIN 382
Tool material	HSS
Surface	◯
Spiral entry	without point grind
Chamfer lead	1,75xP
Cutting direction	right-hand
Tolerance	6g
Discount group	103
Techn. data page	820



d1	P	d2	b	workpce Ø	Code no.	Availability
	mm	mm	mm	mm		
M 5	0.80	18.000	7.00	4.900	5.000	●
M 6	1.00	18.000	7.00	5.880	6.000	●
M 7	1.00	21.000	9.00	6.880	7.000	●
M 8	1.25	21.000	9.00	7.870	8.000	●
M10	1.50	27.000	11.00	9.850	10.000	●
M12	1.75	36.000	14.00	11.830	12.000	●
M16	2.00	41.000	18.00	15.820	16.000	●
M20	2.50	41.000	18.00	19.790	20.000	●
M24	3.00	50.000	22.00	23.770	24.000	●
M45	4.50	85.000	36.00	44.770	45.000	❍
M52	5.00	85.000	36.00	51.660	52.000	❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

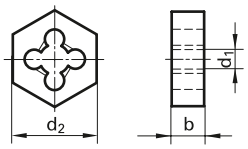
Guhring no.	130
Standard	DIN EN 22568
Tool material	HSS-E
Surface	●
	lapped
Spiral entry	>M 2.6
Chamfer lead	1,75xP
Cutting direction	right-hand
Tolerance	6g
Discount group	103
Techn. data page	820



d1	P	d2	b	workpce Ø	Code no.	Availability
	mm	mm	mm	mm		
M 2	0.40	16.000	3.50	1.940	2.000	●
M 2,2	0.45	16.000	3.50	2.130	2.200	○
M 2,5	0.45	16.000	5.00	2.430	2.500	●
M 3	0.50	16.000	5.00	2.920	3.010	●
M 3	0.50	20.000	5.00	2.920	3.020	●
M 4	0.70	16.000	5.00	3.910	4.010	●
M 4	0.70	20.000	5.00	3.910	4.020	●
M 5	0.80	20.000	7.00	4.900	5.000	●
M 6	1.00	20.000	7.00	5.880	6.000	●
M 8	1.25	25.000	9.00	7.870	8.000	●
M10	1.50	30.000	11.00	9.850	10.000	●
M12	1.75	38.000	14.00	11.830	12.000	●
M14	2.00	38.000	14.00	13.820	14.000	●
M16	2.00	45.000	18.00	15.820	16.000	●
M20	2.50	45.000	18.00	19.790	20.000	●
M22	2.50	55.000	22.00	21.790	22.000	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

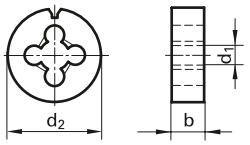
Guhring no.	140
Standard	DIN 382
Tool material	HSS
Surface	○
Spiral entry	>M 2.6
Chamfer lead	1,75xP
Cutting direction	right-hand
Tolerance	6g
Discount group	103
Techn. data page	820



d1	P	d2	b	workpce Ø	Code no.	Availability
	mm	mm	mm	mm		
M 3	0.50	18.000	5.00	2.920	3.000	●
M 4	0.70	18.000	5.00	3.910	4.000	●
M 5	0.80	18.000	7.00	4.900	5.000	○
M 6	1.00	18.000	7.00	5.880	6.000	○
M 8	1.25	21.000	9.00	7.870	8.000	●
M10	1.50	27.000	11.00	9.850	10.000	○
M12	1.75	36.000	14.00	11.830	12.000	○
M14	2.00	36.000	14.00	13.820	14.000	●
M16	2.00	41.000	18.00	15.820	16.000	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

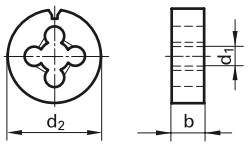
Guhring no.	151	153	155	156
Standard	DIN EN 22568			
Tool material	HSS			
Surface	○	○	○	○
		lapped	lapped	
Spiral entry	without	>M 2.6	>M 2.6	>M 2.6
Chamfer lead	1,75xP	1,75xP	1,25xP	1,75xP
Cutting direction	right-hand	right-hand	right-hand	left-hand
Tolerance	6g	6g	6g	6g
Discount group	103	103	103	103
Techn. data page	820	820	820	820



d1	P	d2	b	workpce Ø	Code no.	Availability			
	mm	mm	mm	mm					
M 1	0.25	16.000	5.00	0.970	1.000	●			
M 1,2	0.25	16.000	5.00	1.170	1.200	●			
M 1,4	0.30	16.000	5.00	1.360	1.400	○			
M 1,6	0.35	16.000	5.00	1.540	1.600	●			
M 1,7	0.35	16.000	5.00	1.660	1.700	○			
M 2	0.40	16.000	5.00	1.940	2.000	●			
M 2,3	0.40	16.000	5.00	2.250	2.300	○			
M 2,5	0.45	16.000	5.00	2.430	2.500	●			
M 2,6	0.45	16.000	5.00	2.540	2.600	●			
M 3	0.50	20.000	5.00	2.920	3.020	●			●
M 3,5	0.60	20.000	5.00	3.410	3.500	●			
M 4	0.70	20.000	5.00	3.910	4.020	●	●	●	●
M 4,5	0.75	20.000	7.00	4.410	4.500		○	○	
M 5	0.80	20.000	7.00	4.900	5.000	●	●	○	●
M 5,5	0.90	20.000	7.00	5.390	5.500		○		
M 6	1.00	20.000	7.00	5.880	6.000	●	●	○	●
M 7	1.00	25.000	9.00	6.880	7.000	●			
M 8	1.25	25.000	9.00	7.870	8.000	●	●	●	●
M 9	1.25	25.000	9.00	8.870	9.000		○		
M10	1.50	30.000	11.00	9.850	10.000	●	●	●	●
M11	1.50	30.000	11.00	10.850	11.000	○	○		
M12	1.75	38.000	14.00	11.830	12.000	●	●	○	●
M14	2.00	38.000	14.00	13.820	14.000	●			●
M16	2.00	45.000	18.00	15.820	16.000	●		○	●
M18	2.50	45.000	18.00	17.790	18.000	●		○	
M20	2.50	45.000	18.00	19.790	20.000	●		○	●
M22	2.50	55.000	22.00	21.790	22.000			○	
M24	3.00	55.000	22.00	23.770	24.000	●		○	
M27	3.00	65.000	25.00	26.770	27.000			○	
M30	3.50	65.000	25.00	29.730	30.000	●			
M33	3.50	65.000	25.00	32.730	33.000				○

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

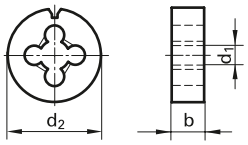
Guhring no.	152
Standard	DIN EN 22568
Tool material	HSS
Surface	○
Spiral entry	>M 2.6
Chamfer lead	1,75xP
Cutting direction	right-hand
Tolerance	6g
Discount group	103
Techn. data page	820



d1	P	d2	b	workpce Ø	Code no.	Availability
	mm	mm	mm	mm		
M 3	0.50	20.000	5.00	2.920	3.020	●
M 3,5	0.60	20.000	5.00	3.410	3.500	●
M 4	0.70	20.000	5.00	3.910	4.020	●
M 4,5	0.75	20.000	7.00	4.410	4.500	◐
M 5	0.80	20.000	7.00	4.900	5.000	●
M 6	1.00	20.000	7.00	5.880	6.000	●
M 7	1.00	25.000	9.00	6.880	7.000	●
M 8	1.25	25.000	9.00	7.870	8.000	●
M 9	1.25	25.000	9.00	8.870	9.000	●
M10	1.50	30.000	11.00	9.850	10.000	●
M12	1.75	38.000	14.00	11.830	12.000	●
M14	2.00	38.000	14.00	13.820	14.000	●
M16	2.00	45.000	18.00	15.820	16.000	●
M18	2.50	45.000	18.00	17.790	18.000	●
M20	2.50	45.000	18.00	19.790	20.000	●
M22	2.50	55.000	22.00	21.790	22.000	●
M24	3.00	55.000	22.00	23.770	24.000	●
M27	3.00	65.000	25.00	26.770	27.000	●
M30	3.50	65.000	25.00	29.730	30.000	●

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

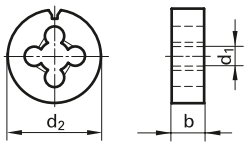
Guhring no.	161	162	163
Standard		DIN EN 22568	
Tool material		HSS	
Surface	○	○	○
			lapped
Spiral entry	without point grind	>M 2.6	>M 2.6
Chamfer lead	1,75xP	1,75xP	1,75xP
Cutting direction	right-hand	right-hand	right-hand
Tolerance	6g	6g	6g
Discount group	103	103	103
Techn. data page	820	820	820



d1 X P	d2	b	workpce Ø	Code no.	Availability		
	mm	mm	mm				
M 2,6X0,25	16.000	5.00	2.540	2.601	○		
M 3 X0,35	20.000	5.00	2.940	3.002		●	
M 4 X0,5	20.000	5.00	3.920	4.003	○	●	
M 4,5X0,5	20.000	5.00	4.420	4.503			●
M 5 X0,5	20.000	5.00	4.920	5.003	○	●	
M 6 X0,5	20.000	5.00	5.920	6.003		●	
M 6 X0,75	20.000	7.00	5.910	6.004		●	
M 7 X0,5	25.000	9.00	6.920	7.003		●	
M 7 X0,75	25.000	9.00	6.910	7.004		●	
M 8 X0,5	25.000	9.00	7.920	8.003		●	
M 8 X0,75	25.000	9.00	7.910	8.004	●	●	
M 8 X1	25.000	9.00	7.880	8.005	●	●	
M 9 X0,75	25.000	9.00	8.910	9.004		●	
M 9 X1	25.000	9.00	8.880	9.005		●	
M10 X0,75	30.000	11.00	9.910	10.004		●	
M10 X1	30.000	11.00	9.880	10.005	●	●	○
M10 X1,25	30.000	11.00	9.870	10.006	●	●	
M11 X0,5	30.000	11.00	10.920	11.003			●
M11 X1	30.000	11.00	10.880	11.005		●	
M12 X0,75	38.000	10.00	11.910	12.004		●	
M12 X1	38.000	10.00	11.880	12.005	●	●	
M12 X1,25	38.000	10.00	11.870	12.006	●	●	
M12 X1,5	38.000	10.00	11.850	12.007	●	●	
M13 X1	38.000	10.00	12.880	13.005		●	
M14 X1	38.000	10.00	13.880	14.005	○	●	
M14 X1,25	38.000	10.00	13.870	14.006		●	
M14 X1,5	38.000	10.00	13.850	14.007	●	●	
M15 X1	38.000	10.00	14.880	15.005		●	
M15 X1,5	38.000	10.00	14.850	15.007			●
M16 X1	45.000	14.00	15.880	16.005	○	●	
M16 X1,5	45.000	14.00	15.850	16.007	●	●	
M17 X1	45.000	14.00	16.880	17.005		●	○
M18 X1	45.000	14.00	17.880	18.005		●	
M18 X1,5	45.000	14.00	17.850	18.007		●	
M20 X0,75	45.000	14.00	19.910	20.004			○
M20 X1	45.000	14.00	19.880	20.005	●	●	

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

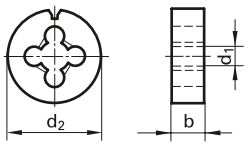
Guhring no.	161	162	163
Standard		DIN EN 22568	
Tool material		HSS	
Surface	○	○	○
			lapped
Spiral entry	without point grind	>M 2.6	>M 2.6
Chamfer lead	1,75xP	1,75xP	1,75xP
Cutting direction	right-hand	right-hand	right-hand
Tolerance	6g	6g	6g
Discount group	103	103	103
Techn. data page	820	820	820



d1 X P	d2	b	workpce Ø	Code no.	Availability		
	mm	mm	mm				
M20 X1,5	45.000	14.00	19.850	20.007	●	●	
M20 X2	45.000	14.00	19.820	20.008		●	❍
M22 X1	55.000	16.00	21.880	22.005		●	
M22 X1,5	55.000	16.00	21.850	22.007	❍	●	
M24 X1,5	55.000	16.00	23.850	24.007		●	
M24 X2	55.000	16.00	23.820	24.008		●	❍
M25 X1,5	55.000	16.00	24.850	25.007		●	
M26 X1	55.000	16.00	25.880	26.005			❍
M26 X1,5	55.000	16.00	25.850	26.007		●	
M27 X1,5	65.000	18.00	26.850	27.007		●	❍
M27 X2	65.000	18.00	26.820	27.008		●	
M28 X1,5	65.000	18.00	27.850	28.007		●	
M30 X1,5	65.000	18.00	29.850	30.007		●	
M30 X2	65.000	18.00	29.820	30.008		●	

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

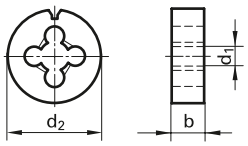
Guhring no.	181	182
Standard	DIN EN 22568	
Tool material	HSS	
Surface	◯	◯
Spiral entry	without point grind	with
Chamfer lead	1,75xP	1,75xP
Cutting direction	right-hand	right-hand
Tolerance	2a	2a
Discount group	103	103
Techn. data page	820	820



d1 - P	d2	b	workpce Ø	Code no.	Availability	
	mm	mm	mm			
NR. 4 -40	16.000	5.00	2.760	2.845	❍	
NR. 8 -32	20.000	7.00	4.070	4.166	❍	●
NR.10 -24	20.000	7.00	4.710	4.826		●
1/4 -20	20.000	7.00	6.220	6.350	❍	●
5/16-18	25.000	9.00	7.800	7.938		●
3/8 -16	30.000	11.00	9.370	9.525		●
7/16-14	30.000	11.00	10.950	11.113	❍	●
1/2 -13	38.000	14.00	12.520	12.700		●
5/8 -11	45.000	18.00	15.680	15.875		●
3/4 -10	45.000	18.00	18.840	19.050		●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

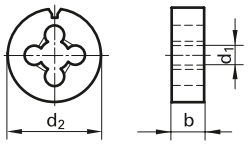
Guhring no.	185
Standard	DIN EN 22568
Tool material	HSS
Surface	○
Spiral entry	with
Chamfer lead	1,75xP
Cutting direction	right-hand
Tolerance	2a
Discount group	103
Techn. data page	820



d1 - P	d2	b	workpce Ø	Code no.	Availability
	mm	mm	mm		
NR.10 -32	20.000	7.00	4.730	4.826	●
1/4 -28	20.000	7.00	6.240	6.350	●
5/16-24	25.000	9.00	7.820	7.938	●
3/8 -24	30.000	11.00	9.410	9.525	●
7/16-20	30.000	11.00	10.980	11.113	●
1/2 -20	38.000	10.00	12.560	12.700	●
9/16-18	38.000	10.00	14.140	14.288	●
5/8 -18	45.000	14.00	15.730	15.875	●
3/4 -16	45.000	14.00	18.890	19.050	●
7/8 -14	55.000	16.00	22.050	22.225	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

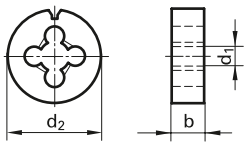
Guhring no.	172
Standard	DIN EN 22568
Tool material	HSS
Surface	◯
Spiral entry	with
Chamfer lead	1,75xP
Cutting direction	right-hand
Tolerance	
Discount group	103
Techn. data page	820



d1	P	d2	b	workpce Ø	Code no.	Availability
	G/inch	mm	mm	mm		
W 1/8	40.00	20.000	5.00	3.090	3.175	❍
W 1/4	20.00	20.000	7.00	6.180	6.350	●
W 3/8	16.00	30.000	11.00	9.350	9.525	●
W 1/2	12.00	38.000	14.00	12.470	12.700	●
W 5/8	11.00	45.000	18.00	15.660	15.876	●
W1	8.00	55.000	22.00	25.110	25.401	❍
W1 3/8	6.00	65.000	25.00	34.570	34.926	❍
W1 5/8	5.00	75.000	30.00	40.920	41.277	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

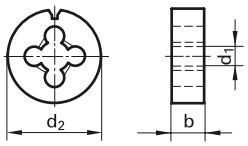
Guhring no.	175	176
Standard	DIN EN 24231	
Tool material	HSS	
Surface	○	○
Spiral entry	without point grind	with
Chamfer lead	1,75xP	1,75xP
Cutting direction	right-hand	right-hand
Tolerance		
Discount group	103	103
Techn. data page	820	820



d1	P	d2	b	workpce Ø	Code no.	Availability	
	G/inch	mm	mm	mm			
G 1/8	28.00	30.000	11.00	9.620	9.728	●	●
G 1/4	19.00	38.000	10.00	13.030	13.157	●	●
G 3/8	19.00	45.000	14.00	16.540	16.662	●	●
G 1/2	14.00	45.000	14.00	20.810	20.955	●	●
G 5/8	14.00	55.000	16.00	22.770	22.911		●
G 3/4	14.00	55.000	16.00	26.300	26.441	●	●
G 7/8	14.00	65.000	18.00	30.060	30.201		❍
G1	11.00	65.000	18.00	33.070	33.249	❍	●
G1 1/4	11.00	75.000	20.00	41.730	41.910		●
G1 1/2	11.00	90.000	22.00	47.620	47.803		●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	198
Standard	DIN EN 24230
Tool material	HSS
Surface	◯
Spiral entry	with
Chamfer lead	1,75xP
Cutting direction	right-hand
Tolerance	
Discount group	103
Techn. data page	820



d1	P	d2	b	workpce Ø	Code no.	Availability
	G/inch	mm	mm	mm		
R 1/8	28.00	30.000	11.00	9.480	9.728	❍
R 1/4	19.00	38.000	14.00	12.780	13.157	❍
R 1/2	14.00	45.000	18.00	20.440	20.955	❍
R1 1/4	11.00	75.000	26.00	41.120	41.910	❍
R2	11.00	105.000	28.00	58.820	59.614	❍

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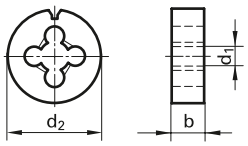
Guhring no.	190	191
Standard	DIN EN 22568	
Tool material	HSS	
Surface	○	○
Spiral entry	without point grind	with
Chamfer lead	1,75xP	1,75xP
Cutting direction	right-hand	right-hand
Tolerance		
Discount group	103	103
Techn. data page	820	820



d1	P	d2	b	workpce Ø	Code no.	Availability	
	G/inch	mm	mm	mm			
1/8	27.00	30.000	11.00	9.930	10.620	●	●
1/4	18.00	38.000	14.00	13.180	14.140		●
3/8	18.00	45.000	14.00	16.600	17.570		●
1/2	14.00	45.000	18.00	20.630	21.900	◑	●
3/4	14.00	55.000	22.00	25.950	27.230	●	●
1	11.50	65.000	25.00	32.510	34.180	●	

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

The QS principle encourages requests for inspection records or certificates of conformity to be supplied with ordered tools. We will gladly do this. But as the setting-up of inspection records is particularly time consuming and costly - special marking on a specified number of tools, the provision of measuring records, the entry of measured data in special forms - and we do not wish to incorporate these costs in our overhead costs, we have chosen to charge the prices below in relation to the quantity ordered. Surely you will appreciate this.

inspected number of items / inspection criteria	1	up to 3	up to 5	up to 10	up to 15	up to 20	up to 30	up to 50	up to 100
	net prices for the inspected number of items per inspection criteria								
Total length	●	●	●	●	●	●	●	●	●
Thread length	●	●	●	●	●	●	●	●	●
Flute length	●	●	●	●	●	●	●	●	●
Shank diameter	●	●	●	●	●	●	●	●	●
Thread diameter	●	●	●	●	●	●	●	●	●
Effective diameter	●	●	●	●	●	●	●	●	●
Thread core diameter	●	●	●	●	●	●	●	●	●
Chamfer length	●	●	●	●	●	●	●	●	●
Chamfer angle	●	●	●	●	●	●	●	●	●
Chamfer diameter	●	●	●	●	●	●	●	●	●
Rake angle	●	●	●	●	●	●	●	●	●
Lead angle	●	●	●	●	●	●	●	●	●
Chamfer concentricity	●	●	●	●	●	●	●	●	●
Thread concentricity	●	●	●	●	●	●	●	●	●
Shank concentricity	●	●	●	●	●	●	●	●	●
Included angle of thread	●	●	●	●	●	●	●	●	●
Optical	●	●	●	●	●	●	●	●	●
Marking of the test tools									

	net prices for the inspected number of items for all inspection criteria								
	●	●	●	●	●	●	●	●	●
	plus cost of inspection report								
total price	●	●	●	●	●	●	●	●	●

Strong Performance

Milling cutters for maximum performance and quality

RF 100

High-performance end mills
with unequal helix

GUHRING

MILLING CUTTERS

CR 100

Milling cutters for CFK

GUHRING

RF 100 U

centre cutting

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 6527 K	N	HB			Solid carbide	○	6,000 - 20,000	3200	106	1101
DIN 6527 K	N	HB			Solid carbide	F	6,000 - 20,000	3731	106	1101
DIN 6527 K	N	HA		NEW	Solid carbide	F	6,000 - 20,000	6706	106	1101
DIN 6527 L	N	HA			Solid carbide	○	4,000 - 25,000	3208	106	1102
DIN 6527 L	N	HA			Solid carbide	F	4,000 - 25,000	3736	106	1102
DIN 6527 L	N	HB			Solid carbide	○	4,000 - 25,000	3201	106	1102
DIN 6527 L	N	HB			Solid carbide	F	4,000 - 25,000	3732	106	1102
Guhring std.	N	HA			Solid carbide	○	10,000 - 25,000	3209	106	1103
Guhring std.	N	HA			Solid carbide	F	10,000 - 25,000	3627	106	1103
Guhring std.	N	HA		NEW	Solid carbide	F	6,000 - 20,000	3837	106	1104
Guhring std.	N	HB		NEW	Solid carbide	F	6,000 - 20,000	3838	106	1104
Guhring std.	N	HA		NEW	Solid carbide	F	6,000 - 20,000	3839	106	1104
Guhring std.	N	HB		NEW	Solid carbide	F	6,000 - 20,000	3871	106	1104
DIN 6527 L	N	HA		NEW	Solid carbide	F	6,000 - 25,000	3872	106	1105
DIN 6527 L	N	HB		NEW	Solid carbide	F	6,000 - 25,000	3873	106	1105

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
RF 100 U (3-fluted)										
centre cutting										
~ DIN 6527 L	N	HA		NEW	Solid carbide	F	3,000 - 16,000	3893	106	1106
~ DIN 6527 L	N	HB		NEW	Solid carbide	F	3,000 - 16,000	3894	106	1106
~ DIN 6527 L	N	HA		NEW	Solid carbide	F	3,000 - 20,000	3891	106	1106
~ DIN 6527 L	N	HB		NEW	Solid carbide	F	3,000 - 20,000	3892	106	1106
Rf 100 U/HF										
centre cutting										
DIN 6527 L	HF	HA		NEW	Solid carbide	F	6,000 - 25,000	3507	106	1107
DIN 6527 L	HF	HB		NEW	Solid carbide	F	6,000 - 25,000	3508	106	1107
Guhring std.	HF	HA		NEW	Solid carbide	F	6,000 - 20,000	3509	106	1107
Guhring std.	HF	HB		NEW	Solid carbide	F	6,000 - 20,000	3522	106	1107
Guhring std.	HF	HA		NEW	Solid carbide	F	6,000 - 20,000	3598	106	1108
Guhring std.	HF	HB		NEW	Solid carbide	F	6,000 - 20,000	3600	106	1108
RF 100 F										
centre cutting										
DIN 6527 L	NH	HA			Solid carbide	F	4,000 - 20,000	3629	106	1109
DIN 6527 L	NH	HB			Solid carbide	F	4,000 - 20,000	3630	106	1109
DIN 6527 L	NH	HB			Solid carbide	F	6,000 - 20,000	3366	106	1109

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
RF 100 VA										
centre cutting										
DIN 6527 K	N	HA		NEW	Solid carbide	a	4,000 - 20,000	3804	106	1110
DIN 6527 K	N	HB		NEW	Solid carbide	a	4,000 - 20,000	3805	106	1110
DIN 6527 L	N	HA		NEW	Solid carbide	a	3,000 - 25,000	3800	106	1110
DIN 6527 L	N	HB		NEW	Solid carbide	a	3,000 - 25,000	3803	106	1110
DIN 6527 L	N	HA		NEW	Solid carbide	a	6,000 - 25,000	6700	106	1111
DIN 6527 L	N	HB		NEW	Solid carbide	a	6,000 - 25,000	6701	106	1111
Guhring std.	N	HA		NEW	Solid carbide	a	6,000 - 20,000	3806	106	1111
Guhring std.	N	HB		NEW	Solid carbide	a	6,000 - 20,000	3807	106	1111
RF 100 VA/NF										
centre cutting										
DIN 6527 L	NF	HA		NEW	Solid carbide	a	5,000 - 25,000	3696	106	1112
DIN 6527 L	NF	HB		NEW	Solid carbide	a	5,000 - 25,000	3718	106	1112
Guhring std.	NF	HA		NEW	Solid carbide	a	6,000 - 20,000	3733	106	1112
Guhring std.	NF	HB		NEW	Solid carbide	a	6,000 - 20,000	3885	106	1112
RF 100 VA with ball nose										
centre cutting										
DIN 6527 L	N	HA		NEW	Solid carbide	a	4,000 - 25,000	6707	106	1113

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
RF 100 VA with ball nose centre cutting										
DIN 6527 L	N	HB		NEW	Solid carbide	a	4,000 - 25,000	6708	106	1113
RF 100 A centre cutting										
DIN 6527 L	W	HA			Solid carbide	◯	4,000 - 20,000	3202	106	1114
DIN 6527 L	W	HB			Solid carbide	◯	4,000 - 20,000	3319	106	1114
RF 100 A (3-fluted) centre cutting										
Guhring std.	W	HA		NEW	Solid carbide	◯	3,000 - 20,000	3472	106	1115
Guhring std.	W	HA		NEW	Solid carbide	◯	6,000 - 20,000	3473	106	1115
Guhring std.	W	HB		NEW	Solid carbide	◯	3,000 - 20,000	6702	106	1116
Guhring std.	W	HB		NEW	Solid carbide	◯	6,000 - 20,000	6703	106	1116
RF 100 A/WF centre cutting										
~ DIN 6527 L	WF	HA		NEW	Solid carbide	◯	6,000 - 25,000	3468	106	1117
~ DIN 6527 L	WF	HB			Solid carbide	◯	6,000 - 25,000	3469	106	1117
Guhring std.	WF	HA		NEW	Solid carbide	◯	6,000 - 20,000	3470	106	1117
Guhring std.	WF	HB		NEW	Solid carbide	◯	6,000 - 20,000	3471	106	1117

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
RF 100 H										
centre cutting										
DIN 6527 L	H	HA		NEW	Solid carbide	A	6,000 - 20,000	3895	106	1118
DIN 6527 L	H	HB		NEW	Solid carbide	A	6,000 - 20,000	3896	106	1118
RF 100 Ti										
centre cutting										
DIN 6527 L	N	HA		NEW	Solid carbide	A	6,000 - 25,000	3498	106	1120
DIN 6527 L	N	HB		NEW	Solid carbide	A	6,000 - 25,000	3499	106	1120
RF 100 S/F (5-fluted)										
centre cutting										
~ DIN 6527 L	NH	HA		NEW	Solid carbide	F	4,000 - 25,000	6709	106	1122
~ DIN 6527 L	NH	HB		NEW	Solid carbide	F	4,000 - 25,000	6710	106	1122
Guhring std.	NH	HA		NEW	Solid carbide	F	4,000 - 20,000	3897	106	1122
Guhring std.	NH	HB		NEW	Solid carbide	F	4,000 - 20,000	3898	106	1122
RF 100 S/F (6-fluted)										
centre cutting										
~ DIN 6527 L	NH	HA			Solid carbide	F	8,000 - 25,000	3631	106	1123
~ DIN 6527 L	NH	HB			Solid carbide	F	8,000 - 25,000	3632	106	1123

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
GH 100 U - slot drills (3-fluted)									
centre cutting									
DIN 6527 K	NH	HA		Solid carbide	○	3,000 - 20,000	3193	106	1125
DIN 6527 K	NH	HA		Solid carbide	F	3,000 - 20,000	3540	106	1125
DIN 6527 K	NH	HB		Solid carbide	F	3,000 - 20,000	3729	106	1125
DIN 6527 L	NH	HA		Solid carbide	○	1,000 - 20,000	3196	106	1126
DIN 6527 L	NH	HA		Solid carbide	F	1,000 - 20,000	3636	106	1126
DIN 6527 L	NH	HB		Solid carbide	F	3,000 - 20,000	3730	106	1126
DIN 6528	NH	HA		Solid carbide	○	2,000 - 20,000	3203	106	1127
DIN 6528	NH	HA		Solid carbide	F	2,000 - 20,000	3741	106	1127
GH 100 U - mini-slot drills (3-fl.)									
centre cutting									
Guhring std.	NH	Ø<2.0 HA/HB		Solid carbide	F	1,000 - 10,000	3686	106	1127
GA 200 A - slot drills (3-fluted)									
for Al, centre cutting and with corner radius									
~ DIN 6527 L	W	HA		Solid carbide	○	6,000 - 25,000	3367	106	1129
RS 100 U									
high-performance roughing end mills with centre cutting									
DIN 6527 L	NF	HA		Solid carbide	F	6,000 - 25,000	3887	106	1131
DIN 6527 L	NF	HB		Solid carbide	F	6,000 - 25,000	3888	106	1131

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
RS 100 F										
high-performance roughing end mills with centre cutting										
DIN 6527 L	NF	HA			Solid carbide	F	6,000 - 25,000	3889	106	1131
DIN 6527 L	NF	HB			Solid carbide	F	6,000 - 25,000	3890	106	1131
GS 100 U - roughing end mills with fine teeth										
for materials < 48 HRC, centre cutting										
DIN 6527 L	NRf	HB			Solid carbide	○	6,000 - 25,000	3204	117	1132
DIN 6527 L	NRf	HB			Solid carbide	F	6,000 - 25,000	3723	117	1132
DIN 6527 L	NRf	HB			Solid carbide	F	6,000 - 20,000	3365	106	1132
GS 100 A - roughing end mills with coarse teeth										
for Al < 600 N/mm², centre cutting										
DIN 6527 L	WR	HB			Solid carbide	○	6,000 - 20,000	3364	106	1133
DIN 6527 L	WR	HB			Solid carbide	○	6,000 - 25,000	3127	117	1133
GS 100 H - roughing end mills with fine teeth										
for materials < 56 HRC, centre cutting										
DIN 6527 L	HR	HB			Solid carbide	F	6,000 - 20,000	3682	117	1134
DIN 6527 L	HR	HA		NEW	Solid carbide	F	6,000 - 25,000	6704	106	1134
DIN 6527 L	HR	HB		NEW	Solid carbide	F	6,000 - 25,000	6705	106	1134
GH 100 U - multi-tooth end mills										
for superfine finishing of materials < 50 HRC										
~ DIN 6527 L	NH	HA			Solid carbide	○	3,000 - 25,000	3311	106	1135

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
GH 100 U - multi-tooth end mills for superfine finishing of materials < 50 HRC									
~ DIN 6527 L	NH	HA		Solid carbide	F	3,000 - 25,000	3689	106	1135
~ DIN 6527 L	NH	HB		Solid carbide	F	6,000 - 25,000	3047	106	1135
Guhring std.	NH	HA		Solid carbide	○	6,000 - 25,000	3312	106	1136
Guhring std.	NH	HA		Solid carbide	F	6,000 - 25,000	3691	106	1136
Guhring std.	NH	HB		Solid carbide	○	6,000 - 25,000	3313	106	1136
Guhring std.	NH	HB		Solid carbide	F	6,000 - 25,000	3693	106	1136
GH 100 H - hard multi-t. end mills for superfine finishing of materials < 62 HRC									
~ DIN 6527 L	H	HA		Solid carbide	F	3,000 - 20,000	3715	106	1138
Guhring std.	H	HA		Solid carbide	F	6,000 - 20,000	3716	106	1138
Pilot end mill 180° centre cutting									
~ DIN 6527 L	N	HA	NEW	Solid carbide	A	1,400 - 12,000	6716	106	1139

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Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
CR 100 - End mills												
For fibre-reinforced plastics												
Guhring std.	N	HA		NEW	Solid carbide	D	4,000	-	16,000	6720	106	1140
Guhring std.	N	HA		NEW	Solid carbide	D	4,000	-	16,000	6717	106	1140
Guhring std.	N	HA		NEW	Solid carbide	D	4,000	-	16,000	6719	106	1140
CR 100 Air - End mills with internal cooling												
For fibre-reinforced plastics												
Guhring std.	N	HA		NEW	Solid carbide	D	6,000	-	16,000	6718	106	1141

bright | steam tempered | nitrided lands | nitrided | golden brown | TiAlN | TiAlN nanoA | TiAlN SuperA

Slot drills (2-fluted)

centre cutting

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 6527 K	N	HA		Solid carbide	○	2,000 - 20,000	3194	117	1142
DIN 6527 K	N	HA		Solid carbide	F	2,000 - 20,000	3633	117	1142
DIN 6527 K	N	HB		Solid carbide	○	2,000 - 20,000	3294	117	1142
DIN 6527 K	N	HB		Solid carbide	F	2,000 - 20,000	3634	117	1142
DIN 6527 L	N	HA		Solid carbide	○	1,000 - 20,000	3195	117	1143
DIN 6527 L	N	HA		Solid carbide	F	1,000 - 20,000	3635	117	1143
DIN 6527 L	N	HB		Solid carbide	○	2,000 - 20,000	3295	117	1143
DIN 6527 L	N	HB		Solid carbide	F	2,000 - 20,000	3154	117	1143
DIN 6528	N	HA		Solid carbide	○	2,000 - 20,000	3303	117	1144
DIN 6528	N	HA		Solid carbide	F	2,000 - 20,000	3676	117	1144
Guhring std.	N	HA		Solid carbide	○	2,000 - 20,000	3212	117	1144
Guhring std.	N	HA		Solid carbide	F	2,000 - 20,000	3709	117	1144

XL slot drills (2-fluted)

centre cutting

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	N	HA		Solid carbide	○	3,000 - 20,000	3011	117	1145
Guhring std.	N	HA		Solid carbide	F	3,000 - 20,000	3021	117	1145

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Al slot drills (2-fluted)									
centre cutting									
DIN 6527 K	W	HA		Solid carbide	○	3,000 - 20,000	3310	117	1145
DIN 6527 K	W	HB		Solid carbide	○	3,000 - 20,000	3126	117	1145
DIN 6527 L	W	HA		Solid carbide	○	3,000 - 20,000	3309	117	1146
DIN 6527 L	W	HB		Solid carbide	○	3,000 - 20,000	3059	117	1146
XL Al slot drills (2-fluted)									
centre cutting									
Guhring std.	W	HA		Solid carbide	○	5,000 - 16,000	3358	117	1146
Slot drills (3-fluted)									
centre cutting									
DIN 6527 K	N	HA		Solid carbide	○	2,000 - 20,000	3555	117	1147
DIN 6527 K	N	HA		Solid carbide	F	2,000 - 20,000	3558	117	1147
DIN 6527 K	N	HB		Solid carbide	○	2,000 - 20,000	3296	117	1147
DIN 6527 K	N	HB		Solid carbide	F	2,000 - 20,000	3719	117	1147
DIN 6527 L	N	HA		Solid carbide	○	2,000 - 20,000	3559	117	1148
DIN 6527 L	N	HA		Solid carbide	F	2,000 - 20,000	3560	117	1148
DIN 6527 L	N	HB		Solid carbide	○	2,000 - 20,000	3297	117	1148
DIN 6527 L	N	HB		Solid carbide	F	2,000 - 20,000	3720	117	1148

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Slot drills (3-fluted)									
centre cutting									
DIN 6528	N	HA		Solid carbide	◯	2,000 - 20,000	3307	117	1149
DIN 6528	N	HA		Solid carbide	(F)	2,000 - 20,000	3677	117	1149
Guhring std.	N	HA		Solid carbide	◯	2,000 - 20,000	3220	117	1149
Guhring std.	N	HA		Solid carbide	(F)	2,000 - 20,000	3711	117	1149
XL slot drills (3-fluted)									
centre cutting									
Guhring std.	N	HA		Solid carbide	◯	3,000 - 20,000	3314	117	1150
Guhring std.	N	HA		Solid carbide	(F)	3,000 - 20,000	3680	117	1150
Guhring std.	N	HA	NEW	Solid carbide	(D)	3,000 - 16,000	6721	106	1150
Mini slot drills (3-fluted)									
centre cutting									
Guhring std.	N	Ø<2.0 HA/HB		Solid carbide	(F)	0,300 - 20,000	3684	117	1151
End mills (4-fluted)									
centre cutting									
DIN 6527 K	N	HA		Solid carbide	◯	2,000 - 20,000	3198	117	1152
DIN 6527 K	N	HA		Solid carbide	(F)	2,000 - 20,000	3637	117	1152
DIN 6527 K	N	HB		Solid carbide	◯	2,000 - 20,000	3298	117	1152
DIN 6527 K	N	HB		Solid carbide	(F)	2,000 - 20,000	3721	117	1152

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
End mills (4-fluted)									
centre cutting									
DIN 6527 L	N	HA		Solid carbide	○	2,000 - 20,000	3197	117	1153
DIN 6527 L	N	HA		Solid carbide	F	2,000 - 20,000	3649	117	1153
DIN 6527 L	N	HB		Solid carbide	○	2,000 - 20,000	3299	117	1153
DIN 6527 L	N	HB		Solid carbide	F	2,000 - 20,000	3722	117	1153
DIN 6528	N	HA		Solid carbide	○	2,000 - 20,000	3304	117	1154
DIN 6528	N	HA		Solid carbide	F	2,000 - 20,000	3678	117	1154
Guhring std.	N	HA		Solid carbide	○	4,500 - 20,000	3257	117	1154
Guhring std.	N	HA		Solid carbide	F	4,500 - 20,000	3713	117	1154
XL end mills (4-fluted)									
centre cutting									
Guhring std.	N	HA		Solid carbide	○	3,000 - 20,000	3012	117	1155
Guhring std.	N	HA		Solid carbide	F	3,000 - 20,000	3023	117	1155
Chamfering milling cutters 60°									
straight-fluted									
Guhring std.		HA	NEW	Solid carbide	A	4,000 - 12,000	6711	117	1156
Guhring std.		HB	NEW	Solid carbide	A	6,000 - 12,000	6712	117	1156

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
Chamfering milling cutters 90° straight-fluted												
Guhring std.		HA		NEW	Solid carbide	A	4,000	-	12,000	6713	117	1156
Guhring std.		HB		NEW	Solid carbide	A	6,000	-	12,000	3396	117	1156
Chamfering milling cutters 120° straight-fluted												
Guhring std.		HA		NEW	Solid carbide	A	4,000	-	12,000	6714	117	1157
Guhring std.		HB		NEW	Solid carbide	A	6,000	-	12,000	6715	117	1157

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Slot drills with corner radius (2-fluted) centre cutting										
DIN 6527 L	N	HA			Solid carbide	○	6,000 - 20,000	3106	117	1158
DIN 6527 L	N	HA			Solid carbide	F	6,000 - 20,000	3561	117	1158
DIN 6527 L	N	HA		NEW	Solid carbide	D	6,000 - 12,000	6722	106	1159
End mills with corner radius (4-fluted) centre cutting										
DIN 6527 L	N	HA			Solid carbide	○	6,000 - 20,000	3111	117	1160
DIN 6527 L	N	HA			Solid carbide	F	6,000 - 20,000	3562	117	1160
DIN 6527 L	N	HA		NEW	Solid carbide	D	6,000 - 12,000	6723	106	1161
GH 100 U - multi-tooth end mills with corner radius centre cutting										
~ DIN 6527 L	NH	HA			Solid carbide	F	6,000 - 20,000	3563	106	1162
GF 500 T - HSC-profile cutters with Torus form for materials < 54 HRC, centre cutting										
Guhring std.	N	HA			Solid carbide	A	4,000 - 12,000	3863	106	1163
Guhring std.	N	HA			Solid carbide	A	2,000 - 12,000	3856	106	1164
Guhring std.	N	HA			Solid carbide	A	6,000 - 12,000	3865	106	1165
Guhring std.	N	HA			Solid carbide	A	2,000 - 8,000	3860	106	1166
Guhring std.	N	HA			Solid carbide	A	2,000 - 12,000	3859	106	1167

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
GF 300 T - hard profile cutters with Torus form for materials < 62 HRC, centre cutting										
Guhring std.	H	HA			Solid carbide	F	3,000 - 16,000	3361	106	1168
Guhring std.	H	HA			Solid carbide	F	6,000 - 16,000	3362	106	1169
GH 100 H - hard multi-tooth end mills with corner radius for superfine finishing of materials < 62 HRC										
Guhring std.	H	HA			Solid carbide	F	6,000 - 16,000	3363	106	1170
Ball nose slot drills (2-fluted) centre cutting										
DIN 6527 L	N	HA			Solid carbide	○	0,500 - 20,000	3308	117	1171
DIN 6527 L	N	HA			Solid carbide	F	0,500 - 20,000	3679	117	1171
DIN 6527 L	N	HA		NEW	Solid carbide	D	3,000 - 12,000	6724	106	1171
DIN 6527 L	N	HB			Solid carbide	○	3,000 - 20,000	3024	117	1172
DIN 6527 L	N	HB			Solid carbide	F	3,000 - 20,000	3049	117	1172
XL ball nose slot drills (2-fluted) centre cutting										
Guhring std.	N	HA			Solid carbide	○	3,000 - 12,000	3014	117	1172
Guhring std.	N	HA			Solid carbide	F	3,000 - 12,000	3030	117	1172
Ball nose end mills (4-fluted) centre cutting										
DIN 6528	N	HA			Solid carbide	○	4,000 - 20,000	3306	117	1173

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
Ball nose end mills (4-fluted)												
centre cutting												
DIN 6528	N	HA			Solid carbide	F	4,000	-	20,000	3727	117	1173
DIN 6527 L	N	HB			Solid carbide	○	3,000	-	20,000	3026	117	1173
DIN 6527 L	N	HB			Solid carbide	F	3,000	-	20,000	3050	117	1173
XL ball nose end mills (4-fluted)												
centre cutting												
Guhring std.	N	HA			Solid carbide	○	3,000	-	12,000	3015	117	1174
Guhring std.	N	HA			Solid carbide	F	3,000	-	12,000	3043	117	1174
Guhring std.	N	HA		NEW	Solid carbide	Ⓓ	3,000	-	12,000	6725	106	1174
GF 200 B - ball nose pr. cutters												
for materials < 48 HRC, centre cutting												
Guhring std.	N	HA			Solid carbide	F	3,000	-	10,000	3044	106	1175
Guhring std.	N	HA			Solid carbide	F	3,000	-	10,000	3045	106	1175
GF 500 B - HSC-ball nose profile cutters												
for materials < 54 HRC, centre cutting												
Guhring std.	N	HA			Solid carbide	A	6,000	-	12,000	3854	106	1176
Guhring std.	N	HA			Solid carbide	A	4,000	-	12,000	3866	106	1177
Guhring std.	N	HA			Solid carbide	A	2,000	-	12,000	3848	106	1178
Guhring std.	N	HA			Solid carbide	A	6,000	-	12,000	3855	106	1179

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
GF 500 B - HSC-ball nose profile cutters for materials < 54 HRC, centre cutting									
Guhring std.	N	HA		Solid carbide	A	2,000 - 8,000	3853	106	1180
Guhring std.	N	HA		Solid carbide	A	2,000 - 12,000	3849	106	1181
GF 300 B - ball nose hard profile cutters for materials < 62 HRC, centre cutting									
Guhring std.	H	HA		Solid carbide	F	0,500 - 16,000	3359	106	1182
Guhring std.	H	HA		Solid carbide	F	3,000 - 16,000	3360	106	1183
GF 200 WP									
Guhring std.	GF 200	HA				10,000 - 32,000	1941	140	1184
Guhring std.	GF 200	HA				10,000 - 32,000	1942	140	1184
Indexable inserts round									
Guhring std.				Cermet	○	10.000 - 32.000	1947	141	1185
Guhring std.				Solid carbide	F	10.000 - 32.000	2520	141	1185
Torx screwdriver									
Guhring std.						-	1612	140	1185

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Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
Slot drills (2-fluted)												
centre cutting												
Guhring std.		HA			PCD	◯	4,000	-	20,000	**5492**	110	1186
Guhring std.		cyl.			PCD	◯	4,000	-	20,000	**5493**	110	1187
Slot drills (3-fluted)												
centre cutting												
Guhring std.		HA		NEW	PCD	◯	14,000	-	20,000	**5495**	110	1188
Guhring std.		cyl.		NEW	PCD	◯	14,000	-	20,000	**5496**	110	1189

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
RF 40 - Ratio end mills									
centre cutting									
DIN 844 K	N	B		HSS-E-PM	◯	8,000 - 30,000	3429	112	1190
DIN 844 K	N	B		HSS-E-PM	F	8,000 - 20,000	3705	112	1190
DIN 844 L	N	B		HSS-E-PM	◯	16,000 - 30,000	3432	112	1190
DIN 844 L	N	B		HSS-E-PM	F	16,000 - 30,000	3706	112	1190
GS 40 - roughing end mills									
fine teeth, with centre cutting									
DIN 844 K	NRf	B		HSS-E-PM	◯	6,000 - 20,000	3322	112	1191
DIN 844 K	NRf	B		HSS-E-PM	F	6,000 - 20,000	3668	112	1191
DIN 844 K	NRf	B		HSS-E-PM	◯	6,000 - 32,000	3340	112	1191
DIN 844 K	NRf	B		HSS-E-PM	F	6,000 - 32,000	3660	112	1191

Slot drills (2-fluted)

centre cutting

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 327	N	B		M42	○	1,000 - 25,000	3451	112	1192
DIN 327	N	B		M42	F	1,000 - 25,000	3663	112	1192
DIN 844 K	N	B		M42	○	3,000 - 20,000	3452	112	1192
DIN 844 K	N	B		M42	F	3,000 - 20,000	3694	112	1192
DIN 844 L	N	B		M42	○	3,000 - 20,000	3453	112	1193
DIN 844 L	N	B		M42	F	3,000 - 20,000	3695	112	1193

Slot drills (3-fluted)

centre cutting

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 327	N	B		M42	○	2,800 - 30,000	3458	112	1193
DIN 327	N	B		M42	F	2,800 - 30,000	3651	112	1193
DIN 844 K	N	B		M42	○	2,800 - 20,000	3459	112	1194
DIN 844 K	N	B		M42	F	2,800 - 20,000	3664	112	1194
DIN 844 L	N	B		M42	○	3,000 - 20,000	3460	112	1194
DIN 844 L	N	B		M42	F	3,000 - 20,000	3836	112	1194

Mini-End Mill (3-fluted)

centre cutting

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	N	B		M42	○	3,000 - 10,000	3142	112	1195

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Mini-End Mill (3-fluted)									
centre cutting									
Guhring std.	N	B		M42	F	3,000 - 10,000	3144	112	1195
Guhring std.	N	B		M42	○	3,000 - 10,000	3143	112	1195
Guhring std.	N	B		M42	F	3,000 - 10,000	3145	112	1195
Ball nose slot drills (2-fluted)									
centre cutting									
DIN 327	N	B		M42	○	2,000 - 28,000	3466	112	1196
DIN 327	N	B		M42	F	2,000 - 30,000	3703	112	1196
Guhring std.	N	B		M42	○	3,000 - 30,000	3467	112	1197
Guhring std.	N	B		M42	F	3,000 - 20,000	3704	112	1197
End mills									
centre cutting									
DIN 844 K	N	B		M42	○	2,000 - 32,000	3428	112	1198
DIN 844 K	N	B		M42	F	2,000 - 32,000	3670	112	1198
DIN 844 L	N	B		M42	○	3,000 - 40,000	3431	112	1198
DIN 844 L	N	B		M42	F	3,000 - 32,000	3692	112	1198
Guhring std.	N	B		M42	○	6,000 - 20,000	3433	112	1199

Milling cutters

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Roughing end mills centre cutting

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 844 K	NR	B		M42	○	6,000 - 50,000	3346	112	1200
DIN 844 K	NR	B		M42	F	6,000 - 50,000	3690	112	1200
DIN 844 L	NR	B		M42	○	6,000 - 36,000	3347	112	1200
DIN 844 L	NR	B		M42	F	6,000 - 36,000	3650	112	1200

Roughing/finishing end mills centre cutting

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 844 K	NF	B		M42	○	6,000 - 50,000	3343	112	1201
DIN 844 K	NF	B		M42	F	6,000 - 40,000	3669	112	1201
DIN 844 L	NF	B		M42	○	6,000 - 36,000	3342	112	1201
DIN 844 L	NF	B		M42	F	6,000 - 32,000	3698	112	1201

Morse taper end mills

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 845 K	NF	MK		HSCO	○	10,000 - 50,000	3118	112	1202
DIN 845 K	NR	MK		HSCO	○	10,000 - 50,000	3117	112	1202
DIN 845 K	N	MK		HSCO	○	14,000 - 45,000	3440	112	1202
DIN 845 L	NR	MK		HSCO	○	16,000 - 50,000	3121	112	1203
DIN 845 L	N	MK		HSCO	○	16,000 - 63,000	3120	112	1203

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
End mills with international taper									
DIN 2328 K	NR	SK		HSCO	◯	32,000 - 80,000	3131	112	1204
DIN 2328 K	N	SK		HSCO	◯	32,000 - 80,000	3130	112	1204
DIN 2328 L	NR	SK		HSCO	◯	32,000 - 80,000	3134	112	1205
DIN 2328 L	N	SK		HSCO	◯	32,000 - 80,000	3133	112	1205
Side and face cutters									
DIN 885	N			HSCO	◯	50,000 - 200,000	3530	112	1206
Shell end mills									
DIN 1880	N			M42	◯	40,000 - 125,000	3504	112	1206
DIN 1880	N			M42	Ⓒ	40,000 - 100,000	3654	112	1206
DIN 1880	NR			M42	◯	40,000 - 125,000	3185	112	1207
DIN 1880	NR			HSCO	Ⓒ	40,000 - 100,000	3749	112	1207
DIN 1880	NF			M42	◯	40,000 - 125,000	3187	112	1207
Woodruff cutters									
DIN 850	N	B		HSCO	◯	4,500 - 45,500	3580	112	1208
DIN 850	H	B		HSCO	◯	4,500 - 45,500	3579	112	1208

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Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
T-slot end mills									
DIN 851	N	B		HSCO	◯	12,500 - 32,000	3570	112	1209
Corner rounding cutters with face relief									
DIN 6518	N	B		HSCO	◯	10,000 - 56,000	3176	112	1209
Dovetail cutters									
DIN 1833	H	B		HSCO	◯	16,000 - 32,000	3572	112	1210
DIN 1833	H	B		HSCO	◯	16,000 - 25,000	3576	112	1210
DIN 1833	H	B		HSCO	◯	16,000 - 32,000	3574	112	1210
DIN 1833	H	B		HSCO	◯	16,000 - 32,000	3577	112	1210

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
RF 100 U												
centre cutting												
Guhring std.	N	cil. h6			Solid carbide	F	3/16	-	1	3113	106	1212
Guhring std.	N	~HB			Solid carbide	F	3/8	-	1	3099	106	1212
Guhring std.	N	cil. h6			Solid carbide	F	3/16	-	1	3114	106	1212
Guhring std.	N	~HB			Solid carbide	F	3/8	-	1	3100	106	1212
Guhring std.	N	Ø<1/2 HA/HB		NEW	Solid carbide	F	1/4	-	1	3079	106	1213
Rf 100 U/HF												
centre cutting												
Guhring std.	HF	Ø<1/2 HA/HB		NEW	Solid carbide	F	1/4	-	1	3082	106	1213
RF 100 F												
centre cutting												
Guhring std.	NH	Ø<1/2 HA/HB		NEW	Solid carbide	F	3/16	-	3/4	3078	106	1214
RF 100 VA												
centre cutting												
Guhring std.	N	Ø<1/2 HA/HB		NEW	Solid carbide	a	3/16	-	1	3080	106	1214
RF 100 VA/NF												
centre cutting												
Guhring std.	NF	Ø<1/2 HA/HB		NEW	Solid carbide	a	1/4	-	1	3081	106	1215
RF 100 A												
centre cutting												
Guhring std.	W	Ø<1/2 HA/HB		NEW	Solid carbide	○	3/16	-	3/4	3077	106	1215

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
RF 100 Ti												
centre cutting												
Guhring std.	N	Ø<1/2 HA/HB		NEW	Solid carbide	A	1/4	-	1	3876	106	1216
RF 100 S/F (6-fluted)												
centre cutting												
Guhring std.	NH	cil. h6			Solid carbide	F	5/16	-	1	3115	106	1216
GH 100 U - slot drills (3-fluted)												
centre cutting												
Guhring std.	NH	cyl.		NEW	Solid carbide	F	1/16	-	1/2	3086	106	1217
Guhring std.	NH	cil. h6			Solid carbide	◯	1/8	-	1	3172	106	1217
Guhring std.	NH	cil. h6			Solid carbide	F	1/8	-	1	3173	106	1217
GA 200 A - slot drills (3-fluted)												
for Al, centre cutting and with corner radius												
Guhring std.	W	cil. h6			Solid carbide	◯	1/4	-	3/4	3177	106	1218
RS 100 U												
high-performance roughing end mills with centre cutting												
Guhring std.	NF	cil. h6			Solid carbide	F	1/4	-	1	3097	106	1219
RS 100 F												
high-performance roughing end mills with centre cutting												
Guhring std.	NF	cil. h6			Solid carbide	F	1/4	-	1	3098	106	1219
GS 100 U - rough. cutter, fine tooth												
for materials < 48 HRC, centre cutting												
Guhring std.	NRf	cil. h6			Solid carbide	◯	1/4	-	1	3186	106	1220

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
GS 100 U - rough. cutter, fine tooth for materials < 48 HRC, centre cutting											
Guhring std.	NRf	cil. h6		Solid carbide	F	1/4	-	1	3188	106	1220
GS 100 A - roughing end mills with coarse teeth for Al < 600 N/mm², centre cutting											
Guhring std.	WR	cil. h6		Solid carbide	○	1/4	-	1	3184	106	1220
GS 100 H - rough. cutter, fine tooth for materials < 56 HRC, centre cutting											
Guhring std.	HR	cil. h6		Solid carbide	F	1/4	-	3/4	3189	106	1221
Guhring std.	HR	cil. h6		Solid carbide	F	1/4	-	3/4	3190	106	1221
GH 100 U - multifluted end mills for superfine finishing of materials < 50 HRC											
Guhring std.	NH	cil. h6		Solid carbide	○	1/4	-	1	3178	106	1222
Guhring std.	NH	cil. h6		Solid carbide	F	1/4	-	1	3179	106	1222
Guhring std.	NH	cil. h6		Solid carbide	○	1/4	-	3/4	3180	106	1222
Guhring std.	NH	cil. h6		Solid carbide	F	1/4	-	3/4	3181	106	1222
GH 100 H - hard multi-t. end mills for superfine finishing of materials < 62 HRC											
Guhring std.	H	cil. h6		Solid carbide	F	1/4	-	3/4	3182	106	1223
Guhring std.	H	cil. h6		Solid carbide	F	1/4	-	3/4	3183	106	1223

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Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Slot drills (2-fluted)									
centre cutting									
Guhring std.	N	cil. h6		Solid carbide	F	1/16 - 1	3148	106	1224
Guhring std.	N	cil. h6		Solid carbide	○	1/16 - 1	3146	106	1224
Guhring std.	N	cil. h6		Solid carbide	F	1/16 - 3/4	3092	106	1224
Guhring std.	N	cil. h6		Solid carbide	○	1/8 - 1	3147	106	1225
Guhring std.	N	cil. h6		Solid carbide	F	1/8 - 1	3149	106	1225
Al slot drills (2-fluted)									
centre cutting									
Guhring std.	W	cil. h6		Solid carbide	○	1/8 - 1	3174	106	1226
Guhring std.	W	cil. h6		Solid carbide	○	1/4 - 5/8	3175	106	1226
Slot drills (3-fluted)									
centre cutting									
Guhring std.	N	cil. h6		Solid carbide	○	1/8 - 1	3168	106	1227
Guhring std.	N	cil. h6		Solid carbide	F	1/8 - 1	3170	106	1227
XL slot drills (3-fluted)									
centre cutting									
Guhring std.	N	cil. h6		Solid carbide	○	3/16 - 1	3169	106	1227
Guhring std.	N	cil. h6		Solid carbide	F	3/16 - 1	3171	106	1227

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
End mills (4-fluted)												
centre cutting												
Guhring std.	N	cil. h6			Solid carbide	○	1/16	-	1	3150	106	1228
Guhring std.	N	cil. h6			Solid carbide	F	1/16	-	1	3153	106	1228
Guhring std.	N	cil. h6			Solid carbide	F	1/16	-	3/4	3093	106	1228
Guhring std.	N	cil. h6			Solid carbide	○	1/8	-	1	3152	106	1229
Guhring std.	N	cil. h6			Solid carbide	F	1/8	-	1	3156	106	1229
XL end mills (4-fluted)												
centre cutting												
Guhring std.	N	cil. h6			Solid carbide	○	3/16	-	1	3151	106	1229
Guhring std.	N	cil. h6			Solid carbide	F	3/16	-	1	3155	106	1229
Slot drills (2-fluted)												
with corner radius, with centre cutting												
Guhring std.	N	cil. h6		NEW	Solid carbide	F	1/8	-	1/2	3087	106	1230
Guhring std.	N	cil. h6		NEW	Solid carbide	F	1/8	-	1/2	3088	106	1230
End mills (4-fluted)												
with corner radius, with centre cutting												
Guhring std.	N	cil. h6		NEW	Solid carbide	F	1/8	-	1/2	3089	106	1231
Guhring std.	N	cil. h6		NEW	Solid carbide	F	1/4	-	1/2	3090	106	1231

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Standard	Type	Shank design	Tool illustration		Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
GH 100 U - multifluted end mills with corner radius, with centre cutting												
Guhring std.	NH	cil. h6		NEW	Solid carbide	F	1/4	-	3/4	3091	106	1232
GF 300 T - hard profile cutters with Torus form for materials < 62 HRC, centre cutting												
Guhring std.	H	cil. h6			Solid carbide	F	3/16	-	5/8	3192	106	1233
Ball nose slot drills (2-fluted) centre cutting												
Guhring std.	N	cil. h6			Solid carbide	○	1/16	-	3/4	3157	106	1234
Guhring std.	N	cil. h6			Solid carbide	F	1/16	-	3/4	3159	106	1234
Guhring std.	N	cil. h6			Solid carbide	○	1/8	-	3/4	3158	106	1235
Guhring std.	N	cil. h6			Solid carbide	F	1/8	-	3/4	3160	106	1235
Ball nose end mills (4-fluted) centre cutting												
Guhring std.	N	cil. h6			Solid carbide	○	1/16	-	3/4	3161	106	1236
Guhring std.	N	cil. h6			Solid carbide	F	1/16	-	3/4	3165	106	1236
Guhring std.	N	cil. h6			Solid carbide	○	1/8	-	3/4	3164	106	1236
Guhring std.	N	cil. h6			Solid carbide	F	1/8	-	3/4	3167	106	1236
XL ball nose end mills (4-fluted) centre cutting												
Guhring std.	N	cil. h6			Solid carbide	○	3/16	-	3/4	3162	106	1237

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Standard	Type	Shank design	Tool illustration	Tool material	Surface	d1			Guhring no.	Discount group	Standard range page
XL ball nose end mills (4-fluted) centre cutting											
Guhring std.	N	cil. h6		Solid carbide	F	3/16	-	3/4	3166	106	1237
GF 300 B - ball nose hard profile cutters for materials < 62 HRC, centre cutting											
Guhring std.	H	cil. h6		Solid carbide	F	1/8	-	1/2	3101	106	1238
Guhring std.	H	cil. h6		Solid carbide	F	1/8	-	5/8	3191	106	1239

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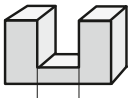
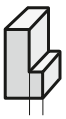
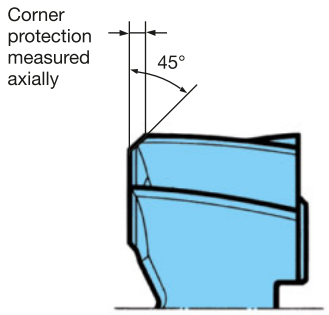
			Application		
			Slot drilling  **1 x d**	**Roughing** **0.3-0.8 x d**	**Finishing** **> 0.1 x d**	**Super finishing**  **0.1 x d**
Material/ Application group	Hardness tensile strength	Example material	Rigid conditions: - good cooling - sufficient performance - short-chipping	Unstable conditions: - standard cooling - average performance - medium- to long-chipping		
Steel **P**	up to 850 Nmm²	C45/ 16MnCr5	RF 100 F Guh. no. 3366 page 1109	RF 100 VA/NF Guh. no. 3696 page 1112	RF 100 S/F Guh. no. 3631 page 1123	
	above 850 Nmm²	42CrMo4	RF 100 U Guh. no. 3732 page 1102	RF 100 U/HF Guh. no. 3508 page 1107		
Stainless steel **M**	up to 750 Nmm²	1.4301 1.4305	RF 100 VA Guh. no. 3803 page 1110	RF 100 VA/NF Guh. no. 3696 page 1112		
	above 750 Nmm²	1.4571	RF 100 F Guh. no. 3366 page 1109	RF 100 VA/NF Guh. no. 3696 page 1112		
Cast iron **K**	up to 180 HB 30	GG	RF 100 F Guh. no. 3366 page 1109	RF 100 U/HF Guh. no. 3508 page 1107		
	above 180 HB 30	GGG / GGT / GGv	RF 100 U Guh. no. 3732 page 1102	RF 100 U/HF Guh. no. 3508 page 1107		
Aluminium **N**	up to 3% Si	AlMgSi1	RF 100 A Guh. no. 3472 page 1115	RF 100 A/WF Guh. no. 3469 page 1117	RF 100 A Guh. no. 3202 page 1114	
	above 3% Si	G-AlSi7Cu3	RF 100 F Guh. no. 3366 page 1109	RF 100 A/WF Guh. no. 3469 page 1117	RF 100 F Guh. no. 3629 page 1109	
Ti-special alloys **S**	Ti-basis	TiAl6V4 Inconel 625	RF 100 Ti Guh. no. 3499 page 1120	RF 100 U/HF Guh. no. 3508 page 1107	RF 100 S/F Guh. no. 3631 page 1123	
	Ni-basis	Inconel 728	RF 100 F Guh. no. 3366 page 1109	RF 100 U/HF Guh. no. 3508 page 1107		
Hardened steel **H**	up to 52 HRC	1.2343	RF 100 U Guh. no. 3732 page 1102	RF 100 U/HF Guh. no. 3508 page 1109		
	above 52 HRC	1.2379	RF 100 H Guh. no. 3896 page 1118	-	RF 100 H Guh. no. 3895 page 1118	

RT 100 milling cutter corner protection dimensions



RF 100 Type	RF 100 U (3-fluted) RF 100 S/F (5-fluted) RF 100 S/F (6-fluted)	RF 100 U (4-fluted) RF 100 F RF 100 A	RF 100 U/HF RF 100 VA/NF RF 100 A/WF	RF 100 VA RF 100 H	RF 100 A (3-fluted)
Ø nom. mm	Corner protection dimensions (mm)				
< 2	0.025 x 45°				
3	0.05 x 45°				0.06 x 45°
4	0.05 x 45°	0.10 x 45°		0.15 x 45°	0.08 x 45°
5	0.05 x 45°	0.10 x 45°		0.15 x 45°	0.10 x 45°
6	0.05 x 45°	0.15 x 45°	0.30 x 45°	0.20 x 45°	0.12 x 45°
8	0.10 x 45°	0.15 x 45°	0.30 x 45°	0.25 x 45°	0.16 x 45°
10	0.10 x 45°	0.20 x 45°	0.30 x 45°	0.30 x 45°	0.20 x 45°
12	0.15 x 45°	0.20 x 45°	0.50 x 45°	0.35 x 45°	0.24 x 45°
14	0.15 x 45°	0.25 x 45°	0.50 x 45°	0.40 x 45°	0.28 x 45°
16	0.15 x 45°	0.35 x 45°	0.50 x 45°	0.50 x 45°	0.32 x 45°
18	0.15 x 45°	0.40 x 45°	0.50 x 45°	0.60 x 45°	0.36 x 45°
20	0.15 x 45°	0.45 x 45°	0.50 x 45°	0.60 x 45°	0.40 x 45°
25	0.20 x 45°	0.60 x 45°	0.60 x 45°	0.75 x 45°	0.50 x 45°
32	0,30 x 45°	0,75 x 45°	0,80 x 45°	0,90 x 45°	0,64 x 45°

Application	Milling cutter type	Type	Helix angle	No. of teeth	Tool illustration	Material to ISO P	M	K	N	S	H	Slot drilling	Roughing	Finishing	Copying	Page
HPC	RF 100 U	N	41/43/45°	3		<1400 N/mm²	all	> 200 HB30	> 5% Si	Ti & Ni		●	●	●		1106
HPC	RF 100 U	N	35/38°	4		< 48 HRC	>1000 N/mm²	> 200 HB30		Ti & Ni		●	●	●		1101
HPC	RF 100 U (corner radius)	N	35/38°	4		< 48 HRC		> 200 HB30				●	●	●	●	1105
	RF 100 U/HF	HF	30/32°	4		< 48 HRC	>1000 N/mm²	> 200 HB30				○	●			1107
HPC	RF 100 F	NH	40/42°	4		<750 N/mm²	<850 N/mm²	< 200 HB30				●	●	●		1109
HPC	RF 100 VA	N	36/38°	4		<850 N/mm²	all	< 200 HB30	> 5% Si	Ti & Ni		●	●	●		1110
HPC	RF 100 VA (ball-nosed)	N	36/38°	4		<850 N/mm²	all	< 200 HB30	> 5% Si	Ti & Ni		●	●	●	●	1113
	RF 100 VA/NF	NF	36/38°	4		<750 N/mm²	all					○	●			1112
HPC	RF 100 A	W	40/42°	4					> 3% Si			○	●	●		1114
HPC	RF 100 A	W	39/40/41°	3					all			●	●	●		1115
	RF 100 A/WF	WF	29/30/31°	3					all			○	●			1117
HPC/ HSC	RF 100 H	NH	40/42°	4		> 48 HRC					< 62 HRC	●	●	●		1118
HPC	RF 100 Ti (corner radius)	N	35/38°	4			<850 N/mm²			Ti & Ni		●	●	●	●	1120
HPC/ HSC	RF 100 S/F	NH	45°	5		< 48 HRC	all	all	> 3% Si	Ti & Ni			●	●		1122
HPC/ HSC	RF 100 S/F	NH	44/45/46°	6		< 48 HRC	all	all	> 3% Si	Ti & Ni			●	●		1123

● = optimal suitability ○ = limited suitability

Application group	Material examples
P	Steel, high-alloyed steel
M	Stainless steel
K	Grey cast iron, spheroidal and malleable cast iron
N	Aluminium and other non-ferrous metals
S	Special-, super- and Ti-alloys
H	Hardened steel and hard cast iron

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Application	Milling cutter type	Type	Helix angle	No. of teeth	Tool illustration	Material to ISO P	M	K	N	S	H	Slot drilling	Roughing	Finishing	Copying	Page
HPC	GH 100 U	NH	45°	3		<1400 N/mm²	all	all	> 3% Si			●	●	○		1125
	GH 100 U (Mini-slot drills)	NH	45°	3		< 850 N/mm²	all		> 3% Si			●	●	○		1127
HPC	GA 200 A (corner radius)	W	45°	3					all			●	●	●		1129
	RS 100 U	NF	30°	4-5		<1000 N/mm²	all	all	> 5% Si			○	●			1131
	RS 100 F	NF	45°	5-6		< 48 HRC	<850 N/mm²	> 200 HB30	> 5% Si	Ti & Ni		○	●			1131
	GS 100 A	WR	30°	3					all			○	●			1133
	GS 100 U	NRf	30°	4-5		< 48 HRC	<850 N/mm²	< 200 HB30	> 5% Si			○	●			1132
	GS 100 H	HR	20°	4		>1200 N/mm²		< 300 HB30			< 52 HRC	○	●			1134
HPC	GH 100 U	NH	45°	6-10		< 48 HRC	all	all						●		1135
HPC/ HSC	GH 100 U (corner radius)	NH	45°	6-8		< 48 HRC	all	all	> 3% Si	Ti & Ni				●	●	1162
HPC/ HSC	GH 100 H	H	55°	6-8				< 300 HB30			< 62 HRC			●		1138
HPC/ HSC	GH 100 H (corner radius)	H	55°	6				< 300 HB30			< 62 HRC			●		1170
	CR 100	N	0°	6-14					CFK	CFK		●	●	●		1140
	Pilot end mill	N	30°	4		all	all	all	> 5% Si			pilot milling				1139
HSC	GF 300 B	H	30°	2		> 48 HRC		< 300 HB30			< 62 HRC				●	1183
HSC	GF 300 T	H	30°	4		> 48 HRC		< 300 HB30			< 62 HRC			●	●	1168
HSC	GF 500 B	N	30°	2		> 850 N/mm²	all	< 200 HB30		Ti & Ni	< 54 HRC				●	1176
HSC	GF 500 T	N	30°	2		> 850 N/mm²	all	< 200 HB30		Ti & Ni	< 54 HRC			●	●	1163
	End mills, PCD-tipped	-	0°	2-3					< 3% Si			●	●	●		1186

● = optimal suitability ○ = limited suitability

Application group	Material examples
P	Steel, high-alloyed steel
M	Stainless steel
K	Grey cast iron, spheroidal and malleable cast iron
N	Aluminium and other non-ferrous metals
S	Special-, super- and Ti-alloys
H	Hardened steel and hard cast iron

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Application	Milling cutter type	Type	Helix angle	No. of teeth	Tool illustration	Material to ISO P	M	K	N	S	H	Slot drilling	Roughing	Finishing	Copying	Page
	Slot drills (Aluminium)	W	30°	2					< 3% Si			●	●	●		1106
	Slot drills	N	30°	2		< 1000 N/mm²		< 180 HB30				●	○			1101
	Slot drills (corner radius)	N	30°	2		< 48 HRC	<850 N/mm²	< 180 HB30	> 3% Si			●	○		●	1105
	Slot drills (ball-nosed)	N	30°	2		< 48 HRC	<850 N/mm²	< 180 HB30	> 3% Si						●	1107
	Slot drills	N	30°	3		< 1000 N/mm²		< 180 HB30				●	○	○		1109
	Slot drills (Mini-slot drills)	N	30°	3		<850 N/mm²	<850 N/mm²			< 850 N/mm²		●	○	○		1110
	End Mills	N	30°	4		< 1000 N/mm²		< 180 HB30						●		1113
	End Mills (corner radius)	N	30°	4		< 48 HRC		< 180 HB30						●	●	1112
	End Mills (ball-nosed)	N	30°	4		< 48 HRC		< 180 HB30						●	●	1114
	Chamfering milling cutters 60°	N	0°	4		< 48 HRC	all	all	> 3% Si					●		1115
	Chamfering milling cutters 90°	N	0°	4		< 48 HRC	all	all	> 3% Si					●		1117
	Chamfering milling cutters 120°	N	0°	4		< 48 HRC	all	all	> 3% Si					●		1118

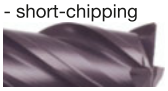
● = optimal suitability ○ = limited suitability

Application group	Material examples
P	Steel, high-alloyed steel
M	Stainless steel
K	Grey cast iron, spheroidal and malleable cast iron
N	Aluminium and other non-ferrous metals
S	Special-, super- and Ti-alloys
H	Hardened steel and hard cast iron

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

fz-corrections:*
ap = 2 x d; fz -30%
fz-corrections:**
ap = 1-2 x d; fz +25%
fz-corrections:***
ap = 1-2 x d; fz +60%

Stable conditions:
- good cooling
- sufficient performance
- short-chipping



Application	Feed width (ae)	Feed depth (ap)
Slotting*	1 x d	0.5 to 1.0 x d
Roughing*	0.5 to 0.9 x d	0.5 to 1.0 x d
Finishing	0.05 to 0.1 x d	1.0 to 2.0 x d
HPC-roughing**	0.25 to 0.5 x d	1.0 to 2.0 x d
HSC-roughing***	0.1 to 0.25 x d	1.0 to 2.0 x d

Material	Hardness	recom-mended RF 100 type	Type of application	cut Vc	fz (mm/z) with nom. Ø							
					3	6	8	10	12	16	20	25
Structural + free-cutting steels, unalloyed heat-treatable + case hardened steels 1.0035 S185, 1.0486 P275N, 1.0345 P235GH, 1.0050, 1.0070, 1.8937 1.0718 11SMnPb30, 1.0736 11SMn37 1.0402 C22, 1.1178 C30E 1.0503 C45, 1.1191 C30E 1.0301 C10, 1.1121 C10E 1.1750 C75W, 1.2076 102Cr6, 1.2307 29CrMoV9	up to 850 N/mm²	F	Slotting	180	0.018	0.035	0.045	0.06	0.07	0.09	0.1	0.15
		F	Roughing	200	0.02	0.04	0.055	0.07	0.085	0.1	0.12	0.17
		SF	Finishing	280	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14
Free-cutting steels, unalloyed case hardened steels, nitriding steels 1.0727 46 S20, 1.0728 60 S20, 1.0757 46SPb20 1.0601 C60, 1.1221 C60E 1.7043 38Cr4 1.5752 15NiCr13, 1.7131 16MnCr5, 1.7264 20CrMo5 1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	850-1,200 N/mm²	F	Slotting	160	0.018	0.035	0.045	0.06	0.07	0.09	0.1	0.15
		F	Roughing	180	0.02	0.04	0.055	0.07	0.085	0.1	0.12	0.17
		SF	Finishing	220	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14
Alloyed heat-treatable, tool and high speed steels 1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2379 X155CrVMo12-1 1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3 Spring steel = 1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4	850-1,400 N/mm²	U	Slotting	135	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14
		U	Roughing	160	0.02	0.04	0.05	0.065	0.08	0.095	0.11	0.16
		SF	Finishing	200	0.015	0.03	0.04	0.05	0.06	0.07	0.09	0.13
Hardened steel Tool steel, heat-treatable steel, spring steel, high-speed steel, case hardened steel, etc. Z.B.: 1.2344 X40CrMoV5-1; 1.2767 X45NiCrMo4; 1.2379 X155CrVMo12-1 ;1.2080 X210Cr12 1.3343 S 6-5-2	up to 54 HRC	U	Slotting	70	0.012	0.025	0.03	0.04	0.045	0.06	0.07	0.1
		U	Roughing	110	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
		SF	Finishing	150	0.015	0.03	0.04	0.05	0.06	0.07	0.09	0.13
	54-60 HRC		Slotting									
		H	Roughing									
		H	Finishing	110	0,01	0,015	0,025	0,035	0,042	0,05	0,08	0,09
Stainless steel 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X10CrNiS18-9 USA = 303, 410, 420F, 430, 430F	up to 750 N/mm²	VA	Slotting	120	0.015	0.03	0.04	0.05	0.06	0.07	0.09	0.13
		VA	Roughing	140	0.018	0.035	0.045	0.06	0.07	0.09	0.1	0.15
		SF	Finishing	180	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14
Stainless steel 1.4301X5CrNi18-10, 1.4303 X5CrNi18-12 1.4310 XCrNi18-8 USA = 304, 304L, 420	750-850 N/mm²	VA	Slotting	80	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
		VA	Roughing	120	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14
		SF	Finishing	140	0.015	0.03	0.04	0.05	0.06	0.07	0.09	0.13
Stainless steel 1.4438 X2CrNiMo18-15-4, 1.4404 X2CrNiMo17-12-2, 1.4571 X6CrNiTi18-10 USA = 310, 316, 316B, 316L, 317	above 850 N/mm²	VA/F	Slotting	70	0.012	0.025	0.03	0.04	0.045	0.06	0.07	0.1
		VA/F	Roughing	100	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
		SF	Finishing	120	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
Special alloys (nickel based "Ni") Nimonic, Inconel, Monel, Hastelloy	up to 1,300 N/mm²	Ti/U	Slotting	30	0,01	0.015	0.02	0.025	0.03	0.04	0.05	0.06
		Ti/U	Roughing	35	0.01	0.02	0.03	0.035	0.04	0.055	0.065	0.08
		SF	Finishing	45	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
Titanium alloys ("Ti") 3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7164 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5	up to 1,300 N/mm²	Ti/U	Slotting	60	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
		Ti/U	Roughing	90	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14
		SF	Finishing	130	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6010 EN-GL100 (GG10), 0.6020 EN-GJL-200 (GG20), 0.7050 EN-GJS-500-7 (GGG50), 0.8535 EN-GJMW-350-4 (GTW35)	up to 240 HB 30	F	Slotting	160	0.02	0.04	0.05	0.065	0.08	0.095	0.11	0.16
		F	Roughing	180	0.02	0.04	0.055	0.07	0.085	0.1	0.12	0.17
		SF	Finishing	220	0.018	0.035	0.045	0.06	0.07	0.09	0.1	0.15
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6025 EN-GL250 (GG25), 0.6035 EN-GJL-350 (GG35), 0.7070 EN-GJS-700-2 (GGG70), 0.8170 EN-GJMB-700-2 (GTS70)	above 240 HB 30	U	Slotting	140	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14
		U	Roughing	160	0.02	0.04	0.05	0.065	0.08	0.095	0.11	0.16
		SF	Finishing	200	0.018	0.035	0.045	0.06	0.07	0.09	0.1	0.15
Aluminium, Al-wrought alloys, Al-alloys 3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1 3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	up to 3% Si	A	Slotting	500	0.02	0.04	0.05	0.065	0.08	0.095	0.11	0.16
		A	Roughing	600	0.02	0.04	0.055	0.07	0.085	0.1	0.12	0.17
		A	Finishing	1000	0.018	0.035	0.045	0.06	0.07	0.09	0.1	0.15
Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	above 3% Si	A	Slotting	230	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14
		A	Roughing	280	0.02	0.04	0.05	0.065	0.08	0.095	0.11	0.16
		A	Finishing	350	0.018	0.035	0.045	0.06	0.07	0.09	0.1	0.15
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	-	A	Slotting	180	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14
		A	Roughing	220	0.02	0.04	0.05	0.065	0.08	0.095	0.11	0.16
		A	Finishing	280	0.018	0.035	0.045	0.06	0.07	0.09	0.1	0.15
Non-ferrous metals (copper, short- or long-chipping brass or bronze) 2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb 2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2 2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5 2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10	up to 850 N/mm²	A	Slotting	250	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
		A	Roughing	300	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14
		SF	Finishing	400	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14

All recommendations are valid for coated tools. For bright milling cutters please vc - 40% and fz -25%!

fz-corrections:*
ap = 2 x d; fz -30%
fz-corrections:**
ap = 1-2 x d; fz +25%
fz-corrections:***
ap = 1-2 x d; fz +60%

Unstable conditions:
- standard cooling
- average performance
- medium- to long-chipping

Application	Feed width (ae)	Feed depth (ap)
Slotting*	1 x d	0.5 up to 1.0 x d
Roughing*	0.5 up to 0.9 x d	0.5 up to 1.0 x d
Finishing	0.05 up to 0.1 x d	1.0 up to 2.0 x d
HPC-roughing**	0.25 up to 0.5 x d	1.0 up to 2.0 x d
HSC-roughing***	0.1 up to 0.25 x d	1.0 up to 2.0 x d

Material	Hardness	recom-mended RF 100 type	Type of application	cut Vc	fz (mm/z) with nom. Ø							
					3	6	8	10	12	16	20	25
Structural + free-cutting steels, unalloyed heat-treatable + case hardened steels 1.0035 S185, 1.0486 P275N, 1.0345 P235GH, 1.0050, 1.0070, 1.8937 1.0718 11SMnPb30, 1.0736 11SMn37 1.0402 C22, 1.1178 C30E 1.0503 C45, 1.1191 C30E 1.0301 C10, 1.1121 C10E 1.1750 C75W, 1.2076 102Cr6, 1.2307 29CrMoV9	up to 850 N/mm²	VA/NF	Slotting	180	0.012	0.025	0.03	0.04	0.045	0.06	0.07	0.1
		VA/NF	Roughing	200	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
			Finishing									
Free-cutting steels, unalloyed case hardened steels, nitriding steels 1.0727 46 S20, 1.0728 60 S20, 1.0757 46SPb20 1.0601 C60, 1.1221 C60E 1.7043 38Cr4 1.5752 15NiCr13, 1.7131 16MnCr5, 1.7264 20CrMo5 1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	850-1,200 N/mm²	VA/NF	Slotting	160	0.012	0.025	0.03	0.04	0.045	0.06	0.07	0.1
		VA/NF	Roughing	180	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
			Finishing									
Alloyed heat-treatable, tool and high speed steels 1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2379 X155CrVMo12-1 1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3 Spring steel = 1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4	850-1,400 N/mm²	U/HF	Slotting	135	0,01	0.015	0.025	0.03	0.035	0.045	0.06	0.07
		U/HF	Roughing	160	0.01	0.02	0.03	0.035	0.04	0.055	0.065	0.08
			Finishing									
Hardened steel Tool steel, heat-treatable steel, spring steel, high-speed steel, case hardened steel, etc. Z.B.: 1.2344 X40CrMoV5-1; 1.2767 X45NiCrMo4; 1.2379 X155CrVMo12-1 ;1.2080 X210Cr12 1.3343 S 6-5-2	up to 54 HRC	U/HF	Slotting	70	0,01	0.015	0.02	0.025	0.03	0.04	0.05	0.06
		U/HF	Roughing	110	0,012	0.015	0.025	0.03	0.035	0.045	0.06	0.07
			Finishing									
	54-60 HRC		Slotting									
			Roughing									
			Finishing									
Stainless steel 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X10CrNiS18-9 USA = 303, 410, 420F, 430, 430F	up to 750 N/mm²	VA/NF	Slotting	120	0.012	0.025	0.03	0.04	0.045	0.06	0.07	0.1
		VA/NF	Roughing	140	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
			Finishing									
Stainless steel 1.4301X5CrNi18-10, 1.4303 X5CrNi18-12 1.4310 XCrNi18-8 USA = 304, 304L, 420	750-850 N/mm²	VA/NF	Slotting	80	0,01	0.015	0.025	0.03	0.035	0.045	0.06	0.07
		VA/NF	Roughing	120	0,012	0.02	0.03	0.035	0.04	0.055	0.065	0.08
			Finishing									
Stainless steel 1.4438 X2CrNiMo18-15-4, 1.4404 X2CrNiMo17-12-2, 1.4571 X6CrNiTi18-10 USA = 310, 316, 316B, 316L, 317	above 850 N/mm²	VA/NF	Slotting	70	0,01	0.015	0.02	0.025	0.03	0.04	0.05	0.06
		VA/NF	Roughing	100	0,012	0.015	0.025	0.03	0.035	0.045	0.06	0.07
			Finishing									
Special alloys (nickel based "Ni") Nimonic, Inconel, Monel, Hastelloy	up to 1,300 N/mm²	U/HF	Slotting	30	0,008	0.01	0.015	0.02	0.025	0.035	0.04	0.05
		U/HF	Roughing	35	0,01	0.015	0.02	0.025	0.03	0.04	0.05	0.06
			Finishing									
Titanium alloys ("Ti") 3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7164 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5	up to 1,300 N/mm²	U/HF	Slotting	60	0,01	0.015	0.025	0.03	0.035	0.045	0.06	0.07
		U/HF	Roughing	90	0,012	0.02	0.03	0.035	0.04	0.055	0.065	0.08
			Finishing									
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6010 EN-GL100 (GG10), 0.6020 EN-GJL-200 (GG20), 0.7050 EN-GJS-500-7 (GGG50), 0.8535 EN-GJMW-350-4 (GTW35)	up to 240 HB 30	VA/NF	Slotting	160	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
		VA/NF	Roughing	180	0.015	0.03	0.04	0.05	0.06	0.07	0.09	0.13
			Finishing									
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6025 EN-GL250 (GG25), 0.6035 EN-GJL-350 (GG35), 0.7070 EN-GJS-700-2 (GGG70), 0.8170 EN-GJMB-700-2 (GTS70)	above 240 HB 30	U/HF	Slotting	140	0.012	0.025	0.03	0.04	0.045	0.06	0.07	0.1
		U/HF	Roughing	160	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
			Finishing									
Aluminium, Al-wrought alloys, Al-alloys 3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1 3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	up to 3% Si	A/WF	Slotting	500	0.016	0.03	0.04	0.055	0.065	0.08	0.095	0.14
		A/WF	Roughing	600	0.018	0.035	0.045	0.06	0.07	0.09	0.1	0.15
			Finishing									
Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	above 3% Si	A/WF	Slotting	230	0.015	0.025	0.035	0.045	0.05	0.065	0.08	0.12
		A/WF	Roughing	280	0.015	0.03	0.04	0.05	0.06	0.07	0.09	0.13
			Finishing									
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	-	A/WF	Slotting	180	0.012	0.025	0.03	0.04	0.045	0.06	0.07	0.1
		A/WF	Roughing	220	0.015	0.03	0.04	0.05	0.06	0.07	0.09	0.13
			Finishing									
Non-ferrous metals (copper, short- or long-chipping brass or bronze) 2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb 2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2 2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5 2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10	up to 850 N/mm²	VA/NF	Slotting	250	0.012	0.025	0.03	0.04	0.045	0.06	0.07	0.1
		VA/NF	Roughing	300	0.015	0.03	0.04	0.05	0.06	0.07	0.09	0.13
			Finishing									

All recommendations are valid for coated tools. For bright milling cutters please vc - 40% and fz -25%!

fz-corrections:*
ap = 2 x d; fz -30%
fz-corrections:**
ap = 1-2 x d; fz +25%
fz-corrections:***
ap = 1-2 x d; fz +60%

Application	Feed width (ae)	Feed depth (ap)
Slotting*	1 x d	0.5 to 1.0 x d
Roughing*	0.5 to 0.9 x d	0.5 to 1.0 x d
Finishing	0.05 to 0.1 x d	1.0 to 2.0 x d
HPC-roughing**	0.25 to 0.5 x d	1.0 to 2.0 x d
HSC-roughing***	0.1 to 0.25 x d	1.0 to 2.0 x d

Material	Hardness	usable GH 100 type	Type of application	cut Vc	fz (mm/z) with nom. Ø							
					3	6	8	10	12	16	20	25
Structural + free-cutting steels, unalloyed heat-treatable + case hardened steels 1.0035 S185, 1.0486 P275N, 1.0345 P235GH, 1.0050, 1.0070, 1.8937 1.0718 11SMnPb30, 1.0736 11SMn37 1.0402 C22, 1.1178 C30E 1.0503 C45, 1.1191 C30E 1.0301 C10, 1.1121 C10E 1.1750 C75W, 1.2076 102Cr6, 1.2307 29CrMoV9	up to 850 N/mm²	U (3-Flt.)	Slotting	180	0.016	0.032	0.041	0.054	0.063	0.081	0.090	0.135
		U (3-Flt.)	Roughing	200	0.018	0.036	0.050	0.063	0.077	0.090	0.108	0.153
		U (6-/8-Flt.)	Finishing	280	0.014	0.027	0.036	0.050	0.059	0.072	0.086	0.126
Free-cutting steels, unalloyed case hardened steels, nitriding steels 1.0727 46 S20, 1.0728 60 S20, 1.0757 46SPb20 1.0601 C60, 1.1221 C60E 1.7043 38Cr4 1.5752 15NiCr13, 1.7131 16MnCr5, 1.7264 20CrMo5 1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	850-1,200 N/mm²	U (3-Flt.)	Slotting	160	0.016	0.032	0.041	0.054	0.063	0.081	0.090	0.135
		U (3-Flt.)	Roughing	180	0.018	0.036	0.050	0.063	0.077	0.090	0.108	0.153
		U (6-/8-Flt.)	Finishing	220	0.014	0.027	0.036	0.050	0.059	0.072	0.086	0.126
Alloyed heat-treatable, tool and high speed steels 1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2379 X155CrVMo12-1 1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3 Spring steel = 1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4	850-1,400 N/mm²	U (3-Flt.)	Slotting	120	0.013	0.024	0.032	0.044	0.052	0.064	0.076	0.112
		U (3-Flt.)	Roughing	150	0.016	0.032	0.040	0.052	0.064	0.076	0.088	0.128
		U (6-/8-Flt.)	Finishing	180	0.012	0.024	0.032	0.040	0.048	0.056	0.072	0.104
Hardened steel Tool steel, heat-treatable steel, spring steel, high-speed steel, case hardened steel, etc. Z.B.: 1.2344 X40CrMoV5-1; 1.2767 X45NiCrMo4; 1.2379 X155CrVMo12-1 ;1.2080 X210Cr12 1.3343 S 6-5-2	up to 54 HRC	U (3-Flt.)	Slotting	60	0.008	0.018	0.021	0.028	0.032	0.042	0.049	0.070
		H (6-/8-Flt.)****	Roughing	90	0.011	0.018	0.025	0.032	0.035	0.046	0.056	0.084
		H (6-/8-Flt.)	Finishing	120	0.011	0.021	0.028	0.035	0.042	0.049	0.063	0.091
	54-60 HRC		Slotting									
			Roughing									
		H (6-/8-Flt.)	Finishing	90	0.01	0.015	0.025	0.035	0.042	0.05	0.08	0.09
Stainless steel 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X10CrNiS18-9 USA = 303, 410, 420F, 430, 430F	up to 750 N/mm²	U (3-Flt.)	Slotting	100	0.014	0.027	0.036	0.045	0.054	0.063	0.081	0.117
		U (3-Flt.)	Roughing	115	0.016	0.032	0.041	0.054	0.063	0.081	0.090	0.135
		U (6-/8-Flt.)	Finishing	150	0.014	0.027	0.036	0.050	0.059	0.072	0.086	0.126
Stainless steel 1.4301X5CrNi18-10, 1.4303 X5CrNi18-12 1.4310 XCrNi18-8 USA = 304, 304L, 420	750-850 N/mm²	U (3-Flt.)	Slotting	60	0.014	0.023	0.032	0.041	0.045	0.059	0.072	0.108
		U (3-Flt.)	Roughing	100	0.014	0.027	0.036	0.050	0.059	0.072	0.086	0.126
		U (6-/8-Flt.)	Finishing	110	0.014	0.027	0.036	0.045	0.054	0.063	0.081	0.117
Stainless steel 1.4438 X2CrNiMo18-15-4, 1.4404 X2CrNiMo17-12-2, 1.4571 X6CrNiTi18-10 USA = 310, 316, 316B, 316L, 317	above 850 N/mm²	U (3-Flt.)	Slotting	60	0.011	0.023	0.027	0.036	0.041	0.054	0.063	0.090
		U (3-Flt.)	Roughing	80	0.014	0.023	0.032	0.041	0.045	0.059	0.072	0.108
		U (6-/8-Flt.)	Finishing	100	0.014	0.023	0.032	0.041	0.045	0.059	0.072	0.108
Special alloys (nickel based "Ni") Nimonic, Inconel, Monel, Hastelloy	up to 1,300 N/mm²	U (3-Flt.)	Slotting	25	0.009	0.014	0.018	0.023	0.027	0.036	0.045	0.054
		U (3-Flt.)	Roughing	30	0.009	0.018	0.027	0.032	0.036	0.050	0.059	0.072
		U (6-/8-Flt.)	Finishing	35	0.014	0.023	0.032	0.041	0.045	0.059	0.072	0.108
Titanium alloys ("Ti") 3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7164 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5	up to 1,300 N/mm²	U (3-Flt.)	Slotting	55	0.014	0.023	0.032	0.041	0.045	0.059	0.072	0.108
		U (3-Flt.)	Roughing	80	0.014	0.027	0.036	0.050	0.059	0.072	0.086	0.126
		U (6-/8-Flt.)	Finishing	120	0.014	0.027	0.036	0.050	0.059	0.072	0.086	0.126
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6010 EN-GL100 (GG10), 0.6020 EN-GJL-200 (GG20), 0.7050 EN-GJS-500-7 (GGG50), 0.8535 EN-GJMW-350-4 (GTW35)	up to 240 HB 30	U (3-Flt.)	Slotting	130	0.018	0.036	0.045	0.059	0.072	0.086	0.099	0.144
		U (3-Flt.)	Roughing	150	0.018	0.036	0.050	0.063	0.077	0.090	0.108	0.153
		U (6-/8-Flt.)	Finishing	180	0.016	0.032	0.041	0.054	0.063	0.081	0.090	0.135
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6025 EN-GL250 (GG25), 0.6035 EN-GJL-350 (GG35), 0.7070 EN-GJS-700-2 (GGG70), 0.8170 EN-GJMB-700-2 (GTS70)	above 240 HB 30	U (3-Flt.)	Slotting	115	0.014	0.027	0.036	0.050	0.059	0.072	0.086	0.126
		U (3-Flt.)	Roughing	130	0.018	0.036	0.045	0.059	0.072	0.086	0.099	0.144
		U (6-/8-Flt.)	Finishing	160	0.016	0.032	0.041	0.054	0.063	0.081	0.090	0.135
Aluminium, Al-wrought alloys, Al-alloys 3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1 3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	up to 3% Si	A (3-Flt.)	Slotting	400	0.018	0.036	0.045	0.059	0.072	0.086	0.099	0.144
		A (3-Flt.)	Roughing	480	0.018	0.036	0.050	0.063	0.077	0.090	0.108	0.153
		A (3-Flt.)	Finishing	800	0.016	0.032	0.041	0.054	0.063	0.081	0.090	0.135
Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	above 3% Si	A (3-Flt.)	Slotting	180	0.014	0.027	0.036	0.050	0.059	0.072	0.086	0.126
		A (3-Flt.)	Roughing	220	0.018	0.036	0.045	0.059	0.072	0.086	0.099	0.144
		U (6-/8-Flt.)	Finishing	280	0.016	0.032	0.041	0.054	0.063	0.081	0.090	0.135
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	-	A (3-Flt.)	Slotting	150	0.014	0.027	0.036	0.050	0.059	0.072	0.086	0.126
		A (3-Flt.)	Roughing	180	0.018	0.036	0.045	0.059	0.072	0.086	0.099	0.144
		A (3-Flt.)	Finishing	230	0.016	0.032	0.041	0.054	0.063	0.081	0.090	0.135
Non-ferrous metals (copper, short- or long-chipping brass or bronze) 2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb 2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2 2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5 2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10	up to 850 N/mm²	A (3-Flt.)	Slotting	200	0.014	0.023	0.032	0.041	0.045	0.059	0.072	0.108
		A (3-Flt.)	Roughing	240	0.014	0.027	0.036	0.050	0.059	0.072	0.086	0.126
		U (6-/8-Flt.)	Finishing	320	0.014	0.027	0.036	0.050	0.059	0.072	0.086	0.126

All recommendations are valid for coated tools. For bright milling cutters please vc - 40% and fz -25%!

**** trochoid milling strategy

fz-corrections:*
ap = 2 x d; fz -30%
fz-corrections:**
ap = 1-2 x d; fz +25%
fz-corrections:***
ap = 1-2 x d; fz +60%

Application	Feed width (ae)	Feed depth (ap)
Slotting*	1 x d	0.5 up to 1.0 x d
Roughing*	0.5 up to 0.9 x d	0.5 up to 1.0 x d
Finishing	0.05 up to 0.1 x d	1.0 up to 2.0 x d
HPC-roughing**	0.25 up to 0.5 x d	1.0 up to 2.0 x d
HSC-roughing***	0.1 up to 0.25 x d	1.0 up to 2.0 x d

Material	Hardness	usable GS 100 type	Type of application	cut Vc	fz (mm/z) with nom. Ø							
					3	6	8	10	12	16	20	25
Structural + free-cutting steels, unalloyed heat-treatable + case hardened steels 1.0035 S185, 1.0486 P275N, 1.0345 P235GH, 1.0050, 1.0070, 1.8937 1.0718 11SMnPb30, 1.0736 11SMn37 1.0402 C22, 1.1178 C30E 1.0503 C45, 1.1191 C30E 1.0301 C10, 1.1121 C10E 1.1750 C75W, 1.2076 102Cr6, 1.2307 29CrMoV9	up to 850 N/mm²	U	Slotting	140	0.010	0.020	0.024	0.032	0.036	0.048	0.056	0.080
		U	Roughing	160	0.012	0.020	0.028	0.036	0.040	0.052	0.064	0.096
			Finishing									
Free-cutting steels, unalloyed case hardened steels, nitriding steels 1.0727 46 S20, 1.0728 60 S20, 1.0757 46SPb20 1.0601 C60, 1.1221 C60E 1.7043 38Cr4 1.5752 15NiCr13, 1.7131 16MnCr5, 1.7264 20CrMo5 1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	850-1,200 N/mm²	U	Slotting	130	0.010	0.020	0.024	0.032	0.036	0.048	0.056	0.080
		U	Roughing	150	0.012	0.020	0.028	0.036	0.040	0.052	0.064	0.096
			Finishing									
Alloyed heat-treatable, tool and high speed steels 1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2379 X155CrVMo12-1 1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3 Spring steel = 1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4	850-1,400 N/mm²	U	Slotting	110	0.008	0.012	0.020	0.024	0.028	0.036	0.048	0.056
		H	Roughing	130	0.008	0.016	0.024	0.028	0.032	0.044	0.052	0.064
			Finishing									
Hardened steel Tool steel, heat-treatable steel, spring steel, high-speed steel, case hardened steel, etc. Z.B.: 1.2344 X40CrMoV5-1; 1.2767 X45NiCrMo4; 1.2379 X155CrVMo12-1 ;1.2080 X210Cr12 1.3343 S 6-5-2	up to 54 HRC	H	Slotting	55	0.008	0.012	0.016	0.020	0.024	0.032	0.040	0.048
		H	Roughing	90	0.010	0.012	0.020	0.024	0.028	0.036	0.048	0.056
			Finishing									
	54-60 HRC		Slotting									
			Roughing									
			Finishing									
Stainless steel 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X10CrNiS18-9 USA = 303, 410, 420F, 430, 430F	up to 750 N/mm²	U	Slotting	100	0.010	0.020	0.024	0.032	0.036	0.048	0.056	0.080
		U	Roughing	115	0.012	0.020	0.028	0.036	0.040	0.052	0.064	0.096
			Finishing									
Stainless steel 1.4301X5CrNi18-10, 1.4303 X5CrNi18-12 1.4310 XCrNi18-8 USA = 304, 304L, 420	750-850 N/mm²	U	Slotting	65	0.007	0.011	0.018	0.021	0.025	0.032	0.042	0.049
		U	Roughing	100	0.008	0.014	0.021	0.025	0.028	0.039	0.046	0.056
			Finishing									
Stainless steel 1.4438 X2CrNiMo18-15-4, 1.4404 X2CrNiMo17-12-2, 1.4571 X6CrNiTi18-10 USA = 310, 316, 316B, 316L, 317	above 850 N/mm²	U	Slotting	55	0.007	0.011	0.014	0.018	0.021	0.028	0.035	0.042
		U	Roughing	80	0.008	0.011	0.018	0.021	0.025	0.032	0.042	0.049
			Finishing									
Special alloys (nickel based "Ni") Nimonic, Inconel, Monel, Hastelloy	up to 1,300 N/mm²	U	Slotting	25	0.006	0.007	0.011	0.014	0.018	0.025	0.028	0.035
		U	Roughing	30	0.007	0.011	0.014	0.018	0.021	0.028	0.035	0.042
			Finishing									
Titanium alloys ("Ti") 3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7164 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5	up to 1,300 N/mm²	U	Slotting	50	0.007	0.011	0.018	0.021	0.025	0.032	0.042	0.049
		U	Roughing	70	0.008	0.014	0.021	0.025	0.028	0.039	0.046	0.056
			Finishing									
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6010 EN-GL100 (GG10), 0.6020 EN-GJL-200 (GG20), 0.7050 EN-GJS-500-7 (GGG50), 0.8535 EN-GJMW-350-4 (GTW35)	up to 240 HB 30	U	Slotting	130	0.011	0.018	0.025	0.032	0.035	0.046	0.056	0.084
		U	Roughing	140	0.011	0.021	0.028	0.035	0.042	0.049	0.063	0.091
			Finishing									
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6025 EN-GL250 (GG25), 0.6035 EN-GJL-350 (GG35), 0.7070 EN-GJS-700-2 (GGG70), 0.8170 EN-GJMB-700-2 (GTS70)	above 240 HB 30	H	Slotting	110	0.008	0.018	0.021	0.028	0.032	0.042	0.049	0.070
		H	Roughing	130	0.011	0.018	0.025	0.032	0.035	0.046	0.056	0.084
			Finishing									
Aluminium, Al-wrought alloys, Al-alloys 3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1 3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	up to 3% Si	A	Slotting	450	0.013	0.024	0.032	0.044	0.052	0.064	0.076	0.112
		A	Roughing	540	0.014	0.028	0.036	0.048	0.056	0.072	0.080	0.120
			Finishing									
Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	above 3% Si	A	Slotting	200	0.012	0.020	0.028	0.036	0.040	0.052	0.064	0.096
		A	Roughing	250	0.012	0.024	0.032	0.040	0.048	0.056	0.072	0.104
			Finishing									
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	-	A	Slotting	160	0.010	0.020	0.024	0.032	0.036	0.048	0.056	0.080
		A	Roughing	200	0.012	0.024	0.032	0.040	0.048	0.056	0.072	0.104
			Finishing									
Non-ferrous metals (copper, short- or long-chipping brass or bronze) 2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb 2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2 2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5 2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10	up to 850 N/mm²	A	Slotting	225	0.010	0.020	0.024	0.032	0.036	0.048	0.056	0.080
		A	Roughing	270	0.012	0.024	0.032	0.040	0.048	0.056	0.072	0.104
			Finishing									

All recommendations are valid for coated tools. For bright milling cutters please vc - 40% and fz -25%!

fz-corrections:*
ap = 2 x d; fz -30%
fz-corrections:**
ap = 1-2 x d; fz +25%
fz-corrections:***
ap = 1-2 x d; fz +60%

Application	Feed width (ae)	Feed depth (ap)
Slotting*	1 x d	0.5 to 1.0 x d
Roughing*	0.5 to 0.9 x d	0.5 to 1.0 x d
Finishing	0.05 to 0.1 x d	1.0 to 2.0 x d
HPC-roughing**	0.25 to 0.5 x d	1.0 to 2.0 x d
HSC-roughing***	0.1 to 0.25 x d	1.0 to 2.0 x d

Material	Hardness	usable RS 100 type	Type of application	cut Vc	fz (mm/z) with nom. Ø							
					3	6	8	10	12	16	20	25
Structural + free-cutting steels, unalloyed heat-treatable + case hardened steels 1.0035 S185, 1.0486 P275N, 1.0345 P235GH, 1.0050, 1.0070, 1.8937 1.0718 11SMnPb30, 1.0736 11SMn37 1.0402 C22, 1.1178 C30E 1.0503 C45, 1.1191 C30E 1.0301 C10, 1.1121 C10E 1.1750 C75W, 1.2076 102Cr6, 1.2307 29CrMoV9	up to 850 N/mm²	U	Slotting	140	0.011	0.023	0.027	0.036	0.041	0.054	0.063	0.090
		F	Roughing	160	0.014	0.023	0.032	0.041	0.045	0.059	0.072	0.108
			Finishing									
Free-cutting steels, unalloyed case hardened steels, nitriding steels 1.0727 46 S20, 1.0728 60 S20, 1.0757 46SPb20 1.0601 C60, 1.1221 C60E 1.7043 38Cr4 1.5752 15NiCr13, 1.7131 16MnCr5, 1.7264 20CrMo5 1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	850-1,200 N/mm²	U	Slotting	130	0.011	0.023	0.027	0.036	0.041	0.054	0.063	0.090
		F	Roughing	150	0.014	0.023	0.032	0.041	0.045	0.059	0.072	0.108
			Finishing									
Alloyed heat-treatable, tool and high speed steels 1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2379 X155CrVMo12-1 1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3 Spring steel = 1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4	850-1,400 N/mm²	U	Slotting	110	0.009	0.014	0.023	0.027	0.032	0.041	0.054	0.063
		F	Roughing	130	0.009	0.018	0.027	0.032	0.036	0.050	0.059	0.072
			Finishing									
Hardened steel Tool steel, heat-treatable steel, spring steel, high-speed steel, case hardened steel, etc. Z.B.: 1.2344 X40CrMoV5-1; 1.2767 X45NiCrMo4; 1.2379 X155CrVMo12-1 ;1.2080 X210Cr12 1.3343 S 6-5-2	up to 54 HRC	F****	Slotting	55	0.009	0.014	0.018	0.023	0.027	0.036	0.045	0.054
		F	Roughing	90	0.011	0.014	0.023	0.027	0.032	0.041	0.054	0.063
			Finishing									
	54-60 HRC		Slotting									
			Roughing									
			Finishing									
Stainless steel 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X10CrNiS18-9 USA = 303, 410, 420F, 430, 430F	up to 750 N/mm²	U	Slotting	100	0.011	0.023	0.027	0.036	0.041	0.054	0.063	0.090
		U	Roughing	115	0.014	0.023	0.032	0.041	0.045	0.059	0.072	0.108
			Finishing									
Stainless steel 1.4301X5CrNi18-10, 1.4303 X5CrNi18-12 1.4310 XCrNi18-8 USA = 304, 304L, 420	750-850 N/mm²	U	Slotting	65	0.009	0.014	0.023	0.027	0.032	0.041	0.054	0.063
		U	Roughing	100	0.011	0.018	0.027	0.032	0.036	0.050	0.059	0.072
			Finishing									
Stainless steel 1.4438 X2CrNiMo18-15-4, 1.4404 X2CrNiMo17-12-2, 1.4571 X6CrNiTi18-10 USA = 310, 316, 316B, 316L, 317	above 850 N/mm²	U	Slotting	55	0.009	0.014	0.018	0.023	0.027	0.036	0.045	0.054
		U	Roughing	80	0.011	0.014	0.023	0.027	0.032	0.041	0.054	0.063
			Finishing									
Special alloys (nickel based "Ni") Nimonic, Inconel, Monel, Hastelloy	up to 1,300 N/mm²	U	Slotting	25	0.007	0.009	0.014	0.018	0.023	0.032	0.036	0.045
		F	Roughing	30	0.009	0.014	0.018	0.023	0.027	0.036	0.045	0.054
			Finishing									
Titanium alloys ("Ti") 3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7164 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5	up to 1,300 N/mm²	U	Slotting	55	0.009	0.014	0.023	0.027	0.032	0.041	0.054	0.063
		F	Roughing	80	0.011	0.018	0.027	0.032	0.036	0.050	0.059	0.072
			Finishing									
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6010 EN-GL100 (GG10), 0.6020 EN-GJL-200 (GG20), 0.7050 EN-GJS-500-7 (GGG50), 0.8535 EN-GJMW-350-4 (GTW35)	up to 240 HB 30	U	Slotting	150	0.014	0.023	0.032	0.041	0.045	0.059	0.072	0.108
		F	Roughing	160	0.014	0.027	0.036	0.045	0.054	0.063	0.081	0.117
			Finishing									
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6025 EN-GL250 (GG25), 0.6035 EN-GJL-350 (GG35), 0.7070 EN-GJS-700-2 (GGG70), 0.8170 EN-GJMB-700-2 (GTS70)	above 240 HB 30	U	Slotting	130	0.011	0.023	0.027	0.036	0.041	0.054	0.063	0.090
		F	Roughing	150	0.014	0.023	0.032	0.041	0.045	0.059	0.072	0.108
			Finishing									
Aluminium, Al-wrought alloys, Al-alloys 3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1 3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	up to 3% Si	U	Slotting	450	0.014	0.027	0.036	0.050	0.059	0.072	0.086	0.126
		U	Roughing	540	0.016	0.032	0.041	0.054	0.063	0.081	0.090	0.135
			Finishing									
Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	above 3% Si	U	Slotting	200	0.014	0.023	0.032	0.041	0.045	0.059	0.072	0.108
		U	Roughing	250	0.014	0.027	0.036	0.045	0.054	0.063	0.081	0.117
			Finishing									
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	-	U	Slotting	160	0.011	0.023	0.027	0.036	0.041	0.054	0.063	0.090
		U	Roughing	200	0.014	0.027	0.036	0.045	0.054	0.063	0.081	0.117
			Finishing									
Non-ferrous metals (copper, short- or long-chipping brass or bronze) 2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb 2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2 2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5 2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10	up to 850 N/mm²	U	Slotting	225	0.011	0.023	0.027	0.036	0.041	0.054	0.063	0.090
		U	Roughing	270	0.014	0.027	0.036	0.045	0.054	0.063	0.081	0.117
			Finishing									

All recommendations are valid for coated tools. For bright milling cutters please vc - 40% and fz -25%!

**** trochoid milling strategy

Tool length/reach up to 3xD Vc and fz 100%
Tool length/reach 3-5xD Vc and fz 80%
Tool length/reach > 5-10xD Vc and fz 60%

Application	Width/depth		Nom. diameter (mm) 2	3	4	6	8	10	12	16
Roughing	ae	(mm)	0.1	0.15	0.2	0.4	0.6	0.75	1	1.2
	ap	(mm)	0.15	0.15	0.3	0.5	0.75	1	1.5	1.5
Finishing	ae	(mm)	0.05	0.07	0.1	0.14	0.16	0.18	0.2	0.3
	ap	(mm)	0.05	0.05	0.07	0.1	0.15	0.2	0.25	0.3

Material	Hardness	usable GF type	Type of application	cut Vc	fz (mm/z) with nom. Ø 2	3	4	6	8	10	12	16
Structural + free-cutting steels, unalloyed heat-treatable + case hardened steels 1.0035 S185, 1.0486 P275N, 1.0345 P235GH, 1.0050, 1.0070, 1.8937 1.0718 11SMnPb30, 1.0736 11SMn37 1.0402 C22, 1.1178 C30E 1.0503 C45, 1.1191 C30E 1.0301 C10, 1.1121 C10E 1.1750 C75W, 1.2076 102Cr6, 1.2307 29CrMoV9	up to 850 N/mm²	GF 500 B	Roughing	200	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 B	Finishing	300	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Free-cutting steels, unalloyed case hardened steels, nitriding steels 1.0727 46 S20, 1.0728 60 S20, 1.0757 46SPb20 1.0601 C60, 1.1221 C60E 1.7043 38Cr4 1.5752 15NiCr13, 1.7131 16MnCr5, 1.7264 20CrMo5 1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	850-1,200 N/mm²	GF 500 B	Roughing	200	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 B	Finishing	300	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Alloyed heat-treatable, tool and high speed steels 1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2379 X155CrVMo12-1 1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3 Spring steel = 1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4	850-1,400 N/mm²	GF 500 B	Roughing	180	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 B	Finishing	280	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Hardened steel Tool steel, heat-treatable steel, spring steel, high-speed steel, case hardened steel, etc. Z.B.: 1.2344 X40CrMoV5-1; 1.2767 X45NiCrMo4; 1.2379 X155CrVMo12-1 ;1.2080 X210Cr12 1.3343 S 6-5-2	up to 54 HRC	GF 500 B	Roughing	140	0.02	0.03	0.035	0.04	0.05	0.07	0.08	0.1
		GF 500 B	Finishing	200	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
	54-60 HRC	GF 300 B	Roughing	80	0.02	0.03	0.035	0.04	0.05	0.07	0.08	0.1
		GF 300 B	Finishing	130	0.025	0.03	0.04	0.045	0.05	0.07	0.1	0.12
Stainless steel 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X10CrNiS18-9 USA = 303, 410, 420F, 430, 430F	up to 750 N/mm²	GF 500 B	Roughing	180	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 B	Finishing	280	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Stainless steel 1.4301X5CrNi18-10, 1.4303 X5CrNi18-12 1.4310 XCrNi18-8 USA = 304, 304L, 420	750-850 N/mm²	GF 500 B	Roughing	120	0.02	0.03	0.035	0.04	0.05	0.07	0.08	0.1
		GF 500 B	Finishing	180	0.025	0.03	0.04	0.045	0.05	0.07	0.1	0.12
Stainless steel 1.4438 X2CrNiMo18-15-4, 1.4404 X2CrNiMo17-12-2, 1.4571 X6CrNiTi18-10 USA = 310, 316, 316B, 316L, 317	above 850 N/mm²	GF 500 B	Roughing	80	0.02	0.03	0.035	0.04	0.05	0.07	0.08	0.1
		GF 500 B	Finishing	130	0.025	0.03	0.04	0.045	0.05	0.07	0.1	0.12
Special alloys (nickel based "Ni") Nimonic, Inconel, Monel, Hastelloy	up to 1,300 N/mm²	GF 500 B	Roughing	40	0.01	0.02	0.03	0.035	0.04	0.05	0.07	0.08
		GF 500 B	Finishing	60	0.02	0.025	0.03	0.04	0.045	0.06	0.08	0.09
Titanium alloys ("Ti") 3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7164 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5	up to 1,300 N/mm²	GF 500 B	Roughing	90	0.02	0.03	0.035	0.04	0.05	0.07	0.08	0.1
		GF 500 B	Finishing	150	0.025	0.03	0.04	0.045	0.05	0.07	0.1	0.12
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6010 EN-GL100 (GG10), 0.6020 EN-GJL-200 (GG20), 0.7050 EN-GJS-500-7 (GGG50), 0.8535 EN-GJMW-350-4 (GTW35)	up to 240 HB 30	GF 500 B	Roughing	200	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 B	Finishing	300	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6025 EN-GL250 (GG25), 0.6035 EN-GJL-350 (GG35), 0.7070 EN-GJS-700-2 (GGG70), 0.8170 EN-GJMB-700-2 (GTS70)	above 240 HB 30	GF 500 B	Roughing	150	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 B	Finishing	230	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Aluminium, Al-wrought alloys, Al-alloys 3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1 3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	up to 3% Si											
Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	above 3% Si	GF 500 B	Roughing	280	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 B	Finishing	350	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	-											
Non-ferrous metals (copper, short- or long-chipping brass or bronze) 2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb 2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2 2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5 2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10	up to 850 N/mm²	GF 500 B	Roughing	250	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 B	Finishing	400	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15

All recommendations are valid for coated tools. For bright milling cutters please vc - 40% and fz -25%!

Tool length/reach up to 3xD Vc and fz 100%
Tool length/reach 3-5xD Vc and fz 80%
Tool length/reach > 5-10xD Vc and fz 60%

Application	Width/depth		Nom. diameter (mm) 2	3	4	6	8	10	12	16
Roughing	ae	(mm)	0.15	0.2	0.3	0.4	0.6	0.75	1	1.5
	ap	(mm)	1	1.5	2	3	4	5	6	8
Finishing	ae	(mm)	0.08	0.11	0.13	0.15	0.2	0.3	0.4	0.5
	ap	(mm)	0.2	0.3	0.4	0.7	1	1.5	2	3

Material	Hardness	usable GF type	Type of application	cut Vc	fz (mm/z) 2	3	4	6	8	10	12	16
Structural + free-cutting steels, unalloyed heat-treatable + case hardened steels 1.0035 S185, 1.0486 P275N, 1.0345 P235GH, 1.0050, 1.0070, 1.8937 1.0718 11SMnPb30, 1.0736 11SMn37 1.0402 C22, 1.1178 C30E 1.0503 C45, 1.1191 C30E 1.0301 C10, 1.1121 C10E 1.1750 C75W, 1.2076 102Cr6, 1.2307 29CrMoV9	up to 850 N/mm²	GF 500 T	Roughing	200	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 T	Finishing	300	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Free-cutting steels, unalloyed case hardened steels, nitriding steels 1.0727 46 S20, 1.0728 60 S20, 1.0757 46SPb20 1.0601 C60, 1.1221 C60E 1.7043 38Cr4 1.5752 15NiCr13, 1.7131 16MnCr5, 1.7264 20CrMo5 1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	850-1,200 N/mm²	GF 500 T	Roughing	200	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 T	Finishing	300	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Alloyed heat-treatable, tool and high speed steels 1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2379 X155CrVMo12-1 1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3 Spring steel = 1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4	850-1,400 N/mm²	GF 300 T	Roughing	180	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 300 T	Finishing	280	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Hardened steel Tool steel, heat-treatable steel, spring steel, high-speed steel, case hardened steel, etc. Z.B.: 1.2344 X40CrMoV5-1; 1.2767 X45NiCrMo4; 1.2379 X155CrVMo12-1 ;1.2080 X210Cr12 1.3343 S 6-5-2	up to 54 HRC	GF 300 T	Roughing	140	0.02	0.03	0.035	0.04	0.05	0.07	0.08	0.1
		GF 300 T	Finishing	200	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
	54-60 HRC	GF 300 T	Roughing	80	0.02	0.03	0.035	0.04	0.05	0.07	0.08	0.1
		GF 300 T	Finishing	130	0.025	0.03	0.04	0.045	0.05	0.07	0.1	0.12
Stainless steel 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X10CrNiS18-9 USA = 303, 410, 420F, 430, 430F	up to 750 N/mm²	GF 500 T	Roughing	180	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 T	Finishing	280	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Stainless steel 1.4301X5CrNi18-10, 1.4303 X5CrNi18-12 1.4310 XCrNi18-8 USA = 304, 304L, 420	750-850 N/mm²	GF 500 T	Roughing	120	0.02	0.03	0.035	0.04	0.05	0.07	0.08	0.1
		GF 500 T	Finishing	180	0.025	0.03	0.04	0.045	0.05	0.07	0.1	0.12
Stainless steel 1.4438 X2CrNiMo18-15-4, 1.4404 X2CrNiMo17-12-2, 1.4571 X6CrNiTi18-10 USA = 310, 316, 316B, 316L, 317	above 850 N/mm²	GF 500 T	Roughing	80	0.02	0.03	0.035	0.04	0.05	0.07	0.08	0.1
		GF 500 T	Finishing	130	0.025	0.03	0.04	0.045	0.05	0.07	0.1	0.12
Special alloys (nickel based “Ni“) Nimonic, Inconel, Monel, Hastelloy	up to 1,300 N/mm²	GF 500 T	Roughing	40	0.01	0.02	0.03	0.035	0.04	0.05	0.07	0.08
		GF 500 T	Finishing	60	0.02	0.025	0.03	0.04	0.045	0.06	0.08	0.09
Titanium alloys (“Ti“) 3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7164 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5	up to 1,300 N/mm²	GF 500 T	Roughing	90	0.02	0.03	0.035	0.04	0.05	0.07	0.08	0.1
		GF 500 T	Finishing	150	0.025	0.03	0.04	0.045	0.05	0.07	0.1	0.12
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6010 EN-GL100 (GG10), 0.6020 EN-GJL-200 (GG20), 0.7050 EN-GJS-500-7 (GGG50), 0.8535 EN-GJMW-350-4 (GTW35)	up to 240 HB 30	GF 500 T	Roughing	200	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 300 T	Finishing	300	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6025 EN-GL250 (GG25), 0.6035 EN-GJL-350 (GG35), 0.7070 EN-GJS-700-2 (GGG70), 0.8170 EN-GJMB-700-2 (GTS70)	above 240 HB 30	GF 300 T	Roughing	150	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 300 T	Finishing	230	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Aluminium, Al-wrought alloys, Al-alloys 3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1 3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	up to 3% Si											
Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	above 3% Si	GF 500 T	Roughing	280	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 T	Finishing	350	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	-											
Non-ferrous metals (copper, short- or long-chipping brass or bronze) 2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb 2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2 2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5 2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10	up to 850 N/mm²	GF 500 T	Roughing	250	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15
		GF 500 T	Finishing	400	0.03	0.04	0.045	0.05	0.07	0.1	0.12	0.15

All recommendations are valid for coated tools. For bright milling cutters please vc - 40% and fz -25%!

fz-corrections:*
ap = 2 x d; fz -30%
fz-corrections:**
ap = 1-2 x d; fz +25%
fz-corrections:***
ap = 1-2 x d; fz +60%

Application	Feed width (ae)	Feed depth (ap)
Slotting*	1 x d	0.5 up to 1.0 x d
Roughing*	0.5 up to 0.9 x d	0.5 up to 1.0 x d
Finishing	0.05 up to 0.1 x d	1.0 up to 2.0 x d
HPC-roughing**	0.25 up to 0.5 x d	1.0 up to 2.0 x d
HSC-roughing***	0.1 up to 0.25 x d	1.0 up to 2.0 x d

Material	Hardness	usable type	Type of application	cut Vc	fz (mm/z)							
					3	6	8	10	12	16	20	25
Structural + free-cutting steels, unalloyed heat-treatable + case hardened steels 1.0035 S185, 1.0486 P275N, 1.0345 P235GH, 1.0050, 1.0070, 1.8937 1.0718 11SMnPb30, 1.0736 11SMn37 1.0402 C22, 1.1178 C30E 1.0503 C45, 1.1191 C30E 1.0301 C10, 1.1121 C10E 1.1750 C75W, 1.2076 102Cr6, 1.2307 29CrMoV9	up to 850 N/mm²	2-fluted	Slotting	125	0.013	0.025	0.032	0.042	0.049	0.063	0.070	0.105
		2- or 3-fluted	Roughing	140	0.014	0.028	0.039	0.049	0.060	0.070	0.084	0.119
		4-fluted	Finishing	190	0.011	0.021	0.028	0.039	0.046	0.056	0.067	0.098
Free-cutting steels, unalloyed case hardened steels, nitriding steels 1.0727 46 S20, 1.0728 60 S20, 1.0757 46SPb20 1.0601 C60, 1.1221 C60E 1.7043 38Cr4 1.5752 15NiCr13, 1.7131 16MnCr5, 1.7264 20CrMo5 1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	850-1,200 N/mm²	2-fluted	Slotting	110	0.013	0.025	0.032	0.042	0.049	0.063	0.070	0.105
		2- or 3-fluted	Roughing	130	0.014	0.028	0.039	0.049	0.060	0.070	0.084	0.119
		4-fluted	Finishing	150	0.011	0.021	0.028	0.039	0.046	0.056	0.067	0.098
Alloyed heat-treatable, tool and high speed steels 1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2379 X155CrVMo12-1 1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3 Spring steel = 1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4	850-1,400 N/mm²	2-fluted	Slotting	95	0.011	0.021	0.028	0.039	0.046	0.056	0.067	0.098
		2- or 3-fluted	Roughing	115	0.014	0.028	0.035	0.046	0.056	0.067	0.077	0.112
		4-fluted	Finishing	140	0.011	0.021	0.028	0.035	0.042	0.049	0.063	0.091
Hardened steel Tool steel, heat-treatable steel, spring steel, high-speed steel, case hardened steel, etc. Z.B.: 1.2344 X40CrMoV5-1; 1.2767 X45NiCrMo4; 1.2379 X155CrVMo12-1 ;1.2080 X210Cr12 1.3343 S 6-5-2	up to 54 HRC	2-fluted	Slotting	50	0.007	0.015	0.018	0.024	0.027	0.036	0.042	0.060
		2- or 3-fluted	Roughing	75	0.009	0.015	0.021	0.027	0.030	0.039	0.048	0.072
		4-fluted	Finishing	105	0.009	0.018	0.024	0.030	0.036	0.042	0.054	0.078
	54-60 HRC	2-fluted	Slotting									
		2- or 3-fluted	Roughing									
		4-fluted	Finishing									
Stainless steel 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X10CrNiS18-9 USA = 303, 410, 420F, 430, 430F	up to 750 N/mm²	2-fluted	Slotting	85	0.009	0.018	0.024	0.030	0.036	0.042	0.054	0.078
		2- or 3-fluted	Roughing	100	0.011	0.021	0.027	0.036	0.042	0.054	0.060	0.090
		4-fluted	Finishing	125	0.010	0.018	0.024	0.033	0.039	0.048	0.057	0.084
Stainless steel 1.4301X5CrNi18-10, 1.4303 X5CrNi18-12 1.4310 XCrNi18-8 USA = 304, 304L, 420	750-850 N/mm²	2-fluted	Slotting	55	0.009	0.015	0.021	0.027	0.030	0.039	0.048	0.072
		2- or 3-fluted	Roughing	85	0.010	0.018	0.024	0.033	0.039	0.048	0.057	0.084
		4-fluted	Finishing	100	0.009	0.018	0.024	0.030	0.036	0.042	0.054	0.078
Stainless steel 1.4438 X2CrNiMo18-15-4, 1.4404 X2CrNiMo17-12-2, 1.4571 X6CrNiTi18-10 USA = 310, 316, 316B, 316L, 317	above 850 N/mm²	2-fluted	Slotting	50	0.007	0.015	0.018	0.024	0.027	0.036	0.042	0.060
		2- or 3-fluted	Roughing	70	0.009	0.015	0.021	0.027	0.030	0.039	0.048	0.072
		4-fluted	Finishing	85	0.009	0.015	0.021	0.027	0.030	0.039	0.048	0.072
Special alloys (nickel based "Ni") Nimonic, Inconel, Monel, Hastelloy	up to 1,300 N/mm²	2-fluted	Slotting	20	0.006	0.009	0.012	0.015	0.018	0.024	0.030	0.036
		2- or 3-fluted	Roughing	25	0.006	0.012	0.018	0.021	0.024	0.033	0.039	0.048
		4-fluted	Finishing	30	0.009	0.015	0.021	0.027	0.030	0.039	0.048	0.072
Titanium alloys ("Ti") 3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7164 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5	up to 1,300 N/mm²	2-fluted	Slotting	40	0.009	0.015	0.021	0.027	0.030	0.039	0.048	0.072
		2- or 3-fluted	Roughing	60	0.010	0.018	0.024	0.033	0.039	0.048	0.057	0.084
		4-fluted	Finishing	90	0.010	0.018	0.024	0.033	0.039	0.048	0.057	0.084
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6010 EN-GL100 (GG10), 0.6020 EN-GJL-200 (GG20), 0.7050 EN-GJS-500-7 (GGG50), 0.8535 EN-GJMW-350-4 (GTW35)	up to 240 HB 30	2-fluted	Slotting	115	0.012	0.024	0.030	0.039	0.048	0.057	0.066	0.096
		2- or 3-fluted	Roughing	125	0.012	0.024	0.033	0.042	0.051	0.060	0.072	0.102
		4-fluted	Finishing	155	0.011	0.021	0.027	0.036	0.042	0.054	0.060	0.090
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6025 EN-GL250 (GG25), 0.6035 EN-GJL-350 (GG35), 0.7070 EN-GJS-700-2 (GGG70), 0.8170 EN-GJMB-700-2 (GTS70)	above 240 HB 30	2-fluted	Slotting	100	0.010	0.018	0.024	0.033	0.039	0.048	0.057	0.084
		2- or 3-fluted	Roughing	115	0.012	0.024	0.030	0.039	0.048	0.057	0.066	0.096
		4-fluted	Finishing	140	0.011	0.021	0.027	0.036	0.042	0.054	0.060	0.090
Aluminium, Al-wrought alloys, Al-alloys 3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1 3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	up to 3% Si	2-fluted	Slotting	350	0.014	0.028	0.035	0.046	0.056	0.067	0.077	0.112
		2- or 3-fluted	Roughing	420	0.014	0.028	0.039	0.049	0.060	0.070	0.084	0.119
		4-fluted	Finishing	700	0.013	0.025	0.032	0.042	0.049	0.063	0.070	0.105
Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	above 3% Si	2-fluted	Slotting	160	0.011	0.021	0.028	0.039	0.046	0.056	0.067	0.098
		2- or 3-fluted	Roughing	200	0.014	0.028	0.035	0.046	0.056	0.067	0.077	0.112
		4-fluted	Finishing	245	0.013	0.025	0.032	0.042	0.049	0.063	0.070	0.105
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	-	2-fluted	Slotting	125	0.011	0.021	0.028	0.039	0.046	0.056	0.067	0.098
		2- or 3-fluted	Roughing	150	0.014	0.028	0.035	0.046	0.056	0.067	0.077	0.112
		4-fluted	Finishing	200	0.013	0.025	0.032	0.042	0.049	0.063	0.070	0.105
Non-ferrous metals (copper, short- or long-chipping brass or bronze) 2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb 2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2 2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5 2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10	up to 850 N/mm²	2-fluted	Slotting	175	0.011	0.018	0.025	0.032	0.035	0.046	0.056	0.084
		2- or 3-fluted	Roughing	210	0.011	0.021	0.028	0.039	0.046	0.056	0.067	0.098
		4-fluted	Finishing	280	0.011	0.021	0.028	0.039	0.046	0.056	0.067	0.098

All recommendations are valid for coated tools. For bright milling cutters please vc - 40% and fz -25%!

fz-corrections:*
ap = 2 x d; fz -30%
fz-corrections:**
ap = 1-2 x d; fz +25%
fz-corrections:***
ap = 1-2 x d; fz +60%

Application	Feed width (ae)	Feed depth (ap)
Slotting*	1 x d	0.5 up to 1.0 x d
Roughing*	0.5 up to 0.9 x d	0.5 up to 1.0 x d
Finishing	0.05 up to 0.1 x d	1.0 up to 2.0 x d
HPC-roughing**	0.25 up to 0.5 x d	1.0 up to 2.0 x d
HSC-roughing***	0.1 up to 0.25 x d	1.0 up to 2.0 x d

Material	Hardness	usable type	Type of application	cut Vc	fz (mm/z) 2	3	4	6	8	10	12	16
Structural + free-cutting steels, unalloyed heat-treatable + case hardened steels 1.0035 S185, 1.0486 P275N, 1.0345 P235GH, 1.0050, 1.0070, 1.8937 1.0718 11SMnPb30, 1.0736 11SMn37 1.0402 C22, 1.1178 C30E 1.0503 C45, 1.1191 C30E 1.0301 C10, 1.1121 C10E 1.1750 C75W, 1.2076 102Cr6, 1.2307 29CrMoV9	up to 850 N/mm²											
Free-cutting steels, unalloyed case hardened steels, nitriding steels 1.0727 46 S20, 1.0728 60 S20, 1.0757 46SPb20 1.0601 C60, 1.1221 C60E 1.7043 38Cr4 1.5752 15NiCr13, 1.7131 16MnCr5, 1.7264 20CrMo5 1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	850-1,200 N/mm²											
Alloyed heat-treatable, tool and high speed steels 1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2379 X155CrVMo12-1 1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3 Spring steel = 1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4	850-1,400 N/mm²											
Hardened steel Tool steel, heat-treatable steel, spring steel, high-speed steel, case hardened steel, etc. Z.B.: 1.2344 X40CrMoV5-1; 1.2767 X45NiCrMo4; 1.2379 X155CrVMo12-1 ;1.2080 X210Cr12 1.3343 S 6-5-2	up to 54 HRC											
	54-60 HRC											
Stainless steel 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X10CrNiS18-9 USA = 303, 410, 420F, 430, 430F	up to 750 N/mm²											
Stainless steel 1.4301X5CrNi18-10, 1.4303 X5CrNi18-12 1.4310 XCrNi18-8 USA = 304, 304L, 420	750-850 N/mm²											
Stainless steel 1.4438 X2CrNiMo18-15-4, 1.4404 X2CrNiMo17-12-2, 1.4571 X6CrNiTi18-10 USA = 310, 316, 316B, 316L, 317	above 850 N/mm²											
Special alloys (nickel based "Ni") Nimonic, Inconel, Monel, Hastelloy	up to 1,300 N/mm²											
Titanium alloys ("Ti") 3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7164 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5	up to 1,300 N/mm²											
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6010 EN-GL100 (GG10), 0.6020 EN-GJL-200 (GG20), 0.7050 EN-GJS-500-7 (GGG50), 0.8535 EN-GJMW-350-4 (GTW35)	up to 240 HB 30											
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6025 EN-GL250 (GG25), 0.6035 EN-GJL-350 (GG35), 0.7070 EN-GJS-700-2 (GGG70), 0.8170 EN-GJMB-700-2 (GTS70)	above 240 HB 30											
Aluminium, Al-wrought alloys, Al-alloys 3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1 3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	up to 3% Si	2-fluted	Slotting	350	0.014	0.028	0.035	0.046	0.056	0.067	0.077	0.112
		2-fluted	Roughing	420	0.014	0.028	0.039	0.049	0.060	0.070	0.084	0.119
		2-fluted	Finishing	700	0.013	0.025	0.032	0.042	0.049	0.063	0.070	0.105
Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	above 3% Si	2-fluted	Slotting	160	0.011	0.021	0.028	0.039	0.046	0.056	0.067	0.098
		2-fluted	Roughing	200	0.014	0.028	0.035	0.046	0.056	0.067	0.077	0.112
		2-fluted	Finishing	245	0.013	0.025	0.032	0.042	0.049	0.063	0.070	0.105
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	-	2-fluted	Slotting	125	0.011	0.021	0.028	0.039	0.046	0.056	0.067	0.098
		2-fluted	Roughing	150	0.014	0.028	0.035	0.046	0.056	0.067	0.077	0.112
		2-fluted	Finishing	200	0.013	0.025	0.032	0.042	0.049	0.063	0.070	0.105
Non-ferrous metals (copper, short- or long-chipping brass or bronze) 2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb 2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2 2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5 2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10	up to 850 N/mm²	2-fluted	Slotting	175	0.011	0.018	0.025	0.032	0.035	0.046	0.056	0.084
		2-fluted	Roughing	210	0.011	0.021	0.028	0.039	0.046	0.056	0.067	0.098
		2-fluted	Finishing	280	0.011	0.021	0.028	0.039	0.046	0.056	0.067	0.098

All recommendations are valid for coated tools. For bright milling cutters please vc - 40% and fz -25%!

Tool length/reach up to 3xD Vc and fz 100%
Tool length/reach 3-5xD Vc and fz 80%
Tool length/reach > 5-10xD Vc and fz 60%

Application	Width/depth		Nom. diameter (mm) 2	3	4	6	8	10	12	16
Roughing	ae	(mm)	0.1	0.15	0.2	0.4	0.6	0.75	1	1.2
	ap	(mm)	0.15	0.15	0.3	0.5	0.75	1	1.5	1.5
Finishing	ae	(mm)	0.05	0.07	0.1	0.14	0.16	0.18	0.2	0.3
	ap	(mm)	0.05	0.05	0.07	0.1	0.15	0.2	0.25	0.3

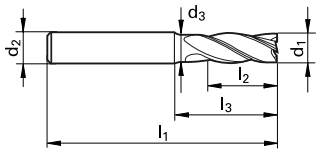
Material	Hardness	usable type	Type of application	cut Vc	fz (mm/z) 3	6	8	10	12	16	20	25
Structural + free-cutting steels, unalloyed heat-treatable + case hardened steels 1.0035 S185, 1.0486 P275N, 1.0345 P235GH, 1.0050, 1.0070, 1.8937 1.0718 11SMnPb30, 1.0736 11SMn37 1.0402 C22, 1.1178 C30E 1.0503 C45, 1.1191 C30E 1.0301 C10, 1.1121 C10E 1.1750 C75W, 1.2076 102Cr6, 1.2307 29CrMoV9	up to 850 N/mm²	2-/4-fluted	Roughing	175	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
		2-/4-fluted	Finishing	350	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
Free-cutting steels, unalloyed case hardened steels, nitriding steels 1.0727 46 S20, 1.0728 60 S20, 1.0757 46SPb20 1.0601 C60, 1.1221 C60E 1.7043 38Cr4 1.5752 15NiCr13, 1.7131 16MnCr5, 1.7264 20CrMo5 1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	850-1,200 N/mm²	2-/4-fluted	Roughing	175	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
		2-/4-fluted	Finishing	245	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
Alloyed heat-treatable, tool and high speed steels 1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2379 X155CrVMo12-1 1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3 Spring steel = 1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4	850-1,400 N/mm²	2-/4-fluted	Roughing	140	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
		2-/4-fluted	Finishing	210	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
Hardened steel Tool steel, heat-treatable steel, spring steel, high-speed steel, case hardened steel, etc. Z.B.: 1.2344 X40CrMoV5-1; 1.2767 X45NiCrMo4; 1.2379 X155CrVMo12-1 ;1.2080 X210Cr12 1.3343 S 6-5-2	up to 54 HRC		Roughing									
			Finishing									
	54-60 HRC		Roughing									
			Finishing									
Stainless steel 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X10CrNiS18-9 USA = 303, 410, 420F, 430, 430F	up to 750 N/mm²	2-/4-fluted	Roughing	126	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
		2-/4-fluted	Finishing	196	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
Stainless steel 1.4301X5CrNi18-10, 1.4303 X5CrNi18-12 1.4310 XCrNi18-8 USA = 304, 304L, 420	750-850 N/mm²	2-/4-fluted	Roughing	91	0.014	0.021	0.025	0.028	0.035	0.049	0.056	0.070
		2-/4-fluted	Finishing	140	0.018	0.021	0.028	0.032	0.035	0.049	0.070	0.084
Stainless steel 1.4438 X2CrNiMo18-15-4, 1.4404 X2CrNiMo17-12-2, 1.4571 X6CrNiTi18-10 USA = 310, 316, 316B, 316L, 317	above 850 N/mm²	2-/4-fluted	Roughing	56	0.014	0.021	0.025	0.028	0.035	0.049	0.056	0.070
		2-/4-fluted	Finishing	91	0.018	0.021	0.028	0.032	0.035	0.049	0.070	0.084
Special alloys (nickel based "Ni") Nimonic, Inconel, Monel, Hastelloy	up to 1,300 N/mm²	2-/4-fluted	Roughing	28	0.007	0.014	0.021	0.025	0.028	0.035	0.049	0.056
		2-/4-fluted	Finishing	42	0.014	0.018	0.021	0.028	0.032	0.042	0.056	0.063
Titanium alloys ("Ti") 3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7164 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5	up to 1,300 N/mm²	2-/4-fluted	Roughing	56	0.014	0.021	0.025	0.028	0.035	0.049	0.056	0.070
		2-/4-fluted	Finishing	105	0.018	0.021	0.028	0.032	0.035	0.049	0.070	0.084
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6010 EN-GL100 (GG10), 0.6020 EN-GJL-200 (GG20), 0.7050 EN-GJS-500-7 (GGG50), 0.8535 EN-GJMW-350-4 (GTW35)	up to 240 HB 30	2-/4-fluted	Roughing	140	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
		2-/4-fluted	Finishing	210	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6025 EN-GL250 (GG25), 0.6035 EN-GJL-350 (GG35), 0.7070 EN-GJS-700-2 (GGG70), 0.8170 EN-GJMB-700-2 (GTS70)	above 240 HB 30	2-/4-fluted	Roughing	105	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
		2-/4-fluted	Finishing	161	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
Aluminium, Al-wrought alloys, Al-alloys 3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1 3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	up to 3% Si											
Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	above 3% Si	2-/4-fluted	Roughing	196	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
		2-/4-fluted	Finishing	245	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	-											
Non-ferrous metals (copper, short- or long-chipping brass or bronze) 2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb 2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2 2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5 2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10	up to 850 N/mm²	2-/4-fluted	Roughing	175	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105
		2-/4-fluted	Finishing	280	0.021	0.028	0.032	0.035	0.049	0.070	0.084	0.105

All recommendations are valid for coated tools. For bright milling cutters please vc - 40% and fz -25%!

RF 100 U

centre cutting

Guhring no.	3200	3731
Standard	DIN 6527 K	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HB	HB
Helix	35°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091

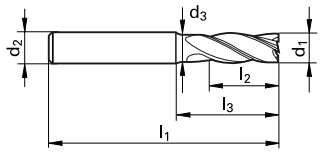


d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.500	54.00	10.00	18.00	4	●	●
8.000	8.000	7.500	58.00	12.00	22.00	4	●	●
10.000	10.000	9.200	66.00	14.00	26.00	4	●	●
12.000	12.000	11.200	73.00	16.00	28.00	4	●	●
14.000	14.000	13.200	75.00	18.00	30.00	4	●	●
16.000	16.000	15.000	82.00	22.00	34.00	4	●	●
18.000	18.000	17.000	84.00	24.00	36.00	4	●	●
20.000	20.000	19.000	92.00	26.00	42.00	4	●	●

centre cutting

Guhring no.	6706
Standard	DIN 6527 K
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	N
Shank design	HA
Helix	35°/38°
Tolerance	h10
Discount group	106
Techn. data page	1091

NEW



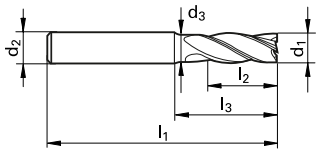
d1	d2	d3	l1	l2	l3	Z	Availability
mm	mm	mm	mm	mm	mm		
6.000	6.000	5.500	54.00	10.00	18.00	4	●
8.000	8.000	7.500	58.00	12.00	22.00	4	●
10.000	10.000	9.200	66.00	14.00	26.00	4	●
12.000	12.000	11.200	73.00	16.00	28.00	4	●
14.000	14.000	13.200	75.00	18.00	30.00	4	●
16.000	16.000	15.000	82.00	22.00	34.00	4	●
18.000	18.000	17.000	84.00	24.00	36.00	4	●
20.000	20.000	19.000	92.00	26.00	42.00	4	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

RF 100 U

centre cutting

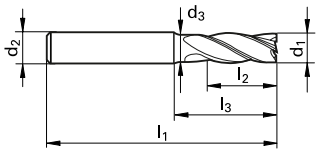
Guhring no.	3208	3736
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HA	HA
Helix	35°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
4.000	6.000	3.700	57.00	11.00	21.00	4	●	●
5.000	6.000	4.700	57.00	13.00	21.00	4	●	●
6.000	6.000	5.500	57.00	13.00	21.00	4	●	●
8.000	8.000	7.500	63.00	19.00	27.00	4	●	●
10.000	10.000	9.200	72.00	22.00	32.00	4	●	●
12.000	12.000	11.200	83.00	26.00	38.00	4	●	●
14.000	14.000	13.200	83.00	26.00	38.00	4	●	●
16.000	16.000	15.000	92.00	32.00	44.00	4	●	●
18.000	18.000	17.000	92.00	32.00	44.00	4	●	●
20.000	20.000	19.000	104.00	38.00	54.00	4	●	●
25.000	25.000	23.500	121.00	45.00	65.00	4	●	●

centre cutting

Guhring no.	3201	3732
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HB	HB
Helix	35°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091

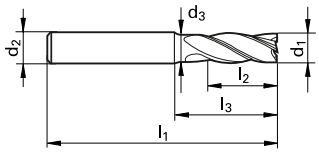


d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
4.000	6.000	3.700	57.00	11.00	21.00	4	●	●
5.000	6.000	4.700	57.00	13.00	21.00	4	●	●
6.000	6.000	5.500	57.00	13.00	21.00	4	●	●
8.000	8.000	7.500	63.00	19.00	27.00	4	●	●
10.000	10.000	9.200	72.00	22.00	32.00	4	●	●
12.000	12.000	11.200	83.00	26.00	38.00	4	●	●
14.000	14.000	13.200	83.00	26.00	38.00	4	●	●
16.000	16.000	15.000	92.00	32.00	44.00	4	●	●
18.000	18.000	17.000	92.00	32.00	44.00	4	●	●
20.000	20.000	19.000	104.00	38.00	54.00	4	●	●
25.000	25.000	23.500	121.00	45.00	65.00	4	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3209	3627
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	◯	F
Type	N	N
Shank design	HA	HA
Helix	35°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
10.000	10.000	9.200	100.00	40.00	60.00	4	●	●
12.000	12.000	11.200	150.00	45.00	105.00	4	●	●
14.000	14.000	13.200	150.00	45.00	105.00	4	●	●
16.000	16.000	15.000	150.00	65.00	102.00	4	●	●
18.000	18.000	17.000	150.00	65.00	102.00	4	●	●
20.000	20.000	19.000	150.00	65.00	100.00	4	●	●
25.000	25.000	23.500	150.00	75.00	94.00	4	●	●

RF 100 U - high-performance end mills for materials up to 1600 N/mm2 (48 HRC)

RF 100 high-performance end mills excel thanks to unequal helix angles which considerably reduce vibration. The uneven helix angle vastly improves surface quality with finshing operations and considerably higher feed rates with slot drilling and roughing operations are also achieved.

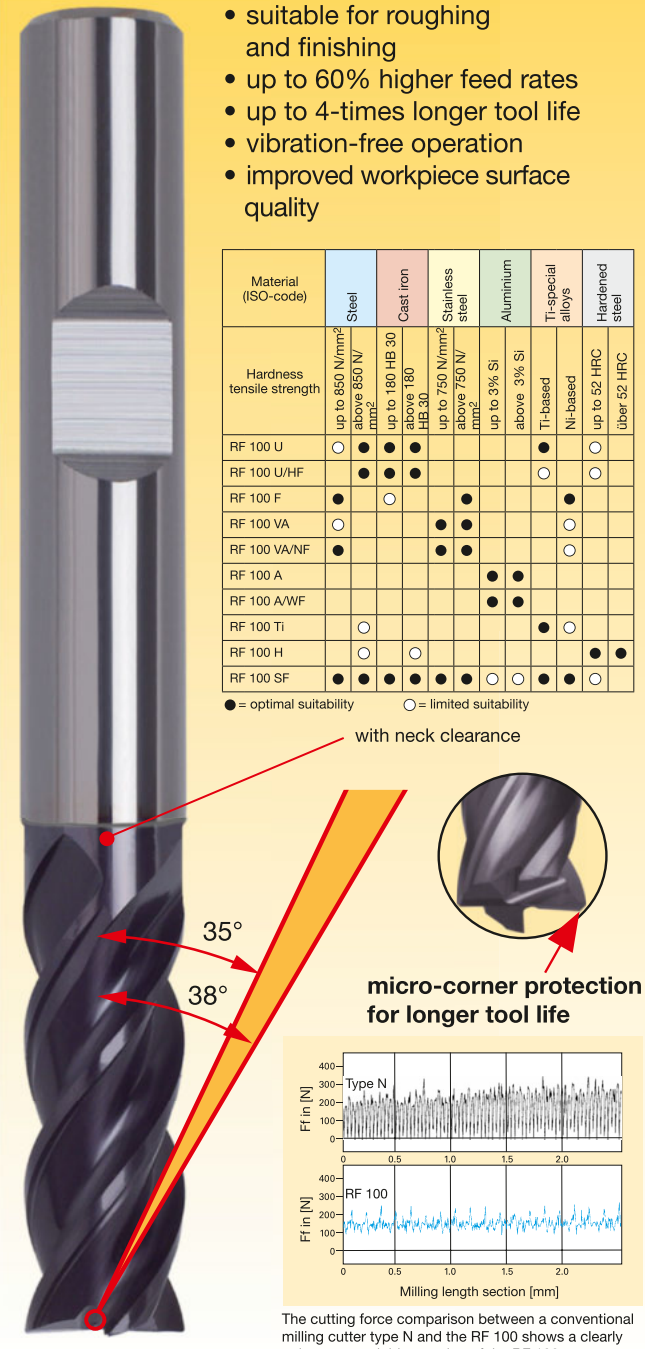
With many applications. the complete milling process can be covered with one RF 100. which as well as increasing tool life and dimensional accuracy of the workpiece generates a considerable cost advantage.

Summary of advantages

- suitable for roughing and finishing
- up to 60% higher feed rates
- up to 4-times longer tool life
- vibration-free operation
- improved workpiece surface quality

Material (ISO-code)	Steel		Cast iron		Stainless steel		Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	über 52 HRC
RF 100 U	○	●	●	●					●		○	
RF 100 U/HF		●	●	●					○		○	
RF 100 F	●		○			●				●		
RF 100 VA	○				●	●				○		
RF 100 VA/NF	●				●	●				○		
RF 100 A							●	●				
RF 100 A/WF							●	●				
RF 100 Ti		○							●	○		
RF 100 H		○		○							●	●
RF 100 SF	●	●	●	●	●	●	○	○	●	●	○	

● = optimal suitability ○ = limited suitability



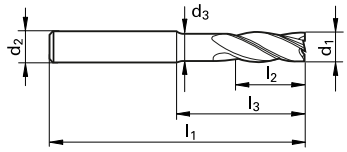
The cutting force comparison between a conventional milling cutter type N and the RF 100 shows a clearly quieter. more rigid operation of the RF 100.

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

RF 100 U

centre cutting

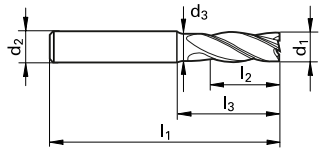
Guhring no.	3837	3838
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	N	N
Shank design	HA	HB
Helix	35°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.500	65.00	13.00	29.00	4	●	●
8.000	8.000	7.500	75.00	19.00	39.00	4	●	●
10.000	10.000	9.200	80.00	22.00	40.00	4	●	●
12.000	12.000	11.200	93.00	26.00	48.00	4	●	●
16.000	16.000	15.000	108.00	32.00	60.00	4	●	●
20.000	20.000	19.000	126.00	38.00	76.00	4	●	●

centre cutting

Guhring no.	3839	3871
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	N	N
Shank design	HA	HB
Helix	35°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW

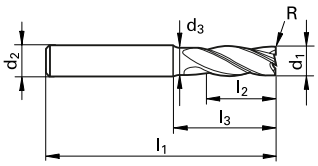


d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.500	65.00	18.00	29.00	4	●	●
8.000	8.000	7.500	75.00	24.00	39.00	4	●	●
10.000	10.000	9.200	80.00	30.00	40.00	4	●	●
12.000	12.000	11.200	93.00	36.00	48.00	4	●	●
16.000	16.000	15.000	108.00	48.00	60.00	4	●	●
20.000	20.000	19.000	126.00	60.00	76.00	4	●	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

centre cutting

Guhring no.	3872	3873
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	N	N
Shank design	HA	HB
Helix	35°/38°	35°/38°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



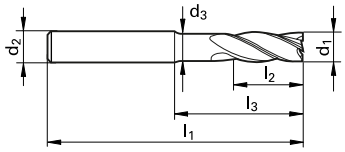
d1	d2	d3	l1	l2	l3	r	Z	Code no.	Availability	
mm	mm	mm	mm	mm	mm	mm				
6.000	6.000	5.500	57.00	13.00	21.00	0.50	4	6.005	●	●
6.000	6.000	5.500	57.00	13.00	21.00	1.00	4	6.010	●	●
6.000	6.000	5.500	57.00	13.00	21.00	2.00	4	6.020	●	●
8.000	8.000	7.500	63.00	19.00	27.00	0.50	4	8.005	●	●
8.000	8.000	7.500	63.00	19.00	27.00	1.00	4	8.010	●	●
8.000	8.000	7.500	63.00	19.00	27.00	2.00	4	8.020	●	●
10.000	10.000	9.200	72.00	22.00	32.00	0.50	4	10.005	●	●
10.000	10.000	9.200	72.00	22.00	32.00	1.00	4	10.010	●	●
10.000	10.000	9.200	72.00	22.00	32.00	2.00	4	10.020	●	●
12.000	12.000	11.200	83.00	26.00	38.00	0.50	4	12.005	●	●
12.000	12.000	11.200	83.00	26.00	38.00	1.00	4	12.010	●	●
12.000	12.000	11.200	83.00	26.00	38.00	2.00	4	12.020	●	●
16.000	16.000	15.000	92.00	32.00	44.00	0.50	4	16.005	●	●
16.000	16.000	15.000	92.00	32.00	44.00	1.00	4	16.010	●	●
16.000	16.000	15.000	92.00	32.00	44.00	2.00	4	16.020	●	●
16.000	16.000	15.000	92.00	32.00	44.00	3.00	4	16.030	●	●
20.000	20.000	19.000	104.00	38.00	54.00	0.50	4	20.005	●	●
20.000	20.000	19.000	104.00	38.00	54.00	1.00	4	20.010	●	●
20.000	20.000	19.000	104.00	38.00	54.00	2.00	4	20.020	●	●
20.000	20.000	19.000	104.00	38.00	54.00	3.00	4	20.030	●	●
25.000	25.000	23.500	121.00	45.00	65.00	2.00	4	25.020	●	●
25.000	25.000	23.500	121.00	45.00	65.00	3.00	4	25.030	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

RF 100 U (3-fluted)

centre cutting

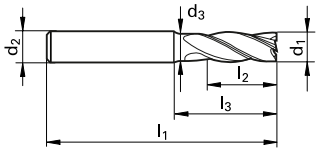
Guhring no.	3893	3894
Standard	~ DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	N	N
Shank design	HA	HB
Helix	41°/43°/45°	
Tolerance	e8	e8
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
3.000	6.000	2.700	57.00	4.00	21.00	3	●	●
4.000	6.000	3.700	57.00	5.00	21.00	3	●	●
5.000	6.000	4.700	57.00	6.00	21.00	3	●	●
6.000	6.000	5.500	57.00	7.00	21.00	3	●	●
8.000	8.000	7.500	63.00	9.00	27.00	3	●	●
10.000	10.000	9.200	72.00	11.00	32.00	3	●	●
12.000	12.000	11.200	83.00	12.00	38.00	3	●	●
16.000	16.000	15.000	92.00	16.00	44.00	3	●	●

centre cutting

Guhring no.	3891	3892
Standard	~ DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	N	N
Shank design	HA	HB
Helix	41°/43°/45°	
Tolerance	e8	e8
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



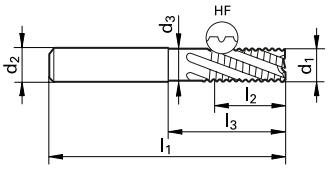
d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
3.000	6.000	2.700	57.00	8.00	21.00	3	●	●
3.500	6.000	3.200	57.00	10.00	21.00	3	●	●
3.700	6.000	3.400	57.00	11.00	21.00	3	●	●
4.000	6.000	3.700	57.00	11.00	21.00	3	●	●
4.500	6.000	4.200	57.00	11.00	21.00	3	●	●
4.700	6.000	4.400	57.00	13.00	21.00	3	●	●
5.000	6.000	4.700	57.00	13.00	21.00	3	●	●
5.500	6.000	5.200	57.00	13.00	21.00	3	●	●
5.700	6.000	5.400	57.00	13.00	21.00	3	●	●
6.000	6.000	5.500	57.00	13.00	21.00	3	●	●
6.500	8.000	6.000	63.00	16.00	27.00	3	●	●
7.000	8.000	6.500	63.00	16.00	27.00	3	●	●
7.500	8.000	7.000	63.00	19.00	27.00	3	●	●
8.000	8.000	7.500	63.00	19.00	27.00	3	●	●
8.500	10.000	8.000	72.00	19.00	32.00	3	●	●
9.000	10.000	8.500	72.00	19.00	32.00	3	●	●
9.500	10.000	9.000	72.00	22.00	32.00	3	●	●
10.000	10.000	9.200	72.00	22.00	32.00	3	●	●
12.000	12.000	11.200	83.00	26.00	38.00	3	●	●
16.000	16.000	15.000	92.00	32.00	44.00	3	●	●
20.000	20.000	19.000	104.00	38.00	54.00	3	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Rf 100 U/HF

centre cutting

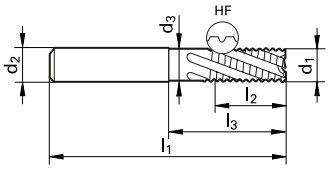
Guhring no.	3507	3508
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	HF	HF
Shank design	HA	HB
Helix	30°/32°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1092	1092
	NEW	NEW



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.500	57.00	13.00	21.00	4	●	●
8.000	8.000	7.500	63.00	19.00	27.00	4	●	●
10.000	10.000	9.200	72.00	22.00	32.00	4	●	●
12.000	12.000	11.200	83.00	26.00	38.00	4	●	●
16.000	16.000	15.000	92.00	32.00	44.00	4	●	●
20.000	20.000	19.000	104.00	38.00	54.00	4	●	●
25.000	25.000	23.500	121.00	45.00	65.00	4	●	●

centre cutting

Guhring no.	3509	3522
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	HF	HF
Shank design	HA	HB
Helix	30°/32°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1092	1092
	NEW	NEW



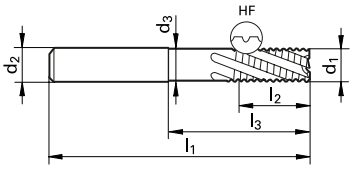
d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.500	65.00	18.00	29.00	4	●	●
8.000	8.000	7.500	75.00	24.00	39.00	4	●	●
10.000	10.000	9.200	80.00	30.00	40.00	4	●	●
12.000	12.000	11.200	93.00	36.00	48.00	4	●	●
16.000	16.000	15.000	108.00	48.00	60.00	4	●	●
20.000	20.000	19.000	126.00	60.00	76.00	4	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3598	3600
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	HF	HF
Shank design	HA	HB
Helix	30°/32°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1092	1092

NEW NEW



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.500	75.00	13.00	39.00	4	●	●
8.000	8.000	7.500	100.00	19.00	64.00	4	●	●
10.000	10.000	9.200	100.00	22.00	60.00	4	●	●
12.000	12.000	11.200	150.00	26.00	105.00	4	●	●
16.000	16.000	15.000	150.00	32.00	102.00	4	●	●
20.000	20.000	19.000	150.00	38.00	100.00	4	●	●

RF 100 U/HF - high-performance roughing end mills for materials up to 1600 N/mm² (48 HRC)

Based on our RF 100 end mill with unequal helix angles in combination with a newly developed roughing geometry. The result is a dramatic increase in tool life in comparison to conventional rough milling cutters with round or flat knuckle-type teeth. At the same time. the surface quality of the workpiece is improved to a peak-to-valley height of appr. Ra = 2-3 µm. making in many cases finishing operations unnecessary.

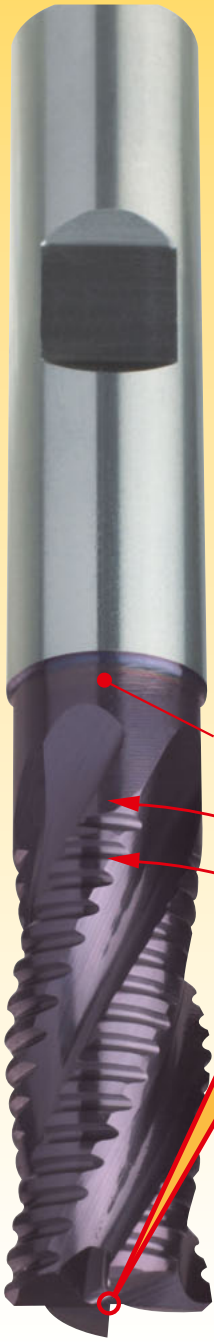
Simultaneously. the innovative design reduces power consumption in comparison to conventional RF 100 end mills allowing the application in unstable conditions and on less powerful machines.

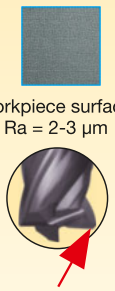
Summary of advantages

- low cutting pressure and power consumption
- vibration-free operation
- increased feed rates possible
- increased surface qualities (Ra = 2-3 µm)
- longer tool life

Material (ISO-code)	Steel		Cast iron		Stainless steel		Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	above 52 HRC
RF 100 U	○	●	●	●					●		○	
RF 100 U/HF		●	●	●					○		○	
RF 100 F	●		○			●				●		
RF 100 VA	○				●	●				○		
RF 100 VA/NF	●				●	●				○		
RF 100 A							●	●				
RF 100 A/WF							●	●				
RF 100 Ti		○							●	○		
RF 100 H		○		○							●	●
RF 100 SF	●	●	●	●	●	●	○	○	●	●	○	

●= optimal suitability ○= limited suitability





micro corner protection for longer tool life

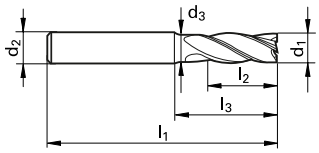
Type	RF 100 U smooth cutting	RF 100 U/HF
Performance index	100%	70%
Workpiece surface	R_a = 1-2 µm	R_a = 2-3 µm
Tool life index	100%	75%
Power consumption	160%	100%
Cutting pressure	150%	100%

bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A TiAlN SuperA

RF 100 F

centre cutting

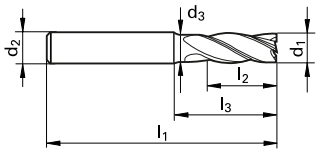
Guhring no.	3629	3630
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	NH	NH
Shank design	HA	HB
Helix	40°/42°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
4.000	6.000	3.700	57.00	11.00	21.00	4	●	●
5.000	6.000	4.700	57.00	13.00	21.00	4	●	●
6.000	6.000	5.500	57.00	13.00	21.00	4	●	●
8.000	8.000	7.500	63.00	19.00	27.00	4	●	●
10.000	10.000	9.200	72.00	22.00	32.00	4	●	●
12.000	12.000	11.200	83.00	26.00	38.00	4	●	●
16.000	16.000	15.000	92.00	32.00	44.00	4	●	●
20.000	20.000	19.000	104.00	38.00	54.00	4	●	●

centre cutting

Guhring no.	3366
Standard	DIN 6527 L
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	NH
Shank design	HB
Helix	40°/42°
Tolerance	h10
Discount group	106
Techn. data page	1091



d1	d2	d3	l1	l2	l3	Z	Availability
mm	mm	mm	mm	mm	mm		
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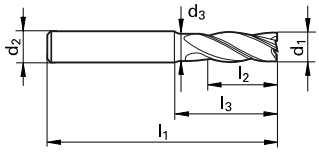
8.000	8.000	7.500	63.00	19.00	27.00	4	●
10.000	10.000	9.200	72.00	22.00	32.00	4	●
12.000	12.000	11.200	83.00	26.00	38.00	4	●
16.000	16.000	15.000	92.00	32.00	44.00	4	●
20.000	20.000	19.000	104.00	38.00	54.00	4	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

RF 100 VA

centre cutting

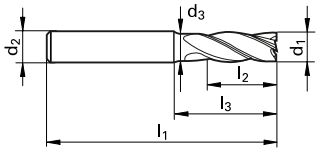
Guhring no.	3804	3805
Standard	DIN 6527 K	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	a	a
Type	N	N
Shank design	HA	HB
Helix	36°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
4.000	6.000	3.700	54.00	8.00	18.00	4	●	●
5.000	6.000	4.700	54.00	9.00	18.00	4	●	●
6.000	6.000	5.500	54.00	10.00	18.00	4	●	●
8.000	8.000	7.500	58.00	12.00	22.00	4	●	●
10.000	10.000	9.200	66.00	14.00	26.00	4	●	●
12.000	12.000	11.200	73.00	16.00	28.00	4	●	●
16.000	16.000	15.000	82.00	22.00	34.00	4	●	●
20.000	20.000	19.000	92.00	26.00	42.00	4	●	●

centre cutting

Guhring no.	3800	3803
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	a	a
Type	N	N
Shank design	HA	HB
Helix	36°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



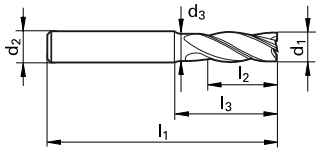
d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
3.000	6.000	2.700	57.00	8.00	21.00	4	●	●
3.500	6.000	3.200	57.00	10.00	21.00	4	●	●
4.000	6.000	3.700	57.00	11.00	21.00	4	●	●
4.500	6.000	4.200	57.00	11.00	21.00	4	●	●
5.000	6.000	4.700	57.00	13.00	21.00	4	●	●
5.500	6.000	5.200	57.00	13.00	21.00	4	●	●
6.000	6.000	5.500	57.00	13.00	21.00	4	●	●
6.500	8.000	6.000	63.00	16.00	27.00	4	●	●
7.000	8.000	6.500	63.00	16.00	27.00	4	●	●
7.500	8.000	7.000	63.00	19.00	27.00	4	●	●
8.000	8.000	7.500	63.00	19.00	27.00	4	●	●
8.500	10.000	8.000	72.00	19.00	32.00	4	●	●
9.000	10.000	8.500	72.00	19.00	32.00	4	●	●
9.500	10.000	9.000	72.00	22.00	32.00	4	●	●
10.000	10.000	9.200	72.00	22.00	32.00	4	●	●
11.000	12.000	10.200	83.00	26.00	38.00	4	●	●
12.000	12.000	11.200	83.00	26.00	38.00	4	●	●
14.000	14.000	13.200	83.00	26.00	38.00	4	●	●
16.000	16.000	15.000	92.00	32.00	44.00	4	●	●
18.000	18.000	17.000	92.00	32.00	44.00	4	●	●
20.000	20.000	19.000	104.00	38.00	54.00	4	●	●
25.000	25.000	23.500	121.00	45.00	65.00	4	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

RF 100 VA

centre cutting

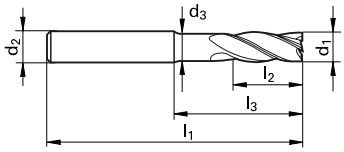
Guhring no.	6700	6701
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	a	a
Type	N	N
Shank design	HA	HB
Helix	36°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.500	57.00	13.00	21.00	4	●	●
8.000	8.000	7.500	63.00	19.00	27.00	4	●	●
10.000	10.000	9.200	72.00	22.00	32.00	4	●	●
12.000	12.000	11.200	83.00	26.00	38.00	4	●	●
16.000	16.000	15.000	92.00	32.00	44.00	4	●	●
20.000	20.000	19.000	104.00	38.00	54.00	4	●	●
25.000	25.000	23.500	121.00	45.00	65.00	4	●	●

centre cutting

Guhring no.	3806	3807
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	a	a
Type	N	N
Shank design	HA	HB
Helix	36°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



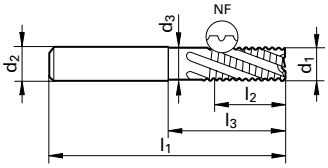
d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.500	65.00	10.00	29.00	4	●	●
8.000	8.000	7.500	75.00	12.00	39.00	4	●	●
10.000	10.000	9.200	80.00	14.00	40.00	4	●	●
12.000	12.000	11.200	93.00	16.00	48.00	4	●	●
16.000	16.000	15.000	108.00	22.00	60.00	4	●	●
20.000	20.000	19.000	126.00	26.00	76.00	4	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

RF 100 VA/NF

centre cutting

Guhring no.	3696	3718
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	a	a
Type	NF	NF
Shank design	HA	HB
Helix	36°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1092	1092
	NEW	NEW



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
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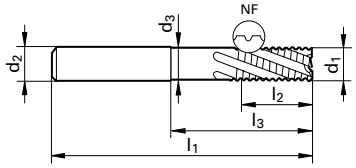
6.000	6.000	5.500	57.00	13.00	21.00	4	●	●
7.000	8.000	6.500	63.00	16.00	27.00	4	●	●
8.000	8.000	7.500	63.00	19.00	27.00	4	●	●
9.000	10.000	8.500	72.00	19.00	32.00	4	●	●
10.000	10.000	9.200	72.00	22.00	32.00	4	●	●
12.000	12.000	11.200	83.00	26.00	38.00	4	●	●
14.000	14.000	13.200	83.00	26.00	38.00	4	●	●
16.000	16.000	15.000	92.00	32.00	44.00	4	●	●
18.000	20.000	17.000	92.00	32.00	44.00	4	●	●
20.000	20.000	19.000	104.00	38.00	54.00	4	●	●
25.000	25.000	23.500	121.00	45.00	65.00	4	●	●

centre cutting

Guhring no.	3733	3885
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	a	a
Type	NF	NF
Shank design	HA	HB
Helix	36°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1092	1092
	NEW	NEW

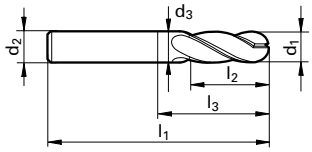


d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.500	65.00	10.00	29.00	4	●	●
8.000	8.000	7.500	75.00	12.00	39.00	4	●	●
10.000	10.000	9.200	80.00	14.00	40.00	4	●	●
12.000	12.000	11.200	93.00	16.00	48.00	4	●	●
16.000	16.000	15.000	108.00	22.00	60.00	4	●	●
20.000	20.000	19.000	126.00	26.00	76.00	4	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	6707	6708
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	a	a
Type	N	N
Shank design	HA	HB
Helix	36°/38°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Availability
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5.000	6.000	4.700	57.00	13.00	21.00	4	● ●
6.000	6.000	5.500	57.00	13.00	21.00	4	● ●
8.000	8.000	7.500	63.00	19.00	27.00	4	● ●
10.000	10.000	9.200	72.00	22.00	32.00	4	● ●
12.000	12.000	11.200	83.00	26.00	38.00	4	● ●
16.000	16.000	15.000	92.00	32.00	44.00	4	● ●
20.000	20.000	19.000	104.00	38.00	54.00	4	● ●
25.000	25.000	23.500	121.00	45.00	65.00	4	● ●

RF 100 VA - high-performance end mills for stainless steels with ball nose

RF 100 VA high-performance end mills excel thanks to unequal helix angles which considerably reduce vibration. The uneven helix angle vastly improves surface quality with finishing operations and considerably higher feed rates with slot drilling and roughing operations are also achieved.

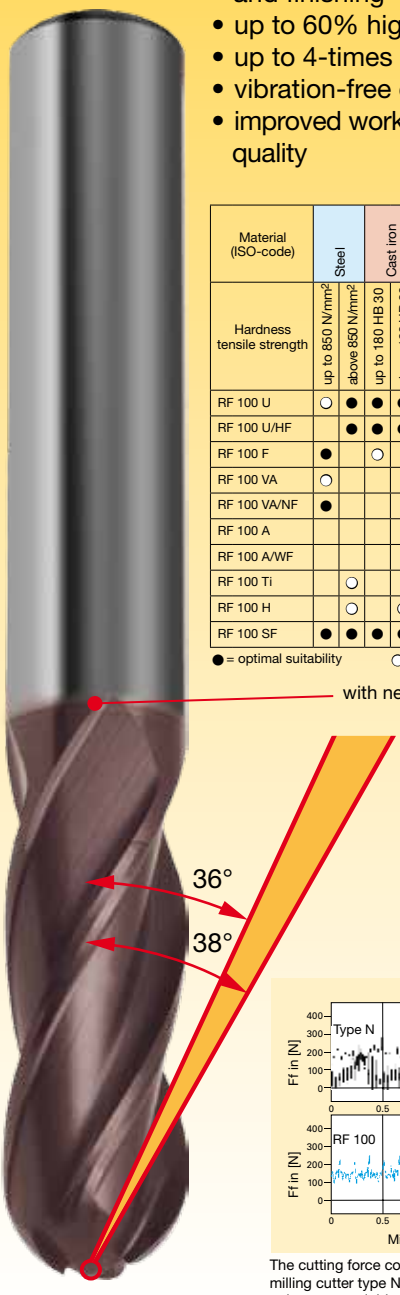
With many applications. the complete milling process can be covered with one RF 100. which as well as increasing tool life and dimensional accuracy of the workpiece generates a considerable cost advantage.

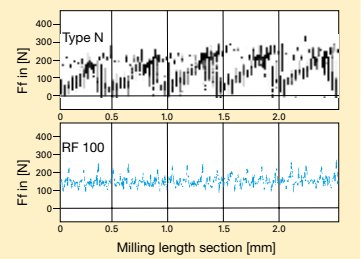
Summary of advantages

- suitable for roughing and finishing
- up to 60% higher feed rates
- up to 4-times longer tool life
- vibration-free operation
- improved workpiece surface quality

Material (ISO-code)	Steel		Cast iron		Stainless steel		Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	above 52 HRC
RF 100 U	○	●	●	●					●		○	
RF 100 U/HF		●	●	●					○		○	
RF 100 F	●		○			●				●		
RF 100 VA	○				●	●				○		
RF 100 VA/NF	●				●	●				○		
RF 100 A							●	●				
RF 100 A/WF							●	●				
RF 100 Ti		○							●	○		
RF 100 H		○		○							●	●
RF 100 SF	●	●	●	●	●	●	○	○	●	●	○	

● = optimal suitability ○ = limited suitability



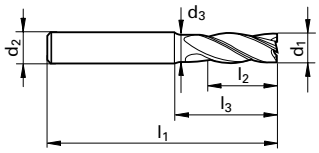


The cutting force comparison between a conventional milling cutter type N and the RF 100 shows a clearly quieter. more rigid operation of the RF 100.

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3202	3319
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K	
Surface	◯	◯
Type	W	W
Shank design	HA	HB
Helix	40°/42°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Availability	
4.000	6.000	3.700	57.00	11.00	21.00	4	●	●
5.000	6.000	4.700	57.00	13.00	21.00	4	●	●
6.000	6.000	5.500	57.00	13.00	21.00	4	●	●
8.000	8.000	7.500	63.00	19.00	27.00	4	●	●
10.000	10.000	9.200	72.00	22.00	32.00	4	●	●
12.000	12.000	11.200	83.00	26.00	38.00	4	●	●
16.000	16.000	15.000	92.00	32.00	44.00	4	●	●
20.000	20.000	19.000	104.00	38.00	54.00	4	●	●

RF 100 A - high-performance roughing end mills for aluminium and Al-alloys

RF 100 high-perfomance end mills excel thanks to unequal helix angles which considerably reduce vibration. The uneven helix angle vastly improves surface quality for finishing operations and a considerably higher feed rate for slot drilling and roughing operations are also achieved.

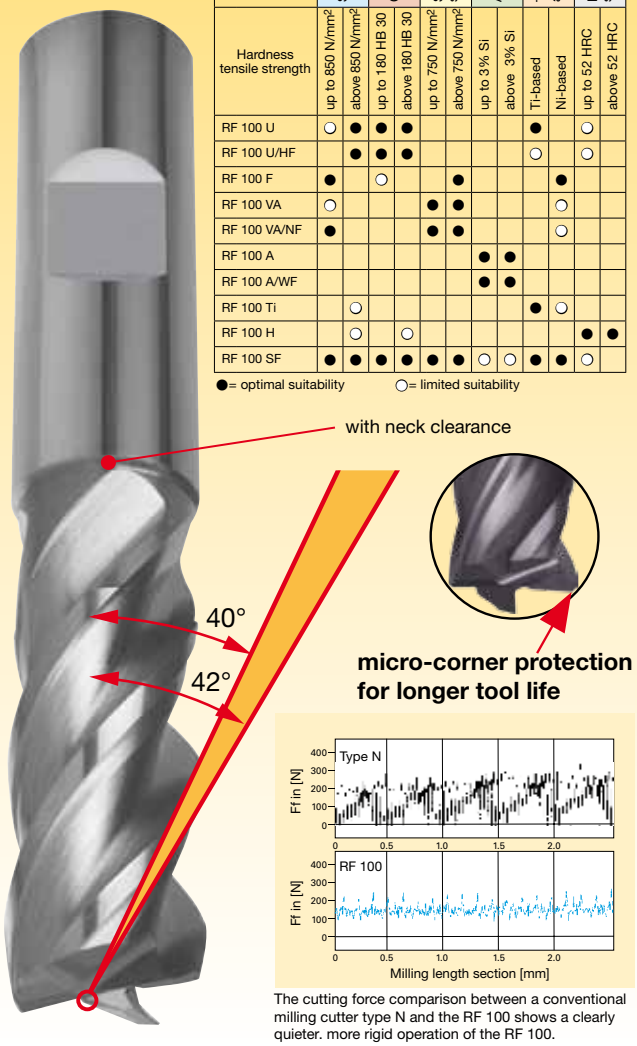
With many applications, the complete milling process can be covered with one RF 100, which as well as increasing tool life and dimensional accuracy of the workpiece generates a considerable cost advantage.

Summary of advantages

- suitable for roughing and finishing
- up to 60% higher feed rates
- up to 4-times longer tool life
- vibration-free operation
- improved workpiece surface quality

Material (ISO-code)	Steel		Cast iron		Stainless steel		Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	above 52 HRC
RF 100 U	◯	●	●	●					●		◯	
RF 100 U/HF		●	●	●					◯		◯	
RF 100 F	●		◯			●				●		
RF 100 VA	◯				●	●				◯		
RF 100 VA/NF	●				●	●				◯		
RF 100 A							●	●				
RF 100 A/WF							●	●				
RF 100 Ti		◯							●	◯		
RF 100 H		◯		◯							●	●
RF 100 SF	●	●	●	●	●	●	◯	◯	●	●	◯	

●= optimal suitability ◯= limited suitability



The cutting force comparison between a conventional milling cutter type N and the RF 100 shows a clearly quieter. more rigid operation of the RF 100.

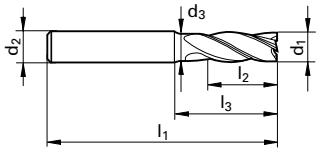
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

RF 100 A (3-fluted)

centre cutting

Guhring no.	3472
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	W
Shank design	HA
Helix	39°/40°41°
Tolerance	h10
Discount group	106
Techn. data page	1091

NEW

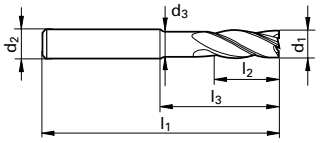


d1	d2	d3	l1	l2	l3	Z	Availability
mm	mm	mm	mm	mm	mm		
3.000	6.000	2.700	57.00	8.00	21.00	3	●
4.000	6.000	3.700	57.00	11.00	21.00	3	●
5.000	6.000	4.700	57.00	13.00	21.00	3	●
6.000	6.000	5.500	57.00	13.00	21.00	3	●
8.000	8.000	7.500	63.00	19.00	27.00	3	●
10.000	10.000	9.200	72.00	22.00	32.00	3	●
12.000	12.000	11.200	83.00	26.00	38.00	3	●
16.000	16.000	15.000	92.00	32.00	44.00	3	●
20.000	20.000	19.000	104.00	38.00	54.00	3	●

centre cutting

Guhring no.	3473
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	W
Shank design	HA
Helix	39°/40°41°
Tolerance	h10
Discount group	106
Techn. data page	1091

NEW



d1	d2	d3	l1	l2	l3	Z	Availability
mm	mm	mm	mm	mm	mm		
6.000	6.000	5.500	65.00	13.00	29.00	3	●
8.000	8.000	7.500	75.00	19.00	39.00	3	●
10.000	10.000	9.200	80.00	22.00	40.00	3	●
12.000	12.000	11.200	93.00	26.00	48.00	3	●
16.000	16.000	15.000	108.00	32.00	60.00	3	●
20.000	20.000	19.000	126.00	38.00	76.00	3	●

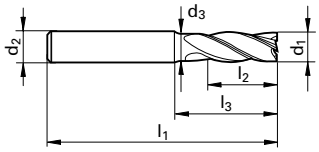
Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

RF 100 A (3-fluted)

centre cutting

Guhring no.	6702
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	W
Shank design	HB
Helix	39°/40°/41°
Tolerance	h10
Discount group	106
Techn. data page	1091

NEW

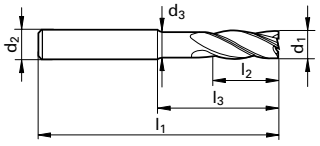


d1	d2	d3	l1	l2	l3	Z	Availability
mm	mm	mm	mm	mm	mm		
3.000	6.000	2.700	57.00	8.00	21.00	3	●
4.000	6.000	3.700	57.00	11.00	21.00	3	●
5.000	6.000	4.700	57.00	13.00	21.00	3	●
6.000	6.000	5.500	57.00	13.00	21.00	3	●
8.000	8.000	7.500	63.00	19.00	27.00	3	●
10.000	10.000	9.200	72.00	22.00	32.00	3	●
12.000	12.000	11.200	83.00	26.00	38.00	3	●
16.000	16.000	15.000	92.00	32.00	44.00	3	●
20.000	20.000	19.000	104.00	38.00	54.00	3	●

centre cutting

Guhring no.	6703
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	W
Shank design	HB
Helix	39°/40°/41°
Tolerance	h10
Discount group	106
Techn. data page	1091

NEW



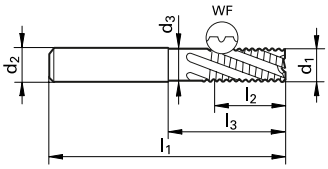
d1	d2	d3	l1	l2	l3	Z	Availability
mm	mm	mm	mm	mm	mm		
6.000	6.000	5.500	65.00	13.00	29.00	3	●
8.000	8.000	7.500	75.00	19.00	39.00	3	●
10.000	10.000	9.200	80.00	22.00	40.00	3	●
12.000	12.000	11.200	93.00	26.00	48.00	3	●
16.000	16.000	15.000	108.00	32.00	60.00	3	●
20.000	20.000	19.000	126.00	38.00	76.00	3	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

RF 100 A/WF

centre cutting

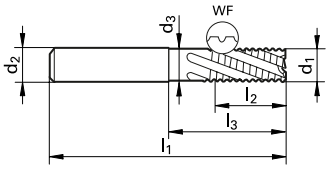
Guhring no.	3468	3469
Standard	~ DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K	
Surface	◯	◯
Type	WF	WF
Shank design	HA	HB
Helix	29°/30°/31°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1092	1092
	NEW	



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.500	57.00	13.00	21.00	3	●	●
8.000	8.000	7.500	63.00	19.00	27.00	3	●	●
10.000	10.000	9.200	72.00	22.00	32.00	3	●	●
12.000	12.000	11.200	83.00	26.00	38.00	3	●	●
16.000	16.000	15.000	92.00	32.00	44.00	3	●	●
20.000	20.000	19.000	104.00	38.00	54.00	3	●	●
25.000	25.000	23.500	121.00	45.00	65.00	3	●	●

centre cutting

Guhring no.	3470	3471
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	
Surface	◯	◯
Type	WF	WF
Shank design	HA	HB
Helix	29°/30°/31°	
Tolerance	h12	h10
Discount group	106	106
Techn. data page	1092	1092
	NEW	NEW

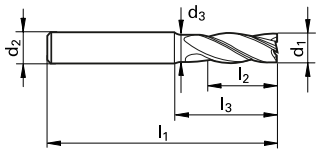


d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.500	65.00	13.00	29.00	3	●	●
8.000	8.000	7.500	75.00	19.00	39.00	3	●	●
10.000	10.000	9.200	80.00	22.00	40.00	3	●	●
12.000	12.000	11.200	93.00	26.00	48.00	3	●	●
16.000	16.000	15.000	108.00	32.00	60.00	3	●	●
20.000	20.000	19.000	126.00	38.00	76.00	3	●	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

centre cutting

Guhring no.	3895	3896
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	A	A
Type	H	H
Shank design	HA	HB
Helix	40°/42°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Availability
6.000	6.000	5.500	57.00	13.00	21.00	4	● ●
8.000	8.000	7.500	63.00	19.00	27.00	4	● ●
10.000	10.000	9.200	72.00	22.00	32.00	4	● ●
12.000	12.000	11.200	83.00	26.00	38.00	4	● ●
16.000	16.000	15.000	92.00	32.00	44.00	4	● ●
20.000	20.000	19.000	104.00	38.00	54.00	4	● ●

RF 100 H - high-performance roughing end mills for hardened steels up to 60 HRC

RF 100 high-perfomance end mills excel thanks to unequal helix angles which considerably reduce vibration. The uneven helix angle vastly improves surface quality for finishing operations.

Innovative design with core stability enables roughing operations up to 1xD in materials up 54 HRC as well as finishing operations over the entire cutting edge length (up to 2.5xD) in materials up to 60 HRC. Also applicable with HPC strategy for roughing materials over 60 HRC.

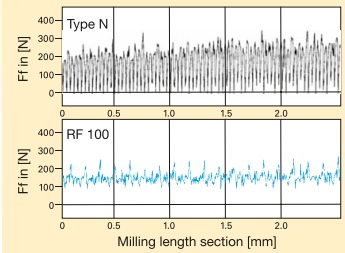
Summary of advantages

- suitable for roughing and finishing
- up to 60% higher feed rates
- up to 4-times longer tool life
- vibration-free operation
- improved workpiece surface quality

Material (ISO-code)	Steel		Cast iron		Stainless steel		Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	above 52 HRC
RF 100 U	○	●	●	●					●		○	
RF 100 U/HF		●	●	●					○		○	
RF 100 F	●		○			●				●		
RF 100 VA	○				●	●				○		
RF 100 VA/NF	●				●	●				○		
RF 100 A							●	●				
RF 100 A/WF							●	●				
RF 100 Ti		○							●	○		
RF 100 H		○		○							●	●
RF 100 SF	●	●	●	●	●	●	○	○	●	●	○	

● = optimal suitability ○ = limited suitability

micro-corner protection for longer tool life



The cutting force comparison between a conventional milling cutter type N and the RF 100 shows a clearly quieter. more rigid operation of the RF 100.

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

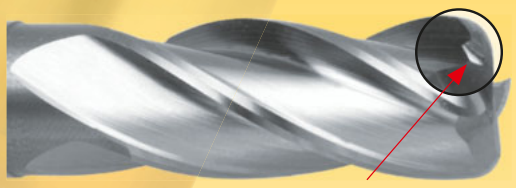
RF 100 Ti - high-performance roughing end mills for special and Ti-alloys

RF 100 high-perfomance end mills excel thanks to unequal helix angles which considerably reduce vibration. The uneven helix angle vastly improves surface quality for finishing operations and a considerably higher feed rate for slot drilling and roughing operations are also achieved.

With many applications, the complete milling process can be covered with one RF 100, which as well as increasing tool life and dimensional accuracy of the workpiece generates a considerable cost advantage.

Summary of advantages

- suitable for roughing and finishing
- up to 60% higher feed rates
- up to 4-times longer tool life
- vibration-free operation
- improved workpiece surface quality



High wear protection through constant rake angle in radius area

Seamless radius area for high form and contour accuracy

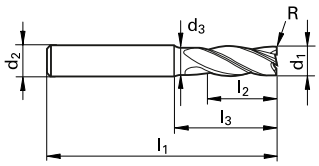
Material (ISO-code)	Steel		Cast iron		Stainless steel		Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	above 52 HRC
RF 100 U	○	●	●	●					●		○	
RF 100 U/HF		●	●	●					○		○	
RF 100 F	●		○			●				●		
RF 100 VA	○				●	●				○		
RF 100 VA/NF	●				●	●				○		
RF 100 A							●	●				
RF 100 A/WF							●	●				
RF 100 Ti		○							●	○		
RF 100 H		○		○							●	●
RF 100 SF	●	●	●	●	●	●	○	○	●	●	○	

● = optimal suitability ○ = limited suitability

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Sygnum

centre cutting

Guhring no.	3498	3499
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	A	A
Type	N	N
Shank design	HA	HB
Helix	35°/38°	35°/38°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



d1	d2	d3	l1	l2	l3	r	Z	Code no.	Availability	
mm	mm	mm	mm	mm	mm	mm				
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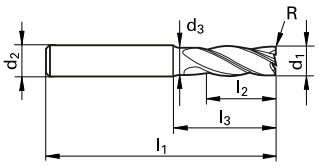
6.000	6.000	5.500	57.00	13.00	21.00	0.80	4	6.008	●	●
6.000	6.000	5.500	57.00	13.00	21.00	1.00	4	6.010	●	●
6.000	6.000	5.500	57.00	13.00	21.00	1.50	4	6.015	●	●
6.000	6.000	5.500	57.00	13.00	21.00	2.00	4	6.020	●	●
8.000	8.000	7.500	63.00	19.00	27.00	0.50	4	8.005	●	●
8.000	8.000	7.500	63.00	19.00	27.00	0.80	4	8.008	●	●
8.000	8.000	7.500	63.00	19.00	27.00	1.00	4	8.010	●	●
8.000	8.000	7.500	63.00	19.00	27.00	1.50	4	8.015	●	●
8.000	8.000	7.500	63.00	19.00	27.00	2.00	4	8.020	●	●
10.000	10.000	9.200	72.00	22.00	32.00	0.50	4	10.005	●	●
10.000	10.000	9.200	72.00	22.00	32.00	0.80	4	10.008	●	●
10.000	10.000	9.200	72.00	22.00	32.00	1.00	4	10.010	●	●
10.000	10.000	9.200	72.00	22.00	32.00	1.50	4	10.015	●	●
10.000	10.000	9.200	72.00	22.00	32.00	2.00	4	10.020	●	●
12.000	12.000	11.200	83.00	26.00	38.00	0.50	4	12.005	●	●
12.000	12.000	11.200	83.00	26.00	38.00	0.80	4	12.008	●	●
12.000	12.000	11.200	83.00	26.00	38.00	1.00	4	12.010	●	●
12.000	12.000	11.200	83.00	26.00	38.00	1.50	4	12.015	●	●
12.000	12.000	11.200	83.00	26.00	38.00	2.00	4	12.020	●	●
12.000	12.000	11.200	83.00	26.00	38.00	2.50	4	12.025	●	●
12.000	12.000	11.200	83.00	26.00	38.00	3.00	4	12.030	●	●
12.000	12.000	11.200	83.00	26.00	38.00	3.175	4	12.031	●	●
12.000	12.000	11.200	83.00	26.00	38.00	4.00	4	12.040	●	●
16.000	16.000	15.000	92.00	32.00	44.00	0.50	4	16.005	●	●
16.000	16.000	15.000	92.00	32.00	44.00	0.80	4	16.008	●	●
16.000	16.000	15.000	92.00	32.00	44.00	1.00	4	16.010	●	●
16.000	16.000	15.000	92.00	32.00	44.00	1.50	4	16.015	●	●
16.000	16.000	15.000	92.00	32.00	44.00	2.00	4	16.020	●	●
16.000	16.000	15.000	92.00	32.00	44.00	2.50	4	16.025	●	●
16.000	16.000	15.000	92.00	32.00	44.00	3.00	4	16.030	●	●
16.000	16.000	15.000	92.00	32.00	44.00	3.175	4	16.031	●	●
16.000	16.000	15.000	92.00	32.00	44.00	4.00	4	16.040	●	●
20.000	20.000	19.000	104.00	38.00	54.00	0.50	4	20.005	●	●
20.000	20.000	19.000	104.00	38.00	54.00	1.00	4	20.010	●	●
20.000	20.000	19.000	104.00	38.00	54.00	1.50	4	20.015	●	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

centre cutting

Guhring no.	3498	3499
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	A	A
Type	N	N
Shank design	HA	HB
Helix	35°/38°	35°/38°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



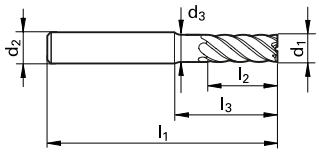
d1	d2	d3	l1	l2	l3	r	Z	Code no.	Availability	
mm	mm	mm	mm	mm	mm	mm				
20.000	20.000	19.000	104.00	38.00	54.00	2.00	4	20.020	●	●
20.000	20.000	19.000	104.00	38.00	54.00	2.50	4	20.025	●	●
20.000	20.000	19.000	104.00	38.00	54.00	3.00	4	20.030	●	●
20.000	20.000	19.000	104.00	38.00	54.00	3.175	4	20.031	●	●
20.000	20.000	19.000	104.00	38.00	54.00	4.00	4	20.040	●	●
25.000	25.000	23.500	121.00	45.00	65.00	1.50	4	25.015	●	●
25.000	25.000	23.500	121.00	45.00	65.00	2.00	4	25.020	●	●
25.000	25.000	23.500	121.00	45.00	65.00	2.50	4	25.025	●	●
25.000	25.000	23.500	121.00	45.00	65.00	3.00	4	25.030	●	●
25.000	25.000	23.500	121.00	45.00	65.00	3.175	4	25.031	●	●
25.000	25.000	23.500	121.00	45.00	65.00	4.00	4	25.040	●	●
25.000	25.000	23.500	121.00	45.00	65.00	5.00	4	25.050	●	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

RF 100 S/F (5-fluted)

centre cutting

Guhring no.	6709	6710
Standard	~ DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	NH	NH
Shank design	HA	HB
Helix	45°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Availability	
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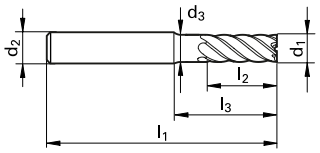
5.000	6.000	4.700	57.00	13.00	21.00	5	●	●
6.000	6.000	5.500	57.00	13.00	21.00	5	●	●
8.000	8.000	7.500	63.00	19.00	27.00	5	●	●
10.000	10.000	9.200	72.00	22.00	32.00	5	●	●
12.000	12.000	11.200	83.00	26.00	38.00	5	●	●
16.000	16.000	15.000	92.00	32.00	44.00	5	●	●
20.000	20.000	19.000	104.00	38.00	54.00	5	●	●
25.000	25.000	23.500	121.00	45.00	65.00	5	●	●

centre cutting

Guhring no.	3897	3898
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	NH	NH
Shank design	HA	HB
Helix	45°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091
	NEW	NEW

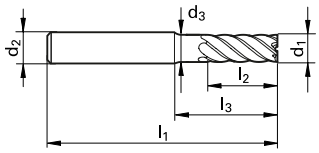


d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Availability	
4.000	6.000	3.700	65.00	12.00	29.00	5	●	●
5.000	6.000	4.700	65.00	15.00	29.00	5	●	●
6.000	6.000	5.500	65.00	18.00	29.00	5	●	●
8.000	8.000	7.500	75.00	24.00	39.00	5	●	●
10.000	10.000	9.200	80.00	30.00	40.00	5	●	●
12.000	12.000	11.200	93.00	36.00	48.00	5	●	●
16.000	16.000	15.000	108.00	48.00	60.00	5	●	●
20.000	20.000	19.000	126.00	60.00	76.00	5	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3631	3632
Standard	~ DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	NH	NH
Shank design	HA	HB
Helix	44°/45°/46°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
8.000	8.000	7.500	63.00	19.00	27.00	6	●	●
10.000	10.000	9.200	72.00	22.00	32.00	6	●	●
12.000	12.000	11.200	83.00	26.00	38.00	6	●	●
16.000	16.000	15.000	92.00	32.00	44.00	6	●	●
20.000	20.000	19.000	104.00	38.00	54.00	6	●	●
25.000	25.000	23.500	121.00	45.00	65.00	6	●	●

RF 100 S/F - high-performance semi-roughing end mills for materials up to 1600 N/mm² (48 HRC)

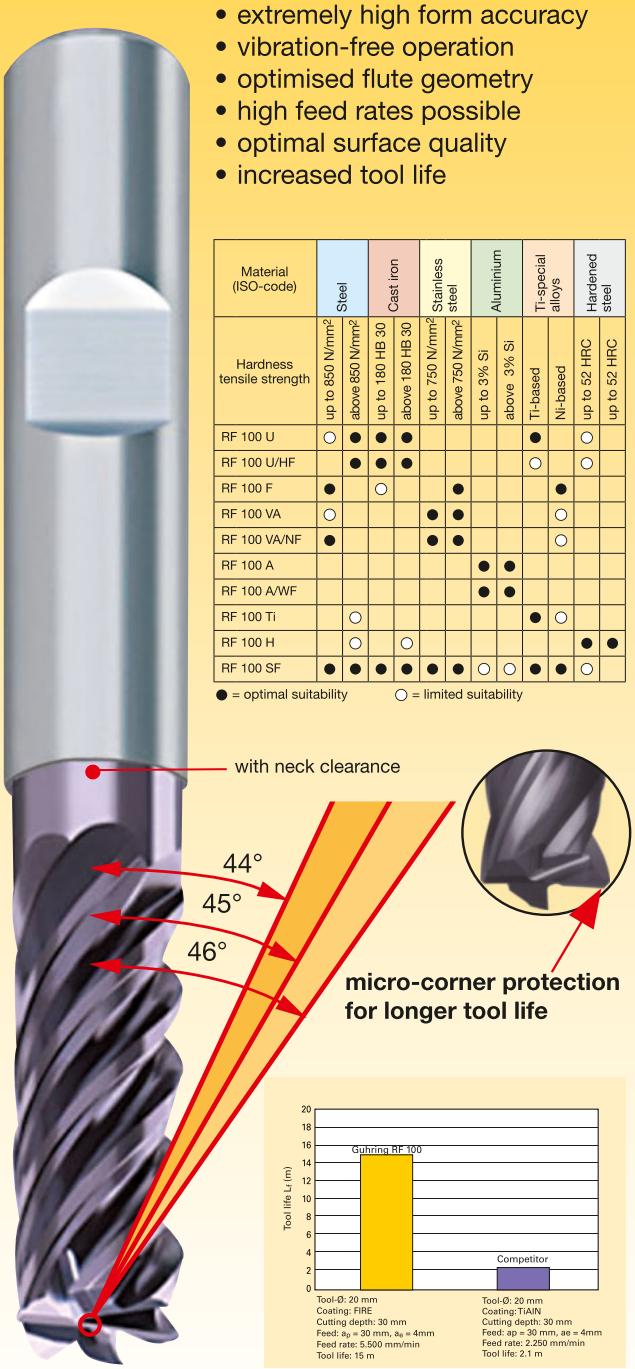
Based on our 4-fluted RF 100 U the RF 100 S/F has a higher, more rigid web paired with 6 cutting edges. In addition, its innovative flute geometry ensures optimal chip evacuation.
The range of application includes super finishing and HSC finishing as well as semi-roughing operations (HPC-machining), i.e. feed widths (ae) up to 0.3xD with close to complete cutting length.

Summary of advantages

- suitable for semi-roughing (HPC) and HSC-finishing
- extremely high form accuracy
- vibration-free operation
- optimised flute geometry
- high feed rates possible
- optimal surface quality
- increased tool life

Material (ISO-code)	Steel		Cast iron		Stainless steel	Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	up to 62 HRC
RF 100 U	○	●	●	●					●		○	
RF 100 U/HF		●	●	●					○		○	
RF 100 F	●		○			●				●		
RF 100 VA	○				●	●				○		
RF 100 VA/NF	●				●	●				○		
RF 100 A							●	●				
RF 100 A/WF							●	●				
RF 100 Ti		○							●	○		
RF 100 H		○		○							●	●
RF 100 SF	●	●	●	●	●	●	○	○	●	●	○	

● = optimal suitability ○ = limited suitability



Tool life comparison:
Semi-roughing in 48 HRC the RF 100 S/F achieves more than 7 times the too life in comparison to conventional end mills.

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

GH 100 U – high performance end mills with helix

The new design Guhring GH 100 U end mills offer the ultimate pre-requisite for a cost-efficient, optimal machining of general steels, high-alloyed steels, CrNi steels as well as stainless steels and titanium-alloys up to 50 HRC.

All GH 100 U end mills excel thanks to their micro-corner protection combined with a reinforced and corrected minor cutting edge. This design considerably reduces the wear at the cutting edges allowing a higher feed rate as well as improving tool life.

Micro-corner protection and corrected reinforced cutting edge = optimal stability

GH 100 U slot drills (3-fluted) excel further thanks to their optimised flute geometry, achieving ultimate machining efficiency especially for slot milling and roughing operations. Paired with a very high spiral, optimal chip evacuation is achieved whilst reducing vibration. The advantages:

- reduced wear
- high feed rates possible
- optimal chip evacuation
- can be applied for roughing and finishing

GH 100 U multi-tooth end mills excel thanks to a reinforced core, providing high stability and enabling the production of optimal workpiece surfaces. Together with the reduced machining time wear is drastically reduced. The advantages:

- reduced wear
- high feed rates possible
- high contour accuracy
- reduced machining time
- suitable for HSC

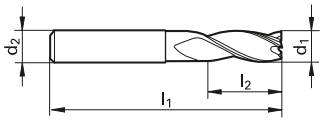
Material (ISO-code)	Steel		Cast iron		Stainless steel		Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	above 52 HRC
GH 100 U mini	●				●	○	●	○	●			
GH 100 U	○	●	○	●	○	●		●	○	●	○	
GH 100 H			○	●							●	●

● = optimal suitability ○ = limited suitability

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

centre cutting

Guhring no.	3193	3540	3729
Standard		DIN 6527 K	
Tool material		Solid carbide	
Carbide grade	K	K/P	
Surface	○	F	F
Type	NH	NH	NH
Shank design	HA	HA	HB
Helix	45°	45°	45°
Tolerance	h10	h10	h10
Discount group	106	106	106
Techn. data page	1093	1093	1093



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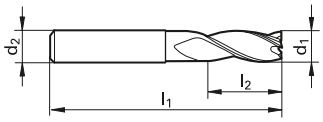
5.000	6.000	54.00	6.00	3	5.000	○	●	●
6.000	6.000	54.00	7.00	3	6.000	○	●	●
7.000	8.000	58.00	8.00	3	7.000	○	●	●
8.000	8.000	58.00	9.00	3	8.000	○	●	●
9.000	10.000	66.00	10.00	3	9.000	○	●	●
10.000	10.000	66.00	11.00	3	10.000	○	●	●
12.000	12.000	73.00	12.00	3	12.000	○	●	●
14.000	14.000	75.00	14.00	3	14.000	○	●	●
16.000	16.000	82.00	16.00	3	16.000	○	●	●
18.000	18.000	84.00	18.00	3	18.000	○	●	●
20.000	20.000	92.00	20.00	3	20.000	○	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3196	3636	3730
Standard		DIN 6527 L	
Tool material		Solid carbide	
Carbide grade	K	K/P	
Surface	○	F	F
Type	NH	NH	NH
Shank design	HA	HA	HB
Helix	45°	45°	45°
Tolerance	h10	h10	h10
Discount group	106	106	106
Techn. data page	1093	1093	1093



d1	d2	l1	l2	Z	Code no.	Availability		
mm	mm	mm	mm					
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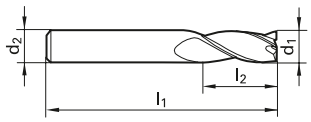
1.500	3.000	38.00	3.00	3	1.500	○	●	
2.000	6.000	57.00	6.00	3	2.000	○	●	
2.500	6.000	57.00	7.00	3	2.500	○	●	
3.000	6.000	57.00	7.00	3	3.000	○	●	●
3.500	6.000	57.00	7.00	3	3.500	○	●	●
4.000	6.000	57.00	8.00	3	4.000	○	●	●
4.500	6.000	57.00	8.00	3	4.500	○	●	●
5.000	6.000	57.00	10.00	3	5.000	○	●	●
6.000	6.000	57.00	10.00	3	6.000	○	●	●
7.000	8.000	63.00	13.00	3	7.000	○	●	●
8.000	8.000	63.00	16.00	3	8.000	○	●	●
9.000	10.000	72.00	16.00	3	9.000	○	●	●
10.000	10.000	72.00	19.00	3	10.000	○	●	●
12.000	12.000	83.00	22.00	3	12.000	○	●	●
14.000	14.000	83.00	22.00	3	14.000	○	●	●
14.000	16.000	92.00	26.00	3	14.001	○	○	
16.000	16.000	92.00	26.00	3	16.000	○	●	●
18.000	18.000	92.00	26.00	3	18.000	○	●	●
18.000	20.000	104.00	32.00	3	18.001	○	○	
20.000	20.000	104.00	32.00	3	20.000	○	●	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3203	3741
Standard	DIN 6528	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	NH	NH
Shank design	HA	HA
Helix	45°	45°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1093	1093



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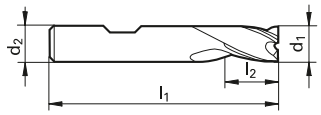
2.500	2.500	32.00	7.00	3	○	●
3.000	3.000	38.00	7.00	3	○	●
3.500	3.500	50.00	7.00	3	○	●
4.000	4.000	50.00	8.00	3	○	●
4.500	4.500	50.00	8.00	3	○	●
5.000	5.000	50.00	10.00	3	○	●
5.500	5.500	57.00	10.00	3	○	●
6.000	6.000	57.00	10.00	3	○	●
6.500	6.500	60.00	13.00	3	○	●
7.000	7.000	60.00	13.00	3	○	●
7.500	7.500	63.00	16.00	3	○	●
8.000	8.000	63.00	16.00	3	○	●
8.500	8.500	67.00	16.00	3	○	●
9.000	9.000	67.00	16.00	3	○	●
9.500	9.500	72.00	19.00	3	○	●
10.000	10.000	72.00	19.00	3	○	●
11.000	11.000	83.00	22.00	3	○	●
12.000	12.000	83.00	22.00	3	○	●
13.000	13.000	83.00	22.00	3	○	●
14.000	14.000	83.00	22.00	3	○	●
15.000	15.000	92.00	26.00	3	○	●
16.000	16.000	92.00	26.00	3	○	●
18.000	18.000	92.00	26.00	3	○	●
20.000	20.000	104.00	32.00	3	○	●

centre cutting

Guhring no.	3686
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	NH
Shank design	HB/<2,0 HA
Helix	45°
Tolerance	e8
Discount group	106
Techn. data page	1093



d1	d2	l1	l2	Z	Availability
mm	mm	mm	mm		
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1.200	3.000	38.00	2.00	3	●
1.500	3.000	38.00	3.00	3	●
1.800	3.000	38.00	3.00	3	●
2.000	6.000	45.00	4.00	3	●
2.500	6.000	45.00	5.00	3	●
3.000	6.000	45.00	6.00	3	●
3.500	6.000	45.00	6.00	3	●
4.000	6.000	45.00	7.00	3	●
4.500	6.000	45.00	8.00	3	●
5.000	6.000	45.00	8.00	3	●
5.500	6.000	45.00	8.00	3	●
5.750	6.000	45.00	10.00	3	●
6.000	6.000	45.00	10.00	3	●
6.750	8.000	55.00	10.00	3	●
7.000	8.000	55.00	12.00	3	●
7.750	8.000	55.00	12.00	3	●
8.000	8.000	55.00	13.00	3	●
8.700	10.000	55.00	14.00	3	●
9.000	10.000	55.00	14.00	3	●
9.700	10.000	55.00	16.00	3	●
10.000	10.000	55.00	16.00	3	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

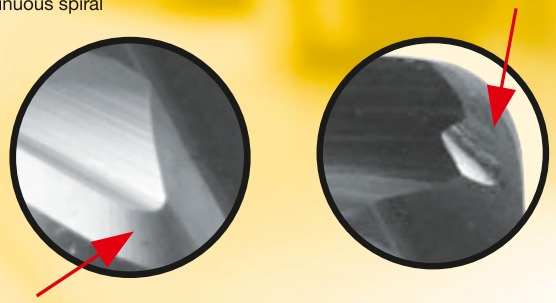
High metal removal end mills GA 200 A: The specialist for machining aluminium

This innovative tool was developed specifically for the machining of integrated aluminium components and is suitable for roughing and slot dilling as well as finishing operations.

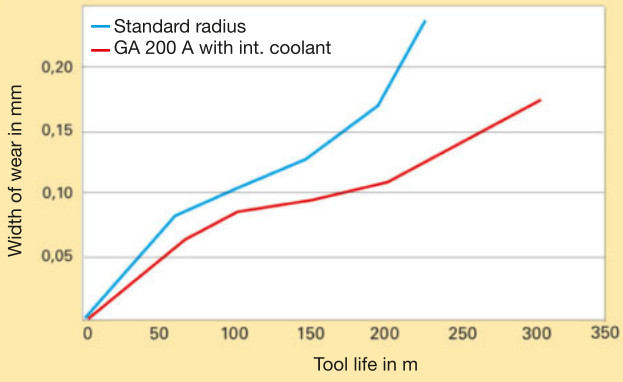
Special features:

- radial coolant exit (64° angle) for optimal chip evacuation
- radius geometry with continuous helix-radius-correction
- reduced neck ground for collision reduction

High wear protection thanks to radius geometry with constant rake angle and continuous spiral



Seamless radius area provides high form and contour accuracy



Tool life comparison in AlSi9:
Guhring's seamless radius geometry reduces wear and provides a considerably longer tool life in comparison with tools ground with conventional corner radii.

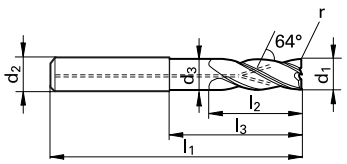
Material (ISO-code)	Steel		Cast iron		Stainless steel		Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	above 52 HRC
GA 100 A	○						●	●				

● = optimal suitability ○ = limited suitability

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ AlTiN SuperA

for Al, centre cutting and with corner radius

Guhring no.	3367
Standard	~ DIN 6527 L
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	W
Shank design	HA
Helix	45°
Tolerance	h10
Discount group	106
Techn. data page	1093



d1	d2	d3	l1	l2	l3	r	Z	Code no.	Availability
mm	mm	mm	mm	mm	mm	mm			
6.000	6.000	5.700	57.00	10.00	21.00	1.00	3	6.000	●
8.000	8.000	7.700	63.00	16.00	27.00	1.00	3	8.000	●
10.000	10.000	9.500	72.00	19.00	32.00	1.50	3	10.000	●
12.000	12.000	11.500	83.00	22.00	38.00	1.50	3	12.000	●
12.000	12.000	11.500	83.00	22.00	38.00	2.00	3	12.020	●
12.000	12.000	11.500	83.00	22.00	38.00	2.50	3	12.025	●
12.000	12.000	11.500	83.00	22.00	38.00	4.00	3	12.040	●
16.000	16.000	15.500	92.00	26.00	44.00	2.00	3	16.000	●
16.000	16.000	15.500	92.00	26.00	44.00	2.50	3	16.025	●
16.000	16.000	15.500	92.00	26.00	44.00	3.00	3	16.030	●
16.000	16.000	15.500	92.00	26.00	44.00	4.00	3	16.040	●
20.000	20.000	19.500	104.00	32.00	54.00	2.50	3	20.000	●
20.000	20.000	19.500	104.00	32.00	54.00	2.00	3	20.020	●
20.000	20.000	19.500	104.00	32.00	54.00	3.00	3	20.030	●
20.000	20.000	19.500	104.00	32.00	54.00	4.00	3	20.040	●
25.000	25.000	24.500	121.00	38.00	65.00	2.00	3	25.020	●
25.000	25.000	24.500	121.00	38.00	65.00	3.00	3	25.030	●
25.000	25.000	24.500	121.00	38.00	65.00	4.00	3	25.040	●

RS 100 - high-performance roughing cutters: New roughing geometry for optimal efficiency

RS 100 high-performance roughing cutters benefit from a completely new roughing geometry, considerably reducing surface wear thanks to its unequal spacing. The result is a drastic increase in tool life compared to conventional round knuckle-type geometries and an improvement in the surface quality of the workpiece, so that in many applications finishing operations are unnecessary and the machining cost per workpiece is vastly reduced. In addition, the tool excels with a much reduced power requirement in comparison to tools without chip breaking geometry.

Two types of RS 100 high-performance roughing cutters are available: The 4-flute, 30° RH spiral RS 100 U is suitable for the machining of all standard steels. As well as offering a new 5-6-flute geometry and a helix angle increased to 45°, RS 100 F possesses a considerably increased core diameter and is suitable for roughing/finishing operations with a width of cut up to 0.25 x D in all general purpose steels and tough materials.

Advantages at a glance:

- increased tool life in comparison to milling cutters with round knuckle-type teeth
- increased feed rate thanks to new edge wear protection
- improved workpiece surface
- reduced power requirement compared to smooth cutting milling cutters

Comparison overview:

Type	NR round knuckle-type	NF flat knuckle-type (conv.)	RS 100 U&F (NF new)
Perform. index	100%	65%	120%
Workpiece surface	Ra = 9-10 µm	Ra = 6-7 µm	Ra = 2-3 µm
Tool life index	100%	100%	140%

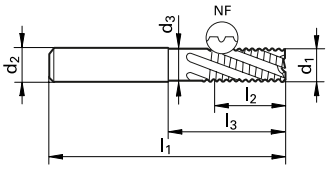
Material (ISO-code)	Steel		Cast iron		Stainless steel		Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	above 52 HRC
RS 100 U	●	○	●		●	○		○	●		○	
RS 100 F	●	○	●		●	○		○		●		
GS 100 A							●	●		○		
GS 100 U	●	○	●		●	○		○				
GS 100 H	○	●	○		○	●					●	

● = optimal suitability ○ = limited suitability

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

high-performance roughing end mills with centre cutting

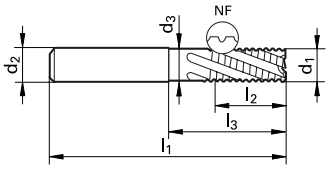
Guhring no.	3887	3888
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	NF	NF
Shank design	HA	HB
Helix	30°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1095	1095



d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.700	57.00	13.00	21.00	4	●	●
8.000	8.000	7.700	63.00	19.00	27.00	4	●	●
10.000	10.000	9.500	72.00	22.00	32.00	4	●	●
12.000	12.000	11.500	83.00	26.00	38.00	4	●	●
14.000	14.000	13.500	83.00	26.00	38.00	4	●	●
16.000	16.000	15.500	92.00	32.00	44.00	4	●	●
18.000	18.000	17.500	92.00	32.00	44.00	4	●	●
20.000	20.000	19.500	104.00	38.00	54.00	4	●	●
25.000	25.000	24.000	121.00	45.00	65.00	5	●	●

high-performance roughing end mills with centre cutting

Guhring no.	3889	3890
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	NF	NF
Shank design	HA	HB
Helix	45°	
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1095	1095

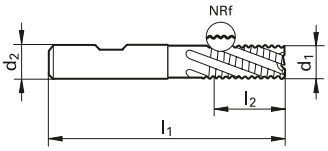


d1	d2	d3	l1	l2	l3	Z	Availability	
mm	mm	mm	mm	mm	mm			
6.000	6.000	5.700	57.00	13.00	21.00	5	●	●
8.000	8.000	7.700	63.00	19.00	27.00	5	●	●
10.000	10.000	9.500	72.00	22.00	32.00	5	●	●
12.000	12.000	11.500	83.00	26.00	38.00	5	●	●
14.000	14.000	13.500	83.00	26.00	38.00	5	●	●
16.000	16.000	15.500	92.00	32.00	44.00	6	●	●
18.000	18.000	17.500	92.00	32.00	44.00	6	●	●
20.000	20.000	19.500	104.00	38.00	54.00	6	●	●
25.000	25.000	24.000	121.00	45.00	65.00	6	●	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

for materials < 48 HRC, centre cutting

Guhring no.	3204	3723	3365
Standard		DIN 6527 L	
Tool material		Solid carbide	
Carbide grade	K	K/P	
Surface	○	F	F
Type	NRf	NRf	NRf
Shank design	HB	HB	HB
Helix	30°	30°	30°
Tolerance	h10	h10	h10
Discount group	117	117	106
Techn. data page	1094	1094	1094

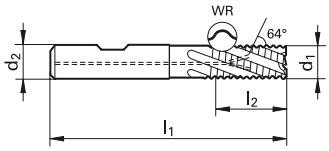


d1	d2	l1	l2	Z	Code no.	Availability		
mm	mm	mm	mm					
6.000	6.000	57.00	13.00	4	6.000	●	●	●
8.000	8.000	63.00	19.00	4	8.000	●	●	●
10.000	10.000	72.00	22.00	4	10.000	●	●	●
12.000	12.000	83.00	26.00	4	12.000	●	●	●
14.000	14.000	83.00	26.00	4	14.000	●	●	
14.000	16.000	92.00	32.00	4	14.001	○	○	
16.000	16.000	92.00	32.00	4	16.000	●	●	●
18.000	18.000	92.00	32.00	4	18.000	●	●	
18.000	20.000	104.00	38.00	4	18.001	○	○	
20.000	20.000	104.00	38.00	4	20.000	●	●	●
25.000	25.000	121.00	45.00	5	25.000	●	●	

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

for Al < 600 N/mm², centre cutting

Guhring no.	3364	3127
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K	
Surface	◯	◯
Type	WR	WR
Shank design	HB	HB
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	117
Techn. data page	1094	1094

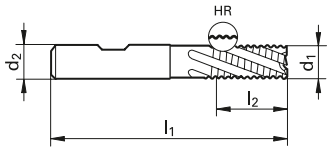


d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
6.000	6.000	57.00	10.00	3	●	●
8.000	8.000	63.00	16.00	3	●	●
10.000	10.000	72.00	19.00	3	●	●
12.000	12.000	83.00	22.00	3	●	●
14.000	14.000	83.00	22.00	3		●
16.000	16.000	92.00	26.00	3	●	●
18.000	18.000	92.00	26.00	3		●
20.000	20.000	104.00	32.00	3	●	●
25.000	25.000	121.00	45.00	3		●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

for materials < 56 HRC, centre cutting

Guhring no.	3682	6704	6705
Standard		DIN 6527 L	
Tool material		Solid carbide	
Carbide grade		K/P	
Surface	F	F	F
Type	HR	HR	HR
Shank design	HB	HA	HB
Helix	20°	20°	20°
Tolerance	h10	h10	h10
Discount group	117	106	106
Techn. data page	1094	1094	1094
		NEW	NEW

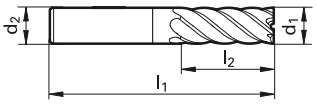


d1	d2	l1	l2	Z	Availability		
mm	mm	mm	mm				
6.000	6.000	57.00	13.00	4	●	●	●
8.000	8.000	63.00	19.00	4	●	●	●
10.000	10.000	72.00	22.00	4	●	●	●
12.000	12.000	83.00	26.00	4	●	●	●
16.000	16.000	92.00	32.00	4	●	●	●
20.000	20.000	104.00	38.00	4	●	●	●
25.000	25.000	121.00	45.00	4		●	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

for superfine finishing of materials < 50 HRC

Guhring no.	3311	3689	3047
Standard		~ DIN 6527 L	
Tool material		Solid carbide	
Carbide grade	K	K/P	
Surface	○	F	F
Type	NH	NH	NH
Shank design	HA	HA	HB
Helix	45°	45°	45°
Tolerance	h10	h10	h10
Discount group	106	106	106
Techn. data page	1093	1093	1093

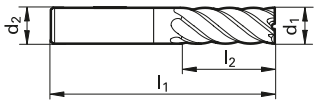


d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability		
3.000	6.000	57.00	8.00	6	3.000	●	●	
4.000	6.000	57.00	11.00	6	4.000	●	●	
5.000	6.000	57.00	13.00	6	5.000	●	●	
6.000	6.000	57.00	13.00	6	6.000	●	●	●
8.000	8.000	63.00	19.00	6	8.000	●	●	●
10.000	10.000	72.00	22.00	6	10.000	●	●	●
12.000	12.000	83.00	26.00	6	12.000	●	●	●
14.000	14.000	83.00	26.00	6	14.000	●	●	●
14.000	16.000	92.00	32.00	6	14.001	○	○	
16.000	16.000	92.00	32.00	6	16.000	●	●	●
18.000	18.000	92.00	32.00	8	18.000	●	●	●
18.000	20.000	104.00	38.00	8	18.001	○	○	
20.000	20.000	104.00	38.00	8	20.000	●	●	●
25.000	25.000	121.00	45.00	10	25.000	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

for superfine finishing of materials < 50 HRC

Guhring no.	3312	3691	3313	3693
Standard	Guhring std.			
Tool material	Solid carbide			
Carbide grade	K	K/P	K	K/P
Surface	○	F	○	F
Type	NH	NH	NH	NH
Shank design	HA	HA	HB	HB
Helix	45°	45°	45°	45°
Tolerance	h10	h10	h10	h10
Discount group	106	106	106	106
Techn. data page	1093	1093	1093	1093



d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability
6.000	6.000	75.00	30.00	6	6.000	● ● ● ●
8.000	8.000	100.00	40.00	6	8.000	● ● ● ●
10.000	10.000	100.00	40.00	6	10.000	● ● ● ●
12.000	12.000	150.00	45.00	6	12.000	● ● ● ●
16.000	16.000	150.00	65.00	6	16.000	● ● ● ●
20.000	20.000	150.00	65.00	8	20.000	● ● ● ●
25.000	25.000	150.00	75.00	10	25.000	● ● ● ●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

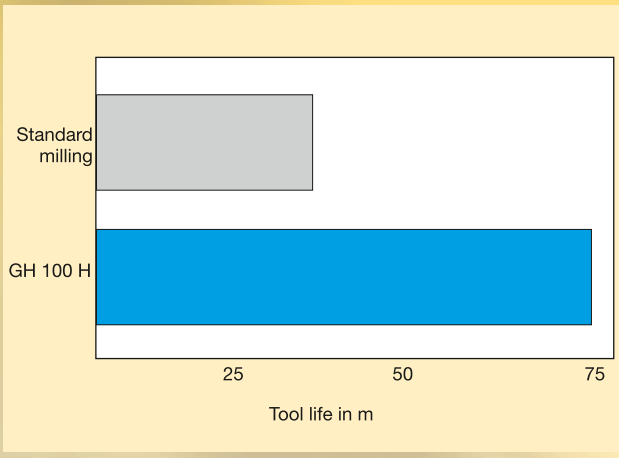
GH 100 H: The optimal tool for hard milling in the die and mould industry

Guhring's hard milling cutters optimally satisfy the requirements for time- and cost-saving machining of hardened workpieces. Different geometries as well as the carbide grade DK500UF with its high hardness and toughness are optimally adapted for the various milling operations. Subsequently, Guhring's hard milling cutters achieve highest contour accuracy for cutting depths up to 3xD.

Advantages:

- application up to 62 HRC
- high tool rigidity
- optimal surface quality
- high feed rates and tool life

HPC-Hochleistungs-fräser



Tool life comparison between Guhring GH 100 H milling cutters and conventional milling cutters for finish machining tool steel hardened to 57 HRC.

Material (ISO-code)	Steel		Cast iron		Stainless steel		Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	above 52 HRC
GH 100 U mini	●				●	○	●	○	●			
GH 100 U	○	●	○	●	○	●		●	○	●	○	
GH 100 H			○	●							●	●

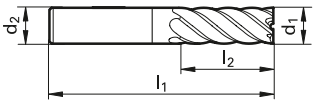
● = optimal suitability ○ = limited suitability

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Sygnum

GH 100 H - hard multi-t. end mills

for superfine finishing of materials < 62 HRC

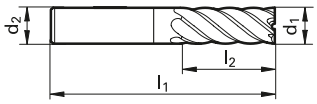
Guhring no.	3715
Standard	~ DIN 6527 L
Tool material	Solid carbide
Carbide grade	DK 500 UF
Surface	F
Type	H
Shank design	HA
Helix	55°
Tolerance	h10
Discount group	106
Techn. data page	1093



d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability
3.000	6.000	57.00	8.00	6	3.000	●
4.000	6.000	57.00	11.00	6	4.000	●
5.000	6.000	57.00	13.00	6	5.000	●
6.000	6.000	57.00	13.00	6	6.000	●
8.000	8.000	63.00	19.00	6	8.000	●
10.000	10.000	72.00	22.00	6	10.000	●
12.000	12.000	83.00	26.00	6	12.000	●
14.000	14.000	83.00	26.00	6	14.000	●
14.000	16.000	92.00	32.00	6	14.001	○
16.000	16.000	92.00	32.00	6	16.000	●
18.000	18.000	92.00	32.00	8	18.000	●
18.000	20.000	104.00	38.00	8	18.001	○
20.000	20.000	104.00	38.00	8	20.000	●

for superfine finishing of materials < 62 HRC

Guhring no.	3716
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	DK 500 UF
Surface	F
Type	H
Shank design	HA
Helix	55°
Tolerance	h10
Discount group	106
Techn. data page	1093



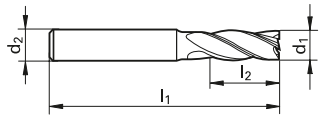
d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability
6.000	6.000	75.00	30.00	6	6.000	●
8.000	8.000	100.00	40.00	6	8.000	●
10.000	10.000	100.00	40.00	6	10.000	●
12.000	12.000	150.00	45.00	6	12.000	●
16.000	16.000	150.00	65.00	6	16.000	●
20.000	20.000	150.00	65.00	8	20.000	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	6716
Standard	~ DIN 6527 L
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	HA
Helix	30°
Tolerance	h6
Discount group	106
Techn. data page	-

NEW



d1 mm	d2 mm	l1 mm	l2 mm	Z	Availability
1.400	3.000	38.00	3.00	4	●
1.500	3.000	38.00	4.00	4	●
1.800	3.000	38.00	6.00	4	●
2.000	3.000	38.00	7.00	4	●
2.100	3.000	38.00	7.00	4	●
2.300	3.000	38.00	7.00	4	●
2.500	3.000	38.00	7.00	4	●
2.800	3.000	38.00	7.00	4	●
3.000	6.000	57.00	8.00	4	●
3.500	6.000	57.00	10.00	4	●
4.000	6.000	57.00	11.00	4	●
4.500	6.000	57.00	11.00	4	●
5.000	6.000	57.00	13.00	4	●
5.500	6.000	57.00	13.00	4	●
6.000	8.000	63.00	13.00	4	●
6.500	8.000	63.00	13.00	4	●
7.000	8.000	63.00	16.00	4	●
7.500	8.000	63.00	16.00	4	●
8.000	10.000	72.00	19.00	4	●
8.500	10.000	72.00	19.00	4	●
9.000	10.000	72.00	19.00	4	●
10.000	12.000	83.00	22.00	4	●
11.000	12.000	83.00	26.00	4	●
12.000	14.000	83.00	26.00	4	●

CR 100 – high-performance milling cutter for CFRP not only for the aircraft industry

Guhring's CR 100 high-performance milling cutter for CFRP and similar composite materials are the optimal solution for milling applications in the aerospace industry, in energy technology and many other industries thanks to its special geometries and its diamond coating.

Advantages:
- long tool life
- high feed rates and cutting speeds
- smooth running
- very good, burr-free surfaces
- no delamination

CR 100 Air:
Special, rear facing air-cooling ducts ensure an optimal evacuation of the CFRP dust.

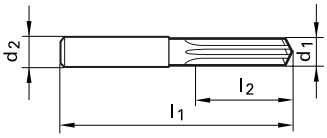
CR 100 With drill point:
Especially for plunging and subsequent profiling operations.

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

CR 100 - End mills

For fibre-reinforced plastics

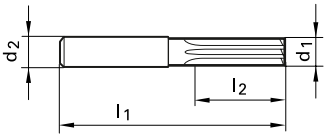
Guhring no.	6720
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	Ⓓ
Type	N
Shank design	HA
Helix	0°
Tolerance	e10
Discount group	106
Techn. data page	-
	NEW



d1	d2	l1	l2	Z	Availability
mm	mm	mm	mm		
4.000	4.000	55.00	12.00	6	●
6.000	6.000	65.00	18.00	8	●
8.000	8.000	75.00	24.00	10	●
10.000	10.000	80.00	30.00	12	●
12.000	12.000	93.00	36.00	14	●
16.000	16.000	108.00	48.00	14	●

For fibre-reinforced plastics

Guhring no.	6717	6719
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	Ⓓ	Ⓓ
Type	N	N
Shank design	HA	HA
Helix	0°	0°
Tolerance	e10	e10
Discount group	106	106
Techn. data page	-	-
	NEW	NEW



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
4.000	6.000	57.00	10.00	6	●	●
6.000	6.000	65.00	15.00	8	●	●
8.000	8.000	75.00	20.00	10	●	●
10.000	10.000	80.00	25.00	12	●	●
12.000	12.000	93.00	32.00	14	●	●
16.000	16.000	108.00	34.00	14	●	●

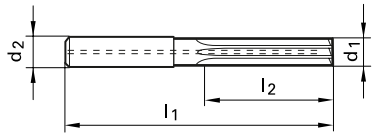
CFK end mill

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

For fibre-reinforced plastics

Guhring no.	6718
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	D
Type	N
Shank design	HA
Helix	0°
Tolerance	e10
Discount group	106
Techn. data page	-

NEW



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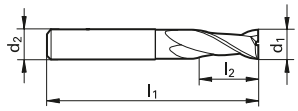
8.000	8.000	80.00	32.00	10	●
10.000	10.000	90.00	40.00	12	●
12.000	12.000	110.00	48.00	14	●
16.000	16.000	130.00	64.00	14	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3194	3633	3294	3634
Standard	DIN 6527 K			
Tool material	Solid carbide			
Carbide grade	K	K/P	K	K/P
Surface	○	F	○	F
Type	N	N	N	N
Shank design	HA	HA	HB	HB
Helix	30°	30°	30°	30°
Tolerance	h10	h10	h10	h10
Discount group	117	117	117	117
Techn. data page	1098	1098	1098	1098



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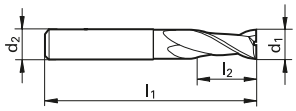
2.500	6.000	50.00	3.00	2	2.500	●	●	●	❍
3.000	6.000	50.00	4.00	2	3.000	●	●	●	●
4.000	6.000	54.00	5.00	2	4.000	●	●	●	●
5.000	6.000	54.00	6.00	2	5.000	●	●	●	●
6.000	6.000	54.00	7.00	2	6.000	●	●	●	●
6.500	8.000	58.00	8.00	2	6.500	❍	❍	❍	❍
8.000	8.000	58.00	9.00	2	8.000	●	●	●	●
10.000	10.000	66.00	11.00	2	10.000	●	●	●	●
12.000	12.000	73.00	12.00	2	12.000	●	●	●	●
14.000	14.000	75.00	14.00	2	14.000	●	●	●	●
16.000	16.000	82.00	16.00	2	16.000	●	●	●	●
18.000	18.000	84.00	18.00	2	18.000	●	●	●	●
20.000	20.000	92.00	20.00	2	20.000	●	●	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3195	3635	3295	3154
Standard	DIN 6527 L			
Tool material	Solid carbide			
Carbide grade	K	K/P	K	K/P
Surface	○	F	○	F
Type	N	N	N	N
Shank design	HA	HA	HB	HB
Helix	30°	30°	30°	30°
Tolerance	h10	h10	h10	h10
Discount group	117	117	117	117
Techn. data page	1098	1098	1098	1098



d1	d2	l1	l2	Z	Code no.	Availability			
mm	mm	mm	mm						
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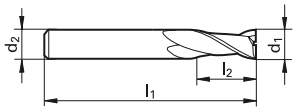
1.500	3.000	38.00	3.00	2	1.500	●	●		
2.000	6.000	57.00	6.00	2	2.000	●	●	●	●
2.500	6.000	57.00	7.00	2	2.500	●	●	●	●
2.800	6.000	57.00	7.00	2	2.800	●	●	●	●
3.000	6.000	57.00	7.00	2	3.000	●	●	●	●
3.500	6.000	57.00	7.00	2	3.500	●	●	●	●
3.800	6.000	57.00	8.00	2	3.800	●	●	●	●
4.000	6.000	57.00	8.00	2	4.000	●	●	●	●
4.500	6.000	57.00	8.00	2	4.500	●	●	●	●
4.800	6.000	57.00	10.00	2	4.800	●	●	●	●
5.000	6.000	57.00	10.00	2	5.000	●	●	●	●
5.500	6.000	57.00	10.00	2	5.500	●	●	●	●
5.750	6.000	57.00	10.00	2	5.750	●	●	●	●
6.000	6.000	57.00	10.00	2	6.000	●	●	●	●
6.750	8.000	63.00	13.00	2	6.750	●	●	●	●
7.000	8.000	63.00	13.00	2	7.000	●	●	●	●
7.500	8.000	63.00	16.00	2	7.500	●	○	○	○
7.750	8.000	63.00	16.00	2	7.750	●	●	●	●
8.000	8.000	63.00	16.00	2	8.000	●	●	●	●
8.700	10.000	72.00	16.00	2	8.700	●	●	●	●
9.000	10.000	72.00	16.00	2	9.000	●	●	●	●
9.700	10.000	72.00	19.00	2	9.700	●	●	●	●
10.000	10.000	72.00	19.00	2	10.000	●	●	●	●
11.700	12.000	83.00	22.00	2	11.700	●	●	●	●
12.000	12.000	83.00	22.00	2	12.000	●	●	●	●
13.700	14.000	83.00	22.00	2	13.700	●	●	●	●
14.000	14.000	83.00	22.00	2	14.000	●	●	●	●
14.000	16.000	92.00	26.00	2	14.001	○	○		
15.700	16.000	92.00	26.00	2	15.700	●	●	●	●
16.000	16.000	92.00	26.00	2	16.000	●	●	●	●
18.000	18.000	92.00	26.00	2	18.000	●	●	●	●
18.000	20.000	104.00	32.00	2	18.001	○	○		
20.000	20.000	104.00	32.00	2	20.000	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Slot drills (2-fluted)

centre cutting

Guhring no.	3303	3676
Standard	DIN 6528	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HA	HA
Helix	30°	30°
Tolerance	h10	h10
Discount group	117	117
Techn. data page	1098	1098



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mm	mm	mm	mm			
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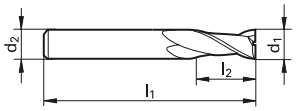
3.000	3.000	38.00	7.00	2	●	●
3.500	3.500	50.00	7.00	2	●	●
4.000	4.000	50.00	8.00	2	●	●
4.500	4.500	50.00	8.00	2	●	●
5.000	5.000	50.00	10.00	2	●	●
5.500	5.500	57.00	10.00	2	●	●
6.000	6.000	57.00	10.00	2	●	●
6.500	6.500	60.00	13.00	2	●	●
7.000	7.000	60.00	13.00	2	●	●
7.500	7.500	63.00	16.00	2	●	●
8.000	8.000	63.00	16.00	2	●	●
8.500	8.500	67.00	16.00	2	●	●
9.000	9.000	67.00	16.00	2	●	●
9.500	9.500	72.00	19.00	2	●	●
10.000	10.000	72.00	19.00	2	●	●
11.000	11.000	83.00	22.00	2	●	●
12.000	12.000	83.00	22.00	2	●	●
13.000	13.000	83.00	22.00	2	●	●
14.000	14.000	83.00	22.00	2	●	●
15.000	15.000	92.00	26.00	2	●	●
16.000	16.000	92.00	26.00	2	●	●
18.000	18.000	92.00	26.00	2	●	●
20.000	20.000	104.00	32.00	2	●	●

centre cutting

Guhring no.	3212	3709
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HA	HA
Helix	30°	30°
Tolerance	e8	e8
Discount group	117	117
Techn. data page	1098	1098



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
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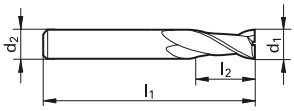
3.000	3.000	32.00	12.00	2	○	○
3.500	3.500	32.00	12.00	2	○	○
4.000	4.000	40.00	12.00	2	○	○
4.500	4.500	50.00	14.00	2	○	○
5.000	5.000	50.00	14.00	2	○	○
5.500	5.500	50.00	16.00	2	○	○
6.000	6.000	50.00	16.00	2	○	○
6.500	6.500	60.00	16.00	2	○	○
7.000	7.000	60.00	20.00	2	○	○
7.500	7.500	60.00	20.00	2	○	○
8.000	8.000	60.00	20.00	2	○	○
8.500	8.500	60.00	20.00	2	○	○
9.000	9.000	60.00	20.00	2	○	○
9.500	9.500	70.00	22.00	2	○	○
10.000	10.000	70.00	22.00	2	○	○
11.000	11.000	70.00	22.00	2	○	○
12.000	12.000	70.00	22.00	2	○	○
13.000	13.000	75.00	25.00	2	○	○
14.000	14.000	75.00	25.00	2	○	○
15.000	15.000	75.00	25.00	2	○	○
16.000	16.000	75.00	25.00	2	○	○
18.000	18.000	100.00	35.00	2	○	○
20.000	20.000	100.00	35.00	2	○	○

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ◍ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3011	3021
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HA	HA
Helix	30°	30°
Tolerance	h10	h10
Discount group	117	117
Techn. data page	1098	1098



d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability	
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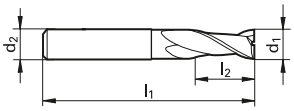
4.000	4.000	75.00	25.00	2	4.000	●	●
5.000	5.000	75.00	30.00	2	5.000	●	●
6.000	6.000	75.00	30.00	2	6.000	●	●
8.000	8.000	100.00	40.00	2	8.000	●	●
10.000	10.000	100.00	40.00	2	10.000	●	●
12.000	12.000	150.00	45.00	2	12.000	●	●
14.000	14.000	150.00	45.00	2	14.000	●	●
14.000	16.000	150.00	65.00	2	14.001	○	○
16.000	16.000	150.00	65.00	2	16.000	●	●
18.000	18.000	150.00	65.00	2	18.000	●	●
18.000	20.000	150.00	65.00	2	18.001	○	○
20.000	20.000	150.00	65.00	2	20.000	●	●

centre cutting

Guhring no.	3310	3126
Standard	DIN 6527 K	
Tool material	Solid carbide	
Carbide grade	K	
Surface	○	○
Type	W	W
Shank design	HA	HB
Helix	45°	45°
Tolerance	e8	e8
Discount group	117	117
Techn. data page	1099	1099



d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability	
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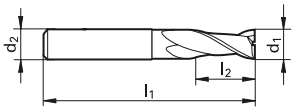
5.000	6.000	54.00	6.00	2	5.000	●	●
6.000	6.000	54.00	7.00	2	6.000	●	●
8.000	8.000	58.00	9.00	2	8.000	●	●
10.000	10.000	66.00	11.00	2	10.000	●	●
12.000	12.000	73.00	12.00	2	12.000	●	●
14.000	14.000	75.00	14.00	2	14.000	●	●
16.000	16.000	82.00	16.00	2	16.000	●	●
18.000	18.000	84.00	18.00	2	18.000	●	●
20.000	20.000	92.00	20.00	2	20.000	●	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

centre cutting

Guhring no.	3309	3059
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K	
Surface	◯	◯
Type	W	W
Shank design	HA	HB
Helix	45°	45°
Tolerance	e8	e8
Discount group	117	117
Techn. data page	1099	1099



d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability	
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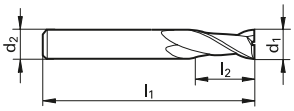
4.000	6.000	57.00	8.00	2	4.000	●	●
5.000	6.000	57.00	10.00	2	5.000	●	●
6.000	6.000	57.00	10.00	2	6.000	●	●
8.000	8.000	63.00	16.00	2	8.000	●	●
10.000	10.000	72.00	19.00	2	10.000	●	●
12.000	12.000	83.00	22.00	2	12.000	●	●
14.000	14.000	83.00	22.00	2	14.000	●	●
14.000	16.000	92.00	26.00	2	14.001	◯	
16.000	16.000	92.00	26.00	2	16.000	●	●
18.000	18.000	92.00	26.00	2	18.000	●	●
18.000	20.000	104.00	32.00	2	18.001	◯	
20.000	20.000	104.00	32.00	2	20.000	●	●

centre cutting

Guhring no.	3358
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	W
Shank design	HA
Helix	45°
Tolerance	h10
Discount group	117
Techn. data page	1099

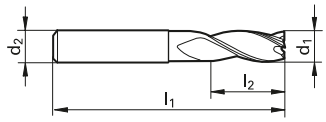


d1 mm	d2 mm	l1 mm	l2 mm	Z	Availability
5.000	5.000	75.00	30.00	2	●
6.000	6.000	75.00	30.00	2	●
8.000	8.000	100.00	40.00	2	●
10.000	10.000	100.00	40.00	2	●
12.000	12.000	150.00	45.00	2	●
16.000	16.000	150.00	65.00	2	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3555	3558	3296	3719
Standard	DIN 6527 K			
Tool material	Solid carbide			
Carbide grade	K	K/P	K	K/P
Surface	○	F	○	F
Type	N	N	N	N
Shank design	HA	HA	HB	HB
Helix	30°	30°	30°	30°
Tolerance	h10	h10	h10	h10
Discount group	117	117	117	117
Techn. data page	1098	1098	1098	1098

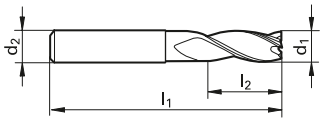


d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability			
2.000	6.000	50.00	3.00	3	2.000	●	●	●	●
2.500	6.000	50.00	3.00	3	2.500	○	●	●	○
3.000	6.000	50.00	4.00	3	3.000	●	●	●	●
3.500	6.000	50.00	4.00	3	3.500	○	○	●	●
4.000	6.000	54.00	5.00	3	4.000	●	●	●	●
5.000	6.000	54.00	6.00	3	5.000	●	●	●	●
5.500	6.000	54.00	7.00	3	5.500	○	○	●	○
6.000	6.000	54.00	7.00	3	6.000	●	●	●	●
7.000	8.000	58.00	8.00	3	7.000	●	●	●	●
8.000	8.000	58.00	9.00	3	8.000	●	●	●	●
8.500	10.000	66.00	10.00	3	8.500	○	○	●	○
9.000	10.000	66.00	10.00	3	9.000	●	●	●	●
10.000	10.000	66.00	11.00	3	10.000	●	●	●	●
12.000	12.000	73.00	12.00	3	12.000	●	●	●	●
14.000	14.000	75.00	14.00	3	14.000	●	●	●	●
16.000	16.000	82.00	16.00	3	16.000	●	●	●	●
18.000	18.000	84.00	18.00	3	18.000	●	●	●	●
20.000	20.000	92.00	20.00	3	20.000	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3559	3560	3297	3720
Standard	DIN 6527 L			
Tool material	Solid carbide			
Carbide grade	K	K/P	K	K/P
Surface	◯	F	◯	F
Type	N	N	N	N
Shank design	HA	HA	HB	HB
Helix	30°	30°	30°	30°
Tolerance	h10	h10	h10	h10
Discount group	117	117	117	117
Techn. data page	1098	1098	1098	1098



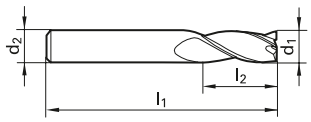
d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability			
2.000	6.000	57.00	6.00	3	2.000	●	●	●	●
2.500	6.000	57.00	7.00	3	2.500	●	●	●	●
3.000	6.000	57.00	7.00	3	3.000	●	●	●	●
3.500	6.000	57.00	7.00	3	3.500	●	●	●	●
4.000	6.000	57.00	8.00	3	4.000	●	●	●	●
4.500	6.000	57.00	8.00	3	4.500	●	●	●	●
5.000	6.000	57.00	10.00	3	5.000	●	●	●	●
6.000	6.000	57.00	10.00	3	6.000	●	●	●	●
7.000	8.000	63.00	13.00	3	7.000	●	●	●	●
8.000	8.000	63.00	16.00	3	8.000	●	●	●	●
8.500	10.000	72.00	16.00	3	8.500	❍	❍	❍	❍
9.000	10.000	72.00	16.00	3	9.000	●	●	●	●
10.000	10.000	72.00	19.00	3	10.000	●	●	●	●
12.000	12.000	83.00	22.00	3	12.000	●	●	●	●
14.000	14.000	83.00	22.00	3	14.000	●	●	●	●
14.000	16.000	92.00	26.00	3	14.001	❍	❍		
16.000	16.000	92.00	26.00	3	16.000	●	●	●	●
18.000	18.000	92.00	26.00	3	18.000	●	●	●	●
18.000	20.000	104.00	32.00	3	18.001	❍	❍		
20.000	20.000	104.00	32.00	3	20.000	●	●	●	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Slot drills (3-fluted)

centre cutting

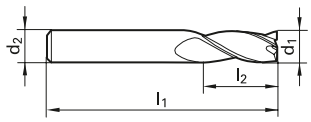
Guhring no.	3307	3677
Standard	DIN 6528	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HA	HA
Helix	30°	30°
Tolerance	h10	h10
Discount group	117	117
Techn. data page	1098	1098



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
2.000	2.000	32.00	5.00	3	●	●
2.500	2.500	32.00	6.00	3	●	●
3.000	3.000	38.00	7.00	3	●	●
3.500	3.500	50.00	7.00	3	●	●
4.000	4.000	50.00	8.00	3	●	●
4.500	4.500	50.00	8.00	3	●	●
5.000	5.000	50.00	10.00	3	●	●
5.500	5.500	57.00	10.00	3	●	●
6.000	6.000	57.00	10.00	3	●	●
6.500	6.500	60.00	13.00	3	●	●
7.000	7.000	60.00	13.00	3	●	●
7.500	7.500	63.00	16.00	3	●	●
8.000	8.000	63.00	16.00	3	●	●
8.500	8.500	67.00	16.00	3	●	●
9.000	9.000	67.00	16.00	3	●	●
9.500	9.500	72.00	19.00	3	●	●
10.000	10.000	72.00	19.00	3	●	●
11.000	11.000	83.00	22.00	3	●	●
12.000	12.000	83.00	22.00	3	●	●
13.000	13.000	83.00	22.00	3	●	●
14.000	14.000	83.00	22.00	3	●	●
15.000	15.000	92.00	26.00	3	●	●
16.000	16.000	92.00	26.00	3	●	●
18.000	18.000	92.00	26.00	3	●	●
20.000	20.000	104.00	32.00	3	●	●

centre cutting

Guhring no.	3220	3711
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HA	HA
Helix	30°	30°
Tolerance	e8/h11	e8/h11
Discount group	117	117
Techn. data page	1098	1098



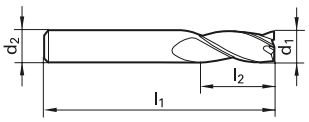
d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
2.000	2.000	32.00	8.00	3	○	○
2.500	2.500	32.00	8.00	3	○	○
3.000	3.000	32.00	12.00	3	○	○
3.500	3.500	32.00	12.00	3	○	
4.000	4.000	40.00	12.00	3	○	○
4.500	4.500	50.00	14.00	3	○	○
5.000	5.000	50.00	14.00	3	○	○
5.500	5.500	50.00	16.00	3	○	○
6.000	6.000	50.00	16.00	3	○	○
6.500	6.500	60.00	16.00	3	○	○
7.000	7.000	60.00	20.00	3	○	○
7.500	7.500	60.00	20.00	3	○	○
8.000	8.000	60.00	20.00	3	○	○
8.500	8.500	60.00	20.00	3	○	○
9.000	9.000	60.00	20.00	3	○	○
9.500	9.500	70.00	22.00	3	○	○
10.000	10.000	70.00	22.00	3	○	○
11.000	11.000	70.00	22.00	3	○	○
12.000	12.000	70.00	22.00	3	○	○
13.000	13.000	75.00	25.00	3	○	○
14.000	14.000	75.00	25.00	3	○	○
15.000	15.000	75.00	25.00	3	○	○
16.000	16.000	75.00	25.00	3	○	○
18.000	18.000	100.00	35.00	3	○	○
20.000	20.000	100.00	35.00	3	○	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3314	3680	6721
Standard		Guhring std.	
Tool material		Solid carbide	
Carbide grade	K	K/P	
Surface	○	F	D
Type	N	N	N
Shank design	HA	HA	HA
Helix	30°	30°	30°
Tolerance	h10	h10	h10
Discount group	117	117	106
Techn. data page	1098	1098	1098

NEW

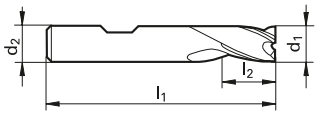


d1	d2	l1	l2	Z	Availability		
mm	mm	mm	mm				
3.000	3.000	75.00	20.00	3	●	●	●
4.000	4.000	75.00	25.00	3	●	●	●
5.000	5.000	75.00	30.00	3	●	●	●
6.000	6.000	75.00	30.00	3	●	●	●
8.000	8.000	100.00	40.00	3	●	●	●
10.000	10.000	100.00	40.00	3	●	●	●
12.000	12.000	150.00	45.00	3	●	●	●
16.000	16.000	150.00	65.00	3	●	●	●
20.000	20.000	150.00	65.00	3	●	●	

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3684
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	N
Shank design	HB/<2,0 HA
Helix	30°
Tolerance	e8
Discount group	117
Techn. data page	1098

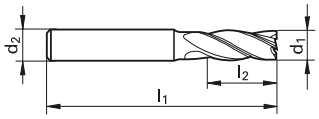


d1 mm	d2 mm	l1 mm	l2 mm	Z	Availability
0.300	3.000	38.00	1.00	3	●
0.400	3.000	38.00	1.00	3	●
0.500	3.000	38.00	1.50	3	●
0.600	3.000	38.00	1.50	3	●
0.800	3.000	38.00	2.00	3	●
1.000	3.000	38.00	2.00	3	●
1.200	3.000	38.00	2.00	3	●
1.500	3.000	38.00	2.00	3	●
1.800	3.000	38.00	2.00	3	●
2.000	6.000	38.00	4.00	3	●
2.500	6.000	38.00	5.00	3	●
3.000	6.000	38.00	5.00	3	●
3.500	6.000	38.00	6.00	3	●
4.000	6.000	38.00	7.00	3	●
4.500	6.000	38.00	8.00	3	●
5.000	6.000	38.00	8.00	3	●
5.500	6.000	38.00	8.00	3	●
5.750	6.000	38.00	8.00	3	●
6.000	6.000	38.00	8.00	3	●
6.750	8.000	42.00	10.00	3	●
7.000	8.000	42.00	10.00	3	●
7.750	8.000	42.00	10.00	3	●
8.000	8.000	43.00	11.00	3	●
8.700	10.000	48.00	11.00	3	●
9.000	10.000	48.00	11.00	3	●
9.700	10.000	48.00	11.00	3	●
10.000	10.000	50.00	13.00	3	●
12.000	12.000	55.00	15.00	3	●
14.000	14.000	58.00	15.00	3	●
16.000	16.000	62.00	18.00	3	●
18.000	18.000	70.00	20.00	3	●
20.000	20.000	75.00	22.00	3	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

centre cutting

Guhring no.	3198	3637	3298	3721
Standard	DIN 6527 K			
Tool material	Solid carbide			
Carbide grade	K	K/P	K	K/P
Surface	○	F	○	F
Type	N	N	N	N
Shank design	HA	HA	HB	HB
Helix	30°	30°	30°	30°
Tolerance	h10	h10	h10	h10
Discount group	117	117	117	117
Techn. data page	1098	1098	1098	1098

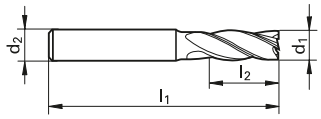


d1	d2	l1	l2	Z	Code no.	Availability			
mm	mm	mm	mm						
2.000	6.000	50.00	4.00	4	2.000	●	●	●	●
3.000	6.000	50.00	5.00	4	3.000	●	●	●	●
4.000	6.000	54.00	8.00	4	4.000	●	●	●	●
5.000	6.000	54.00	9.00	4	5.000	●	●	●	●
6.000	6.000	54.00	10.00	4	6.000	●	●	●	●
8.000	8.000	58.00	12.00	4	8.000	●	●	●	●
10.000	10.000	66.00	14.00	4	10.000	●	●	●	●
12.000	12.000	73.00	16.00	4	12.000	●	●	●	●
14.000	14.000	75.00	18.00	4	14.000	●	●	●	●
16.000	16.000	82.00	22.00	4	16.000	●	●	●	●
18.000	18.000	84.00	24.00	4	18.000	●	●	●	●
20.000	20.000	92.00	26.00	4	20.000	●	●	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3197	3649	3299	3722
Standard	DIN 6527 L			
Tool material	Solid carbide			
Carbide grade	K	K/P	K	K/P
Surface	○	F	○	F
Type	N	N	N	N
Shank design	HA	HA	HB	HB
Helix	30°	30°	30°	30°
Tolerance	h10	h10	h10	h10
Discount group	117	117	117	117
Techn. data page	1098	1098	1098	1098



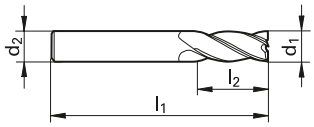
d1	d2	l1	l2	Z	Code no.	Availability			
mm	mm	mm	mm						
2.000	6.000	57.00	7.00	4	2.000	●	●	●	●
3.000	6.000	57.00	8.00	4	3.000	●	●	●	●
3.500	6.000	57.00	10.00	4	3.500	●	●	●	●
4.000	6.000	57.00	11.00	4	4.000	●	●	●	●
4.500	6.000	57.00	11.00	4	4.500	●	●	●	●
5.000	6.000	57.00	13.00	4	5.000	●	●	●	●
6.000	6.000	57.00	13.00	4	6.000	●	●	●	●
7.000	8.000	63.00	16.00	4	7.000	●	●	●	●
8.000	8.000	63.00	19.00	4	8.000	●	●	●	●
9.000	10.000	72.00	19.00	4	9.000	●	●	●	●
10.000	10.000	72.00	22.00	4	10.000	●	●	●	●
12.000	12.000	83.00	26.00	4	12.000	●	●	●	●
14.000	14.000	83.00	26.00	4	14.000	●	●	●	●
14.000	16.000	92.00	32.00	4	14.001	❍	❍		
16.000	16.000	92.00	32.00	4	16.000	●	●	●	●
18.000	18.000	92.00	32.00	4	18.000	●	●	●	●
18.000	20.000	104.00	38.00	4	18.001	❍	❍		
20.000	20.000	104.00	38.00	4	20.000	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

End mills (4-fluted)

centre cutting

Guhring no.	3304	3678
Standard	DIN 6528	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HA	HA
Helix	30°	30°
Tolerance	h10	h10
Discount group	117	117
Techn. data page	1098	1098



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
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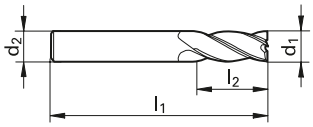
2.500	2.500	32.00	6.00	4	●	●
3.000	3.000	38.00	7.00	4	●	●
3.500	3.500	50.00	8.00	4	●	●
4.000	4.000	50.00	11.00	4	●	●
4.500	4.500	50.00	11.00	4	○	○
5.000	5.000	50.00	13.00	4	●	●
6.000	6.000	57.00	13.00	4	●	●
7.000	7.000	60.00	16.00	4	●	●
7.500	7.500	63.00	19.00	4	○	○
8.000	8.000	63.00	19.00	4	●	●
9.000	9.000	67.00	19.00	4	●	●
10.000	10.000	72.00	22.00	4	●	●
11.000	11.000	83.00	26.00	4	●	●
12.000	12.000	83.00	26.00	4	●	●
13.000	13.000	83.00	26.00	4	●	●
14.000	14.000	83.00	26.00	4	●	●
15.000	15.000	92.00	32.00	4	●	
16.000	16.000	92.00	32.00	4	●	●
18.000	18.000	92.00	32.00	4	●	●
20.000	20.000	104.00	38.00	4	●	●

centre cutting

Guhring no.	3257	3713
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HA	HA
Helix	30°	30°
Tolerance	h11	h11
Discount group	117	117
Techn. data page	1098	1098

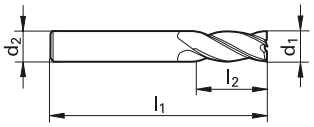


d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
4.500	4.500	50.00	14.00	4	○	○
5.000	5.000	50.00	14.00	4	○	○
5.500	5.500	50.00	16.00	4	○	
6.000	6.000	50.00	16.00	4	○	○
6.500	6.500	60.00	16.00	4	○	
7.000	7.000	60.00	20.00	4	○	○
7.500	7.500	60.00	20.00	4	○	○
8.000	8.000	60.00	20.00	4	○	○
8.500	8.500	60.00	20.00	4	○	
9.000	9.000	60.00	20.00	4	○	○
9.500	9.500	70.00	22.00	4	○	
10.000	10.000	70.00	22.00	4	○	○
11.000	11.000	70.00	22.00	4	○	○
12.000	12.000	70.00	22.00	4	○	○
13.000	13.000	75.00	25.00	4	○	○
14.000	14.000	75.00	25.00	4	○	○
15.000	15.000	75.00	25.00	4	○	
16.000	16.000	75.00	25.00	4	○	○
18.000	18.000	100.00	35.00	4	○	○
20.000	20.000	100.00	35.00	4	○	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3012	3023
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	◯	F
Type	N	N
Shank design	HA	HA
Helix	30°	30°
Tolerance	h10	h10
Discount group	117	117
Techn. data page	1098	1098



d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability	
3.000	3.000	75.00	20.00	4	3.000	●	●
4.000	4.000	75.00	25.00	4	4.000	●	●
5.000	5.000	75.00	30.00	4	5.000	●	●
6.000	6.000	75.00	30.00	4	6.000	●	●
8.000	8.000	100.00	40.00	4	8.000	●	●
10.000	10.000	100.00	40.00	4	10.000	●	●
12.000	12.000	150.00	45.00	4	12.000	●	●
14.000	14.000	150.00	45.00	4	14.000	●	●
14.000	16.000	150.00	65.00	4	14.001	◯	◯
16.000	16.000	150.00	65.00	4	16.000	●	●
18.000	18.000	150.00	65.00	4	18.000	●	●
18.000	20.000	150.00	65.00	4	18.001	◯	◯
20.000	20.000	150.00	65.00	4	20.000	●	●

The perfect combination: Shrink fit chuck + end mill with HA shank

The combination of shrink fit chuck from our GM 300 program and end mill with HA shank offers highest concentricity even with long tool neck lengths. Benefit from these advantages especially

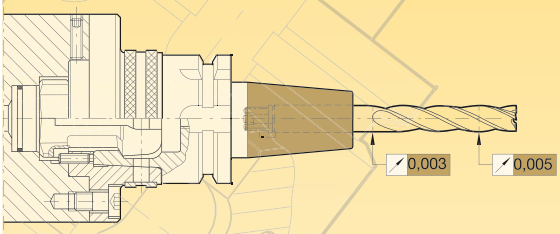
… with long range applications due to deep forms or obstructions

… where there are highest demands on surface quality

… the powerful and accurate clamping

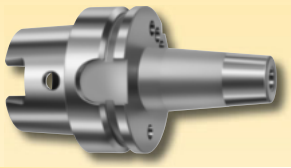
The concentricity of a solid carbide end mill

HSK-A 63 shrink fit chuck, clamping diameter 12.0 mm



HSK-A

Guhring no. **4736**



ISO

Guhring no. **4738**

GISS 3000 shrink fit system

Guhring no. **4753**

with axial adjustment

Induction shrink fit system with integrated length pre-setting

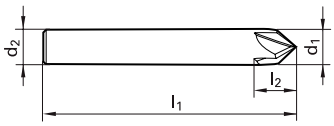
Solid carbide universal end mills

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

straight-fluted

Guhring no.	6711	6712
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	A	A
Type		
Shank design	HA	HB
Helix	0°	0°
Tolerance	js9	js9
Discount group	117	117
Techn. data page	-	-

NEW

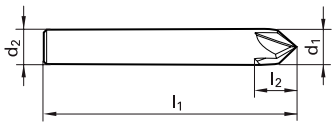


d1 mm	d2 mm	l1 mm	l2 mm	Z	Availability	
4.000	4.000	50.00	22.00	4	●	
6.000	6.000	57.00	21.00	4	●	●
8.000	8.000	63.00	27.00	4	●	●
10.000	10.000	72.00	32.00	4	●	●
12.000	12.000	83.00	38.00	4	●	●

straight-fluted

Guhring no.	6713	3396
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	A	A
Type		
Shank design	HA	HB
Helix	0°	0°
Tolerance	js9	js9
Discount group	117	117
Techn. data page	-	-

NEW NEW



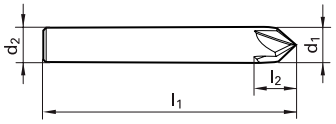
d1 mm	d2 mm	l1 mm	l2 mm	Z	Availability	
4.000	4.000	50.00	22.00	4	●	
6.000	6.000	57.00	21.00	4	●	●
8.000	8.000	63.00	27.00	4	●	●
10.000	10.000	72.00	32.00	4	●	●
12.000	12.000	83.00	38.00	4	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

straight-fluted

Guhring no.	6714	6715
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	A	A
Type		
Shank design	HA	HB
Helix	0°	0°
Tolerance	js9	js9
Discount group	117	117
Techn. data page	-	-

NEW NEW



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
4.000	4.000	50.00	22.00	4	●	
6.000	6.000	57.00	21.00	4	●	●
8.000	8.000	63.00	27.00	4	●	●
10.000	10.000	72.00	32.00	4	●	●
12.000	12.000	83.00	38.00	4	●	●

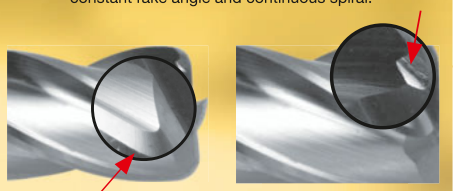
Milling cutters with corner radius: Satisfying the highest demands on accuracy and tool life

Especially the die and mould industry places ever higher demands on milling cutters – primarily with regard to accuracy and tool life. Therefore, Guhring's cutting tool program now includes radius milling cutters that are perfectly adapted to satisfy these demands and provide optimal machining results thanks to application orientated geometries, carbide grades and coatings. The advantages are especially high form and contour accuracy of the workpiece, minimal wear and therefore excellent tool life.

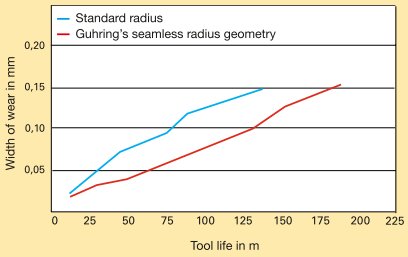
The special features of Guhring's milling cutters with corner corner radius are:

- outside diameter and the radius is ground in one-pass
- radius point geometry with constant helix-radius-correction
- reduced neck ground for collision reduction with protruding edges

High wear protection thanks to radius geometry with constant rake angle and continuous spiral.



Seamless radius area provides high form and contour accuracy.



Wear comparison:
Guhring's seamless radius geometry reduces wear and provides a considerably longer tool life in comparison with tools ground with conventional corner radius.

Reduced neck ground for collision reduction

Material (ISO-code)	Steel		Cast iron		Stainless steel		Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	above 52 HRC
GF 500 T	●	●	●	○	○	●	●		●	●	●	
GF 300 T		○	●	●						○	●	●

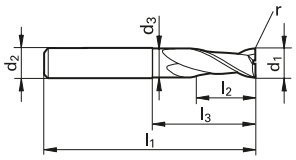
● = optimal suitability ○ = limited suitability

Solid carbide universal end mills

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

centre cutting

Guhring no.	3106	3561
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HA	HA
Helix	30°	30°
Tolerance	h10	h10
Discount group	117	117
Techn. data page	1098	1098



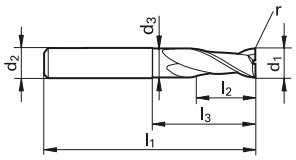
d1	d2	d3	l1	l2	l3	r	Z	Code no.	Availability	
mm	mm	mm	mm	mm	mm	mm				
6.000	6.000	5.700	57.00	10.00	21.00	0.50	2	6.005	●	●
6.000	6.000	5.700	57.00	10.00	21.00	1.00	2	6.010	●	●
8.000	8.000	7.700	63.00	16.00	27.00	0.50	2	8.005	●	●
8.000	8.000	7.700	63.00	16.00	27.00	1.00	2	8.010	●	●
8.000	8.000	7.700	63.00	16.00	27.00	1.50	2	8.015	●	●
8.000	8.000	7.700	63.00	16.00	27.00	2.00	2	8.020	●	●
10.000	10.000	9.500	72.00	19.00	32.00	0.50	2	10.005	●	●
10.000	10.000	9.500	72.00	19.00	32.00	1.00	2	10.010	●	●
10.000	10.000	9.500	72.00	19.00	32.00	1.50	2	10.015	●	●
10.000	10.000	9.500	72.00	19.00	32.00	2.00	2	10.020	●	●
12.000	12.000	11.500	83.00	22.00	38.00	0.50	2	12.005	●	●
12.000	12.000	11.500	83.00	22.00	38.00	1.00	2	12.010	●	●
12.000	12.000	11.500	83.00	22.00	38.00	1.50	2	12.015	●	●
12.000	12.000	11.500	83.00	22.00	38.00	2.00	2	12.020	●	●
16.000	16.000	15.500	92.00	26.00	44.00	1.00	2	16.010	●	●
16.000	16.000	15.500	92.00	26.00	44.00	1.50	2	16.015	●	●
16.000	16.000	15.500	92.00	26.00	44.00	2.00	2	16.020	●	●
20.000	20.000	19.500	104.00	32.00	54.00	1.00	2	20.010	●	●
20.000	20.000	19.500	104.00	32.00	54.00	1.50	2	20.015	●	●
20.000	20.000	19.500	104.00	32.00	54.00	2.00	2	20.020	●	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	6722
Standard	DIN 6527 L
Tool material	Solid carbide
Carbide grade	K/P
Surface	D
Type	N
Shank design	HA
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	1098

NEW

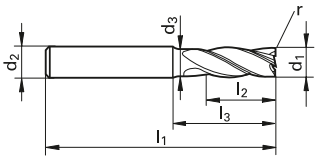


d1	d2	d3	l1	l2	l3	r	Z	Code no.	Availability
mm	mm	mm	mm	mm	mm	mm			
6.000	6.000	5.700	57.00	10.00	21.00	0.50	2	6.005	●
6.000	6.000	5.700	57.00	10.00	21.00	1.00	2	6.010	●
8.000	8.000	7.700	63.00	16.00	27.00	0.50	2	8.005	●
8.000	8.000	7.700	63.00	16.00	27.00	1.00	2	8.010	●
10.000	10.000	9.500	72.00	19.00	32.00	0.50	2	10.005	●
10.000	10.000	9.500	72.00	19.00	32.00	1.00	2	10.010	●
12.000	12.000	11.500	83.00	22.00	38.00	0.50	2	12.005	●
12.000	12.000	11.500	83.00	22.00	38.00	1.00	2	12.010	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3111	3562
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HA	HA
Helix	30°	30°
Tolerance	h10	h10
Discount group	117	117
Techn. data page	1098	1098



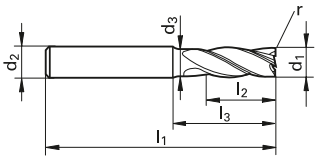
d1	d2	d3	l1	l2	l3	r	Z	Code no.	Availability	
mm	mm	mm	mm	mm	mm	mm				
6.000	6.000	5.700	57.00	13.00	21.00	0.50	4	6.005	●	●
6.000	6.000	5.700	57.00	13.00	21.00	1.00	4	6.010	●	●
8.000	8.000	7.700	63.00	19.00	27.00	0.50	4	8.005	●	●
8.000	8.000	7.700	63.00	19.00	27.00	1.00	4	8.010	●	●
8.000	8.000	7.700	63.00	19.00	27.00	1.50	4	8.015	●	●
8.000	8.000	7.700	63.00	19.00	27.00	2.00	4	8.020	●	●
10.000	10.000	9.500	72.00	22.00	32.00	0.50	4	10.005	●	●
10.000	10.000	9.500	72.00	22.00	32.00	0.80	4	10.008	●	●
10.000	10.000	9.500	72.00	22.00	32.00	1.00	4	10.010	●	●
10.000	10.000	9.500	72.00	22.00	32.00	1.50	4	10.015	●	●
10.000	10.000	9.500	72.00	22.00	32.00	2.00	4	10.020	●	●
12.000	12.000	11.500	83.00	26.00	38.00	0.50	4	12.005	●	●
12.000	12.000	11.500	83.00	26.00	38.00	0.80	4	12.008	●	●
12.000	12.000	11.500	83.00	26.00	38.00	1.00	4	12.010	●	●
12.000	12.000	11.500	83.00	26.00	38.00	1.50	4	12.015	●	●
12.000	12.000	11.500	83.00	26.00	38.00	2.00	4	12.020	●	●
16.000	16.000	15.500	92.00	32.00	44.00	1.00	4	16.010	●	●
16.000	16.000	15.500	92.00	32.00	44.00	1.50	4	16.015	●	●
16.000	16.000	15.500	92.00	32.00	44.00	2.00	4	16.020	●	●
20.000	20.000	19.500	104.00	38.00	54.00	1.00	4	20.010	●	●
20.000	20.000	19.500	104.00	38.00	54.00	1.50	4	20.015	●	●
20.000	20.000	19.500	104.00	38.00	54.00	2.00	4	20.020	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	6723
Standard	DIN 6527 L
Tool material	Solid carbide
Carbide grade	K/P
Surface	D
Type	N
Shank design	HA
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	1098

NEW

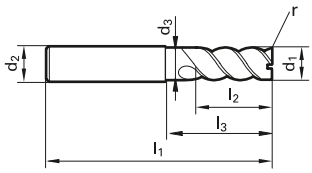


d1	d2	d3	l1	l2	l3	r	Z	Code no.	Availability
mm	mm	mm	mm	mm	mm	mm			
6.000	6.000	5.700	57.00	13.00	21.00	0.50	4	6.005	●
6.000	6.000	5.700	57.00	13.00	21.00	1.00	4	6.010	●
8.000	8.000	8.700	63.00	19.00	27.00	0.50	4	8.005	●
8.000	8.000	8.700	63.00	19.00	27.00	1.00	4	8.010	●
10.000	10.000	9.500	72.00	22.00	32.00	0.50	4	10.005	●
10.000	10.000	9.500	72.00	22.00	32.00	1.00	4	10.010	●
12.000	12.000	11.500	83.00	26.00	38.00	0.50	4	12.005	●
12.000	12.000	11.500	83.00	26.00	38.00	1.00	4	12.010	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3563
Standard	~ DIN 6527 L
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	NH
Shank design	HA
Helix	45°
Tolerance	h10
Discount group	106
Techn. data page	1093

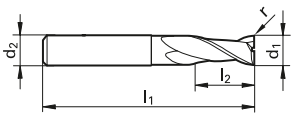


d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	r mm	Z	Code no.	Availability
6.000	6.000	5.700	57.00	13.00	21.00	0.50	6	6.005	●
6.000	6.000	5.700	57.00	13.00	21.00	1.00	6	6.010	●
8.000	8.000	7.700	63.00	19.00	27.00	0.50	6	8.005	●
8.000	8.000	7.700	63.00	19.00	27.00	1.00	6	8.010	●
8.000	8.000	7.700	63.00	19.00	27.00	1.50	6	8.015	●
8.000	8.000	7.700	63.00	19.00	27.00	2.00	6	8.020	●
10.000	10.000	9.500	72.00	22.00	32.00	0.50	6	10.005	●
10.000	10.000	9.500	72.00	22.00	32.00	1.00	6	10.010	●
10.000	10.000	9.500	72.00	22.00	32.00	1.50	6	10.015	●
10.000	10.000	9.500	72.00	22.00	32.00	2.00	6	10.020	●
12.000	12.000	11.500	83.00	26.00	38.00	0.50	6	12.005	●
12.000	12.000	11.500	83.00	26.00	38.00	1.00	6	12.010	●
12.000	12.000	11.500	83.00	26.00	38.00	1.50	6	12.015	●
12.000	12.000	11.500	83.00	26.00	38.00	2.00	6	12.020	●
16.000	16.000	15.500	92.00	32.00	44.00	0.50	6	16.005	●
16.000	16.000	15.500	92.00	32.00	44.00	1.00	6	16.010	●
16.000	16.000	15.500	92.00	32.00	44.00	1.50	6	16.015	●
16.000	16.000	15.500	92.00	32.00	44.00	2.00	6	16.020	●
20.000	20.000	19.500	104.00	38.00	54.00	0.50	8	20.005	●
20.000	20.000	19.500	104.00	38.00	54.00	1.00	8	20.010	●
20.000	20.000	19.500	104.00	38.00	54.00	1.50	8	20.015	●
20.000	20.000	19.500	104.00	38.00	54.00	2.00	8	20.020	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

for materials < 54 HRC, centre cutting

Guhring no.	3863
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1097

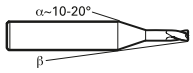


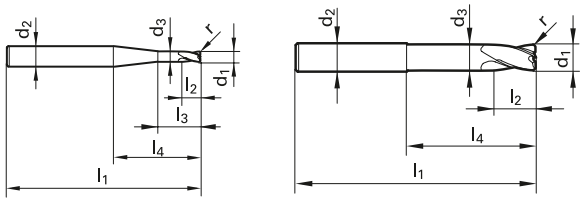
d1	d2	d3	l1	l2	l3	l4	r	β	Z	Availability
mm	mm	mm	mm	mm	mm	mm	mm	°		
4.000	4.000		80.00	8.00		17.50	0.50		2	●
6.000	6.000		100.00	12.00		24.00	1.00		2	●
8.000	8.000		100.00	16.00		29.00	1.00		2	●
10.000	10.000		100.00	20.00		35.00	1.00		2	●
12.000	12.000		120.00	24.00		42.00	1.50		2	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

for materials < 54 HRC, centre cutting

Guhring no.	3856
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1097



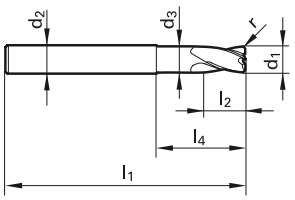


d1	d2	d3	l1	l2	l3	l4	r	β	Z	Availability
mm	mm	mm	mm	mm	mm	mm	mm	°		
2.000	6.000	1.800	57.00	3.00	6.20	20.00	0.50	5.70	2	●
3.000	6.000	2.800	57.00	3.50	8.40	20.00	0.50	4.30	2	●
4.000	6.000	3.800	57.00	4.00	9.40	20.00	1.00	2.90	2	●
6.000	6.000	5.600	57.00	6.00		20.00	2.00		2	●
8.000	8.000	7.600	63.00	7.00		26.00	2.00		2	●
10.000	10.000	9.600	72.00	8.00		30.00	3.00		2	●
12.000	12.000	11.500	83.00	10.00		35.00	4.00		2	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

for materials < 54 HRC, centre cutting

Guhring no.	3865
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1097

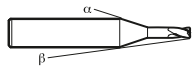


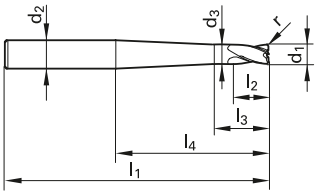
d1	d2	d3	l1	l2	l3	l4	r	β	Z	Availability
mm	mm	mm	mm	mm	mm	mm	mm	°		
6.000	6.000	5.600	80.00	6.00		40.00	2.00		2	●
8.000	8.000	7.600	100.00	7.00		60.00	2.00		2	●
10.000	10.000	9.600	120.00	8.00		75.00	3.00		2	●
12.000	12.000	11.500	120.00	10.00		70.00	4.00		2	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

for materials < 54 HRC, centre cutting

Guhring no.	3860
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1097



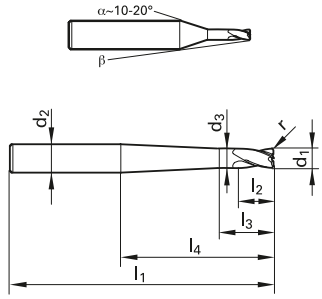


d1	d2	d3	l1	l2	l3	l4	r	β	Z	Availability
mm	mm	mm	mm	mm	mm	mm	mm	°		
2.000	6.000	1.800	80.00	3.00	8.00	40.00	0.50	1.00	2	●
3.000	6.000	2.800	80.00	3.50	12.00	45.00	0.50	1.00	2	●
4.000	6.000	3.800	100.00	4.00	20.00	60.00	0.50	1.00	2	●
6.000	8.000	5.600	120.00	6.00	25.00	80.00	1.00	1.00	2	●
8.000	10.000	7.600	150.00	7.00	20.00	105.00	1.00	0.60	2	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

for materials < 54 HRC, centre cutting

Guhring no.	3859
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1097

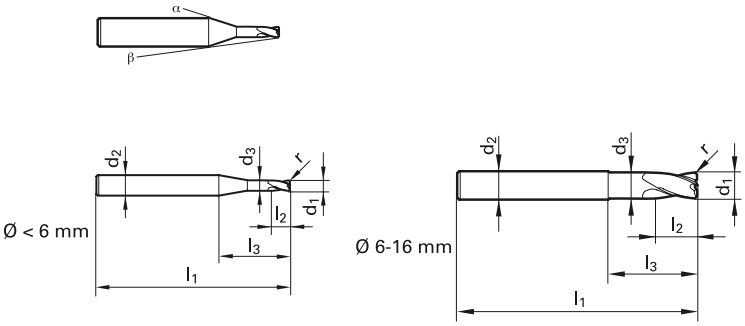


d1	d2	d3	l1	l2	l3	l4	r	β	Z	Availability
mm	mm	mm	mm	mm	mm	mm	mm	°		
2.000	6.000	1.800	80.00	3.00	8.00	40.00	0.50	2.90	2	●
3.000	6.000	2.800	80.00	3.50	12.00	40.00	0.50	2.20	2	●
4.000	6.000	3.800	80.00	4.00	20.00	40.00	1.00	1.40	2	●
6.000	8.000	5.600	100.00	6.00	25.00	60.00	2.00	1.00	2	●
8.000	10.000	7.600	120.00	7.00	30.00	75.00	2.00	0.80	2	●
10.000	12.000	9.600	120.00	8.00	30.00	70.00	3.00	0.80	2	●
12.000	16.000	11.500	150.00	10.00	35.00	100.00	4.00	1.20	2	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

for materials < 62 HRC, centre cutting

Guhring no.	3361
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	H
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1097

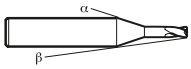


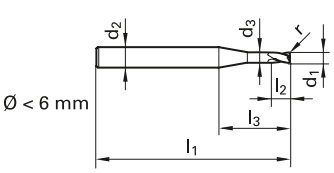
d1	d2	d3	l1	l2	l3	R	Z	Availability
mm	mm	mm	mm	mm	mm	mm		
3.000	6.000	2.700	57.00	5.00	21.00	0.50	4	●
4.000	6.000	3.700	57.00	6.00	21.00	0.50	4	●
5.000	6.000	4.700	57.00	8.00	21.00	0.50	4	●
6.000	6.000	5.700	57.00	9.00	21.00	1.00	4	●
8.000	8.000	7.700	63.00	12.00	27.00	1.00	4	●
10.000	10.000	9.500	72.00	15.00	32.00	1.50	4	●
12.000	12.000	11.500	83.00	18.00	38.00	1.50	4	●
16.000	16.000	15.500	92.00	24.00	44.00	2.00	4	●

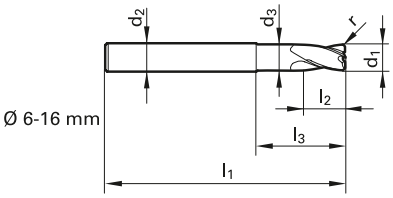
○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

for materials < 62 HRC, centre cutting

Guhring no.	3362
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	H
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1097





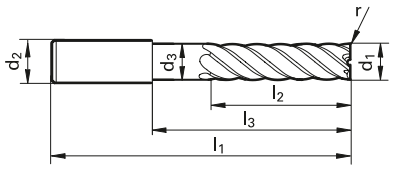


d1	d2	d3	l1	l2	l3	R	Z	Availability
mm	mm	mm	mm	mm	mm	mm		
6.000	6.000	5.700	75.00	9.00	39.00	1.00	4	●
8.000	8.000	7.700	100.00	12.00	64.00	1.00	4	●
10.000	10.000	9.500	100.00	15.00	60.00	1.50	4	●
12.000	12.000	11.500	150.00	18.00	105.00	1.50	4	●
16.000	16.000	15.500	150.00	24.00	102.00	2.00	4	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

for superfine finishing of materials < 62 HRC

Guhring no.	3363
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	H
Shank design	HA
Helix	55°
Tolerance	h10
Discount group	106
Techn. data page	1093

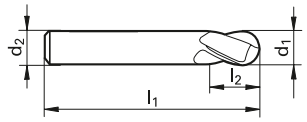


d1	d2	d3	l1	l2	l3	R	Z	Availability
mm	mm	mm	mm	mm	mm	mm		
6.000	6.000	5.700	75.00	13.00	39.00	0.50	6	●
8.000	8.000	7.700	100.00	19.00	64.00	0.50	6	●
10.000	10.000	9.500	100.00	22.00	60.00	0.50	6	●
12.000	12.000	11.500	150.00	26.00	105.00	1.00	6	●
16.000	16.000	15.500	150.00	32.00	102.00	1.00	6	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3308	3679	6724
Standard		DIN 6527 L	
Tool material		Solid carbide	
Carbide grade	K	K/P	
Surface	◯	(F)	(D)
Type	N	N	N
Shank design	HA	HA	HA
Helix	30°	30°	30°
Tolerance	h10	h10	h10
Discount group	117	117	106
Techn. data page	1100	1100	1100
			NEW

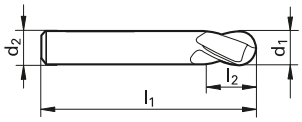


d1	d2	l1	l2	Z	Code no.	Availability		
mm	mm	mm	mm					
0.500	3.000	38.00	1.00	2	0.500	●	●	
0.800	3.000	38.00	1.00	2	0.800	●	●	
1.000	3.000	38.00	2.00	2	1.000	●	●	
1.500	3.000	38.00	3.00	2	1.500	●	●	
2.000	6.000	57.00	6.00	2	2.000	●	●	
3.000	6.000	57.00	7.00	2	3.000	●	●	●
4.000	6.000	57.00	8.00	2	4.000	●	●	●
5.000	6.000	57.00	10.00	2	5.000	●	●	●
6.000	6.000	57.00	10.00	2	6.000	●	●	●
8.000	8.000	63.00	16.00	2	8.000	●	●	●
10.000	10.000	72.00	19.00	2	10.000	●	●	●
12.000	12.000	83.00	22.00	2	12.000	●	●	●
14.000	14.000	83.00	22.00	2	14.000	●	●	
14.000	16.000	92.00	26.00	2	14.001	❍	❍	
16.000	16.000	92.00	26.00	2	16.000	●	●	
18.000	18.000	92.00	26.00	2	18.000	●	●	
18.000	20.000	104.00	32.00	2	18.001	❍	❍	
20.000	20.000	104.00	32.00	2	20.000	●	●	

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

centre cutting

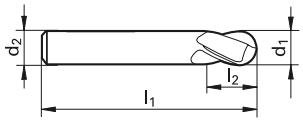
Guhring no.	3024	3049
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HB	HB
Helix	30°	30°
Tolerance	h10	h10
Discount group	117	117
Techn. data page	1100	1100



d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability	
3.000	6.000	57.00	7.00	2	3.000	●	●
4.000	6.000	57.00	8.00	2	4.000	●	●
5.000	6.000	57.00	10.00	2	5.000	●	●
6.000	6.000	57.00	10.00	2	6.000	●	●
8.000	8.000	63.00	16.00	2	8.000	●	●
10.000	10.000	72.00	19.00	2	10.000	●	●
12.000	12.000	83.00	22.00	2	12.000	●	●
14.000	14.000	83.00	22.00	2	14.000	●	●
16.000	16.000	92.00	26.00	2	16.000	●	●
18.000	18.000	92.00	26.00	2	18.000	●	●
20.000	20.000	104.00	32.00	2	20.000	●	●

centre cutting

Guhring no.	3014	3030
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HA	HA
Helix	30°	30°
Tolerance	h10	h10
Discount group	117	117
Techn. data page	1100	1100



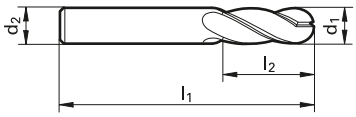
d1 mm	d2 mm	l1 mm	l2 mm	Z	Availability	
3.000	3.000	75.00	20.00	2	●	●
4.000	4.000	75.00	25.00	2	●	●
5.000	5.000	75.00	30.00	2	●	●
6.000	6.000	75.00	30.00	2	●	●
8.000	8.000	100.00	40.00	2	●	●
10.000	10.000	100.00	40.00	2	●	●
12.000	12.000	150.00	45.00	2	●	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Ball nose end mills (4-fluted)

centre cutting

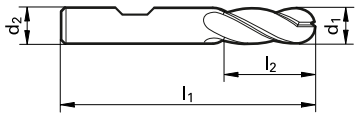
Guhring no.	3306	3727
Standard	DIN 6528	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HA	HA
Helix	30°	30°
Tolerance	h10	h10
Discount group	117	117
Techn. data page	1100	1100



d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability	
4.000	4.000	50.00	11.00	4	4.000	●	●
5.000	5.000	50.00	13.00	4	5.000	●	●
6.000	6.000	57.00	13.00	4	6.000	●	●
8.000	8.000	63.00	19.00	4	8.000	●	●
10.000	10.000	72.00	22.00	4	10.000	●	●
12.000	12.000	83.00	26.00	4	12.000	●	●
14.000	14.000	83.00	26.00	4	14.000	●	●
14.000	16.000	92.00	32.00	4	14.001	○	○
16.000	16.000	92.00	32.00	4	16.000	●	●
18.000	18.000	92.00	32.00	4	18.000	●	●
18.000	20.000	104.00	38.00	4	18.001	○	○
20.000	20.000	104.00	38.00	4	20.000	●	●

centre cutting

Guhring no.	3026	3050
Standard	DIN 6527 L	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	HB	HB
Helix	30°	30°
Tolerance	h10	h10
Discount group	117	117
Techn. data page	1100	1100



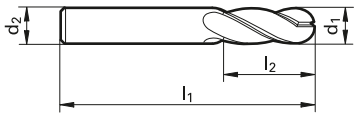
d1 mm	d2 mm	l1 mm	l2 mm	Z	Code no.	Availability	
3.000	6.000	57.00	8.00	4	3.000	●	●
4.000	6.000	57.00	11.00	4	4.000	●	●
5.000	6.000	57.00	13.00	4	5.000	●	●
6.000	6.000	57.00	13.00	4	6.000	●	●
8.000	8.000	63.00	19.00	4	8.000	●	●
10.000	10.000	72.00	22.00	4	10.000	●	●
12.000	12.000	83.00	26.00	4	12.000	●	●
14.000	14.000	83.00	26.00	4	14.000	●	●
16.000	16.000	92.00	32.00	4	16.000	●	●
18.000	18.000	92.00	32.00	4	18.000	●	●
20.000	20.000	104.00	38.00	4	20.000	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3015	3043	6725
Standard		Guhring std.	
Tool material		Solid carbide	
Carbide grade	K	K/P	
Surface	◯	F	D
Type	N	N	N
Shank design	HA	HA	HA
Helix	30°	30°	30°
Tolerance	h10	h10	h10
Discount group	117	117	106
Techn. data page	1100	1100	1100

NEW



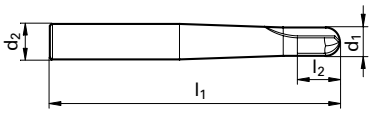
d1 mm	d2 mm	l1 mm	l2 mm	Z	Availability		
3.000	3.000	75.00	20.00	4	●	●	●
4.000	4.000	75.00	25.00	4	●	●	●
5.000	5.000	75.00	30.00	4	●	●	●
6.000	6.000	75.00	30.00	4	●	●	●
8.000	8.000	100.00	40.00	4	●	●	●
10.000	10.000	100.00	40.00	4	●	●	●
12.000	12.000	150.00	45.00	4	●	●	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

GF 200 B - ball nose pr. cutters

for materials < 48 HRC, centre cutting

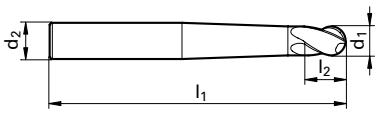
Guhring no.	3044
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	N
Shank design	HA
Helix	0°
Tolerance	h10
Discount group	106
Techn. data page	-



d1	d2	l1	l2	Z	Availability
mm	mm	mm	mm		
3.000	6.000	75.00	4.00	2	❍
4.000	6.000	75.00	5.00	2	❍
5.000	6.000	75.00	6.00	2	❍
6.000	8.000	75.00	8.00	2	❍
8.000	10.000	100.00	12.00	2	❍
10.000	12.000	100.00	15.00	2	❍

for materials < 48 HRC, centre cutting

Guhring no.	3045
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	N
Shank design	HA
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	-

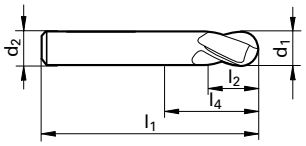


d1	d2	l1	l2	Z	Availability
mm	mm	mm	mm		
3.000	6.000	75.00	4.00	4	❍
4.000	6.000	75.00	5.00	4	❍
5.000	6.000	75.00	6.00	4	❍
6.000	8.000	75.00	8.00	4	❍
8.000	10.000	100.00	12.00	4	❍
10.000	12.000	100.00	15.00	4	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

for materials < 54 HRC, centre cutting

Guhring no.	3854
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1096

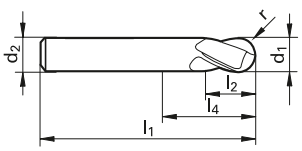


d1	d2	d3	l1	l2	l3	l4	r	β	Z	Availability
mm	mm	mm	mm	mm	mm	mm	mm	°		
6.000	6.000		57.00	12.00		24.00	3.00		2	●
8.000	8.000		63.00	16.00		29.00	4.00		2	●
10.000	10.000		72.00	20.00		35.00	5.00		2	●
12.000	12.000		83.00	24.00		42.00	6.00		2	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

for materials < 54 HRC, centre cutting

Guhring no.	3866
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1096

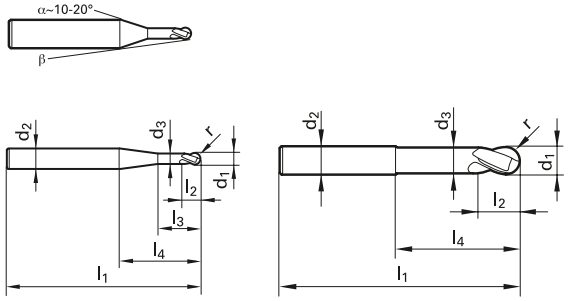


d1	d2	d3	l1	l2	l3	l4	r	β	Z	Availability
mm	mm	mm	mm	mm	mm	mm	mm	°		
4.000	4.000		80.00	8.00		17.50	2.00		2	●
6.000	6.000		100.00	12.00		24.00	3.00		2	●
8.000	8.000		100.00	16.00		29.00	4.00		2	●
10.000	10.000		100.00	20.00		35.00	5.00		2	●
12.000	12.000		120.00	24.00		42.00	6.00		2	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

for materials < 54 HRC, centre cutting

Guhring no.	3848
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1096

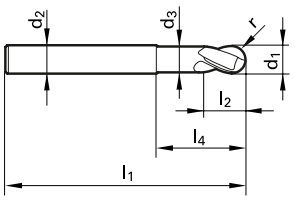


d1	d2	d3	l1	l2	l3	l4	r	β	Z	Availability
mm	mm	mm	mm	mm	mm	mm	mm	°		
2.000	6.000	1.800	57.00	3.00	6.20	20.00	1.00	5.70	2	●
3.000	6.000	2.800	57.00	3.50	8.40	20.00	1.50	4.30	2	●
4.000	6.000	3.800	57.00	4.00	9.40	20.00	2.00	2.90	2	●
6.000	6.000	5.600	57.00	6.00		20.00	3.00		2	●
8.000	8.000	7.600	63.00	7.00		26.00	4.00		2	●
10.000	10.000	9.600	72.00	8.00		30.00	5.00		2	●
12.000	12.000	11.500	83.00	10.00		35.00	6.00		2	●

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown (A) TiAlN (a) TiAlN nanoA (A) TiAlN SuperA

for materials < 54 HRC, centre cutting

Guhring no.	3855
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1096

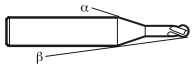


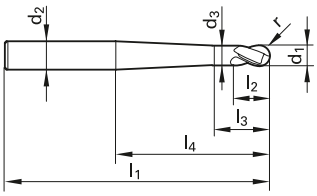
d1	d2	d3	l1	l2	l3	l4	r	β	Z	Availability
mm	mm	mm	mm	mm	mm	mm	mm	°		
6.000	6.000	5.600	80.00	6.00		40.00	3.00		2	●
8.000	8.000	7.600	100.00	7.00		60.00	4.00		2	●
10.000	10.000	9.600	120.00	8.00		75.00	5.00		2	●
12.000	12.000	11.500	120.00	10.00		70.00	6.00		2	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

for materials < 54 HRC, centre cutting

Guhring no.	3853
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1096



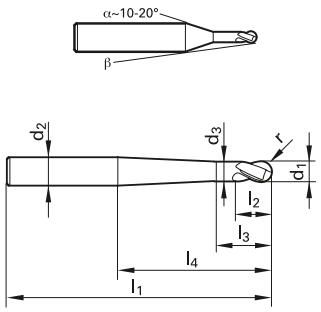


d1	d2	d3	l1	l2	l3	l4	r	β	Z	Availability
mm	mm	mm	mm	mm	mm	mm	mm	°		
2.000	6.000	1.800	80.00	3.00	8.00	40.00	1.00	1.00	2	●
3.000	6.000	2.800	80.00	3.50	12.00	45.00	1.50	1.00	2	●
4.000	6.000	3.800	100.00	4.00	20.00	60.00	2.00	1.00	2	●
6.000	8.000	5.600	120.00	6.00	25.00	80.00	3.00	1.00	2	●
8.000	10.000	7.600	150.00	7.00	20.00	105.00	4.00	0.60	2	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

for materials < 54 HRC, centre cutting

Guhring no.	3849
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1096

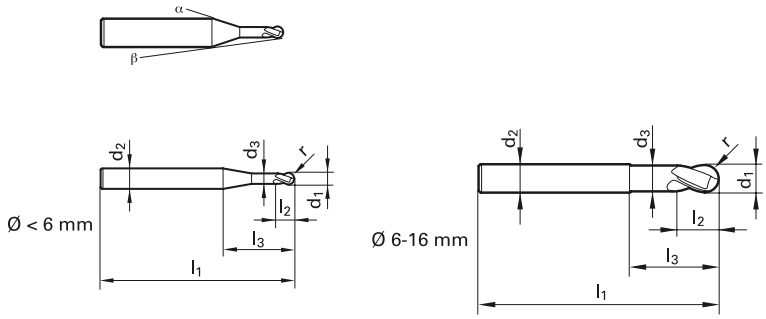


d1	d2	d3	l1	l2	l3	l4	r	β	Z	Availability
mm	mm	mm	mm	mm	mm	mm	mm	°		
2.000	6.000	1.800	80.00	3.00	8.00	40.00	1.00	2.90	2	●
3.000	6.000	2.800	80.00	3.50	12.00	40.00	1.50	2.20	2	●
4.000	6.000	3.800	80.00	4.00	20.00	40.00	2.00	1.40	2	●
5.000	6.000	4.700	80.00	5.00	25.00	40.00	2.50	0.70	2	●
6.000	8.000	5.600	100.00	6.00	25.00	60.00	3.00	1.00	2	●
8.000	10.000	7.600	120.00	7.00	30.00	75.00	4.00	0.80	2	●
10.000	12.000	9.600	120.00	8.00	30.00	70.00	5.00	0.80	2	●
12.000	16.000	11.500	150.00	10.00	35.00	100.00	6.00	1.20	2	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

for materials < 62 HRC, centre cutting

Guhring no.	3359
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	H
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1096

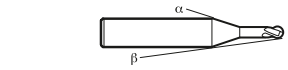


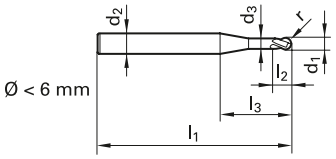
d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	r mm	Z	Code no.	Availability
0.500	3.000	0.400	38.00	0.75	10.00	0.25	2	0.500	●
0.800	3.000	0.700	38.00	1.20	10.00	0.40	2	0.800	●
1.000	3.000	0.900	38.00	1.50	10.00	0.50	2	1.000	●
1.500	3.000	1.400	38.00	2.25	10.00	0.75	2	1.500	●
2.000	6.000	1.900	57.00	3.00	21.00	1.00	2	2.000	●
3.000	6.000	2.700	57.00	5.00	21.00	1.50	2	3.000	●
4.000	6.000	3.700	57.00	6.00	21.00	2.00	2	4.000	●
5.000	6.000	4.700	57.00	8.00	21.00	2.50	2	5.000	●
6.000	6.000	5.700	57.00	9.00	21.00	3.00	2	6.000	●
8.000	8.000	7.700	63.00	12.00	27.00	4.00	2	8.000	●
10.000	10.000	9.500	72.00	15.00	32.00	5.00	2	10.000	●
12.000	12.000	11.500	83.00	18.00	38.00	6.00	2	12.000	●
16.000	16.000	15.500	92.00	24.00	44.00	8.00	2	16.000	●

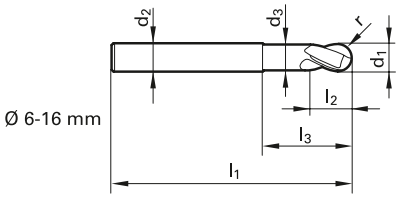
○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

for materials < 62 HRC, centre cutting

Guhring no.	3360
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	H
Shank design	HA
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1096







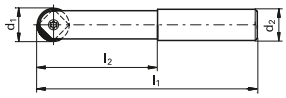
d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	r mm	Z	Code no.	Availability
3.000	6.000	2.700	75.00	5.00	39.00	1.50	2	3.000	●
4.000	6.000	3.700	75.00	6.00	39.00	2.00	2	4.000	●
5.000	6.000	4.700	75.00	8.00	39.00	2.50	2	5.000	●
6.000	6.000	5.700	75.00	9.00	39.00	3.00	2	6.000	●
8.000	8.000	7.700	100.00	12.00	64.00	4.00	2	8.000	●
10.000	10.000	9.500	100.00	15.00	60.00	5.00	2	10.000	●
12.000	12.000	11.500	150.00	18.00	105.00	6.00	2	12.000	●
16.000	16.000	15.500	150.00	24.00	102.00	8.00	2	16.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

GF 200 WP

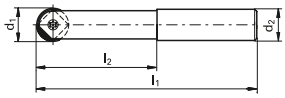
HPC radius end mills

Guhring no.	1941
Standard	Guhring std.
Tool material	
Carbide grade	
Surface	
Type	GF 200
Shank design	HA
Helix	
Tolerance	
Discount group	140
Techn. data page	-



d1 mm	d2 mm	l1 mm	l2 mm	Availability
10.000	10.000	94.20	45.00	○
12.000	12.000	109.20	50.00	○
16.000	16.000	124.00	65.00	○
20.000	20.000	139.00	75.00	○
25.000	25.000	164.00	90.00	○
32.000	32.000	184.00	105.00	○

Guhring no.	1942
Standard	Guhring std.
Tool material	
Carbide grade	
Surface	
Type	GF 200
Shank design	HA
Helix	
Tolerance	
Discount group	140
Techn. data page	-



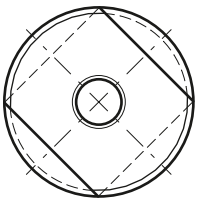
d1 mm	d2 mm	l1 mm	l2 mm	Availability
10.000	12.000	149.20	35.00	○
12.000	16.000	159.20	60.00	○
16.000	20.000	173.50	70.00	○
20.000	25.000	188.50	80.00	○
25.000	32.000	209.00	100.00	○
32.000	40.000	239.00	125.00	○

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Torx screwdriver

Guhring no.	1947	2520
Standard	Guhring std.	
Tool material	Cermet	Solid carbide
Carbide grade	P15/P20	K/P
Surface	○	F
Cutting direction	right-hand	right-hand
Discount group	141	141
Techn. data page	-	-

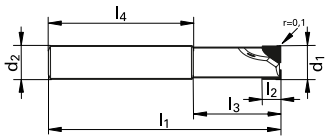
Guhring no.	1612
Standard	Guhring std.
Tool material	
Carbide grade	
Surface	
Cutting direction	
Discount group	140
Techn. data page	-



d1 mm	b mm	Availability		Torx	Code no.	Availability
10.000	2.500	○	●	T8	8.000	●
12.000	2.500	○	●	T15	15.001	●
16.000	3.200	○	●	T20	20.001	●
20.000	4.000	○	●			
25.000	4.600	○	●			
32.000	5.000	○	○			

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

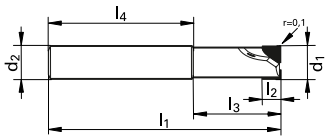
Guhring no.	5492
Standard	Guhring std.
Tool material	PCD
Surface	◯
Type	
Shank design	HA
Helix	0°
Cooling	axial
Discount group	110
Techn. data page	-



d1	d2	l1	l2	l3	l4	Z	Code no.	Availability
mm	mm	mm	mm	mm	mm			
4.000	6.000	51.00	6.00	15.00	36.00	2	4.000	●
5.000	6.000	51.00	8.00	15.00	36.00	2	5.000	●
6.000	6.000	57.00	8.00	21.00	36.00	2	6.000	●
8.000	8.000	63.00	8.00	27.00	36.00	2	8.000	●
8.000	8.000	63.00	12.00	27.00	36.00	2	8.001	●
10.000	10.000	72.00	8.00	32.00	40.00	2	10.000	●
10.000	10.000	72.00	16.00	32.00	40.00	2	10.001	●
12.000	12.000	83.00	8.00	38.00	45.00	2	12.000	●
12.000	12.000	83.00	16.00	38.00	45.00	2	12.001	●
14.000	14.000	83.00	8.00	38.00	45.00	2	14.000	●
14.000	14.000	83.00	16.00	38.00	45.00	2	14.001	●
16.000	16.000	100.00	12.00	52.00	48.00	2	16.000	●
16.000	16.000	100.00	20.00	52.00	48.00	2	16.001	●
18.000	18.000	100.00	12.00	52.00	48.00	2	18.000	●
18.000	18.000	100.00	20.00	52.00	48.00	2	18.001	●
20.000	20.000	100.00	12.00	50.00	50.00	2	20.000	●
20.000	20.000	100.00	20.00	50.00	50.00	2	20.001	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5493
Standard	Guhring std.
Tool material	PCD
Surface	◯
Type	
Shank design	DZ
Helix	0°
Cooling	axial
Discount group	110
Techn. data page	-

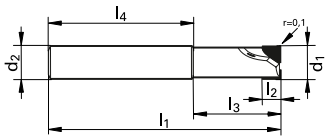


d1	d2	l1	l2	l3	l4	Z	Code no.	Availability
mm	mm	mm	mm	mm	mm			
4.000	6.000	70.00	6.00	15.00	55.00	2	4.000	●
5.000	6.000	70.00	8.00	15.00	55.00	2	5.000	●
6.000	6.000	75.00	8.00	21.00	54.00	2	6.000	●
8.000	8.000	100.00	8.00	27.00	73.00	2	8.000	●
8.000	8.000	100.00	12.00	27.00	73.00	2	8.001	●
10.000	10.000	100.00	8.00	32.00	68.00	2	10.000	●
10.000	10.000	100.00	16.00	32.00	68.00	2	10.001	●
12.000	12.000	100.00	8.00	38.00	62.00	2	12.000	●
12.000	12.000	100.00	16.00	38.00	62.00	2	12.001	●
14.000	14.000	100.00	8.00	38.00	62.00	2	14.000	●
14.000	14.000	100.00	16.00	38.00	62.00	2	14.001	●
16.000	16.000	150.00	12.00	52.00	98.00	2	16.000	●
16.000	16.000	150.00	20.00	52.00	98.00	2	16.001	●
18.000	18.000	125.00	12.00	52.00	73.00	2	18.000	●
18.000	18.000	125.00	20.00	52.00	73.00	2	18.001	●
18.000	18.000	150.00	20.00	52.00	98.00	2	18.002	●
18.000	18.000	150.00	12.00	52.00	98.00	2	18.003	●
20.000	20.000	150.00	12.00	50.00	100.00	2	20.000	●
20.000	20.000	150.00	20.00	50.00	100.00	2	20.001	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Guhring no.	5495
Standard	Guhring std.
Tool material	PCD
Surface	◯
Type	
Shank design	HA
Helix	0°
Cooling	axial
Discount group	110
Techn. data page	

NEW



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14.000	14.000	83.00	16.00	38.00	45.00	3	14.001	●
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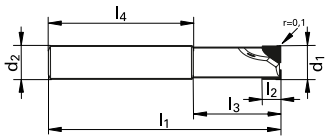
16.000	16.000	100.00	20.00	52.00	48.00	3	16.001	●
18.000	18.000	100.00	12.00	52.00	48.00	3	18.000	●
18.000	18.000	100.00	20.00	52.00	48.00	3	18.001	●
20.000	20.000	100.00	12.00	50.00	50.00	3	20.000	●
20.000	20.000	100.00	20.00	50.00	50.00	3	20.001	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5496
Standard	Guhring std.
Tool material	PCD
Surface	◯
Type	
Shank design	DZ
Helix	0°
Cooling	axial
Discount group	110
Techn. data page	

NEW



d1	d2	l1	l2	l3	l4	Z	Code no.	Availability
mm	mm	mm	mm	mm	mm			
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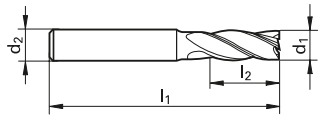
14.000	14.000	100.00	16.00	38.00	62.00	3	14.001	●
16.000	16.000	150.00	12.00	52.00	98.00	3	16.000	●
16.000	16.000	150.00	20.00	52.00	98.00	3	16.001	●
18.000	18.000	150.00	12.00	52.00	98.00	3	18.000	●
18.000	18.000	150.00	20.00	52.00	98.00	3	18.001	●
20.000	20.000	150.00	12.00	50.00	100.00	3	20.000	●
20.000	20.000	150.00	20.00	50.00	100.00	3	20.001	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

RF 40 - Ratio end mills

centre cutting

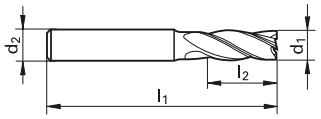
Guhring no.	3429	3705
Standard	DIN 844 K	
Tool material	HSS-E-PM	
Carbide grade		
Surface	◯	F
Type	N	N
Shank design	B	B
Helix	35°/38°	35°/38°
Tolerance	k10	k10
Discount group	112	112
Techn. data page		



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
8.000	10.000	69.00	19.00	4	●	●
10.000	10.000	72.00	22.00	4	●	●
12.000	12.000	83.00	26.00	4	●	●
14.000	12.000	83.00	26.00	4	●	●
16.000	16.000	92.00	32.00	4	●	●
18.000	16.000	92.00	32.00	4	●	●
20.000	20.000	104.00	38.00	4	●	●
25.000	25.000	121.00	45.00	4	❍	
30.000	25.000	121.00	45.00	6	❍	

centre cutting

Guhring no.	3432	3706
Standard	DIN 844 L	
Tool material	HSS-E-PM	
Carbide grade		
Surface	◯	F
Type	N	N
Shank design	B	B
Helix	30°/32°	30°/32°
Tolerance	k10	k10
Discount group	112	112
Techn. data page		



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
16.000	16.000	123.00	63.00	4	●	●
18.000	16.000	123.00	63.00	4	●	●
20.000	20.000	141.00	75.00	4	●	●
25.000	25.000	166.00	90.00	4	●	●
30.000	25.000	166.00	90.00	6	❍	●

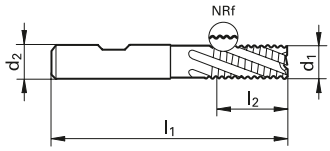
High performance end mills made from HSS-E-PM

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

GS 40 - roughing end mills

fine teeth, with centre cutting

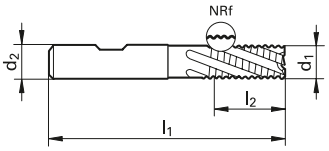
Guhring no.	3322	3668
Standard	DIN 844 K	
Tool material	HSS-E-PM	
Carbide grade		
Surface	○	F
Type	NRf	NRf
Shank design	B	B
Helix	30°	30°
Tolerance	k12	k12
Discount group	112	112
Techn. data page		



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
6.000	6.000	57.00	13.00	3	●	●
8.000	10.000	69.00	19.00	3	●	●
10.000	10.000	72.00	22.00	3	●	●
12.000	12.000	83.00	26.00	3	●	●
14.000	12.000	83.00	26.00	3	●	●
16.000	16.000	92.00	32.00	3	●	●
18.000	16.000	92.00	32.00	3	●	●
20.000	20.000	104.00	38.00	3	●	●

fine teeth, with centre cutting

Guhring no.	3340	3660
Standard	DIN 844 K	
Tool material	HSS-E-PM	
Carbide grade		
Surface	○	F
Type	NRf	NRf
Shank design	B	B
Helix	30°	30°
Tolerance	k12	k12
Discount group	112	112
Techn. data page		



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
6.000	6.000	57.00	13.00	4	●	●
7.000	10.000	66.00	16.00	4	●	●
8.000	10.000	69.00	19.00	4	●	●
9.000	10.000	69.00	19.00	4	●	●
10.000	10.000	72.00	22.00	4	●	●
11.000	12.000	79.00	22.00	4	❍	●
12.000	12.000	83.00	26.00	4	●	●
13.000	12.000	83.00	26.00	4	●	●
14.000	12.000	83.00	26.00	4	●	●
15.000	12.000	83.00	26.00	4	❍	●
16.000	16.000	92.00	32.00	4	●	●
18.000	16.000	92.00	32.00	4	●	●
20.000	20.000	104.00	38.00	4	●	●
25.000	25.000	121.00	45.00	5	●	●
28.000	25.000	121.00	45.00	5	●	●
30.000	25.000	121.00	45.00	5	●	●
32.000	32.000	133.00	53.00	6	●	●

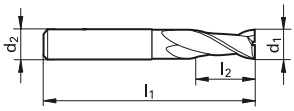
High performance end mills made from HSS-E-PM

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Slot drills (2-fluted)

centre cutting

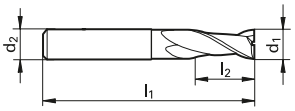
Guhring no.	3451	3663
Standard	DIN 327	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	N	N
Shank design	B	B
Helix	30°	30°
Tolerance	e8/h10	e8/h10
Discount group	112	112
Techn. data page		



d1 mm		d2 mm	l1 mm	l2 mm	Z	Availability	
1.000	h10	6.000	47.00	2.00	2	●	●
1.500	h10	6.000	47.00	3.00	2	●	●
2.000	e8	6.000	48.00	4.00	2	●	●
2.500	e8	6.000	49.00	5.00	2	●	●
3.000	e8	6.000	49.00	5.00	2	●	●
3.500	h10	6.000	50.00	6.00	2	●	●
4.000	e8	6.000	51.00	7.00	2	●	●
4.500	h10	6.000	51.00	7.00	2	●	●
5.000	e8	6.000	52.00	8.00	2	●	●
5.500	h10	6.000	52.00	8.00	2	●	●
6.000	e8	6.000	52.00	8.00	2	●	●
6.500	h10	10.000	60.00	10.00	2	●	●
7.000	e8	10.000	60.00	10.00	2	●	●
7.500	h10	10.000	60.00	10.00	2	●	●
8.000	e8	10.000	61.00	11.00	2	●	●
8.500	h10	10.000	61.00	11.00	2	●	●
9.000	h10	10.000	61.00	11.00	2	●	●
9.500	h10	10.000	61.00	11.00	2	●	●
10.000	e8	10.000	63.00	13.00	2	●	●
10.500	h10	12.000	70.00	13.00	2	●	●
11.000	h10	12.000	70.00	13.00	2	●	●
11.500	h10	12.000	70.00	13.00	2	●	●
12.000	e8	12.000	73.00	16.00	2	●	●
13.000	h10	12.000	73.00	16.00	2	●	●
14.000	e8	12.000	73.00	16.00	2	●	●
15.000	h10	12.000	73.00	16.00	2	●	●
16.000	e8	16.000	79.00	19.00	2	●	●
17.000	h10	16.000	79.00	19.00	2	●	●
18.000	e8	16.000	79.00	19.00	2	●	●
19.000	h10	16.000	79.00	19.00	2	●	●
20.000	e8	20.000	88.00	22.00	2	●	●
22.000	e8	20.000	88.00	22.00	2	●	●
24.000	e8	25.000	102.00	26.00	2	●	●
25.000	e8	25.000	102.00	26.00	2	●	●

centre cutting

Guhring no.	3452	3694
Standard	DIN 844 K	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	N	N
Shank design	B	B
Helix	30°	30°
Tolerance	e8/h10	e8/h10
Discount group	112	112
Techn. data page		

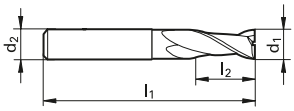


d1 mm		d2 mm	l1 mm	l2 mm	Z	Availability	
3.000	e8	6.000	52.00	8.00	2	●	●
3.500	h10	6.000	54.00	10.00	2	●	●
4.000	e8	6.000	55.00	11.00	2	●	●
4.500	h10	6.000	55.00	11.00	2	●	●
5.000	e8	6.000	57.00	13.00	2	●	●
5.500	h10	6.000	57.00	13.00	2	●	●
6.000	e8	6.000	57.00	13.00	2	●	●
7.000	e8	10.000	66.00	16.00	2	●	●
8.000	e8	10.000	69.00	19.00	2	●	●
10.000	e8	10.000	72.00	22.00	2	●	●
11.000	h10	12.000	79.00	22.00	2	●	○
12.000	e8	12.000	83.00	26.00	2	●	●
13.000	h10	12.000	83.00	26.00	2	○	○
14.000	e8	12.000	83.00	26.00	2	●	●
15.000	h10	12.000	83.00	26.00	2	○	○
16.000	e8	16.000	92.00	32.00	2	●	●
18.000	e8	16.000	92.00	32.00	2	●	●
20.000	e8	20.000	104.00	38.00	2	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

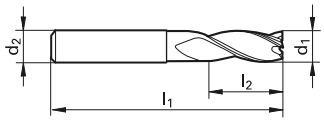
Guhring no.	3453	3695
Standard	DIN 844 L	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	N	N
Shank design	B	B
Helix	30°	30°
Tolerance	h10	h10
Discount group	112	112
Techn. data page		



d1		d2	l1	l2	Z	Availability	
mm		mm	mm	mm			
3.000	h10	6.000	56.00	12.00	2	●	●
4.000	h10	6.000	63.00	19.00	2	●	●
5.000	h10	6.000	68.00	24.00	2	●	●
6.000	h10	6.000	68.00	24.00	2	●	●
8.000	h10	10.000	88.00	38.00	2	●	●
10.000	h10	10.000	95.00	45.00	2	●	●
12.000	h10	12.000	110.00	53.00	2	●	●
14.000	h10	12.000	110.00	53.00	2	●	●
16.000	h10	16.000	123.00	63.00	2	●	●
18.000	h10	16.000	123.00	63.00	2	●	●
20.000	h10	20.000	141.00	75.00	2	●	●

centre cutting

Guhring no.	3458	3651
Standard	DIN 327	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	N	N
Shank design	B	B
Helix	30°	30°
Tolerance	e8/h10	e8/h10
Discount group	112	112
Techn. data page		

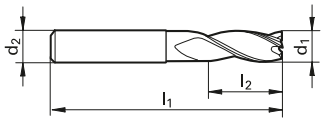


d1		d2	l1	l2	Z	Availability	
mm		mm	mm	mm			
2.800	h10	6.000	49.00	5.00	3	●	●
3.000	e8	6.000	49.00	5.00	3	●	●
3.800	h10	6.000	51.00	7.00	3	●	●
4.000	e8	6.000	51.00	7.00	3	●	●
4.800	h10	6.000	52.00	8.00	3	●	●
5.000	e8	6.000	52.00	8.00	3	●	●
5.750	h10	6.000	52.00	8.00	3	●	●
6.000	e8	6.000	52.00	8.00	3	●	●
6.750	h10	10.000	60.00	10.00	3	○	○
7.000	e8	10.000	60.00	10.00	3	●	●
7.750	h10	10.000	61.00	11.00	3	●	●
8.000	e8	10.000	61.00	11.00	3	●	●
9.700	h10	10.000	63.00	13.00	3	●	●
10.000	e8	10.000	63.00	13.00	3	●	●
11.700	h10	12.000	70.00	13.00	3	●	●
12.000	e8	12.000	73.00	16.00	3	●	●
13.700	h10	12.000	73.00	16.00	3	○	○
14.000	e8	12.000	73.00	16.00	3	●	●
15.700	h10	16.000	79.00	19.00	3	○	○
16.000	e8	16.000	79.00	19.00	3	●	●
18.000	e8	16.000	79.00	19.00	3	●	●
20.000	e8	20.000	88.00	22.00	3	●	●
22.000	e8	20.000	88.00	22.00	3	●	●
25.000	e8	25.000	102.00	26.00	3	●	●
30.000	h10	25.000	102.00	26.00	3	●	●

Slot drills (3-fluted)

centre cutting

Guhring no.	3459	3664
Standard	DIN 844 K	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	N	N
Shank design	B	B
Helix	30°	30°
Tolerance	e8/h10	e8/h10
Discount group	112	112
Techn. data page		



d1 mm		d2 mm	l1 mm	l2 mm	Z	Availability	
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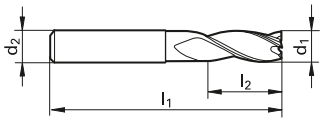
3.000	e8	6.000	52.00	8.00	3	●	●
3.800	h10	6.000	55.00	11.00	3	●	●
4.000	e8	6.000	55.00	11.00	3	●	●
4.800	h10	6.000	57.00	13.00	3	●	●
5.000	e8	6.000	57.00	13.00	3	●	●
5.750	h10	6.000	57.00	13.00	3	●	●
6.000	e8	6.000	57.00	13.00	3	●	●
6.750	h10	10.000	66.00	16.00	3	●	●
7.000	e8	10.000	66.00	16.00	3	●	●
7.750	h10	10.000	69.00	19.00	3	●	●
8.000	e8	10.000	69.00	19.00	3	●	●
9.000	h10	10.000	69.00	19.00	3	●	●
9.700	h10	10.000	72.00	22.00	3	●	●
10.000	e8	10.000	72.00	22.00	3	●	●
11.000	h10	12.000	79.00	22.00	3	●	●
11.700	h10	12.000	79.00	22.00	3	●	●
12.000	e8	12.000	83.00	26.00	3	●	●
13.700	h10	12.000	83.00	26.00	3	●	●
14.000	e8	12.000	83.00	26.00	3	●	●
15.000	h10	12.000	83.00	26.00	3	●	●
15.700	h10	16.000	92.00	32.00	3	●	●
16.000	e8	16.000	92.00	32.00	3	●	●
18.000	e8	16.000	92.00	32.00	3	●	●
20.000	e8	20.000	104.00	38.00	3	●	●

centre cutting

Guhring no.	3460	3836
Standard	DIN 844 L	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	N	N
Shank design	B	B
Helix	30°	30°
Tolerance	h10	h10
Discount group	112	112
Techn. data page		



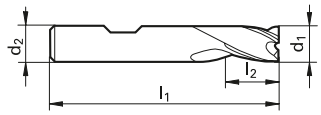
d1 mm		d2 mm	l1 mm	l2 mm	Z	Availability	
3.000	h10	6.000	56.00	12.00	3	●	●
4.000	h10	6.000	63.00	19.00	3	●	●
5.000	h10	6.000	68.00	24.00	3	●	●
6.000	h10	6.000	68.00	24.00	3	●	●
8.000	h10	10.000	88.00	38.00	3	●	●
10.000	h10	10.000	95.00	45.00	3	●	●
12.000	h10	12.000	110.00	53.00	3	●	●
14.000	h10	12.000	110.00	53.00	3	●	●
16.000	h10	16.000	123.00	63.00	3	●	●
18.000	h10	16.000	123.00	63.00	3	●	●
20.000	h10	20.000	141.00	75.00	3	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Mini-End Mill (3-fluted)

centre cutting

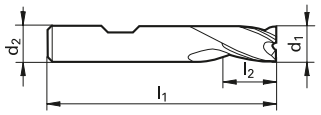
Guhring no.	3142	3144
Standard	Guhring std.	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	N	N
Shank design	B	B
Helix	30°	30°
Tolerance	e8	e8
Discount group	112	112
Techn. data page		



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
3.000	6.000	36.00	5.00	3	●	●
4.000	6.000	38.00	7.00	3	●	●
5.000	6.000	39.00	8.00	3	●	●
6.000	6.000	39.00	8.00	3	●	●
8.000	8.000	43.00	11.00	3	●	●
10.000	10.000	50.00	13.00	3	●	●

centre cutting

Guhring no.	3143	3145
Standard	Guhring std.	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	N	N
Shank design	B	B
Helix	30°	30°
Tolerance	e8	e8
Discount group	112	112
Techn. data page		

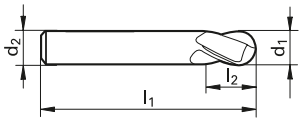


d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
3.000	6.000	39.00	8.00	3	●	●
4.000	6.000	42.00	11.00	3	●	●
5.000	6.000	44.00	13.00	3	●	●
6.000	6.000	44.00	13.00	3	●	●
8.000	8.000	51.00	19.00	3	●	●
10.000	10.000	59.00	22.00	3	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3466	3703
Standard	DIN 327	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	N	N
Shank design	B	B
Helix	30°	30°
Tolerance	e8/h10	e8/h10
Discount group	112	112
Techn. data page		

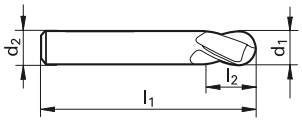


d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
2.000	6.000	48.00	4.00	2	●	●
3.000	6.000	49.00	5.00	2	●	●
4.000	6.000	51.00	7.00	2	●	●
5.000	6.000	52.00	8.00	2	●	●
6.000	6.000	52.00	8.00	2	●	●
7.000	10.000	60.00	10.00	2	●	●
8.000	10.000	61.00	11.00	2	●	●
9.000	10.000	61.00	11.00	2	●	●
10.000	10.000	63.00	13.00	2	●	●
11.000	12.000	70.00	13.00	2		○
12.000	12.000	73.00	16.00	2	●	●
13.000	12.000	73.00	16.00	2	○	●
14.000	12.000	73.00	16.00	2	●	●
15.000	12.000	73.00	16.00	2	○	○
16.000	16.000	79.00	19.00	2	●	●
17.000	16.000	79.00	19.00	2	○	○
18.000	16.000	79.00	19.00	2	●	●
19.000	16.000	79.00	19.00	2	○	○
20.000	20.000	88.00	22.00	2	●	●
22.000	20.000	88.00	22.00	2	○	○
24.000	25.000	102.00	26.00	2	○	○
25.000	25.000	102.00	26.00	2	○	
26.000	25.000	102.00	26.00	2	○	
28.000	25.000	102.00	26.00	2	○	
30.000	25.000	102.00	26.00	2		○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3467	3704
Standard	Guhring std.	
Tool material	M42	
Carbide grade		
Surface	◯	F
Type	N	N
Shank design	B	B
Helix	30°	30°
Tolerance	h10	h10
Discount group	112	112
Techn. data page		



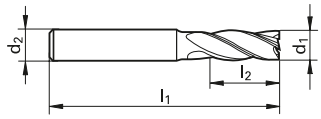
d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
3.000	6.000	56.00	8.00	2	●	●
4.000	6.000	63.00	11.00	2	●	●
5.000	6.000	68.00	13.00	2	●	●
6.000	6.000	68.00	13.00	2	●	●
7.000	10.000	80.00	16.00	2	❍	❍
8.000	10.000	88.00	19.00	2	●	●
10.000	10.000	95.00	22.00	2	●	●
12.000	12.000	110.00	26.00	2	●	●
14.000	12.000	110.00	26.00	2	●	●
15.000	12.000	110.00	26.00	2	❍	❍
16.000	16.000	123.00	32.00	2	●	●
18.000	16.000	123.00	32.00	2	●	●
20.000	20.000	141.00	38.00	2	●	●
24.000	25.000	166.00	45.00	2	❍	
25.000	25.000	166.00	45.00	2	❍	
30.000	25.000	166.00	45.00	2	❍	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

End mills

centre cutting

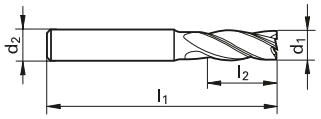
Guhring no.	3428	3670
Standard	DIN 844 K	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	N	N
Shank design	B	B
Helix	30°	30°
Tolerance	k10	k10
Discount group	112	112
Techn. data page		



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
2.000	6.000	51.00	7.00	4	●	●
2.500	6.000	52.00	8.00	4	●	●
3.000	6.000	52.00	8.00	4	●	●
3.500	6.000	54.00	10.00	4	●	●
4.000	6.000	55.00	11.00	4	●	●
4.500	6.000	55.00	11.00	4	●	●
5.000	6.000	57.00	13.00	4	●	●
5.500	6.000	57.00	13.00	4	●	●
6.000	6.000	57.00	13.00	4	●	●
6.500	10.000	66.00	16.00	4	●	●
7.000	10.000	66.00	16.00	4	●	●
7.500	10.000	66.00	16.00	4	●	●
8.000	10.000	69.00	19.00	4	●	●
8.500	10.000	69.00	19.00	4	●	●
9.000	10.000	69.00	19.00	4	●	●
9.500	10.000	69.00	19.00	4	●	●
10.000	10.000	72.00	22.00	4	●	●
11.000	12.000	79.00	22.00	4	●	●
12.000	12.000	83.00	26.00	4	●	●
13.000	12.000	83.00	26.00	4	●	●
14.000	12.000	83.00	26.00	4	●	●
15.000	12.000	83.00	26.00	4	●	●
16.000	16.000	92.00	32.00	4	●	●
18.000	16.000	92.00	32.00	4	●	●
20.000	20.000	104.00	38.00	4	●	●
22.000	20.000	104.00	38.00	6	●	●
24.000	25.000	121.00	45.00	6	●	●
25.000	25.000	121.00	45.00	6	●	●
26.000	25.000	121.00	45.00	6	●	○
28.000	25.000	121.00	45.00	6	●	●
30.000	25.000	121.00	45.00	6	●	●
32.000	32.000	133.00	53.00	6	●	●

centre cutting

Guhring no.	3431	3692
Standard	DIN 844 L	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	N	N
Shank design	B	B
Helix	30°	30°
Tolerance	k10	k10
Discount group	112	112
Techn. data page		

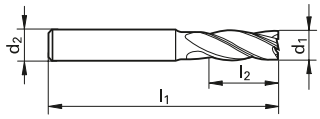


d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
3.000	6.000	56.00	12.00	4	●	●
4.000	6.000	63.00	19.00	4	●	●
5.000	6.000	68.00	24.00	4	●	●
6.000	6.000	68.00	24.00	4	●	●
7.000	10.000	80.00	30.00	4	●	●
8.000	10.000	88.00	38.00	4	●	●
9.000	10.000	88.00	38.00	4	●	●
10.000	10.000	95.00	45.00	4	●	●
11.000	12.000	102.00	45.00	4	●	○
12.000	12.000	110.00	53.00	4	●	●
14.000	12.000	110.00	53.00	4	●	●
15.000	12.000	110.00	53.00	4	●	○
16.000	16.000	123.00	63.00	4	●	●
18.000	16.000	123.00	63.00	4	●	●
20.000	20.000	141.00	75.00	4	●	●
25.000	25.000	166.00	90.00	6	●	●
28.000	25.000	166.00	90.00	6	●	●
30.000	25.000	166.00	90.00	6	●	●
32.000	32.000	186.00	106.00	6	●	●
40.000	40.000	217.00	125.00	6	●	

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3433
Standard	Guhring std.
Tool material	M42
Carbide grade	
Surface	◯
Type	N
Shank design	B
Helix	30°
Tolerance	k10
Discount group	112
Techn. data page	



d1	d2	l1	l2	Z	Availability
mm	mm	mm	mm		
6.000	6.000	79.00	40.00	4	●
8.000	10.000	105.00	56.00	4	●
10.000	10.000	112.00	63.00	4	●
12.000	12.000	125.00	71.00	4	●
14.000	12.000	125.00	71.00	4	●
16.000	16.000	141.00	80.00	4	●
18.000	16.000	141.00	80.00	4	●
20.000	20.000	163.00	100.00	4	●

HSS special milling cutters

For special applications, Guhring also produces special milling cutters to customer requirements. This includes application orientated HSS-E or HSS-E-PM milling cutters with bores, straight or taper shanks coated with the optimal surface finish from the Guhring coating range as for example FIRE or TiAlN.

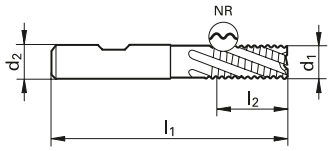
As well as end mills with straight, ISO taper, Morse taper or HSK shank this also includes form relieved and profile relief ground milling cutters, taper and radius milling cutters as well as milling cutters with quick spiral or knuckle-type teeth. Furthermore, we produce straight, staggered and spiral teeth gear cutters as well as side and face cutters.

Contact Guhring or send us your tool drawing and/or workpiece drawing. We offer advice regarding the optimal tool application!

Roughing end mills

centre cutting

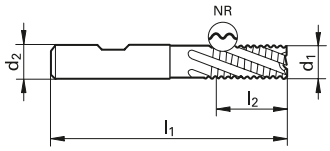
Guhring no.	3346	3690
Standard	DIN 844 K	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	NR	NR
Shank design	B	B
Helix	30°	30°
Tolerance	k12	k12
Discount group	112	112
Techn. data page		



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
6.000	6.000	57.00	13.00	4	●	●
7.000	10.000	66.00	16.00	4	●	●
8.000	10.000	69.00	19.00	4	●	●
9.000	10.000	69.00	19.00	4	●	●
10.000	10.000	72.00	22.00	4	●	●
11.000	12.000	79.00	22.00	4	●	●
12.000	12.000	83.00	26.00	4	●	●
14.000	12.000	83.00	26.00	4	●	●
15.000	12.000	83.00	26.00	4	●	●
16.000	16.000	92.00	32.00	4	●	●
18.000	16.000	92.00	32.00	4	●	●
20.000	20.000	104.00	38.00	4	●	●
22.000	20.000	104.00	38.00	4	●	●
24.000	25.000	121.00	45.00	4	●	○
25.000	25.000	121.00	45.00	4	●	●
26.000	25.000	121.00	45.00	4	●	●
28.000	25.000	121.00	45.00	4	●	●
30.000	25.000	121.00	45.00	4	●	●
32.000	32.000	133.00	53.00	4	●	●
36.000	32.000	133.00	53.00	6		●
40.000	40.000	155.00	63.00	6	●	●
50.000	50.000	177.00	75.00	8	○	○

centre cutting

Guhring no.	3347	3650
Standard	DIN 844 L	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	NR	NR
Shank design	B	B
Helix	30°	30°
Tolerance	k12	k12
Discount group	112	112
Techn. data page		



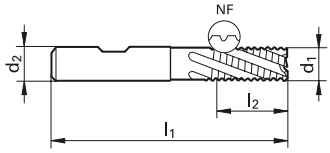
d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
6.000	6.000	68.00	24.00	4	●	●
7.000	10.000	80.00	30.00	4	●	●
8.000	10.000	88.00	38.00	4	●	●
9.000	10.000	88.00	38.00	4	●	●
10.000	10.000	95.00	45.00	4	●	●
12.000	12.000	110.00	53.00	4	●	●
14.000	12.000	110.00	53.00	4	●	●
16.000	16.000	123.00	63.00	4	●	●
18.000	16.000	123.00	63.00	4	●	●
20.000	20.000	141.00	75.00	4	●	●
22.000	20.000	141.00	75.00	4	●	●
25.000	25.000	166.00	90.00	4	●	●
28.000	25.000	166.00	90.00	4	●	●
32.000	32.000	186.00	106.00	4	●	●
36.000	32.000	186.00	106.00	6	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Roughing/finishing end mills

centre cutting

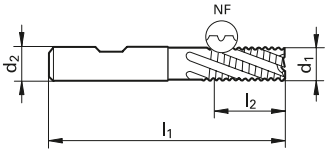
Guhring no.	3343	3669
Standard	DIN 844 K	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	NF	NF
Shank design	B	B
Helix	30°	30°
Tolerance	k12	k12
Discount group	112	112
Techn. data page		



d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
6.000	6.000	57.00	13.00	4	●	●
7.000	10.000	66.00	16.00	4	●	●
8.000	10.000	69.00	19.00	4	●	●
9.000	10.000	69.00	19.00	4	●	●
10.000	10.000	72.00	22.00	4	●	●
11.000	12.000	79.00	22.00	4	●	●
12.000	12.000	83.00	26.00	4	●	●
14.000	12.000	83.00	26.00	4	●	●
15.000	12.000	83.00	26.00	4	●	●
16.000	16.000	92.00	32.00	4	●	●
18.000	16.000	92.00	32.00	4	●	●
20.000	20.000	104.00	38.00	4	●	●
22.000	20.000	104.00	38.00	4	●	●
24.000	25.000	121.00	45.00	4	○	○
25.000	25.000	121.00	45.00	4	●	●
26.000	25.000	121.00	45.00	4	○	○
28.000	25.000	121.00	45.00	4	●	●
30.000	25.000	121.00	45.00	4	●	●
32.000	32.000	133.00	53.00	4	●	●
36.000	32.000	133.00	53.00	6	○	
40.000	40.000	155.00	63.00	6	●	○
50.000	50.000	177.00	75.00	8	○	

centre cutting

Guhring no.	3342	3698
Standard	DIN 844 L	
Tool material	M42	
Carbide grade		
Surface	○	F
Type	NF	NF
Shank design	B	B
Helix	30°	30°
Tolerance	k12	k12
Discount group	112	112
Techn. data page		

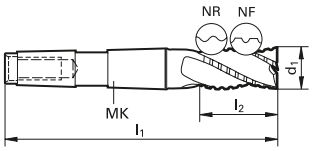


d1	d2	l1	l2	Z	Availability	
mm	mm	mm	mm			
6.000	6.000	68.00	24.00	4	●	●
8.000	10.000	88.00	38.00	4	●	●
10.000	10.000	95.00	45.00	4	●	●
12.000	12.000	110.00	53.00	4	●	●
14.000	12.000	110.00	53.00	4	●	●
16.000	16.000	123.00	63.00	4	●	●
18.000	16.000	123.00	63.00	4	●	●
20.000	20.000	141.00	75.00	4	●	●
22.000	20.000	141.00	75.00	4	●	●
25.000	25.000	166.00	90.00	4	●	●
28.000	25.000	166.00	90.00	4	●	●
32.000	32.000	186.00	106.00	4	●	●
36.000	32.000	186.00	106.00	6	○	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

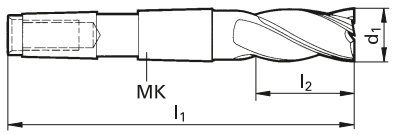
Morse taper end mills

Guhring no.	3118	3117
Standard	DIN 845 K	
Tool material	HSCO	
Carbide grade		
Surface	◯	◯
Type	NF	NR
Shank design	MK	MK
Helix	30°	30°
Tolerance	k12	k12
Discount group	112	112
Techn. data page		



d1	MK	Form	l1	l2	Z	Availability	
mm			mm				
10.000	1	B	92.00	22.00	4	◯	◯
14.000	2	B	111.00	26.00	4	◯	◯
16.000	2	B	117.00	32.00	4	◯	●
18.000	2	B	117.00	32.00	4	◯	◯
20.000	2	B	123.00	38.00	4	◯	●
24.000	3	B	147.00	45.00	4	◯	
25.000	3	B	147.00	45.00	4	◯	●
26.000	3	B	147.00	45.00	4		◯
28.000	3	B	147.00	45.00	5		◯
30.000	3	B	147.00	45.00	5	◯	●
32.000	4	C	201.00	53.00	6		●
35.000	4	C	201.00	53.00	6	◯	
40.000	4	C	211.00	63.00	6		●
50.000	5	C	261.00	75.00	8	◯	●

Guhring no.	3440
Standard	DIN 845 K
Tool material	HSCO
Carbide grade	
Surface	◯
Type	N
Shank design	MK
Helix	30°
Tolerance	k10
Discount group	112
Techn. data page	

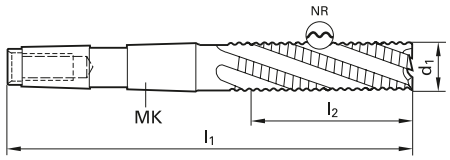


d1	MK	Form	l1	l2	Z	Availability
mm			mm			
14.000	2	B	111.00	26.00	4	◯
16.000	2	B	117.00	32.00	4	●
18.000	2	B	117.00	32.00	4	●
19.000	2	B	117.00	32.00	4	◯
20.000	2	B	123.00	38.00	4	●
22.000	2	B	123.00	38.00	6	●
25.000	3	B	147.00	45.00	6	●
26.000	3	B	147.00	45.00	6	●
28.000	3	B	147.00	45.00	6	●
30.000	3	B	147.00	45.00	6	●
32.000	4	C	201.00	53.00	6	●
40.000	4	C	211.00	63.00	6	●
45.000	4	C	211.00	63.00	8	◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

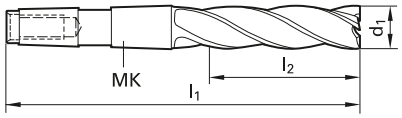
Morse taper end mills

Guhring no.	3121
Standard	DIN 845 L
Tool material	HSCO
Carbide grade	
Surface	◯
Type	NR
Shank design	MK
Helix	30°
Tolerance	k12
Discount group	112
Techn. data page	



d1	MK	Form	l1	l2	Z	Availability
mm			mm			
16.000	2	B	148.00	63.00	4	●
18.000	2	B	148.00	63.00	4	○
20.000	2	B	160.00	75.00	4	●
25.000	3	B	192.00	90.00	4	●
28.000	3	B	192.00	90.00	5	●
30.000	3	B	192.00	90.00	5	○
32.000	4	C	254.00	106.00	6	●
36.000	4	C	254.00	106.00	6	●
40.000	4	C	273.00	125.00	6	●
50.000	5	C	336.00	150.00	8	○

Guhring no.	3120
Standard	DIN 845 L
Tool material	HSCO
Carbide grade	
Surface	◯
Type	N
Shank design	MK
Helix	30°
Tolerance	k10
Discount group	112
Techn. data page	

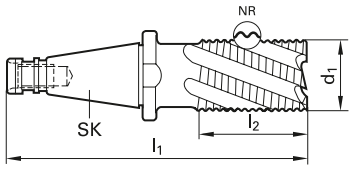


d1	MK	Form	l1	l2	Z	Code no.	Availability
mm			mm	mm			
16.000	2	B	148.00	63.00	4	16.000	●
16.000	3	B	165.00	63.00	4	16.001	○
18.000	2	B	148.00	63.00	4	18.000	○
18.000	3	B	165.00	63.00	4	18.001	○
20.000	2	B	160.00	75.00	4	20.000	●
25.000	3	B	192.00	90.00	6	25.000	●
28.000	3	B	192.00	90.00	6	28.000	●
28.000	4	C	265.00	112.00	6	28.001	●
32.000	4	C	254.00	106.00	6	32.000	●
36.000	4	C	254.00	106.00	6	36.000	●
40.000	4	C	273.00	125.00	6	40.000	●
40.000	5	C	317.00	125.00	6	40.002	●
50.000	5	C	298.00	112.00	8	50.001	●
56.000	5	C	336.00	150.00	8	56.000	○
63.000	5	C	411.00	225.00	8	63.002	○

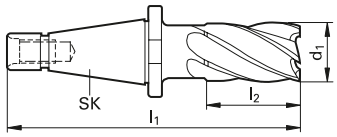
End mills with international taper

Guhring no.	3131
Standard	DIN 2328 K
Tool material	HSCO
Carbide grade	
Surface	◯
Type	NR
Shank design	SK
Helix	30°
Tolerance	k12
Discount group	112
Techn. data page	

Guhring no.	3130
Standard	DIN 2328 K
Tool material	HSCO
Carbide grade	
Surface	◯
Type	N
Shank design	SK
Helix	30°
Tolerance	k10
Discount group	112
Techn. data page	



d1	SK	Form	l1	l2	Z	Code no.	Availability
mm			mm	mm			
32.000	40	A	188.00	53.00	4	32.000	●
36.000	40	A	188.00	53.00	6	36.000	●
40.000	40	A	198.00	63.00	6	40.000	●
40.000	50	A	240.00	63.00	6	40.001	●
45.000	50	A	240.00	63.00	6	45.001	●
50.000	40	A	210.00	75.00	6	50.000	●
50.000	50	A	252.00	75.00	6	50.001	●
56.000	40	A	210.00	75.00	8	56.000	●
56.000	50	A	252.00	75.00	8	56.001	●
63.000	50	A	267.00	90.00	8	63.000	●
80.000	50	A	283.00	106.00	8	80.000	●

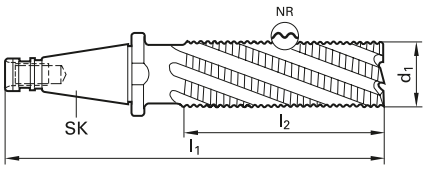


d1	SK	Form	l1	l2	Z	Code no.	Availability
mm			mm	mm			
32.000	40	A	188.00	53.00	6	32.000	●
36.000	40	A	188.00	53.00	6	36.000	●
40.000	40	A	198.00	63.00	6	40.000	●
40.000	40	A	198.00	63.00	8	40.001	●
45.000	40	A	198.00	63.00	8	45.000	●
45.000	50	A	240.00	63.00	8	45.001	●
50.000	40	A	210.00	75.00	8	50.000	●
50.000	50	A	252.00	75.00	8	50.001	●
56.000	40	A	210.00	75.00	8	56.000	●
56.000	50	A	252.00	75.00	8	56.001	●
63.000	50	A	267.00	90.00	8	63.000	●
80.000	50	A	283.00	106.00	10	80.000	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

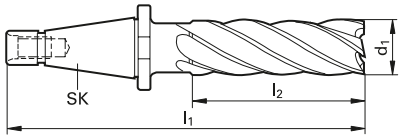
End mills with international taper

Guhring no.	3134
Standard	DIN 2328 L
Tool material	HSCO
Carbide grade	
Surface	◯
Type	NR
Shank design	SK
Helix	30°
Tolerance	k12
Discount group	112
Techn. data page	



d1	SK	Form	l1	l2	Z	Code no.	Availability
mm			mm	mm			
32.000	40	A	215.00	80.00	4	32.001	◯
32.000	40	A	241.00	106.00	4	32.000	◯
36.000	40	A	241.00	106.00	6	36.000	◯
40.000	40	A	260.00	125.00	6	40.000	◯
40.000	50	A	277.00	100.00	6	40.003	◯
45.000	40	A	260.00	100.00	6	45.001	◯
45.000	50	A	260.00	100.00	6	45.004	◯
50.000	40	A	285.00	150.00	6	50.000	◯
50.000	50	A	289.00	112.00	6	50.003	◯
50.000	50	A	327.00	150.00	6	50.002	◯
56.000	40	A	285.00	112.00	8	56.001	◯
63.000	50	A	317.00	140.00	8	63.001	◯
80.000	50	A	337.00	160.00	8	80.001	◯

Guhring no.	3133
Standard	DIN 2328 L
Tool material	HSCO
Carbide grade	
Surface	◯
Type	N
Shank design	SK
Helix	30°
Tolerance	h10
Discount group	112
Techn. data page	

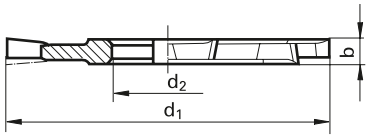


d1	SK	Form	l1	l2	Z	Code no.	Availability
mm			mm	mm			
32.000	40	A	241.00	106.00	6	32.000	◯
36.000	40	A	215.00	80.00	6	36.001	◯
36.000	40	A	241.00	106.00	6	36.000	◯
40.000	40	A	260.00	125.00	6	40.000	◯
45.000	40	A	260.00	125.00	8	45.000	◯
45.000	50	A	277.00	100.00	8	45.003	◯
45.000	50	A	302.00	125.00	8	45.002	◯
45.000	50	A	337.00	160.00	8	45.004	◯
50.000	40	A	247.00	112.00	8	50.001	●
56.000	50	A	327.00	150.00	8	56.002	◯
80.000	50	A	389.00	212.00	10	80.000	●
80.000	50	A	477.00	300.00	10	80.003	◯

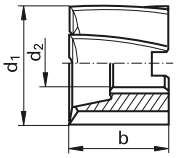
Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	3530
Standard	DIN 885
Tool material	HSCO
Carbide grade	
Surface	○
Type	N
Helix	staggered teeth
Tolerance	k14
Discount group	112
Techn. data page	

Guhring no.	3504	3654
Standard	DIN 1880	
Tool material	M42	
Carbide grade		
Surface	○	C
Type	N	N
Shank design		
Helix	30°	30°
Tolerance	k12	k12
Discount group	112	112
Techn. data page		



d1 mm	d2 mm	b mm	Z	Code no.	Availability
50.000	16.000	4.00	10	50.000	○
50.000	16.000	6.00	10	50.002	○
50.000	16.000	8.00	10	50.003	○
63.000	22.000	5.00	12	63.000	●
63.000	22.000	6.00	12	63.001	●
63.000	22.000	8.00	12	63.002	●
63.000	22.000	10.00	12	63.003	○
63.000	22.000	12.00	12	63.004	○
80.000	27.000	5.00	14	80.000	○
80.000	27.000	6.00	14	80.001	○
80.000	27.000	8.00	14	80.002	●
80.000	27.000	10.00	14	80.003	○
80.000	27.000	12.00	14	80.004	○
80.000	27.000	16.00	14	80.006	○
100.000	32.000	6.00	16	100.000	●
100.000	32.000	8.00	16	100.001	●
100.000	32.000	10.00	16	100.002	●
100.000	32.000	12.00	16	100.003	○
100.000	32.000	14.00	16	100.004	○
100.000	32.000	16.00	16	100.005	○
100.000	32.000	18.00	16	100.006	○
100.000	32.000	20.00	16	100.007	●
125.000	32.000	6.00	16	125.000	●
125.000	32.000	8.00	16	125.001	●
125.000	32.000	10.00	16	125.002	●
125.000	32.000	14.00	16	125.004	○
125.000	32.000	16.00	16	125.005	○
125.000	32.000	18.00	16	125.006	○
125.000	32.000	20.00	16	125.007	●
160.000	40.000	8.00	18	160.000	○
160.000	40.000	10.00	18	160.001	○
160.000	40.000	12.00	18	160.002	○
160.000	40.000	14.00	18	160.003	○
160.000	40.000	18.00	18	160.005	○
160.000	40.000	20.00	18	160.006	○
200.000	40.000	12.00	22	200.001	○
200.000	40.000	14.00	22	200.002	○
200.000	40.000	18.00	22	200.004	○
200.000	40.000	20.00	22	200.005	○

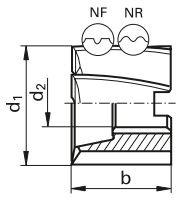


d1 mm	d2 mm	b mm	Z	Availability	
40.000	16.000	32.00	8	●	●
50.000	22.000	36.00	8	●	●
63.000	27.000	40.00	8	●	●
80.000	27.000	45.00	10	●	●
100.000	32.000	50.00	10		○
125.000	40.000	56.00	12	○	

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

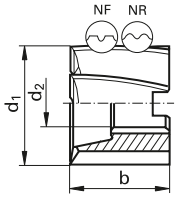
Shell end mills

Guhring no.	3185	3749
Standard	DIN 1880	
Tool material	M42	HSCO
Carbide grade		
Surface	◯	C
Type	NR	NR
Shank design		
Helix	30°	30°
Tolerance	k12	k12
Discount group	112	112
Techn. data page		



d1 mm	d2 mm	b mm	Z	Availability	
40.000	16.000	32.00	6	●	●
50.000	22.000	36.00	8	●	●
63.000	27.000	40.00	8	●	●
80.000	27.000	45.00	10	❍	●
100.000	32.000	50.00	10	❍	❍
125.000	40.000	56.00	12	❍	

Guhring no.	3187
Standard	DIN 1880
Tool material	M42
Carbide grade	
Surface	◯
Type	NF
Shank design	
Helix	30°
Tolerance	k12
Discount group	112
Techn. data page	

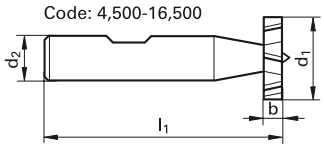


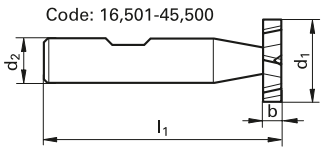
d1 mm	d2 mm	b mm	Z	Availability
40.000	16.000	32.00	6	●
50.000	22.000	36.00	8	●
63.000	27.000	40.00	8	●
80.000	27.000	45.00	10	●
100.000	32.000	50.00	10	❍
125.000	40.000	56.00	12	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Woodruff cutters

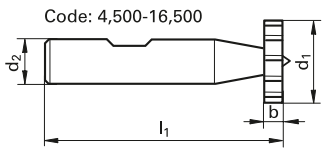
Guhring no.	3580
Standard	DIN 850
Tool material	HSCO
Carbide grade	
Surface	◯
Type	N
Shank design	B
Helix	
Tolerance	h12
Discount group	112
Techn. data page	

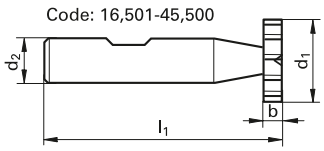




for keyseats	d1 mm	d2 mm	l1 mm	b mm	Z	Code no.	Availability
1,0x 1,4	4.500	6.000	50.00	1.00	6	4.500	●
1,5x 2,6	7.500	6.000	50.00	1.50	6	7.500	●
2,0x 2,6	7.500	6.000	50.00	2.00	6	7.501	●
2,0x 3,7	10.500	6.000	50.00	2.00	6	10.500	●
2,5x 3,7	10.500	6.000	50.00	2.50	6	10.501	●
3,0x 3,7	10.500	6.000	50.00	3.00	6	10.502	●
3,0x 5,0	13.500	10.000	56.00	3.00	8	13.500	●
4,0x 5,0	13.500	10.000	56.00	4.00	8	13.501	●
3,0x 6,5	16.500	10.000	56.00	3.00	8	16.500	●
4,0x 6,5	16.500	10.000	56.00	4.00	8	16.501	●
5,0x 6,5	16.500	10.000	56.00	5.00	8	16.502	●
4,0x 7,5	19.500	10.000	63.00	4.00	8	19.500	●
5,0x 7,5	19.500	10.000	63.00	5.00	8	19.501	●
6,0x 7,5	19.500	10.000	63.00	6.00	8	19.502	●
5,0x 9,0	22.500	10.000	63.00	5.00	10	22.500	●
6,0x 9,0	22.500	10.000	63.00	6.00	10	22.501	●
8,0x 9,0	22.500	10.000	63.00	8.00	10	22.502	●
6,0x10,0	25.500	10.000	63.00	6.00	10	25.500	●
6,0x11,0	28.500	10.000	63.00	6.00	10	28.500	●
8,0x11,0	28.500	10.000	63.00	8.00	10	28.501	●
10,0x11,0	28.500	12.000	71.00	10.00	10	28.502	●
8,0x13,0	32.500	12.000	71.00	8.00	10	32.500	●
10,0x13,0	32.500	12.000	71.00	10.00	10	32.501	●
10,0x16,0	45.500	12.000	71.00	10.00	12	45.500	●

Guhring no.	3579
Standard	DIN 850
Tool material	HSCO
Carbide grade	
Surface	◯
Type	H
Shank design	B
Helix	
Tolerance	h12
Discount group	112
Techn. data page	





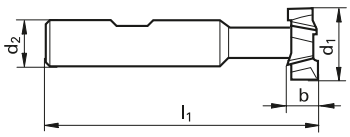
for keyseats	d1 mm	d2 mm	l1 mm	b mm	Z	Code no.	Availability
1,0x 1,4	4.500	6.000	50.00	1.00	8	4.500	◯
1,5x 2,6	7.500	6.000	50.00	1.50	8	7.500	◯
2,0x 2,6	7.500	6.000	50.00	2.00	8	7.501	◯
2,0x 3,7	10.500	6.000	50.00	2.00	10	10.500	◯
2,5x 3,7	10.500	6.000	50.00	2.50	10	10.501	◯
3,0x 3,7	10.500	6.000	50.00	3.00	10	10.502	◯
3,0x 5,0	13.500	10.000	56.00	3.00	10	13.500	◯
4,0x 5,0	13.500	10.000	56.00	4.00	10	13.501	◯
3,0x 6,5	16.500	10.000	56.00	3.00	10	16.500	◯
4,0x 6,5	16.500	10.000	56.00	4.00	10	16.501	◯
5,0x 6,5	16.500	10.000	56.00	5.00	10	16.502	◯
4,0x 7,5	19.500	10.000	63.00	4.00	12	19.500	◯
5,0x 7,5	19.500	10.000	63.00	5.00	12	19.501	◯
6,0x 7,5	19.500	10.000	63.00	6.00	12	19.502	◯
5,0x 9,0	22.500	10.000	63.00	5.00	12	22.500	◯
6,0x 9,0	22.500	10.000	63.00	6.00	12	22.501	◯
8,0x 9,0	22.500	10.000	63.00	8.00	12	22.502	◯
6,0x10,0	25.500	10.000	63.00	6.00	14	25.500	◯
6,0x11,0	28.500	10.000	63.00	6.00	16	28.500	◯
8,0x11,0	28.500	10.000	63.00	8.00	16	28.501	◯
10,0x11,0	28.500	12.000	71.00	10.00	16	28.502	◯
8,0x13,0	32.500	12.000	71.00	8.00	18	32.500	◯
10,0x13,0	32.500	12.000	71.00	10.00	18	32.501	◯
10,0x16,0	45.500	12.000	71.00	10.00	22	45.500	◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Corner rounding cutters

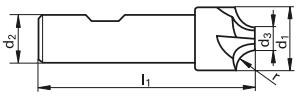
with face relief

Guhring no.	3570
Standard	DIN 851
Tool material	HSCO
Carbide grade	
Surface	◯
Type	N
Shank design	B
Helix	
Tolerance	d11
Discount group	112
Techn. data page	



for keyseats	d1 mm	d2 mm	l1 mm	b mm	Z	Code no.	Availability
6	12.500	10.000	57.00	6.00	6	12.500	●
8	16.000	10.000	62.00	8.00	6	16.000	●
10	18.000	12.000	70.00	8.00	6	18.000	●
10	19.000	12.000	71.00	9.00	6	19.000	●
12	21.000	12.000	74.00	9.00	8	21.000	●
12	22.000	12.000	75.00	10.00	8	22.000	●
14	25.000	16.000	82.00	11.00	8	25.000	●
16	28.000	16.000	85.00	12.00	8	28.000	●
18	32.000	16.000	90.00	14.00	8	32.000	●

Guhring no.	3176
Standard	DIN 6518
Tool material	HSCO
Carbide grade	
Surface	◯
Type	N
Shank design	B
Helix	5°
Tolerance	
Discount group	112
Techn. data page	



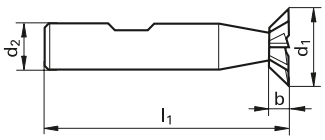
r mm	d1 mm	d2 mm	d3 mm	l1 mm	Z	Code no.	Availability
2.00	10.000	10.000	6.000	60.00	4	2.000	●
2.50	11.000	10.000	6.000	60.00	4	2.500	◯
3.00	12.000	12.000	6.000	60.00	4	3.000	●
4.00	14.000	12.000	6.000	60.00	4	4.000	●
5.00	16.000	12.000	6.000	60.00	4	5.000	●
6.00	20.000	16.000	8.000	67.00	4	6.000	●
8.00	24.000	16.000	8.000	71.00	4	8.000	●
10.00	28.000	25.000	8.000	85.00	4	10.000	●
12.00	34.000	25.000	10.000	90.00	4	12.000	◯
16.00	48.000	25.000	16.000	100.00	6	16.000	◯
20.00	56.000	32.000	16.000	112.00	6	20.000	◯

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

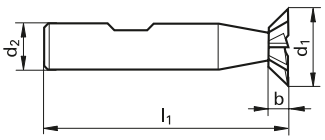
Dovetail cutters

Guhring no.	3572	3576
Standard	DIN 1833	
Tool material	HSCO	
Surface	○	○
Type	H	H
Form	C	D
Shank design	B	B
Profile angle	45	45
Tolerance	js16	js16
Discount group	112	112
Techn. data page		

Guhring no.	3574	3577
Standard	DIN 1833	
Tool material	HSCO	
Surface	○	○
Type	H	H
Form	C	D
Shank design	B	B
Profile angle	60	60
Tolerance	js16	js16
Discount group	112	112
Techn. data page		



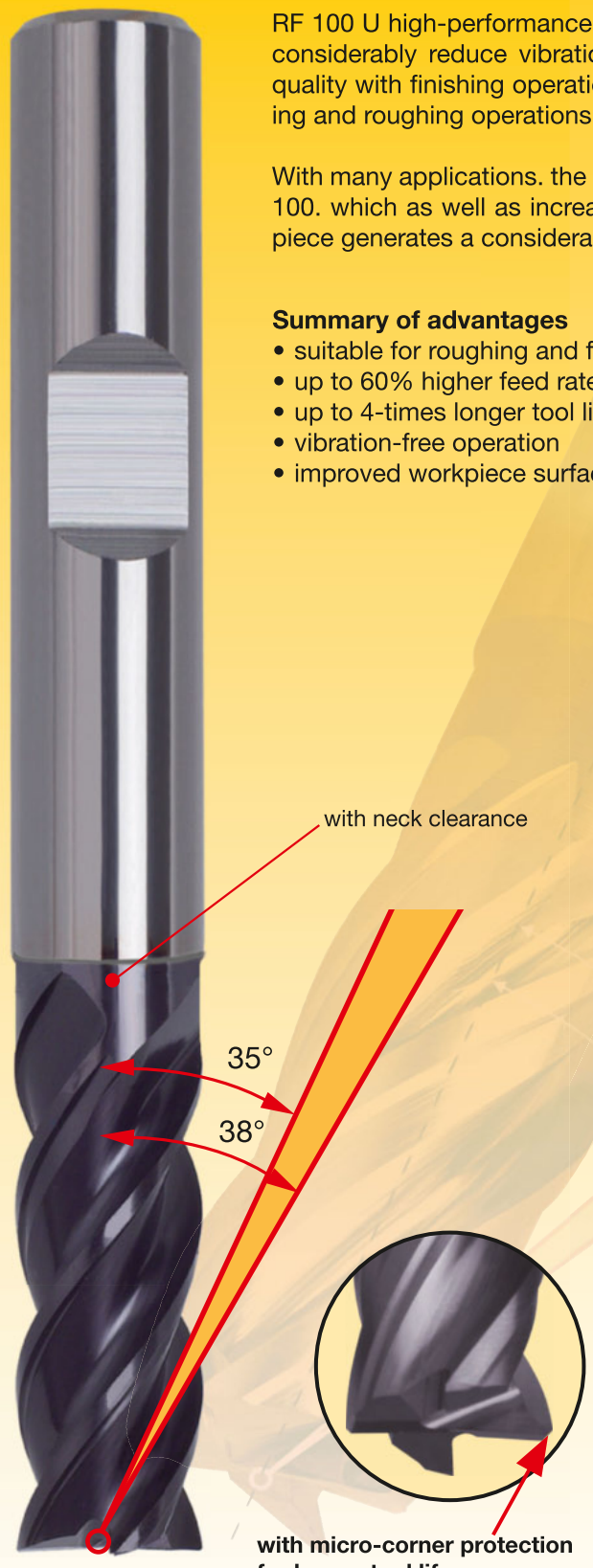
d1	d2	l1	b	Z	Availability	
mm	mm	mm	mm			
16.000	12.000	60.00	4.00	8	●	●
20.000	12.000	63.00	5.00	10	●	●
25.000	12.000	67.00	6.30	10	●	●
32.000	16.000	71.00	8.00	12	●	



d1	d2	l1	b	Z	Availability	
mm	mm	mm	mm			
16.000	12.000	60.00	6.30	8	●	●
20.000	12.000	63.00	8.00	10	●	●
25.000	12.000	67.00	10.00	10	●	●
32.000	16.000	71.00	12.50	12	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

RF 100 U - high-performance end mills for materials up to 1600 N/mm² (48 HRC)

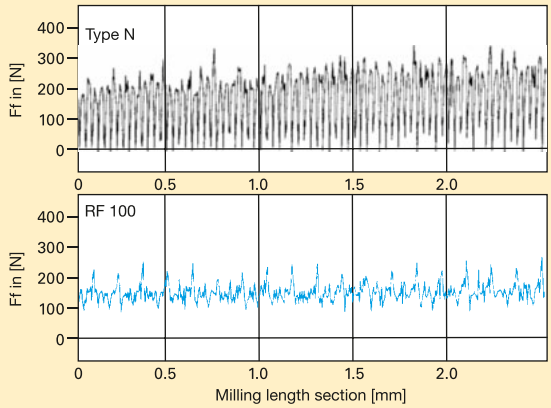


RF 100 U high-performance end mills excel thanks to unequal helix angles which considerably reduce vibration. The uneven helix angle vastly improves surface quality with finishing operations and considerably higher feed rates with slot drilling and roughing operations are also achieved.

With many applications. the complete milling process can be covered with one RF 100. which as well as increasing tool life and dimensional accuracy of the workpiece generates a considerable cost advantage.

Summary of advantages

- suitable for roughing and finishing
- up to 60% higher feed rates
- up to 4-times longer tool life
- vibration-free operation
- improved workpiece surface quality



The cutting force comparison between a conventional milling cutter type N and a RF100 clearly shows the quieter. more rigid operation of the RF100.

Material (ISO-code)	Steel		Cast iron		Stainless steel		Aluminium		Ti-special alloys		Hardened steel	
Hardness tensile strength	up to 850 N/mm²	above 850 N/mm²	up to 180 HB 30	above 180 HB 30	up to 750 N/mm²	above 750 N/mm²	up to 3% Si	above 3% Si	Ti-based	Ni-based	up to 52 HRC	above 52 HRC
RF 100 U	○	●	●	●					●		○	
RF 100 U/HF		●	●	●					○		○	
RF 100 F	●		○			●				●		
RF 100 VA	○				●	●				○		
RF 100 VA/NF	●				●	●				○		
RF 100 A							●	●				
RF 100 A/WF							●	●				
RF 100 Ti		○							●	○		
RF 100 H		○		○							●	●
RF 100 SF	●	●	●	●	●	●	○	○	●	●	○	

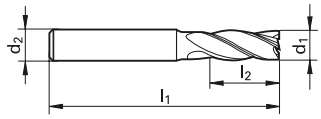
● = optimal suitability ○ = limited suitability

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

RF 100 U

centre cutting

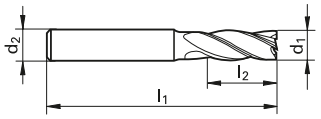
Guhring no.	3113	3099
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	N	N
Shank design	cil. h6	~HB
Helix	35°/38°	35°/38°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091



d1	d2	l1	l2	Z	Code no.	Availability	
inch	inch	inch	inch				
3/16	3/16	2	3/8	4	4.760	●	
1/4	1/4	2	1/2	4	6.350	●	
5/16	5/16	2	1/2	4	7.940	●	
3/8	3/8	2	5/8	4	9.520	●	●
1/2	1/2	2 1/2	5/8	4	12.700	●	●
5/8	5/8	3	3/4	4	15.870	●	●
3/4	3/4	3	1	4	19.050	●	●
1	1	3	1	4	25.400	●	●

centre cutting

Guhring no.	3114	3100
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	
Surface	F	F
Type	N	N
Shank design	cil. h6	~HB
Helix	35°/38°	35°/38°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1091	1091



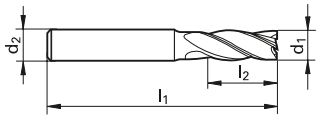
d1	d2	l1	l2	Z	Code no.	Availability	
inch	inch	inch	inch				
3/16	3/16	2	3/8	4	4.760	●	
1/4	1/4	2 1/2	3/4	4	6.350	●	
5/16	5/16	2 1/2	13/16	4	7.940	●	
3/8	3/8	2 1/2	1	4	9.520	●	●
7/16	7/16	2 3/4	1	4	11.110	●	
1/2	1/2	3	1	4	12.700	●	●
5/8	5/8	3 1/2	1 1/4	4	15.870	●	●
3/4	3/4	4	1 1/2	4	19.050	●	●
1	1	4	1 1/2	4	25.400	●	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3079
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	N
Shank design	Ø<1/2 HA/HB
Helix	35°/38°
Tolerance	h10
Discount group	106
Techn. data page	1091

NEW

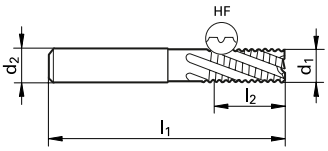


d1	d2	l1	l2	Z	r	Code no.	Availability
inch	inch	inch	inch		mm		
1/4	1/4	2 1/2	3/4	4	0.381	6.352	●
1/4	1/4	2 1/2	3/4	4	0.787	6.354	●
5/16	5/16	2 1/2	13/16	4	0.787	7.944	●
3/8	3/8	2 1/2	1	4	0.787	9.524	●
7/16	7/16	2 3/4	1	4	0.787	11.114	●
1/2	1/2	3 1/2	1 1/4	4	0.787	12.704	●
1/2	1/2	3 1/2	1 1/4	4	1.016	12.705	●
1/2	1/2	3 1/2	1 1/4	4	1.575	12.706	●
1/2	1/2	3 1/2	1 1/4	4	2.286	12.707	●
5/8	5/8	3 1/2	1 1/4	4	0.787	15.874	●
5/8	5/8	3 1/2	1 1/4	4	1.575	15.876	●
3/4	3/4	4	1 1/2	4	1.575	19.056	●
3/4	3/4	4	1 1/2	4	2.286	19.057	●
3/4	3/4	4	1 1/2	4	3.175	19.059	●
1	1	4	1 1/2	4	1.575	25.406	●
1	1	4	1 1/2	4	2.286	25.407	●
1	1	4	1 1/2	4	3.175	25.409	●

centre cutting

Guhring no.	3082
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	HF
Shank design	Ø<1/2 HA/HB
Helix	30°/32°
Tolerance	h10
Discount group	106
Techn. data page	1092

NEW



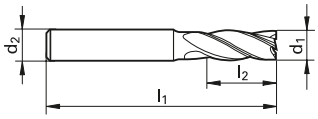
d1	d2	l1	l2	Z	Code no.	Availability
inch	inch	inch	inch			
1/4	1/4	2 1/2	3/4	4	6.350	●
5/16	5/16	2 1/2	13/16	4	7.940	●
3/8	3/8	2 1/2	1	4	9.520	●
1/2	1/2	3 1/2	1 1/4	4	12.700	●
5/8	5/8	3 1/2	1 1/4	4	15.870	●
3/4	3/4	4	1 1/2	4	19.050	●
1	1	4	1 1/2	4	25.400	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3078
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	NH
Shank design	Ø<1/2 HA/HB
Helix	40°/42°
Tolerance	h10
Discount group	106
Techn. data page	1091

NEW

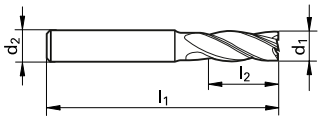


d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability
3/16	3/16	2	5/8	4	4.760	●
1/4	1/4	2 1/2	3/4	4	6.350	●
5/16	5/16	2 1/2	13/16	4	7.940	●
3/8	3/8	2 1/2	1	4	9.520	●
1/2	1/2	3 1/2	1 1/4	4	12.700	●
5/8	5/8	3 1/2	1 1/4	4	15.870	●
3/4	3/4	4	1 1/2	4	19.050	●

centre cutting

Guhring no.	3080
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	a
Type	N
Shank design	Ø<1/2 HA/HB
Helix	36°/38°
Tolerance	h10
Discount group	106
Techn. data page	1091

NEW



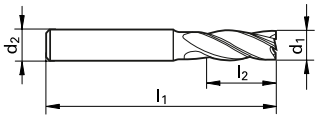
d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability
3/16	3/16	2	5/8	4	4.760	●
1/4	1/4	2 1/2	3/4	4	6.350	●
5/16	5/16	2 1/2	13/16	4	7.940	●
3/8	3/8	2 1/2	1	4	9.520	●
1/2	1/2	3 1/2	1 1/4	4	12.700	●
5/8	5/8	3 1/2	1 1/4	4	15.870	●
3/4	3/4	4	1 1/2	4	19.050	●
1	1	4	1 1/2	4	25.400	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3081
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	a
Type	NF
Shank design	Ø<1/2 HA/HB
Helix	36°/38°
Tolerance	h10
Discount group	106
Techn. data page	1092

NEW

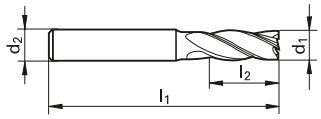


d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability
1/4	1/4	2 1/2	3/4	4	6.350	●
5/16	5/16	2 1/2	13/16	4	7.940	●
3/8	3/8	2 1/2	7/8	4	9.520	●
1/2	1/2	3 1/2	1 1/4	4	12.700	●
5/8	5/8	3 1/2	1 1/4	4	15.870	●
3/4	3/4	4	1 1/2	4	19.050	●
1	1	4	1 1/2	4	25.400	●

centre cutting

Guhring no.	3077
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	W
Shank design	Ø<1/2 HA/HB
Helix	40°/42°
Tolerance	h10
Discount group	106
Techn. data page	1091

NEW



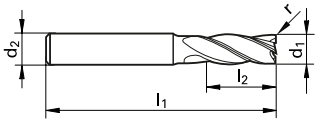
d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability
3/16	3/16	2	5/8	4	4.760	●
1/4	1/4	2 1/2	3/4	4	6.350	●
5/16	5/16	2 1/2	13/16	4	7.940	●
3/8	3/8	2 1/2	1	4	9.520	●
1/2	1/2	3 1/2	1 1/4	4	12.700	●
5/8	5/8	3 1/2	1 1/4	4	15.870	●
3/4	3/4	4	1 1/2	4	19.050	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3876
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	A
Type	N
Shank design	Ø<1/2 HA/HB
Helix	35°/38°
Tolerance	h10
Discount group	106
Techn. data page	1091

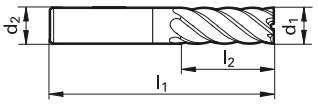
NEW



d1 inch	d2 inch	l1 inch	l2 inch	Z	r mm	Code no.	Availability
1/4	1/4	2 1/2	3/4	4	0.381	6.352	●
1/4	1/4	2 1/2	3/4	4	0.787	6.354	●
5/16	5/16	2 1/2	13/16	4	0.787	7.944	●
3/8	3/8	2 1/2	1	4	0.787	9.524	●
7/16	7/16	2 3/4	1	4	0.787	11.114	●
1/2	1/2	3 1/2	1 1/4	4	0.787	12.704	●
1/2	1/2	3 1/2	1 1/4	4	1.016	12.705	●
1/2	1/2	3 1/2	1 1/4	4	1.575	12.706	●
1/2	1/2	3 1/2	1 1/4	4	2.286	12.707	●
5/8	5/8	3 1/2	1 1/4	4	0.787	15.874	●
5/8	5/8	3 1/2	1 1/4	4	1.575	15.876	●
3/4	3/4	4	1 1/2	4	1.575	19.056	●
3/4	3/4	4	1 1/2	4	2.286	19.057	●
3/4	3/4	4	1 1/2	4	3.175	19.059	●
1	1	4	1 1/2	4	1.575	25.406	●
1	1	4	1 1/2	4	2.286	25.407	●
1	1	4	1 1/2	4	3.175	25.409	●

centre cutting

Guhring no.	3115
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	NH
Shank design	cil. h6
Helix	44°/45°/46°
Tolerance	h10
Discount group	106
Techn. data page	1091



d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability
5/16	5/16	2 1/2	13/16	6	7.940	●
3/8	3/8	2 1/2	1	6	9.520	●
1/2	1/2	3	1	6	12.700	●
5/8	5/8	3 1/2	1 1/4	6	15.870	●
3/4	3/4	4	1 1/2	6	19.050	●
1	1	4	1 1/2	6	25.400	●

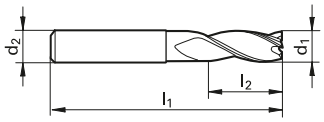
○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

GH 100 U - slot drills (3-fluted)

centre cutting

Guhring no.	3086
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	NH
Shank design	cyl.
Helix	45°
Tolerance	h10
Discount group	106
Techn. data page	1093

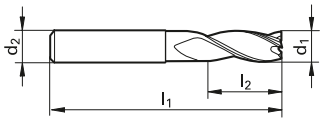
NEW



d1	d2	l1	l2	Z	Code no.	Availability
inch	inch	inch	inch			
1/16	1/16	1 1/2	1/4	3	1.590	●
1/8	1/8	1 1/2	1/4	3	3.170	●
3/16	3/16	2	3/8	3	4.760	●
1/4	1/4	2	1/2	3	6.350	●
5/16	5/16	2	1/2	3	7.940	●
3/8	3/8	2	5/8	3	9.520	●
7/16	7/16	2 1/2	5/8	3	11.110	●
1/2	1/2	2 1/2	5/8	3	12.700	●

centre cutting

Guhring no.	3172	3173
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	NH	NH
Shank design	cil. h6	cil. h6
Helix	45°	45°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1093	1093

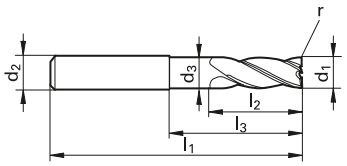


d1	d2	l1	l2	Z	Code no.	Availability	
inch	inch	inch	inch				
1/8	1/8	1 1/2	3/8	3	3.170	●	●
3/16	3/16	2	5/8	3	4.760	●	●
1/4	1/4	2 1/2	3/4	3	6.350	●	●
5/16	5/16	2 1/2	13/16	3	7.940	●	●
3/8	3/8	3	1	3	9.520	●	●
7/16	7/16	2 3/4	2 3/4	3	11.110	●	●
1/2	1/2	3	1	3	12.700	●	●
5/8	5/8	3 1/2	1 1/4	3	15.870	●	●
3/4	3/4	4	1 1/2	3	19.050	●	●
1	1	4	1 1/2	3	25.400	●	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

for Al, centre cutting and with corner radius

Guhring no.	3177
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	W
Shank design	zyl h6
Helix	45°
Tolerance	h10
Discount group	106
Techn. data page	1093

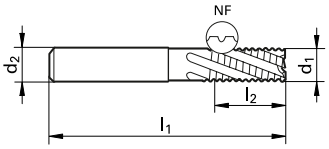


d1	d2	d3	l1	l2	l3	r	Z	Code no.	Availability
inch	inch	mm	inch	inch	mm	mm			
1/4	1/4	6.050	3	3/8	38.10	0.25	3	6.350	●
5/16	5/16	7.640	3	7/16	38.10	0.32	3	7.940	●
3/8	3/8	9.220	3	9/16	38.10	0.38	3	9.520	●
1/2	1/2	12.200	4 1/2	3/4	69.85	0.51	3	12.700	●
5/8	5/8	15.370	5	7/8	76.20	0.64	3	15.870	●
3/4	3/4	18.550	5	1	76.20	0.76	3	19.050	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

high-performance roughing end mills with centre cutting

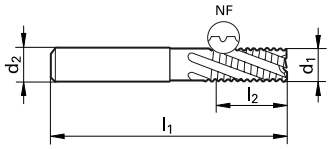
Guhring no.	3097
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	NF
Shank design	cil. h6
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	1095



d1	d2	l1	l2	Z	Code no.	Availability
inch	inch	inch	inch			
1/4	1/4	2 1/2	3/4	4	6.350	●
5/16	5/16	2 1/2	13/16	4	7.940	●
3/8	3/8	2 1/2	7/8	4	9.520	●
1/2	1/2	3	1	4	12.700	●
5/8	5/8	3 1/2	1 1/4	4	15.870	●
3/4	3/4	4	1 5/8	4	19.050	●
1	1	4	1 3/4	5	25.400	●

high-performance roughing end mills with centre cutting

Guhring no.	3098
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	NF
Shank design	cil. h6
Helix	45°
Tolerance	h10
Discount group	106
Techn. data page	1095

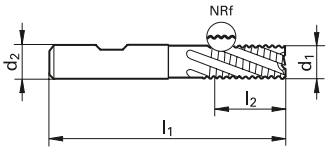


d1	d2	l1	l2	Z	Code no.	Availability
inch	inch	inch	inch			
1/4	1/4	2 1/2	3/4	5	6.350	●
5/16	5/16	2 1/2	13/16	5	7.940	●
3/8	3/8	2 1/2	7/8	5	9.520	●
1/2	1/2	3	1	5	12.700	●
5/8	5/8	3 1/2	1 1/4	6	15.870	●
3/4	3/4	4	1 5/8	6	19.050	●
1	1	4	1 3/4	6	25.400	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

for materials < 48 HRC, centre cutting

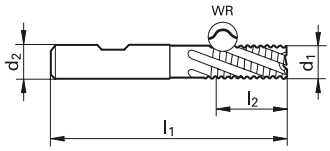
Guhring no.	3186	3188
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	◯	F
Type	NRf	NRf
Shank design	cil. h6	cil. h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1094	1094



d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability	
1/4	1/4	2 1/2	3/4	4	6.350	●	●
5/16	5/16	2 1/2	3/4	4	7.940	●	●
3/8	3/8	2 1/2	7/8	4	9.520	●	●
1/2	1/2	3	1	4	12.700	●	●
5/8	5/8	3 1/2	1 1/4	4	15.870	●	●
3/4	3/4	4	1 5/8	4	19.050	●	●
1	1	4	1 3/4	5	25.400	●	●

for Al < 600 N/mm², centre cutting

Guhring no.	3184
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	WR
Shank design	cil. h6
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	1094



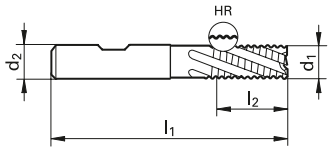
d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability
1/4	1/4	2 1/2	3/4	3	6.350	●
5/16	5/16	2 1/2	3/4	3	7.940	●
3/8	3/8	2 1/2	7/8	3	9.520	●
1/2	1/2	3	1	3	12.700	●
5/8	5/8	3 1/2	1 1/4	3	15.870	●
3/4	3/4	4	1 5/8	3	19.050	●
1	1	4	1 3/4	3	25.400	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

GS 100 H - rough. cutter, fine tooth

for materials < 56 HRC, centre cutting

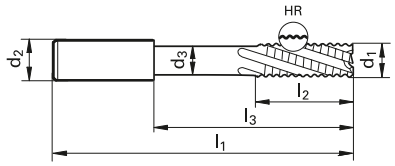
Guhring no.	3189
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	HR
Shank design	cil. h6
Helix	20°
Tolerance	h11
Discount group	106
Techn. data page	1094



d1	d2	l1	l2	Z	Code no.	Availability
inch	inch	inch	inch			
1/4	1/4	2 1/2	3/4	4	6.350	●
5/16	5/16	2 1/2	3/4	4	7.940	●
3/8	3/8	2 1/2	7/8	4	9.520	●
1/2	1/2	3	1	4	12.700	●
5/8	5/8	3 1/2	1 1/4	4	15.870	●
3/4	3/4	4	1 5/8	4	19.050	●

for materials < 56 HRC, centre cutting

Guhring no.	3190
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	HR
Shank design	zyl h6
Helix	20°
Tolerance	h11
Discount group	106
Techn. data page	1094



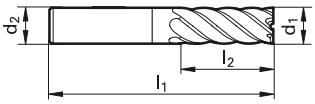
d1	d3	l1	l2	l3	Z	Code no.	Availability
inch	mm	inch	inch	mm			
1/4	6.050	3	3/4	38.10	4	6.350	●
5/16	7.638	3	7/8	38.10	4	7.940	●
3/8	9.225	3	7/8	38.10	4	9.520	●
1/2	12.200	4 1/2	1	69.85	4	12.700	●
5/8	15.375	5	1 1/4	76.20	4	15.870	●
3/4	18.550	5	1 1/2	76.20	4	19.050	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

GH 100 U - multifluted end mills

for superfine finishing of materials < 50 HRC

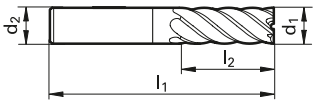
Guhring no.	3178	3179
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	◯	F
Type	NH	NH
Shank design	cil. h6	cil. h6
Helix	45°	45°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1093	1093



d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability	
1/4	1/4	2 1/2	3/4	6	6.350	●	●
5/16	5/16	2 1/2	7/8	6	7.940	●	●
3/8	3/8	2 1/2	7/8	6	9.520	●	●
1/2	1/2	3	1	6	12.700	●	●
5/8	5/8	3 1/2	1 1/4	6	15.870	●	●
3/4	3/4	4	1 1/2	8	19.050	●	●
1	1	4	1 1/2	10	25.400	●	●

for superfine finishing of materials < 50 HRC

Guhring no.	3180	3181
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	◯	F
Type	NH	NH
Shank design	cil. h6	cil. h6
Helix	45°	45°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1093	1093



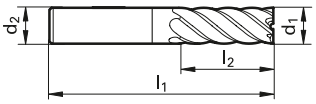
d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability	
1/4	1/4	3	1 1/8	6	6.350	●	●
5/16	5/16	3	1 1/8	6	7.940	●	●
3/8	3/8	3	1 1/8	6	9.520	●	●
1/2	1/2	4 1/2	2	6	12.700	●	●
5/8	5/8	5	2 1/4	6	15.870	●	●
3/4	3/4	5	2 1/4	8	19.050	●	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

GH 100 H - hard multi-t. end mills

for superfine finishing of materials < 62 HRC

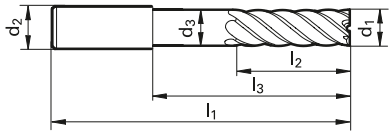
Guhring no.	3182
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	H
Shank design	cil. h6
Helix	55°
Tolerance	h10
Discount group	106
Techn. data page	1093



d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability
1/4	1/4	2 1/2	3/4	6	6.350	●
5/16	5/16	2 1/2	7/8	6	7.940	●
3/8	3/8	2 1/2	7/8	6	9.520	●
1/2	1/2	3	1	6	12.700	●
5/8	5/8	3 1/2	1 1/4	6	15.870	●
3/4	3/4	4	1 1/2	8	19.050	●

for superfine finishing of materials < 62 HRC

Guhring no.	3183
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	H
Shank design	cil. h6
Helix	55°
Tolerance	h10
Discount group	106
Techn. data page	1093



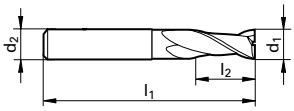
d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability
1/4	1/4	3	3/4	6	6.350	●
5/16	5/16	3	7/8	6	7.940	●
3/8	3/8	3	7/8	6	9.520	●
1/2	1/2	4 1/2	1	6	12.700	●
5/8	5/8	5	1 1/4	6	15.870	●
3/4	3/4	5	1 1/2	8	19.050	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Slot drills (2-fluted)

centre cutting

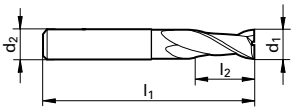
Guhring no.	3148	3146
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K/P	K
Surface	F	○
Type	N	N
Shank design	cil. h6	cil. h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1098	1098



d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability	
1/16	1/8	1 1/2	3/16	2	1.590	●	●
3/32	1/8	1 1/2	1/4	2	2.380	●	●
1/8	1/8	1 1/2	3/8	2	3.170	●	●
5/32	3/16	2	1/2	2	3.970	●	●
3/16	3/16	2	3/8	2	4.760	●	●
7/32	1/4	2 1/2	5/8	2	5.560	●	●
1/4	1/4	2 1/2	3/4	2	6.350	●	●
9/32	5/16	2 1/2	3/4	2	7.140	●	●
5/16	5/16	2 1/2	13/16	2	7.940	●	●
11/32	3/8	2 1/2	1	2	8.730	●	●
3/8	3/8	2 1/2	1	2	9.520	●	●
13/32	7/16	2 3/4	1	2	10.320	●	●
7/16	7/16	2 3/4	1	2	11.110	●	●
15/32	1/2	3	1	2	11.910	●	●
1/2	1/2	3	1	2	12.700	●	●
9/16	9/16	3 1/2	1 1/8	2	14.290	●	●
5/8	5/8	3 1/2	1 1/4	2	15.870	●	●
11/16	3/4	4	1 3/8	2	17.460	●	●
3/4	3/4	4	1 1/2	2	19.050	●	●
1	1	4	1 1/2	2	25.400	●	●

centre cutting

Guhring no.	3092
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	N
Shank design	cil. h6
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	1098

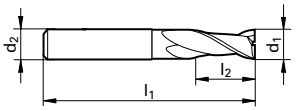


d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability
1/16	1/8	1 1/2	1/8	2	1.590	●
1/8	1/8	1 1/2	1/4	2	3.170	●
3/16	3/16	2	3/8	2	4.760	●
1/4	1/4	2	1/2	2	6.350	●
5/16	5/16	2	1/2	2	7.940	●
3/8	3/8	2	5/8	2	9.520	●
7/16	7/16	2 1/2	5/8	2	11.110	●
1/2	1/2	2 1/2	5/8	2	12.700	●
5/8	5/8	3	3/4	2	15.870	●
3/4	3/4	3	1	2	19.050	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3147	3149
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	◯	F
Type	N	N
Shank design	cil. h6	cil. h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1098	1098



d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability	
1/8	1/8	2	1/2	2	3.170	●	●
3/16	3/16	2 1/2	3/4	2	4.760	●	●
1/4	1/4	3	1 1/8	2	6.350	●	●
5/16	5/16	3	1 1/8	2	7.940	●	●
3/8	3/8	3	1 1/8	2	9.520	●	●
7/16	7/16	4 1/2	2	2	11.110	●	●
1/2	1/2	4 1/2	2	2	12.700	●	●
5/8	5/8	5	2 1/4	2	15.870	●	●
3/4	3/4	5	2 1/4	2	19.050	●	●
1	1	5	2 1/4	2	25.400	●	●

The perfect combination: Shrink fit chuck + end mill with HA shank

The combination of shrink fit chuck from our GM 300 program and end mill with HA shank offers highest concentricity even with long tool neck lengths. Benefit from these advantages especially

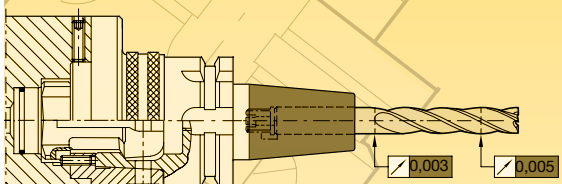
... with long range applications due to deep forms or obstructions

... where there are highest demands on surface quality

... the powerful and accurate clamping

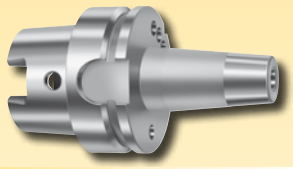
The concentricity of a solid carbide end mill

HSK-A 63 shrink fit chuck, clamping diameter 12.0 mm



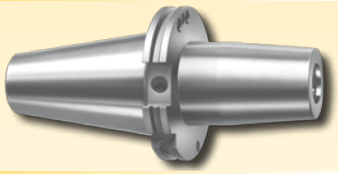
HSK-A

Guhring no. **4736**



ISO

Guhring no. **4738**



GISS 3000 shrink fit system

Guhring no. **4753**

with axial adjustment

Induction shrink fit system with integrated length pre-setting

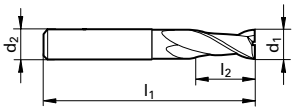
Solid carbide end mills (imperial)

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Al slot drills (2-fluted)

centre cutting

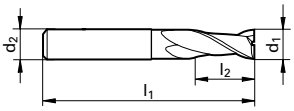
Guhring no.	3174
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	W
Shank design	cil. h6
Helix	45°
Tolerance	h10
Discount group	106
Techn. data page	1099



d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability
1/8	1/8	1 1/2	7/16	2	3.170	●
3/16	3/16	2	9/16	2	4.760	●
1/4	1/4	2 1/2	3/4	2	6.350	●
5/16	5/16	2 1/2	13/16	2	7.940	●
3/8	3/8	2 1/2	7/8	2	9.520	●
7/16	7/16	2 3/4	1	2	11.110	●
1/2	1/2	3	1	2	12.700	●
9/16	9/16	3 1/2	1 1/8	2	14.290	●
5/8	5/8	3 1/2	1 1/4	2	15.870	●
3/4	3/4	4	1 1/2	2	19.050	●
1	1	4	1 1/2	2	25.400	●

centre cutting

Guhring no.	3175
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	W
Shank design	cil. h6
Helix	45°
Tolerance	h10
Discount group	106
Techn. data page	1099

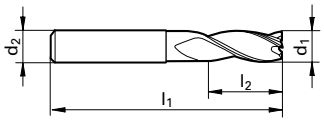


d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability
1/4	1/4	3	1 1/8	2	6.350	●
3/8	3/8	3	1 1/8	2	9.520	●
1/2	1/2	4 1/2	2	2	12.700	●
5/8	5/8	5	2 1/4	2	15.870	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3168	3170
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	◯	F
Type	N	N
Shank design	cil. h6	cil. h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1098	1098

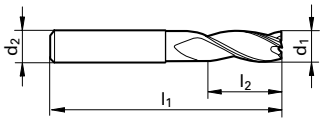


d1	d2	l1	l2	Z	Code no.	Availability	
inch	inch	inch	inch				
1/8	1/8	1 1/2	3/8	3	3.170	●	●
3/16	3/16	2	5/8	3	4.760	●	●
1/4	1/4	2 1/2	3/4	3	6.350	●	●
5/16	5/16	2 1/2	13/16	3	7.940	●	●
3/8	3/8	3	1	3	9.520	●	●
7/16	7/16	2 3/4	1	3	11.110	●	●
1/2	1/2	3	1	3	12.700	●	●
9/16	9/16	3 1/2	1 1/8	3	14.290	●	●
5/8	5/8	3 1/2	1 1/4	3	15.870	●	●
3/4	3/4	4	1 1/2	3	19.050	●	●
1	1	4	1 1/2	3	25.400	●	●

XL slot drills (3-fluted)

centre cutting

Guhring no.	3169	3171
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	◯	F
Type	N	N
Shank design	cil. h6	cil. h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1098	1098



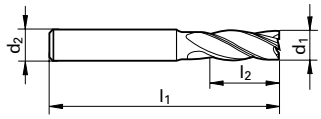
d1	d2	l1	l2	Z	Code no.	Availability	
inch	inch	inch	inch				
3/16	3/16	3	1 1/4	3	4.760	●	●
1/4	1/4	4	1 5/8	3	6.350	●	●
5/16	5/16	4	1 5/8	3	7.940	●	●
3/8	3/8	4	1 5/8	3	9.520	●	●
7/16	7/16	5	2	3	11.110	●	●
1/2	1/2	6	3	3	12.700	●	●
5/8	5/8	6	3	3	15.870	●	●
3/4	3/4	6	3	3	19.050	●	●
1	1	6	3	3	25.400	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

End mills (4-fluted)

centre cutting

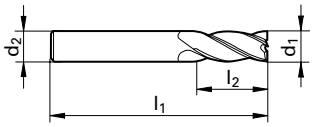
Guhring no.	3150	3153
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	cil. h6	cil. h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1098	1098



d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability	
1/16	1/8	1 1/2	3/16	4	1.590	●	●
3/32	1/8	1 1/2	1/4	4	2.380	●	●
1/8	1/8	1 1/2	3/8	4	3.170	●	●
5/32	3/16	2	1/2	4	3.970	●	●
3/16	3/16	2	5/8	4	4.760	●	●
7/32	1/4	2 1/2	5/8	4	5.560	●	●
1/4	1/4	2 1/2	3/4	4	6.350	●	●
9/32	5/16	2 1/2	3/4	4	7.140	●	●
5/16	5/16	2 1/2	13/16	4	7.940	●	●
11/32	3/8	2 1/2	1	4	8.730	●	●
3/8	3/8	2 1/2	1	4	9.520	●	●
13/32	7/16	2 3/4	1	4	10.320	●	●
7/16	7/16	2 3/4	1	4	11.110	●	●
15/32	1/2	3	1	4	11.910	●	●
1/2	1/2	3	1	4	12.700	●	●
9/16	9/16	3 1/2	1 1/8	4	14.290	●	●
5/8	5/8	3 1/2	1 1/4	4	15.870	●	●
11/16	3/4	4	1 3/8	4	17.460	●	●
3/4	3/4	4	1 1/2	4	19.050	●	●
1	1	4	1 1/2	6	25.400	●	●

centre cutting

Guhring no.	3093
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	N
Shank design	cil. h6
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	1098

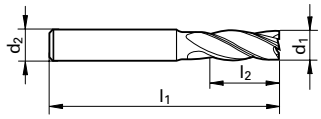


d1 inch	d2 inch	l1 inch	l2 inch	Z	Code no.	Availability
1/16	1/8	1 1/2	1/8	4	1.590	●
1/8	1/8	1 1/2	1/4	4	3.170	●
3/16	3/16	2	3/8	4	4.760	●
1/4	1/4	2	1/2	4	6.350	●
5/16	5/16	2	1/2	4	7.940	●
3/8	3/8	2	5/8	4	9.520	●
7/16	7/16	2 1/2	5/8	4	11.110	●
1/2	1/2	2 1/2	5/8	4	12.700	●
5/8	5/8	3	3/4	4	15.870	●
3/4	3/4	3	1	4	19.050	●

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

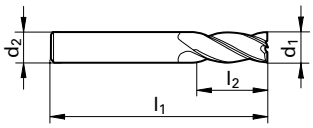
Guhring no.	3152	3156
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	◯	F
Type	N	N
Shank design	cil. h6	cil. h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1098	1098



d1	d2	l1	l2	Z	Code no.	Availability	
inch	inch	inch	inch				
1/8	1/8	2	1/2	4	3.170	●	●
3/16	3/16	2 1/2	3/4	4	4.760	●	●
1/4	1/4	3	1 1/8	4	6.350	●	●
5/16	5/16	3	1 1/8	4	7.940	●	●
3/8	3/8	3	1 1/8	4	9.520	●	●
7/16	7/16	4 1/2	2	4	11.110	●	●
1/2	1/2	4 1/2	2	4	12.700	●	●
5/8	5/8	5	2 1/4	4	15.870	●	●
3/4	3/4	5	2 1/4	4	19.050	●	●
1	1	5	2 1/4	6	25.400	●	●

centre cutting

Guhring no.	3151	3155
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	◯	F
Type	N	N
Shank design	cil. h6	cil. h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1098	1098



d1	d2	l1	l2	Z	Code no.	Availability	
inch	inch	inch	inch				
3/16	3/16	3	1 1/4	4	4.760	●	●
1/4	1/4	4	1 5/8	4	6.350	●	●
5/16	5/16	4	1 5/8	4	7.940	●	●
3/8	3/8	4	1 5/8	4	9.520	●	●
7/16	7/16	5	2	4	11.110	●	●
1/2	1/2	6	3	4	12.700	●	●
5/8	5/8	6	3	4	15.870	●	●
3/4	3/4	6	3	4	19.050	●	●
1	1	6	3	6	25.400	●	●

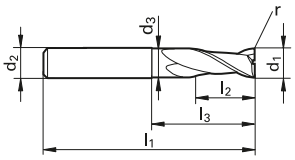
C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Slot drills (2-fluted)

with corner radius, with centre cutting

Guhring no.	3087
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	N
Shank design	cil. h6
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	1098

NEW

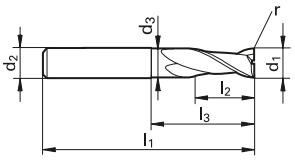


d1	d2	l1	l2	Z	r	Code no.	Availability
inch	inch	inch	inch		mm		
1/8	1/8	1 1/2	3/8	2	0.381	3.172	●
1/8	1/8	1 1/2	3/8	2	0.787	3.174	●
3/16	3/16	2	5/8	2	0.381	4.762	●
3/16	3/16	2	5/8	2	0.787	4.764	●
3/16	3/16	2	5/8	2	1.575	4.766	●
1/4	1/4	2 1/2	3/4	2	0.381	6.352	●
1/4	1/4	2 1/2	3/4	2	0.787	6.354	●
1/4	1/4	2 1/2	3/4	2	1.575	6.356	●
5/16	5/16	2 1/2	13/16	2	0.381	7.942	●
5/16	5/16	2 1/2	13/16	2	0.787	7.944	●
5/16	5/16	2 1/2	13/16	2	1.575	7.946	●
3/8	3/8	2 1/2	1	2	0.381	9.522	●
3/8	3/8	2 1/2	1	2	0.787	9.524	●
3/8	3/8	2 1/2	1	2	1.575	9.526	●
1/2	1/2	3	1	2	0.381	12.702	●
1/2	1/2	3	1	2	0.787	12.704	●
1/2	1/2	3	1	2	1.575	12.706	●

with corner radius, with centre cutting

Guhring no.	3088
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	N
Shank design	cil. h6
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	1098

NEW



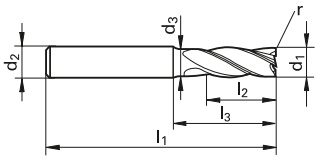
d1	d2	l1	l2	Z	r	Code no.	Availability
inch	inch	inch	inch		mm		
1/8	1/8	2	1/2	2	0.381	3.172	●
1/8	1/8	2	1/2	2	0.787	3.174	●
1/4	1/4	3	1 1/8	2	0.381	6.352	●
1/4	1/4	3	1 1/8	2	0.787	6.354	●
1/4	1/4	3	1 1/8	2	1.575	6.356	●
3/8	3/8	3	1 1/8	2	0.381	9.522	●
3/8	3/8	3	1 1/8	2	0.787	9.524	●
3/8	3/8	3	1 1/8	2	1.575	9.526	●
1/2	1/2	4 1/2	2	2	0.381	12.702	●
1/2	1/2	4 1/2	2	2	0.787	12.704	●
1/2	1/2	4 1/2	2	2	1.575	12.706	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

with corner radius, with centre cutting

Guhring no.	3089
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	N
Shank design	cil. h6
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	1098

NEW

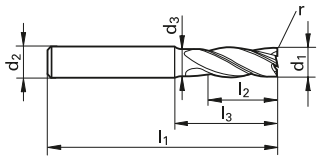


d1	d2	l1	l2	Z	r	Code no.	Availability
inch	inch	inch	inch		mm		
1/8	1/8	1 1/2	3/8	4	0.381	3.172	●
1/8	1/8	1 1/2	3/8	4	0.787	3.174	●
3/16	3/16	2	5/8	4	0.381	4.762	●
3/16	3/16	2	5/8	4	0.787	4.764	●
3/16	3/16	2	5/8	4	1.575	4.766	●
1/4	1/4	2 1/2	3/4	4	0.381	6.352	●
1/4	1/4	2 1/2	3/4	4	0.787	6.354	●
1/4	1/4	2 1/2	3/4	4	1.575	6.356	●
5/16	5/16	2 1/2	13/16	4	0.381	7.942	●
5/16	5/16	2 1/2	13/16	4	0.787	7.944	●
5/16	5/16	2 1/2	13/16	4	1.575	7.946	●
3/8	3/8	2 1/2	1	4	0.381	9.522	●
3/8	3/8	2 1/2	1	4	0.787	9.524	●
3/8	3/8	2 1/2	1	4	1.575	9.526	●
1/2	1/2	3	1	4	0.381	12.702	●
1/2	1/2	3	1	4	0.787	12.704	●
1/2	1/2	3	1	4	1.575	12.706	●

with corner radius, with centre cutting

Guhring no.	3090
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	N
Shank design	cil. h6
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	1098

NEW



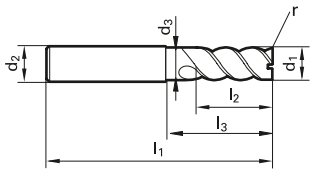
d1	d2	l1	l2	Z	r	Code no.	Availability
inch	inch	inch	inch		mm		
1/4	1/4	4	1 5/8	4	0.381	6.352	●
1/4	1/4	4	1 5/8	4	0.787	6.354	●
1/4	1/4	4	1 5/8	4	1.575	6.356	●
3/8	3/8	4	1 5/8	4	0.381	9.522	●
3/8	3/8	4	1 5/8	4	0.787	9.524	●
3/8	3/8	4	1 5/8	4	1.575	9.526	●
1/2	1/2	6	3	4	0.381	12.702	●
1/2	1/2	6	3	4	0.787	12.704	●
1/2	1/2	6	3	4	1.575	12.706	●

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

with corner radius, with centre cutting

Guhring no.	3091
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	NH
Shank design	cil. h6
Helix	45°
Tolerance	h10
Discount group	106
Techn. data page	1093

NEW



d1 inch	d2 inch	l1 inch	l2 inch	Z	r mm	Code no.	Availability
1/4	1/4	2 1/2	3/4	6	0.381	6.352	●
1/4	1/4	2 1/2	3/4	6	0.787	6.354	●
1/4	1/4	2 1/2	3/4	6	1.575	6.356	●
5/16	5/16	2 1/2	13/16	6	0.381	7.942	●
5/16	5/16	2 1/2	13/16	6	0.787	7.944	●
5/16	5/16	2 1/2	13/16	6	1.575	7.946	●
3/8	3/8	2 1/2	1	6	0.381	9.522	●
3/8	3/8	2 1/2	1	6	0.787	9.524	●
3/8	3/8	2 1/2	1	6	1.575	9.526	●
1/2	1/2	3	1	6	0.381	12.702	●
1/2	1/2	3	1	6	0.787	12.704	●
1/2	1/2	3	1	6	1.575	12.706	●
1/2	1/2	3	1	6	2.286	12.707	●
5/8	5/8	3 1/2	1 1/4	6	0.787	15.874	●
5/8	5/8	3 1/2	1 1/4	6	1.575	15.876	●
5/8	5/8	3 1/2	1 1/4	6	2.286	15.877	●
3/4	3/4	4	1 1/2	8	0.787	19.054	●
3/4	3/4	4	1 1/2	8	1.575	19.056	●
3/4	3/4	4	1 1/2	8	2.286	19.057	●
3/4	3/4	4	1 1/2	8	3.175	19.059	●

Satisfying the highest demands on accuracy and tool life

Especially in the die and mould industry are ever-higher demands on milling cutters – primarily with regard to accuracy and tool life. Therefore, Guhring's cutting tool program now includes radius milling cutters that are perfectly adapted to satisfy these demands and provide optimal machining results thanks to application orientated geometries, carbide grades and coatings.
The advantages are especially high form and contour accuracy of the workpiece, minimal wear and therefore excellent tool life.

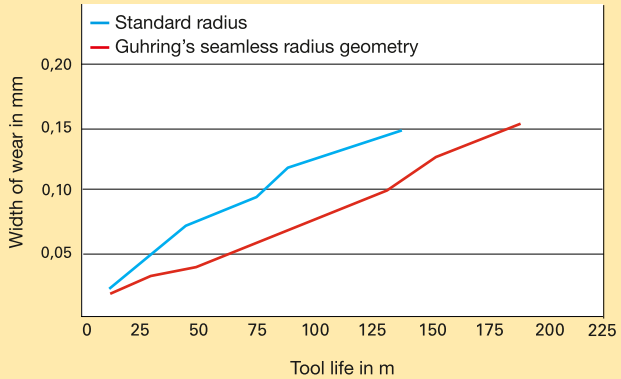
The special features of Guhring's milling cutters with corner or full radius are:

- outside diameter and the radius is ground in one-pass
- radius point geometry with constant helix-radius-correction
- reduced neck ground for collision reduction with protruding edges

High wear protection thanks to radius geometry with constant rake angle and continuous spiral.

Seamless radius area provides high form and contour accuracy.

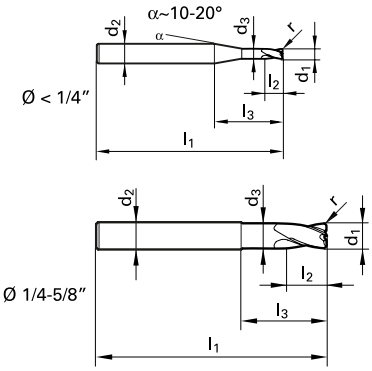
Wear comparison:
Guhring's seamless radius geometry reduces wear and provides a considerably longer tool life in comparison with tools ground with conventional corner radii.



bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

for materials < 62 HRC, centre cutting

Guhring no.	3192
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	H
Shank design	zyl h6
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	1097

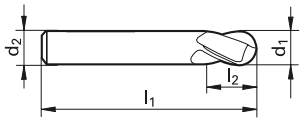


d1	d2	d3	l1	l2	l3	r	Z	Code no.	Availability
inch	inch	mm	inch	inch	mm	mm			
3/16	1/4	4.463	2 1/2	3/16	25.40	0.20	4	4.760	●
1/4	1/4	6.050	3	1/4	38.10	0.25	4	6.350	●
5/16	5/16	7.638	3	5/16	38.10	0.32	4	7.940	●
3/8	3/8	9.225	3	3/8	38.10	0.38	4	9.520	●
1/2	1/2	12.200	4 1/2	1/2	69.85	0.51	4	12.700	●
5/8	5/8	15.375	5	5/8	76.20	0.64	4	15.870	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

centre cutting

Guhring no.	3157	3159
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	zyl h6	zyl h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1100	1100

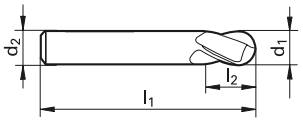


d1	d2	l1	l2	Z	Code no.	Availability	
inch	inch	inch	inch				
1/16	1/8	1 1/2	3/16	2	1.590	●	●
1/8	1/8	1 1/2	3/8	2	3.170	●	●
3/16	3/16	2	5/8	2	4.760	●	●
1/4	1/4	2 1/2	3/4	2	6.350	●	●
5/16	5/16	2 1/2	13/16	2	7.940	●	●
3/8	3/8	2 1/2	1	2	9.520	●	●
7/16	7/16	2 3/4	1	2	11.110	●	●
1/2	1/2	3	1	2	12.700	●	●
9/16	9/16	3 1/2	1 1/8	2	14.290	●	●
5/8	5/8	3 1/2	1 1/4	2	15.870	●	●
3/4	3/4	4	1 1/2	2	19.050	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3158	3160
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	zyl h6	zyl h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1100	1100



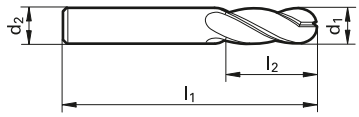
d1	d2	l1	l2	Z	Code no.	Availability	
inch	inch	inch	inch				
1/8	1/8	2	1/2	2	3.170	●	●
3/16	3/16	2 1/2	3/4	2	4.760	●	●
1/4	1/4	3	1 1/8	2	6.350	●	●
5/16	5/16	3	1 1/8	2	7.940	●	●
3/8	3/8	3	1 1/8	2	9.520	●	●
7/16	7/16	4 1/2	2	2	11.110	●	●
1/2	1/2	4 1/2	2	2	12.700	●	●
5/8	5/8	5	2 1/4	2	15.870	●	●
3/4	3/4	5	2 1/4	2	19.050	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Ball nose end mills (4-fluted)

centre cutting

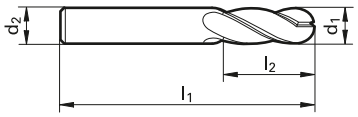
Guhring no.	3161	3165
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	◯	F
Type	N	N
Shank design	cil. h6	cil. h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1100	1100



d1	d2	l1	l2	Z	Code no.	Availability	
inch	inch	inch	inch				
1/16	1/8	1 1/2	3/16	4	1.590	●	●
1/8	1/8	1 1/2	3/8	4	3.170	●	●
3/16	3/16	2	5/8	4	4.760	●	●
1/4	1/4	2 1/2	3/4	4	6.350	●	●
5/16	5/16	2 1/2	13/16	4	7.940	●	●
3/8	3/8	2 1/2	1	4	9.520	●	●
7/16	7/16	2 3/4	1	4	11.110	●	●
1/2	1/2	3	1	4	12.700	●	●
9/16	9/16	3 1/2	1 1/8	4	14.290	●	●
5/8	5/8	3 1/2	1 1/4	4	15.870	●	●
3/4	3/4	4	1 1/2	4	19.050	●	●

centre cutting

Guhring no.	3164	3167
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	◯	F
Type	N	N
Shank design	cil. h6	cil. h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1100	1100

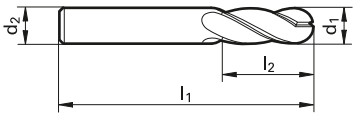


d1	d2	l1	l2	Z	Code no.	Availability	
inch	inch	inch	inch				
1/8	1/8	2	1/2	4	3.170	●	●
3/16	3/16	2 1/2	3/4	4	4.760	●	●
1/4	1/4	3	1 1/8	4	6.350	●	●
5/16	5/16	3	1 1/8	4	7.940	●	●
3/8	3/8	3	1 1/8	4	9.520	●	●
7/16	7/16	4 1/2	2	4	11.110	●	●
1/2	1/2	4 1/2	2	4	12.700	●	●
5/8	5/8	5	2 1/4	4	15.870	●	●
3/4	3/4	5	2 1/4	4	19.050	●	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

centre cutting

Guhring no.	3162	3166
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K	K/P
Surface	○	F
Type	N	N
Shank design	zyl h6	zyl h6
Helix	30°	30°
Tolerance	h10	h10
Discount group	106	106
Techn. data page	1100	1100

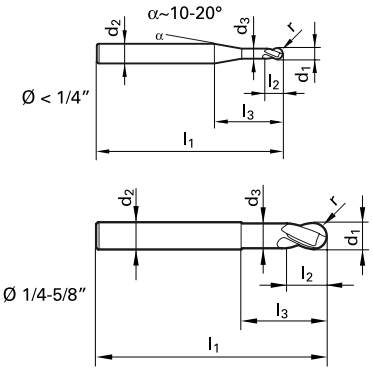


d1	d2	l1	l2	Z	Code no.	Availability	
inch	inch	inch	inch				
3/16	3/16	3	1 1/4	4	4.760	●	●
1/4	1/4	4	1 5/8	4	6.350	●	●
5/16	5/16	4	1 5/8	4	7.940	●	●
3/8	3/8	4	1 5/8	4	9.520	●	●
7/16	7/16	5	2	4	11.110	●	●
1/2	1/2	6	3	4	12.700	●	●
5/8	5/8	6	3	4	15.870	●	●
3/4	3/4	6	3	4	19.050	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

for materials < 62 HRC, centre cutting

Guhring no.	3101
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	H
Shank design	zyl h6
Helix	30°
Tolerance	h8
Discount group	106
Techn. data page	1096

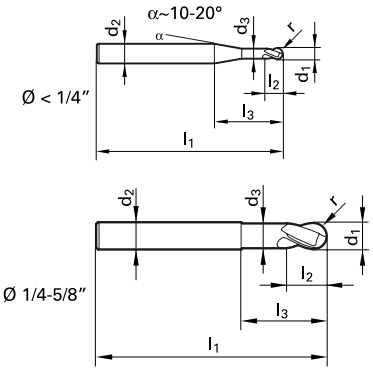


d1	d2	d3	l1	l2	l3	r	Z	Code no.	Availability
inch	inch	mm	inch	inch	mm	mm			
1/8	1/4	2.875	2	1/4	12.70	1.587	2	3.170	●
3/16	1/4	4.463	2	3/16	12.70	2.382	2	4.760	●
1/4	1/4	6.050	2	1/4	17.70	3.175	2	6.350	●
5/16	5/16	7.638	2	5/16	25.40	3.969	2	7.940	●
3/8	3/8	9.225	2 1/2	3/8	25.40	4.763	2	9.520	●
1/2	1/2	12.200	3	1/2	31.75	6.35	2	12.700	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

for materials < 62 HRC, centre cutting

Guhring no.	3191
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K/P
Surface	F
Type	H
Shank design	zyl h6
Helix	30°
Tolerance	h10
Discount group	106
Techn. data page	1096



d1	d2	d3	l1	l2	l3	r	Z	Code no.	Availability
inch	inch	mm	inch	inch	mm	mm			
1/8	1/4	2.875	2 1/2	1/8	25.40	1.587	2	3.170	●
3/16	1/4	4.463	2 1/2	3/16	25.40	2.382	2	4.760	●
1/4	1/4	6.050	3	1/4	38.10	3.175	2	6.350	●
5/16	5/16	7.638	3	5/16	38.10	3.969	2	7.940	●
3/8	3/8	9.225	3	3/8	38.10	4.763	2	9.520	●
1/2	1/2	12.200	4 1/2	1/2	69.85	6.35	2	12.700	●
5/8	5/8	15.375	5	5/8	76.20	7.938	2	15.870	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

The QS principle encourages requests for inspection records or certificates of conformity to be supplied with ordered tools. We will gladly do this. But as the setting-up of inspection records is particularly time consuming and costly - special marking on a specified number of tools, the provision of measuring records, the entry of measured data in special forms - and we do not wish to incorporate these costs in our overhead costs, we have chosen to charge the prices below in relation to the quantity ordered. Surely you will appreciate this.

inspected number of items / inspection criteria	1	up to 3	up to 5	up to 10	up to 15	up to 20	up to 30	up to 50	up to 100
	net prices for the inspected number of items per inspection criteria								
cutting diameter	●	●	●	●	●	●	●	●	●
shank diameter	●	●	●	●	●	●	●	●	●
total length	●	●	●	●	●	●	●	●	●
cutting length	●	●	●	●	●	●	●	●	●
circular clearance	●	●	●	●	●	●	●	●	●
clearance angle minor cutting edge	●	●	●	●	●	●	●	●	●
clearance angle major cutting edge	●	●	●	●	●	●	●	●	●
orthogonal rake angle minor c. e.	●	●	●	●	●	●	●	●	●
back rake angle minor cutting edge	●	●	●	●	●	●	●	●	●
lead angle	●	●	●	●	●	●	●	●	●
concentricity minor cutting edge Tr	●	●	●	●	●	●	●	●	●
cutting edge tolerance Tp	●	●	●	●	●	●	●	●	●
tolerance	●	●	●	●	●	●	●	●	●
optical	●	●	●	●	●	●	●	●	●
marking of test tools	●	●	●	●	●	●	●	●	●

	net prices for the inspected number of items for all inspection criteria								
	●	●	●	●	●	●	●	●	●
	plus cost of inspection report								
total price	●	●	●	●	●	●	●	●	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Additional charges for grinding of flat to DIN 6535 form HB on straight shanks

from quantity	gross additional charges per item depending on core drill diameter (mm)							
	up to 6.00	up to 8.00	up to 10.00	up to 12.00	up to 14.00	up to 16.00	up to 18.00	up to 20.00
3.....10	●	●	●	●	●	●	●	●
11.....20	●	●	●	●	●	●	●	●
21.....30	●	●	●	●	●	●	●	●
31.....50	●	●	●	●	●	●	●	●
51....100	●	●	●	●	●	●	●	●
101....200	●	●	●	●	●	●	●	●

Additional charges for screwed shank to DIN 1835 form D

from quantity	gross additional charges per item depending on core drill diameter (mm)		
	up to 15.00	up to 30.00	up to 50.00
3	●	●	●
4 and 5	●	●	●
6.....10	●	●	●
11.....20	●	●	●
21.....30	●	●	●
over 30	on request	on request	on request

Additional charges for corner rounding and ball nosing on carbides

from quantity	gross additional charges per item depending on core drill diameter (mm)
3	●
4	●
5	●
6	●
7	●
8	●
9	●
10	●
11.....14	●
15.....19	●
20.....24	●
25.....29	●
30.....49	●
50.....99	●
over 100	on request

GUHRING

Perfect Reaming

HR 500 - high-performance reamers
for first-class results
in no time at all

REAMERS

GUHRING

NC machine reamers

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 212-3	B		HSS-E	◯	1,000 - 12,020	455	105	1280
DIN 212-3	B		HSS-E	◯	1,500 - 20,000	490	105	1280

Machine reamers

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
DIN 208	A		HSS-E	◯	3,000 - 40,000	404	105	1284
DIN 208	B		HSS-E	◯	3,000 - 50,000	405	105	1284
DIN 208	B		HSS-E	S	8,000 - 20,000	642	105	1284
DIN 212	A		HSS-E	◯	1,000 - 5,500	401	105	1286
DIN 212	B		HSS-E	◯	1,000 - 3,700	402	105	1286
DIN 212	A		HSS-E	◯	1,000 - 6,000	457	105	1286
DIN 212-2	A		HSS-E	◯	4,000 - 20,000	440	105	1287
DIN 212-2	B		HSS-E	◯	3,800 - 20,000	468	105	1287
DIN 212-2	B		HSS-E	S	4,000 - 20,000	641	105	1287
DIN 212-2	A		HSS-E	◯	4,500 - 10,000	467	105	1287
DIN 212	B		HSS-E	◯	0,950 - 12,050	496	105	1289

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Machine reamers with coolant duct								
DIN 212-2	A		HSS-E	○	5,000 - 20,000	1431	105	1291
Machine reamers with coolant duct								
DIN 8089	A		HSS-E	○	5,000 - 18,000	1432	105	1292
Machine reamers								
DIN 8089	A		HSS-E	○	4,000 - 20,000	488	105	1293
DIN 8089	B		HSS-E	○	4,000 - 20,000	489	105	1293
DIN 8089	B		HSS-E	○	3,760 - 12,040	497	105	1294
Machine reamer sets								
DIN 8089	B		HSS-E	○	-	458	105	1295
Quick spiral reamers								
DIN 212	C		HSS-E	○	1,000 - 5,500	403	105	1296
DIN 212-2	C		HSS-E	○	4,000 - 20,000	469	105	1296
DIN 208	C		HSS-E	○	3,000 - 30,000	406	105	1297
Machine bridge reamers								
DIN 311			HSS	●	6,400 - 40,000	414	105	1298

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Machine bottoming reamers								
Guhring std.	A		HSS-E	○	3,000 - 12,000	419	105	1299
Guhring std.	A		HSS-E	○	3,000 - 25,000	420	105	1300
Expanding machine reamers								
Guhring std.	A		HSS-E	○	10,000 - 20,000	430	105	1301
Stepped machine reamers								
Guhring std.			HSS-E	○	5,000 - 38,000	431	105	1302
Shell reamers								
DIN 219	A		HSS-E	◍	29,000 - 98,000	407	105	1303
DIN 219	B		HSS-E	◍	25,000 - 75,000	408	105	1303
DIN 219	C		HSS-E	◍	29,000 - 98,000	409	105	1304

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Carbide high performance reamers

Standard	Type	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	HR 500 S		Solid carbide	a	3,000 - 20,000	1685	166	1305
Guhring std.	HR 500 D		Solid carbide	a	3,000 - 20,000	1686	166	1305
Guhring std.	HR 500 Alu	NEW	Solid carbide	Cb	4,000 - 20,000	1678	166	1306
Guhring std.	HR 500 Alu	NEW	Solid carbide	Cb	4,000 - 20,000	1679	166	1306
Guhring std.	HR 500 S	NEW	Solid carbide	a	2,970 - 12,030	1675	166	1307
Guhring std.	HR 500 D	NEW	Solid carbide	a	2,970 - 12,030	1676	166	1307
Guhring std.	HR 500 GS	NEW	Carbide	a	22,000 - 40,000	1680	166	1309
Guhring std.	HR 500 GD	NEW	Carbide	a	22,000 - 40,000	1681	166	1309

Cermet high performance reamers

Standard	Type	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	HR 500 GS	NEW	Cermet tipped	◯	22,000 - 40,000	1682	166	1310
Guhring std.	HR 500 GD	NEW	Cermet tipped	◯	22,000 - 40,000	1683	166	1310

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

NC machine reamers

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Guhring std.	B		Solid carbide	◯	0,980 - 12,050	1427	120	1311
Guhring std.	B		Solid carbide	◯	3,000 - 12,000	1449	120	1311

Machine reamers

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
~ DIN 8050	A		Carbide	◯	5,000 - 20,000	717	120	1316
~ DIN 8050	B		Carbide	◯	5,000 - 20,000	718	120	1316
~ DIN 8093	A		Carbide	◯	1,000 - 20,000	1408	120	1317
~ DIN 8093	A		Carbide	a	2,000 - 20,000	1428	120	1317
~ DIN 8093	B		Carbide	◯	1,000 - 20,000	1409	120	1317
~ DIN 8093	B		Carbide	a	1,800 - 20,000	1429	120	1317
~ DIN 8051	A		Carbide	◯	5,000 - 40,000	719	120	1319
~ DIN 8051	B		Carbide	◯	6,000 - 32,000	720	120	1319
~ DIN 8094	A		Carbide	◯	6,000 - 28,000	1410	120	1320
~ DIN 8094	B		Carbide	◯	5,000 - 40,000	1411	120	1320

Machine reamers

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
~ DIN 8090	A		Carbide	◯	4,000 - 15,000	674	120	1321

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Machine reamers								
~ DIN 8090	A		Carbide	a	3,500 - 14,000	1430	120	1321
~ DIN 8090	B		Carbide	◯	3,000 - 16,000	1407	120	1321
~ DIN 8090	C		Carbide	◯	4,000 - 14,000	737	120	1321
Expanding machine reamers								
Guhring std.	A		Carbide	◯	8,000 - 18,000	749	120	1322
Guhring std.	A		Carbide	◯	8,000 - 30,000	740	120	1323
Stepped machine reamers								
Guhring std.			Carbide	◯	8,000 - 25,000	743	120	1324
Shell reamers								
DIN 8054			Carbide	◯	25,000 - 55,000	727	120	1325

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Hand taper reamers								
DIN 9	A		HSS	◯	1,000 - 30,000	428	105	1326
DIN 9	B		HSS	◯	1,500 - 30,000	429	105	1326
Guhring std.			HSS	◯	3,000 - 23,000	1433	105	1327
Machine taper reamers								
DIN 2179			HSS-E	◯	1,000 - 30,000	410	105	1328
DIN 2180			HSS-E	◯	5,000 - 50,000	411	105	1329
Hand reamers								
DIN 206	A		HSS	◯	2,000 - 49,000	412	105	1330
DIN 206	B		HSS	◯	1,400 - 43,000	413	105	1330
Adjustable hand reamers								
DIN 859	B		HSS	◯	4,000 - 59,000	415	105	1332
Expanding hand reamers								
Guhring std.			HSS	◯	6,400 - 67,000	416	105	1334
Replacement blades for expanding hand reamers								
Guhring std.			HSS	◯	6,400 - 80,000	417	105	1335

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Arbors, complete								
DIN 217					-	**1438**	105	1336
Arbors without accessories								
Guhring std.					-	**1434**	105	1337
Draw-off nuts								
Guhring std.					-	**1435**	105	1338
Driving collars								
Guhring std.					-	**1436**	105	1339
Woodruff keys								
DIN 6888					-	**1437**	105	1340

Tools with bold feed column no.
are preferred choice.

For blind holes with close diameter tolerances
choose straight-fluted reamers.

For exact definition of tools please refer to the
“Standard range and technical data” pages.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no. R
Guhring no. L
Standard/DIN
Tool material
Surface finish
Form
Cooling
Std. range page

Counter-sink Ø mm	Feed column no. 71	72	73	74	75	76	77
	f (mm/rev.)						
< 4.00	0.080	0.100	0.125	0.300	0.500	0.800	1.000
4.00	0.100	0.125	0.160	0.300	0.500	1.000	1.200
5.00	0.100	0.125	0.160	0.400	0.600	1.000	1.400
6.30	0.125	0.160	0.200	0.400	0.700	1.200	1.600
8.00	0.160	0.200	0.250	0.600	1.000	1.800	2.400
10.00	0.200	0.250	0.315	0.600	1.200	1.800	2.400
12.50	0.200	0.250	0.315	0.800	1.200	2.000	2.500
16.00	0.250	0.315	0.400	0.800	1.400	2.200	2.600
20.00	0.315	0.400	0.500	0.800	1.400	2.200	2.600
25.00	0.400	0.500	0.630	1.000	1.600	2.500	3.000
31.50	0.400	0.500	0.630	1.000	2.000	3.000	3.600
40.00	0.500	0.630	0.800	1.200	2.000	3.000	3.600
50.00	0.630	0.800	1.000	1.400	2.200	3.200	3.600
> 50.00	0.800	1.000	1.250	1.600	2.200	3.200	3.600

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

NC reamers

Machine reamers

455	490	401 457	402	440 467	1431	496	468	404	405	641	642
212-3	212-3	212	212	212-2	212-2	212	212-2	208	208	212-2	208
HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
○	○	○	○	○	○	○	○	○	○	Ⓢ	Ⓢ
B	B	A	B	A	A	B	B	A	B	B	B
					axial						
1280	1280	1286	1286	1287	1291	1289	1287	1284	1284	1287	1284

v_c m/min	Feed column no.		v_c m/min	Feed column no.								v_c m/min	Feed column no.	
16	72	72	16	72	72	72	72	72	72	72	72	20	71	71
12	72	72	12	72	72	72	72	72	72	72	72	16	71	71
12	72	72	12	72	72	72	72	72	72	72	72	16	71	71
10	71	71	10	71	71	71	71	71	71	71	71	12	71	71
14	72	72	14	72	72	72	72	72	72	72	72	18	71	71
12	71	71	12	71	71	71	71	71	71	71	71	16	71	71
10	71	71	10	71	71	71	71	71	71	71	71	12	71	71
10	71	71	10	71	71	71	71	71	71	71	71	12	71	71
8	71	71	8	71	71	71	71	71	71	71	71	10	71	71
16	72	72	16	72	72	72	72	72	72	72	72	18	71	71
10	71	71	10	71	71	71	71	71	71	71	71	12	71	71
8	71	71	8	71	71	71	71	71	71	71	71	10	71	71
10	71	71	10	71	71	71	71	71	71	71	71	12	71	71
8	71	71	8	71	71	71	71	71	71	71	71	10	71	71
14	72	72	14	72	72	72	72	72	72	72	72	16	71	71
10	71	71	10	71	71	71	71	71	71	71	71	12	71	71
10	71	71	10	71	71	71	71	71	71	71	71	12	71	71
6	72	72	6	72	72	72	72	72	72	72	72	8	71	71
6	72	72	6	72	72	72	72	72	72	72	72	8	71	71
4	72	72	4	72	72	72	72	72	72	72	72	6	71	71
14	71	71	14	71	71	71	71	71	71	71	71	16	71	71
12	71	71	12	71	71	71	71	71	71	71	71	14	71	71
12	71	71	12	71	71	71	71	71	71	71	71	16	71	71
10	71	71	10	71	71	71	71	71	71	71	71	14	71	71
6	71	71	6	71	71	71	71	71	71	71	71	6	71	71
4	71	71	4	71	71	71	71	71	71	71	71	4	71	71
18	73	73	18	73	73	73	73	73	73	73	73	22	73	73
18	73	73	18	73	73	73	73	73	73	73	73	22	73	73
20	72	72	20	72	72	72	72	72	72	72	72	22	72	72
18	72	72	18	72	72	72	72	72	72	72	72	22	72	72
20	72	72	20	72	72	72	72	72	72	72	72	22	72	72
18	72	72	18	72	72	72	72	72	72	72	72	20	72	72
18	72	72	18	72	72	72	72	72	72	72	72	22	72	72
16	72	72	16	72	72	72	72	72	72	72	72	18	72	72
20	72	72	20	72	72	72	72	72	72	72	72	22	72	72
18	72	72	18	72	72	72	72	72	72	72	72	20	72	72
18	72	72	18	72	72	72	72	72	72	72	72	20	72	72
14	72	72	14	72	72	72	72	72	72	72	72	18	72	72
12	73	73	12	73	73	73	73	73	73	73	73	12	73	73
14	73	73	14	73	73	73	73	73	73	73	73	14	73	73

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Tools with bold feed column no.
are preferred choice.

For blind holes with close diameter tolerances
choose straight-fluted reamers.

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Guhring no.
Standard/DIN
Tool material
Surface finish
Form
Cooling
Std. range page

Counter-sink Ø mm	Feed column no. 71	72	73	74	75	76	77
	f (mm/rev.)						
< 4.00	0.080	0.100	0.125	0.300	0.500	0.800	1.000
4.00	0.100	0.125	0.160	0.300	0.500	1.000	1.200
5.00	0.100	0.125	0.160	0.400	0.600	1.000	1.400
6.30	0.125	0.160	0.200	0.400	0.700	1.200	1.600
8.00	0.160	0.200	0.250	0.600	1.000	1.800	2.400
10.00	0.200	0.250	0.315	0.600	1.200	1.800	2.400
12.50	0.200	0.250	0.315	0.800	1.200	2.000	2.500
16.00	0.250	0.315	0.400	0.800	1.400	2.200	2.600
20.00	0.315	0.400	0.500	0.800	1.400	2.200	2.600
25.00	0.400	0.500	0.630	1.000	1.600	2.500	3.000
31.50	0.400	0.500	0.630	1.000	2.000	3.000	3.600
40.00	0.500	0.630	0.800	1.200	2.000	3.000	3.600
50.00	0.630	0.800	1.000	1.400	2.200	3.200	3.600
> 50.00	0.800	1.000	1.250	1.600	2.200	3.200	3.600

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Machine reamers

488	1432	489	497
8089	8089	8089	8089
HSS-E	HSS-E	HSS-E	HSS-E
○	○	○	○
A	A	B	B
	axial		
1293	1292	1293	1294

Vc m/min	Feed column no.			
16	71	71	71	71
12	71	71	71	71
12	71	71	71	71
10	71	71	71	71
14	71	71	71	71
12	71	71	71	71
10	71	71	71	71
10	71	71	71	71
8	71	71	71	71
16	71	71	71	71
10	71	71	71	71
8	71	71	71	71
10	71	71	71	71
8	71	71	71	71
14	71	71	71	71
10	71	71	71	71
10	71	71	71	71
6	71	71	71	71
6	71	71	71	71
4	71	71	71	71
14	71	71	71	71
12	71	71	71	71
12	71	71	71	71
12	71	71	71	71
6	71	71	71	71
4	71	71	71	71
18	73	73	73	73
18	73	73	73	73
20	72	72	72	72
18	72	72	72	72
20	72	72	72	72
18	72	72	72	72
18	72	72	72	72
16	72	72	72	72
20	72	72	72	72
18	72	72	72	72
18	72	72	72	72
14	72	72	72	72
12	73	73	73	73
14	73	73	73	73

Quick spiral reamers

469	403	406
212-2	212	208
HSS-E	HSS-E	HSS-E
○	○	○
C	C	C
1296	1296	1297

Vc m/min	Feed column no.		
16	73	73	73
12	73	73	73
12	73	73	73
14	73	73	73
12	73	73	73
16	73	73	73
10	73	73	73
5	71	71	71
22	73	73	73
22	73	73	73
20	73	73	73
16	73	73	73
18	73	73	73
12	73	73	73
14	73	73	73

Bottoming reamers

419	420
G.S.	G.S.
HSS-E	HSS-E
○	○
A	A
1299	1300

Vc m/min	Feed column no.	
10	71	71
8	71	71
14	71	71
12	71	71
10	71	71
10	71	71
10	71	71
10	71	71
8	71	71
12	71	71
10	71	71
8	71	71
10	71	71
8	71	71
8	71	71
8	71	71
8	71	71
6	71	71
4	71	71
4	71	71
12	71	71
10	71	71
12	71	71
10	71	71
4	71	71
3	71	71
20	72	72
20	72	72
20	71	71
18	71	71
14	71	71
14	71	71
18	71	71
16	71	71
16	71	71
14	71	71
16	71	71
14	71	71
12	73	73
10	73	73

Reamers

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Tools with bold feed column no.
are preferred choice.

For blind holes with close diameter tolerances
choose straight-fluted reamers.

For exact definition of tools please refer to the
“Standard range and technical data” pages.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Surface finish
Typ
Cooling
Std. range page

Counter-sink Ø mm	Feed column no. 71	72	73	74	75	76	77
	f (mm/rev.)						
< 4.00	0.080	0.100	0.125	0.300	0.500	0.800	1.000
4.00	0.100	0.125	0.160	0.300	0.500	1.000	1.200
5.00	0.100	0.125	0.160	0.400	0.600	1.000	1.400
6.30	0.125	0.160	0.200	0.400	0.700	1.200	1.600
8.00	0.160	0.200	0.250	0.600	1.000	1.800	2.400
10.00	0.200	0.250	0.315	0.600	1.200	1.800	2.400
12.50	0.200	0.250	0.315	0.800	1.200	2.000	2.500
16.00	0.250	0.315	0.400	0.800	1.400	2.200	2.600
20.00	0.315	0.400	0.500	0.800	1.400	2.200	2.600
25.00	0.400	0.500	0.630	1.000	1.600	2.500	3.000
31.50	0.400	0.500	0.630	1.000	2.000	3.000	3.600
40.00	0.500	0.630	0.800	1.200	2.000	3.000	3.600
50.00	0.630	0.800	1.000	1.400	2.200	3.200	3.600
> 50.00	0.800	1.000	1.250	1.600	2.200	3.200	3.600

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

High performance reamers

1685	1686	1675	1676	1678	1679	1680	1681	1682	1683
G.S.	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.
Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Sol. carb.	Carbide	Carbide	Cermet tipped	
a	a	a	a	Cb	Cb	a	a	○	○
HR 500 S	HR 500 D	HR 500 S	HR 500 D	HR 500 Alu	HR 500 Alu	HR 500 GS	HR 500 GD	HR 500 GS	HR 500 GD
axial	axial	axial	axial	axial	axial	axial	axial	axial	axial
1305	1305	1307	1307	1306	1306	1309	1309	1310	1310

v_c m/min	Feed column no.			
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
90	75-76	75-76	75-76	75-76
45	73-74	73-74	73-74	73-74
90	74-75	74-75	74-75	74-75
60	74-75	74-75	74-75	74-75
90	74-75	74-75	74-75	74-75
50	73-74	73-74	73-74	73-74
45	73-74	73-74	73-74	73-74
100	75-76	75-76	75-76	75-76
100	75-76	75-76	75-76	75-76
185	75-76	75-76	75-76	75-76
90	75-76	75-76	75-76	75-76
40	74-75	74-75	74-75	74-75
60	74-75	74-75	74-75	74-75
60	74-75	74-75	74-75	74-75
120	75-76	75-76	75-76	75-76
175	75-76	75-76	75-76	75-76
175	75-76	75-76	75-76	75-76
175	75-76	75-76	75-76	75-76
140	75-76	75-76	75-76	75-76
140	75-76	75-76	75-76	75-76

v_c m/min	Feed column no.	
300	76-77	76-77
300	76-77	76-77
300	76-77	76-77
300	76-77	76-77

v_c m/min	Feed column no.	
33	74-75	74-75
33	74-75	74-75
33	74-75	74-75
33	74-75	74-75
33	74-75	74-75
33	74-75	74-75
33	74-75	74-75
33	74-75	74-75
33	74-75	74-75
33	74-75	74-75
33	74-75	74-75
33	74-75	74-75
33	74-75	74-75
33	74-75	74-75
25	74-75	74-75
25	74-75	74-75
45	74-75	74-75
25	74-75	74-75
25	74-75	74-75
15	72-73	72-73
70	75-76	75-76
70	75-76	75-76
85	75-76	75-76
75	75-76	75-76
30	74-75	74-75
30	73-74	73-74
30	73-74	73-74
120	75-76	75-76
80	74-75	74-75
80	74-75	74-75
85	74-75	74-75
85	74-75	74-75
85	74-75	74-75
85	74-75	74-75
80	74-75	74-75
80	74-75	74-75

v_c m/min	Feed column no.	
140	75-76	75-76
140	75-76	75-76
140	75-76	75-76
140	75-76	75-76
140	75-76	75-76
140	75-76	75-76
140	75-76	75-76
140	75-76	75-76
140	75-76	75-76
140	75-76	75-76
140	75-76	75-76
140	75-76	75-76
140	75-76	75-76
140	75-76	75-76
120	74-75	74-75
115	75-76	75-76

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Tools with bold feed column no.
are preferred choice.

For blind holes with close diameter tolerances
choose straight-fluted reamers.

For exact definition of tools please refer to the
“Standard range and technical data” pages.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Surface finish
Form
Cooling
Std. range page

Counter-sink Ø mm	Feed column no. 71	72	73	74	75	76	77
	f (mm/rev.)						
< 4.00	0.080	0.100	0.125	0.300	0.500	0.800	1.000
4.00	0.100	0.125	0.160	0.300	0.500	1.000	1.200
5.00	0.100	0.125	0.160	0.400	0.600	1.000	1.400
6.30	0.125	0.160	0.200	0.400	0.700	1.200	1.600
8.00	0.160	0.200	0.250	0.600	1.000	1.800	2.400
10.00	0.200	0.250	0.315	0.600	1.200	1.800	2.400
12.50	0.200	0.250	0.315	0.800	1.200	2.000	2.500
16.00	0.250	0.315	0.400	0.800	1.400	2.200	2.600
20.00	0.315	0.400	0.500	0.800	1.400	2.200	2.600
25.00	0.400	0.500	0.630	1.000	1.600	2.500	3.000
31.50	0.400	0.500	0.630	1.000	2.000	3.000	3.600
40.00	0.500	0.630	0.800	1.200	2.000	3.000	3.600
50.00	0.630	0.800	1.000	1.400	2.200	3.200	3.600
> 50.00	0.800	1.000	1.250	1.600	2.200	3.200	3.600

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

NC reamers

Machine reamers

1427	1449	1408	1409	1410	1411	717	718	719	720	1428	1429
G.S.	G.S.	~8093	~8093	~8094	~8094	~8050	~8050	~8051	~8051	~8093	~8093
Sol. carb.	Sol. carb.	Carbide	Carbide	Carbide	Carbide	Carbide	Carbide	Carbide	Carbide	Carbide	Carbide
○	○	○	○	○	○	○	○	○	○	a	a
B	B	A	B	A	B	A	B	A	B	A	B
1311	1311	1317	1317	1320	1320	1316	1316	1319	1319	1317	1317

v_c m/min	Feed column no.		v_c m/min	Feed column no.								v_c m/min	Feed column no.	
18	72	72	18	72	72	72	72	72	72	72	72	20	73	73
16	72	72	16	72	72	72	72	72	72	72	72	18	73	73
18	72	72	18	72	72	72	72	72	72	72	72	20	73	73
16	72	72	16	72	72	72	72	72	72	72	72	18	73	73
18	71	71	18	71	71	71	71	71	71	71	71	20	72	72
16	72	72	16	72	72	72	72	72	72	72	72	18	72	72
14	71	71	14	71	71	71	71	71	71	71	71	15	72	72
14	71	71	14	71	71	71	71	71	71	71	71	15	72	72
12	71	71	12	71	71	71	71	71	71	71	71	13	71	71
18	71	71	18	71	71	71	71	71	71	71	71	20	73	73
14	71	71	14	71	71	71	71	71	71	71	71	15	72	72
12	71	71	12	71	71	71	71	71	71	71	71	13	72	72
14	71	71	14	71	71	71	71	71	71	71	71	15	71	71
12	71	71	12	71	71	71	71	71	71	71	71	13	71	71
12	71	71	12	71	71	71	71	71	71	71	71	13	71	71
10	71	71	10	71	71	71	71	71	71	71	71	11	71	71
10	71	71	10	71	71	71	71	71	71	71	71	11	71	71
												11	71	71
8	71	71	8	71	71	71	71	71	71	71	71	9	71	71
6	71	71	6	71	71	71	71	71	71	71	71	7	71	71
6	71	71	6	71	71	71	71	71	71	71	71	7	71	71
20	71	71	20	71	71	71	71	71	71	71	71	22	73	73
18	71	71	18	71	71	71	71	71	71	71	71	20	73	73
20	71	71	20	71	71	71	71	71	71	71	71	22	73	73
18	71	71	18	71	71	71	71	71	71	71	71	20	73	73
												4	71	71
10	71	71	10	71	71	71	71	71	71	71	71	11	71	71
10	71	71	10	71	71	71	71	71	71	71	71	11	71	71
30	73	73	30	73	73	73	73	73	73	73	73	33	73	73
30	73	73	30	73	73	73	73	73	73	73	73	33	73	73
40	72	72	40	72	72	72	72	72	72	72	72	44	73	73
30	72	72	30	72	72	72	72	72	72	72	72	33	73	73
25	72	72	25	72	72	72	72	72	72	72	72	28	73	73
25	72	72	25	72	72	72	72	72	72	72	72	28	73	73
35	72	72	35	72	72	72	72	72	72	72	72	39	73	73
30	72	72	30	72	72	72	72	72	72	72	72	33	73	73
35	72	72	35	72	72	72	72	72	72	72	72	39	73	73
30	72	72	30	72	72	72	72	72	72	72	72	33	73	73
30	72	72	30	72	72	72	72	72	72	72	72	33	73	73
25	72	72	25	72	72	72	72	72	72	72	72	28	73	73
20	73	73	20	73	73	73	73	73	73	73	73	22	73	73
20	73	73	20	73	73	73	73	73	73	73	73	22	73	73

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Tools with bold feed column no.
are preferred choice.

For blind holes with close diameter tolerances
choose straight-fluted reamers.

For exact definition of tools please refer to the
“Standard range and technical data” pages.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Surface finish
Form
Cooling
Std. range page

Counter-sink Ø mm	Feed column no. 71	72	73	74	75	76	77
	f (mm/rev.)						
< 4.00	0.080	0.100	0.125	0.300	0.500	0.800	1.000
4.00	0.100	0.125	0.160	0.300	0.500	1.000	1.200
5.00	0.100	0.125	0.160	0.400	0.600	1.000	1.400
6.30	0.125	0.160	0.200	0.400	0.700	1.200	1.600
8.00	0.160	0.200	0.250	0.600	1.000	1.800	2.400
10.00	0.200	0.250	0.315	0.600	1.200	1.800	2.400
12.50	0.200	0.250	0.315	0.800	1.200	2.000	2.500
16.00	0.250	0.315	0.400	0.800	1.400	2.200	2.600
20.00	0.315	0.400	0.500	0.800	1.400	2.200	2.600
25.00	0.400	0.500	0.630	1.000	1.600	2.500	3.000
31.50	0.400	0.500	0.630	1.000	2.000	3.000	3.600
40.00	0.500	0.630	0.800	1.200	2.000	3.000	3.600
50.00	0.630	0.800	1.000	1.400	2.200	3.200	3.600
> 50.00	0.800	1.000	1.250	1.600	2.200	3.200	3.600

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Expand. reamers

749	740	stepped 743
G.S.	G.S.	G.S.
Carbide	Carbide	Carbide
○	○	○
A	A	
1322	1323	1324

v_c m/min	Feed column no.		v_c m/min	Feed column no.
16	71	71	18	72
14	71	71	16	72
14	71	71	18	72
12	71	71	16	72
14	71	71	18	71
12	71	71	16	72
12	71	71	14	71
12	71	71	14	71
10	71	71	12	71
14	71	71	18	71
12	71	71	14	71
10	71	71	12	71
12	71	71	14	71
10	71	71	12	71
10	71	71	12	71
10	71	71	10	71
8	71	71	10	71
8	71	71	10	71
8	71	71		
6	71	71		
6	71	71		
20	71	71	20	71
18	71	71	18	71
20	71	71	20	71
20	71	71	18	71
4	71	71		
8	71	71	10	71
8	71	71	10	71
25	72	72	30	73
25	72	72	30	73
35	72	72	40	72
30	72	72	30	72
20	72	72	25	72
20	72	72	25	72
30	72	72	35	72
25	72	72	30	72
30	72	72	35	72
25	72	72	30	72
25	72	72	30	72
20	72	72	25	72
16	73	73	20	73
16	73	73	20	73

Machine reamers

674	1407	737	1430	stepped 727
~8090	~8090	~8090	~8090	8054
Carbide	Carbide	Carbide	Carbide	Carbide
○	○	○	ⓐ	○
A	B	C	A	
1321	1321	1321	1321	1325

v_c m/min	Feed column no.			v_c m/min	Feed column no.	v_c m/min	Feed column no.
20	72	72	72	22	72	20	72
18	72	72	72	20	72	20	72
20	72	72	72	22	72	20	72
18	72	72	72	20	72	20	72
20	71	71	71	22	71	20	71
18	71	71	71	20	71	20	71
16	71	71	71	18	71	16	71
16	71	71	71	18	71	18	71
14	71	71	71	13	71	14	71
20	71	71	71	22	71	20	72
16	71	71	71	18	71	18	71
14	71	71	71	15	71	14	71
16	71	71	71	18	71	18	71
14	71	71	71	15	71	14	71
14	71	71	71	15	71	18	71
12	71	71	71	13	71	12	71
12	71	71	71	13	71	14	71
						8	71
8	71	71	71	9	71	14	71
6	71	71	71	7	71	12	71
6	71	71	71	7	71	10	71
20	71	71	71	22	71	22	71
18	71	71	71	20	71	18	71
20	71	71	71	22	71	20	71
20	71	71	71	22	71	18	71
10	71	71	71	11	71	10	71
10	71	71	71	11	71	10	71
30	73	73	73	33	73	30	73
30	73	73	73	33	73	30	73
40	72	72	72	44	72	35	73
30	72	72	72	33	72	25	73
25	72	72	72	28	72	25	73
35	72	72	72	39	72	25	73
35	72	72	72	33	72	35	73
30	72	72	72	33	72	30	73
30	72	72	72	33	72	30	73
25	72	72	72	28	72	25	73
30	72	72	72	33	72	30	73
25	72	72	72	28	72	25	73
12	73	73	73	12	73	20	72
14	73	73	73	14	73	20	73

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Tools with bold feed column no.
are preferred choice.

For blind holes with close diameter tolerances
choose straight-fluted reamers.

For exact definition of tools please refer to the
“Standard range and technical data” pages.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Surface finish
Form
Cooling
Std. range page

Counter-sink Ø mm	Feed column no. 71	72	73	74	75	76	77
	f (mm/rev.)						
< 4.00	0.080	0.100	0.125	0.300	0.500	0.800	1.000
4.00	0.100	0.125	0.160	0.300	0.500	1.000	1.200
5.00	0.100	0.125	0.160	0.400	0.600	1.000	1.400
6.30	0.125	0.160	0.200	0.400	0.700	1.200	1.600
8.00	0.160	0.200	0.250	0.600	1.000	1.800	2.400
10.00	0.200	0.250	0.315	0.600	1.200	1.800	2.400
12.50	0.200	0.250	0.315	0.800	1.200	2.000	2.500
16.00	0.250	0.315	0.400	0.800	1.400	2.200	2.600
20.00	0.315	0.400	0.500	0.800	1.400	2.200	2.600
25.00	0.400	0.500	0.630	1.000	1.600	2.500	3.000
31.50	0.400	0.500	0.630	1.000	2.000	3.000	3.600
40.00	0.500	0.630	0.800	1.200	2.000	3.000	3.600
50.00	0.630	0.800	1.000	1.400	2.200	3.200	3.600
> 50.00	0.800	1.000	1.250	1.600	2.200	3.200	3.600

Coolant:
○ Air
● Neat oil
● Soluble oil

Cutting direction:
R right-hand cutting
L left-hand cutting

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Shell reamers

Taper pin reamers

Machine bridge reamers	Expanding mach. reamers	stepped	Shell reamers			Taper pin reamers	
414	430	431	407	408	409	410	411
311	G.S.	G.S.	219	219	219	2179	2180
HSS	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
●	○	○	◍	◍	◍	○	○
	A		A	B	C		
1298	1301	1302	1303	1303	1304	1328	1329

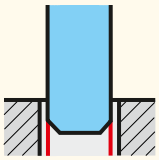
v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.	v_c m/min	Feed column no.		v_c m/min	Feed column no.	v_c m/min	Feed column no.	
14	72	16	71	14	72	16	71	71	16	73	8		72
		12	71	12	72	14	71	71	14	73		72	
12	72	12	71	12	72	12	71	71	14	73	8	72	72
10	72	10	71	10	72	10	71	71	10	73	8		72
		14	71	12	72	16	71	71				71	
10	71	12	71	12	72	14	71	71			8	71	71
8	71	10	71	10	71	10	71	71			8		71
		10	71	10	71	10	71	71				71	
6	71	8	71	10	71	8	71	71			8	71	71
12	72	16	72	14	72	16	71	71			8		71
		10	71	10	71	10	71	71					
6	71	8	71	10	71	8	71	71			6	71	71
8	71	10	71	10	71	10	71	71			6		71
		8	71	10	71	8	71	71				71	
12	71	14	71	12	71	14	71	71			6	71	71
8	71	10	71	10	71	10	71	71			6		71
		10	71	10	71	10	71	71				71	
5	71	6	71	8	71	6	71	71			6		71
		4	71	5	71	4	71	71				71	
4	71	4	71	5	71	4	71	71			6	71	71
12	71	14	71	14	71	14	71	71			6		71
		12	71	12	71	12	71	71				71	
12	71	12	71	14	71	12	71	71			6	71	71
10	71	10	71	12	71	10	71	71			6		71
4	71	4	71	5	71	6	71	71			6	71	71
3	71	3	71	4	71	4	71	71			6		71
		18	72	18	73	18	72	72	20	73		73	
18	73	18	72	18	73	18	72	72	20	73	8	73	73
18	73	20	71	22	73	20	72	72	20	73	8		73
		18	71	20	73	18	72	72	18	73		72	
18	73	20	71	20	73	20	72	72	20	73	8	73	73
16	72	14	71	16	73	18	72	72	18	73	8		72
		18	71	18	73	18	72	72	20	73		72	
16	72	16	71	16	73	16	72	72			8	72	72
20	71	16	71	16	73	20	72	72			8		72
		14	71	14	73	18	72	72				72	
16	72	16	71	16	73	18	72	72			8	72	72
14	72	14	71	14	73	14	72	72			8		72
		12	73	12	73	12	72	72	12	73		72	
10	72	12	73	12	73	14	72	72	14	73	8	72	72

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Typical reaming errors

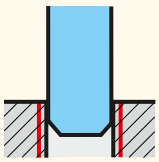
Low cutting speed, high feed rates as well as the use of good cooling and lubricating agents provide the basis for good reaming practice.
A further point to be considered is that a reamer – an exception is the machine bottoming reamer – always follows the direction of the pre-drilled hole. Subsequently, reamers do not correct alignment errors of pre-drilled holes. Errors between the spindle axis and the axis of the pre-drilled hole can be adjusted with the aid of floating holders.
The following fault finding chart will be found useful in tracing the cause of some common reaming problems.

❶ Hole too large



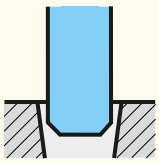
- Tool diameter too large
- Cutting speed/feed rate too high
- Concentricity error of machine spindle
- Bevel lead of tool too short/uneven
- Cutting edge build up
- Lubricating agent unsuitable, holes too large due to lubrication
- Axis shifting between tool and pre-drilled hole. Application of floating holders

❷ Hole too small



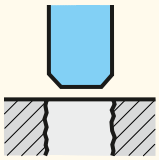
- Reamer blunt. Does not cut, only scrapes
- Cutting speed/feed rate too low
- Component is thin-walled, springs back
- Insufficient stock removal allowance, tool seizes in hole

❸ Conical hole malformation



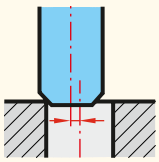
- Tool knocks in spindle
- Bevel lead incorrect
- Axis shifting between tool and pre-drilled hole. Application of floating holders
- Pre-machining inaccurate
- Feed rate too low

❹ Unsatisfactory surface finish



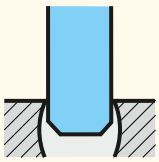
- No/insufficient lubrication. Cutting edge build-up.
- Tool damaged, i. e. broken cutting edge
- Material has a tendancy to cause build up on cutting edges.
- Surface finish of pre-drilled hole unsatisfactory
- Concentricity bevel lead incorrect
- Chip evacuation restricted
- Cutting speed too low

❺ Misalignment of hole



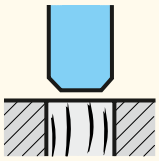
- Pre-drilled hole misaligned
- Concentricity bevel lead incorrect

❻ Hole crowned or oval



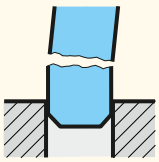
- Workpiece clamped incorrectly
- Chip congestion

❼ Hole has chatter marks



- Cutting edge build-up
- Grease content in coolant too low
- Stock removal allowance insufficient
- Tool incorrectly clamped in tool holder
- Machine spindle not concentric
- Feed rate too low
- Axis shifting

❽ Tool seizes and breaks



- Back taper incorrect
- Circular lands too wide
- Pre-drilled hole is too small
- Bevel lead blunt/ground unevenly
- Feed rate too high
- Chip congestion
- Axis shifting

nom. size

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A AlTiN SuperA

NC machine reamers

Guhring no.	455
Standard	DIN 212-3
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	+0,004/+0,005
Discount group	105
Standard range page	1280

left hand spiral flutes
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends
Tolerance:
≤ Ø 5.50 mm: 0.000/+0.004
> Ø 5.50 mm: 0.000/+0.005

NC machine chucking reamers are similar to DIN 212 with straight shank (h6) for standardised tool clamping in hydraulic or shrink fit chucks. The combination of NC machine chucking reamer and hydraulic, high precision clamping or shrink fit chuck respectively offers highest concentricity and process reliability for the production of holes to required tolerances. Short delivery for intermediate sizes.

NC machine reamers

Guhring no.	490
Standard	DIN 212-3
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	105
Standard range page	1280

left hand spiral flutes
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends

NC machine chucking reamers are similar to DIN 212 with straight shank (h6) for standardised tool clamping in hydraulic or shrink fit chucks. The combination of NC machine chucking reamer and hydraulic or shrink fit chuck respectively offers highest concentricity and process reliability for the production of holes to required tolerances.

Machine reamers

Guhring no.	404
Standard	DIN 208
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1284

straight-fluted
Ø 3.00 mm with external centre on cutting end, with internal centre on shank end
> Ø 3.00 mm with internal centres on both ends
≤ Ø 4.00 mm to Guhring Standard

Machine reamers

Guhring no.	405
Standard	DIN 208
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	105
Standard range page	1284

left hand spiral flutes
Ø 3.00 mm with external centre on cutting end, with internal centre on shank end
> Ø 3.00 mm with internal centres on both ends
≤ Ø 4.00 mm to Guhring Standard

Machine reamers

Guhring no.	642
Standard	DIN 208
Tool material	HSS-E
Surface	S
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	105
Standard range page	1284

left hand spiral flutes
Ø 3.00 mm with external centre on cutting end, with internal centre on shank end
> Ø 3.00 mm with internal centres on both ends
≤ Ø 4.00 mm to Guhring Standard

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Machine reamers

straight-fluted
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends

Guhring no.	401
Standard	DIN 212
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1286

Machine reamers

left hand spiral flutes
> Ø 3.75 mm with internal centres on both ends
≤ Ø 3.75 mm with external centres on both ends

Guhring no.	402
Standard	DIN 212
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	105
Standard range page	1286

Machine reamers

straight-fluted
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends

Guhring no.	457
Standard	DIN 212
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	left-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1286

Machine reamers

straight-fluted
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends

Guhring no.	440
Standard	DIN 212-2
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1287

Machine reamers

left hand spiral flutes
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends

Guhring no.	468
Standard	DIN 212-2
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	105
Standard range page	1287

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Machine reamers

left hand spiral flutes
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends

Guhring no.	641
Standard	DIN 212-2
Tool material	HSS-E
Surface	S
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	105
Standard range page	1287

Machine reamers

straight-fluted
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends

Guhring no.	467
Standard	DIN 212-2
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	left-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1287

Machine reamers

left hand spiral flutes
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends
Ø in increments of 0.01 mm
Tolerance:
Ø 0.95 - 5.50 mm: 0.000/+0.004
Ø 5.51 - 12.05 mm: 0.000/+0.005

Guhring no.	496
Standard	DIN 212
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	+0,004/+0,005
Discount group	105
Standard range page	1289

Machine reamers with coolant duct

straight-fluted
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends with axial coolant duct for the machining of blind holes

Guhring no.	1431
Standard	DIN 212-2
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1291

Machine reamers with coolant duct

straight-fluted
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends with axial coolant duct for the machining of blind holes

Guhring no.	1432
Standard	DIN 8089
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1292

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Machine reamers

straight-fluted
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends

Guhring no.	488
Standard	DIN 8089
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1293

Machine reamers

left hand spiral flutes
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends

Guhring no.	489
Standard	DIN 8089
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	105
Standard range page	1293

Machine reamers

left hand spiral flutes
Ø in increments of 0.01 mm
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends
Tolerance:
≤ Ø 5.50 mm: 0.000/+0.004
> Ø 5.50 mm: 0.000/+0.005

Guhring no.	497
Standard	DIN 8089
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	+0,004/+0,005
Discount group	105
Standard range page	1294

Machine reamer sets

left hand spiral flutes
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends
Tolerance:
≤ Ø 5.50 mm: 0.000/+0.004
> Ø 5.50 mm: 0.000/+0.005

Guhring no.	458
Standard	DIN 8089
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	+0,004/+0,005
Discount group	105
Standard range page	1295

Quick spiral reamers

left hand spiral flutes 45°
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends

Guhring no.	403
Standard	DIN 212
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	C
Tolerance	H7
Discount group	105
Standard range page	1296

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Quick spiral reamers

left hand spiral flutes 45°
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends

Guhring no.	469
Standard	DIN 212-2
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	C
Tolerance	H7
Discount group	105
Standard range page	1296

Quick spiral reamers

left hand spiral flutes 45°
Ø 3.00 mm with external centre on cutting end, with internal centre on shank end
≤ Ø 4.00 mm to Guhring Standard

Guhring no.	406
Standard	DIN 208
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	C
Tolerance	H7
Discount group	105
Standard range page	1297

Machine bridge reamers

left hand spiral flutes 25°
with internal centres on both ends
1:10 on taper lead length
Manufacturing tolerance k11

Guhring no.	414
Standard	DIN 311
Tool material	HSS
Surface	●
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1298

Machine bottoming reamers

straight-fluted

Guhring no.	419
Standard	Guhring std.
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1299

Machine bottoming reamers

straight-fluted

Guhring no.	420
Standard	Guhring std.
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1300

Expanding machine reamers

straight-fluted
max. possible adjustability
≤ Ø 12.00 mm approx. 0.015 mm
≤ Ø 17.00 mm approx. 0.020 mm
≤ Ø 24.00 mm approx. 0.025 mm
≤ Ø 32.00 mm approx. 0.030 mm

Attention: Only expand reamer! Because of risk of breakage the pre-tension should never be relieved by turning the set screw anti-clockwise!

Guhring no.	430
Standard	Guhring std.
Tool material	HSS-E
Surface	○
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1301

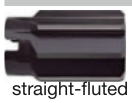
Stepped machine reamers

left hand spiral flutes
with internal centres on both ends

Thanks to the large guide length, these reamers offer high quality and alignment accuracy for pre-machinining and finishing operations.

Guhring no.	431
Standard	Guhring std.
Tool material	HSS-E
Surface	○
Type	
Cutting direction	right-hand
Form	
Tolerance	H7
Discount group	105
Standard range page	1302

Shell reamers



straight-fluted

The shell reamers have a taper bore with a taper 1 : 30 and a driving slot to DIN 138.

Guhring no.	407
Standard	DIN 219
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1303

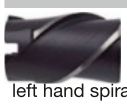
Shell reamers

left hand spiral flutes

The shell reamers have a taper bore with a taper 1 : 30 and a driving slot to DIN 138.

Guhring no.	408
Standard	DIN 219
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	105
Standard range page	1303

Shell reamers



left hand spiral flutes 45°

The shell reamers have a taper bore with a taper 1 : 30 and a driving slot to DIN 138.

Guhring no.	409
Standard	DIN 219
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	C
Tolerance	H7
Discount group	105
Standard range page	1304

○ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Carbide high performance reamers

for the machining of blind holes
with axial coolant duct
extremely unequal flute spacing
straight-fluted
Straight shank tol. h6 for clamping in hydraulic chucks and shrink fit chucks

The solid carbide HPC reamer HR 500 S operates with highest cutting rates and produces extremely high-quality holes. Therefore, it often enables considerable savings in the process costs. In addition, it provides very high process reliability.

Guhring no.	1685
Standard	Guhring std.
Tool material	Solid carbide
Surface	a
Type	HR 500 S
Cutting direction	right-hand
Form	
Tolerance	H7
Discount group	166
Standard range page	1305

Carbide high performance reamers

for machining of through holes
with longitudinal flutes on the shank for coolant supply
extremely unequal flute spacing
straight-fluted
Straight shank tol. h6 for clamping in hydraulic chucks and shrink fit chucks

The solid carbide HPC reamer HR 500 D operates with highest cutting rates (see Guhringguide) and produces extremely high-quality holes. Therefore, it often enables considerable savings in the process costs. In addition, it provides very high process reliability. The special coolant supply ensures an optimal chip evacuation and an optimal cooling.

Guhring no.	1686
Standard	Guhring std.
Tool material	Solid carbide
Surface	a
Type	HR 500 D
Cutting direction	right-hand
Form	
Tolerance	H7
Discount group	166
Standard range page	1305

Carbide high performance reamers

for the machining of blind holes
with axial coolant duct
extremely unequal flute spacing
straight-fluted
Straight shank tol. h6 for clamping in hydraulic chucks and shrink fit chucks

The solid carbide HPC reamer HR 500 S ALU operates with highest cutting rates and produces extremely high-quality holes. Therefore, it often enables considerable savings in the process costs. In addition, it provides very high process reliability.

Guhring no.	1678
Standard	Guhring std.
Tool material	Solid carbide
Surface	Cb
Type	HR 500 Alu
Cutting direction	right-hand
Form	
Tolerance	H7
Discount group	166
Standard range page	1306

Carbide high performance reamers

for machining of through holes
with longitudinal flutes on the shank for coolant supply
extremely unequal flute spacing
straight-fluted
Straight shank tol. h6 for clamping in hydraulic chucks and shrink fit chucks

The solid carbide HPC reamer HR 500 D ALU operates with highest cutting rates (see Guhringguide) and produces extremely high-quality holes. Therefore, it often enables considerable savings in the process costs. In addition, it provides very high process reliability. The special coolant supply ensures an optimal chip evacuation and an optimal cooling.

Guhring no.	1679
Standard	Guhring std.
Tool material	Solid carbide
Surface	Cb
Type	HR 500 Alu
Cutting direction	right-hand
Form	
Tolerance	H7
Discount group	166
Standard range page	1306

Carbide high performance reamers

for the machining of blind holes
with axial coolant duct
extremely unequal flute spacing
straight-fluted
Straight shank tol. h6 for clamping in hydraulic chucks and shrink fit chucks

The solid carbide HPC reamer HR 500 S operates with highest cutting rates and produces extremely high-quality holes. Therefore, it often enables considerable savings in the process costs. In addition, it provides very high process reliability.

Guhring no.	1675
Standard	Guhring std.
Tool material	Solid carbide
Surface	a
Type	HR 500 S
Cutting direction	right-hand
Form	
Tolerance	+0,005
Discount group	166
Standard range page	1307

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Carbide high performance reamers

for machining of through holes
with longitudinal flutes on the shank for coolant supply
extremely unequal flute spacing
straight-fluted
Straight shank tol. h6 for clamping in hydraulic chucks and shrink fit chucks

The solid carbide HPC reamer HR 500 D operates with highest cutting rates (see Guhringguide) and produces extremely high-quality holes. Therefore, it often enables considerable savings in the process costs. In addition, it provides very high process reliability. The special coolant supply ensures an optimal chip evacuation and an optimal cooling.

Guhring no.	1676
Standard	Guhring std.
Tool material	Solid carbide
Surface	a
Type	HR 500 D
Cutting direction	right-hand
Form	
Tolerance	+0,005
Discount group	166
Standard range page	1307

Carbide high performance reamers

for the machining of blind holes
with axial coolant duct
extremely unequal flute spacing
straight-fluted
Straight shank tol. h6 for clamping in hydraulic chucks and shrink fit chucks

The solid carbide HPC reamer HR 500 GS operates with highest cutting rates and produces extremely high-quality holes. Therefore, it often enables considerable savings in the process costs. In addition, it provides very high process reliability.

Guhring no.	1680
Standard	Guhring std.
Tool material	Carbide
Surface	a
Type	HR 500 GS
Cutting direction	right-hand
Form	
Tolerance	H7
Discount group	166
Standard range page	1309

Carbide high performance reamers

for machining of through holes
with longitudinal flutes on the shank for coolant supply
extremely unequal flute spacing
straight-fluted
Straight shank tol. h6 for clamping in hydraulic chucks and shrink fit chucks

The solid carbide HPC reamer HR 500 GD operates with highest cutting rates (see Guhringguide) and produces extremely high-quality holes. Therefore, it often enables considerable savings in the process costs. In addition, it provides very high process reliability. The special coolant supply ensures an optimal chip evacuation and an optimal cooling.

Guhring no.	1681
Standard	Guhring std.
Tool material	Carbide
Surface	a
Type	HR 500 GD
Cutting direction	right-hand
Form	
Tolerance	H7
Discount group	166
Standard range page	1309

Cermet high performance reamers

for the machining of blind holes
with axial coolant duct
extremely unequal flute spacing
straight-fluted
Straight shank tol. h6 for clamping in hydraulic chucks and shrink fit chucks

The Cermet HPC reamer HR 500 GS operates with highest cutting rates and produces extremely high-quality holes. Therefore, it often enables considerable savings in the process costs. In addition, it provides very high process reliability.

Guhring no.	1682
Standard	Guhring std.
Tool material	Cermet tipped
Surface	○
Type	HR 500 GS
Cutting direction	right-hand
Form	
Tolerance	H7
Discount group	166
Standard range page	1310

Cermet high performance reamers

for machining of through holes
with longitudinal flutes on the shank for coolant supply
extremely unequal flute spacing
straight-fluted
Straight shank tol. h6 for clamping in hydraulic chucks and shrink fit chucks

The Cermet HPC reamer HR 500 GD operates with highest cutting rates and produces extremely high-quality holes. Therefore, it often enables considerable savings in the process costs. In addition, it provides very high process reliability. The special coolant supply ensures an optimal chip evacuation and an optimal cooling.

Guhring no.	1683
Standard	Guhring std.
Tool material	Cermet tipped
Surface	○
Type	HR 500 GD
Cutting direction	right-hand
Form	
Tolerance	H7
Discount group	166
Standard range page	1310

○ bright ◔ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

NC machine reamers

Ø > 3.75 mm with extremely unequal flute spacing
left hand spiral flutes
Tolerance:
≤ Ø 5.50 mm: 0.000/+0.004
> Ø 5.50 mm: 0.000/+0.005

NC machine chucking reamers similar to DIN 8093 with straight shank (h6) for standardised tool clamping in hydraulic or shrink fit chucks offer highest concentricity and process reliability for the production of holes to required tolerances.

Guhring no.	1427
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	+0,004/+0,005
Discount group	120
Standard range page	1311

NC machine reamers

Ø > 3.75 mm with extremely unequal flute spacing
left hand spiral flutes

NC machine chucking reamers similar to DIN 8093 with straight shank (h6) for standardised tool clamping in hydraulic or shrink fit chucks offer highest concentricity and process reliability for the production of holes to required tolerances.

Guhring no.	1449
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	120
Standard range page	1311

Machine reamers

extremely unequal flute spacing
straight-fluted
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centres on both ends
> Ø 9.50 mm with internal centres on both ends

Guhring no.	717
Standard	~ DIN 8050
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	120
Standard range page	1316

Machine reamers

extremely unequal flute spacing
left hand spiral flutes
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centres on both ends
> Ø 9.50 mm with internal centres on both ends

Guhring no.	718
Standard	~ DIN 8050
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	120
Standard range page	1316

Machine reamers

≥ Ø 3.0 mm with extrem unequal flute spacing
straight-fluted
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
≤ Ø 9.50 mm with external centres on both ends
> Ø 9.50 mm with internal centres on both ends

Guhring no.	1408
Standard	~ DIN 8093
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	120
Standard range page	1317

Machine reamers

≥ Ø 3.0 mm with extrem unequal flute spacing
straight-fluted
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centres on both ends
> Ø 9.50 mm with internal centres on both ends

Guhring no.	1428
Standard	~ DIN 8093
Tool material	Carbide
Surface	a
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	120
Standard range page	1317

Machine reamers

≥ Ø 3.0 mm with extrem unequal flute spacing
left hand spiral flutes
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centres on both ends
> Ø 9.50 mm with internal centres on both ends

Guhring no.	1409
Standard	~ DIN 8093
Tool material	Carbide
Surface	○
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	120
Standard range page	1317

Machine reamers

≥ Ø 3.0 mm with extrem unequal flute spacing
left hand spiral flutes
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centres on both ends
> Ø 9.50 mm with internal centres on both ends

Guhring no.	1429
Standard	~ DIN 8093
Tool material	Carbide
Surface	a
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	120
Standard range page	1317

Machine reamers

with extremely unequal flute spacing
straight-fluted
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centre on cutting end
internal centre on shank end
> Ø 9.50 mm with internal centres on both ends

Guhring no.	719
Standard	~ DIN 8051
Tool material	Carbide
Surface	○
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	120
Standard range page	1319

Machine reamers

with extremely unequal flute spacing
left hand spiral flutes
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centre on cutting end
internal centre on shank end
> Ø 9.50 mm with internal centres on both ends

Guhring no.	720
Standard	~ DIN 8051
Tool material	Carbide
Surface	○
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	120
Standard range page	1319

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Machine reamers

with extremely unequal flute spacing
straight-fluted
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centre on cutting end
internal centre on shank end
> Ø 9.50 mm with internal centres on both ends

Guhring no.	1410
Standard	~ DIN 8094
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	120
Standard range page	1320

Machine reamers

with extremely unequal flute spacing
left hand spiral flutes
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centre on cutting end
internal centre on shank end
> Ø 9.50 mm with internal centres on both ends

Guhring no.	1411
Standard	~ DIN 8094
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	120
Standard range page	1320

Machine reamers

with extremely unequal flute spacing
straight-fluted
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centres on both ends
> Ø 9.50 mm with internal centres on both ends

Guhring no.	674
Standard	~ DIN 8090
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	120
Standard range page	1321

Machine reamers

with extremely unequal flute spacing
straight-fluted
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centres on both ends
> Ø 9.50 mm with internal centres on both ends

Guhring no.	1430
Standard	~ DIN 8090
Tool material	Carbide
Surface	a
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	120
Standard range page	1321

Machine reamers

with extremely unequal flute spacing
left hand spiral flutes
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centres on both ends
> Ø 9.50 mm with internal centres on both ends

Guhring no.	1407
Standard	~ DIN 8090
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	120
Standard range page	1321

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Machine reamers

with extremely unequal flute spacing
right hand spiral flutes
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
allocation to Guhring standard
≤ Ø 9.50 mm with external centres on both ends
> Ø 9.50 mm with internal centres on both ends

Guhring no.	737
Standard	~ DIN 8090
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	C
Tolerance	H7
Discount group	120
Standard range page	1321

Expanding machine reamers

straight-fluted
with carbide inserts
with internal centres on both ends

Expanding machine reamers similar to DIN 8050 have an adjustment range of approx. 0.03 mm via tapered screw setting.

Guhring no.	749
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	120
Standard range page	1322

Expanding machine reamers

straight-fluted
with carbide inserts
with internal centres on both ends

Expanding machine reamers similar to DIN 8050 have an adjustment range of approx. 0.03 mm via tapered screw setting.

Guhring no.	740
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	120
Standard range page	1323

Stepped machine reamers

left hand spiral flutes
≤ Ø 9,50 mm: solid carbide
> Ø 9.50 mm: Carb. head
≤ Ø 9.50 mm with external centre on cutting end
internal centre on shank end
> Ø 9.50 mm with internal centres on both ends

Guhring no.	743
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	
Tolerance	H7
Discount group	120
Standard range page	1324

Shell reamers

straight-fluted
with carbide inserts
Ø 30.00 mm to Guhring standard

The shell reamers have a taper bore with a taper 1 : 30 and a driving slot to DIN 138.

Guhring no.	727
Standard	DIN 8054
Tool material	Carbide
Surface	◯
Type	
Cutting direction	right-hand
Form	
Tolerance	H7
Discount group	120
Standard range page	1325

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Hand taper reamers

straight-fluted
with taper 1:50 for the reaming of holes to suit taper pins
with square to DIN 10
Ø 3.50; 5.50; 6.50; 7.00; 9.00; 13.00 und 14.00 mm to Guhring standard

Guhring no.	428
Standard	DIN 9
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	
Discount group	105
Standard range page	1326

Hand taper reamers

left hand spiral flutes
with taper 1:50 for the reaming of holes to suit taper pins
with square to DIN 10
Ø 3.50; 5.50; 6.50; 7.00; 9.00; 13.00 und 14.00 mm to Guhring standard

Guhring no.	429
Standard	DIN 9
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	
Discount group	105
Standard range page	1326

Hand taper reamers

left hand spiral flutes
with taper 1 : 10 for reaming of conical pre-machined holes
with square to DIN 10

Guhring no.	1433
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1327

Machine taper reamers

left hand spiral flutes approx. 45°
with taper 1:50 for the reaming of holes to suit taper pins to0 DIN 1, 258, 7977 and 7978
≤ Ø 4.00 mm with external centres on both ends
> Ø 4.00 mm with internal centres on both ends
≤ Ø 1.50 mm to Guhring Standard
With tang to DIN 1809

For pre-machining we recommend taper pin drills Guhring no. 531 and 532. However, the pre-drilled hole can also be cylindrical.

Guhring no.	410
Standard	DIN 2179
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1328

Machine taper reamers

left hand spiral flutes approx. 45°
with taper 1:50 for the reaming of holes to suit taper pins to0 DIN 1, 258, 7977 and 7978
with internal centres on both ends
Ø 13.00 und 14.00 mm to Guhring standard

For pre-machining we recommend taper pin drills Guhring no. 531 and 532. However, the pre-drilled hole can also be cylindrical.

Guhring no.	411
Standard	DIN 2180
Tool material	HSS-E
Surface	◯
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1329

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Hand reamers

straight-fluted
with square to DIN 10
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends
≤ 1.75 mm to Guhring standard

Guhring no.	412
Standard	DIN 206
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	A
Tolerance	H7
Discount group	105
Standard range page	1330

Hand reamers

left hand spiral flutes
with square to DIN 10
≤ Ø 3.75 mm with external centres on both ends
> Ø 3.75 mm with internal centres on both ends
≤ 1.75 mm to Guhring standard

Guhring no.	413
Standard	DIN 206
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	H7
Discount group	105
Standard range page	1330

Adjustable hand reamers

left hand spiral flutes
with square to DIN 10
with internal centres on both ends

The hand reamers are ground to nom. size and not for hole tolerance zone H7.
The adjustment range is 1/100 of the nom. diameter, i. e. for Ø 10.00 mm approx. 0.1 mm.
From Ø 6.50 mm the adjustment is via a lock nut.

Guhring no.	415
Standard	DIN 859
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	
Discount group	105
Standard range page	1332

Expanding hand reamers

with wide adjustment range
with square to DIN 10
with internal centres on both ends

The quickly adjustable hand reamers are especially suitable for maintenance and repairs. Total length, cutting edge length and number of flutes only apply to Guhring no. 416.

Guhring no.	416
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1334

Replacement blades for expanding hand reamers

Guhring no.	417
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1335

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Arbors, complete

Arbors complete
Mandrel: short
for shell-core drills Art. no. 728

Guhring no.	1438
Standard	DIN 217
Tool material	
Surface	
Type	
Cutting direction	
Form	
Tolerance	
Discount group	105
Standard range page	1336

Arbors without accessories

without accessories

Guhring no.	1434
Standard	Guhring std.
Tool material	
Surface	
Type	
Cutting direction	
Form	
Tolerance	
Discount group	105
Standard range page	1337

Draw-off nuts

Guhring no.	1435
Standard	Guhring std.
Tool material	
Surface	
Type	
Cutting direction	
Form	
Tolerance	
Discount group	105
Standard range page	1338

Driving collars

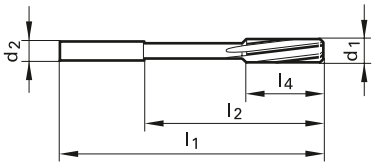
Guhring no.	1436
Standard	Guhring std.
Tool material	
Surface	
Type	
Cutting direction	
Form	
Tolerance	
Discount group	105
Standard range page	1339

Woodruff keys

Guhring no.	1437
Standard	DIN 6888
Tool material	
Surface	
Type	
Cutting direction	
Form	
Tolerance	
Discount group	105
Standard range page	1340

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

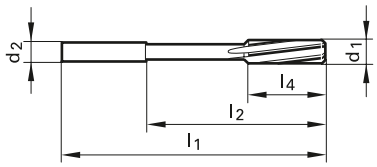
Guhring no.	455	490
Standard	DIN 212-3	
Tool material	HSS-E	
Surface	◯	◯
Type		
Form	B	B
Cutting direction	right-hand	right-hand
Tolerance	+0,004/+0,005	H7
Discount group	105	105
Techn. data page	1265	1265



d1	d2 h6	l1	l2	l4	Z	Availability	
mm	mm	mm	mm	mm			
1.000	1.000	34.00	15.00	5.50	3	●	
1.010	1.000	34.00	15.00	5.50	3	●	
1.500	2.000	40.00	18.00	8.00	3	●	●
1.510	2.000	43.00	20.00	9.00	3	❍	
1.530	2.000	43.00	20.00	9.00	3	●	
1.600	2.000	43.00	20.00	9.00	3		●
1.700	2.000	43.00	20.00	9.00	3		●
1.800	2.000	46.00	22.00	10.00	4		●
1.970	2.000	49.00	24.00	11.00	4	❍	
1.980	2.000	49.00	24.00	11.00	4	●	
1.990	2.000	49.00	24.00	11.00	4	●	
2.000	2.000	49.00	24.00	11.00	4	●	●
2.010	2.000	49.00	24.00	11.00	4	●	
2.020	2.000	49.00	24.00	11.00	4	●	
2.030	2.000	49.00	24.00	11.00	4	●	
2.100	2.000	49.00	24.00	11.00	4		●
2.200	3.000	53.00	25.00	12.00	4		●
2.300	3.000	53.00	25.00	12.00	4		●
2.400	3.000	57.00	29.00	14.00	4		●
2.470	3.000	57.00	29.00	14.00	4	❍	
2.490	3.000	57.00	29.00	14.00	4	❍	
2.500	3.000	57.00	29.00	14.00	4	●	●
2.510	3.000	57.00	29.00	14.00	4	●	
2.520	3.000	57.00	29.00	14.00	4	●	
2.530	3.000	57.00	29.00	14.00	4	●	
2.600	3.000	57.00	29.00	14.00	4		●
2.700	3.000	61.00	33.00	15.00	6		●
2.800	3.000	61.00	33.00	15.00	6		●
2.900	3.000	61.00	33.00	15.00	6		●
2.970	3.000	61.00	33.00	15.00	6	●	
2.980	3.000	61.00	33.00	15.00	6	●	
2.990	3.000	61.00	33.00	15.00	6	●	
3.000	3.000	61.00	33.00	15.00	6	●	●
3.010	4.000	65.00	37.00	16.00	6	●	
3.020	4.000	65.00	37.00	16.00	6	●	
3.030	4.000	65.00	37.00	16.00	6	●	

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

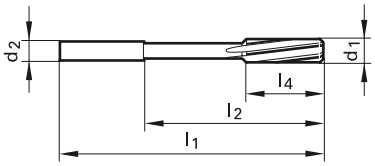
Guhring no.	455	490
Standard	DIN 212-3	
Tool material	HSS-E	
Surface	◯	◯
Type		
Form	B	B
Cutting direction	right-hand	right-hand
Tolerance	+0,004/+0,005	H7
Discount group	105	105
Techn. data page	1265	1265



d1	d2 h6	l1	l2	l4	Z	Availability	
mm	mm	mm	mm	mm			
3.100	4.000	65.00	37.00	16.00	6		●
3.200	4.000	65.00	37.00	16.00	6		●
3.300	4.000	65.00	37.00	16.00	6		●
3.500	4.000	70.00	42.00	18.00	6		●
3.600	4.000	70.00	42.00	18.00	6		●
3.700	4.000	70.00	42.00	18.00	6		●
3.800	4.000	75.00	47.00	19.00	6		●
3.900	4.000	75.00	47.00	19.00	6		●
3.970	4.000	75.00	47.00	19.00	6	●	
3.980	4.000	75.00	47.00	19.00	6	●	
3.990	4.000	75.00	47.00	19.00	6	●	
4.000	4.000	75.00	47.00	19.00	6	●	●
4.010	4.000	75.00	47.00	19.00	6	●	
4.020	4.000	75.00	47.00	19.00	6	●	
4.030	4.000	75.00	47.00	19.00	6	●	
4.100	4.000	75.00	47.00	19.00	6		●
4.200	4.000	75.00	47.00	19.00	6		●
4.500	5.000	80.00	52.00	21.00	6		●
4.700	5.000	80.00	52.00	21.00	6		●
4.800	5.000	86.00	58.00	23.00	6		●
4.900	5.000	86.00	58.00	23.00	6		●
4.980	5.000	86.00	58.00	23.00	6	●	
4.990	5.000	86.00	58.00	23.00	6	●	
5.000	5.000	86.00	58.00	23.00	6	●	●
5.010	5.000	86.00	58.00	23.00	6	●	
5.020	5.000	86.00	58.00	23.00	6	●	
5.030	5.000	86.00	58.00	23.00	6	●	
5.100	5.000	86.00	58.00	23.00	6		●
5.200	5.000	86.00	58.00	23.00	6		●
5.300	5.000	86.00	58.00	23.00	6		●
5.400	6.000	93.00	57.00	26.00	6		●
5.500	6.000	93.00	57.00	26.00	6		●
5.600	6.000	93.00	57.00	26.00	6		●
5.700	6.000	93.00	57.00	26.00	6		●
5.800	6.000	93.00	57.00	26.00	6		●
5.900	6.000	93.00	57.00	26.00	6		●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

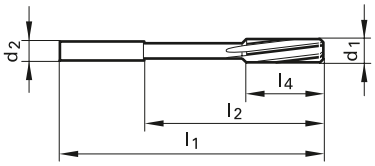
Guhring no.	455	490
Standard	DIN 212-3	
Tool material	HSS-E	
Surface	○	○
Type		
Form	B	B
Cutting direction	right-hand	right-hand
Tolerance	+0,004/+0,005	H7
Discount group	105	105
Techn. data page	1265	1265



d1	d2 h6	l1	l2	l4	Z	Availability	
mm	mm	mm	mm	mm			
5.980	6.000	93.00	57.00	26.00	6	●	
5.990	6.000	93.00	57.00	26.00	6	●	
6.000	6.000	93.00	57.00	26.00	6	●	●
6.010	6.000	101.00	65.00	28.00	6	●	
6.020	6.000	101.00	65.00	28.00	6	●	
6.030	6.000	101.00	65.00	28.00	6	●	
6.100	6.000	101.00	65.00	28.00	6		●
6.200	6.000	101.00	65.00	28.00	6		●
6.300	6.000	101.00	65.00	28.00	6		●
6.400	6.000	101.00	65.00	28.00	6		●
6.500	6.000	101.00	65.00	28.00	6		●
6.600	6.000	101.00	65.00	28.00	6		●
6.800	8.000	109.00	73.00	31.00	6		●
6.900	8.000	109.00	73.00	31.00	6		●
7.000	8.000	109.00	73.00	31.00	6		●
7.100	8.000	109.00	73.00	31.00	6		●
7.300	8.000	109.00	73.00	31.00	6		●
7.400	8.000	109.00	73.00	31.00	6		○
7.500	8.000	109.00	73.00	31.00	6		●
7.600	8.000	117.00	81.00	33.00	6		●
7.700	8.000	117.00	81.00	33.00	6		○
7.800	8.000	117.00	81.00	33.00	6		○
7.900	8.000	117.00	81.00	33.00	6		●
7.970	8.000	117.00	81.00	33.00	6	○	
7.980	8.000	117.00	81.00	33.00	6	●	
7.990	8.000	117.00	81.00	33.00	6	●	
8.000	8.000	117.00	81.00	33.00	6	●	●
8.010	8.000	117.00	81.00	33.00	6	●	
8.020	8.000	117.00	81.00	33.00	6	●	
8.030	8.000	117.00	81.00	33.00	6	●	
8.100	8.000	117.00	81.00	33.00	6		●
8.200	8.000	117.00	81.00	33.00	6		●
8.300	8.000	117.00	81.00	33.00	6		●
8.500	8.000	117.00	81.00	33.00	6		●
8.600	10.000	125.00	85.00	36.00	6		○
8.700	10.000	125.00	85.00	36.00	6		○

○ bright ◔ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

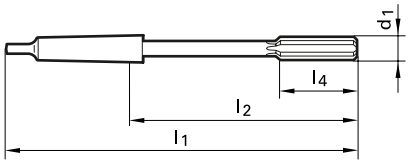
Guhring no.	455	490
Standard	DIN 212-3	
Tool material	HSS-E	
Surface	◯	◯
Type		
Form	B	B
Cutting direction	right-hand	right-hand
Tolerance	+0,004/+0,005	H7
Discount group	105	105
Techn. data page	1265	1265



d1	d2 h6	l1	l2	l4	Z	Availability	
mm	mm	mm	mm	mm			
8.800	10.000	125.00	85.00	36.00	6		●
9.000	10.000	125.00	85.00	36.00	6	❍	●
9.010	10.000	125.00	85.00	36.00	6	❍	
9.100	10.000	125.00	85.00	36.00	6		❍
9.200	10.000	125.00	85.00	36.00	6		❍
9.300	10.000	125.00	85.00	36.00	6		●
9.500	10.000	125.00	85.00	36.00	6		●
9.700	10.000	133.00	93.00	38.00	6		●
9.970	10.000	133.00	93.00	38.00	6	❍	
9.980	10.000	133.00	93.00	38.00	6	❍	
9.990	10.000	133.00	93.00	38.00	6	❍	
10.000	10.000	133.00	93.00	38.00	6	●	●
10.010	10.000	133.00	93.00	38.00	6	●	
10.020	10.000	133.00	93.00	38.00	6	●	
10.030	10.000	133.00	93.00	38.00	6	●	
11.000	10.000	142.00	102.00	41.00	6		●
11.980	10.000	151.00	111.00	44.00	6	●	
11.990	10.000	151.00	111.00	44.00	6	●	
12.000	10.000	151.00	111.00	44.00	6	●	●
12.010	10.000	151.00	111.00	44.00	6	●	
12.020	10.000	151.00	111.00	44.00	6	●	
13.000	10.000	151.00	111.00	44.00	6		●
14.000	14.000	160.00	115.00	47.00	8		●
15.000	14.000	162.00	117.00	50.00	8		●
16.000	14.000	170.00	125.00	52.00	8		●
17.000	14.000	175.00	130.00	54.00	8		●
18.000	14.000	182.00	137.00	56.00	8		●
19.000	16.000	189.00	141.00	58.00	8		●
20.000	16.000	195.00	147.00	60.00	8		●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

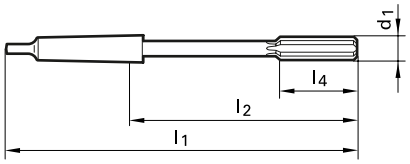
Guhring no.	404	405	642
Standard		DIN 208	
Tool material		HSS-E	
Surface	○	○	Ⓢ
Type			
Form	A	B	B
Cutting direction	right-hand	right-hand	right-hand
Tolerance	H7	H7	H7
Discount group	105	105	105
Techn. data page	1265	1265	1265



d1	MK	l1	l2	l4	Z	Availability		
mm		mm	mm	mm				
3.000	1	115.00	53.00	15.00	6	●	●	
4.000	1	125.00	63.00	19.00	6	●	●	
5.000	1	133.00	71.00	23.00	6	●	●	
5.100	1	133.00	71.00	23.00	6	○		
5.500	1	138.00	76.00	26.00	6	○		
6.000	1	138.00	76.00	26.00	6	●	●	
6.100	1	144.00	82.00	28.00	6	●		
6.200	1	144.00	82.00	28.00	6	●		
6.500	1	144.00	82.00	28.00	6	●		
7.000	1	150.00	88.00	31.00	6		●	
7.500	1	150.00	88.00	31.00	6	○		
8.000	1	156.00	94.00	33.00	6	●	●	○
8.500	1	156.00	94.00	33.00	6	○		
9.000	1	162.00	100.00	36.00	6	●	●	
9.500	1	162.00	100.00	36.00	6	○		
9.800	1	168.00	106.00	38.00	6	○		
10.000	1	168.00	106.00	38.00	6	●	●	●
10.100	1	168.00	106.00	38.00	6	○		
11.000	1	175.00	113.00	41.00	6	●	●	●
12.000	1	182.00	120.00	44.00	6	●	●	●
13.000	1	182.00	120.00	44.00	6	●	●	○
14.000	1	189.00	127.00	47.00	8	●	●	●
15.000	2	204.00	129.00	50.00	8	●	●	●
15.700	2	210.00	135.00	52.00	8	●		
16.000	2	210.00	135.00	52.00	8	●	●	●
17.000	2	214.00	139.00	54.00	8	●	●	●
18.000	2	219.00	144.00	56.00	8	●	●	●
19.000	2	223.00	148.00	58.00	8	●	●	○
19.500	2	228.00	153.00	60.00	8	○		
20.000	2	228.00	153.00	60.00	8	●	●	●
21.000	2	232.00	157.00	62.00	8	●	●	
22.000	2	237.00	162.00	64.00	8	●	●	
23.000	2	241.00	166.00	66.00	8	●	●	
24.000	3	268.00	174.00	68.00	8	●	●	
25.000	3	268.00	174.00	68.00	8	●	●	
26.000	3	273.00	179.00	70.00	8	●	●	

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

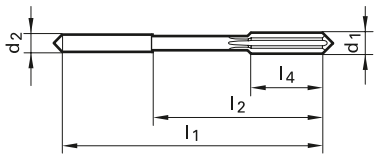
Guhring no.	404	405	642
Standard		DIN 208	
Tool material		HSS-E	
Surface	○	○	(S)
Type			
Form	A	B	B
Cutting direction	right-hand	right-hand	right-hand
Tolerance	H7	H7	H7
Discount group	105	105	105
Techn. data page	1265	1265	1265



d1	MK	l1	l2	l4	Z	Availability	
mm		mm	mm	mm			
27.000	3	277.00	183.00	71.00	10		●
28.000	3	277.00	183.00	71.00	10	●	●
29.000	3	281.00	187.00	73.00	10		●
30.000	3	281.00	187.00	73.00	10	●	●
31.000	3	285.00	191.00	75.00	10	●	●
32.000	4	317.00	199.50	77.00	10	●	●
33.000	4	317.00	199.50	77.00	10		●
34.000	4	321.00	203.50	78.00	10	●	●
35.000	4	321.00	203.50	78.00	10	●	●
36.000	4	325.00	207.50	79.00	10	●	●
38.000	4	329.00	211.50	81.00	10	●	●
40.000	4	329.00	211.50	81.00	10	●	●
42.000	4	333.00	215.50	82.00	12		●
44.000	4	336.00	218.50	83.00	12		●
45.000	4	336.00	218.50	83.00	12		●
46.000	4	340.00	222.50	84.00	12		●
48.000	4	344.00	226.50	86.00	12		●
50.000	4	344.00	226.50	86.00	12		●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

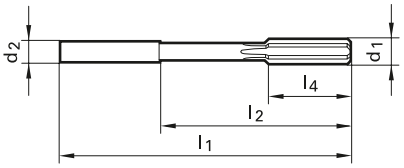
Guhring no.	401	402	457
Standard		DIN 212	
Tool material		HSS-E	
Surface	◯	◯	◯
Type			
Form	A	B	A
Cutting direction	right-hand	right-hand	left-hand
Tolerance	H7	H7	H7
Discount group	105	105	105
Techn. data page	1266	1266	1266



d1	d2 h9	l1	l2	l4	Z	Availability		
mm	mm	mm	mm	mm				
1.000	1.000	34.00	15.00	5.50	3	●	●	❍
1.200	1.200	38.00	16.50	7.50	3	●	●	
1.300	1.300	38.00	16.50	7.50	3		●	
1.400	1.400	40.00	18.00	8.00	3		●	
1.500	1.500	40.00	18.00	8.00	3	●	●	❍
1.600	1.600	43.00	20.00	9.00	3	●	●	
1.800	1.800	46.00	22.00	10.00	4	●	●	
1.900	1.900	46.00	22.00	10.00	4		●	
2.000	2.000	49.00	24.00	11.00	4	●	●	
2.200	2.200	53.00	25.00	12.00	4	❍	●	
2.300	2.300	53.00	25.00	12.00	4		●	
2.500	2.500	57.00	29.00	14.00	4	●	●	❍
2.700	2.800	61.00	33.00	15.00	6		●	
2.800	2.800	61.00	33.00	15.00	6		●	
2.900	3.000	61.00	33.00	15.00	6		❍	
3.000	3.000	61.00	33.00	15.00	6	●	●	❍
3.200	3.200	65.00	37.00	16.00	6	●	●	
3.500	3.500	70.00	42.00	18.00	6	●	●	❍
3.700	3.500	70.00	42.00	18.00	6		●	
4.000	4.000	75.00	47.00	19.00	6			❍
4.500	4.500	80.00	52.00	21.00	6			❍
5.000	5.000	86.00	58.00	23.00	6			❍
5.500	5.600	93.00	57.00	26.00	6	❍		❍
6.000	5.600	93.00	57.00	26.00	6			❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

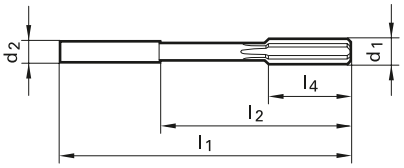
Guhring no.	440	468	641	467
Standard	DIN 212-2			
Tool material	HSS-E			
Surface	○	○	(S)	○
Type				
Form	A	B	B	A
Cutting direction	right-hand	right-hand	right-hand	left-hand
Tolerance	H7	H7	H7	H7
Discount group	105	105	105	105
Techn. data page	1266	1266	1267	1267



d1	d2 h9	l1	l2	l4	Z	Availability
mm	mm	mm	mm	mm		
3.800	4.000	75.00	47.00	19.00	6	●
4.000	4.000	75.00	47.00	19.00	6	● ● ●
4.400	4.500	80.00	52.00	21.00	6	○
4.500	4.500	80.00	52.00	21.00	6	● ● ○
4.700	4.500	80.00	52.00	21.00	6	●
4.900	5.000	86.00	58.00	23.00	6	○
5.000	5.000	86.00	58.00	23.00	6	● ● ● ○
5.100	5.000	86.00	58.00	23.00	6	●
5.500	5.600	93.00	57.00	26.00	6	● ● ○
6.000	5.600	93.00	57.00	26.00	6	● ● ● ○
6.100	6.300	101.00	65.00	28.00	6	●
6.200	6.300	101.00	65.00	28.00	6	●
6.500	6.300	101.00	65.00	28.00	6	● ○
6.900	7.100	109.00	73.00	31.00	6	○
7.000	7.100	109.00	73.00	31.00	6	● ● ● ○
7.100	7.100	109.00	73.00	31.00	6	○
7.200	7.100	109.00	73.00	31.00	6	●
7.400	7.100	109.00	73.00	31.00	6	○
7.500	7.100	109.00	73.00	31.00	6	○
8.000	8.000	117.00	81.00	33.00	6	● ● ● ○
8.100	8.000	117.00	81.00	33.00	6	●
8.300	8.000	117.00	81.00	33.00	6	○
8.500	8.000	117.00	81.00	33.00	6	○ ●
9.000	9.000	125.00	85.00	36.00	6	● ● ○ ○
9.200	9.000	125.00	85.00	36.00	6	○
9.400	9.000	125.00	85.00	36.00	6	○
9.500	9.000	125.00	85.00	36.00	6	○ ●
9.800	10.000	133.00	93.00	38.00	6	●
9.900	10.000	133.00	93.00	38.00	6	○
10.000	10.000	133.00	93.00	38.00	6	● ● ● ○
10.100	10.000	133.00	93.00	38.00	6	●
10.500	10.000	133.00	93.00	38.00	6	○
10.700	10.000	142.00	102.00	41.00	6	○
11.000	10.000	142.00	102.00	41.00	6	● ● ●
11.500	10.000	142.00	102.00	41.00	6	○ ●
12.000	10.000	151.00	111.00	44.00	6	● ● ●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

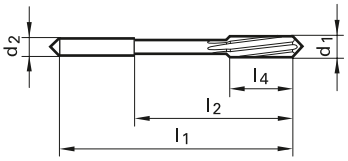
Guhring no.	440	468	641	467
Standard	DIN 212-2			
Tool material	HSS-E			
Surface	○	○	Ⓢ	○
Type				
Form	A	B	B	A
Cutting direction	right-hand	right-hand	right-hand	left-hand
Tolerance	H7	H7	H7	H7
Discount group	105	105	105	105
Techn. data page	1266	1266	1267	1267



d1	d2 h9	l1	l2	l4	Z	Availability				
mm	mm	mm	mm	mm						
13.000	10.000	151.00	111.00	44.00	6	●	●	●		
14.000	12.500	160.00	115.00	47.00	8	●	●	●		
15.000	12.500	162.00	117.00	50.00	8	●	●	●		
16.000	12.500	170.00	125.00	52.00	8	●	●	●		
17.000	14.000	175.00	130.00	54.00	8	●	●			
18.000	14.000	182.00	137.00	56.00	8	●	●	●		
19.000	16.000	189.00	141.00	58.00	8	●	●			
20.000	16.000	195.00	147.00	60.00	8	●	●	●		

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

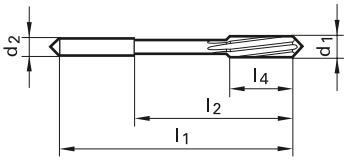
Guhring no.	496
Standard	DIN 212
Tool material	HSS-E
Surface finish	◯
Form	B
Cutting direction	right-hand
Tolerance	0.004/0.005
Discount group	105
Techn. data page	1267



from d1 mm	to d1 mm	d2 h9 mm	l1 mm	l2 mm	l4 mm	Z	Availability
0.950	1.060	1.000	34.00	15.00	5.50	3	●
1.070	1.180	1.100	36.00	15.50	6.50	3	●
1.190	1.320	1.200	38.00	16.50	7.50	3	●
1.330	1.390	1.400	40.00	18.00	8.00	3	●
1.400	1.410	1.400	40.00	18.00	8.00	3	●
1.420	1.490	1.500	40.00	18.00	8.00	3	●
1.500	1.500	1.500	40.00	18.00	8.00	3	●
1.510	1.700	1.600	43.00	20.00	9.00	3	●
1.710	1.900	1.800	46.00	22.00	10.00	4	●
1.910	1.990	2.000	49.00	24.00	11.00	4	●
2.000	2.090	2.000	49.00	24.00	11.00	4	●
2.100	2.120	2.000	49.00	24.00	11.00	4	●
2.130	2.360	2.200	53.00	25.00	12.00	4	●
2.370	2.490	2.500	57.00	29.00	14.00	4	●
2.500	2.590	2.500	57.00	29.00	14.00	4	●
2.600	2.650	2.500	57.00	29.00	14.00	4	●
2.660	2.800	2.800	61.00	33.00	15.00	6	●
2.810	2.990	3.000	61.00	33.00	15.00	6	●
3.000	3.000	3.000	61.00	33.00	15.00	6	●
3.010	3.090	3.200	65.00	37.00	16.00	6	●
3.100	3.350	3.200	65.00	37.00	16.00	6	●
3.360	3.490	3.500	70.00	42.00	18.00	6	●
3.500	3.590	3.500	70.00	42.00	18.00	6	●
3.600	3.740	3.500	70.00	42.00	18.00	6	●
3.760	3.810	4.000	75.00	47.00	19.00	6	●
3.820	4.200	4.000	75.00	47.00	19.00	6	●
4.210	4.250	4.000	75.00	47.00	19.00	6	●
4.260	4.750	4.500	80.00	52.00	21.00	6	●
4.760	5.200	5.000	86.00	58.00	23.00	6	●
5.210	5.300	5.000	86.00	58.00	23.00	6	●
5.310	6.000	5.600	93.00	57.00	26.00	6	●
6.010	6.110	6.300	101.00	65.00	28.00	6	●
6.120	6.700	6.300	101.00	65.00	28.00	6	●
6.710	7.500	7.100	109.00	73.00	31.00	6	●
7.510	8.200	8.000	117.00	81.00	33.00	6	●
8.210	8.500	8.000	117.00	81.00	33.00	6	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

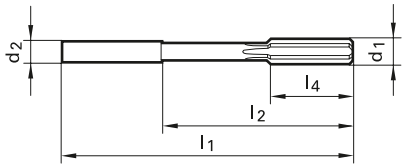
Guhring no.	496
Standard	DIN 212
Tool material	HSS-E
Surface finish	○
Form	B
Cutting direction	right-hand
Tolerance	0.004/0.005
Discount group	105
Techn. data page	1267



from d1	to d1	d2 h9	l1	l2	l4	Z	Availability
mm	mm	mm	mm	mm	mm		
8.510	9.500	9.000	125.00	85.00	36.00	6	❍
9.510	10.200	10.000	133.00	93.00	38.00	6	●
10.210	10.600	10.000	133.00	93.00	38.00	6	●
10.610	11.200	10.000	142.00	102.00	41.00	6	❍
11.210	11.800	10.000	142.00	102.00	41.00	6	●
11.810	12.000	10.000	151.00	111.00	44.00	6	●
12.010	12.050	10.000	151.00	151.00	44.00	6	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

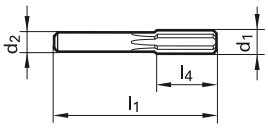
Guhring no.	1431
Standard	DIN 212-2
Tool material	HSS-E
Surface	○
Type	
Form	A
Cutting direction	right-hand
Tolerance	H7
Discount group	105
Techn. data page	1267



d1	d2 h9	l1	l2	l4	Z	Availability
mm	mm	mm	mm	mm		
5.000	5.000	86.00	58.00	23.00	6	●
5.500	5.600	93.00	57.00	26.00	6	○
6.000	5.600	93.00	57.00	26.00	6	●
6.500	6.300	101.00	65.00	28.00	6	○
8.000	8.000	117.00	81.00	33.00	6	●
9.500	9.000	125.00	85.00	36.00	6	○
10.000	10.000	133.00	93.00	38.00	6	●
11.500	10.000	142.00	102.00	41.00	6	○
12.000	10.000	151.00	111.00	44.00	6	●
14.000	12.500	160.00	115.00	47.00	8	○
16.000	12.500	170.00	125.00	52.00	8	●
17.000	14.000	175.00	130.00	54.00	8	○
19.000	16.000	189.00	141.00	58.00	8	○
20.000	16.000	195.00	147.00	60.00	8	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

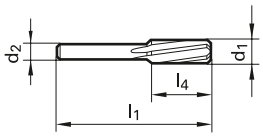
Guhring no.	1432
Standard	DIN 8089
Tool material	HSS-E
Surface	○
Type	
Form	A
Cutting direction	right-hand
Tolerance	H7
Discount group	105
Techn. data page	1267



d1 mm	d2 h8 mm	l1 mm	l4 mm	Z	Availability
5.000	4.000	63.00	22.00	6	●
5.500	5.000	63.00	22.00	6	○
6.500	5.000	63.00	22.00	6	○
7.000	6.300	71.00	25.00	6	○
8.500	6.300	71.00	25.00	6	●
9.000	8.000	71.00	25.00	6	●
9.500	8.000	71.00	25.00	6	○
10.500	8.000	71.00	25.00	6	○
11.000	10.000	80.00	28.00	6	●
11.500	10.000	80.00	28.00	6	○
12.000	10.000	80.00	28.00	6	○
15.000	12.500	90.00	32.00	8	○
16.000	12.500	90.00	32.00	8	○
17.000	12.500	90.00	32.00	8	○
18.000	16.000	100.00	36.00	8	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

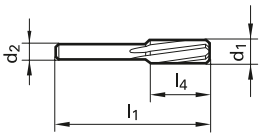
Guhring no.	488	489
Standard	DIN 8089	
Tool material	HSS-E	
Surface	◯	◯
Type		
Form	A	B
Cutting direction	right-hand	right-hand
Tolerance	H7	H7
Discount group	105	105
Techn. data page	1268	1268



d1	d2 h8	l1	l4	Z	Availability	
mm	mm	mm	mm			
4.000	3.550	56.00	20.00	6	●	●
4.500	4.000	63.00	22.00	6	◯	●
5.000	4.000	63.00	22.00	6	●	●
6.000	5.000	63.00	22.00	6	●	●
6.500	5.000	63.00	22.00	6	◯	●
7.000	6.300	71.00	25.00	6		●
7.500	6.300	71.00	25.00	6	◯	◯
8.000	6.300	71.00	25.00	6	●	●
8.500	6.300	71.00	25.00	6	●	●
9.000	8.000	71.00	25.00	6	●	●
10.000	8.000	71.00	25.00	6	●	●
10.500	8.000	71.00	25.00	6	◯	
11.000	10.000	80.00	28.00	6		●
11.500	10.000	80.00	28.00	6	◯	◯
12.000	10.000	80.00	28.00	6	●	●
13.000	10.000	80.00	28.00	6	●	●
14.000	12.500	90.00	32.00	8	●	●
15.000	12.500	90.00	32.00	8	◯	●
16.000	12.500	90.00	32.00	8	●	●
17.000	12.500	90.00	32.00	8		◯
18.000	16.000	100.00	36.00	8	●	●
19.000	16.000	100.00	36.00	8	◯	
20.000	16.000	100.00	36.00	8	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	497
Standard	DIN 8089
Tool material	HSS-E
Surface finish	◯
Form	B
Cutting direction	right-hand
Tolerance	0.004/0.005
Discount group	105
Techn. data page	1268



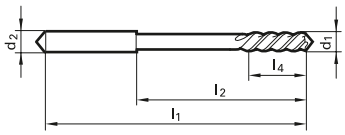
from d1	to d1	d2 h8	l1	l4	Z	Availability
mm	mm	mm	mm	mm		
3.760	3.810	3.550	56.00	20.00	6	●
3.830	4.200	3.550	56.00	20.00	6	●
4.210	4.250	3.550	56.00	20.00	6	●
4.260	5.300	4.000	63.00	22.00	6	●
4.760	5.200	4.000	63.00	22.00	6	◯
5.310	6.110	5.000	63.00	22.00	6	●
6.120	6.700	5.000	63.00	22.00	6	●
6.710	8.200	6.300	71.00	25.00	6	●
8.210	8.500	6.300	71.00	25.00	6	◯
8.510	10.200	8.000	71.00	25.00	6	●
10.210	10.600	8.000	71.00	25.00	6	●
10.610	11.200	10.000	80.00	28.00	6	◯
11.210	12.040	10.000	80.00	28.00	6	◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Guhring no.	**458**
Standard	**DIN 8089**
Tool material	**HSS-E**
Surface	◯
Type	
Form	**B**
Cutting direction	**right-hand**
Tolerance	**+0,004/+0,005**
Discount group	**105**
Techn. data page	**1268**

from d1 mm	to d1 mm	no. per set	Code no.	Availability
8.810	9.400	60.00	9.400	❍
10.010	10.500	50.00	10.500	❍
10.510	11.000	50.00	11.000	❍
11.510	12.000	50.00	12.000	❍

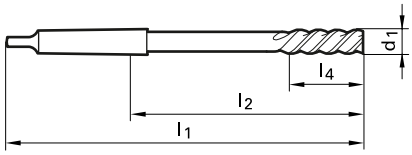
Guhring no.	403	469
Standard	DIN 212	DIN 212-2
Tool material	HSS-E	
Surface	○	○
Type		
Form	C	C
Cutting direction	right-hand	right-hand
Tolerance	H7	H7
Discount group	105	105
Techn. data page	1268	1269



d1	d2 h9	l1	l2	l4	Z	Availability	
mm	mm	mm	mm	mm			
1.000	1.000	34.00	15.00	5.50	2	●	
1.200	1.200	38.00	16.50	7.50	2	●	
1.400	1.400	40.00	18.00	8.00	2	●	
1.500	1.500	40.00	18.00	8.00	2	●	
1.600	1.600	43.00	20.00	9.00	2	●	
1.800	1.800	46.00	22.00	10.00	2	❍	
2.000	2.000	49.00	24.00	11.00	3	●	
2.200	2.200	53.00	25.00	12.00	3	●	
2.500	2.500	57.00	29.00	14.00	3	●	
2.800	2.800	61.00	33.00	15.00	3	●	
3.000	3.000	61.00	33.00	15.00	3	●	
3.200	3.200	65.00	37.00	16.00	3	●	
3.500	3.500	70.00	42.00	18.00	3	●	
4.000	4.000	75.00	47.00	19.00	3		●
4.500	4.500	80.00	52.00	21.00	3	❍	●
5.000	5.000	86.00	52.00	23.00	3		●
5.500	5.600	93.00	57.00	26.00	3	❍	●
6.000	5.600	93.00	57.00	26.00	3		●
6.500	6.300	101.00	65.00	28.00	3		●
7.000	7.100	109.00	73.00	31.00	3		●
8.000	8.000	117.00	81.00	33.00	3		●
8.500	8.000	117.00	81.00	33.00	3		❍
9.000	9.000	125.00	85.00	36.00	3		●
10.000	10.000	133.00	93.00	38.00	3		●
11.000	10.000	142.00	102.00	41.00	3		●
12.000	10.000	151.00	111.00	44.00	3		●
13.000	10.000	151.00	111.00	44.00	3		●
14.000	12.500	160.00	115.00	47.00	3		●
15.000	12.500	162.00	117.00	50.00	3		❍
16.000	12.500	170.00	125.00	52.00	3		●
18.000	14.000	182.00	137.00	56.00	3		●
20.000	16.000	195.00	147.00	60.00	3		●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

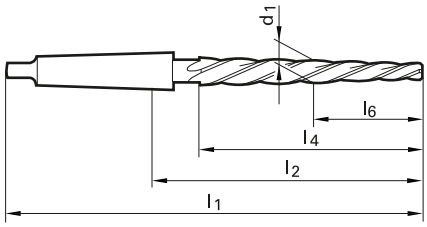
Guhring no.	406
Standard	DIN 208
Tool material	HSS-E
Surface	○
Type	
Form	C
Cutting direction	right-hand
Tolerance	H7
Discount group	105
Techn. data page	1269



d1	MK	l1	l2	l4	Z	Availability
mm		mm	mm	mm		
3.000	1	115.00	53.00	15.00	3	○
4.000	1	125.00	63.00	19.00	3	○
5.000	1	133.00	71.00	23.00	3	○
7.000	1	150.00	88.00	31.00	3	○
8.000	1	156.00	94.00	33.00	3	○
9.000	1	162.00	100.00	36.00	3	●
11.000	1	175.00	113.00	41.00	3	○
13.000	1	182.00	120.00	44.00	3	○
14.000	1	189.00	127.00	47.00	3	●
15.000	2	204.00	129.00	50.00	3	●
16.000	2	210.00	135.00	52.00	3	●
17.000	2	214.00	139.00	54.00	3	●
18.000	2	219.00	144.00	56.00	3	●
20.000	2	228.00	153.00	60.00	3	●
21.000	2	232.00	157.00	62.00	3	○
22.000	2	237.00	162.00	64.00	3	●
23.000	2	241.00	166.00	66.00	3	○
24.000	3	268.00	174.00	68.00	3	○
25.000	3	268.00	174.00	68.00	3	●
26.000	3	273.00	179.00	70.00	3	●
28.000	3	277.00	183.00	71.00	3	●
30.000	3	281.00	187.00	73.00	3	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

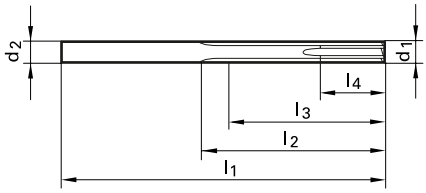
Guhring no.	414
Standard	DIN 311
Tool material	HSS
Surface	●
Type	
Form	
Cutting direction	right-hand
Tolerance	
Discount group	105
Techn. data page	1269



d1	MK	l1	l2	l4	l6	Z	Availability
mm		mm	mm	mm	mm		
6.400	1	151.00	89.00	75.00	19.00	4	○
8.400	1	161.00	99.00	85.00	25.00	4	○
9.500	1	166.00	104.00	90.00	27.00	4	●
10.000	1	171.00	109.00	95.00	30.00	4	●
11.000	1	176.00	114.00	100.00	33.00	4	●
12.000	2	199.00	124.00	105.00	39.00	4	●
13.000	2	199.00	124.00	105.00	39.00	4	●
14.000	2	209.00	134.00	115.00	42.00	5	●
15.000	2	219.00	144.00	125.00	45.00	5	●
16.000	2	229.00	154.00	135.00	48.00	5	●
17.000	3	251.00	157.00	135.00	51.00	5	●
18.000	3	261.00	167.00	145.00	58.00	5	●
19.000	3	261.00	167.00	145.00	58.00	5	●
20.000	3	271.00	177.00	155.00	62.00	5	●
21.000	3	271.00	177.00	155.00	62.00	5	●
22.000	3	281.00	187.00	165.00	66.00	5	●
23.000	3	281.00	187.00	165.00	66.00	5	●
24.000	3	296.00	202.00	180.00	72.00	5	●
25.000	3	296.00	202.00	180.00	72.00	5	●
26.000	3	296.00	202.00	180.00	72.00	5	●
27.000	3	311.00	217.00	195.00	78.00	5	●
28.000	3	311.00	217.00	195.00	78.00	5	●
30.000	3	311.00	217.00	195.00	78.00	5	●
31.000	3	326.00	232.00	210.00	84.00	5	●
32.000	4	354.00	236.50	210.00	84.00	5	●
37.000	4	364.00	246.50	220.00	88.00	5	○
40.000	4	374.00	256.50	230.00	92.00	5	○

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

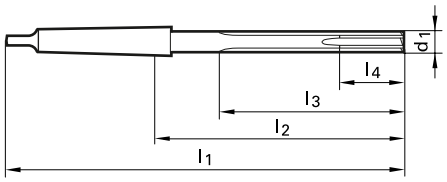
Guhring no.	419
Standard	Guhring std.
Tool material	HSS-E
Surface	◯
Type	
Form	A
Cutting direction	right-hand
Tolerance	H7
Discount group	105
Techn. data page	1269



d1	d2	int. Ø	l1	l2	l3	l4	Z	Availability
mm	mm	mm	mm	mm	mm	mm		
3.000	3.000	1.500	61.00	37.00	33.00	12.00	6	●
4.000	4.000	1.600	75.00	48.00	44.00	16.00	6	●
4.500	4.500	1.800	80.00	52.00	48.00	16.00	6	◯
5.000	5.000	2.000	86.00	59.00	53.00	20.00	6	●
6.000	6.000	2.500	93.00	65.00	59.00	20.00	6	●
7.000	7.000	3.000	109.00	75.00	69.00	22.00	6	●
8.000	8.000	3.000	117.00	81.00	71.00	24.00	6	●
10.000	10.000	3.000	133.00	94.00	84.00	26.00	6	●
12.000	12.000	3.000	151.00	106.00	96.00	26.00	6	◯

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

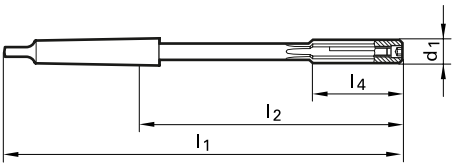
Guhring no.	420
Standard	Guhring std.
Tool material	HSS-E
Surface	○
Type	
Form	A
Cutting direction	right-hand
Tolerance	H7
Discount group	105
Techn. data page	1269



d1	MK	int. Ø	l1	l2	l3	l4	Z	Availability
mm		mm	mm	mm	mm	mm		
3.000	1	1.500	114.00	52.00	37.00	12.00	6	○
3.500	1	1.500	120.00	58.00	44.00	12.00	6	○
7.000	1	3.000	150.00	88.00	75.00	22.00	6	○
10.000	1	3.000	168.00	106.00	94.00	26.00	6	○
12.000	1	3.000	182.00	120.00	106.00	26.00	6	●
16.000	2	6.000	210.00	135.00	123.00	30.00	8	○
18.000	2	8.000	219.00	144.00	132.00	30.00	8	○
20.000	2	8.000	228.00	153.00	139.00	32.00	8	●
25.000	3	12.000	268.00	174.00	159.00	36.00	8	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

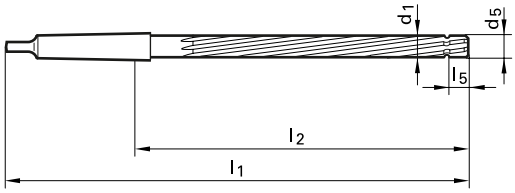
Guhring no.	430
Standard	Guhring std.
Tool material	HSS-E
Surface	◯
Type	
Form	A
Cutting direction	right-hand
Tolerance	H7
Discount group	105
Techn. data page	1270



d1	MK	l1	l2	l4	Z	Availability
mm		mm	mm	mm		
10.000	1	168.00	106.00	38.00	9	❍
12.000	1	182.00	120.00	44.00	9	❍
14.000	1	189.00	127.00	47.00	9	❍
15.000	2	204.00	129.00	50.00	9	❍
16.000	2	210.00	135.00	52.00	9	❍
17.000	2	214.00	139.00	54.00	9	❍
18.000	2	219.00	144.00	56.00	9	❍
20.000	2	228.00	153.00	60.00	9	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

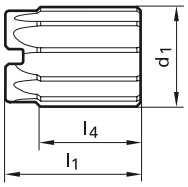
Guhring no.	431
Standard	Guhring std.
Tool material	HSS-E
Surface	◯
Type	
Form	
Cutting direction	right-hand
Tolerance	
Discount group	105
Techn. data page	1270



d1 mm	MK	d5 mm	l1 mm	l2 mm	l5 mm	Z	Availability
5.000	1	4.920	165.00	103.00	10.00	6	●
6.000	1	5.920	165.00	103.00	10.00	6	●
8.000	1	7.920	205.00	143.00	10.00	6	●
10.000	1	9.900	230.00	168.00	12.00	6	●
12.000	1	11.900	230.00	168.00	12.00	6	●
14.000	1	13.900	230.00	168.00	12.00	8	●
16.000	2	15.900	250.00	175.00	12.00	8	●
20.000	2	19.900	260.00	185.00	15.00	8	●
25.000	3	24.850	285.00	191.00	15.00	8	◯
32.000	4	31.850	330.00	212.50	15.00	10	◯
38.000	4	37.850	345.00	227.50	15.00	10	◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

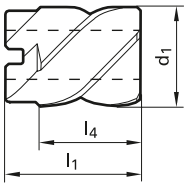
Guhring no.	407	408
Standard	DIN 219	
Tool material	HSS-E	
Surface	●	●
Type		
Form	A	B
Cutting direction	right-hand	right-hand
Tolerance	H7	H7
Discount group	105	105
Techn. data page	1270	1270



d1	int. Ø	l1	l4	Z	Availability
mm	mm	mm	mm		
25.000	13.000	45.00	32.00	8	●
29.000	13.000	45.00	32.00	8	❍
30.000	13.000	45.00	32.00	8	● ●
32.000	16.000	50.00	36.00	10	●
33.000	16.000	50.00	36.00	10	●
34.000	16.000	50.00	36.00	10	●
35.000	16.000	50.00	36.00	10	● ●
36.000	19.000	56.00	40.00	10	●
38.000	19.000	56.00	40.00	10	❍ ●
40.000	19.000	56.00	40.00	10	● ●
42.000	19.000	56.00	40.00	10	●
44.000	22.000	63.00	45.00	12	●
45.000	22.000	63.00	45.00	12	● ●
46.000	22.000	63.00	45.00	12	●
50.000	22.000	63.00	45.00	12	●
52.000	27.000	71.00	50.00	12	●
55.000	27.000	71.00	50.00	12	●
58.000	27.000	71.00	50.00	12	●
60.000	27.000	71.00	50.00	12	●
62.000	32.000	80.00	56.00	14	●
65.000	32.000	80.00	56.00	14	● ●
70.000	32.000	80.00	56.00	14	●
75.000	40.000	90.00	63.00	14	●
90.000	50.000	100.00	71.00	16	●
98.000	50.000	100.00	71.00	16	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

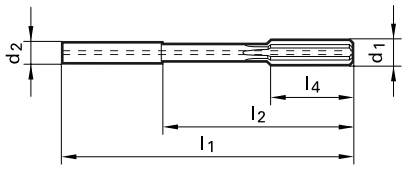
Guhring no.	409
Standard	DIN 219
Tool material	HSS-E
Surface	○
Type	
Form	C
Cutting direction	right-hand
Tolerance	H7
Discount group	105
Techn. data page	1270



d1	int. Ø	l1	l4	Z	Availability
mm	mm	mm	mm		
29.000	13.000	45.00	32.00	3	○
30.000	13.000	45.00	32.00	3	●
34.000	16.000	50.00	36.00	3	○
35.000	16.000	50.00	36.00	3	●
40.000	19.000	56.00	40.00	5	○
42.000	19.000	56.00	40.00	5	○
50.000	22.000	63.00	45.00	5	●
60.000	27.000	71.00	50.00	5	●
88.000	50.000	100.00	71.00	7	○
92.000	50.000	100.00	71.00	7	○
95.000	50.000	100.00	71.00	7	○
98.000	50.000	100.00	71.00	7	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	1685	1686
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K10	K10
Surface	a	a
Type	HR 500 S	HR 500 D
Form		
Cutting direction	right-hand	right-hand
Tolerance	H7	H7
Discount group	166	166
Techn. data page	1271	1271

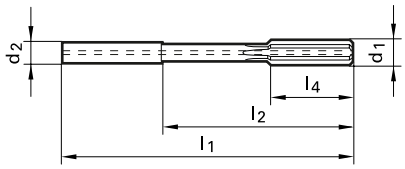


d1 mm	d2 h6 mm	l1 mm	l2 mm	l4 mm	Z	Availability	
3.000	4.000	68.00	40.00	12.00	4	●	●
3.500	4.000	68.00	40.00	12.00	4	●	●
4.000	4.000	68.00	40.00	12.00	4	●	●
4.500	6.000	76.00	40.00	12.00	4	●	●
5.000	6.000	76.00	40.00	12.00	4	●	●
5.500	6.000	76.00	40.00	12.00	4	●	●
6.000	6.000	76.00	40.00	12.00	4	●	●
6.500	8.000	101.00	65.00	16.00	6	●	●
7.000	8.000	101.00	65.00	16.00	6	●	●
7.500	8.000	101.00	65.00	16.00	6	●	●
8.000	8.000	101.00	65.00	16.00	6	●	●
8.500	10.000	101.00	61.00	19.00	6	●	●
9.000	10.000	101.00	61.00	19.00	6	●	●
9.500	10.000	101.00	61.00	19.00	6	●	●
10.000	10.000	101.00	61.00	19.00	6	●	●
10.500	12.000	130.00	85.00	19.00	6	●	●
11.000	12.000	130.00	85.00	19.00	6	●	●
11.500	12.000	130.00	85.00	19.00	6	●	●
12.000	12.000	130.00	85.00	19.00	6	●	●
13.000	14.000	130.00	85.00	22.00	6	●	●
14.000	14.000	130.00	85.00	22.00	6	●	●
15.000	16.000	150.00	102.00	22.00	6	●	●
16.000	16.000	150.00	102.00	22.00	6	●	●
17.000	18.000	150.00	102.00	25.00	6	●	●
18.000	18.000	150.00	102.00	25.00	6	●	●
19.000	20.000	150.00	100.00	25.00	6	●	●
20.000	20.000	150.00	100.00	25.00	6	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1678	1679
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K6	K6
Surface	Cb	Cb
Type	HR 500 Alu	HR 500 Alu
Form		
Cutting direction	right-hand	right-hand
Tolerance	H7	H7
Discount group	166	166
Techn. data page	1271	1271

NEW NEW

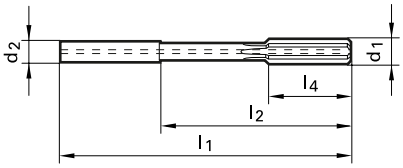


d1 mm	d2 h6 mm	l1 mm	l2 mm	l4 mm	Z	Availability	
4.000	4.000	68.00	40.00	12.00	4	●	●
5.000	6.000	76.00	40.00	12.00	4	●	●
6.000	6.000	76.00	40.00	12.00	4	●	●
7.000	8.000	101.00	65.00	16.00	6	●	●
8.000	8.000	101.00	65.00	16.00	6	●	●
10.000	10.000	101.00	61.00	19.00	6	●	●
12.000	12.000	130.00	85.00	19.00	6	●	●
14.000	14.000	130.00	85.00	22.00	6	●	●
16.000	16.000	150.00	102.00	22.00	6	●	●
18.000	18.000	150.00	102.00	25.00	6	●	●
20.000	20.000	150.00	100.00	25.00	6	●	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	1675	1676
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K10	K10
Surface	a	a
Type	HR 500 S	HR 500 D
Form		
Cutting direction	right-hand	right-hand
Tolerance	+0,005	+0,005
Discount group	166	166
Techn. data page	1271	1272

NEW NEW

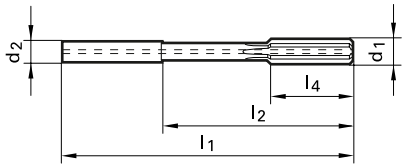


d1 mm	d2 h6 mm	l1 mm	l2 mm	l4 mm	Z	Availability	
2.970	4.000	68.00	40.00	12.00	4	●	●
2.980	4.000	68.00	40.00	12.00	4	●	●
2.990	4.000	68.00	40.00	12.00	4	●	●
3.000	4.000	68.00	40.00	12.00	4	●	●
3.010	4.000	68.00	40.00	12.00	4	●	●
3.020	4.000	68.00	40.00	12.00	4	●	●
3.030	4.000	68.00	40.00	12.00	4	●	●
3.970	4.000	68.00	40.00	12.00	4	●	●
3.980	4.000	68.00	40.00	12.00	4	●	●
3.990	4.000	68.00	40.00	12.00	4	●	●
4.000	4.000	68.00	40.00	12.00	4	●	●
4.010	4.000	68.00	40.00	12.00	4	●	●
4.020	4.000	68.00	40.00	12.00	4	●	●
4.030	4.000	68.00	40.00	12.00	4	●	●
4.970	6.000	76.00	40.00	12.00	4	●	●
4.980	6.000	76.00	40.00	12.00	4	●	●
4.990	6.000	76.00	40.00	12.00	4	●	●
5.000	6.000	76.00	40.00	12.00	4	●	●
5.010	6.000	76.00	40.00	12.00	4	●	●
5.020	6.000	76.00	40.00	12.00	4	●	●
5.030	6.000	76.00	40.00	12.00	4	●	●
5.970	6.000	76.00	40.00	12.00	4	●	●
5.980	6.000	76.00	40.00	12.00	4	●	●
5.990	6.000	76.00	40.00	12.00	4	●	●
6.000	6.000	76.00	40.00	12.00	4	●	●
6.010	6.000	76.00	40.00	12.00	4	●	●
6.020	6.000	76.00	40.00	12.00	4	●	●
6.030	6.000	76.00	40.00	12.00	4	●	●
7.000	8.000	101.00	65.00	16.00	6	●	●
7.970	8.000	101.00	65.00	16.00	6	●	●
7.980	8.000	101.00	65.00	16.00	6	●	●
7.990	8.000	101.00	65.00	16.00	6	●	●
8.000	8.000	101.00	65.00	16.00	6	●	●
8.010	8.000	101.00	65.00	16.00	6	●	●
8.020	8.000	101.00	65.00	16.00	6	●	●
8.030	8.000	101.00	65.00	16.00	6	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	1675	1676
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K10	K10
Surface	a	a
Type	HR 500 S	HR 500 D
Form		
Cutting direction	right-hand	right-hand
Tolerance	+0,005	+0,005
Discount group	166	166
Techn. data page	1271	1272

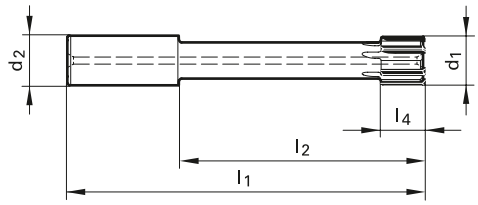
NEW NEW



d1	d2 h6	l1	l2	l4	Z	Availability	
mm	mm	mm	mm	mm			
9.000	10.000	101.00	61.00	19.00	6	●	●
9.970	10.000	101.00	61.00	19.00	6	●	●
9.980	10.000	101.00	61.00	19.00	6	●	●
9.990	10.000	101.00	61.00	19.00	6	●	●
10.000	10.000	101.00	61.00	19.00	6	●	●
10.010	10.000	101.00	61.00	19.00	6	●	●
10.020	10.000	101.00	61.00	19.00	6	●	●
10.030	10.000	101.00	61.00	19.00	6	●	●
11.000	12.000	130.00	85.00	19.00	6	●	●
11.970	12.000	130.00	85.00	19.00	6	●	●
11.980	12.000	130.00	85.00	19.00	6	●	●
11.990	12.000	130.00	85.00	19.00	6	●	●
12.000	12.000	130.00	85.00	19.00	6	●	●
12.010	12.000	130.00	85.00	19.00	6	●	●
12.020	12.000	130.00	85.00	19.00	6	●	●
12.030	12.000	130.00	85.00	19.00	6	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

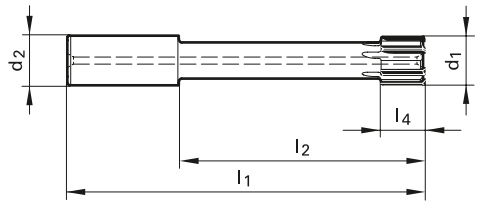
Guhring no.	1680	1681
Standard	Guhring std.	
Tool material	Carbide	
Carbide grade	K10	K10
Surface	a	a
Type	HR 500 GS	HR 500 GD
Form		
Cutting direction	right-hand	right-hand
Tolerance	H7	H7
Discount group	166	166
Techn. data page	1272	1272
	NEW	NEW



d1	d2 h6	l1	l2	l4	Z	Availability	
mm	mm	mm	mm	mm			
22.000	20.000	160.00	110.00	22.00	6	●	●
24.000	25.000	180.00	124.00	22.00	6	●	●
25.000	25.000	180.00	124.00	22.00	6	●	●
26.000	25.000	180.00	124.00	22.00	6	●	●
28.000	25.000	180.00	124.00	25.00	6	●	●
30.000	25.000	180.00	124.00	25.00	6	●	●
32.000	32.000	200.00	140.00	25.00	6	●	●
34.000	32.000	200.00	140.00	25.00	6	●	●
36.000	32.000	200.00	140.00	25.00	8	●	●
38.000	32.000	200.00	140.00	25.00	8	●	●
40.000	32.000	200.00	140.00	25.00	8	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

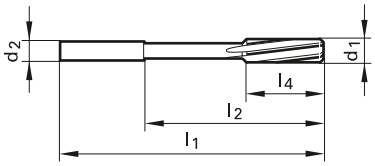
Guhring no.	1682	1683
Standard	Guhring std.	
Tool material	Cermet tipped	
Carbide grade		
Surface	◯	◯
Type	HR 500 GS	HR 500 GD
Form		
Cutting direction	right-hand	right-hand
Tolerance	H7	H7
Discount group	166	166
Techn. data page	1272	1272
	NEW	NEW



d1	d2 h6	l1	l2	l4	Z	Availability	
mm	mm	mm	mm	mm			
22.000	20.000	160.00	110.00	22.00	6	●	●
24.000	25.000	180.00	124.00	22.00	6	●	●
25.000	25.000	180.00	124.00	22.00	6	●	●
26.000	25.000	180.00	124.00	22.00	6	●	●
28.000	25.000	180.00	124.00	25.00	6	●	●
30.000	25.000	180.00	124.00	25.00	6	●	●
32.000	32.000	200.00	140.00	25.00	6	●	●
34.000	32.000	200.00	140.00	25.00	6	●	●
36.000	32.000	200.00	140.00	25.00	8	●	●
38.000	32.000	200.00	140.00	25.00	8	●	●
40.000	32.000	200.00	140.00	25.00	8	●	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

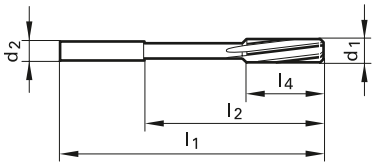
Guhring no.	1427	1449
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K10	K10
Surface	◯	◯
Type		
Form	B	B
Cutting direction	right-hand	right-hand
Tolerance	+0,004/+0,005	H7
Discount group	120	120
Techn. data page	1273	1273



d1	d2 h6	l1	l2	l4	Z	Availability	
mm	mm	mm	mm	mm			
0.980	4.000	50.00	22.00	6.00	3	●	
0.990	4.000	50.00	22.00	6.00	3	●	
1.000	4.000	50.00	22.00	6.00	3	●	
1.010	4.000	50.00	22.00	6.00	3	●	
1.020	4.000	50.00	22.00	6.00	3	●	
1.030	4.000	50.00	22.00	9.00	3	●	
1.480	4.000	50.00	22.00	9.00	3	●	
1.490	4.000	50.00	22.00	9.00	3	●	
1.500	4.000	50.00	22.00	9.00	3	●	
1.510	4.000	50.00	22.00	9.00	3	●	
1.520	4.000	50.00	22.00	9.00	3	●	
1.530	4.000	50.00	22.00	9.00	3	●	
1.980	4.000	50.00	22.00	12.00	4	●	
1.990	4.000	50.00	22.00	12.00	4	●	
2.000	4.000	50.00	22.00	12.00	4	●	
2.010	4.000	50.00	22.00	12.00	4	●	
2.020	4.000	50.00	22.00	12.00	4	●	
2.030	4.000	50.00	22.00	12.00	4	●	
2.480	4.000	60.00	32.00	16.00	4	●	
2.490	4.000	60.00	32.00	16.00	4	●	
2.500	4.000	60.00	32.00	16.00	4	●	
2.510	4.000	60.00	32.00	16.00	4	●	
2.520	4.000	60.00	32.00	16.00	4	●	
2.530	4.000	60.00	32.00	16.00	4	●	
2.970	4.000	64.00	36.00	17.00	6	●	
2.980	4.000	64.00	36.00	17.00	6	●	
2.990	4.000	64.00	36.00	17.00	6	●	
3.000	4.000	64.00	36.00	17.00	6	●	●
3.010	4.000	64.00	36.00	17.00	6	●	
3.020	4.000	64.00	36.00	17.00	6	●	
3.030	4.000	64.00	36.00	17.00	6	●	
3.100	4.000	68.00	40.00	18.00	6		●
3.200	4.000	68.00	40.00	18.00	6		●
3.300	4.000	68.00	40.00	18.00	6		●
3.400	4.000	74.00	46.00	20.00	6		●
3.500	4.000	74.00	46.00	20.00	6		●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

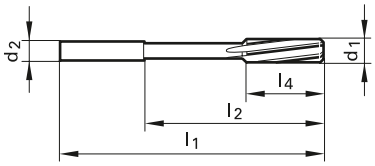
Guhring no.	1427	1449
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K10	K10
Surface	◯	◯
Type		
Form	B	B
Cutting direction	right-hand	right-hand
Tolerance	+0,004/+0,005	H7
Discount group	120	120
Techn. data page	1273	1273



d1	d2 h6	l1	l2	l4	Z	Availability
mm	mm	mm	mm	mm		
3.600	4.000	74.00	46.00	20.00	6	●
3.700	4.000	74.00	46.00	20.00	6	●
3.800	4.000	77.00	45.00	21.00	6	●
3.970	4.000	77.00	45.00	21.00	6	●
3.980	4.000	77.00	45.00	21.00	6	●
3.990	4.000	77.00	45.00	21.00	6	●
4.000	4.000	77.00	45.00	21.00	6	● ●
4.010	4.000	77.00	45.00	21.00	6	●
4.020	4.000	77.00	45.00	21.00	6	●
4.030	4.000	77.00	45.00	21.00	6	●
4.100	6.000	82.00	50.00	23.00	6	●
4.200	6.000	82.00	50.00	23.00	6	●
4.300	6.000	82.00	50.00	23.00	6	◯
4.400	6.000	82.00	50.00	23.00	6	●
4.500	6.000	82.00	50.00	23.00	6	●
4.600	6.000	82.00	50.00	23.00	6	●
4.700	6.000	82.00	50.00	23.00	6	●
4.800	6.000	93.00	59.00	26.00	6	●
4.900	6.000	93.00	59.00	26.00	6	●
4.970	6.000	93.00	59.00	26.00	6	●
4.980	6.000	93.00	59.00	26.00	6	●
4.990	6.000	93.00	59.00	26.00	6	●
5.000	6.000	93.00	59.00	26.00	6	● ●
5.010	6.000	93.00	59.00	26.00	6	●
5.020	6.000	93.00	59.00	26.00	6	●
5.030	6.000	93.00	59.00	26.00	6	●
5.100	6.000	93.00	59.00	26.00	6	●
5.200	6.000	93.00	59.00	26.00	6	●
5.300	6.000	93.00	59.00	26.00	6	●
5.500	6.000	93.00	57.00	26.00	6	●
5.600	6.000	93.00	57.00	26.00	6	●
5.700	6.000	93.00	57.00	26.00	6	●
5.800	6.000	93.00	57.00	26.00	6	●
5.970	6.000	93.00	57.00	26.00	6	●
5.980	6.000	93.00	57.00	26.00	6	●
5.990	6.000	93.00	57.00	26.00	6	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

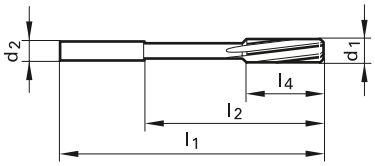
Guhring no.	1427	1449
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K10	K10
Surface	◯	◯
Type		
Form	B	B
Cutting direction	right-hand	right-hand
Tolerance	+0,004/+0,005	H7
Discount group	120	120
Techn. data page	1273	1273



d1	d2 h6	l1	l2	l4	Z	Availability	
mm	mm	mm	mm	mm			
6.000	6.000	93.00	57.00	26.00	6	●	●
6.010	6.000	93.00	57.00	26.00	6	●	
6.020	6.000	93.00	57.00	26.00	6	●	
6.030	6.000	93.00	57.00	26.00	6	●	
6.100	8.000	101.00	63.00	28.00	6		●
6.200	8.000	101.00	63.00	28.00	6		●
6.300	8.000	101.00	63.00	28.00	6		●
6.400	8.000	101.00	63.00	28.00	6		●
6.500	8.000	101.00	63.00	28.00	6		●
6.600	8.000	101.00	63.00	28.00	6		●
6.700	8.000	101.00	63.00	28.00	6		●
6.800	8.000	109.00	69.00	31.00	6		●
7.000	8.000	109.00	69.00	31.00	6	●	●
7.100	8.000	109.00	69.00	31.00	6		●
7.200	8.000	109.00	69.00	31.00	6		●
7.400	8.000	109.00	69.00	31.00	6		●
7.500	8.000	109.00	69.00	31.00	6		●
7.700	8.000	117.00	75.00	33.00	6		●
7.800	8.000	117.00	75.00	33.00	6		●
7.900	8.000	117.00	75.00	33.00	6		●
7.970	8.000	117.00	75.00	33.00	6	●	
7.980	8.000	117.00	75.00	33.00	6	●	
7.990	8.000	117.00	75.00	33.00	6	●	
8.000	8.000	117.00	75.00	33.00	6	●	●
8.010	8.000	117.00	75.00	33.00	6	●	
8.020	8.000	117.00	75.00	33.00	6	●	
8.030	8.000	117.00	75.00	33.00	6	●	
8.040	8.000	117.00	75.00	33.00	6	●	
8.100	10.000	117.00	75.00	33.00	6		●
8.200	10.000	117.00	75.00	33.00	6		●
8.300	10.000	117.00	75.00	33.00	6		●
8.400	10.000	117.00	75.00	33.00	6		●
8.500	10.000	117.00	75.00	33.00	6		●
8.600	10.000	117.00	75.00	33.00	6		●
8.700	10.000	125.00	81.00	36.00	6		○
8.800	10.000	125.00	81.00	36.00	6		●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

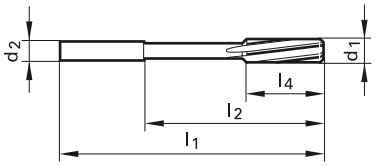
Guhring no.	1427	1449
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K10	K10
Surface	◯	◯
Type		
Form	B	B
Cutting direction	right-hand	right-hand
Tolerance	+0,004/+0,005	H7
Discount group	120	120
Techn. data page	1273	1273



d1	d2 h6	l1	l2	l4	Z	Availability	
mm	mm	mm	mm	mm			
8.900	10.000	125.00	81.00	36.00	6		●
9.000	10.000	125.00	81.00	36.00	6	●	●
9.100	10.000	125.00	81.00	36.00	6		●
9.300	10.000	125.00	81.00	36.00	6		●
9.500	10.000	125.00	81.00	36.00	6		●
9.600	10.000	125.00	81.00	36.00	6		●
9.700	10.000	133.00	87.00	38.00	6		●
9.800	10.000	133.00	87.00	38.00	6		●
9.900	10.000	133.00	87.00	38.00	6		●
9.970	10.000	133.00	87.00	38.00	6	●	
9.980	10.000	133.00	87.00	38.00	6	●	
9.990	10.000	133.00	87.00	38.00	6	●	
10.000	10.000	133.00	87.00	38.00	6	●	●
10.010	10.000	133.00	87.00	38.00	6	●	
10.020	10.000	133.00	87.00	38.00	6	●	
10.030	10.000	133.00	87.00	38.00	6	●	
10.040	10.000	133.00	87.00	38.00	6	●	
10.050	10.000	133.00	87.00	38.00	6	●	
10.100	10.000	133.00	87.00	38.00	6		●
10.200	10.000	133.00	87.00	38.00	6		●
10.300	10.000	133.00	87.00	38.00	6		●
10.400	10.000	133.00	87.00	38.00	6		●
10.500	10.000	133.00	87.00	38.00	6		●
10.600	10.000	133.00	87.00	38.00	6		◯
11.000	10.000	142.00	96.00	41.00	6		●
11.100	10.000	142.00	96.00	41.00	6		●
11.200	10.000	142.00	96.00	41.00	6		●
11.300	10.000	142.00	96.00	41.00	6		●
11.500	10.000	142.00	96.00	41.00	6		●
11.600	10.000	142.00	96.00	41.00	6		●
11.800	10.000	142.00	96.00	41.00	6		●
11.900	12.000	151.00	105.00	44.00	6		●
11.970	12.000	151.00	105.00	44.00	6	●	
11.980	12.000	151.00	105.00	44.00	6	●	
11.990	12.000	151.00	105.00	44.00	6	●	
12.000	12.000	151.00	105.00	44.00	6	●	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

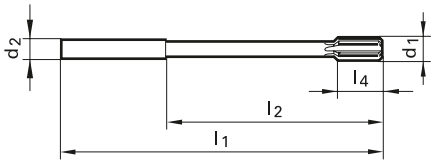
Guhring no.	1427	1449
Standard	Guhring std.	
Tool material	Solid carbide	
Carbide grade	K10	K10
Surface	◯	◯
Type		
Form	B	B
Cutting direction	right-hand	right-hand
Tolerance	+0,004/+0,005	H7
Discount group	120	120
Techn. data page	1273	1273



d1	d2 h6	l1	l2	l4	Z	Availability
mm	mm	mm	mm	mm		
12.010	12.000	151.00	105.00	44.00	6	●
12.020	12.000	151.00	105.00	44.00	6	●
12.030	12.000	151.00	105.00	44.00	6	●
12.040	12.000	151.00	105.00	44.00	6	●
12.050	12.000	151.00	105.00	44.00	6	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

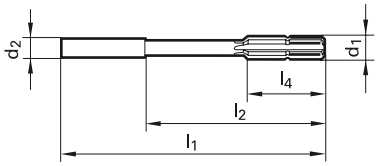
Guhring no.	717	718
Standard	~ DIN 8050	
Tool material	Carbide	
Carbide grade	K10	K10
Surface	◯	◯
Type		
Form	A	B
Cutting direction	right-hand	right-hand
Tolerance	H7	H7
Discount group	120	120
Techn. data page	1273	1273



d1	d2 h6	l1	l2	l4	Z	Availability	
mm	mm	mm	mm	mm			
5.000	5.000	86.00	52.00	12.00	6	●	●
6.000	5.600	93.00	57.00	12.00	6	●	●
7.000	7.100	109.00	69.00	16.00	6	●	●
8.000	8.000	117.00	75.00	16.00	6	●	●
9.000	9.000	125.00	81.00	19.00	6	●	●
10.000	10.000	133.00	87.00	12.00	6	●	●
11.000	10.000	142.00	96.00	12.00	6	●	●
12.000	10.000	151.00	105.00	12.00	6	●	●
13.000	10.000	151.00	105.00	12.00	6	●	●
14.000	12.000	160.00	110.00	16.00	6	●	●
15.000	12.000	162.00	112.00	16.00	6	●	●
16.000	12.000	170.00	120.00	19.00	6	●	●
18.000	14.000	182.00	130.00	19.00	6		●
20.000	16.000	195.00	137.00	19.00	6	●	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	1408	1428	1409	1429
Standard	~ DIN 8093			
Tool material	Carbide			
Carbide grade	K10	K10	K10	K10
Surface	◯	a	◯	a
Type				
Form	A	A	B	B
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	H7	H7	H7	H7
Discount group	120	120	120	120
Techn. data page	1273	1274	1274	1274

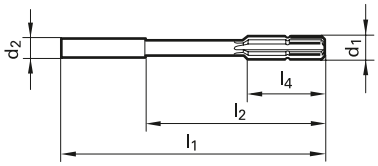


d1	d2 h6	l1	l2	l4	Z	Availability
mm	mm	mm	mm	mm		
1.000	1.000	34.00	15.50	5.50	3	
1.200	1.200	38.00	17.10	7.50	3	
1.400	1.400	40.00	18.70	8.00	3	
1.500	1.500	40.00	18.80	8.00	3	
1.600	1.600	43.00	20.80	9.00	3	
1.800	1.800	46.00	22.90	10.00	4	
2.000	2.000	49.00	25.00	11.00	4	
2.200	2.200	53.00	26.10	12.00	4	
2.500	2.500	57.00	30.30	14.00	4	
2.800	2.800	61.00	34.40	15.00	4	
3.000	3.000	61.00	34.50	15.00	6	
3.200	3.200	65.00	38.60	16.00	6	
3.500	3.500	70.00	43.80	18.00	6	
4.000	4.000	75.00	43.00	19.00	6	
4.500	4.500	80.00	47.00	21.00	6	
5.000	5.000	86.00	52.00	23.00	6	
5.500	5.600	93.00	57.00	26.00	6	
6.000	5.600	93.00	57.00	26.00	6	
6.500	6.300	101.00	63.00	28.00	6	
7.000	7.100	109.00	69.00	31.00	6	
7.500	7.100	109.00	69.00	31.00	6	
8.000	8.000	117.00	75.00	33.00	6	
8.500	8.000	117.00	75.00	33.00	6	
9.000	9.000	125.00	81.00	36.00	6	
9.500	9.000	125.00	81.00	36.00	6	
10.000	10.000	133.00	87.00	38.00	6	
10.500	10.000	133.00	87.00	38.00	6	
11.000	10.000	142.00	96.00	41.00	6	
12.000	10.000	151.00	105.00	44.00	6	
13.000	10.000	151.00	105.00	44.00	6	
14.000	12.000	160.00	110.00	47.00	6	
15.000	12.000	162.00	112.00	50.00	6	
16.000	12.000	170.00	120.00	52.00	6	
17.000	14.000	175.00	123.00	54.00	6	
18.000	14.000	182.00	130.00	56.00	6	
19.000	16.000	189.00	131.00	58.00	6	

● ◯

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

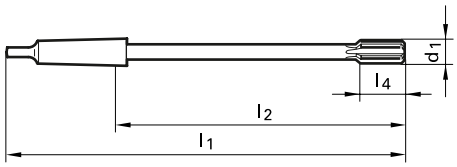
Guhring no.	1408	1428	1409	1429
Standard	~ DIN 8093			
Tool material	Carbide			
Carbide grade	K10	K10	K10	K10
Surface	○	a	○	a
Type				
Form	A	A	B	B
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	H7	H7	H7	H7
Discount group	120	120	120	120
Techn. data page	1273	1274	1274	1274



d1	d2 h6	l1	l2	l4	Z	Availability
mm	mm	mm	mm	mm		
20.000	16.000	195.00	137.00	60.00	6	● ● ● ●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

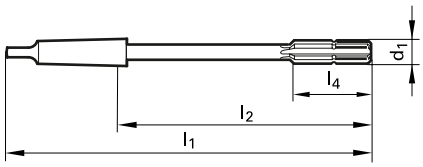
Guhring no.	719	720
Standard	~ DIN 8051	
Tool material	Carbide	
Carbide grade	K10	K10
Surface	◯	◯
Type		
Form	A	B
Cutting direction	right-hand	right-hand
Tolerance	H7	H7
Discount group	120	120
Techn. data page	1274	1274



d1	MK	l1	l2	l4	Z	Availability	
mm		mm	mm	mm			
5.000	1	133.00	71.00	12.00	6	●	
6.000	1	138.00	76.00	12.00	6	●	●
7.000	1	150.00	88.00	16.00	6	●	
8.000	1	156.00	94.00	16.00	6	●	●
10.000	1	168.00	106.00	12.00	6	●	●
11.000	1	175.00	113.00	12.00	6	●	❍
12.000	1	182.00	120.00	12.00	6	●	●
13.000	1	182.00	120.00	12.00	6	●	❍
14.000	1	189.00	127.00	16.00	6	●	●
15.000	2	204.00	129.00	16.00	6	●	●
16.000	2	210.00	135.00	19.00	6	●	●
17.000	2	214.00	139.00	19.00	6	●	
18.000	2	219.00	144.00	19.00	6	●	●
20.000	2	228.00	153.00	19.00	6	●	●
21.000	2	232.00	157.00	22.00	6	●	
22.000	2	237.00	162.00	22.00	6	●	●
23.000	2	241.00	166.00	22.00	6	●	
24.000	3	268.00	174.00	22.00	8	●	●
25.000	3	268.00	174.00	22.00	8	●	●
26.000	3	273.00	179.00	22.00	8	●	●
28.000	3	277.00	183.00	25.00	8	●	
30.000	3	281.00	187.00	25.00	8	●	●
32.000	4	317.00	199.50	25.00	8	❍	●
40.000	4	329.00	211.50	25.00	8	❍	

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

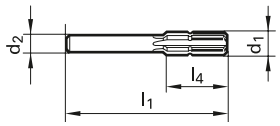
Guhring no.	1410	1411
Standard	~ DIN 8094	
Tool material	Carbide	
Carbide grade	K10	K10
Surface	◯	◯
Type		
Form	A	B
Cutting direction	right-hand	right-hand
Tolerance	H7	H7
Discount group	120	120
Techn. data page	1275	1275



d1	MK	l1	l2	l4	Z	Availability	
mm		mm	mm	mm			
5.000	1	133.00	71.00	23.00	6		●
6.000	1	138.00	76.00	26.00	6	●	●
7.000	1	150.00	88.00	31.00	6		◯
8.000	1	156.00	94.00	33.00	6	●	●
9.000	1	162.00	100.00	36.00	6		●
10.000	1	168.00	106.00	38.00	6	●	●
11.000	1	175.00	113.00	41.00	6		●
12.000	1	182.00	120.00	44.00	6	●	●
13.000	1	182.00	120.00	44.00	6	●	●
14.000	1	189.00	127.00	47.00	6	●	●
15.000	2	204.00	129.00	50.00	6	●	●
16.000	2	210.00	135.00	52.00	6	●	●
17.000	2	214.00	139.00	54.00	6		●
18.000	2	219.00	144.00	56.00	6	●	●
19.000	2	223.00	148.00	58.00	6		●
20.000	2	228.00	153.00	60.00	6	●	●
21.000	2	232.00	157.00	62.00	6		●
22.000	2	237.00	162.00	64.00	6		●
23.000	2	241.00	166.00	66.00	6	●	●
24.000	3	268.00	174.00	68.00	8		●
25.000	3	268.00	174.00	68.00	8	●	●
26.000	3	273.00	179.00	70.00	8		●
27.000	3	277.00	183.00	71.00	8		●
28.000	3	277.00	183.00	71.00	8	●	●
30.000	3	281.00	187.00	73.00	8		●
35.000	4	321.00	203.50	78.00	8		●
40.000	4	329.00	211.50	81.00	8		●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

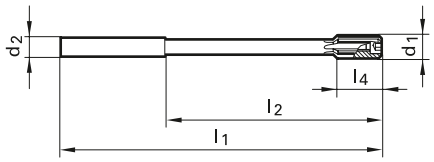
Guhring no.	674	1430	1407	737
Standard	~ DIN 8090			
Tool material	Carbide			
Carbide grade	K10	K10	K10	K10
Surface	◯	(a)	◯	◯
Type				
Form	A	A	B	C
Cutting direction	right-hand	right-hand	right-hand	right-hand
Tolerance	H7	H7	H7	H7
Discount group	120	120	120	120
Techn. data page	1275	1275	1275	1276



d1	d2 h8/≥10 h6	l1	l4	Z	Availability
mm	mm	mm	mm		
3.000	2.500	56.00	20.00	6	●
3.200	2.800	56.00	20.00	6	○
3.500	3.000	56.00	20.00	6	● ●
4.000	3.550	56.00	20.00	6	● ● ● ●
4.500	4.000	63.00	22.00	6	● ● ●
5.000	4.000	63.00	22.00	6	● ● ●
5.500	5.000	63.00	22.00	6	● ● ○
6.000	5.000	63.00	22.00	6	● ● ● ●
6.500	5.000	63.00	22.00	6	● ● ●
7.000	6.300	71.00	25.00	6	● ● ●
7.500	6.300	71.00	25.00	6	○ ○
8.000	6.300	71.00	25.00	6	● ● ● ●
9.000	8.000	71.00	25.00	6	● ● ●
10.000	8.000	71.00	25.00	6	● ● ● ●
10.500	8.000	71.00	25.00	6	● ● ●
11.000	10.000	80.00	28.00	6	●
11.500	10.000	80.00	28.00	6	○
12.000	10.000	80.00	28.00	6	● ● ●
12.500	10.000	80.00	28.00	6	●
13.500	12.500	90.00	32.00	6	● ●
14.000	12.500	90.00	32.00	6	● ● ● ●
15.000	12.500	90.00	32.00	6	● ●
16.000	12.500	90.00	32.00	6	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

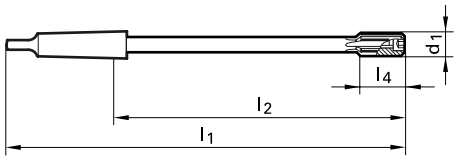
Guhring no.	749
Standard	Guhring std.
Tool material	Carbide
Carbide grade	K10
Surface	◯
Type	
Form	A
Cutting direction	right-hand
Tolerance	H7
Discount group	120
Techn. data page	1276



d1	d2 h6	l1	l2	l4	Z	Availability
mm	mm	mm	mm	mm		
8.000	8.000	117.00	75.00	12.00	4	●
9.000	10.000	125.00	79.00	12.00	6	●
10.000	10.000	133.00	87.00	12.00	6	●
12.000	10.000	151.00	105.00	12.00	6	●
13.000	10.000	151.00	105.00	12.00	6	●
14.000	12.000	160.00	110.00	16.00	6	●
15.000	12.000	162.00	112.00	16.00	6	●
16.000	12.000	170.00	120.00	19.00	6	●
18.000	14.000	182.00	130.00	19.00	6	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

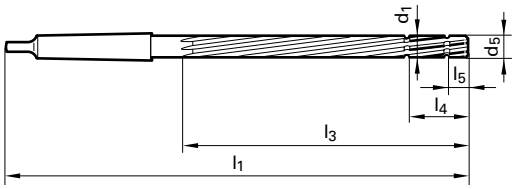
Guhring no.	740
Standard	Guhring std.
Tool material	Carbide
Carbide grade	K10
Surface	◯
Type	
Form	A
Cutting direction	right-hand
Tolerance	H7
Discount group	120
Techn. data page	1276



d1	MK	l1	l2	l4	Z	Availability
mm		mm	mm	mm		
8.000	1	156.00	94.00	12.00	4	◯
10.000	1	168.00	106.00	12.00	6	◯
11.000	1	175.00	113.00	12.00	6	◯
12.000	1	182.00	120.00	12.00	6	◯
14.000	1	189.00	127.00	16.00	6	◯
15.000	2	204.00	129.00	16.00	6	◯
16.000	2	210.00	135.00	19.00	6	◯
19.000	2	223.00	148.00	19.00	6	◯
20.000	2	228.00	153.00	19.00	6	◯
22.000	2	237.00	162.00	22.00	6	◯
25.000	3	268.00	174.00	22.00	6	◯
30.000	3	281.00	187.00	25.00	6	◯

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

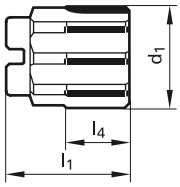
Guhring no.	743
Standard	Guhring std.
Tool material	Carbide
Carbide grade	K10
Surface	◯
Type	
Form	
Tolerance	H7
Cutting direction	right-hand
Discount group	120
Techn. data page	1276



d1	MK	d5	l1	l3	l4	l5	Z	Availability
mm		mm	mm	mm	mm	mm		
8.000	1	7.920	205.00	133.00	27,50	10.00	6	●
10.000	1	9.900	230.00	155.00	28.00	12.00	6	●
12.000	1	11.900	230.00	155.00	28.00	12.00	6	●
24.000	3	23.850	285.00	176.00	33.00	15.00	8	❍
25.000	3	24.850	285.00	176.00	33.00	15.00	8	❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

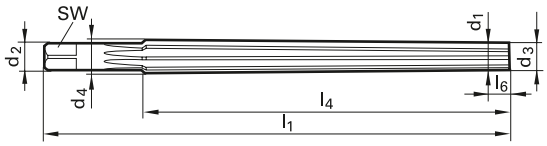
Guhring no.	727
Standard	DIN 8054
Tool material	Carbide
Carbide grade	K10
Surface	◯
Type	
Form	
Cutting direction	right-hand
Tolerance	H7
Discount group	120
Techn. data page	1276



d1	int. Ø	l1	l4	Z	Availability
mm	mm	mm	mm		
25.000	13.000	45.00	30.00	6	❍
35.000	13.000	45.00	30.00	8	❍
36.000	16.000	50.00	30.00	8	❍
38.000	16.000	50.00	30.00	8	❍
40.000	16.000	50.00	30.00	8	❍
50.000	19.000	56.00	30.00	10	❍
55.000	22.000	63.00	30.00	10	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

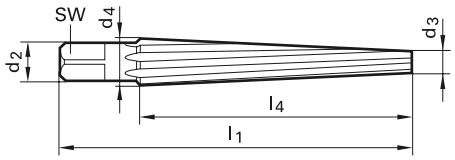
Guhring no.	428	429
Standard	DIN 9	DIN 9
Tool material	HSS	HSS
Surface	◯	◯
Type		
Form	A	B
Cutting direction	right-hand	right-hand
Tolerance		
Discount group	105	105
Techn. data page	1277	1277



d1	d2	d3	d4	l1	l4	l6	SW	Z	Availability	
mm	mm	mm	mm	mm	mm	mm				
1.000	3.150	0.900	1.460	46.00	28.00	5.00	2.40	3	●	
1.200	3.150	1.100	1.740	50.00	32.00	5.00	2.40	3		❍
1.500	3.150	1.400	2.140	57.00	37.00	5.00	2.40	3	●	
2.000	3.150	1.900	2.860	68.00	48.00	5.00	2.40	3	●	
2.500	3.150	2.400	3.360	68.00	48.00	5.00	2.40	4	●	
3.000	4.000	2.900	4.060	80.00	58.00	5.00	3.00	5	●	●
3.500	4.500	3.400	4.660	87.00	63.00	5.00	3.40	5		●
4.000	5.000	3.900	5.260	93.00	68.00	5.00	3.80	5	●	●
4.500	5.600	4.400	5.800	95.00	70.00	5.00	4.30	5		●
5.000	6.300	4.900	6.360	100.00	73.00	5.00	4.90	5	❍	●
5.500	7.100	5.400	7.200	118.00	90.00	5.00	5.50	6		❍
6.000	8.000	5.900	8.000	135.00	105.00	5.00	6.20	6	●	●
6.500	8.000	6.400	8.600	140.00	110.00	5.00	6.20	6		❍
7.000	9.000	6.900	9.400	160.00	125.00	5.00	7.00	6	●	●
8.000	10.000	7.900	10.800	180.00	145.00	5.00	8.00	6	●	●
9.000	11.200	8.900	12.100	195.00	160.00	5.00	9.00	6	❍	●
10.000	12.500	9.900	13.400	215.00	175.00	5.00	10.00	6	●	●
12.000	14.000	11.800	16.000	255.00	210.00	10.00	11.00	8	❍	●
13.000	16.000	12.800	17.000	255.00	210.00	10.00	12.00	8		●
14.000	16.000	13.800	18.000	255.00	210.00	10.00	12.00	8		●
16.000	18.000	15.800	20.400	280.00	230.00	10.00	14.50	8	●	●
20.000	22.400	19.800	24.800	310.00	250.00	10.00	18.00	8	❍	●
25.000	28.000	24.700	30.700	370.00	300.00	15.00	22.00	10		●
30.000	31.500	29.700	36.100	400.00	320.00	15.00	24.00	10	●	❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

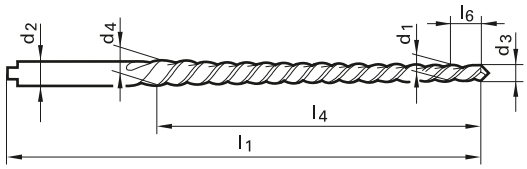
Guhring no.	1433
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	
Form	
Cutting direction	right-hand
Tolerance	
Discount group	105
Techn. data page	1277



d2	d3	d4	l1	l4	SW	Z	Code no.	Availability
mm	mm	mm	mm	mm	mm			
8.000	3.000	10.000	100.00	70.00	6.20	5	3.000	❍
13.000	5.000	15.000	140.00	100.00	10.00	7	5.000	❍
21.000	10.000	25.000	195.00	150.00	16.00	9	10.000	❍
30.000	15.000	35.000	250.00	200.00	24.00	11	15.000	❍
40.000	23.000	45.000	275.00	220.00	32.00	11	23.000	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

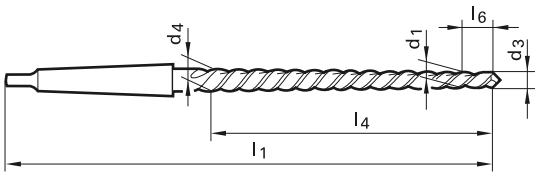
Guhring no.	410
Standard	DIN 2179
Tool material	HSS-E
Surface	◯
Type	
Form	
Cutting direction	right-hand
Tolerance	
Discount group	105
Techn. data page	1277



d1	d2	d3	d4	l1	l4	l6	Z	Availability
mm	mm	mm	mm	mm	mm	mm		
1.000	1.400	0.900	1.460	60.00	33.00	5.00	2	●
1.500	2.100	1.400	2.140	70.00	37.00	5.00	2	●
2.000	3.150	1.900	2.860	86.00	48.00	5.00	3	●
2.500	3.150	2.400	3.360	86.00	48.00	5.00	3	●
3.000	4.000	2.900	4.060	100.00	58.00	5.00	3	●
4.000	5.000	3.900	5.260	112.00	68.00	5.00	3	●
5.000	6.300	4.900	6.360	122.00	73.00	5.00	3	●
6.000	8.000	5.900	8.000	160.00	105.00	5.00	3	●
6.500	8.500	6.400	8.780	188.00	119.00	5.00	3	●
8.000	10.000	7.900	10.800	207.00	145.00	5.00	3	●
10.000	12.500	9.900	13.400	245.00	175.00	5.00	3	●
12.000	16.000	11.800	16.000	290.00	210.00	10.00	3	●
14.000	17.000	13.800	17.680	289.00	194.00	10.00	3	❍
30.000	35.000	29.700	36.100	475.00	320.00	15.00	4	❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

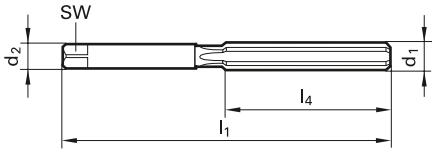
Guhring no.	411
Standard	DIN 2180
Tool material	HSS-E
Surface	○
Type	
Form	
Cutting direction	right-hand
Tolerance	
Discount group	105
Techn. data page	1277



d1	MK	d3	d4	l1	l4	l6	Z	Availability
mm		mm	mm	mm	mm	mm		
5.000	1	4.900	6.360	155.00	73.00	5.00	3	●
6.000	1	5.900	8.000	187.00	105.00	5.00	3	●
8.000	1	7.900	10.800	227.00	145.00	5.00	3	●
10.000	1	9.900	13.400	257.00	175.00	5.00	3	●
12.000	2	11.800	16.000	315.00	210.00	10.00	3	●
13.000	2	12.800	16.680	295.00	194.00	10.00	3	●
14.000	2	13.800	17.680	295.00	194.00	10.00	3	●
16.000	2	15.800	20.400	335.00	230.00	10.00	3	●
20.000	3	19.800	24.800	377.00	250.00	10.00	3	●
25.000	3	24.700	30.700	427.00	300.00	15.00	3	●
30.000	4	29.700	36.100	475.00	320.00	15.00	4	●
40.000	4	39.700	46.500	495.00	340.00	15.00	6	●
50.000	5	49.700	56.900	550.00	360.00	15.00	8	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

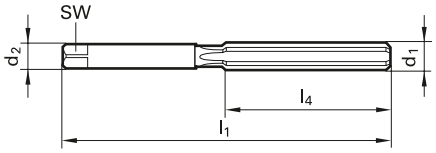
Guhring no.	412	413
Standard	DIN 206	
Tool material	HSS	
Surface	◯	◯
Type		
Form	A	B
Cutting direction	right-hand	right-hand
Tolerance	H7	H7
Discount group	105	105
Techn. data page	1278	1278



d1	d2	l1	l4	SW	Z	Availability	
mm	mm	mm	mm				
1.400	1.400	41.00	20.00	1.12	3		●
1.500	1.500	41.00	20.00	1.12	3		◯
2.000	2.000	50.00	25.00	1.60	4	●	●
2.200	2.200	54.00	27.00	1.80	4	●	●
2.500	2.500	58.00	29.00	2.10	4	●	●
3.000	3.000	62.00	31.00	2.40	6	●	●
3.200	3.200	66.00	33.00	2.40	6	◯	◯
3.500	3.500	71.00	35.00	2.70	6	●	●
4.000	4.000	76.00	38.00	3.00	6	●	●
4.500	4.500	81.00	41.00	3.40	6	◯	●
5.000	5.000	87.00	44.00	3.80	6	●	●
5.500	5.500	93.00	47.00	4.30	6	◯	●
6.000	6.000	93.00	47.00	4.90	6	●	●
6.500	6.500	100.00	50.00	4.90	6		●
7.000	7.000	107.00	54.00	5.50	6	◯	●
7.500	7.500	107.00	54.00	6.20	6		●
8.000	8.000	115.00	58.00	6.20	6	●	●
8.500	8.500	115.00	58.00	7.00	6		●
9.000	9.000	124.00	62.00	7.00	6	●	●
9.500	9.500	124.00	62.00	8.00	6	◯	●
10.000	10.000	133.00	66.00	8.00	6	●	●
10.500	10.500	133.00	66.00	8.00	6		◯
11.000	11.000	142.00	71.00	9.00	6	◯	●
11.500	11.500	142.00	71.00	9.00	6		●
12.000	12.000	152.00	76.00	9.00	6	●	●
12.500	12.500	152.00	76.00	10.00	6		●
13.000	13.000	152.00	76.00	10.00	6		●
14.000	14.000	163.00	81.00	11.00	8	●	●
15.000	15.000	163.00	81.00	12.00	8	◯	●
15.500	15.500	175.00	87.00	12.00	8	◯	
16.000	16.000	175.00	87.00	12.00	8	●	●
16.500	16.500	175.00	87.00	13.00	8		●
17.000	17.000	175.00	87.00	13.00	8	◯	●
18.000	18.000	188.00	93.00	14.50	8		●
19.000	19.000	188.00	93.00	14.50	8		●
20.000	20.000	201.00	100.00	16.00	8	●	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

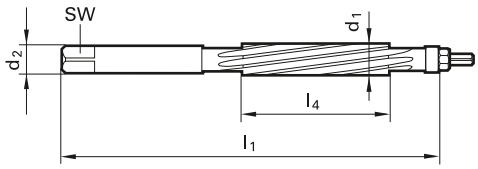
Guhring no.	412	413
Standard	DIN 206	
Tool material	HSS	
Surface	◯	◯
Type		
Form	A	B
Cutting direction	right-hand	right-hand
Tolerance	H7	H7
Discount group	105	105
Techn. data page	1278	1278



d1	d2	l1	l4	SW	Z	Availability	
mm	mm	mm	mm				
21.000	21.000	201.00	100.00	16.00	8	❍	●
22.000	22.000	215.00	107.00	18.00	8	❍	●
24.000	24.000	231.00	115.00	18.00	8		●
25.000	25.000	231.00	115.00	20.00	8	❍	●
28.000	28.000	247.00	124.00	22.00	10	●	●
30.000	30.000	247.00	124.00	24.00	10		●
31.000	31.000	265.00	133.00	24.00	10		❍
32.000	32.000	265.00	133.00	24.00	10		●
33.000	33.000	265.00	133.00	26.00	10		●
34.000	34.000	284.00	142.00	26.00	10		●
35.000	35.000	284.00	142.00	29.00	10		●
38.000	38.000	305.00	152.00	29.00	10		●
38.100	38.100	305.00	152.00	29.00	10	❍	
40.000	40.000	305.00	152.00	32.00	10		●
43.000	43.000	326.00	163.00	35.00	12		●
44.000	44.000	326.00	163.00	32.00	12	❍	
46.000	46.000	326.00	163.00	35.00	12	❍	
49.000	49.000	347.00	174.00	39.00	12	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

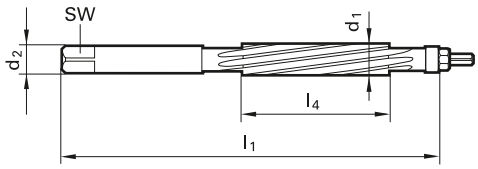
Guhring no.	415
Standard	DIN 859
Tool material	HSS
Surface	○
Type	
Form	B
Cutting direction	right-hand
Tolerance	
Discount group	105
Techn. data page	1278



d1 mm	d2 mm	l1 mm	l4 mm	SW	Z	Availability
4.000	4.000	76.00	24.00	3.00	6	●
5.000	5.000	87.00	30.00	3.80	6	●
5.500	5.500	93.00	33.00	4.30	6	○
6.000	6.000	93.00	33.00	4.90	6	●
7.000	7.000	107.00	38.00	5.50	9	●
8.000	8.000	115.00	42.00	6.20	9	●
9.000	9.000	124.00	46.00	7.00	9	●
10.000	10.000	133.00	50.00	8.00	9	●
11.000	11.000	142.00	51.00	9.00	9	●
12.000	12.000	152.00	56.00	9.00	9	●
12.500	12.500	152.00	56.00	10.00	9	○
13.000	13.000	152.00	56.00	10.00	9	●
14.000	14.000	163.00	61.00	11.00	9	●
15.000	15.000	163.00	61.00	12.00	9	●
16.000	16.000	175.00	67.00	12.00	9	●
17.000	17.000	175.00	67.00	13.00	9	○
18.000	18.000	188.00	68.00	14.50	9	○
19.000	19.000	188.00	68.00	14.50	9	●
20.000	20.000	201.00	75.00	16.00	9	●
21.000	21.000	201.00	75.00	16.00	12	○
22.000	22.000	215.00	82.00	18.00	12	●
24.000	24.000	231.00	85.00	18.00	12	●
25.000	25.000	231.00	85.00	20.00	12	●
26.000	26.000	231.00	85.00	20.00	12	○
28.000	28.000	247.00	94.00	22.00	12	○
29.000	29.000	247.00	94.00	22.00	12	○
30.000	30.000	247.00	94.00	24.00	12	●
31.000	31.000	265.00	99.00	24.00	12	○
32.000	32.000	265.00	99.00	24.00	12	○
33.000	33.000	265.00	99.00	26.00	12	●
38.000	38.000	305.00	111.00	29.00	12	●
41.000	41.000	305.00	111.00	32.00	12	○
43.000	43.000	326.00	120.00	35.00	12	○
46.000	46.000	326.00	120.00	35.00	12	○
47.000	47.000	326.00	120.00	39.00	12	○
49.000	49.000	347.00	131.00	39.00	12	○

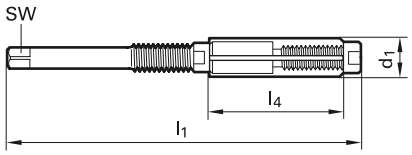
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	415
Standard	DIN 859
Tool material	HSS
Surface	◯
Type	
Form	B
Cutting direction	right-hand
Tolerance	
Discount group	105
Techn. data page	1278



d1	d2	l1	l4	SW	Z	Availability
mm	mm	mm	mm			
51.000	51.000	347.00	131.00	39.00	16	❍
54.000	54.000	367.00	131.00	44.00	16	❍
58.000	58.000	367.00	131.00	44.00	16	❍
59.000	59.000	367.00	131.00	49.00	16	❍

Guhring no.	416
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	
Form	
Cutting direction	right-hand
Tolerance	
Discount group	105
Techn. data page	1278



d1	from d1	to d1	l1	l4	SW	Z	Availability
mm	mm	mm	mm	mm			
6.400	6.400	7.200	110.00	32.00	3.00	4	●
7.200	7.200	8.000	110.00	32.00	3.40	4	●
8.000	8.000	9.000	115.00	34.00	3.80	5	●
9.000	9.000	10.000	115.00	34.00	4.30	5	●
10.000	10.000	11.000	115.00	34.00	4.90	5	●
11.000	11.000	12.000	125.00	35.00	4.90	5	●
12.000	12.000	13.500	135.00	41.00	6.20	5	●
13.500	13.500	15.500	146.00	50.00	7.00	5	●
15.500	15.500	18.000	166.00	60.00	8.00	5	●
18.000	18.000	21.000	178.00	65.00	9.00	5	●
21.000	21.000	24.000	195.00	76.00	11.00	5	●
24.000	24.000	27.500	218.00	82.00	12.00	5	●
27.500	27.500	31.500	245.00	86.00	14.50	5	●
31.500	31.500	37.000	280.00	98.00	18.00	6	●
37.000	37.000	45.000	325.00	108.00	20.00	6	●
45.000	45.000	55.000	370.00	118.00	26.00	6	●
55.000	55.000	65.000	400.00	125.00	32.00	6	●
67.000	67.000	80.000	435.00	140.00	39.00	8	●

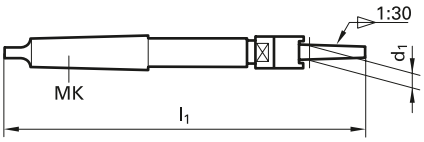
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**417**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	○
Type	
Form	
Cutting direction	**right-hand**
Tolerance	
Discount group	**105**
Techn. data page	**1278**

d1 mm	from d1 mm	to d1 mm	l4 mm	Availability
6.400	6.400	7.200	32.00	○
7.200	7.200	8.000	32.00	○
8.000	8.000	9.000	34.00	○
9.000	9.000	10.000	34.00	○
10.000	10.000	11.000	34.00	○
11.000	11.000	12.000	35.00	○
12.000	12.000	13.500	41.00	○
13.500	13.500	15.500	50.00	○
15.500	15.500	18.000	60.00	○
18.000	18.000	21.000	65.00	○
21.000	21.000	24.000	76.00	○
24.000	24.000	27.500	82.00	○
27.500	27.500	31.500	86.00	○
31.500	31.500	37.000	98.00	○
37.000	37.000	45.000	108.00	○
45.000	45.000	55.000	118.00	○
55.000	55.000	65.000	125.00	○
65.000	65.000	67.000	140.00	○
67.000	67.000	80.000	140.00	○
80.000	80.000	95.000	155.00	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

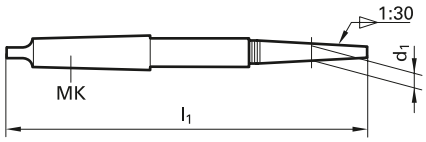
Guhring no.	**1438**
Standard	**DIN 217**
Discount group	**105**
Techn. data page	**1279**



d1 mm	MK	l1 mm	Availability
13.000	3	250.00	●
16.000	3	261.00	●
19.000	4	298.00	●
22.000	4	312.00	●
27.000	5	359.00	●
32.000	5	376.00	●
40.000	5	396.00	●
50.000	5	416.00	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

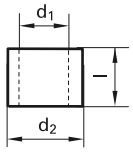
Guhring no.	1434
Standard	Guhring std.
Discount group	105
Techn. data page	1279



d1 mm	MK	l1 mm	Availability
13.000	3	250.00	○
16.000	3	261.00	○
19.000	4	298.00	○
22.000	4	312.00	○
27.000	5	359.00	○
32.000	5	376.00	○
40.000	5	396.00	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

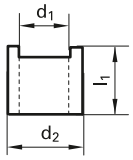
Guhring no.	1435
Standard	Guhring std.
Discount group	105
Techn. data page	1279



d1	l	d2	Availability
mm	mm	mm	
13.000	14.00	23.000	○
16.000	16.00	27.000	○
19.000	18.00	32.000	○
22.000	20.00	39.000	○
27.000	21.00	46.000	○
32.000	27.00	56.000	○
40.000	29.00	65.000	○

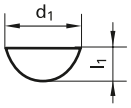
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**1436**
Standard	**Guhring std.**
Discount group	**105**
Techn. data page	**1279**



d1	l1	d2	Availability
mm	mm	mm	
13.000	21.00	23.000	❍
16.000	23.00	27.000	❍
19.000	28.00	32.000	❍
22.000	30.00	39.000	❍
27.000	35.00	46.000	❍
32.000	42.00	56.000	❍
40.000	45.00	65.000	❍

Guhring no.	**1437**
Standard	**DIN 6888**
Discount group	**105**
Techn. data page	**1279**



d1	l1	Holder	Thickness	Availability
mm	mm	mm	mm	
13.000	3.70	13	3.000	○
16.000	5.00	16	4.000	○
22.000	6.50	19/22	5.000	○
27.000	7.50	27	6.000	○
32.000	9.00	32	8.000	○
50.000	11.00	40/50	8.000	○

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Additional charges for special tol. zones and intermediate sizes for straight shank reamers

The surcharge for grinding intermediate sizes and special tolerances is €30.00 net per diameter regardless of quantity. Minimum order 2 of.

Quality control requirements for reamers

The QS principle encourages requests for inspection records or certificates of conformity to be supplied with ordered tools. We will gladly do this. But as the setting-up of inspection records is particularly time consuming and costly - special marking on a specified number of tools, the provision of measuring records, the entry of measured data in special forms - and we do not wish to incorporate these costs in our overhead costs, we have chosen to charge the prices below in relation to the quantity ordered. Surely you will appreciate this.

inspected number of items / inspection criteria	1	up to 3	up to 5	up to 10	up to 15	up to 20	up to 30	up to 50	up to 100
	net prices for the inspected number of items per inspection criteria								
total length	●	●	●	●	●	●	●	●	●
cutting length	●	●	●	●	●	●	●	●	●
shank length	●	●	●	●	●	●	●	●	●
shank diameter	●	●	●	●	●	●	●	●	●
cutting diameter and taper	●	●	●	●	●	●	●	●	●
concentricity Tlh/Trn/Trs	●	●	●	●	●	●	●	●	●
land width	●	●	●	●	●	●	●	●	●
clearance angle of minor cut. edge	●	●	●	●	●	●	●	●	●
clearance angle	●	●	●	●	●	●	●	●	●
back rake angle	●	●	●	●	●	●	●	●	●
end cutting angle	●	●	●	●	●	●	●	●	●
bore diameter for shell reamers	●	●	●	●	●	●	●	●	●
optical	●	●	●	●	●	●	●	●	●
marking of test tools	●	●	●	●	●	●	●	●	●

	net prices for the inspected number of items for all inspection criteria								
	●	●	●	●	●	●	●	●	●
	plus cost of inspection report								
total price	●	●	●	●	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

GUHRING

More than countersinking

Countersinks, de-burring and chamfering tools
for the machining of hole
entries and exits as well as cross holes

COUNTERSINKS

GUHRING

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
60° countersinks								
DIN 334	C		HSS	○	6,300 - 25,000	472	105	1371
DIN 334	A		HSS	○ >Ø 8,00	8,000 - 20,000	470	105	1372
DIN 334	D		HSS	●	16,000 - 80,000	473	105	1373
DIN 334	B		HSS	●	16,000 - 100,000	471	105	1374
90° countersinks								
DIN 335	A		HSS	○ >Ø 8,00	8,000 - 20,000	474	105	1375
DIN 335	C		HSS	○	4,300 - 31,000	476	105	1376
DIN 335	C		HSS	A	4,300 - 31,000	1326	105	1376
DIN 335	C		HSS	S	5,000 - 31,000	327	105	1376
DIN 335	D		HSS	○	15,000 - 100,000	477	105	1377
DIN 335	D		HSS	S	25,000 - 50,000	328	105	1377
DIN 335	B		HSS	●	16,000 - 100,000	475	105	1378
90° countersinks								
DIN 335	C		HSS	○	7,000 - 7,000	498	105	1379
DIN 335	C		HSS	S	7,000 - 7,000	499	105	1379

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
90° countersinks for fine tolerances								
DIN 1866			HSS	○	2,000 - 19,000	436	105	1380
90° countersinks for medial tolerances								
DIN 1866			HSS	○	6,600 - 21,500	437	105	1381
90° countersinks for tapping size holes								
DIN 1866			HSS	○	6,000 - 19,000	438	105	1382
120° countersinks								
DIN 347	A		HSS	○ >Ø 8,00	8,000 - 20,000	478	105	1383
Guhring std.			HSS	○	16,000 - 16,000	480	105	1384
Guhring std.			HSS	●	25,000 - 40,000	481	105	1385
DIN 347	B		HSS	●	25,000 - 100,000	479	105	1386
Counterbores with fixed pilots for fine tolerances								
DIN 373			HSS	○	2,200 - 20,000	482	105	1387
DIN 373			HSS	S	8,000 - 20,000	324	105	1387
Guhring std.			HSS	●	18,000 - 40,000	485	105	1388

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Counterbores with fixed pilots for medial tolerances								
DIN 373			HSS	○	6,000 - 20,000	483	105	1389
DIN 373			HSS	(S)	6,000 - 18,000	325	105	1389
Guhring std.			HSS	◍	18,000 - 40,000	486	105	1390
Counterbores with fixed pilots for tapping size holes								
DIN 373			HSS	○	6,000 - 20,000	484	105	1391
DIN 373			HSS	(S)	6,000 - 18,000	326	105	1391
Guhring std.			HSS	◍	20,000 - 26,000	487	105	1392
Counterbores with hole for detachable pilot								
DIN 375			HSS	◍	15,000 - 63,000	463	105	1393
Detachable pilot for fine tolerances								
DIN 1868			HSS	○	8,400 - 25,000	464	105	1394
Detachable pilot for medial tolerances								
DIN 1868			HSS	○	9,000 - 39,000	465	105	1395
Detachable pilot for taping size holes								
DIN 1868			HSS	○	6,800 - 32,000	466	105	1396

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown (A) TiAlN (a) TiAlN nanoA (A) TiAlN SuperA

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Spot facers								
DIN 1862			HSS-E	○	3,500 - 13,000	432	105	1397
DIN 1862			HSS-E	○	6,000 - 30,000	433	105	1398
DIN 1862			HSS-E	○	10,000 - 30,000	434	105	1399
DIN 1862			HSS-E	○	20,000 - 48,000	435	105	1400
De-burring forks								
Guhring std.			Solid carbide	○	2,000 - 8,000	4101	120	1401
Guhring std.			Solid carbide	○	2,000 - 8,000	4100	120	1402
Front/back deburrer 90°								
Guhring std.		NEW	Solid carbide	a	3,000 - 12,000	495	120	1403

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Type	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Pilot counterbores								
Guhring std.	KS 125		HSS	◯	12,000 - 57,000	1601	104	1404
Guhring std.	KS 140		HSS	◯	5,000 - 45,000	1602	104	1405
Guhring std.	KS 108		Carbide	◯	5,900 - 75,000	1603	104	1406
Guhring std.	KS 115		Carbide	◯	18,000 - 74,000	1604	104	1407
Spotfacers								
Guhring std.	KS 100		Carbide	◯	9,000 - 67,000	1606	104	1408
90° countersinks								
Guhring std.	KS 100		HSS	◯	12,000 - 30,000	1622	104	1409

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Threaded pins								
DIN 551					-	**1624**	104	1410
Tool extractors								
Guhring std.					-	**1650**	104	1411
Guhring std.					-	**1651**	104	1411
Pilots with angled flat								
Guhring std.				○	-	**1615**	104	1412
Pilots complete								
Guhring std.				○	-	**1616**	104	1414
Pilots complete with pilot sleeve								
Guhring std.				○	-	**1617**	104	1418
Holding screws								
Guhring std.					-	**1647**	104	1420
Safety bolts								
Guhring std.					-	**1648**	104	1421

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Standard	Type	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Locknuts								
Guhring std.					-	**1649**	104	1422
Standard short holders with straight shank								
Guhring std.					-	**1625**	104	1423
Standard short holders with taper shank								
Guhring std.					-	**1626**	104	1424
Standard long holders with taper shank								
Guhring std.					-	**1628**	104	1425

bright | steam tempered | nitrided lands | nitrided | golden brown | A TiAlN | a TiAlN nanoA | A TiAlN SuperA

SPECIAL COUNTERSINKS

For non-standard countersink forms we produce special tools to suit the application. Please contact us and we shall convince you with our flexibility of design.

Tools with bold feed column no.
are preferred choice.

For exact definition of tools please refer to the
“Standard range and technical data” pages.

For multi-fluted countersinking tools the Ø-range for the
respective flute no. is in brackets.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Surface finish
Angle of taper
Form
Std. range page

Countersink Ø mm	Feed column no.					
	81	**82**	**83**	**84**	**85**	**86**
	f (mm/rev.)					
2.00	0.03	0.04	0.06	0.08	0.10	0.13
2.50	0.03	0.05	0.07	0.10	0.13	0.16
3.15	0.03	0.05	0.08	0.11	0.15	0.20
4.00	0.04	0.06	0.09	0.13	0.17	0.22
5.00	0.04	0.07	0.10	0.14	0.18	0.23
6.30	0.04	0.07	0.12	0.15	0.19	0.24
8.00	0.05	0.08	0.13	0.16	0.20	0.25
10.00	0.06	0.09	0.14	0.17	0.22	0.26
12.50	0.06	0.10	0.15	0.19	0.23	0.28
16.00	0.07	0.11	0.17	0.21	0.26	0.31
20.00	0.08	0.13	0.18	0.23	0.28	0.33
25.00	0.09	0.15	0.21	0.26	0.30	0.38
31.50	0.12	0.17	0.24	0.30	0.36	0.42
40.00	0.14	0.21	0.28	0.34	0.40	0.46
50.00	0.17	0.24	0.31	0.36	0.42	0.48
63.00	0.20	0.27	0.33	0.38	0.44	0.50
80.00	0.23	0.30	0.35	0.40	0.46	0.52
100.00	0.25	0.30	0.35	0.40	0.46	0.52

Coolant:
○ Air
● Neat oil
● Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Countersinks

436	437	438	470	471	472	473
1866	1866	1866	334	334	334	334
HSS	HSS	HSS	HSS	HSS	HSS	HSS
○	○	○	○● >Ø 8,00	●	○	●
90°	90°	90°	60°	60°	60°	60°
			A	B	C	D
1382	1383	1384	1374	1376	1373	1375

Vc m/min	Feed column no.						
32	**85**	85	85	85	85	**85**	**85**
30	**85**	85	85	84	84	**85**	**85**
32	**85**	85	85	85	85	**85**	**85**
30	**85**	85	85	84	84	**85**	**85**
32	**85**	85	85	84	84	**85**	**85**
30	**85**	85	85	84	84	**85**	**85**
20	**84**	84	84	84	84	**84**	**84**
15	**84**	84	84	84	84	**84**	**84**
12	**84**	84	84	**84**	**84**	84	84
25	**85**	85	85	85	85	**85**	**85**
15	**84**	84	84	**84**	**84**	**84**	**84**
10	**84**	84	84	84	84	84	84
15	**85**	85	85	84	84	**85**	**85**
12	**84**	84	84	**84**	**84**	84	84
17	**84**	84	84	84	84	**84**	**84**
15	**84**	84	84	84	84	**84**	**84**
15	**84**	84	84	84	84	**84**	**84**
10	**84**	84	84	84	84	**84**	**84**
16	**84**	84	84	84	84	**84**	**84**
12	**84**	84	84	84	84	**84**	**84**
14	**84**	84	84	84	84	**84**	**84**
8	**84**	84	84	84	84	**84**	**84**
25	**85**	85	85	84	84	**85**	**85**
16	**84**	84	84	84	84	**84**	**84**
22	**84**	84	84	84	84	**84**	**84**
20	**84**	84	84	84	84	**84**	**84**
8	**84**	84	84	84	84	**84**	**84**
15	**85**	85	85	85	85	**85**	**85**
10	**85**	85	85	**84**	**84**	**85**	**85**
90	**85**	85	85	85	85	**85**	**85**
70	**86**	86	86	85	85	**86**	**86**
40	**85**	85	85	85	85	**85**	**85**
30	**85**	85	85	85	85	**85**	**85**
100	**86**	86	86	85	85	**86**	**86**
60	**84**	84	84	84	84	**84**	**84**
80	**85**	85	85	84	84	**85**	**85**
50	**85**	85	85	84	84	**85**	**85**
30	**86**	86	86	85	85	**86**	**86**
26	**86**	86	86	85	85	**86**	**86**
24	**86**	86	86	85	85	**86**	**86**
20	**86**	86	86	85	85	**86**	**86**
30	**84**	84	84	84	84	84	84
40	**85**	85	85	84	84	85	85
70	**84**	84	84	84	84	84	84

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Tools with bold feed column no.
are preferred choice.

For exact definition of tools please refer to the
“Standard range and technical data” pages.

For multi-fluted countersinking tools the Ø-range for the
respective flute no. is in brackets.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Surface finish
Angle of taper
Form
Std. range page

Counter-sink Ø mm	Feed column no.					
	81	**82**	**83**	**84**	**85**	**86**
	f (mm/rev.)					
2.00	0.03	0.04	0.06	0.08	0.10	0.13
2.50	0.03	0.05	0.07	0.10	0.13	0.16
3.15	0.03	0.05	0.08	0.11	0.15	0.20
4.00	0.04	0.06	0.09	0.13	0.17	0.22
5.00	0.04	0.07	0.10	0.14	0.18	0.23
6.30	0.04	0.07	0.12	0.15	0.19	0.24
8.00	0.05	0.08	0.13	0.16	0.20	0.25
10.00	0.06	0.09	0.14	0.17	0.22	0.26
12.50	0.06	0.10	0.15	0.19	0.23	0.28
16.00	0.07	0.11	0.17	0.21	0.26	0.31
20.00	0.08	0.13	0.18	0.23	0.28	0.33
25.00	0.09	0.15	0.21	0.26	0.30	0.38
31.50	0.12	0.17	0.24	0.30	0.36	0.42
40.00	0.14	0.21	0.28	0.34	0.40	0.46
50.00	0.17	0.24	0.31	0.36	0.42	0.48
63.00	0.20	0.27	0.33	0.38	0.44	0.50
80.00	0.23	0.30	0.35	0.40	0.46	0.52
100.00	0.25	0.30	0.35	0.40	0.46	0.52

Coolant:
○ Air
● Neat oil
● Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Countersinks

474	475	476	477	478	479	480	481
335	335	335	335	347	347	G.S.	G.S.
HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
>Ø 8,00				>Ø 8,00			
90°	90°	90°	90°	120°	120°	120°	120°
A	B	C	D	A	B		
1377	1380	1378	1379	1385	1388	1386	1387

1326
335
HSS
A
90°
C
1378

327	328
335	335
HSS	HSS
S	S
90°	90°
C	D
1378	1379

Vc m/min	Feed column no.							
32	85	85	**86**	**86**	85	85	**85**	**85**
30	85	85	**85**	**85**	84	84	**85**	**85**
32	85	85	**86**	**86**	85	85	**85**	**85**
30	85	85	**85**	**85**	84	84	**85**	**85**
32	85	85	**85**	**85**	84	84	**85**	**85**
30	85	85	**85**	**85**	84	84	**85**	**85**
20	84	84	**85**	**85**	84	84	**84**	**84**
15	84	84	**85**	**85**	84	84	**84**	**84**
12	**84**	**84**	84	84	**84**	**84**	84	84
25	85	85	**86**	**86**	85	85	**85**	**85**
15	84	84	**85**	**85**	**84**	**84**	84	84
10	**84**	**84**	84	84	84	84	84	84
15	85	85	**85**	**85**	84	84	**85**	**85**
12	**84**	**84**	84	84	**84**	**84**	84	84
17	84	84	**85**	**85**	84	84	**84**	**84**
15	84	84	**84**	**84**	84	84	**84**	**84**
15	84	84	**84**	**84**	84	84	**84**	**84**
10	84	84	**84**	**84**	84	84	**84**	**84**
16	84	84	**85**	**85**	84	84	**84**	**84**
12	84	84	**84**	**84**	84	84	**84**	**84**
14	84	84	**84**	**84**	84	84	**84**	**84**
8	84	84	**84**	**84**	84	84	**84**	**84**
25	85	85	**85**	**85**	84	84	**85**	**85**
16	84	84	**85**	**85**	84	84	**84**	**84**
22	84	84	**85**	**85**	84	84	**84**	**84**
20	84	84	**84**	**84**	84	84	**84**	**84**
8	**84**	**84**	84	84	84	84	**84**	**84**
15	85	85	**86**	**86**	85	85	**85**	**85**
10	85	85	**85**	**85**	**84**	**84**	**85**	**85**
90	85	85	**86**	**86**	85	85	**85**	**85**
70	86	86	**86**	**86**	85	85	**86**	**86**
40	85	85	**86**	**86**	85	85	**85**	**85**
30	85	85	**86**	**86**	85	85	**85**	**85**
100	86	86	**86**	**86**	85	85	**86**	**86**
60	84	84	**85**	**85**	84	84	**84**	**84**
80	85	85	**85**	**85**	84	84	**85**	**85**
50	85	85	**85**	**85**	84	84	**85**	**85**
30	86	86	**86**	**86**	85	85	**86**	**86**
26	86	86	**86**	**86**	85	85	**86**	**86**
24	86	86	**86**	**86**	85	85	**86**	**86**
20	86	86	**86**	**86**	85	85	**86**	**86**
30	84	84	**85**	**85**	84	84	84	84
40	85	85	**85**	**85**	84	84	85	85
70	84	84	**85**	**85**	84	84	84	84

Vc m/min	Feed column no.
37	**86**
35	**85**
37	**86**
35	**85**
37	**85**
35	**85**
23	**85**
17	**85**
14	**84**
29	**86**
17	**85**
12	**84**
17	**85**
14	**84**
20	**85**
17	**84**
17	**84**
12	**84**
18	**85**
14	**84**
16	**84**
9	**84**
29	**85**
18	**85**
25	**85**
23	**84**
9	**84**
17	**86**
12	**85**
104	**86**
81	**86**
46	**86**
35	**86**
115	**86**
69	**85**
92	**85**
58	**85**
35	**86**
30	**86**
28	**86**
23	**86**
35	**85**
46	**85**
81	**85**

Vc m/min	Feed column no.	
35	**86**	**86**
33	**85**	**85**
35	**86**	**86**
33	**85**	**85**
35	**85**	**85**
33	**85**	**85**
22	**85**	**85**
17	**85**	**85**
13	**84**	**84**
28	**86**	**86**
17	**85**	**85**
11	**84**	**84**
17	**85**	**85**
13	**84**	**84**
19	**85**	**85**
17	**84**	**84**
17	**84**	**84**
11	**84**	**84**
18	**85**	**85**
13	**84**	**84**
15	**84**	**84**
9	**84**	**84**
28	**85**	**85**
18	**85**	**85**
24	**85**	**85**
22	**84**	**84**
9	**84**	**84**
17	**86**	**86**
11	**85**	**85**
99	**86**	**86**
77	**86**	**86**
44	**86**	**86**
33	**86**	**86**
110	**86**	**86**
66	**85**	**85**
88	**85**	**85**
55	**85**	**85**
33	**86**	**86**
29	**86**	**86**
26	**86**	**86**
22	**86**	**86**
33	**85**	**85**
44	**85**	**85**
77	**85**	**85**

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Tools with bold feed column no.
are preferred choice.

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Guhring no.
Standard/DIN
Tool material
Surface finish
Pilot
Std. range page

Countersink Ø mm	Feed column no. 81	82	83	84	85	86
	f (mm/rev.)					
2.00	0.03	0.04	0.06	0.08	0.10	0.13
2.50	0.03	0.05	0.07	0.10	0.13	0.16
3.15	0.03	0.05	0.08	0.11	0.15	0.20
4.00	0.04	0.06	0.09	0.13	0.17	0.22
5.00	0.04	0.07	0.10	0.14	0.18	0.23
6.30	0.04	0.07	0.12	0.15	0.19	0.24
8.00	0.05	0.08	0.13	0.16	0.20	0.25
10.00	0.06	0.09	0.14	0.17	0.22	0.26
12.50	0.06	0.10	0.15	0.19	0.23	0.28
16.00	0.07	0.11	0.17	0.21	0.26	0.31
20.00	0.08	0.13	0.18	0.23	0.28	0.33
25.00	0.09	0.15	0.21	0.26	0.30	0.38
31.50	0.12	0.17	0.24	0.30	0.36	0.42
40.00	0.14	0.21	0.28	0.34	0.40	0.46
50.00	0.17	0.24	0.31	0.36	0.42	0.48
63.00	0.20	0.27	0.33	0.38	0.44	0.50
80.00	0.23	0.30	0.35	0.40	0.46	0.52
100.00	0.25	0.30	0.35	0.40	0.46	0.52

Coolant:
○ Air
● Neat oil
● Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Counterbores

482	483	484	463	485	486	487
373	373	373	375	G.S.	G.S.	G.S.
HSS	HSS	HSS	HSS	HSS	HSS	HSS
○	○	○	●	●	●	●
with fixed pilot			detach.	with fixed pilot		
1389	1391	1393	1395	1390	1392	1394

324	325	326
373	373	373
HSS	HSS	HSS
(S)	(S)	(S)
with fixed pilot		
1389	1391	1393

Spot facers

432	433	434	435
1862	1862	1862	1862
HSS-E	HSS-E	HSS-E	HSS-E
●	●	●	●
1399	1400	1401	1402

v_c m/min	Feed column no.						
32	85	85	85	85	85	85	85
30	85	85	85	85	85	85	85
32	85	85	85	85	85	85	85
30	85	85	85	85	85	85	85
32	85	85	85	85	85	85	85
30	85	85	85	85	85	85	85
20	84	84	84	84	84	84	84
15	84	84	84	84	84	84	84
12	84	84	84	84	84	84	84
25	85	85	85	85	85	85	85
15	84	84	84	84	84	84	84
10	84	84	84	84	84	84	84
15	85	85	85	84	85	85	85
12	84	84	84	84	84	84	84
17	84	84	84	84	84	84	84
15	84	84	84	84	84	84	84
15	84	84	84	84	84	84	84
10	84	84	84	84	84	84	84
16	84	84	84	84	84	84	84
12	84	84	84	84	84	84	84
14	84	84	84	84	84	84	84
8	84	84	84	84	84	84	84
25	85	85	85	85	85	85	85
16	84	84	84	84	84	84	84
22	84	84	84	84	84	84	84
20	84	84	84	84	84	84	84
8	84	84	84	84	84	84	84
15	85	85	85	85	85	85	85
10	85	85	85	85	85	85	85
90	85	85	85	85	85	85	85
70	86	86	86	86	86	86	86
40	85	85	85	85	85	85	85
30	85	85	85	85	85	85	85
100	86	86	86	86	86	86	86
60	84	84	84	84	84	84	84
80	85	85	85	85	85	85	85
50	85	85	85	85	85	85	85
30	86	86	86	86	86	86	86
26	86	86	86	86	86	86	86
24	86	86	86	86	86	86	86
20	86	86	86	86	86	86	86
30	84	84	84	84	84	84	84
40	85	85	85	85	85	85	85
70	84	84	84	84	84	84	84

v_c m/min	Feed column no.		
35	85	85	85
33	85	85	85
35	85	85	85
33	85	85	85
35	85	85	85
33	85	85	85
22	84	84	84
17	84	84	84
13	84	84	84
28	85	85	85
17	84	84	84
11	84	84	84
17	85	85	85
13	84	84	84
19	84	84	84
17	84	84	84
17	84	84	84
11	84	84	84
18	84	84	84
13	84	84	84
15	84	84	84
9	84	84	84
28	85	85	85
18	84	84	84
24	84	84	84
22	84	84	84
9	84	84	84
17	85	85	85
11	85	85	85
99	85	85	85
77	86	86	86
44	85	85	85
33	85	85	85
110	86	86	86
66	84	84	84
88	85	85	85
55	85	85	85
33	86	86	86
29	86	86	86
26	86	86	86
22	86	86	86
33	84	84	84
44	85	85	85
77	84	84	84

v_c m/min	Feed column no.			
30	82	83	83	83
27	82	82	82	82
30	**82**	**83**	**83**	**83**
27	82	82	82	82
30	82	82	82	82
27	82	82	82	82
24	**81**	**82**	**82**	**82**
20	**81**	**82**	**82**	**82**
15	**81**	**81**	**81**	**81**
28	82	83	83	83
18	**81**	**82**	**82**	**82**
12	**81**	**81**	**81**	**81**
18	**81**	**82**	**82**	**82**
15	**81**	**81**	**81**	**81**
20	81	82	82	82
17	**81**	**81**	**81**	**81**
20	**81**	**81**	**81**	**81**
12	81	81	81	81
12	81	82	82	82
6	81	81	81	81
8	81	81	81	81
8	81	81	81	81
12	82	82	82	82
10	81	82	82	82
10	81	82	82	82
8	81	81	81	81
5	81	81	81	81
10	82	83	83	83
7	82	82	82	82
100	82	83	83	83
80	83	84	84	84
80	82	83	83	83
70	82	83	83	83
75	83	84	84	84
50	81	82	82	82
60	82	82	82	82
45	82	82	82	82
40	83	84	84	84
36	**83**	**84**	**84**	**84**
35	83	84	84	84
28	83	84	84	84
25	81	82	82	82
32	82	82	82	82
60	81	82	82	82

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Tools with bold feed column no.
are preferred choice.

For exact definition of tools please refer to the
“Standard range and technical data” pages.

For multi-fluted countersinking tools the Ø-range for the
respective flute no. is in brackets.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Surface finish
Type
Std. range page

Counter-sink Ø mm	Feed column no. 81	82	83	84	85	86
	f (mm/rev.)					
2.00	0.03	0.04	0.06	0.08	0.10	0.13
2.50	0.03	0.05	0.07	0.10	0.13	0.16
3.15	0.03	0.05	0.08	0.11	0.15	0.20
4.00	0.04	0.06	0.09	0.13	0.17	0.22
5.00	0.04	0.07	0.10	0.14	0.18	0.23
6.30	0.04	0.07	0.12	0.15	0.19	0.24
8.00	0.05	0.08	0.13	0.16	0.20	0.25
10.00	0.06	0.09	0.14	0.17	0.22	0.26
12.50	0.06	0.10	0.15	0.19	0.23	0.28
16.00	0.07	0.11	0.17	0.21	0.26	0.31
20.00	0.08	0.13	0.18	0.23	0.28	0.33
25.00	0.09	0.15	0.21	0.26	0.30	0.38
31.50	0.12	0.17	0.24	0.30	0.36	0.42
40.00	0.14	0.21	0.28	0.34	0.40	0.46
50.00	0.17	0.24	0.31	0.36	0.42	0.48
63.00	0.20	0.27	0.33	0.38	0.44	0.50
80.00	0.23	0.30	0.35	0.40	0.46	0.52
100.00	0.25	0.30	0.35	0.40	0.46	0.52

Coolant:
○ Air
● Neat oil
● Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
malleable cast iron	**0.7070** EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Pilot counterbores

1601	1602
G.S.	G.S.
HSS	HSS
○	○
KS 125	KS 140
1406	1407

1603	1604
G.S.	G.S.
Carbide	Carbide
○	○
KS 108	KS 115
1408	1409

Spotfacers

1606
G.S.
Carbide
○
KS 100
1410

Taper countersinks

1622
G.S.
HSS
○
KS 100
1411

v_c m/min	Feed column no.	
30	82	**82**
27	82	**82**
30	82	**82**
27	82	**82**
30	82	**82**
27	82	**82**
24	81	**81**
20	81	**81**
15	**81**	81
28	82	**82**
18	81	**81**
12	**81**	81
18	**81**	**81**
15	**81**	81
20	81	**81**
17	81	**81**
20	81	**81**
12	**81**	81
12	81	**81**
6	81	**81**
8	81	**81**
8	81	81
12	**82**	82
10	**81**	81
10	**81**	81
8	**81**	81
5	**81**	81
10	82	**82**
7	82	**82**
100	82	**82**
80	83	**83**
80	82	**82**
70	82	**82**
75	83	**83**
50	81	**81**
60	**82**	**82**
45	**82**	**82**
40	**83**	**83**
36	**83**	**83**
35	83	83
28	83	83
25	81	81
32	82	82
60	81	81

v_c m/min	Feed column no.	
50	83	82
45	82	82
45	83	82
35	82	82
45	82	82
40	82	82
30	82	82
30	82	82
22	81	81
50	83	82
35	82	82
20	81	81
35	82	82
20	81	81
40	82	82
35	81	81
35	81	81
25	81	81
37	82	82
33	81	81
35	81	82
16	81	81
50	**84**	83
40	**83**	82
50	83	82
40	82	82
20	81	81
20	83	81
15	82	81
80	83	84
80	84	84
60	**83**	84
45	**83**	83
80	84	84
80	82	82
50	**82**	83
40	82	84
35	**84**	82
30	**84**	82
25	84	82
22	84	81
50	82	83
80	82	84
50	82	83

v_c m/min	Feed column no.	
53	83	
48	82	
48	83	
37	82	
48	82	
42	82	
32	82	
32	82	
23	81	
53	83	
37	82	
21	81	
37	82	
21	81	
42	82	
37	81	
37	81	
27	81	
39	82	
35	81	
37	81	
17	81	
53	84	
42	83	
53	83	
42	82	
21	81	
21	83	
16	82	
84	83	
84	84	
63	**83**	
48	**83**	
84	84	
84	82	
53	**82**	
42	82	
37	**84**	
32	**84**	
27	84	
23	84	
53	82	
84	82	
53	82	

v_c m/min	Feed column no.	
30	**85**	
27	**85**	
30	**85**	
27	**85**	
30	**85**	
27	**85**	
24	**84**	
20	**84**	
15	**84**	
28	**85**	
18	84	
12	84	
18	84	
15	84	
20	**84**	
17	**84**	
20	84	
12	84	
12	84	
6	84	
8	84	
8	84	
12	**85**	
10	**84**	
10	**84**	
8	**84**	
5	84	
10	85	
7	85	
100	**85**	
80	**86**	
80	**85**	
70	**85**	
75	86	
50	84	
60	**85**	
45	**85**	
40	86	
36	86	
35	86	
28	86	
25	84	
32	85	
60	84	

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

60° countersinks

three-fluted
radial relief ground

Guhring no.	472
Standard	DIN 334
Tool material	HSS
Surface	○
Type	
Cutting direction	right-hand
Form	C
Tolerance	
Discount group	105
Standard range page	1371

60° countersinks

Multi-fluted
straight-fluted
with relief-ground

Guhring no.	470
Standard	DIN 334
Tool material	HSS
Surface	◐ >Ø 8,00
Type	
Cutting direction	right-hand
Form	A
Tolerance	
Discount group	105
Standard range page	1372

60° countersinks

three-fluted
radial relief ground

Guhring no.	473
Standard	DIN 334
Tool material	HSS
Surface	◐
Type	
Cutting direction	right-hand
Form	D
Tolerance	
Discount group	105
Standard range page	1373

60° countersinks

Multi-fluted
straight-fluted
with relief-ground
Ø 100.00 mm to Guhring standard

Guhring no.	471
Standard	DIN 334
Tool material	HSS
Surface	◐
Type	
Cutting direction	right-hand
Form	B
Tolerance	
Discount group	105
Standard range page	1374

90° countersinks

Multi-fluted
straight-fluted
with relief-ground

Guhring no.	474
Standard	DIN 335
Tool material	HSS
Surface	◐ >Ø 8,00
Type	
Cutting direction	right-hand
Form	A
Tolerance	
Discount group	105
Standard range page	1375

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

90° countersinks	Guhring no.	476
	Standard	DIN 335
three-fluted radial relief ground	Tool material	HSS
	Surface	◯
	Type	
	Cutting direction	right-hand
	Form	C
	Tolerance	
	Discount group	105
	Standard range page	1376

90° countersinks	Guhring no.	1326
	Standard	DIN 335
three-fluted radial relief ground	Tool material	HSS
	Surface	(A)
	Type	
	Cutting direction	right-hand
	Form	C
	Tolerance	
	Discount group	105
	Standard range page	1376

90° countersinks	Guhring no.	327
	Standard	DIN 335
three-fluted radial relief ground	Tool material	HSS
	Surface	(S)
	Type	
	Cutting direction	right-hand
	Form	C
	Tolerance	
	Discount group	105
	Standard range page	1376

90° countersinks	Guhring no.	477
	Standard	DIN 335
three-fluted radial relief ground Ø 100.00 mm to Guhring standard	Tool material	HSS
	Surface	◯
	Type	
	Cutting direction	right-hand
	Form	D
	Tolerance	
	Discount group	105
	Standard range page	1377

90° countersinks	Guhring no.	328
	Standard	DIN 335
three-fluted radial relief ground	Tool material	HSS
	Surface	(S)
	Type	
	Cutting direction	right-hand
	Form	D
	Tolerance	
	Discount group	105
	Standard range page	1377

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

90° countersinks

Guhring no.	475
Standard	DIN 335
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	B
Tolerance	
Discount group	105
Standard range page	1378

Multi-fluted
straight-fluted
with relief-ground
Ø 100.00 mm to Guhring standard

90° countersinks

Guhring no.	498
Standard	DIN 335
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	C
Tolerance	
Discount group	105
Standard range page	1379

three-fluted
radial relief ground

Set in case,
consisting of Guhring no. 476,
nom.-Ø:
6.30 mm
8.30 mm
10.40 mm
12.40 mm
16.50 mm
20.50 mm

90° countersinks

Guhring no.	499
Standard	DIN 335
Tool material	HSS
Surface	Ⓢ
Type	
Cutting direction	right-hand
Form	C
Tolerance	
Discount group	105
Standard range page	1379

radial relief ground
three-fluted

Set in case,
consisting of Guhring no. 327,
nom.-Ø:
6.30 mm
8.30 mm
10.40 mm
12.40 mm
16.50 mm
20.50 mm

90° countersinks for fine tolerances

Guhring no.	436
Standard	DIN 1866
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1380

right hand spiral flutes
with fixed pilot
Ø 19.00 mm to Guhring standard

90° countersinks for medial tolerances

Guhring no.	437
Standard	DIN 1866
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1381

right hand spiral flutes
with fixed pilot
Ø 21.50 mm to Guhring standard

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

90° countersinks for tapping size holes

right hand spiral flutes
with fixed pilot
Ø 19.00 mm to Guhring standard

Guhring no.	438
Standard	DIN 1866
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1382

120° countersinks

Multi-fluted
straight-fluted
with relief-ground
≤ 12.50 mm and Ø 20.00 mm to Guhring standard

Guhring no.	478
Standard	DIN 347
Tool material	HSS
Surface	◯ >Ø 8,00
Type	
Cutting direction	right-hand
Form	A
Tolerance	
Discount group	105
Standard range page	1383

120° countersinks

three-fluted
similar DIN 347
radial relief ground

Guhring no.	480
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1384

120° countersinks

three-fluted
similar DIN 347
radial relief ground

Guhring no.	481
Standard	Guhring std.
Tool material	HSS
Surface	●
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1385

120° countersinks

Multi-fluted
straight-fluted
with relief-ground
≤ 20.00 mm and Ø 100.00 mm to Guhring standard

Guhring no.	479
Standard	DIN 347
Tool material	HSS
Surface	●
Type	
Cutting direction	right-hand
Form	B
Tolerance	
Discount group	105
Standard range page	1386

Counterbores with fixed pilots for fine tolerances

right hand spiral flutes
with fixed pilot

Guhring no.	482
Standard	DIN 373
Tool material	HSS
Surface	○
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1387

Counterbores with fixed pilots for fine tolerances

right hand spiral flutes
with fixed pilot

Guhring no.	324
Standard	DIN 373
Tool material	HSS
Surface	Ⓢ
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1387

Counterbores with fixed pilots for fine tolerances

right hand spiral flutes
with fixed pilot

For fine tolerance clearance holes to DIN ISO 273

Guhring no.	485
Standard	Guhring std.
Tool material	HSS
Surface	◐
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1388

Counterbores with fixed pilots for medial tolerances

right hand spiral flutes
with fixed pilot

For countersinks to DIN 974, part 1

Guhring no.	483
Standard	DIN 373
Tool material	HSS
Surface	○
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1389

Counterbores with fixed pilots for medial tolerances

right hand spiral flutes
with fixed pilot

For countersinks to DIN 974, part 1

Guhring no.	325
Standard	DIN 373
Tool material	HSS
Surface	Ⓢ
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1389

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Counterbores with fixed pilots for medial tolerances

right hand spiral flutes
with fixed pilot

For countersinks to DIN 974, part 1
For fine tolerance clearance holes to DIN ISO 273

Guhring no.	486
Standard	Guhring std.
Tool material	HSS
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1390

Counterbores with fixed pilots for tapping size holes

right hand spiral flutes
with fixed pilot

Guhring no.	484
Standard	DIN 373
Tool material	HSS
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1391

Counterbores with fixed pilots for tapping size holes

right hand spiral flutes
with fixed pilot

For countersinks to DIN 974, part 1

Guhring no.	326
Standard	DIN 373
Tool material	HSS
Surface	S
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1391

Counterbores with fixed pilots for tapping size holes

right hand spiral flutes
with fixed pilot

For tapping size holes to DIN 336, page 1

Guhring no.	487
Standard	Guhring std.
Tool material	HSS
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1392

Counterbores with hole for detachable pilot

right hand spiral flutes

For countersinks to DIN 974, part 1
to suit detachable pilot:
Guhring no. 464 for fine tolerances
Guhring no. 465 for medial tolerances
Guhring no. 466 for tapping size holes

Guhring no.	463
Standard	DIN 375
Tool material	HSS
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1393

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Spot facers	Guhring no.	432
	Standard	DIN 1862
right hand spiral flutes Internal drawbolt thread M6 to DIN 228, part 1, form A	Tool material	HSS-E
	Surface	◯
	Type	
	Cutting direction	right-hand
	Form	
	Tolerance	
	Discount group	105
	Standard range page	1397

Spot facers	Guhring no.	433
	Standard	DIN 1862
right hand spiral flutes Internal drawbolt thread M10 to DIN 228, part 1, form A	Tool material	HSS-E
	Surface	◯
	Type	
	Cutting direction	right-hand
	Form	
	Tolerance	
	Discount group	105
	Standard range page	1398

Spot facers	Guhring no.	434
	Standard	DIN 1862
right hand spiral flutes Internal drawbolt thread M12 to DIN 228, part 1, form A	Tool material	HSS-E
	Surface	◯
	Type	
	Cutting direction	right-hand
	Form	
	Tolerance	
	Discount group	105
	Standard range page	1399

Spot facers	Guhring no.	435
	Standard	DIN 1862
right hand spiral flutes Internal drawbolt thread M16 to DIN 228, part 1, form A	Tool material	HSS-E
	Surface	◯
	Type	
	Cutting direction	right-hand
	Form	
	Tolerance	
	Discount group	105
	Standard range page	1400

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

De-burring forks

Guhring no.	4101
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	EW 100 G
Cutting direction	right-hand
Form	
Tolerance	
Discount group	120
Standard range page	1401

with shank
to DIN 6535
für die Aufnahme in Hydraulik-Dehnspannfutter und Schrumpffutter
with internal coolant supply

for internal and external de-burring
universal for tooling, milling, turning and robotic applications.

De-burring forks

Guhring no.	4100
Standard	Guhring std.
Tool material	Solid carbide
Surface	◯
Type	EW 100 G
Cutting direction	right-hand
Form	
Tolerance	
Discount group	120
Standard range page	1402

mit durchgängig zylindrischem Schaft für die Aufnahme in Spannzangen
with internal coolant supply

for internal and external de-burring
universal for tooling, milling, turning and robotic applications.

Front/back deburrer 90°

Guhring no.	495
Standard	Guhring std.
Tool material	Solid carbide
Surface	a
Type	EW 100 VR
Cutting direction	right-hand
Form	
Tolerance	
Discount group	120
Standard range page	1403

with shank
to DIN 6535
für die Aufnahme in Hydraulik-Dehnspannfutter und Schrumpffutter

for internal and external de-burring
of holes and contours

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Pilot counterbores	Guhring no.	1601
	Standard	Guhring std.
Multi-fluted Tolerance on Ø k8 helix angle 18° Clearance angle 6° with drawbolt thread with detachable pilot	Tool material	HSS
	Surface	◯
	Type	KS 125
	Cutting direction	right-hand
	Form	
	Tolerance	k8
	Discount group	104
	Standard range page	1404

Pilot counterbores	Guhring no.	1602
	Standard	Guhring std.
Multi-fluted Tolerance on Ø k8 Helix angle: ≤ Ø 8.5 mm 25°, > Ø 8.5 mm 30° Clearance angle 6° with drawbolt thread from taper size 1 onwards with detachable pilot	Tool material	HSS
	Surface	◯
	Type	KS 140
	Cutting direction	right-hand
	Form	
	Tolerance	k8
	Discount group	104
	Standard range page	1405

Pilot counterbores	Guhring no.	1603
	Standard	Guhring std.
three-fluted Tolerance on Ø k8 Helix angle: ≤ Ø 13 mm 8°, > Ø 13 mm 12° Clearance angle 6° ≤ Ø 8.5 mm without screwed shank > Ø 8.5 mm with screwed shank with detachable pilot	Tool material	Carbide
	Surface	◯
	Type	KS 108
	Cutting direction	right-hand
	Form	
	Tolerance	k8
	Discount group	104
	Standard range page	1406

Pilot counterbores	Guhring no.	1604
	Standard	Guhring std.
three-fluted Tolerance on Ø k8 helix angle 15° Clearance angle 6° with drawbolt thread with detachable pilot	Tool material	Carbide
	Surface	◯
	Type	KS 115
	Cutting direction	right-hand
	Form	
	Tolerance	k8
	Discount group	104
	Standard range page	1407

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Spotfacers

Multi-fluted
Tolerance on Ø k10
helix angle 0°
Clearance angle 6°
without screwed shank
with detachable pilot

Guhring no.	1606
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	KS 100
Cutting direction	right-hand
Form	
Tolerance	k10
Discount group	104
Standard range page	1408

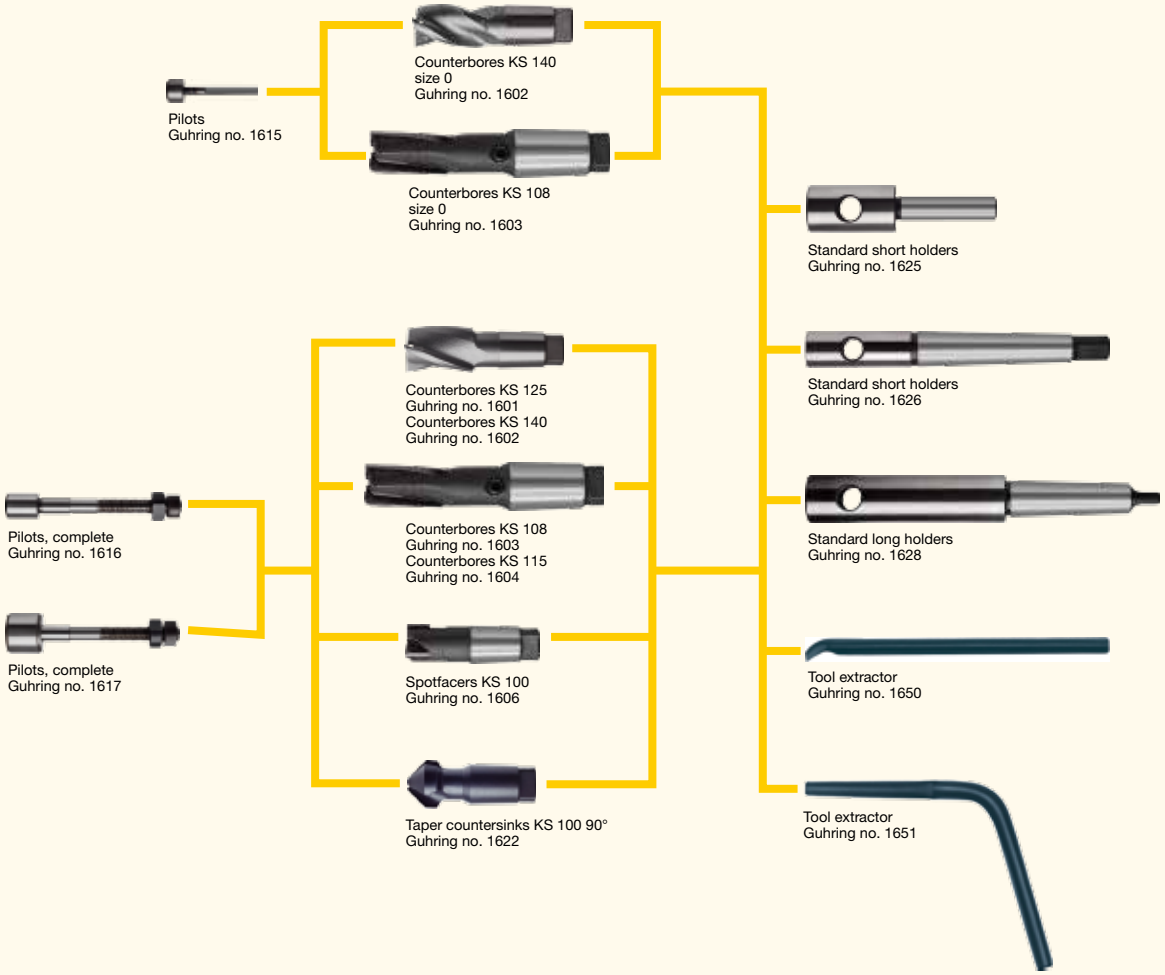
90° countersinks

three-fluted
helix angle 20°
Axial relief ground
with drawbolt thread

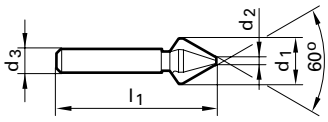
Guhring no.	1622
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	KS 100
Cutting direction	right-hand
Form	
Tolerance	
Discount group	104
Standard range page	1409

Short counterbore system without tool safety device

for use with conventional machines



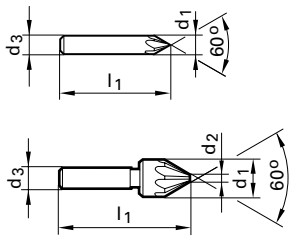
Guhring no.	**472**
Standard	**DIN 334**
Tool material	**HSS**
Surface	◯
Form	**C**
Discount group	**105**
Techn. data page	**1360**



d1	d3	l1	d2	Z	Availability
mm	mm	mm	mm		
6.300	5.000	45.00	1.600	3	●
8.000	6.000	50.00	2.000	3	●
12.500	8.000	56.00	3.200	3	●
16.000	10.000	63.00	4.000	3	●
20.000	10.000	67.00	5.000	3	●
25.000	10.000	71.00	6.300	3	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

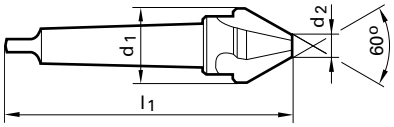
Guhring no.	**470**
Standard	**DIN 334**
Tool material	**HSS**
Surface	>Ø 8,00
Form	**A**
Discount group	**105**
Techn. data page	**1360**



d1	d3	l1	d2	Z	Availability
mm	mm	mm	mm		
8.000	8.000	50.00		5	●
12.500	8.000	50.00	2.000	5	●
16.000	10.000	60.00	3.200	7	●
20.000	10.000	63.00	5.000	7	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

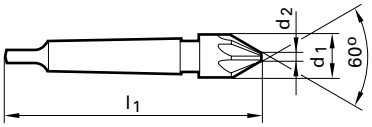
Guhring no.	**473**
Standard	**DIN 334**
Tool material	**HSS**
Surface	
Form	**D**
Discount group	**105**
Techn. data page	**1360**



d1	MK	l1	d2	Z	Availability
mm		mm	mm		
16.000	1	90.00	4.000	3	●
20.000	2	106.00	5.000	3	●
25.000	2	112.00	6.300	3	●
31.500	2	118.00	10.000	3	●
40.000	3	150.00	12.500	3	●
50.000	3	160.00	16.000	3	●
63.000	4	190.00	20.000	3	●
80.000	4	200.00	25.000	3	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

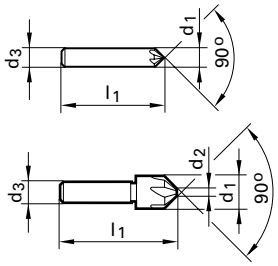
Guhring no.	**471**
Standard	**DIN 334**
Tool material	**HSS**
Surface	○
Form	**B**
Discount group	**105**
Techn. data page	**1360**



d1	MK	l1	d2	Z	Availability
mm		mm	mm		
16.000	1	100.00	3.200	7	●
25.000	2	125.00	7.000	9	●
31.500	2	132.00	9.000	9	●
40.000	3	160.00	12.000	11	●
50.000	3	170.00	16.000	13	○
100.000	4	224.00	31.500	17	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

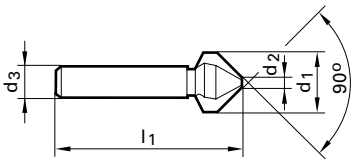
Guhring no.	**474**
Standard	**DIN 335**
Tool material	**HSS**
Surface	>Ø 8,00
Form	**A**
Discount group	**105**
Techn. data page	**1360**



d1	d3	l1	d2	Z	Availability
mm	mm	mm	mm		
8.000	8.000	48.00		5	●
12.500	8.000	48.00	2.000	5	●
16.000	10.000	56.00	3.200	7	●
20.000	10.000	60.00	5.000	7	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

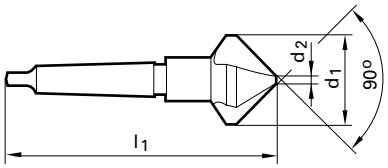
Guhring no.	476	1326	327
Standard	DIN 335	DIN 335	DIN 335
Tool material	HSS	HSS	HSS
Surface	○	A	S
Form	C	C	C
Discount group	105	105	105
Techn. data page	1361	1361	1361



d1	d3	l1	d2	Z	Availability	Availability	Availability
mm	mm	mm	mm				
4.300	4.000	40.00	1.300	3	●	●	
5.000	4.000	40.00	1.500	3	●	○	●
5.300	4.000	40.00	1.500	3	●		
5.800	5.000	45.00	1.500	3	●	○	
6.000	5.000	45.00	1.500	3	●	●	
6.300	5.000	45.00	1.500	3	●	●	●
7.000	6.000	50.00	1.800	3	●	○	
7.300	6.000	50.00	1.800	3	●		
8.000	6.000	50.00	2.000	3	●	●	●
8.300	6.000	50.00	2.000	3	●	●	●
9.400	6.000	50.00	2.200	3	●		●
10.000	6.000	50.00	2.500	3	●	●	●
10.400	6.000	50.00	2.500	3	●	●	●
11.500	8.000	56.00	2.800	3	●	○	●
12.400	8.000	56.00	2.800	3	●	●	●
13.400	8.000	56.00	2.900	3	●	○	●
15.000	10.000	60.00	3.200	3	●	●	●
16.500	10.000	60.00	3.200	3	●	●	●
19.000	10.000	63.00	3.500	3	●	●	
20.500	10.000	63.00	3.500	3	●	●	●
23.000	10.000	67.00	3.800	3	●	●	
25.000	10.000	67.00	3.800	3	●	●	●
26.000	10.000	67.00	3.800	3	●	●	
28.000	12.000	71.00	4.000	3	●	○	
30.000	12.000	71.00	4.200	3	●	●	●
31.000	12.000	71.00	4.200	3	●	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

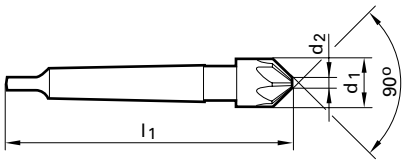
Guhring no.	477	328
Standard	DIN 335	DIN 335
Tool material	HSS	HSS
Surface	◯	S
Form	D	D
Discount group	105	105
Techn. data page	1361	1361



d1	MK	l1	d2	Z	Availability	Availability
mm		mm	mm			
15.000	1	85.00	3.200	3	●	
16.500	1	85.00	3.200	3	●	
19.000	2	100.00	3.500	3	❍	
20.500	2	100.00	3.500	3	●	
23.000	2	106.00	3.800	3	●	
25.000	2	106.00	3.800	3	●	●
26.000	2	106.00	3.800	3	❍	
28.000	2	112.00	4.000	3	●	
30.000	2	112.00	4.200	3	●	
31.000	2	112.00	4.200	3	●	●
34.000	2	118.00	4.500	3	●	
37.000	2	118.00	4.800	3	●	●
40.000	3	140.00	10.000	3	●	●
50.000	3	150.00	14.000	3	●	●
63.000	4	180.00	16.000	3	●	
80.000	4	190.00	22.000	3	●	
100.000	4	200.00	28.000	3	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**475**
Standard	**DIN 335**
Tool material	**HSS**
Surface	
Form	**B**
Discount group	**105**
Techn. data page	**1362**



d1	MK	l1	d2	Z	Availability
mm		mm	mm		
16.000	1	95.00	3.200	7	●
20.000	2	106.00	5.000	7	●
25.000	2	118.00	7.000	9	●
31.500	2	122.00	9.000	9	●
40.000	3	150.00	12.000	11	●
50.000	3	155.00	16.000	13	●
63.000	4	185.00	20.000	15	●
80.000	4	196.00	25.000	17	●
100.000	4	212.00	31.500	17	○

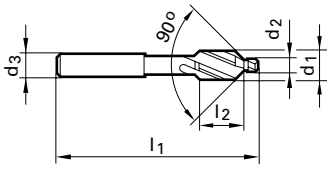
○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	498	499
Standard	DIN 335	
Tool material	HSS	
Surface	◯	(S)
Form	C	C
Discount group	105	105
Techn. data page	1362	1362

d1	no. per set	Code no.	Availability	
mm				
6,30-20,50	6.00	7.000	●	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

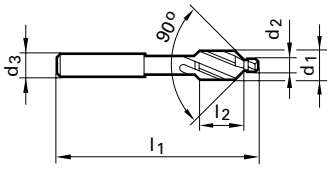
Guhring no.	**436**
Standard	**DIN 1866**
Tool material	**HSS**
Surface	○
Form	
Discount group	**105**
Techn. data page	**1362**



d1	d2	d3	l1	l2	Z	thread	Availability
mm	mm	mm	mm	mm			
2.000	1.100	2.000	45.00	7.00	2	M 1	○
2.500	1.300	2.500	45.00	7.00	2	M 1,2	○
2.800	1.500	2.800	45.00	7.00	2	M 1,4	○
3.300	1.700	3.300	56.00	10.00	2	M 1,6	○
3.800	2.000	3.800	56.00	10.00	2	M 1,8	○
4.300	2.200	4.300	56.00	10.00	2	M 2	●
5.000	2.700	5.000	56.00	10.00	2	M 2,5	●
6.000	3.200	5.000	71.00	14.00	3	M 3	●
8.000	4.300	5.000	71.00	14.00	3	M 4	●
10.000	5.300	8.000	80.00	18.00	3	M 5	●
11.500	6.400	8.000	80.00	18.00	3	M 6	●
15.000	8.400	12.500	100.00	22.00	3	M 8	●
19.000	10.500	12.500	100.00	22.00	3	M10	○

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

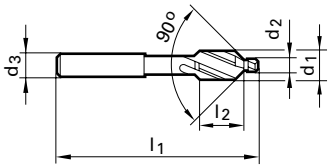
Guhring no.	**437**
Standard	**DIN 1866**
Tool material	**HSS**
Surface	○
Form	
Discount group	**105**
Techn. data page	**1362**



d1	d2	d3	l1	l2	Z	thread	Availability
mm	mm	mm	mm	mm			
6.600	3.400	5.000	71.00	14.00	3	M 3	●
7.600	3.900	5.000	71.00	14.00	3	M 3,5	❍
9.000	4.500	8.000	80.00	18.00	3	M 4	●
11.000	5.500	8.000	80.00	18.00	3	M 5	●
13.000	6.600	12.500	100.00	22.00	3	M 6	●
17.200	9.000	12.500	100.00	22.00	3	M 8	●
21.500	11.000	12.500	100.00	22.00	3	M10	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

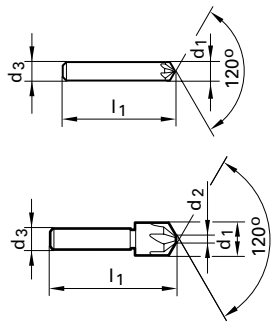
Guhring no.	**438**
Standard	**DIN 1866**
Tool material	**HSS**
Surface	◯
Form	
Discount group	**105**
Techn. data page	**1363**



d1	d2	d3	l1	l2	Z	thread	Availability
mm	mm	mm	mm	mm			
6.000	2.500	5.000	71.00	14.00	3	M 3	●
7.000	2.900	5.000	71.00	14.00	3	M 3,5	❍
8.000	3.300	5.000	71.00	14.00	3	M 4	●
10.000	4.200	8.000	80.00	18.00	3	M 5	●
11.500	5.000	8.000	80.00	18.00	3	M 6	●
15.000	6.800	12.500	100.00	22.00	3	M 8	●
19.000	8.500	12.500	100.00	22.00	3	M10	❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

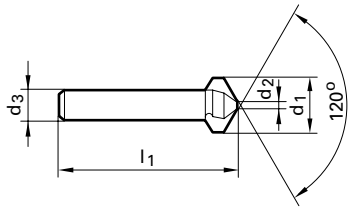
Guhring no.	**478**
Standard	**DIN 347**
Tool material	**HSS**
Surface	>Ø 8,00
Form	**A**
Discount group	**105**
Techn. data page	**1363**



d1	d3	l1	d2	Z	Availability
mm	mm	mm	mm		
8.000	8.000	42.00	2.000	5	●
12.500	8.000	42.00	2.000	5	●
16.000	10.000	53.00	3.200	7	●
20.000	10.000	56.00	5.000	7	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

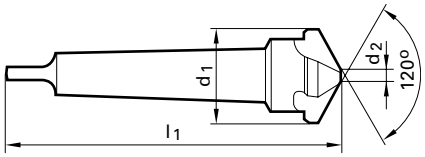
Guhring no.	**480**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	○
Form	
Discount group	**105**
Techn. data page	**1363**



d1	d3	l1	d2	Z	Availability
mm	mm	mm	mm		
16.000	10.000	53.00	4.000	3	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

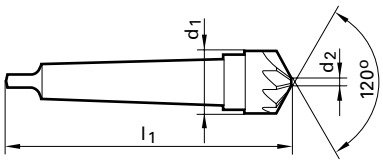
Guhring no.	**481**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	
Form	
Discount group	**105**
Techn. data page	**1363**



d1	MK	l1	d2	Z	Availability
mm		mm	mm		
25.000	2	112.00	6.300	3	●
40.000	3	140.00	12.500	3	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

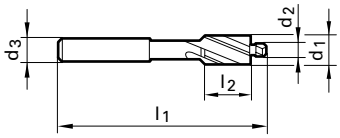
Guhring no.	**479**
Standard	**DIN 347**
Tool material	**HSS**
Surface	
Form	**B**
Discount group	**105**
Techn. data page	**1363**



d1 mm	MK	l1 mm	d2 mm	Z	Availability
25.000	2	112.00	7.000	9	❍
40.000	3	140.00	12.000	11	❍
63.000	4	170.00	20.000	15	❍
100.000	4	200.00	31.500	17	❍

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

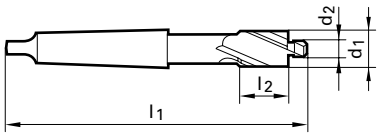
	Guhring no.	482	324
	Standard	DIN 373	DIN 373
	Tool material	HSS	HSS
	Surface	○	(S)
	Form		
	Discount group	105	105
	Techn. data page	1364	1364



d1	d2	d3	l1	l2	Z	thread	Availability	Availability
mm	mm	mm	mm	mm				
2.200	1.100	2.200	45.00	7.00	2	M 1	○	
2.500	1.300	2.500	45.00	7.00	2	M 1,2	○	
3.800	1.800	3.800	56.00	10.00	2	M 1,7	○	
4.300	2.200	4.300	56.00	10.00	2	M 2	●	
5.500	2.800	5.000	71.00	14.00	3	M 2,6	●	
6.000	3.200	5.000	71.00	14.00	3	M 3	●	
6.500	3.700	5.000	71.00	14.00	3	M 3,5	○	
8.000	4.300	5.000	71.00	14.00	3	M 4	●	●
10.000	5.300	8.000	80.00	18.00	3	M 5	●	●
11.000	6.400	8.000	80.00	18.00	3	M 6	●	●
15.000	8.400	12.500	100.00	22.00	3	M 8	●	●
18.000	10.500	12.500	100.00	22.00	3	M10	●	●
20.000	13.000	12.500	100.00	22.00	3	M12	●	●

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

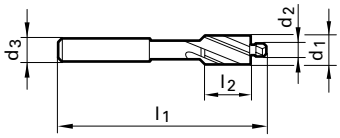
Guhring no.	**485**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	
Form	
Discount group	**105**
Techn. data page	**1364**



d1	d2	MK	l1	l2	Z	thread	Availability
mm	mm		mm	mm			
18.000	10.500	2	150.00	25.00	3	M10	❍
20.000	13.000	2	150.00	25.00	3	M12	●
24.000	15.000	2	162.00	30.00	3	M14	●
26.000	17.000	3	192.00	35.00	3	M16	●
30.000	19.000	3	192.00	35.00	3	M18	●
33.000	21.000	3	204.00	40.00	3	M 20	●
40.000	25.000	3	204.00	40.00	3	M 24	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

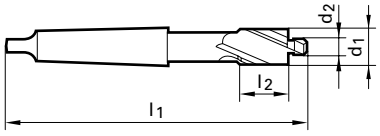
	Guhring no.	483	325
	Standard	DIN 373	DIN 373
	Tool material	HSS	HSS
	Surface	○	S
	Form		
	Discount group	105	105
	Techn. data page	1364	1364



d1	d2	d3	l1	l2	Z	thread	Availability	Availability
mm	mm	mm	mm	mm				
6.000	3.400	5.000	71.00	14.00	3	M 3	●	○
8.000	4.500	5.000	71.00	14.00	3	M 4	●	●
10.000	5.500	8.000	80.00	18.00	3	M 5	●	●
11.000	6.600	8.000	80.00	18.00	3	M 6	●	●
15.000	9.000	12.500	100.00	22.00	3	M 8	●	●
18.000	11.000	12.500	100.00	22.00	3	M10	●	●
20.000	13.500	12.500	100.00	22.00	3	M12	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

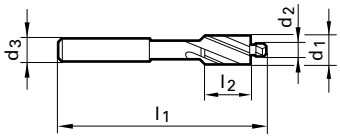
Guhring no.	**486**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	○
Form	
Discount group	**105**
Techn. data page	**1365**



d1	d2	MK	l1	l2	Z	thread	Availability
mm	mm		mm	mm			
18.000	11.000	2	150.00	25.00	3	M10	●
20.000	13.500	2	150.00	25.00	3	M12	●
24.000	15.500	2	162.00	30.00	3	M14	❍
26.000	17.500	3	192.00	35.00	3	M16	●
33.000	22.000	3	204.00	40.00	3	M 20	●
40.000	26.000	3	204.00	40.00	3	M 24	●

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

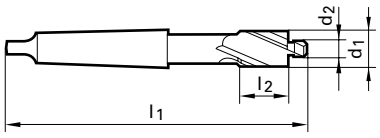
	Guhring no.	484	326
	Standard	DIN 373	DIN 373
	Tool material	HSS	HSS
	Surface	○	(S)
	Form		
	Discount group	105	105
	Techn. data page	1365	1365



d1	d2	d3	l1	l2	Z	thread	Availability	Availability
mm	mm	mm	mm	mm				
6.000	2.500	5.000	71.00	14.00	3	M 3	●	●
8.000	3.300	5.000	71.00	14.00	3	M 4	●	●
10.000	4.200	8.000	80.00	18.00	3	M 5	●	○
11.000	5.000	8.000	80.00	18.00	3	M 6	●	○
15.000	6.800	12.500	100.00	22.00	3	M 8	●	
18.000	8.500	12.500	100.00	22.00	3	M10	●	○
20.000	10.200	12.500	100.00	22.00	3	M12	●	

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

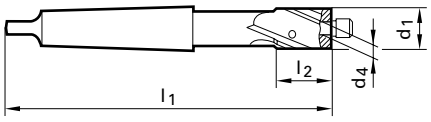
Guhring no.	**487**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	
Form	
Discount group	**105**
Techn. data page	**1365**



d1	d2	MK	l1	l2	Z	thread	Availability
mm	mm		mm	mm			
20.000	10.200	2	150.00	25.00	3	M12	❍
24.000	12.000	2	162.00	30.00	3	M14	❍
26.000	14.000	3	192.00	35.00	3	M16	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

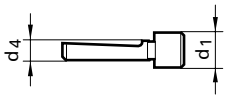
Guhring no.	**463**
Standard	**DIN 375**
Tool material	**HSS**
Surface	
Form	
Discount group	**105**
Techn. data page	**1365**



d1	MK	d4 H8	l1	l2	Z	Availability
mm		mm	mm	mm		
15.000	2	4.000	132.00	22.00	3	●
18.000	2	5.000	140.00	25.00	3	❍
20.000	2	5.000	140.00	25.00	3	●
24.000	2	6.000	150.00	30.00	3	●
26.000	3	8.000	180.00	35.00	3	●
30.000	3	8.000	180.00	35.00	3	●
33.000	3	10.000	190.00	40.00	3	●
63.000	4	16.000	250.00	63.00	4	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

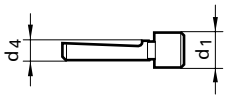
Guhring no.	**464**
Standard	**DIN 1868**
Discount group	**105**
Techn. data page	



d1 mm	d4 mm	G	for mm	Code no.	Availability
8.400	4.000	M8	15,0	8.404	❍
8.400	5.000	M8	18,0/20,0	8.405	❍
10.500	5.000	M10	18,0/20,0	10.505	❍
10.500	6.000	M10	24,0	10.506	❍
13.000	5.000	M12	20,0	13.005	❍
13.000	6.000	M12	24,0	13.006	❍
13.000	8.000	M12	26,0	13.008	❍
15.000	6.000	M14	24,0	15.006	❍
15.000	8.000	M14	26,0/30,0	15.008	❍
17.000	8.000	M16	26,0/30,0	17.008	❍
17.000	10.000	M16	33,0	17.010	❍
19.000	8.000	M18	30,0	19.008	❍
19.000	10.000	M18	33,0/36,0	19.010	❍
21.000	10.000	M20	33,0/36,0/40,0	21.010	❍
23.000	10.000	M22	36,0/40,0	23.010	❍
23.000	12.000	M22	43,0	23.012	❍
25.000	10.000	M24	40,0	25.010	❍
25.000	12.000	M24	43,0/46,0	25.012	❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

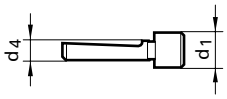
Guhring no.	**465**
Standard	**DIN 1868**
Discount group	**105**
Techn. data page	



d1	d4	G	for	Code no.	Availability
mm	mm		mm		
9.000	4.000	M8	15,0	9.004	○
9.000	5.000	M8	18,0/20,0	9.005	○
11.000	5.000	M10	18,0/20,0	11.005	○
11.000	6.000	M10	24,0	11.006	○
13.500	5.000	M12	20,0	13.505	○
13.500	6.000	M12	24,0	13.506	○
13.500	8.000	M12	26,0	13.508	○
15.500	6.000	M14	24,0	15.506	○
15.500	8.000	M14	26,0/30,0	15.508	○
17.500	8.000	M16	26,0/30,0	17.508	○
17.500	10.000	M16	33,0	17.510	○
20.000	8.000	M18	30,0	20.008	○
20.000	10.000	M18	33,0/36,0	20.010	○
22.000	10.000	M20	33,0/36,0/40,0	22.010	○
24.000	10.000	M22	36,0/40,0	24.010	○
24.000	12.000	M22	43,0	24.012	○
26.000	10.000	M24	40,0	26.010	○
26.000	12.000	M24	43,0/46,0	26.012	○
30.000	12.000	M27	43,0/46,0	30.012	○
30.000	16.000	M27	53,0	30.016	○
33.000	12.000	M30	48,0	33.012	○
33.000	16.000	M30	53,0/61,0	33.016	○
36.000	16.000	M33	53,0/57,0	36.016	○
39.000	16.000	M36	57,0/61,0	39.016	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

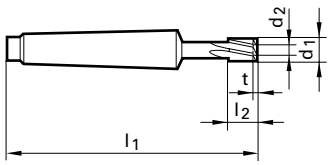
Guhring no.	**466**
Standard	**DIN 1868**
Discount group	**105**
Techn. data page	



d1	d4	G	for	Code no.	Availability
mm	mm		mm		
6.800	4.000	M8	15,0	6.804	○
6.800	5.000	M8	18,0/20,0	6.805	○
8.500	5.000	M10	18,0/20,0	8.505	○
8.500	6.000	M10	24,0	8.506	○
10.200	5.000	M12	20,0	10.205	○
10.200	6.000	M12	24,0	10.206	○
10.200	8.000	M12	26,0	10.208	○
12.000	6.000	M14	24,0	12.006	○
12.000	8.000	M14	26,0/30,0	12.008	○
14.000	8.000	M16	26,0/30,0	14.008	○
14.000	10.000	M16	30,0	14.010	○
15.500	8.000	M18	30,0	15.508	○
15.500	10.000	M18	33,0/36,0	15.510	○
17.500	10.000	M20	33,0/36,0/40,0	17.510	○
19.500	10.000	M22	36,0/40,0	19.510	○
19.500	12.000	M22	43,0	19.512	○
21.000	10.000	M24	40,0	21.010	○
21.000	12.000	M24	43,0/46,0	21.012	○
24.000	12.000	M27	43,0/46,0	24.012	○
24.000	16.000	M27	53,0	24.016	○
26.500	12.000	M30	48,0	26.512	○
26.500	16.000	M30	53,0/61,0	26.516	○
29.500	16.000	M33	53,0/57,0	29.516	○
32.000	16.000	M36	57,0/61,0	32.016	○

○ bright ◔ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

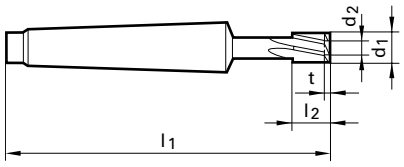
Guhring no.	**432**
Standard	**DIN 1862**
Tool material	**HSS-E**
Surface	
Form	
Tolerance	
Discount group	**105**
Techn. data page	**1366**



d1	MK	d2	l1	l2	t	Z	Availability
mm		mm	mm	mm	mm		
3.500	1		80.00	5.00		4	❍
4.500	1		80.00	5.00		4	❍
5.500	1		85.00	8.00		4	❍
11.000	1	5.000	95.00	16.00	1.50	6	❍
13.000	1	5.000	95.00	16.00	1.50	6	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

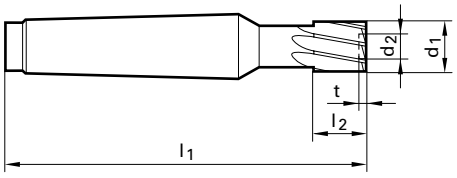
Guhring no.	**433**
Standard	**DIN 1862**
Tool material	**HSS-E**
Surface	◯
Form	
Tolerance	
Discount group	**105**
Techn. data page	**1366**



d1	MK	d2	l1	l2	t	Z	Availability
mm		mm	mm	mm	mm		
6.000	2		112.00	10.00		6	●
8.000	2		112.00	10.00		6	◯
10.000	2	5.000	112.00	16.00	1.50	6	●
12.000	2	5.000	112.00	16.00	1.50	6	●
13.000	2	5.000	112.00	16.00	1.50	6	◯
14.000	2	6.000	125.00	20.00	2.00	6	◯
15.000	2	6.000	125.00	20.00	2.00	6	●
16.000	2	8.000	125.00	20.00	2.00	8	●
18.000	2	10.000	125.00	20.00	2.00	8	●
23.000	2	12.000	125.00	25.00	3.00	8	◯
25.000	2	12.000	125.00	25.00	3.00	8	◯
27.000	2	15.000	125.00	25.00	3.50	8	◯
28.000	2	15.000	125.00	25.00	3.50	8	◯
29.000	2	15.000	125.00	25.00	3.50	8	◯
30.000	2	15.000	125.00	25.00	3.50	8	◯

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ◯ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

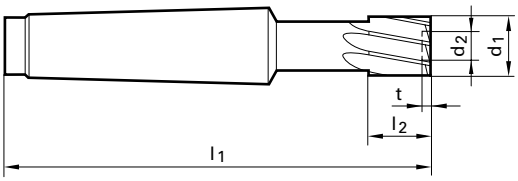
Guhring no.	**434**
Standard	**DIN 1862**
Tool material	**HSS-E**
Surface	
Form	
Tolerance	
Discount group	**105**
Techn. data page	**1366**



d1	MK	d2	l1	l2	t	Z	Availability
mm		mm	mm	mm	mm		
10.000	3	5.000	125.00	16.00	1.50	6	❍
11.000	3	5.000	125.00	16.00	1.50	6	❍
13.000	3	5.000	125.00	16.00	1.50	6	❍
14.000	3	6.000	135.00	20.00	2.00	6	❍
18.000	3	10.000	135.00	20.00	2.00	8	❍
20.000	3	12.000	145.00	25.00	3.00	8	❍
22.000	3	12.000	145.00	25.00	3.00	8	❍
23.000	3	12.000	145.00	25.00	3.00	8	❍
25.000	3	12.000	145.00	25.00	3.00	8	❍
27.000	3	15.000	145.00	25.00	3.50	8	❍
28.000	3	15.000	145.00	25.00	3.50	8	❍
29.000	3	15.000	145.00	25.00	3.50	8	❍
30.000	3	15.000	145.00	25.00	3.50	8	❍

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

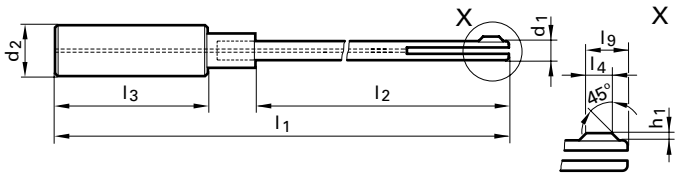
Guhring no.	**435**
Standard	**DIN 1862**
Tool material	**HSS-E**
Surface	○
Form	
Tolerance	
Discount group	**105**
Techn. data page	**1366**



d1	MK	d2	l1	l2	t	Z	Availability
mm		mm	mm	mm	mm		
20.000	4	12.000	175.00	25.00	3.00	8	○
21.000	4	12.000	175.00	25.00	3.00	8	○
22.000	4	12.000	175.00	25.00	3.00	8	○
23.000	4	12.000	175.00	25.00	3.00	8	○
24.000	4	12.000	175.00	25.00	3.00	8	○
25.000	4	12.000	175.00	25.00	3.00	8	○
26.000	4	15.000	175.00	25.00	3.50	8	○
27.000	4	15.000	175.00	25.00	3.50	8	○
28.000	4	15.000	175.00	25.00	3.50	8	○
29.000	4	15.000	175.00	25.00	3.50	8	○
30.000	4	15.000	175.00	25.00	3.50	8	○
31.000	4	15.000	175.00	25.00	3.50	8	○
33.000	4	16.000	195.00	32.00	3.50	10	○
34.000	4	16.000	195.00	32.00	3.50	10	○
35.000	4	16.000	195.00	32.00	3.50	10	○
37.000	4	18.000	195.00	32.00	4.00	10	○
38.000	4	18.000	195.00	32.00	4.00	10	○
39.000	4	18.000	195.00	32.00	4.00	10	○
41.000	4	20.000	210.00	40.00	4.00	10	○
43.000	4	20.000	210.00	40.00	4.00	10	○
44.000	4	20.000	210.00	40.00	4.00	10	○
45.000	4	22.000	210.00	40.00	4.50	10	○
46.000	4	22.000	210.00	40.00	4.50	10	○
47.000	4	22.000	210.00	40.00	4.50	10	○
48.000	4	22.000	210.00	40.00	4.50	10	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

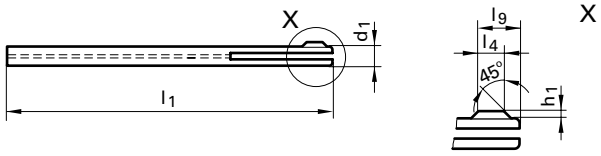
Guhring no.	4101
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	◯
Type	EW 100 G
Discount group	120
Techn. data page	1367



nom. Ø	d1	for Ø range	d2	l1	l2	l3	l4	l9	h1	Availability
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
2.000	1.900	1,91 - 2,15	6.000	120.00	69.00	36.00	1.00	2.05	0.35	●
2.250	2.100	2,16 - 2,40	6.000	120.00	69.00	36.00	1.50	2.60	0.40	●
2.500	2.400	2,41 - 2,70	6.000	120.00	69.00	36.00	1.50	2.90	0.40	●
2.750	2.600	2,71 - 2,90	6.000	130.00	79.00	36.00	1.50	2.95	0.45	❍
3.000	2.900	2,91 - 3,25	6.000	130.00	79.00	36.00	2.00	3.65	0.45	●
3.500	3.200	3,26 - 3,60	10.000	135.00	80.00	40.00	2.00	3.80	0.60	❍
4.000	3.600	3,61 - 4,25	10.000	135.00	80.00	40.00	2.00	4.10	0.70	●
4.500	4.200	4,26 - 4,75	10.000	135.00	80.00	40.00	2.50	4.60	0.70	●
5.000	4.700	4,76 - 5,30	10.000	145.00	80.00	40.00	2.50	4.85	0.75	●
5.500	5.200	5,31 - 5,80	10.000	145.00	90.00	40.00	2.50	4.85	0.75	●
6.000	5.600	5,81 - 6,20	10.000	155.00	90.00	40.00	3.00	5.80	0.80	●
6.500	6.000	6,21 - 6,70	16.000	165.00	102.00	48.00	3.00	5.90	0.90	●
7.000	6.500	6,71 - 7,10	16.000	165.00	102.00	48.00	3.00	5.85	0.85	●
7.500	6.900	7,11 - 7,60	16.000	165.00	102.00	48.00	3.50	6.95	0.95	❍
8.000	7.300	7,61 - 8,05	16.000	165.00	102.00	48.00	3.50	7.00	1.00	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

Guhring no.	**4100**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Carbide grade	**K**
Surface	◯
Type	**EW 100 G**
Discount group	**120**
Techn. data page	**1367**

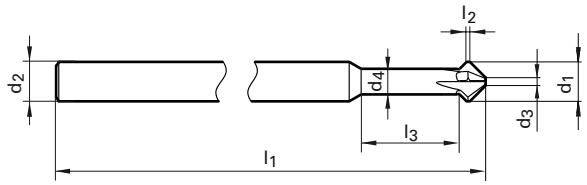


nom. Ø	d1	for Ø range	l1	l4	l9	h1	Availability
mm	mm	mm	mm	mm	mm	mm	
2.000	1.900	1,91 - 2,15	80.00	1.00	2.05	0.35	●
2.250	2.100	2,16 - 2,40	80.00	1.50	2.60	0.40	●
2.500	2.400	2,41 - 2,70	80.00	1.50	2.90	0.40	●
2.750	2.600	2,71 - 2,90	90.00	1.50	2.95	0.45	●
3.000	2.900	2,91 - 3,25	90.00	2.00	3.65	0.45	●
3.500	3.200	3,26 - 3,60	90.00	2.00	3.80	0.60	●
4.000	3.600	3,61 - 4,25	90.00	2.00	4.10	0.70	●
4.500	4.200	4,26 - 4,75	90.00	2.50	4.60	0.70	●
5.000	4.700	4,76 - 5,30	100.00	2.50	4.85	0.75	●
5.500	5.200	5,31 - 5,80	100.00	2.50	4.85	0.75	●
6.000	5.600	5,81 - 6,20	110.00	3.00	5.80	0.80	●
6.500	6.000	6,21 - 6,70	110.00	3.00	5.90	0.90	●
7.000	6.500	6,71 - 7,10	110.00	3.00	5.85	0.85	❍
7.500	6.900	7,11 - 7,60	110.00	3.50	6.95	0.95	❍
8.000	7.300	7,61 - 8,05	110.00	3.50	7.00	1.00	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**495**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Carbide grade	**K/P**
Surface	**a**
Type	**EW 100 VR**
Discount group	**120**
Techn. data page	**1367**

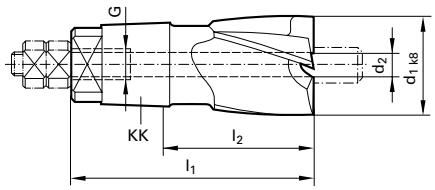
NEW



d1 h8	d2 h6	d3	d4	l1	l2	l3	Availability
mm	mm	mm	mm	mm	mm	mm	
3.000	4.000	0.600	2.200	75.00	0.50	9.40	●
4.000	4.000	0.800	2.900	75.00	0.50	12.40	●
5.000	5.000	1.000	3.900	75.00	0.50	15.00	●
6.000	6.000	1.200	3.900	100.00	0.50	14.30	●
8.000	6.000	1.600		100.00	0.50	59.00	●
10.000	6.000	2.000		100.00	0.50	53.00	●
12.000	6.000	2.400		100.00	0.50	46.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

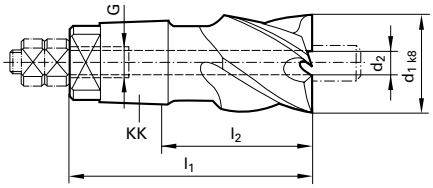
Guhring no.	**1601**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	○
Type	**KS 125**
Tolerance	
Discount group	**104**
Techn. data page	**1368**



d1	d2	G	KK	l1	l2	Z	Availability
mm	mm			mm	mm		
12.000	3.000	M 4	1	40.00	25.00	3	○
12.500	3.000		1	40.00	25.00	3	○
14.000	4.000	M 5	2	48.00	30.00	3	○
14.500	4.000	M 5	2	48.00	30.00	3	○
15.000	4.000	M 5	2	48.00	30.00	3	○
16.000	4.000	M 5	2	48.00	30.00	3	○
18.000	5.000	M 6	3	56.00	34.00	4	○
20.000	5.000	M 6	3	56.00	34.00	4	○
21.000	5.000	M 6	3	56.00	34.00	4	○
23.000	6.000	M 8	4	61.00	38.00	4	○
25.000	6.000	M 8	4	61.00	37.00	4	○
26.000	6.000	M 8	4	61.00	38.00	4	○
28.000	6.000	M 8	4	61.00	38.00	4	○
30.000	6.000	M 8	4	61.00	38.00	4	○
52.000	9.000	M12	5 1/2	68.00	39.00	4	○
53.000	9.000	M12	5 1/2	68.00	39.00	4	○
55.000	9.000	M12	5 1/2	68.00	39.00	4	○
57.000	9.000	M12	5 1/2	68.00	39.00	4	○

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

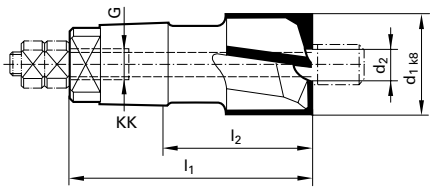
Guhring no.	**1602**
Standard	**Guhring std.**
Tool material	**HSS**
Carbide grade	
Surface	○
Type	**KS 140**
Tolerance	
Discount group	**104**
Techn. data page	**1368**



d1	d2	G	KK	l1	l2	Z	Code no.	Availability
mm	mm		mm	mm	mm			
5.000	1.700		0	35.00	22.00	3	5.000	○
6.500	2.000		0	35.00	22.00	3	6.500	○
7.000	2.500		0	35.00	22.00	3	7.000	○
8.000	2.500		0	35.00	22.00	3	8.000	○
8.500	2.500	M 4	0	35.00	22.00	3	8.500	○
9.000	3.000	M 4	1	40.00	25.00	3	9.000	○
10.000	3.000	M 4	1	40.00	25.00	3	10.000	○
13.000	3.000	M 4	1	40.00	25.00	3	13.000	○
13.001	4.000	M 5	2	48.00	25.00	3	13.001	○
14.000	3.000	M 4	1	40.00	25.00	3	14.000	○
14.000	4.000	M 5	2	48.00	30.00	3	14.001	○
14.500	4.000	M 5	1	40.00	30.00	3	14.500	○
14.500	4.000	M 5	2	48.00	30.00	3	14.501	○
16.001	3.000	M 4	2	48.00	25.00	3	16.001	○
17.500	3.000	M 4	1	40.00	25.00	3	17.500	○
18.000	3.000	M 4	1	40.00	25.00	4	18.000	○
18.000	5.000	M 6	3	56.00	34.00	4	18.002	○
20.000	4.000	M 5	2	48.00	30.00	4	20.000	○
20.000	5.000	M 6	3	56.00	34.00	4	20.001	○
21.000	5.000	M 6	3	56.00	34.00	4	21.001	○
22.000	4.000	M 5	2	48.00	30.00	4	22.000	○
22.000	5.000	M 6	3	56.00	34.00	4	22.001	○
23.500	6.000	M 8	4	61.00	37.00	4	23.501	○
24.001	5.000	M 6	4	61.00	34.00	4	24.001	○
25.000	5.000	M 6	3	56.00	34.00	4	25.000	○
25.000	6.000	M 8	4	61.00	37.00	4	25.001	○
26.000	6.000	M 8	4	61.00	37.00	4	26.001	○
28.000	5.000	M 6	3	56.00	34.00	4	28.000	○
28.000	6.000	M 8	4	61.00	37.00	4	28.001	○
32.000	6.000	M 8	4	61.00	37.00	4	32.000	○
33.000	6.000	M 8	4	61.00	37.00	4	33.000	○
40.000	8.000	M10	5	67.00	39.00	4	40.000	○
45.000	8.000	M10	5	67.00	39.00	4	45.000	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

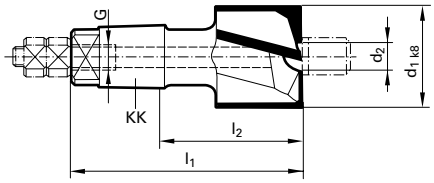
Guhring no.	**1603**
Standard	**Guhring std.**
Tool material	**Carbide**
Carbide grade	**K15**
Surface	○
Type	**KS 108**
Tolerance	
Discount group	**104**
Techn. data page	**1368**



d1	d2	G	KK	l1	l2	Z	Code no.	Availability
mm	mm		mm	mm	mm			
5.900	2.400		0	35.00	22.00	3	5.900	○
6.300	2.400		0	35.00	22.00	3	6.300	○
6.800	2.400		0	35.00	22.00	3	6.800	○
7.500	3.000		0	35.00	22.00	3	7.500	○
10.000	3.700	M 4	1	40.00	40.00	3	10.000	○
11.000	3.700	M 4	1	40.00	25.50	3	11.000	○
15.000	5.500	M 5	2	48.00	30.00	3	15.000	○
16.000	5.500	M 5	2	48.00	30.00	3	16.000	○
17.000	5.500	M 5	2	48.00	30.00	3	17.000	○
17.500	5.500	M 5	2	48.00	30.00	3	17.500	○
18.000	6.600	M 6	3	56.00	34.00	3	18.000	○
20.000	6.600	M 6	3	56.00	34.00	3	20.000	○
21.000	6.600	M 6	3	56.00	34.00	3	21.000	○
22.000	6.600	M 6	3	56.00	34.00	3	22.000	○
24.000	7.700	M 8	4	61.00	37.00	3	24.000	○
25.000	7.700	M 8	4	61.00	37.00	3	25.000	○
26.000	7.700	M 8	4	61.00	37.00	3	26.000	○
33.000	7.700	M 8	4	61.00	37.00	3	33.000	○
57.000	12.700	M12	5 1/2	68.00	39.00	3	57.000	○
58.000	12.700	M12	6	70.00	39.00	3	58.000	○
66.000	13.800	M12	6	70.00	39.00	3	66.000	○
67.000	13.800	M12	6	70.00	39.00	3	67.000	○
74.000	15.700	M14	7	80.00	46.00	3	74.000	○
75.000	15.700	M14	7	80.00	46.00	3	75.000	○

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**1604**
Standard	**Guhring std.**
Tool material	**Carbide**
Carbide grade	**M20**
Surface	◯
Type	**KS 115**
Tolerance	
Discount group	**104**
Techn. data page	**1368**

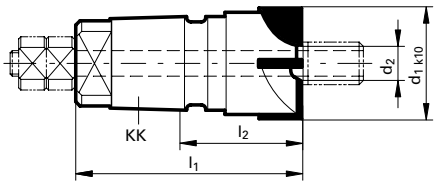


d1	d2	G	KK	l1	l2	Z	Code no.	Availability
mm	mm		mm	mm	mm			
55.000	12.700	M12	5 1/2	68.00	39.00	3	55.000	❍
66.000	13.700	M12	6	70.00	39.00	3	66.000	❍
67.000	13.800	M12	6	70.00	39.00	3	67.000	❍
73.000	15.700	M14	7	80.00	46.00	3	73.000	❍
74.000	15.700	M14	7	80.00	46.00	3	74.000	❍

Countersinks

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

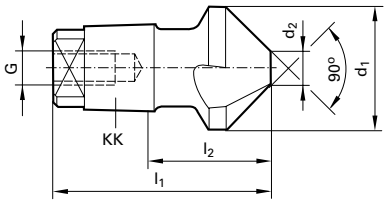
Guhring no.	**1606**
Standard	**Guhring std.**
Tool material	**Carbide**
Carbide grade	**K15**
Surface	◯
Type	**KS 100**
Discount group	**104**
Techn. data page	**1369**



d1	d2	KK	l1	l2	Z	Availability
mm	mm	mm	mm	mm		
9.000	4.000	1	32.00	17.50	3	❍
10.000	4.000	1	32.00	17.50	3	❍
12.000	4.000	1	32.00	17.50	3	❍
15.000	5.600	2	37.00	19.00	4	❍
37.000	9.600	5	56.00	28.50	4	❍
54.000	10.600	5 1/2	58.00	30.00	4	❍
57.000	10.600	5 1/2	58.00	30.00	4	❍
60.000	11.800	6	62.00	31.00	4	❍
66.000	11.800	6	62.00	31.00	4	❍
67.000	11.800	6	62.00	31.00	4	❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**1622**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	◯
Type	**KS 100**
Tolerance	
Discount group	**104**
Techn. data page	**1369**



d1	d2	G	KK	l1	l2	Z	Availability
mm	mm			mm	mm		
12.000	3.000	M 4	1	33.00	18.00	3	❍
15.000	4.000	M 5	2	39.00	21.00	3	❍
20.000	5.000	M 6	3	46.00	24.00	3	❍
30.000	8.000	M 8	4	53.00	29.00	3	❍

Countersinks

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**1624**
Standard	**DIN 551**
Discount group	**104**
Techn. data page	

KK	G	l1	Code no.	Availability
		mm		
0	M 2,5	3.00	2.500	❍

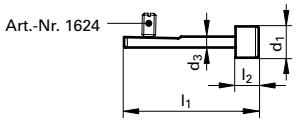
○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	1650	1651
Standard	Guhring std.	
Discount group	104	104
Techn. data page		

für KK	Code no.	Availability	
0	1.000		❍
1	1.100	❍	❍
2	1.200	❍	❍
3	1.300	❍	❍
4	1.400	❍	❍
5	1.500	❍	❍
5 1/2	1.550	❍	❍
6	1.600	❍	❍
7	1.700	❍	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

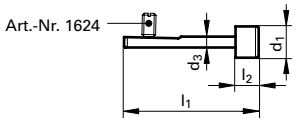
Guhring no.	1615
Standard	Guhring std.
Discount group	104
Techn. data page	



d1	d3	l1	l2	Code no.	Availability
mm	mm	mm	mm		
1.700	1.700	28.00	5.00	1.700	○
1.800	1.700	28.00	5.00	1.800	○
2.000	1.700	28.00	5.00	2.000	○
2.000	2.000	28.00	5.00	2.001	○
2.200	1.700	28.00	5.00	2.200	○
2.200	2.000	28.00	5.00	2.201	○
2.300	2.000	28.00	5.00	2.301	○
2.400	2.000	28.00	5.00	2.401	○
2.500	1.700	28.00	5.00	2.500	○
2.500	2.000	28.00	5.00	2.501	○
2.600	1.700	28.00	5.00	2.600	○
2.600	2.000	28.00	5.00	2.601	○
2.800	2.500	28.00	5.00	2.802	○
2.900	1.700	28.00	5.00	2.900	○
2.900	2.500	28.00	5.00	2.902	○
3.000	1.700	28.00	5.00	3.000	○
3.100	1.700	28.00	5.00	3.100	○
3.100	2.000	28.00	5.00	3.101	○
3.200	2.500	28.00	5.00	3.202	○
3.300	2.500	28.00	5.00	3.302	○
3.400	2.000	28.00	5.00	3.401	○
3.500	2.000	28.00	5.00	3.501	○
3.700	2.500	28.00	5.00	3.702	○
3.800	1.700	28.00	5.00	3.800	○
3.800	2.500	28.00	5.00	3.802	○
3.900	2.500	28.00	5.00	3.902	○
4.000	1.700	28.00	5.00	4.000	○
4.000	2.000	28.00	5.00	4.001	○
4.100	1.700	28.00	5.00	4.100	○
4.100	2.000	28.00	5.00	4.101	○
4.200	1.700	28.00	5.00	4.200	○
4.200	2.500	28.00	5.00	4.202	○
4.300	1.700	28.00	5.00	4.300	○
4.300	2.000	28.00	5.00	4.301	○
4.300	2.500	28.00	5.00	4.302	○
4.400	1.700	28.00	5.00	4.400	○
4.400	2.000	28.00	5.00	4.401	○
4.400	2.500	28.00	5.00	4.402	○
4.500	1.700	28.00	5.00	4.500	○

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

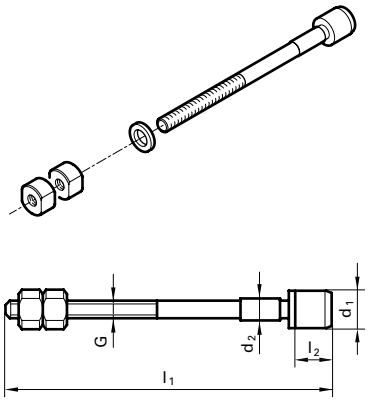
Guhring no.	**1615**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	d3	l1	l2	Code no.	Availability
mm	mm	mm	mm		
4.500	2.000	28.00	5.00	4.501	○
4.500	2.500	28.00	5.00	4.502	○
4.700	2.000	28.00	5.00	4.701	○
4.700	2.500	28.00	5.00	4.702	○
4.800	2.500	28.00	5.00	4.802	○
4.900	2.500	28.00	5.00	4.902	○
5.000	2.500	28.00	5.00	5.002	○
5.100	2.000	28.00	5.00	5.101	○
5.200	2.000	28.00	5.00	5.201	○
5.200	2.500	28.00	5.00	5.202	○
5.400	2.000	28.00	5.00	5.401	○
5.400	2.500	28.00	5.00	5.402	○
5.500	2.000	28.00	5.00	5.501	○
5.600	2.000	28.00	5.00	5.601	○
5.600	2.500	28.00	5.00	5.602	○
5.700	2.500	28.00	5.00	5.702	○
5.800	2.000	28.00	5.00	5.801	○
5.900	2.000	28.00	5.00	5.901	○
6.100	2.500	28.00	5.00	6.102	○
6.300	2.500	28.00	5.00	6.302	○
6.400	2.500	28.00	5.00	6.402	○
6.500	2.500	28.00	5.00	6.502	○
6.800	2.500	28.00	5.00	6.802	○
6.900	2.500	28.00	5.00	6.902	○
7.000	2.500	28.00	5.00	7.002	○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

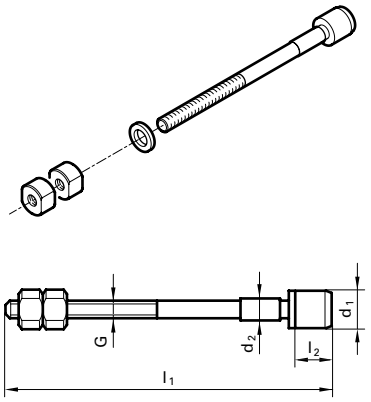
Guhring no.	**1616**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	für KK	d3	G	l1	l2	Code no.	Availability
mm		mm		mm	mm		
3.200	1	3.000	M 3	60.00	7.00	3.200	○
3.300	1	3.000	M 3	60.00	7.00	3.300	○
3.400	1	3.000	M 3	60.00	7.00	3.400	○
3.600	1	3.000	M 3	60.00	7.00	3.600	○
3.800	1	3.000	M 3	60.00	7.00	3.800	○
3.900	1	3.000	M 3	60.00	7.00	3.900	○
4.000	1	3.000	M 3	60.00	7.00	4.000	○
4.100	1	3.000	M 3	60.00	7.00	4.100	○
4.100	2	4.000	M 4	71.00	10.00	4.101	○
4.300	1	3.000	M 3	60.00	7.00	4.300	○
4.300	2	4.000	M 4	71.00	10.00	4.301	○
4.400	2	4.000	M 4	71.00	10.00	4.401	○
4.600	2	4.000	M 4	71.00	10.00	4.601	○
4.700	2	4.000	M 4	71.00	10.00	4.701	○
4.800	2	4.000	M 4	71.00	10.00	4.801	○
5.000	1	3.000	M 3	60.00	7.00	5.000	○
5.100	1	3.000	M 3	60.00	7.00	5.100	○
5.200	1	3.000	M 3	60.00	7.00	5.200	○
5.200	3	5.000	M 5	81.00	10.00	5.202	○
5.300	1	3.000	M 3	60.00	7.00	5.300	○
5.300	3	5.000	M 5	81.00	10.00	5.302	○
5.400	1	3.000	M 3	60.00	7.00	5.400	○
5.400	2	4.000	M 4	71.00	10.00	5.401	○
5.400	3	5.000	M 5	81.00	10.00	5.402	○
5.500	1	3.000	M 3	60.00	7.00	5.500	○
5.500	2	4.000	M 4	71.00	10.00	5.501	○
5.600	2	4.000	M 4	71.00	10.00	5.601	○
5.600	3	5.000	M 5	81.00	10.00	5.602	○
5.700	2	4.000	M 4	71.00	10.00	5.701	○
5.700	3	5.000	M 5	81.00	10.00	5.702	○
5.800	1	3.000	M 3	60.00	7.00	5.800	○
5.800	2	4.000	M 4	71.00	10.00	5.801	○
5.900	3	5.000	M 5	81.00	10.00	5.902	○
6.000	4	6.000	M 6	88.00	12.00	6.003	○
6.100	1	3.000	M 3	60.00	7.00	6.100	○
6.100	2	4.000	M 4	71.00	10.00	6.101	○
6.100	3	5.000	M 5	81.00	10.00	6.102	○
6.100	4	6.000	M 6	88.00	12.00	6.103	○
6.200	3	5.000	M 5	81.00	10.00	6.202	○

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

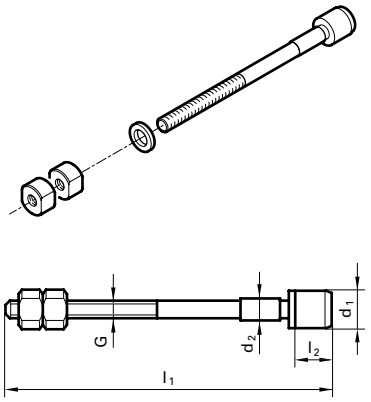
Guhring no.	**1616**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	für KK	d3	G	l1	l2	Code no.	Availability
mm		mm		mm	mm		
6.300	1	3.000	M 3	60.00	7.00	6.300	○
6.300	2	4.000	M 4	71.00	10.00	6.301	○
6.300	3	5.000	M 5	81.00	10.00	6.302	○
6.300	4	6.000	M 6	88.00	12.00	6.303	○
6.400	1	3.000	M 3	60.00	7.00	6.400	○
6.400	4	6.000	M 6	88.00	12.00	6.403	○
6.500	2	4.000	M 4	71.00	10.00	6.501	○
6.500	4	6.000	M 6	88.00	12.00	6.503	○
6.600	1	3.000	M 3	60.00	7.00	6.600	○
6.600	3	5.000	M 5	81.00	10.00	6.602	○
6.700	1	3.000	M 3	60.00	7.00	6.700	○
6.900	2	4.000	M 4	71.00	10.00	6.901	○
7.000	3	5.000	M 5	81.00	10.00	7.002	○
7.100	2	4.000	M 4	71.00	10.00	7.101	○
7.100	4	6.000	M 6	88.00	12.00	7.103	○
7.200	1	3.000	M 3	60.00	7.00	7.200	○
7.300	1	3.000	M 3	60.00	7.00	7.300	○
7.400	1	3.000	M 3	60.00	7.00	7.400	○
7.500	3	5.000	M 5	81.00	10.00	7.502	○
7.500	4	6.000	M 6	88.00	12.00	7.503	○
7.600	1	3.000	M 3	60.00	7.00	7.600	○
7.600	2	4.000	M 4	71.00	10.00	7.601	○
7.600	3	5.000	M 5	81.00	10.00	7.602	○
7.600	4	6.000	M 6	88.00	12.00	7.603	○
7.700	1	3.000	M 3	60.00	7.00	7.700	○
7.700	2	4.000	M 4	71.00	10.00	7.701	○
7.800	3	5.000	M 5	81.00	10.00	7.802	○
7.900	1	3.000	M 3	60.00	7.00	7.900	○
8.000	1	3.000	M 3	60.00	7.00	8.000	○
8.000	4	6.000	M 6	88.00	12.00	8.003	○
8.000	5	8.000	M 8	103.00	18.00	8.004	○
8.100	2	4.000	M 4	71.00	10.00	8.101	○
8.100	3	5.000	M 5	81.00	10.00	8.102	○
8.200	3	5.000	M 5	81.00	10.00	8.202	○
8.400	3	5.000	M 5	81.00	10.00	8.402	○
8.500	3	5.000	M 5	81.00	10.00	8.502	○
8.600	1	3.000	M 3	60.00	7.00	8.600	○
8.600	4	6.000	M 6	88.00	12.00	8.603	○
8.700	3	5.000	M 5	81.00	10.00	8.702	○

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

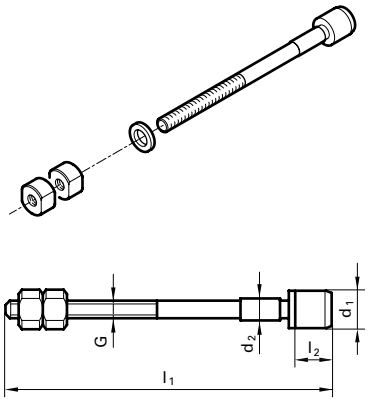
Guhring no.	**1616**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1 mm	für KK	d3 mm	G	l1 mm	l2 mm	Code no.	Availability
8.700	4	6.000	M 6	88.00	12.00	8.703	○
8.800	1	3.000	M 3	60.00	7.00	8.800	○
8.800	2	4.000	M 4	71.00	10.00	8.801	○
8.800	4	6.000	M 6	88.00	12.00	8.803	○
9.000	2	4.000	M 4	71.00	10.00	9.001	○
9.000	4	6.000	M 6	88.00	12.00	9.003	○
9.000	5 1/2	9.000	M 9	106.00	20.00	9.005	○
9.200	2	4.000	M 4	71.00	10.00	9.201	○
9.300	2	4.000	M 4	71.00	10.00	9.301	○
9.400	1	3.000	M 3	60.00	7.00	9.400	○
9.400	2	4.000	M 4	71.00	10.00	9.401	○
9.500	3	5.000	M 5	81.00	10.00	9.502	○
9.600	1	3.000	M 3	60.00	7.00	9.600	○
9.700	2	4.000	M 4	71.00	10.00	9.701	○
9.700	3	5.000	M 5	81.00	10.00	9.702	○
9.800	1	3.000	M 3	60.00	7.00	9.800	○
9.800	2	4.000	M 4	71.00	10.00	9.801	○
10.000	1	3.000	M 3	60.00	7.00	10.000	○
10.000	2	4.000	M 4	71.00	10.00	10.001	○
10.000	3	5.000	M 5	81.00	10.00	10.002	○
10.000	4	6.000	M 6	88.00	12.00	10.003	○
10.100	3	5.000	M 5	81.00	10.00	10.102	○
10.200	1	3.000	M 3	60.00	7.00	10.200	○
10.200	2	4.000	M 4	71.00	10.00	10.201	○
10.200	3	5.000	M 5	81.00	10.00	10.202	○
10.300	2	4.000	M 4	71.00	10.00	10.301	○
10.400	2	4.000	M 4	71.00	10.00	10.401	○
10.500	2	4.000	M 4	71.00	10.00	10.501	○
10.500	5	8.000	M 8	103.00	18.00	10.504	○
11.000	4	6.000	M 6	88.00	12.00	11.003	○
11.000	5	8.000	M 8	103.00	18.00	11.004	○
11.000	6	10.000	M10	110.00	20.00	11.006	○
11.100	4	6.000	M 6	88.00	12.00	11.103	○
11.200	4	6.000	M 6	88.00	12.00	11.203	○
11.500	4	6.000	M 6	88.00	12.00	11.503	○
11.500	5	8.000	M 8	103.00	18.00	11.504	○
11.700	4	6.000	M 6	88.00	12.00	11.703	○
12.000	4	6.000	M 6	88.00	12.00	12.003	○
12.300	4	6.000	M 6	88.00	12.00	12.303	○

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

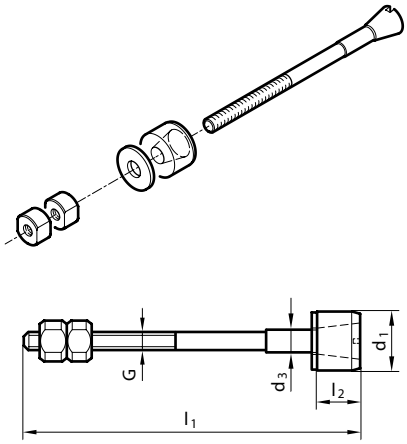
Guhring no.	**1616**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	für KK	d3	G	l1	l2	Code no.	Availability
mm		mm		mm	mm		
12.500	4	6.000	M 6	88.00	12.00	12.503	❍
12.500	5	8.000	M 8	103.00	18.00	12.504	❍
12.600	4	6.000	M 6	88.00	12.00	12.603	❍
12.700	4	6.000	M 6	88.00	12.00	12.703	❍
13.000	4	6.000	M 6	88.00	12.00	13.003	❍
13.000	5 1/2	9.000	M 9	106.00	20.00	13.005	❍
13.000	6	10.000	M10	110.00	20.00	13.006	❍
13.500	5	8.000	M 8	103.00	18.00	13.504	❍
13.500	5 1/2	9.000	M 9	106.00	20.00	13.505	❍
14.000	5	8.000	M 8	103.00	18.00	14.004	❍
14.000	5 1/2	9.000	M 9	106.00	20.00	14.005	❍
14.000	6	10.000	M10	110.00	20.00	14.006	❍
15.000	5	8.000	M 8	103.00	18.00	15.004	❍
15.500	5	8.000	M 8	103.00	18.00	15.504	❍
16.000	6	10.000	M10	110.00	20.00	16.006	❍
16.500	5 1/2	9.000	M 9	106.00	20.00	16.505	❍
17.000	5	8.000	M 8	103.00	18.00	17.004	❍
17.000	5 1/2	9.000	M 9	106.00	20.00	17.005	❍
18.000	6	10.000	M10	110.00	20.00	18.006	❍
18.000	7	12.000	M12	124.00	22.00	18.007	❍
19.000	6	10.000	M10	110.00	20.00	19.006	❍
20.000	6	10.000	M10	110.00	20.00	20.006	❍
24.000	7	12.000	M12	124.00	22.00	24.007	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

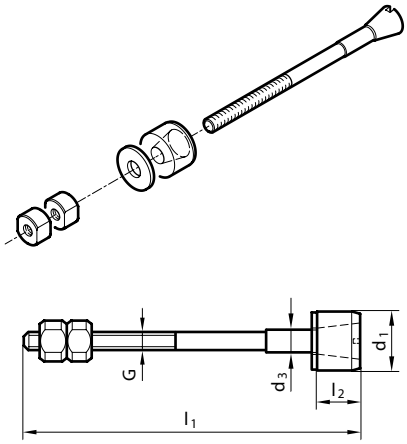
Guhring no.	**1617**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	für KK	d3	G	l1	l2	Code no.	Availability
mm		mm		mm	mm		
11.500	2	4.000	M 4	71.00	10.00	11.500	○
12.000	2	4.000	M 4	71.00	10.00	12.000	○
12.000	3	5.000	M 5	81.00	10.00	12.001	○
13.500	2	4.000	M 4	71.00	10.00	13.500	○
13.500	4	6.000	M 6	88.00	12.00	13.502	○
14.000	2	4.000	M 4	71.00	10.00	14.000	○
14.500	3	5.000	M 5	81.00	10.00	14.501	○
15.000	2	4.000	M 4	71.00	10.00	15.000	○
15.500	2	4.000	M 4	71.00	10.00	15.500	○
15.500	3	5.000	M 5	81.00	10.00	15.501	○
17.500	5	8.000	M 8	103.00	18.00	17.503	○
18.500	4	6.000	M 6	88.00	12.00	18.502	○
19.000	3	5.000	M 5	81.00	10.00	19.001	○
20.000	4	6.000	M 6	88.00	12.00	20.002	○
20.000	5	8.000	M 8	103.00	18.00	20.003	○
21.000	3	5.000	M 5	81.00	10.00	21.001	○
21.000	4	6.000	M 6	88.00	12.00	21.002	○
21.000	5 1/2	9.000	M 9	106.00	20.00	21.004	○
22.000	3	5.000	M 5	81.00	10.00	22.001	○
22.000	4	6.000	M 6	88.00	12.00	22.002	○
22.000	5	8.000	M 8	103.00	18.00	22.003	○
22.000	5 1/2	9.000	M 9	106.00	20.00	22.004	○
22.500	4	6.000	M 6	88.00	12.00	22.502	○
22.500	5 1/2	9.000	M 9	106.00	20.00	22.504	○
23.000	4	6.000	M 6	88.00	12.00	23.002	○
24.000	5	8.000	M 8	103.00	18.00	24.003	○
24.500	5	8.000	M 8	103.00	18.00	24.503	○
24.500	5 1/2	9.000	M 9	106.00	20.00	24.504	○
24.500	6	10.000	M10	110.00	20.00	24.505	○
25.000	6	10.000	M10	110.00	20.00	25.005	○
25.500	4	6.000	M 6	88.00	12.00	25.502	○
25.500	5	8.000	M 8	103.00	18.00	25.503	○
25.500	5 1/2	9.000	M 9	106.00	20.00	25.504	○
26.000	6	10.000	M10	110.00	20.00	26.005	○
26.500	4	6.000	M 6	88.00	12.00	26.502	○
28.000	4	6.000	M 6	88.00	12.00	28.002	○
28.000	7	12.000	M12	124.00	22.00	28.006	○
29.500	5	8.000	M 8	103.00	18.00	29.503	○
30.000	5	8.000	M 8	103.00	18.00	30.003	○

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

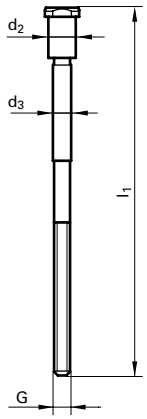
Guhring no.	**1617**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	für KK	d3	G	l1	l2	Code no.	Availability
mm		mm		mm	mm		
30.000	6	10.000	M10	110.00	20.00	30.005	❍
30.500	5	8.000	M 8	103.00	18.00	30.503	❍
31.000	5	8.000	M 8	103.00	18.00	31.003	❍
31.500	5	8.000	M 8	103.00	18.00	31.503	❍
32.000	5 1/2	9.000	M 9	106.00	18.00	32.004	❍
32.500	5	8.000	M 8	103.00	18.00	32.503	❍
33.000	5	8.000	M 8	103.00	18.00	33.003	❍
35.000	7	12.000	M12	124.00	22.00	35.006	❍
35.500	6	10.000	M10	110.00	20.00	35.505	❍
38.000	5 1/2	9.000	M 9	106.00	20.00	38.004	❍
39.000	5	8.000	M 8	103.00	18.00	39.003	❍
42.000	5 1/2	9.000	M 9	106.00	20.00	42.004	❍
50.000	7	12.000	M12	124.00	22.00	50.006	❍
52.000	6	10.000	M10	110.00	20.00	52.005	❍
56.000	7	12.000	M12	124.00	22.00	56.006	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**1647**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



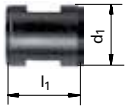
für KK	d2	d3	G	l1	Code no.	Availability
	mm	mm		mm		
1	5.000	3.000	M 3	70.00	3.000	❍
2	6.000	4.000	M 4	85.00	4.000	❍
4	9.000	6.000	M 6	105.00	6.000	❍
4	14.000	6.000	M 6	105.00	6.100	❍
5	16.000	8.000	M8	120.00	8.100	❍
5 1/2	20.000	9.000	M 9	130.00	9.100	❍
6	14.000	10.000	M10	135.00	10.000	❍
6	20.000	10.000	M10	135.00	10.100	❍
7	16.000	12.000	M12	160.00	12.000	❍
7	25.000	12.000	M12	160.00	12.100	❍

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	**1648**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	

d1 mm	für KK	G	l1 mm	Availability
6.500	1	M 4	35.00	❍
8.000	2	M 5	40.00	❍
10.000	3	M 6	46.00	❍
12.000	4	M 8	52.00	❍
15.000	5	M10	59.00	❍
17.000	5 1/2	M12	61.00	❍
19.000	6	M12	66.00	❍
22.000	7	M14	87.00	❍

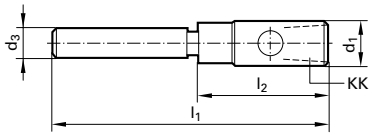
Guhring no.	**1649**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1 mm	für KK	G	l1 mm	Availability
6.500	1	M 3	8.00	❍
8.000	2	M 4	9.00	❍
10.000	3	M 5	11.00	❍
12.000	4	M 6	14.00	❍
15.000	5	M 8	14.00	❍
17.000	5 1/2	M 9	19.00	❍
19.000	6	M10	21.00	❍
22.000	7	M12	30.00	❍

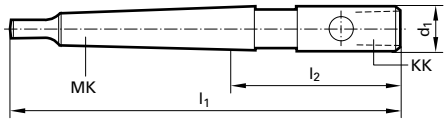
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	**1625**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	KK	d3	l1	l2	Code no.	Availability
mm		mm	mm	mm		
9.000	0	6.000	59.00	24.00	9.000	❍
12.500	1	8.000	76.00	36.00	12.500	❍
17.000	2	10.000	91.00	41.00	17.000	❍
21.000	3	12.000	109.00	49.00	21.000	❍
28.000	4	14.000	112.00	52.00	28.000	❍
32.000	5	16.000	125.00	65.00	32.000	❍

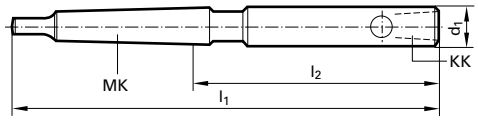
Guhring no.	**1626**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	KK	MK	l1	l2	Code no.	Availability
mm			mm	mm		
12.500	1	1	104.00	42.00	12.500	○
17.000	2	1	109.00	47.00	17.000	○
17.001	2	2	124.00	49.00	17.001	○
21.000	3	1	117.00	55.00	21.000	○
21.002	3	3	152.00	58.00	21.002	○
28.000	4	2	135.00	60.00	28.000	○
28.001	4	3	155.00	61.00	28.001	○
32.000	5	2	148.00	73.00	32.000	○
32.001	5	3	168.00	74.00	32.001	○
32.002	5	4	193.00	75.50	32.002	○
37.000	5 1/2	3	178.00	84.00	37.000	○
37.001	5 1/2	4	203.00	85.50	37.001	○
42.001	6	4	205.00	87.50	42.001	○

○ bright ◍ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**1628**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	KK	MK	l1	l2	Code no.	Availability
mm			mm	mm		
12.500	1	1	142.00	80.00	12.500	❍
17.000	2	1	152.00	90.00	17.000	❍
17.001	2	2	167.00	92.00	17.001	❍
21.001	3	2	185.00	110.00	21.001	❍
28.000	4	2	190.00	115.00	28.000	❍
28.001	4	3	210.00	116.00	28.001	❍
32.000	5	3	235.00	141.00	32.000	❍
37.000	5 1/2	3	255.00	161.00	37.000	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Grinding HSS-countersinks max. 1 mm

from quantity	Gross additional charges per item depending on short countersink size, on request				
	0 / 1	2 / 3	4 / 5	5 1/2 / 6	7
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
6	●	●	●	●	●
10	●	●	●	●	●
16	●	●	●	●	●
21	●	●	●	●	●
31	●	●	●	●	●

Grinding HSS-back spotfacers max. 1 mm

from quantity	Gross additional charges per item depending on short countersink size, on request					
	10-20	>20-36	>36-48	>48-62	>62-80	>80-115
2	●	●	●	●	●	●
3	●	●	●	●	●	●
4	●	●	●	●	●	●
6	●	●	●	●	●	●
10	●	●	●	●	●	●
16	●	●	●	●	●	●
21	●	●	●	●	●	●

Grinding carbide-countersinks max. 1 mm

from quantity	Gross additional charges per item depending on short countersink size, on request				
	0 / 1	2 / 3	4 / 5	5 1/2 / 6	7
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
6	●	●	●	●	●
10	●	●	●	●	●
16	●	●	●	●	●
21	●	●	●	●	●
31	●	●	●	●	●

○ bright ◌ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

The QS principle encourages requests for inspection records or certificates of conformity to be supplied with ordered tools. We will gladly do this. But as the setting-up of inspection records is particularly time consuming and costly - special marking on a specified number of tools, the provision of measuring records, the entry of measured data in special forms - and we do not wish to incorporate these costs in our overhead costs, we have chosen to charge the prices below in relation to the quantity ordered. Surely you will appreciate this.

inspected number of items / inspection criteria	1	up to 3	up to 5	up to 10	up to 15	up to 20	up to 30	up to 50	up to 100
	net prices for the inspected number of items per inspection criteria								
shank diameter	●	●	●	●	●	●	●	●	●
countersink head diameter	●	●	●	●	●	●	●	●	●
length L 1/2	●	●	●	●	●	●	●	●	●
rake angle	●	●	●	●	●	●	●	●	●
clearance angle	●	●	●	●	●	●	●	●	●
centre cutting geometry	●	●	●	●	●	●	●	●	●
optical	●	●	●	●	●	●	●	●	●
marking of test tools	●	●	●	●	●	●	●	●	●

	net prices for the inspected number of items for all inspection criteria								
	●	●	●	●	●	●	●	●	●
	plus cost of inspection report								
total price	●	●	●	●	●	●	●	●	●

NEW

HSC face milling cutters

PCD milling cutters

GUHRING

PCD/CBN TOOLS

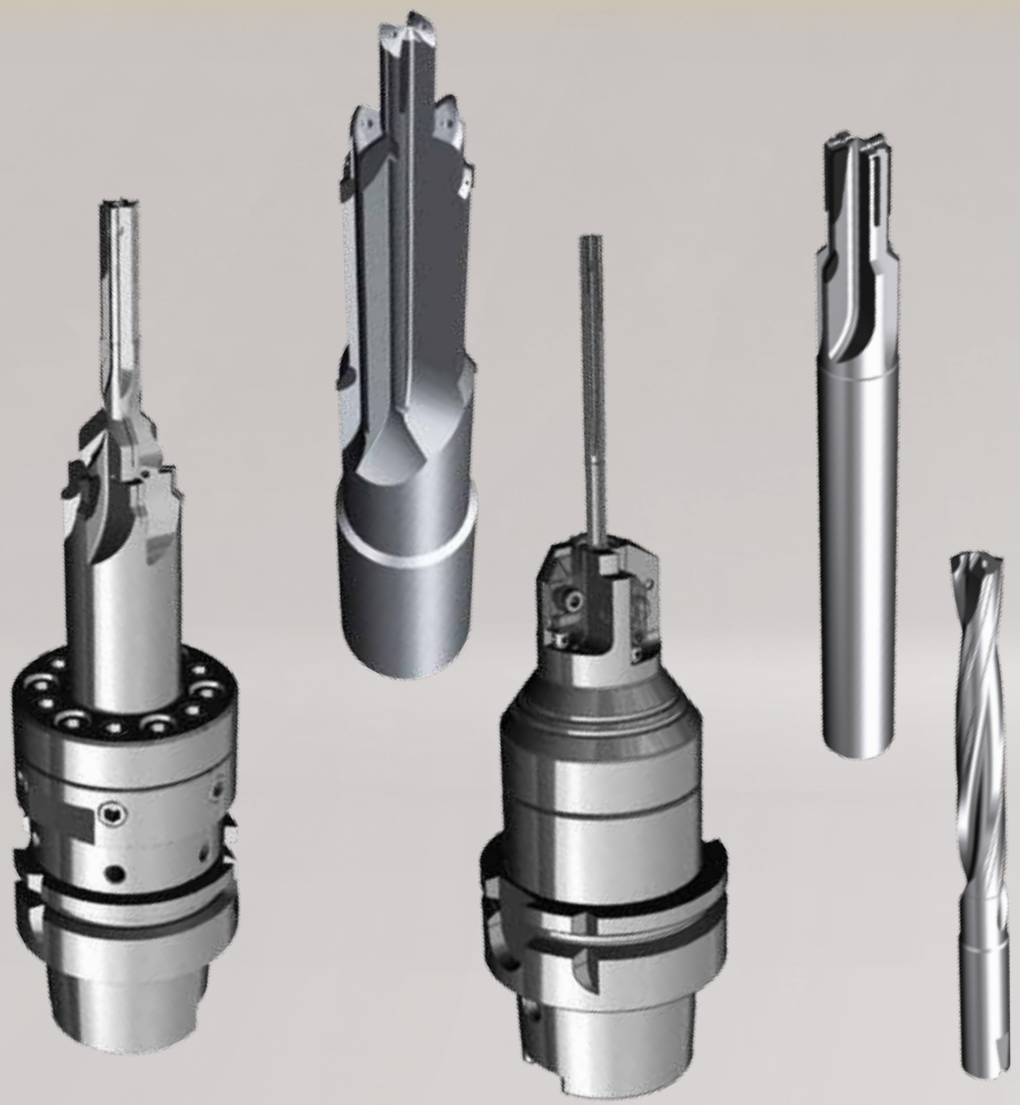
GUHRING

Venture the step into the future with Guhring and multiply your production output!

Our intelligent tooling solutions for the machining of cylinder heads reduce the number of tools and subsequently keep the manufacturing steps in your production to a minimum. Increase your production output while simultaneously reducing your costs:

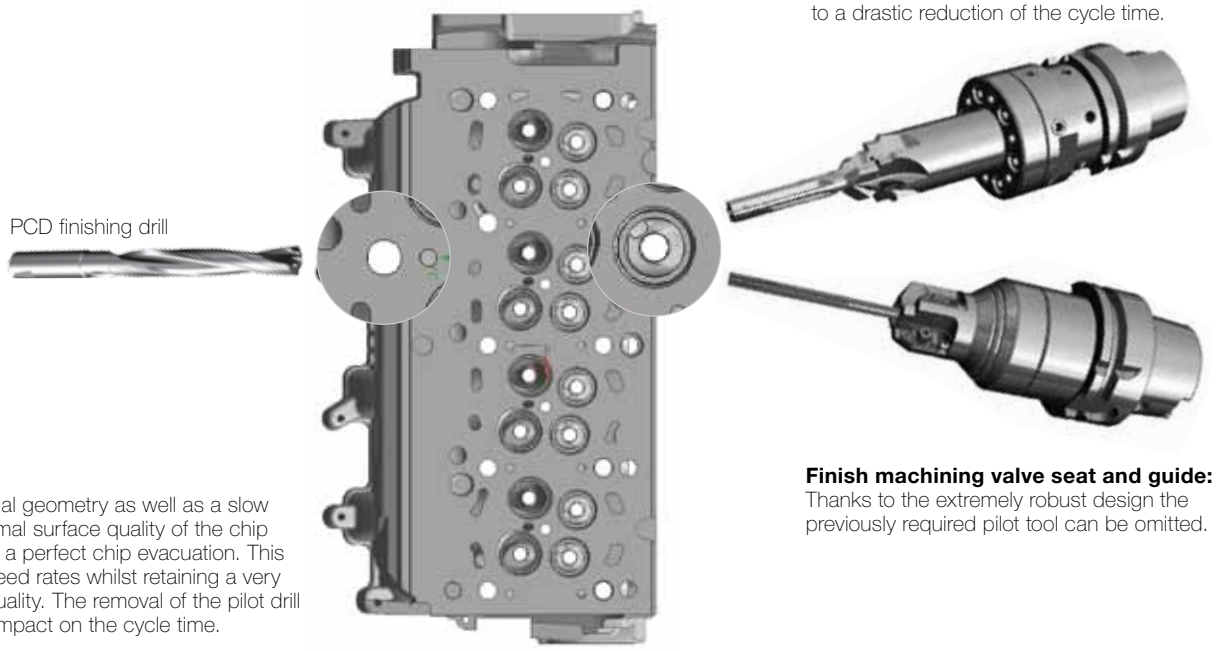
- **less tools**
- **reduced tool changes**
- **shorter manufacturing cycles**
- **reduced machining time**
- **increased productivity**
- **improved economic efficiency**

Don´t stay with the current technology available.
Gain the advantage with our future solution!



Inlet or exhaust port + valve seat:
The consolidation of both these tools leads to a drastic reduction of the cycle time.

PCD finishing drill

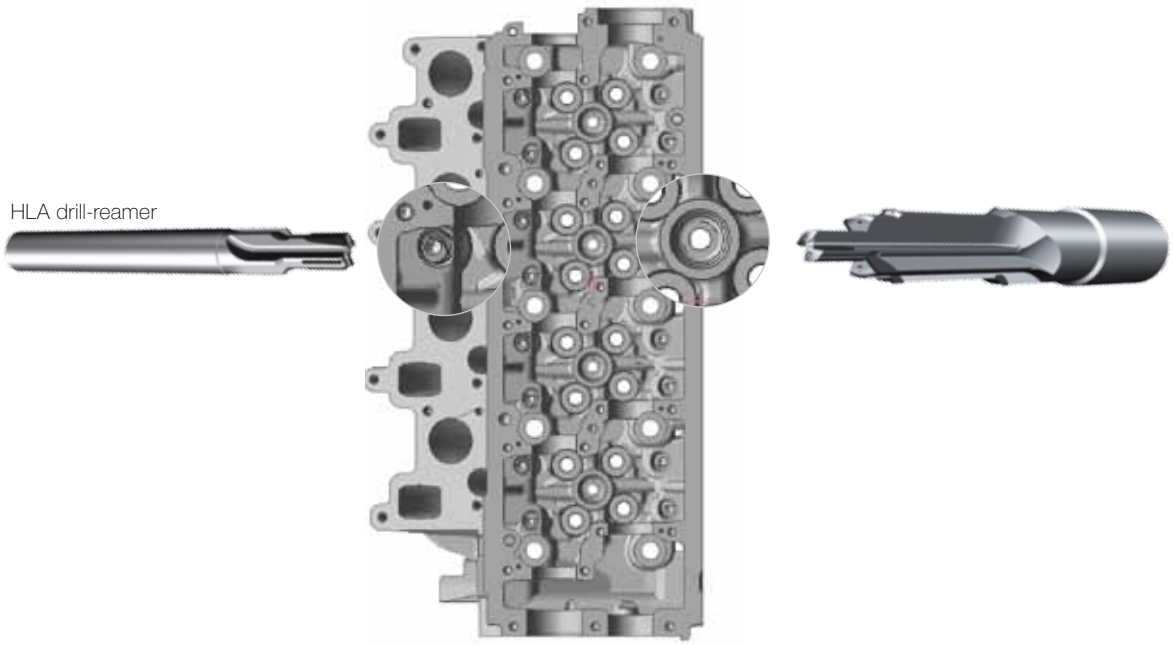


Bolt holes:
Thanks to a special geometry as well as a slow helix and the optimal surface quality of the chip chamber ensures a perfect chip evacuation. This allows very high feed rates whilst retaining a very high machining quality. The removal of the pilot drill has a significant impact on the cycle time.

Finish machining valve seat and guide:
Thanks to the extremely robust design the previously required pilot tool can be omitted.

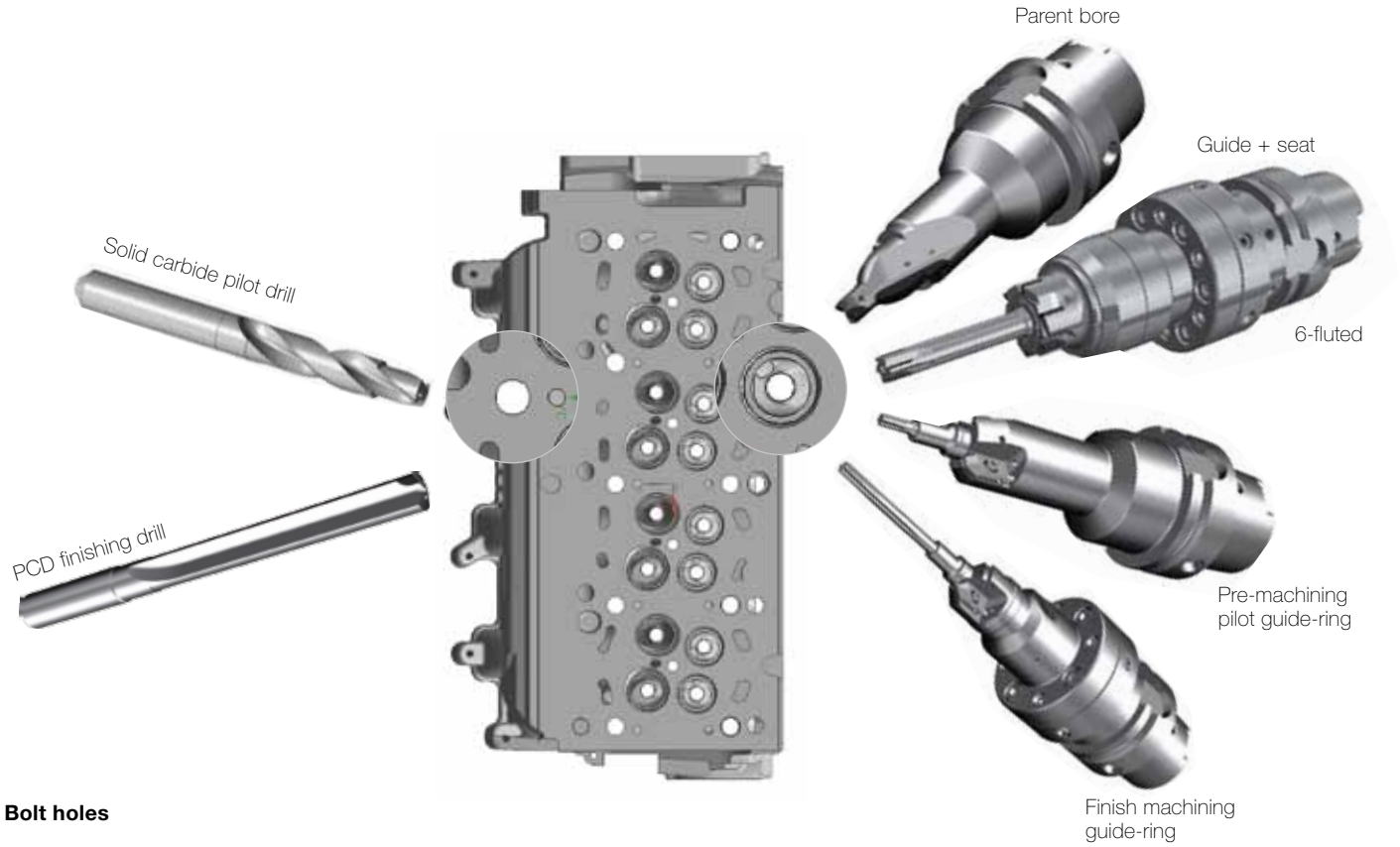
FUTURE SOLUTION

HLA drill-reamer



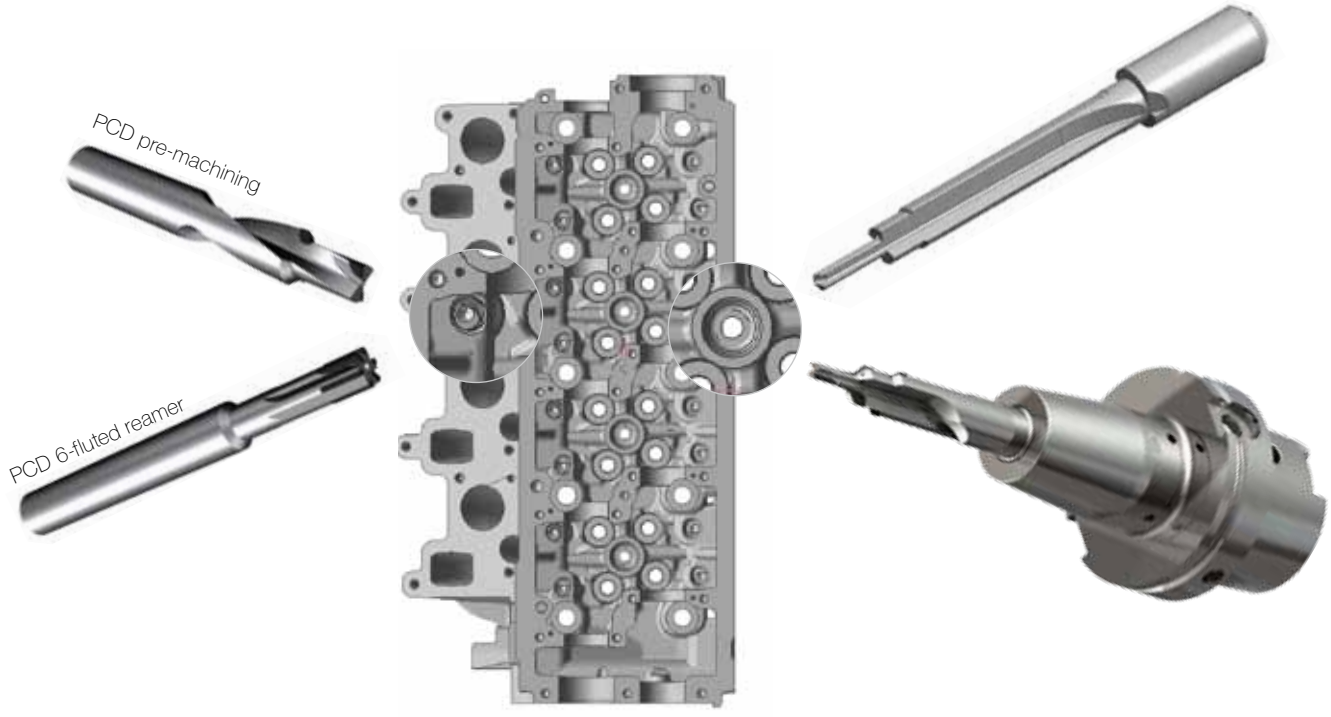
Hydraulic lash adjuster:
Saving the pre-machining reduces the cycle time enormously.

Injector bore:
Optimal partitioning of the chip chambers ensures a flawless chip evacuation.



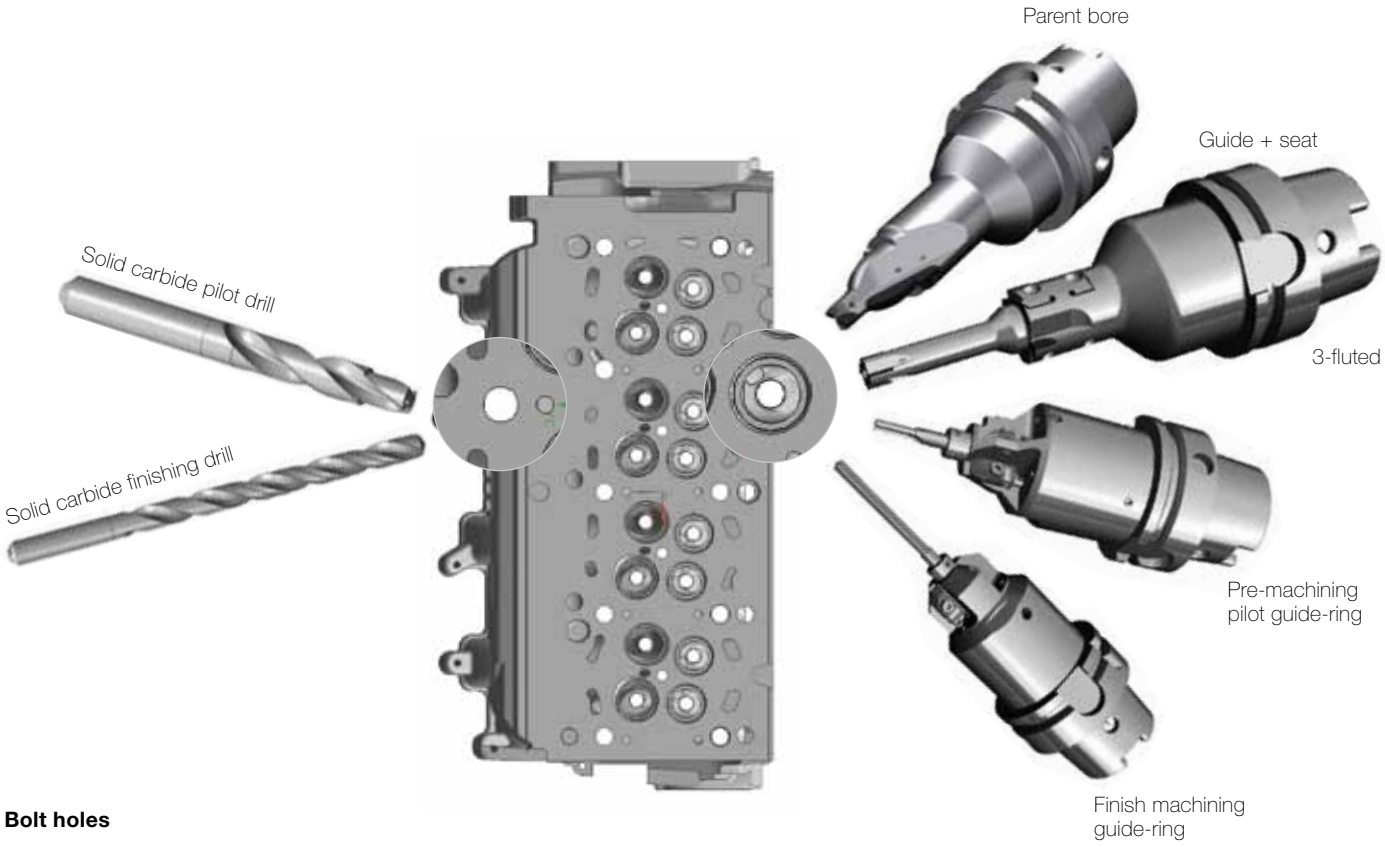
Bolt holes

OPTIMISATION



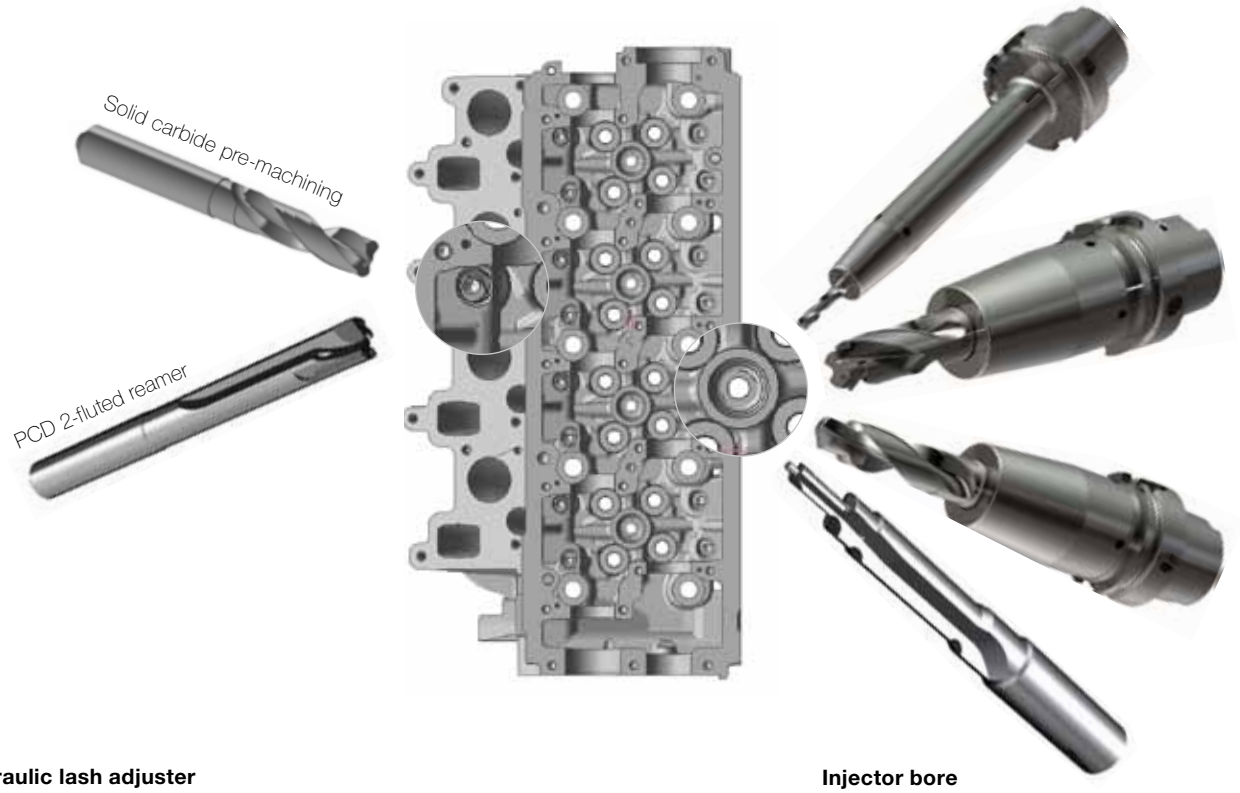
Hydraulic lash adjuster

Injector bore



Bolt holes

CURRENT TECHNOLOGIE



Hydraulic lash adjuster

Injector bore

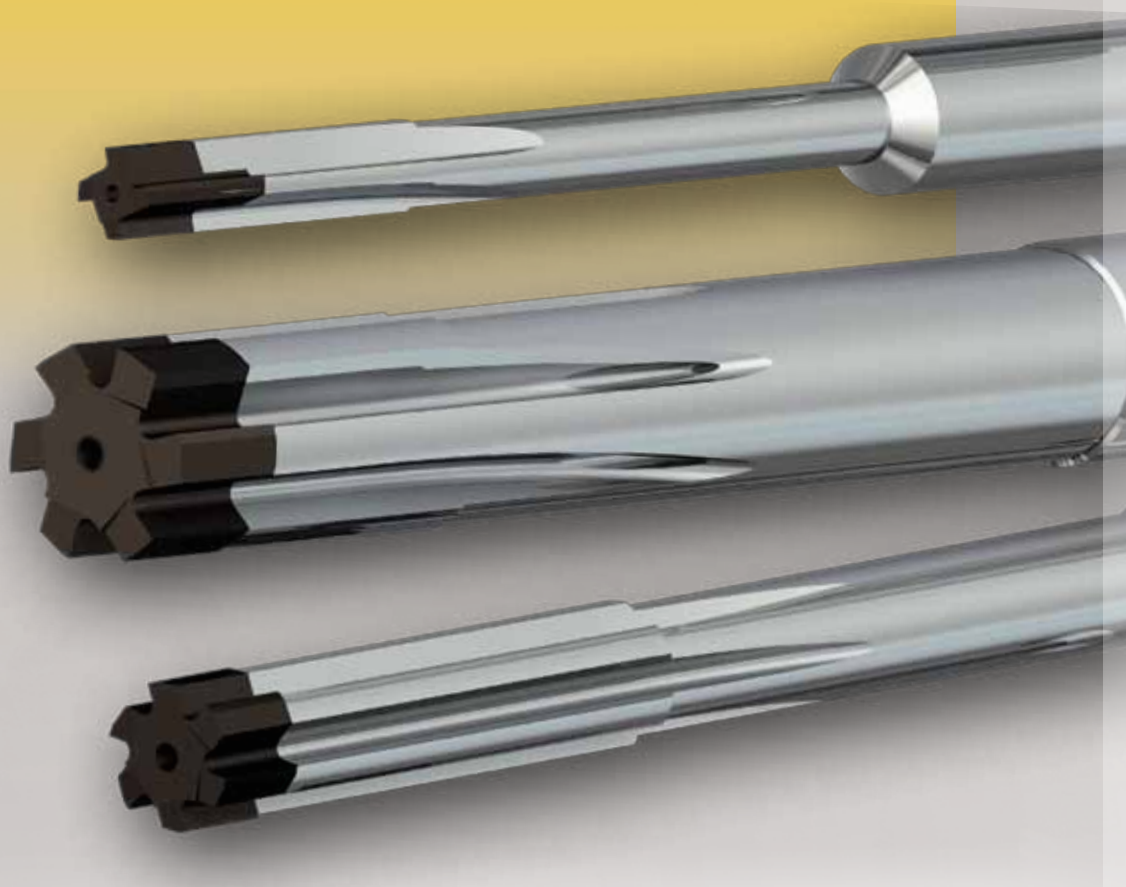
Tooling know-how from a single source

The machining of turbochargers is the perfect example of a highly complex, extremely demanding machining task. Components in a variety of materials must be machined with µm accuracy so that the turbocharger can meet the extreme demands of every day use.

Guhring provides you with intelligent, powerful and highly accurate tooling solutions from one source for all turbocharger machining matters that harmonise perfectly in your production.

Your advantages:

> **perfectly co-ordinated tooling solutions**
> **a smooth production process**
> **a contact person to answer all your machining questions**



PR 1000 M reamers:

Smallest diameters with a high number of flutes

- from Ø 2.0 mm with 4 flutes
- from Ø 3.0 mm with 6 flutes

Maximum performance for super-fine finishing of very small blind hole and through hole diameters!

COLD SIDE

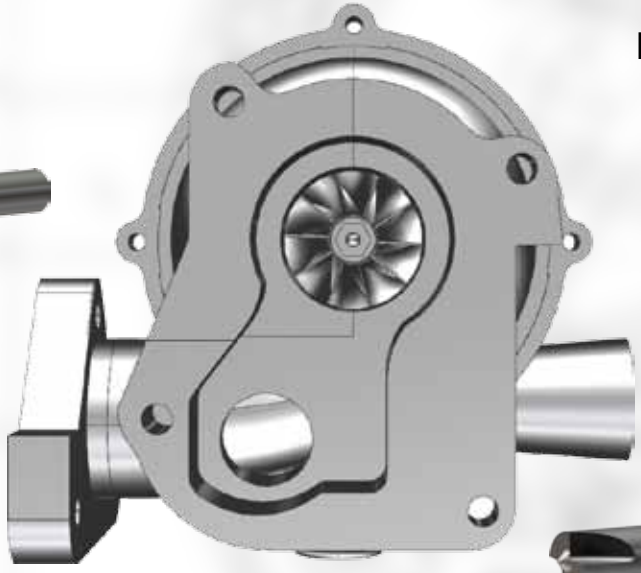
Compressor wheel
Material: AlSi

Shaft bore

Solid carbide pilot drill
N = 8000 1/min
f = 0.17 mm/rev.

Solid carbide pre-drill
N = 8000 1/min
f = 0.17 mm/rev.

PR 1000 M
N = 5000 1/min
f = 0.25 mm/rev.

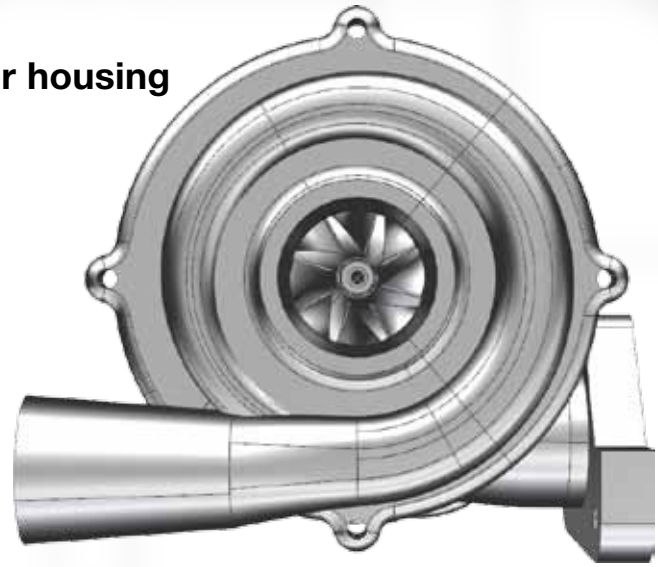


Blade milling

Solid carbide radius milling cutter
N = 24000 1/min
f = 0,14 mm/rev.

Countersink/chamfer tool
N = 6000 1/min
f = 0,10 mm/rev.

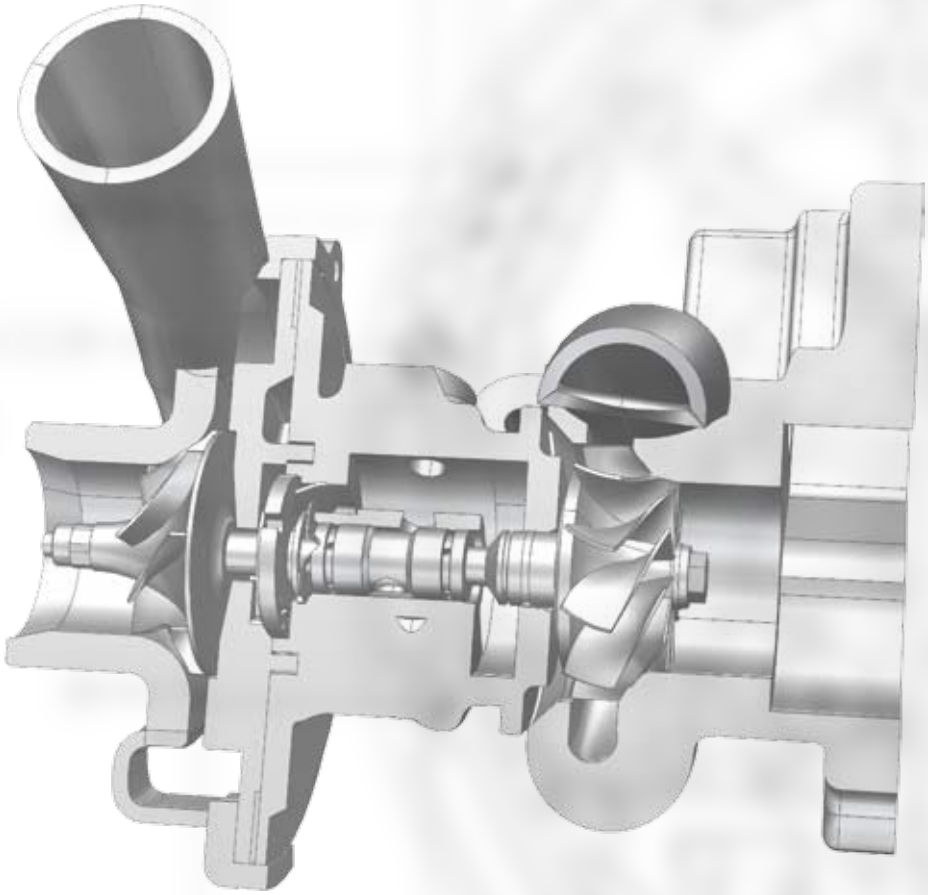
Compressor housing
Material: AlSi



Tap M10
N = 1200 1/min
P = 1.5

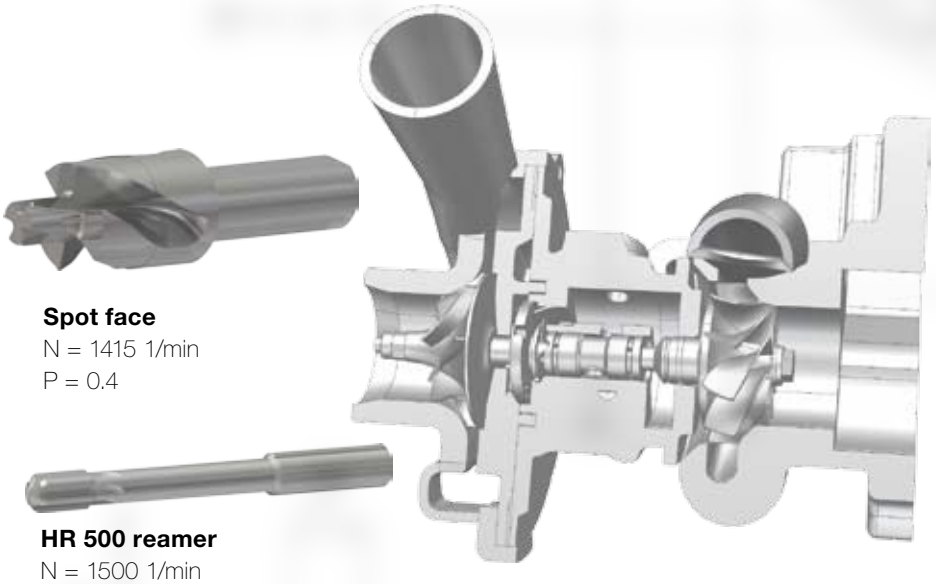
PCD overturning tool
N = 10000 1/min
f = 0.4 mm/rev.

Adjustable PCD reamer
N = 8000 1/min
f = 0.6 mm/rev.



BEARING HOUSING

Material: GG



Spot face
N = 1415 1/min
P = 0.4

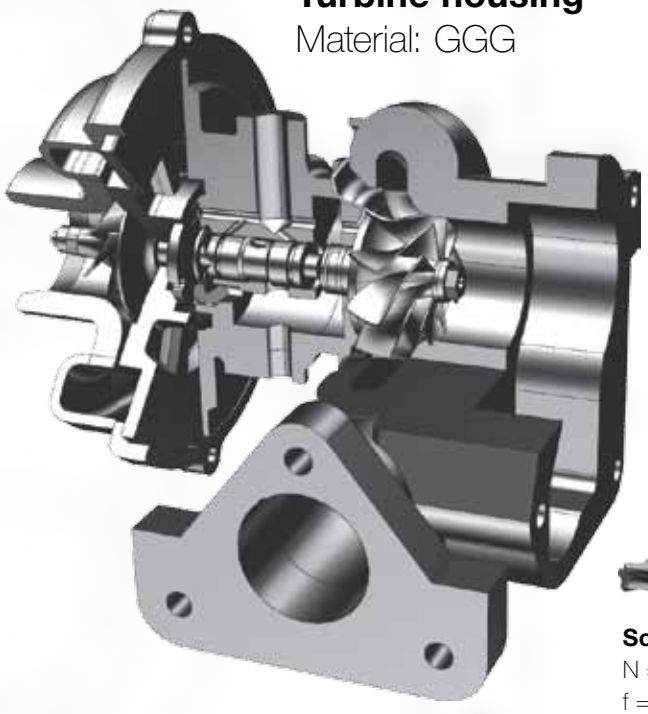
Tap M10
N = 1000 1/min
P = 1.5

HR 500 reamer
N = 1500 1/min
f = 0.46 mm/rev.

Guhring provides optimal technical and economic solutions for the machining of all sub-assemblies. Complete machining concepts are not regarded as suitable due to the diversity of turbochargers and manufacturing processes. The policy is **individual customer solutions.**

HOT SIDE

Turbine housing
Material: GGG

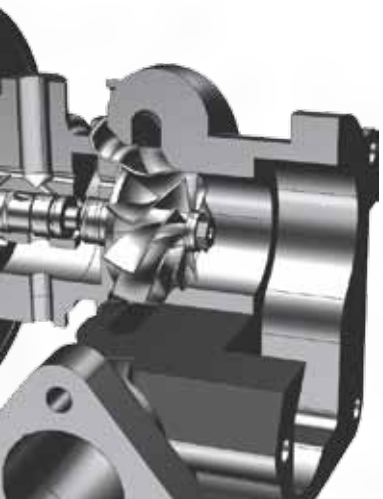


Solid carbide step drill
N = 1270 1/min
f = 0.3 mm/rev.

Solid carbide contour cutter
N = 2785 1/min
f = 0.53 mm/rev.

Solid carbide combi cutter
N = 2785 1/min
f = 0.36 mm/rev.

Hollfelder-Guhring machining concept
out of standard components

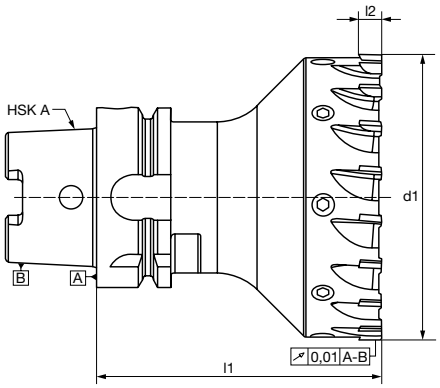


Turbine wheel
Material: Inconel

HSS centre drill
N = 3500 1/min
f = 0.015 mm/rev.

Guhring no.	**3016**
Standard	**Guhring std.**
Tool material	**PCD-tipped**
Surface	◯
Type	**PF 1000 G**
Cutting direction	**right-hand**
Discount group	**110**
Techn. data page	

NEW



d1	HSK-A	l1	l2	Z	Code no.	Availability
mm		mm	mm			
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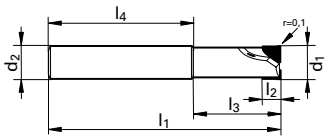
40.000	63	100.00	8.00	10	40.000	●
50.000	63	100.00	8.00	12	50.000	●
63.000	63	100.00	8.00	14	63.000	●
80.000	63	100.00	8.00	16	80.000	●
100.000	63	100.00	8.00	18	100.000	●
125.000	63	100.00	8.00	22	125.000	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

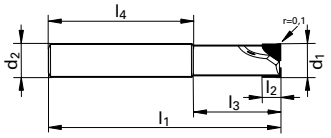
Guhring no.	**5492**
Standard	**Guhring std.**
Tool material	**PCD**
Surface	◯
Type	
Shank design	**HA**
Helix	**0°**
Cooling	**axial**
Discount group	**110**
Techn. data page	



d1	d2	l1	l2	l3	l4	Z	Code no.	Availability
mm	mm	mm	mm	mm	mm			
4.000	6.000	51.00	6.00	15.00	36.00	2	4.000	●
5.000	6.000	51.00	8.00	15.00	36.00	2	5.000	●
6.000	6.000	57.00	8.00	21.00	36.00	2	6.000	●
8.000	8.000	63.00	8.00	27.00	36.00	2	8.000	●
8.000	8.000	63.00	12.00	27.00	36.00	2	8.001	●
10.000	10.000	72.00	8.00	32.00	40.00	2	10.000	●
10.000	10.000	72.00	16.00	32.00	40.00	2	10.001	●
12.000	12.000	83.00	8.00	38.00	45.00	2	12.000	●
12.000	12.000	83.00	16.00	38.00	45.00	2	12.001	●
14.000	14.000	83.00	8.00	38.00	45.00	2	14.000	●
14.000	14.000	83.00	16.00	38.00	45.00	2	14.001	●
16.000	16.000	100.00	12.00	52.00	48.00	2	16.000	●
16.000	16.000	100.00	20.00	52.00	48.00	2	16.001	●
18.000	18.000	100.00	12.00	52.00	48.00	2	18.000	●
18.000	18.000	100.00	20.00	52.00	48.00	2	18.001	●
20.000	20.000	100.00	12.00	50.00	50.00	2	20.000	●
20.000	20.000	100.00	20.00	50.00	50.00	2	20.001	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**5493**
Standard	**Guhring std.**
Tool material	**PCD**
Surface	○
Type	
Shank design	**DZ**
Helix	**0°**
Cooling	**axial**
Discount group	**110**
Techn. data page	



d1	d2	l1	l2	l3	l4	Z	Code no.	Availability
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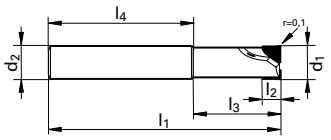
4.000	6.000	70.00	6.00	15.00	55.00	2	4.000	●
5.000	6.000	70.00	8.00	15.00	55.00	2	5.000	●
6.000	6.000	75.00	8.00	21.00	54.00	2	6.000	●
8.000	8.000	100.00	8.00	27.00	73.00	2	8.000	●
8.000	8.000	100.00	12.00	27.00	73.00	2	8.001	●
10.000	10.000	100.00	8.00	32.00	68.00	2	10.000	●
10.000	10.000	100.00	16.00	32.00	68.00	2	10.001	●
12.000	12.000	100.00	8.00	38.00	62.00	2	12.000	●
12.000	12.000	100.00	16.00	38.00	62.00	2	12.001	●
14.000	14.000	100.00	8.00	38.00	62.00	2	14.000	●
14.000	14.000	100.00	16.00	38.00	62.00	2	14.001	●
16.000	16.000	150.00	12.00	52.00	98.00	2	16.000	●
16.000	16.000	150.00	20.00	52.00	98.00	2	16.001	●
18.000	18.000	125.00	12.00	52.00	73.00	2	18.000	●
18.000	18.000	125.00	20.00	52.00	73.00	2	18.001	●
18.000	18.000	150.00	20.00	52.00	98.00	2	18.002	●
18.000	18.000	150.00	12.00	52.00	98.00	2	18.003	●
20.000	20.000	150.00	12.00	50.00	100.00	2	20.000	●
20.000	20.000	150.00	20.00	50.00	100.00	2	20.001	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	5495
Standard	Guhring std.
Tool material	PCD
Surface	◯
Type	
Shank design	HA
Helix	0°
Cooling	axial
Discount group	110
Techn. data page	

NEW



d1	d2	l1	l2	l3	l4	Z	Code no.	Availability
mm	mm	mm	mm	mm	mm			
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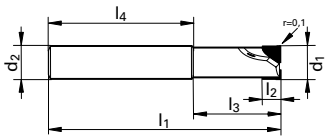
14.000	14.000	83.00	16.00	38.00	45.00	3	14.001	●
16.000	16.000	100.00	12.00	52.00	48.00	3	16.000	●
16.000	16.000	100.00	20.00	52.00	48.00	3	16.001	●
18.000	18.000	100.00	12.00	52.00	48.00	3	18.000	●
18.000	18.000	100.00	20.00	52.00	48.00	3	18.001	●
20.000	20.000	100.00	12.00	50.00	50.00	3	20.000	●
20.000	20.000	100.00	20.00	50.00	50.00	3	20.001	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**5496**
Standard	**Guhring std.**
Tool material	**PCD**
Surface	○
Type	
Shank design	**DZ**
Helix	**0°**
Cooling	**axial**
Discount group	**110**
Techn. data page	

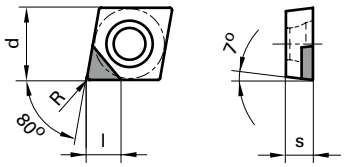
NEW



d1	d2	l1	l2	l3	l4	Z	Code no.	Availability
mm	mm	mm	mm	mm	mm			
14.000	14.000	100.00	8.00	38.00	62.00	3	14.000	●
14.000	14.000	100.00	16.00	38.00	62.00	3	14.001	●
16.000	16.000	150.00	12.00	52.00	98.00	3	16.000	●
16.000	16.000	150.00	20.00	52.00	98.00	3	16.001	●
18.000	18.000	150.00	12.00	52.00	98.00	3	18.000	●
18.000	18.000	150.00	20.00	52.00	98.00	3	18.001	●
20.000	20.000	150.00	12.00	50.00	100.00	3	20.000	●
20.000	20.000	150.00	20.00	50.00	100.00	3	20.001	●

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

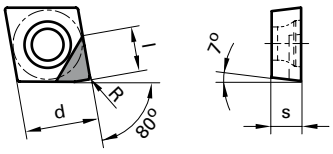
Guhring no.	**7665**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CCGW0602	6.350	2.380	0.20	3.00	62.020	●
CCGW0602	6.350	2.380	0.40	3.00	62.040	●
CCGW09T3	9.525	3.970	0.20	4.00	93.020	●
CCGW09T3	9.525	3.970	0.40	4.00	93.040	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

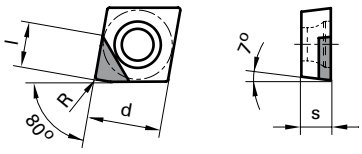
Guhring no.	**7671**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	◯
Cutting direction	**right-hand**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CCGW0602	6.350	2.380	0.20	3.75	62.020	●
CCGW0602	6.350	2.380	0.40	3.75	62.040	●
CCGW09T3	9.525	3.970	0.20	5.64	93.020	●
CCGW09T3	9.525	3.970	0.40	5.64	93.040	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

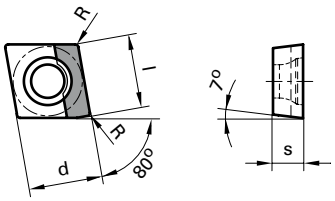
Guhring no.	**7670**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	◯
Cutting direction	**left-hand**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CCGW0602	6.350	2.380	0.20	3.75	62.020	●
CCGW0602	6.350	2.380	0.40	3.75	62.040	●
CCGW09T3	9.525	3.970	0.20	5.64	93.020	●
CCGW09T3	9.525	3.970	0.40	5.64	93.040	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

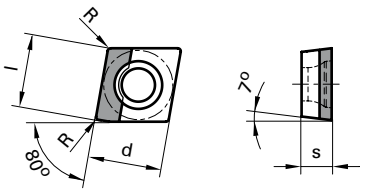
Guhring no.	**7673**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	○
Cutting direction	**right-hand**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CCGW0602	6.350	2.380	0.20	6.41	62.020	●
CCGW0602	6.350	2.380	0.40	6.41	62.040	●
CCGW09T3	9.525	3.970	0.20	9.63	93.020	●
CCGW09T3	9.525	3.970	0.40	9.63	93.040	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

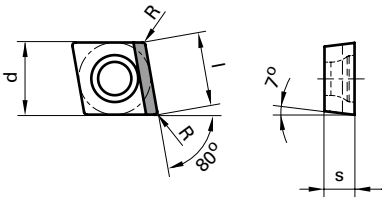
Guhring no.	**7672**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	◯
Cutting direction	**left-hand**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CCGW0602	6.350	2.380	0.20	6.41	62.020	●
CCGW0602	6.350	2.380	0.40	6.41	62.040	●
CCGW09T3	9.525	3.970	0.20	9.63	93.020	●
CCGW09T3	9.525	3.970	0.40	9.63	93.040	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

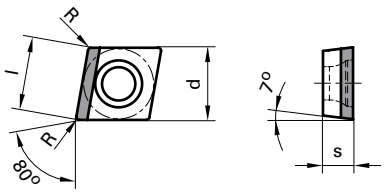
Guhring no.	**7667**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	○
Cutting direction	**right-hand**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CCGW0602	6.350	2.380	0.20	6.45	62.020	●
CCGW0602	6.350	2.380	0.40	6.45	62.040	●
CCGW09T3	9.525	3.970	0.20	9.67	93.020	●
CCGW09T3	9.525	3.970	0.40	9.67	93.040	●

○ bright ◯ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

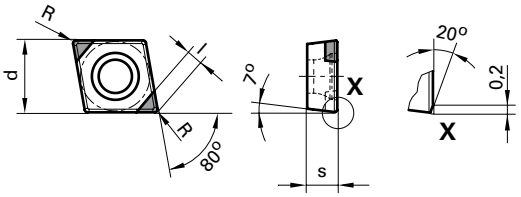
Guhring no.	**7666**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	◯
Cutting direction	**left-hand**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CCGW0602	6.350	2.380	0.20	6.45	62.020	●
CCGW0602	6.350	2.380	0.40	6.45	62.040	●
CCGW09T3	9.525	3.970	0.20	9.67	93.020	●
CCGW09T3	9.525	3.970	0.40	9.67	93.040	●
CCGW1204	12.700	4.760	0.40	12.90	124.040	●
CCGW1204	12.700	4.760	0.80	12.90	124.080	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

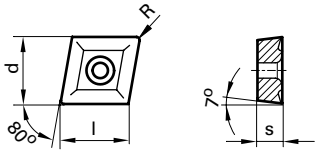
Guhring no.	7683	7684
Standard	DIN ISO 16462	
Tool material	CBN 1023	CBN 2028
Application		
Surface	○	○
Cutting direction	neutral	neutral
Discount group	142	142
Techn. data page		



ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
CCGW0602	6.350	2.380	0.40	2.43	62.040	●	●
CCGW09T3	9.525	3.970	0.40	2.82	93.040	●	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

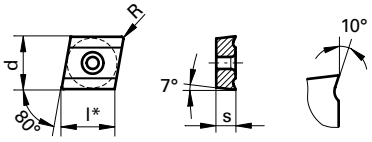
Guhring no.	**7657**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Application	**AL**
Surface	◯
Cutting direction	**neutral**
Discount group	**122**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CCGX0602	6.350	2.380	0.20	6.45	62.020	●
CCGX0602	6.350	2.380	0.40	6.45	62.040	❍
CCGX09T3	9.525	3.970	0.40	9.67	93.040	●
CCGX1204	12.700	4.760	0.80	12.90	124.080	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6693	6698	6679
Standard		Guhring std.	
Tool material	Solid carbide	Solid carbide	Solid carbide
Application	K/P	K/P	K/P
Surface	S	S	A
Cutting direction	right-hand	left-hand	right-hand
Discount group	122	122	122
Techn. data page			
	NEW	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
CCHX0602	6.350	2.380	0.20	6.45	62.020	●	●	●
CCHX0602	6.350	2.380	0.40	6.45	62.040	●	●	●
CCHX0602	6.350	2.380	0.80	6.45	62.080	●	●	●
CCHX09T3	9.525	3.970	0.20	9.67	93.020	●	●	●
CCHX09T3	9.525	3.970	0.40	9.67	93.040	●	●	●
CCHX09T3	9.525	3.970	0.80	9.67	93.080	●	●	●
CCHX1204	12.700	4.760	0.20	12.90	124.020	●	●	●
CCHX1204	12.700	4.760	0.40	12.90	124.040	●	●	●
CCHX1204	12.700	4.760	0.80	12.90	124.080	●	●	●

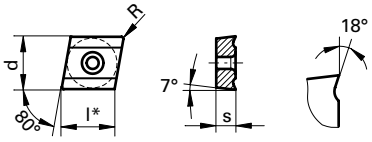
○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

6680	6685	6686	6675	6676	6687	6688
			Guhring std.			
Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide
K/P	K/P	K/P	K/P	K/P	K/P	K/P
A	a	a	A	A	a	a
left-hand	right-hand	left-hand	right-hand	left-hand	right-hand	left-hand
122	122	122	122	122	122	122
NEW	NEW	NEW	NEW	NEW	NEW	NEW

Availability						
●	●	●	●	●	●	●
●	●	●	●	●	●	●
●	●	●	●	●	●	●
●	●	●	●	●	●	●
●	●	●	●	●	●	●
●	●	●	●	●	●	●
●	●	●	●	●	●	●
●	●	●	●	●	●	●
●	●	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6661	6662	6663	6664
Standard	Guhring std.			
Tool material	Solid carbide	Solid carbide	Solid carbide	Solid carbide
Application	K/P	K/P	K/P	K/P
Surface	a	a	a	a
Cutting direction	right-hand	left-hand	right-hand	left-hand
Discount group	122	122	122	122
Techn. data page				
	NEW	NEW	NEW	NEW

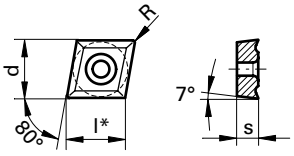


ISO standard	d	s	R	l	Code no.	Availability			
	mm	mm	mm	mm					
CCHX0602	6.350	2.380	0.20	6.45	62.020	●	●	●	●
CCHX0602	6.350	2.380	0.40	6.45	62.040	●	●	●	●
CCHX0602	6.350	2.380	0.80	6.45	62.080	●	●	●	●
CCHX09T3	9.525	3.970	0.20	9.67	93.020	●	●	●	●
CCHX09T3	9.525	3.970	0.40	9.67	93.040	●	●	●	●
CCHX09T3	9.525	3.970	0.80	9.67	93.080	●	●	●	●
CCHX1204	12.700	4.760	0.20	12.90	124.020	●	●	●	●
CCHX1204	12.700	4.760	0.40	12.90	124.040	●	●	●	●
CCHX1204	12.700	4.760	0.80	12.90	124.080	●	●	●	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	6272	7658	7659	7660
Standard	Guhring std.			
Tool material	Solid carbide	Solid carbide	Solid carbide	Solid carbide
Application	K/P	K	M	P
Surface	A	S	S	S
Cutting direction	neutral	neutral	neutral	neutral
Discount group	142	122	122	122
Techn. data page				

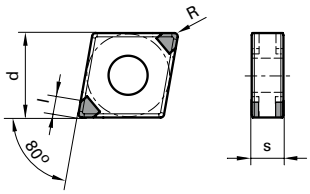
NEW



ISO standard	d	s	R	l	Code no.	Availability			
	mm	mm	mm	mm					
CCMT0602	6.350	2.380	0.40	6.40	62.040	●	❍		
CCMT0602	6.350	2.380	0.80	6.45	62.080		❍		
CCMT09T3	9.525	3.970	0.40	9.70	93.040	●	❍	❍	❍
CCMT09T3	9.525	3.970	0.80	9.70	93.080	●			❍
CCMT1204	12.700	4.760	0.80	12.90	124.080	●	●		
CCMT1204	12.700	4.760	1.20	12.90	124.120	●			

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

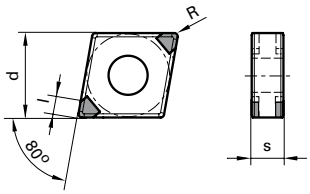
Guhring no.	7695	7697
Standard	DIN ISO 16462	
Tool material	CBN 1023	CBN 1023
Application		
Surface	○	○
Cutting direction	neutral	neutral
Discount group	142	142
Techn. data page		



ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
CNGA1204	12.700	4.760	0.40	2.50	124.040	●	●
CNGA1204	12.700	4.760	0.80	2.40	124.080	●	●
CNGA1204	12.700	4.760	1.20	2.30	124.120	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

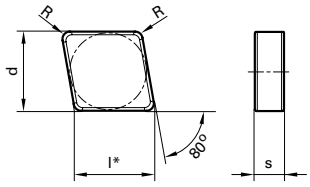
Guhring no.	7696	7698
Standard	DIN ISO 16462	
Tool material	CBN 1023	CBN 1023
Application	Wiper	Wiper
Surface	◯	◯
Cutting direction	neutral	neutral
Discount group	142	142
Techn. data page		



ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
CNGA1204	12.700	4.760	0.80	2.40	124.080	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

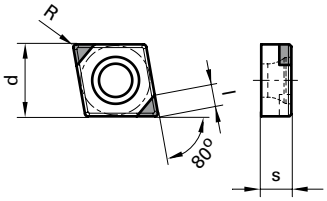
Guhring no.	**7689**
Standard	**DIN ISO 16462**
Tool material	**CBN 3018**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CNGN0904	9.525	4.760	0.80	9.67	94.080	●
CNGN0904	9.525	4.760	1.20	9.67	94.120	●
CNGN1204	12.700	4.760	1.20	12.90	124.120	●
CNGN1204	12.700	4.760	1.60	12.90	124.160	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

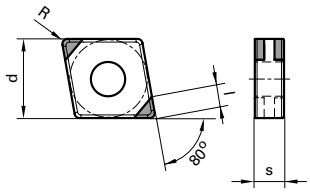
Guhring no.	7713	7714
Standard	DIN ISO 16462	
Tool material	CBN 1023	CBN 2028
Application		
Surface	○	○
Cutting direction	neutral	neutral
Discount group	142	142
Techn. data page		



ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
CNGW0602	6.350	2.380	0.40	2.43	62.040	●	●
CNGW09T3	9.525	3.970	0.40	2.82	93.040	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

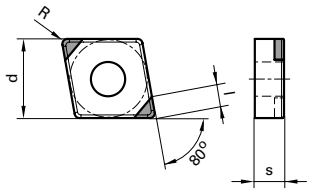
Guhring no.	7687	7688
Standard	DIN ISO 16462	
Tool material	CBN 1023	CBN 2028
Application		
Surface	○	○
Cutting direction	neutral	neutral
Discount group	142	142
Techn. data page		



ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
CNMA1204	12.700	4.760	0.80	3.33	124.080	●	●
CNMA1204	12.700	4.760	1.20	3.25	124.120	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	7685	7686
Standard	DIN ISO 16462	
Tool material	CBN 1023	CBN 2028
Application		
Surface	○	○
Cutting direction	neutral	neutral
Discount group	142	142
Techn. data page		

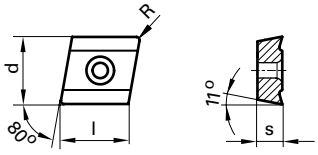


ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
CNMA1204	12.700	4.760	0.80	3.33	124.080	●	●
CNMA1204	12.700	4.760	1.20	3.25	124.120	●	●

Indexable inserts ISO

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	7635	7645	7646	7639
Standard	Guhring std.			
Tool material	Solid carbide	Solid carbide	Solid carbide	Solid carbide
Application	AL	P	P	M
Surface	○	S	S	A
Cutting direction	right-hand	right-hand	left-hand	left-hand
Discount group	142	142	142	142
Techn. data page				

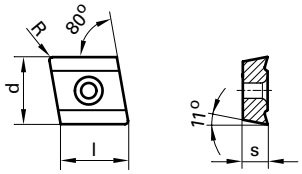


ISO standard	d	s	R	l	Code no.	Availability			
	mm	mm	mm	mm					
CPGT0502	5.560	2.380	0.20	5.64	52.020	❍	❍		
CPGT0502	5.560	2.380	0.40	5.64	52.040	●	●		
CPGT0602	6.350	2.380	0.20	6.45	62.020	❍	●	●	❍
CPGT0602	6.350	2.380	0.40	6.45	62.040	●	●		❍
CPGT09T3	9.525	3.970	0.80	9.67	93.080	●	●		

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	7634	7636
Standard	Guhring std.	
Tool material	Solid carbide	Solid carbide
Application	AL	M
Surface	○	A
Cutting direction	left-hand	right-hand
Discount group	142	142
Techn. data page		

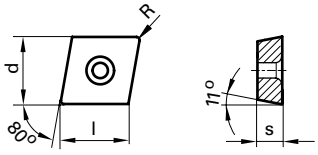
NEW



ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
CPGT0502	5.560	2.380	0.40	5.64	52.040	❍	●
CPGT0602	6.350	2.380	0.20	6.45	62.020	❍	
CPGT0602	6.350	2.380	0.40	6.45	62.040	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

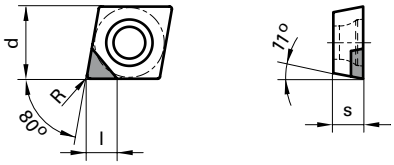
Guhring no.	7632
Standard	Guhring std.
Tool material	Solid carbide
Application	K
Surface	A
Cutting direction	neutral
Discount group	142
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CPGW0502	5.560	2.380	0.20	5.64	52.020	○
CPGW0502	5.560	2.380	0.40	5.64	52.040	●
CPGW0602	6.350	2.380	0.20	6.45	62.020	○
CPGW0602	6.350	2.380	0.40	6.45	62.040	●
CPGW09T3	9.525	3.970	0.80	9.67	93.080	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

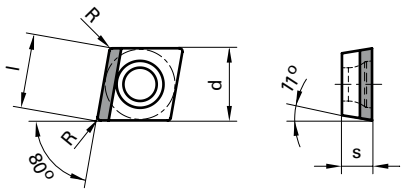
Guhring no.	**7668**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CPGW0602	6.350	2.380	0.20	3.00	62.020	●
CPGW0602	6.350	2.380	0.40	3.00	62.040	●
CPGW09T3	9.525	3.970	0.20	4.00	93.020	●
CPGW09T3	9.525	3.970	0.40	4.00	93.040	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

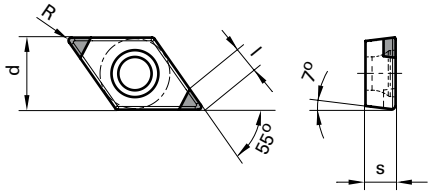
Guhring no.	**7669**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	○
Cutting direction	**left-hand**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
CPGW0602	6.350	2.380	0.20	6.45	62.020	●
CPGW0602	6.350	2.380	0.40	6.45	62.040	●
CPGW09T3	9.525	3.970	0.20	9.67	93.020	●
CPGW09T3	9.525	3.970	0.40	9.67	93.040	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	7691	7692
Standard	DIN ISO 16462	
Tool material	CBN 1023	CBN 2028
Application		
Surface	○	○
Cutting direction	neutral	neutral
Discount group	142	142
Techn. data page		

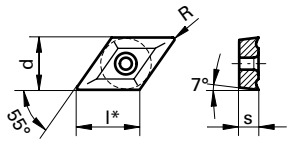


ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
DCGW0702	6.350	2.380	0.20	2.90	72.020	●	●
DCGW0702	6.350	2.380	0.40	2.72	72.040	●	●
DCGW11T3	9.525	3.970	0.40	2.97	113.040	●	●
DCGW11T3	9.525	3.970	0.80	2.50	113.080	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6237
Standard	Guhring std.
Tool material	Solid carbide
Application	K/P
Surface	A
Cutting direction	neutral
Discount group	142
Techn. data page	

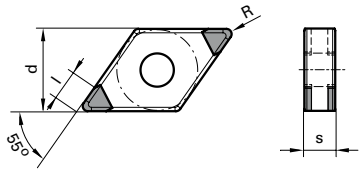
NEW



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
DCMT0702	6.350	2.380	0.20	7.75	72.020	●
DCMT0702	6.350	2.380	0.40	7.75	72.040	●
DCMT11T3	9.525	3.970	0.20	11.60	113.020	●
DCMT11T3	9.525	3.970	0.40	11.60	113.040	●
DCMT11T3	9.525	3.970	0.80	11.60	113.080	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

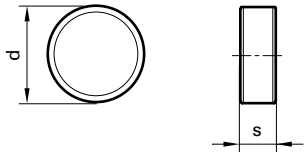
Guhring no.	7701	7702
Standard	DIN ISO 16462	
Tool material	CBN 1023	CBN 1023
Application		
Surface	○	○
Cutting direction	neutral	neutral
Discount group	142	142
Techn. data page		



ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
DNGA1504	12.700	4.760	0.40	3.40	154.040	●	●
DNGA1504	12.700	4.760	0.80	3.00	154.080	●	●
DNGA1504	12.700	4.760	1.20	2.50	154.120	●	●

Guhring no.	7715
Standard	Guhring std.
Tool material	CBN 3018
Application	
Surface	○
Cutting direction	neutral
Discount group	142
Techn. data page	

NEW

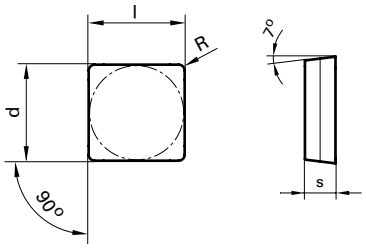


ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
RNGN1204	12.700	4.760		39.878	124.000	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**7716**
Standard	**DIN ISO 16462**
Tool material	**CBN 2028**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	

NEW

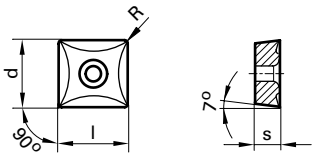


ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
SCGN0601	6.350	6.350	0.20	6.35	61.020	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	7641	7642	7644	7643
Standard	Guhring std.			
Tool material	Solid carbide	Solid carbide	Solid carbide	Solid carbide
Application	AL	K	P	M
Surface	○	S	S	A
Cutting direction	neutral	neutral	neutral	neutral
Discount group	142	142	142	142
Techn. data page				

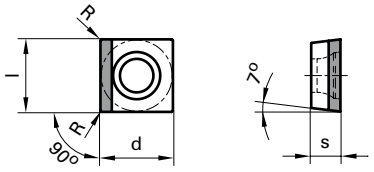
NEW



ISO standard	d	s	R	l	Code no.	Availability			
	mm	mm	mm	mm					
SCGT0602	6.350	2.380	0.40	6.35	62.040	●	●	●	○
SCGT09T3	9.525	3.970	0.40	9.525	93.040	●	●	●	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

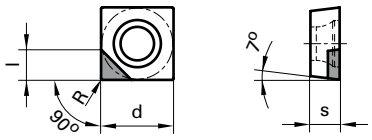
Guhring no.	**7675**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
SCGW0602	6.350	2.380	0.20	6.35	62.020	●
SCGW09T3	9.525	3.970	0.20	9.525	93.020	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

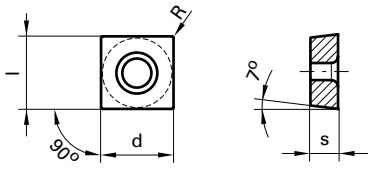
Guhring no.	**7674**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
SCGW0602	6.350	2.380	0.20	3.00	62.020	●
SCGW09T3	9.525	3.970	0.20	4.00	93.020	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

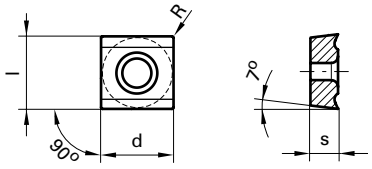
Guhring no.	6350	6300
Standard	Guhring std.	
Tool material	Solid carbide	Solid carbide
Application	K	K
Surface	◯	◯
Cutting direction	neutral	neutral
Discount group	122	122
Techn. data page		
	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
SCHW09T3	9.525	3.970	0.20	9.525	93.020	●	●
SCHW09T3	9.525	3.970	0.40	9.525	93.040	●	●
SCHW09T3	9.525	3.970	0.80	9.525	93.080	●	●
SCHW1204	12.700	4.760	0.20	12.70	124.020	●	●
SCHW1204	12.700	4.760	0.40	12.70	124.040	●	●
SCHW1204	12.700	4.760	0.80	12.70	124.080	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

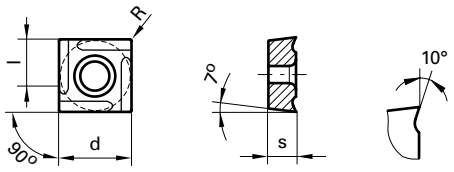
Guhring no.	1657	1655	1656
Standard		Guhring std.	
Tool material	HSCO	Solid carbide	Solid carbide
Application	K/P	K15	P25
Surface	S	○	○
Cutting direction	right-hand	right-hand	right-hand
Discount group	104	104	104
Techn. data page			



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
SCHX0602	6.350	2.380	0.40	6.35	62.040	●	●	●
SCHX0903	9.525	3.180	0.40	9.525	93.040	●	●	●
SCHX1204	12.700	4.760	0.40	12.70	124.040		●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

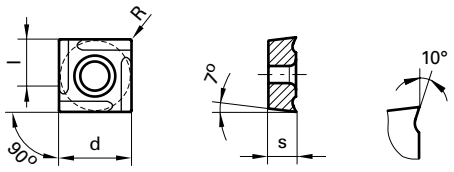
Guhring no.	6304	6306	6315	6317
Standard	Guhring std.			
Tool material	Solid carbide	Solid carbide	Solid carbide	Solid carbide
Application	K	K	K/P	K/P
Surface	○	○	S	S
Cutting direction	right-hand	left-hand	right-hand	left-hand
Discount group	122	122	122	122
Techn. data page				
	NEW	NEW	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability			
	mm	mm	mm	mm					
SCHX09T3	9.525	3.970	0.20	5.00	93.020	●	●	●	●
SCHX09T3	9.525	3.970	0.40	5.00	93.040	●	●	●	●
SCHX09T3	9.525	3.970	0.80	5.00	93.080	●	●	●	●
SCHX1204	12.700	4.760	0.20	5.00	124.020	●	●	●	●
SCHX1204	12.700	4.760	0.40	5.00	124.040	●	●	●	●
SCHX1204	12.700	4.760	0.80	5.00	124.080	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6325	6327	6335	6337
Standard	Guhring std.			
Tool material	Solid carbide	Solid carbide	Solid carbide	Solid carbide
Application	K/P	K/P	K/P	K/P
Surface	A	A	a	a
Cutting direction	right-hand	left-hand	right-hand	left-hand
Discount group	122	122	122	122
Techn. data page				
	NEW	NEW	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability			
	mm	mm	mm	mm					
SCHX09T3	9.525	3.970	0.20	5.00	93.020	●	●	●	●
SCHX09T3	9.525	3.970	0.40	5.00	93.040	●	●	●	●
SCHX09T3	9.525	3.970	0.80	5.00	93.080	●	●	●	●
SCHX1204	12.700	4.760	0.20	5.00	124.020	●	●	●	●
SCHX1204	12.700	4.760	0.40	5.00	124.040	●	●	●	●
SCHX1204	12.700	4.760	0.80	5.00	124.080	●	●	●	●

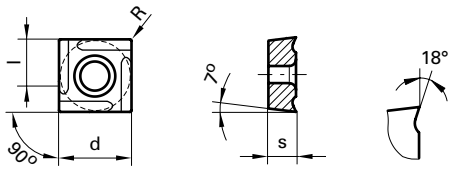
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

6354	6356	6365	6367	6375	6377	6385	6387
Guhring std.							
Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide
K	K	K/P	K/P	K/P	K/P	K/P	K/P
○	○	S	S	A	A	a	a
right-hand	left-hand	right-hand	left-hand	right-hand	left-hand	right-hand	left-hand
122	122	122	122	122	122	122	122
NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW

Availability							
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6303	6305	6314
Standard		Guhring std.	
Tool material	Solid carbide	Solid carbide	Solid carbide
Application	K	K	K/P
Surface	○	○	Ⓢ
Cutting direction	right-hand	left-hand	right-hand
Discount group	122	122	122
Techn. data page			
	NEW	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
SCHX09T3	9.525	3.970	0.20	5.00	93.020	●	●	●
SCHX09T3	9.525	3.970	0.40	5.00	93.040	●	●	●
SCHX09T3	9.525	3.970	0.80	5.00	93.080	●	●	●
SCHX1204	12.700	4.760	0.20	5.00	124.020	●	●	●
SCHX1204	12.700	4.760	0.40	5.00	124.040	●	●	●
SCHX1204	12.700	4.760	0.80	5.00	124.080	●	●	●

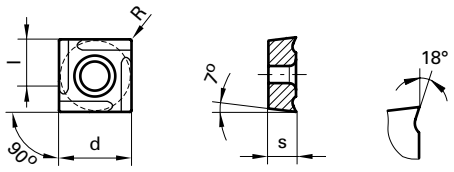
○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

6316	6324	6326	6334	6336
		Guhring std.		
Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide
K/P	K/P	K/P	K/P	K/P
S	A	A	a	a
left-hand	right-hand	left-hand	right-hand	left-hand
122	122	122	122	122
NEW	NEW	NEW	NEW	NEW

Availability				
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6353	6355	6364
Standard	Guhring std.		
Tool material	Solid carbide	Solid carbide	Solid carbide
Application	K	K	K/P
Surface	○	○	Ⓢ
Cutting direction	right-hand	left-hand	right-hand
Discount group	122	122	122
Techn. data page			
	NEW	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
SCHX09T3	9.525	3.970	0.20	5.00	93.020	●	●	●
SCHX09T3	9.525	3.970	0.40	5.00	93.040	●	●	●
SCHX09T3	9.525	3.970	0.80	5.00	93.080	●	●	●
SCHX1204	12.700	4.760	0.20	5.00	124.020	●	●	●
SCHX1204	12.700	4.760	0.40	5.00	124.040	●	●	●
SCHX1204	12.700	4.760	0.80	5.00	124.080	●	●	●

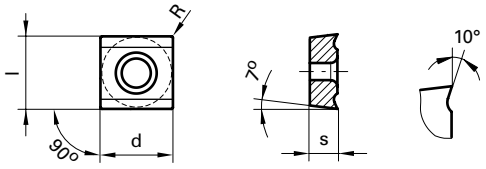
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

6366	6374	6376	6384	6386
		Guhring std.		
Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide
K/P	K/P	K/P	K/P	K/P
S	A	A	a	a
left-hand	right-hand	left-hand	right-hand	left-hand
122	122	122	122	122
NEW	NEW	NEW	NEW	NEW

Availability				
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6302	6313	6323
Standard		Guhring std.	
Tool material	Solid carbide	Solid carbide	Solid carbide
Application	K	K/P	K/P
Surface	○	S	A
Cutting direction	neutral	neutral	neutral
Discount group	122	122	122
Techn. data page			
	NEW	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
SCHX09T3	9.525	3.970	0.20	9.525	93.020	●	●	●
SCHX09T3	9.525	3.970	0.40	9.525	93.040	●	●	●
SCHX09T3	9.525	3.970	0.80	9.525	93.080	●	●	●
SCHX1204	12.700	4.760	0.20	12.70	124.020	●	●	●
SCHX1204	12.700	4.760	0.40	12.70	124.040	●	●	●
SCHX1204	12.700	4.760	0.80	12.70	124.080	●	●	●

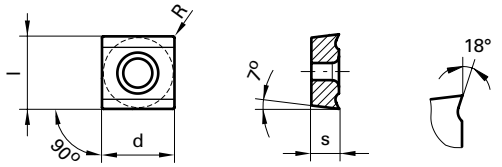
○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ◉ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

6333	6352	6363	6373	6383
		Guhring std.		
Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide
K/P	K	K/P	K/P	K/P
a	○	S	A	a
neutral	neutral	neutral	neutral	neutral
122	122	122	122	122
NEW	NEW	NEW	NEW	NEW

Availability				
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6301	6312	6322
Standard		Guhring std.	
Tool material	Solid carbide	Solid carbide	Solid carbide
Application	K	K/P	K/P
Surface	○	S	A
Cutting direction	neutral	neutral	neutral
Discount group	122	122	122
Techn. data page			
	NEW	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
SCHX09T3	9.525	3.970	0.20	9.525	93.020	●	●	●
SCHX09T3	9.525	3.970	0.40	9.525	93.040	●	●	●
SCHX09T3	9.525	3.970	0.80	9.525	93.080	●	●	●
SCHX1204	12.700	4.760	0.20	12.70	124.020	●	●	●
SCHX1204	12.700	4.760	0.40	12.70	124.040	●	●	●
SCHX1204	12.700	4.760	0.80	12.70	124.080	●	●	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

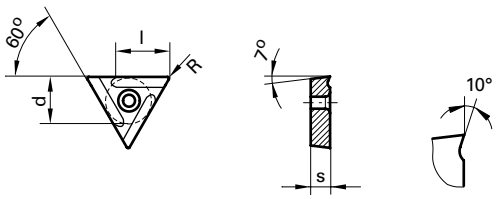
6332	6351	6362	6372	6382
		Guhring std.		
Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide
K/P	K	K/P	K/P	K/P
a	○	S	A	a
neutral	neutral	neutral	neutral	neutral
122	122	122	122	122
NEW	NEW	NEW	NEW	NEW

Availability				
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6239
Standard	Guhring std.
Tool material	Solid carbide
Application	K/P
Surface	A
Cutting direction	neutral
Discount group	142
Techn. data page	

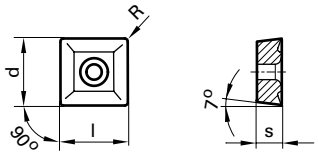
NEW



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
SCMT09T3	9.525	3.970	0.40	9.525	93.040	●
SCMT09T3	9.525	3.970	0.80	9.525	93.080	●
SCMT1204	12.700	4.760	0.40	12.70	124.040	●
SCMT1204	12.700	4.760	0.80	12.70	124.080	●
SCMT1204	12.700	4.760	1.20	12.70	124.120	●

○ bright ◎ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

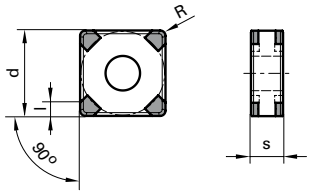
Guhring no.	7650	7652	7651
Standard		Guhring std.	
Tool material	Solid carbide	Solid carbide	Solid carbide
Application	K	P	M
Surface	S	S	S
Cutting direction	neutral	neutral	neutral
Discount group	122	122	122
Techn. data page			



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
SCMT09T3	9.525	3.970	0.40	9.525	93.040	●	●	●
SCMT09T3	9.525	3.970	0.80	9.525	93.080	❍	❍	
SCMT1204	12.700	4.760	0.80	12.70	124.080	❍	●	
SCMT1204	12.700	4.760	1.20	12.70	124.120	❍		

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

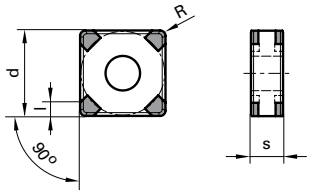
Guhring no.	**7700**
Standard	**DIN ISO 16462**
Tool material	**CBN 1023**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
SNGA1204	12.700	4.760	0.80	2.50	124.080	●
SNGA1204	12.700	4.760	1.20	2.30	124.120	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

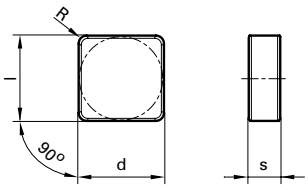
Guhring no.	**7699**
Standard	**DIN ISO 16462**
Tool material	**CBN 1023**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
SNGA1204	12.700	4.760	0.80	2.50	124.080	●
SNGA1204	12.700	4.760	1.20	2.30	124.120	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

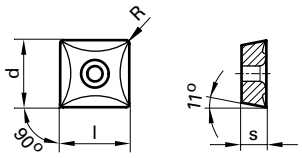
Guhring no.	**7690**
Standard	**DIN ISO 16462**
Tool material	**CBN 3018**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
SNGN0904	9.525	4.760	0.80	9.525	94.080	●
SNGN0904	9.525	4.760	1.20	9.525	94.120	●
SNGN1204	12.700	4.760	1.20	12.70	124.120	●
SNGN1204	12.700	4.760	1.60	12.70	124.160	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

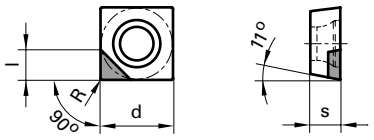
Guhring no.	7647	7649	7648
Standard		Guhring std.	
Tool material	Solid carbide	Solid carbide	Solid carbide
Application	AL	P	M
Surface	○	S	A
Cutting direction	neutral	neutral	neutral
Discount group	142	142	142
Techn. data page			



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
SPGT09T3	9.525	3.970	0.40	9.525	93.040	●	●	○
SPGT09T3	9.525	3.970	0.80	9.525	93.080	●	●	○
SPGT1204	12.700	4.760	0.40	12.70	124.040	●		○

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

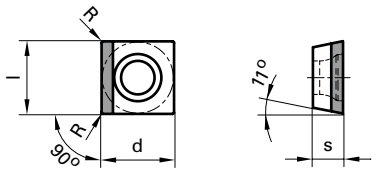
Guhring no.	**7676**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
SPGW0602	6.350	2.380	0.20	3.00	62.020	●
SPGW09T3	9.525	3.970	0.20	4.00	93.020	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

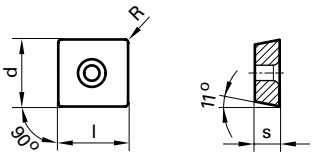
Guhring no.	**7677**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
SPGW0602	6.350	2.380	0.20	6.35	62.020	●
SPGW09T3	9.525	3.970	0.20	9.525	93.020	●

Ⓒ TiCN Ⓒb Carbo Ⓓ Cristall Ⓕ FIRE/nanoFIRE Ⓟ AlCrN Ⓢ TiN Ⓢ+ TiN+ Ⓜ MolyGlide Ⓨ Signum

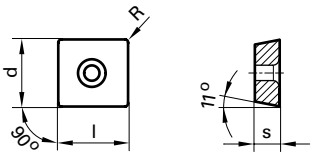
Guhring no.	7640
Standard	Guhring std.
Tool material	Solid carbide
Application	K
Surface	◯
Cutting direction	neutral
Discount group	142
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
SPGW0602	6.350	2.380	0.40	6.35	62.040	●

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

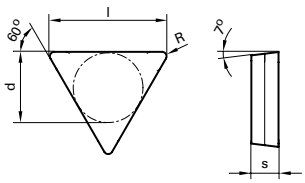
Guhring no.	**7661**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Application	**K**
Surface	**S**
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
SPGW09T3	9.525	3.970	0.40	9.525	93.040	●
SPGW09T3	9.525	3.970	0.80	9.525	93.080	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	7711	7712	7680
Standard	Guhring std.	DIN ISO 16463	DIN ISO 16462
Tool material	Solid carbide	PCD	CBN 1023
Application			
Surface	◯	◯	Ⓢ
Cutting direction	neutral	neutral	neutral
Discount group	142	142	142
Techn. data page			



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
TCCN0601	3.968	1.590	0.20	6.90	61.020	❍	❍	●
TCCN0601	3.968	1.590	0.20	6.90	61.040	❍	❍	
TCCN0601	3.968	1.590	0.40	6.90	61.040			❍
TCCN0902	5.556	2.380	0.40	9.60	92.040			

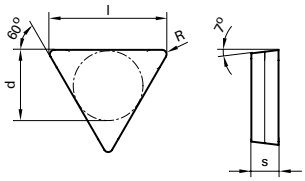
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

7703	7707	7709	7705	7708	7681	7679
DIN ISO 16462						
CBN 1023	CBN 1023	CBN 1024	CBN 1024	CBN 2028	CBN 2028	CBN 2028
S	S	S	S	S	S	S
neutral	neutral	neutral	neutral	neutral	neutral	neutral
142	142	142	142	142	142	142

Availability						
●	●			●	○	●
○	○			○	○	○
		○	○		○	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	7704	7678	7710	7706
Standard	DIN ISO 16462			
Tool material	CBN 2028	CBN 2028	CBN 2026	CBN 2026
Application				
Surface	S	S	S	S
Cutting direction	neutral	neutral	neutral	neutral
Discount group	142	142	142	142
Techn. data page				

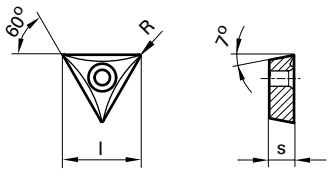


ISO standard	d	s	R	l	Code no.	Availability			
	mm	mm	mm	mm					
TCCN0601	3.968	1.590	0.20	6.90	61.020	●	●		
TCCN0601	3.968	1.590	0.40	6.90	61.040	❍	❍		
TCCN0902	5.556	2.380	0.40	9.60	92.040			❍	❍

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ◍ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**7638**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Application	**K**
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	

NEW

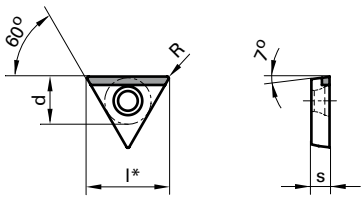


ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
TCGT0902	5.560	2.380	0.20	9.60	92.020	●
TCGT0904	5.560	2.380	0.40	9.60	92.040	●
TCGT1102	6.350	2.380	0.20	11.00	112.020	●
TCGT1102	6.350	2.380	0.40	11.00	112.040	●
TCGT16T3	9.525	3.970	0.40	16.50	163.040	❍

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	7637
Standard	Guhring std.
Tool material	Solid carbide
Application	K
Surface	◯
Cutting direction	neutral
Discount group	142
Techn. data page	

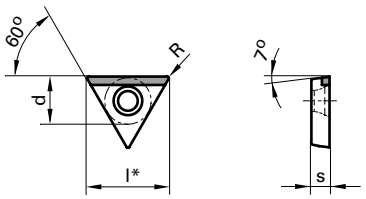
NEW



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
TCGW0902	5.560	2.380	0.20	9.60	92.020	❍
TCGW0902	5.560	2.380	0.40	9.60	92.040	●

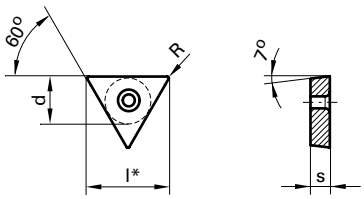
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**7664**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
TCGW1102	6.350	2.380	0.20	11.00	112.020	●
TCGW16T3	9.525	3.970	0.20	16.50	163.020	●

Guhring no.	6307	6357
Standard	Guhring std.	
Tool material	Solid carbide	Solid carbide
Application	K	K
Surface	◯	◯
Cutting direction	neutral	neutral
Discount group	122	122
Techn. data page		
	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
TCHW1102	6.350	2.380	0.20	11.00	112.020	●	●
TCHW1102	6.350	2.380	0.40	11.00	112.040	●	●
TCHW1102	6.350	2.380	0.80	11.00	112.080	●	●
TCHW16T3	9.525	3.970	0.20	16.50	163.020	●	●
TCHW16T3	9.525	3.970	0.40	16.50	163.040	●	●
TCHW16T3	9.525	3.970	0.80	16.50	163.080	●	●

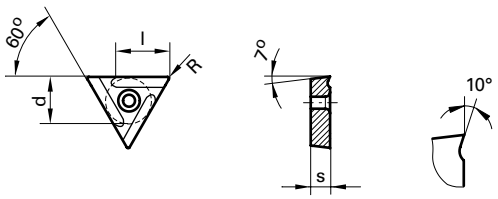
◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

GUHRING

HPC REAMERS

Benefit from high process reliability, high cutting rates, long tool life, closest tolerances, optimal surface qualities and simple application with our cermet and carbide-tipped special reamers for HPC reaming operations.

Guhring no.	6309	6311	6319
Standard	Guhring std.		
Tool material	Solid carbide	Solid carbide	Solid carbide
Application	K	K	K/P
Surface	○	○	Ⓢ
Cutting direction	right-hand	left-hand	right-hand
Discount group	122	122	122
Techn. data page			
	NEW	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
TCHX1102	6.350	2.380	0.20	6.00	112.020	●	●	●
TCHX1102	6.350	2.380	0.40	6.00	112.040	●	●	●
TCHX1102	6.350	2.380	0.80	6.00	112.080	●	●	●
TCHX16T3	9.525	3.970	0.20	9.50	163.020	●	●	●
TCHX16T3	9.525	3.970	0.40	9.50	163.040	●	●	●
TCHX16T3	9.525	3.970	0.80	9.50	163.080	●	●	●

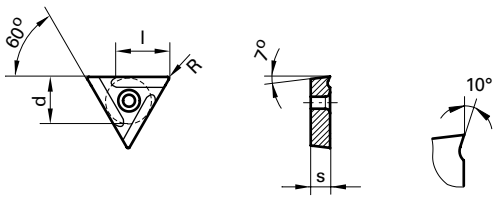
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

6321	6329	6331	6339	6341
		Guhring std.		
Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide
K/P	K/P	K/P	K/P	K/P
S	A	A	a	a
left-hand	right-hand	left-hand	right-hand	left-hand
122	122	122	122	122
NEW	NEW	NEW	NEW	NEW

Availability				
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6359	6361	6369
Standard	Guhring std.		
Tool material	Solid carbide	Solid carbide	Solid carbide
Application	K	K	K/P
Surface	○	○	S
Cutting direction	right-hand	left-hand	right-hand
Discount group	122	122	122
Techn. data page			
	NEW	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
TCHX1102	6.350	2.380	0.20	6.00	112.020	●	●	●
TCHX1102	6.350	2.380	0.40	6.00	112.040	●	●	●
TCHX1102	6.350	2.380	0.80	6.00	112.080	●	●	●
TCHX16T3	9.525	3.970	0.20	9.50	163.020	●	●	●
TCHX16T3	9.525	3.970	0.40	9.50	163.040	●	●	●
TCHX16T3	9.525	3.970	0.80	9.50	163.080	●	●	●

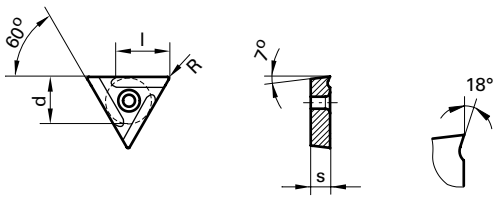
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

6371	6379	6381	6389	6391
		Guhring std.		
Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide
K/P	K/P	K/P	K/P	K/P
S	A	A	a	a
left-hand	right-hand	left-hand	right-hand	left-hand
122	122	122	122	122
NEW	NEW	NEW	NEW	NEW

Availability				
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6308	6310	6318
Standard	Guhring std.		
Tool material	Solid carbide	Solid carbide	Solid carbide
Application	K	K	K/P
Surface	○	○	Ⓢ
Cutting direction	right-hand	left-hand	right-hand
Discount group	122	122	122
Techn. data page			
	NEW	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
TCHX1102	6.350	2.380	0.20	6.00	112.020	●	●	●
TCHX1102	6.350	2.380	0.40	6.00	112.040	●	●	●
TCHX1102	6.350	2.380	0.80	6.00	112.080	●	●	●
TCHX16T3	9.525	3.970	0.20	9.50	163.020	●	●	●
TCHX16T3	9.525	3.970	0.40	9.50	163.040	●	●	●
TCHX16T3	9.525	3.970	0.80	9.50	163.080	●	●	●

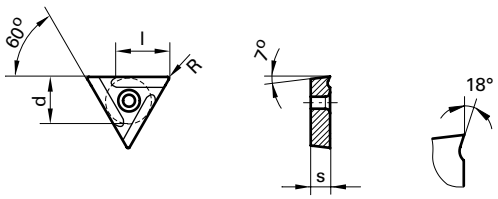
○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

6320	6328	6330	6338	6340
		Guhring std.		
Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide
K/P	K/P	K/P	K/P	K/P
S	A	A	a	a
left-hand	right-hand	left-hand	right-hand	left-hand
122	122	122	122	122
NEW	NEW	NEW	NEW	NEW

Availability				
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6358	6360	6368
Standard	Guhring std.		
Tool material	Solid carbide	Solid carbide	Solid carbide
Application	K	K	K/P
Surface	○	○	Ⓢ
Cutting direction	right-hand	left-hand	right-hand
Discount group	122	122	122
Techn. data page			
	NEW	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
TCHX1102	6.350	2.380	0.20	6.00	112.020	●	●	●
TCHX1102	6.350	2.380	0.40	6.00	112.040	●	●	●
TCHX1102	6.350	2.380	0.80	6.00	112.080	●	●	●
TCHX16T3	9.525	3.970	0.20	9.50	163.020	●	●	●
TCHX16T3	9.525	3.970	0.40	9.50	163.040	●	●	●
TCHX16T3	9.525	3.970	0.80	9.50	163.080	●	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

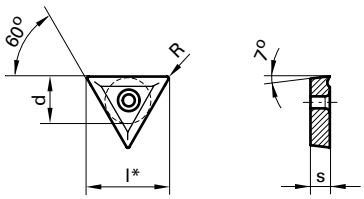
6370	6378	6380	6388	6390
		Guhring std.		
Solid carbide	Solid carbide	Solid carbide	Solid carbide	Solid carbide
K/P	K/P	K/P	K/P	K/P
S	A	A	a	a
left-hand	right-hand	left-hand	right-hand	left-hand
122	122	122	122	122
NEW	NEW	NEW	NEW	NEW

Availability				
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	6238
Standard	Guhring std.
Tool material	Solid carbide
Application	K/P
Surface	A
Cutting direction	neutral
Discount group	142
Techn. data page	

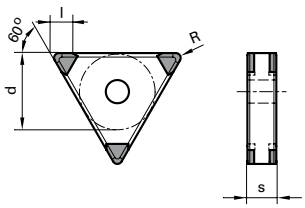
NEW



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
TCMT1102	6.350	2.380	0.40	11.00	112.040	●
TCMT1102	6.350	2.380	0.80	11.00	112.080	●
TCMT16T3	9.525	3.970	0.40	16.50	163.040	●
TCMT16T3	9.525	3.970	0.80	16.50	163.080	●

○ bright ◎ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

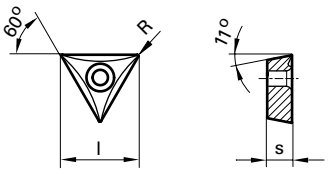
Guhring no.	7693	7694
Standard	DIN ISO 16462	
Tool material	CBN 1023	CBN 1023
Application		
Surface	○	○
Cutting direction	neutral	neutral
Discount group	142	142
Techn. data page		



ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
TNGA1604	9.525	4.760	0.40	3.10	164.040	●	●
TNGA1604	9.525	4.760	0.80	2.70	164.080	●	●
TNGA1604	9.525	4.760	1.20	2.30	164.120	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

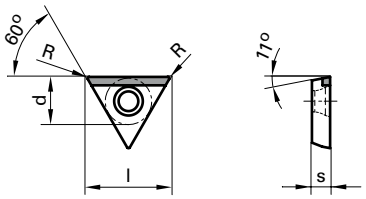
Guhring no.	7654	7656	7655
Standard		Guhring std.	
Tool material	Solid carbide	Solid carbide	Solid carbide
Application	AL	P	M
Surface	○	S	A
Cutting direction	neutral	neutral	neutral
Discount group	142	142	142
Techn. data page			



ISO standard	d	s	R	l	Code no.	Availability		
	mm	mm	mm	mm				
TPGT0902	5.560	2.380	0.20	9.60	92.020	●	●	❍
TPGT0902	5.560	2.380	0.40	9.60	92.040	❍	●	●
TPGT1102	6.350	2.380	0.20	11.00	112.020	❍	●	
TPGT1102	6.350	2.380	0.40	11.00	112.040	❍	❍	

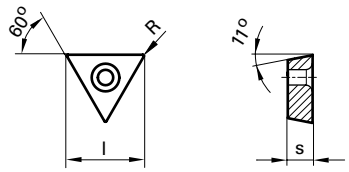
○ bright ◔ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**7663**
Standard	**DIN ISO 16463**
Tool material	**PCD**
Application	
Surface	◯
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
TPGW0902	5.560	2.380	0.20	9.60	92.020	●
TPGW1102	6.350	2.380	0.20	11.00	112.020	●
TPGW16T3	9.525	3.970	0.20	16.50	163.020	●

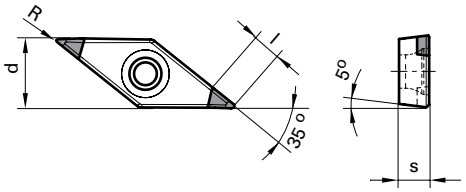
Guhring no.	**7653**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Application	**K**
Surface	**S**
Cutting direction	**neutral**
Discount group	**142**
Techn. data page	



ISO standard	d	s	R	l	Code no.	Availability
	mm	mm	mm	mm		
TPGW0902	5.560	2.380	0.40	9.63	92.040	●
TPGW1102	6.350	2.380	0.40	11.00	112.040	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

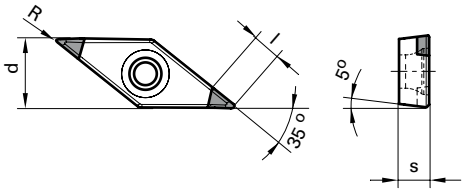
Guhring no.	7717	7718
Standard	DIN ISO 16462	
Tool material	CBN 1023	CBN 2028
Application		
Surface	◯	◯
Cutting direction	neutral	neutral
Discount group	142	142
Techn. data page		
	NEW	NEW



ISO standard	d	s	R	l	Code no.	Availability	
	mm	mm	mm	mm			
VBMW1604	9.525	4.760	0.40	4.00	164.040	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	7719	7720	7722	7721
Standard	DIN ISO 16462			
Tool material	CBN 1023	CBN 1023	CBN 2028	CBN 2028
Application				
Surface	○	○	○	○
Cutting direction	neutral	neutral	neutral	neutral
Discount group	142	142	142	142
Techn. data page				
	NEW	NEW	NEW	NEW

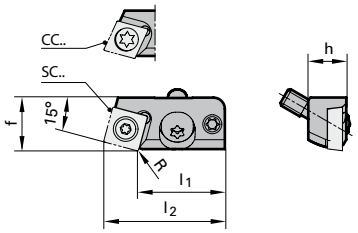


ISO standard	d	s	R	l	Code no.	Availability			
	mm	mm	mm	mm					
VBMW1604	9.525	4.760	0.80	3.30	164.080	●	●	●	●
VBMW1604	9.525	4.760	1.20	2.40	164.120	●	●	●	●

○ bright ◍ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**4080**
Standard	**Guhring std.**
Cutting direction	**right-hand**
Discount group	**113**

NEW

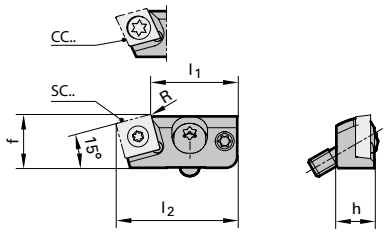


size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
06	9.50	CC..0602..	18.00	22.54	7.30	0.20	6.000	●
09	14.00	SC..09T3..	23.00	29.01	10.00	0.40	9.000	●
12	19.00	SC..1204..	30.00	38.39	11.50	0.40	12.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**4088**
Standard	**Guhring std.**
Cutting direction	**left-hand**
Discount group	**113**

NEW

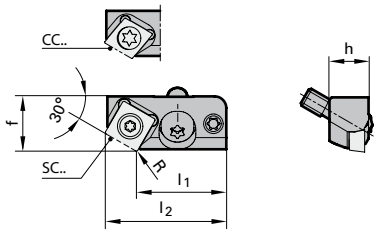


size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
06	9.50	CC..0602..	18.00	22.54	7.30	0.20	6.000	●
09	14.00	SC..09T3..	23.00	29.01	10.00	0.40	9.000	●
12	19.00	SC..1204..	30.00	38.39	11.50	0.40	12.000	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**4081**
Standard	**Guhring std.**
Cutting direction	**right-hand**
Discount group	**113**

NEW

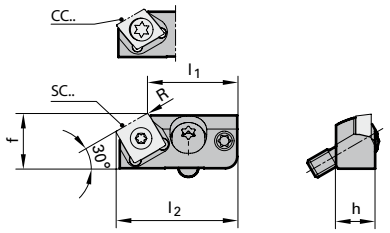


size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
06	9.50	CC..0602..	18.00	23.43	7.30	0.20	6.000	●
09	14.00	SC..09T3..	23.00	30.60	10.00	0.40	9.000	●
12	19.00	SC..1204..	30.00	39.71	11.50	0.40	12.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**4089**
Standard	**Guhring std.**
Cutting direction	**left-hand**
Discount group	**113**

NEW

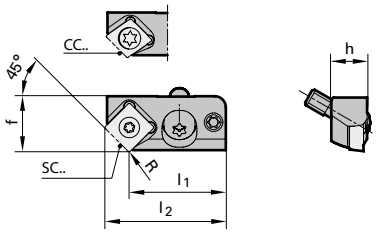


size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
06	9.50	CC..0602..	18.00	23.43	7.30	0.20	6.000	●
09	14.00	SC..09T3..	23.00	30.60	10.00	0.40	9.000	●
12	19.00	SC..1204..	30.00	39.71	11.50	0.40	12.000	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**4082**
Standard	**Guhring std.**
Cutting direction	**right-hand**
Discount group	**113**

NEW

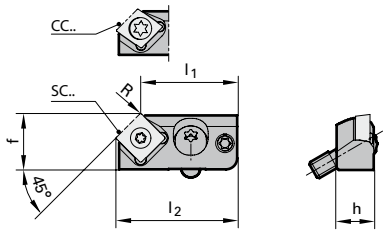


size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
06	9.50	CC..0602..	19.50	23.47	7.30	0.20	6.000	●
09	15.00	SC..09T3..	26.00	31.15	10.00	0.40	9.000	●
12	20.00	SC..1204..	34.00	40.31	11.50	0.40	12.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**4090**
Standard	**Guhring std.**
Cutting direction	**left-hand**
Discount group	**113**

NEW

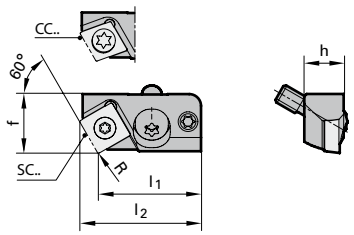


size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
06	9.50	CC..0602..	19.50	23.47	7.30	0.20	6.000	●
09	15.00	SC..09T3..	26.00	31.15	10.00	0.40	9.000	●
12	20.00	SC..1204..	34.00	40.31	11.50	0.40	12.000	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**4083**
Standard	**Guhring std.**
Cutting direction	**right-hand**
Discount group	**113**

NEW

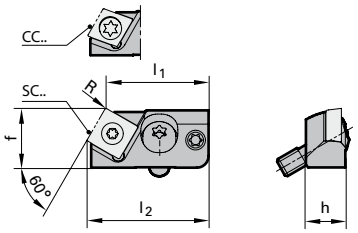


size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
06	9.50	CC..0602..	19.50	22.72	7.30	0.20	6.000	●
09	15.00	SC..09T3..	26.00	30.76	10.00	0.40	9.000	●
12	20.00	SC..1204..	34.00	39.35	11.50	0.40	12.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**4091**
Standard	**Guhring std.**
Cutting direction	**left-hand**
Discount group	**113**

NEW

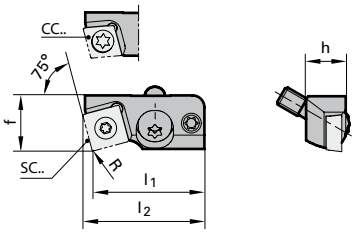


size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
06	9.50	CC..0602..	19.50	22.72	7.30	0.20	6.000	●
09	15.00	SC..09T3..	26.00	30.76	10.00	0.40	9.000	●
12	20.00	SC..1204..	34.00	39.35	11.50	0.40	12.000	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**4084**
Standard	**Guhring std.**
Cutting direction	**right-hand**
Discount group	**113**

NEW

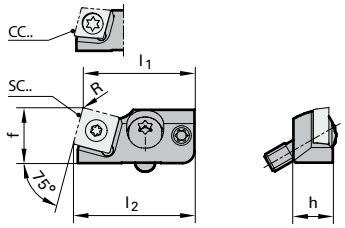


size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
06	9.50	CC..0602..	20.00	21.26	7.30	0.20	6.000	●
09	14.00	SC..09T3..	28.00	29.06	10.00	0.40	9.000	●
12	19.00	SC..1204..	36.00	36.98	11.50	0.40	12.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**4092**
Standard	**Guhring std.**
Cutting direction	**left-hand**
Discount group	**113**

NEW

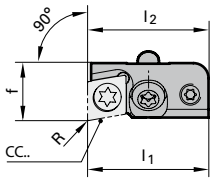


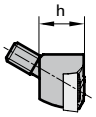
size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
06	9.50	CC..0602..	20.00	21.26	7.30	0.20	6.000	●
09	14.00	SC..09T3..	28.00	29.06	10.00	0.40	9.000	●
12	19.00	SC..1204..	36.00	36.98	11.50	0.40	12.000	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**4085**
Standard	**Guhring std.**
Cutting direction	**right-hand**
Discount group	**113**

NEW





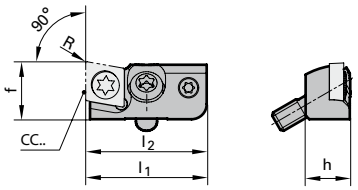
size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
06	9.50	CC..0602..	20.00	20.00	7.30	0.20	6.000	●
09	14.00	CC..09T3..	28.00	27.50	10.00	0.40	9.000	●
12	19.00	CC..1204..	36.00	35.00	11.50	0.40	12.000	●

Short clamping holders

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**4093**
Standard	**Guhring std.**
Cutting direction	**left-hand**
Discount group	**113**

NEW

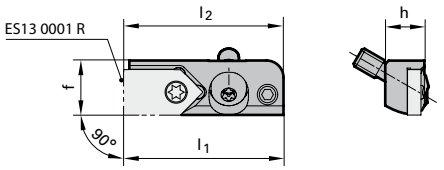


size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
06	9.50	CC..0602..	20.00	20.00	7.30	0.20	6.000	●
09	14.00	CC..09T3..	28.00	27.50	10.00	0.40	9.000	●
12	19.00	CC..1204..	36.00	35.00	11.50	0.40	12.000	●

○ bright ◔ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	**4086**
Standard	**Guhring std.**
Cutting direction	**right-hand**
Discount group	**113**

NEW

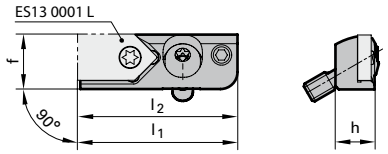


size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
13	16.00	ES130001 N	47.00	47.00	11.50		13.000	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**4094**
Standard	**Guhring std.**
Cutting direction	**left-hand**
Discount group	**113**

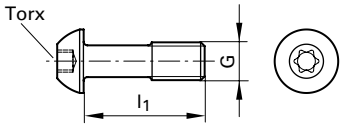
NEW



size	f	for size	l1	l2	h	R	Code no.	Availability
	mm		mm	mm	mm			
13	16.00	ES130001 N	47.00	47.00	11.50		13.000	●

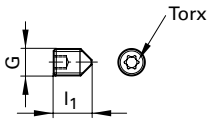
○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	4059
Standard	Guhring std.
Discount group	113



G	l1	Torx	Code no.	Availability
	mm			
M 3,5	10.00	T15	3.501	●
M 5	14.70	T20	5.001	●
M 6	17.50	T25	6.001	●

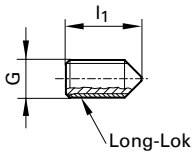
Guhring no.	4060
Standard	Guhring std.
Discount group	113



G	l1	Torx	Code no.	Availability
	mm			
M 3,5 X0,35	5.00	T7	3.501	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ◯ golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

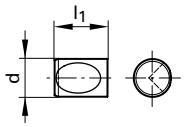
Guhring no.	**1689**
Standard	**Guhring std.**
Discount group	**113**



G	l1	Drive	Code no.	Availability
		mm		
M 5	6.00	T15	5.003	●
M 6	8.00	SW 3	6.001	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4058
Standard	Guhring std.
Discount group	113

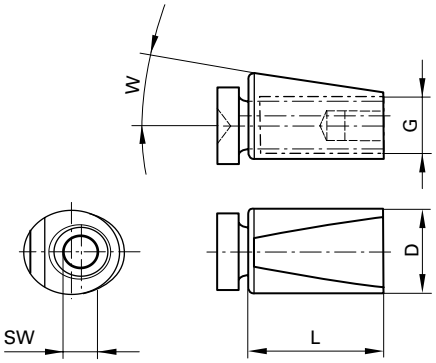


d	l1	for size	Code no.	Availability
mm	mm			
3.502	6.20	CC..0602…	3.502	●
5.002	7.00	CC..09T3…	5.002	●
6.002	8.70	CC..1204…	6.002	●

○ bright ◌ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	**4007**
Standard	**Guhring std.**
Cutting direction	
Discount group	**113**
Techn. data page	

NEW



size	d	for size	G	l	β	SW	Code no.	Availability
	mm			mm				
06	4.500	Cartridge size 06	M 3	5.50	11.00	1.50	4.500	●
06	4.500	CC..06.. / SC..06..	M 3	5.50	7.00	1.50	4.501	●
06	4.500	CP..06.. / SP..06..	M 3	5.50	11.00	1.50	4.502	●
09	6.000	Cartridge size 09	M 4 X0,5	9.30	11.00	2.00	6.000	●
09	6.000	CC..09T3../SC..09T3../TC..1102..	M 4 X0,5	9.30	7.00	2.00	6.001	●
09	6.000	CP..09T3../SP..09T3../TP..1102..	M 4 X0,5	9.30	11.00	2.00	6.002	●
09	6.000	TC..0902..	M 4 X0,5	7.70	7.00	2.00	6.003	●
09	6.000	TP..0902..	M 4 X0,5	5.80	11.00	2.00	6.004	●
12	9.000	Cartridge size 12	M 6 X0,5	12.70	11.00	3.00	9.000	●
12	9.000	CC..1204../SC..1204../TC..16T3..	M 6 X0,5	12.70	7.00	3.00	9.001	●
12	9.000	CP..1204../SP..1204../TP..16T3..	M 6 X0,5	12.70	11.00	3.00	9.002	●

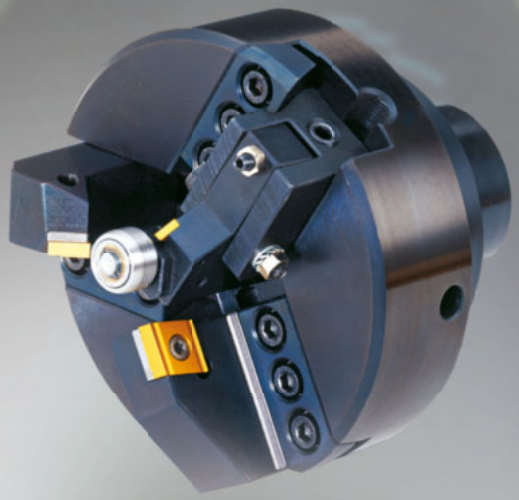
C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Perfect Team

Guhring shrink fit systems
and chucks

GUHRING

Extremely quick
Extremely accurate
Extremely small



GE 100

The multi-functional
tooling system

TOOL CLAMPING DEVICES

HMC 3000

Hydraulic chucks for shanks < Ø6mm

GUHRING

Contents

1. GM 300

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Shrink fit chucks and shrink fit systems 1558
Precision clamping chucks 1560
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The current program can be found in the GM 300 catalogue.

2. GE 100

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Centre drills 1577
Step drills 1578
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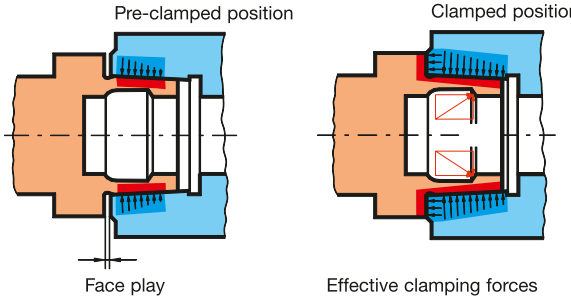
Our modular tooling system GM 300 has been developed for the application of rotating and stationary tools. 1987 we devloped the GM 300 coupling. Standardization for this interface (DIN 69893) was obtained in1991. Since 12/2001 the HSK interface is also standard to ISO 12164-1/-2. The unique design of the clamping method offers not only an ideal interface for manual clamping within the tooling system, but also an ideal interface for automatic clamping directly to the machine spindle or tool holder.

Characteristic feature:
Tapered hollow shank (HSK) with axial plane clamping mechanism according to DIN 69893. The most important advantages are as follows:

• High static and dynamic rigidity
The radial and axial forces generated in the tool shank provide the clamping force necessary for extreme rigidity.

• High torque transmission and defined radial positioning

The wedging effect between the hollow taper shank and the holder or spindle causes a friction contact over the full taper surface and the plane supporting face. Two keys engage with the shank end of the tool holder and provide form-closed, radial positioning, thereby excluding any possible setting errors.



Prestressing and frictional forces of hollow taper shank at the interface.

• High tool change accuracy and repeatability
The circular form engagement of the clamping claws within the hollow tool shqank provides a totally tight connection between the shank and spindle or holder respectively.

• High speed machining performance
The higher the number of revolutions the better, as this increases both the power and effectiveness of the locking of the clamping mechanism. The direct initial stress between the hollow taper shank and the spindle holder compensates for the spindle expansion generated by the centrifugal force so that there is absolutely no radial play. The plane clamping position prevents any slipping in the axial direction.

• Short tool changing times
Efficient tool change due to a short shank length (approx. 1/3 of the conventional ISO taper) and light weight (approx. 50% of the ISO taper).

• Simple, cost-efficient shank design
No moving components at the tool shank means no wearing parts.

• Insensitive to foreign matter
The uninterrupted design of the ring-shaped axial plane clamping simplifies the cleaning of the coupling. During automatic tool change compressed air provides ideal cleaning in the interface.

• Coding and identification
To allow for the attachment of common identification systems, a hole of 10 mm dia. and 4.5 mm depth is provided for the data media (coding chips) in the vicinity of the collar.

• Standardising of interface
GM 300 corresponds to ISO 12164-1/DIN 69893.

• Coolant feed
The tools for automatic clamping, HSK-A and E, are designed for a central coolant feed by means of a tube. Tools with manual change behind the GM 300 interface also operate with a central coolant feed. The clamping elements are entirely sealed against the entry of coolant so that fouling is prevented.

MQL 4-Point Clamping

Guhring no.	Description
4930	MQL 4-point clamping sets
4931	Clamping device for MQL 4--point clamping sets
4932	Ejector for MQL 4-point clamping sets
4933	Retention spindles for MQL 4-point clamping sets
4934	Adaptor for MQL 4-point clamping sets
4935	Retention screw for MQL 4-point clamping sets

4-Point Clamping

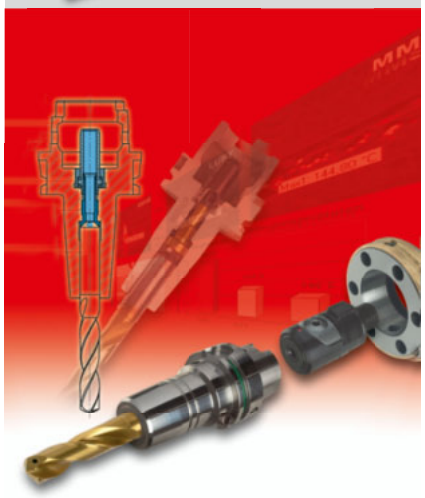
Guhring no.	Description
4351	HSK-C extensions
4355	HSK-A/HSK-C reducing adaptors
4385	Short HSK spindle adaptor
4386	HSK spindle adaptor (in front)
4387	ISO taper/HSK-C basic adaptor on spindles to DIN 2079
4953	Brass sealing collars
4957	Components for 4-point clamping sets
4958	4-point clamping sets for conventional cooling
4959	Components for 4-point clamping sets
4961	Ball pressure screws
4963	Torque sockets

PowerClamp

Guhring no.	Description
4509	ISO taper basic adaptors DIN 2080 form A/HSK-C
4510	VDI basic adaptors DIN 69880-1/HSK-C
4512	ISO taper basic adaptors DIN 69871 form AD/HSK-C
4514	MAS 403 BT/HSK-C basic adaptors
4549	HSK-A/HSK-C extensions
4551	Spring and threaded pin for PowerClamp set
4553	Aluminium locking rings
4554	PowerClamp sets
4555	Threaded spindle for PowerClamp set
4557	Tensioning nut set for PowerClamp set
4581	HSK adaptors (in front)
4582	HSK adaptors (in front) for turning centers
4584	HSK-C spindle adapters (integrated)
4586	HSK adaptors (in front)
4953	Brass sealing collars
4961	Ball pressure screws

MQL Program

For 1- and 2-channel MQL systems



Guhring no.	Description
4209	HSK-A MQL-Hydraulic-chucks
4210	HSK-A MQL-Hydraulic-chucks
4310	Collets for MQL
4330	MQL synchro tapping chuck
4350	HSK-A extensions with minimal lubrication
4735	MQL HSK-A shrink fit chucks
4741	MQL HSK-A shrink fit chucks
4919	MQL length pre-setting screws
4924	MQL coolant delivery sets
4939	MQL coolant delivery set HSK-A
4940	MQL filler HSK-A
4941	Length adjustment screw
4948	Mounting adaptor
4972	Mounting adaptor

Hydraulic Chucks

Guhring no.	Description
4038	Clamping force measuring instrument Senso 3000
4099	Extraction key for reduction bushes
4213	ISO taper hydraulic chucks DIN 69871 with increased clamping force
4221	MAS/BT hydraulic chucks with increased clamping force
4267	HSK-C hydraulic chucks with increased clamping force
4295	HSK-C hydraulic chucks
4296	HSK-A hydraulic chucks with radial length pre-setting
4299	HSK-A hydraulic chucks with increased clamping force
4313	ISO taper hydraulic chucks DIN 69871
4315	Length pre-setting ISO taper adaptors
4316	Universal length pre-setting HSK adaptors
4319	Universal length pre-setting ISO taper adaptors
4321	MAS/BT hydraulic chucks
4367	HSK-C hydraulic chucks
4368	Reduction bushes for hydraulic chucks w/o peripheral cooling
4369	Reduction bushes für hydraulic chucks with peripheral cooling
4395	HSK-C hydraulic chucks with radial length pre-setting
4396	HSK-A hydraulic chucks with radial length pre-setting
4399	HSK-A hydraulic chucks
4900	Adjustment screws
4919	MQL length pre-setting screws
4992	Taper inserts
4993	Plug inserts

Shrink Fit

Guhring no.	Description
4718	Length pre-setting adaptor
4719	Shrink fit extensions
4720	Centering ring
4721	HSV 2000 hot air shrink fit system
4726	TSG 3000 shrink fit chucks HSK-A
4727	TSG 3000 shrink fit chucks SK DIN 69871 form AD/B
4728	TSG 3000 shrink fit chucks MAS-BT
4729	Guhrojet ISO taper shrink fit chucks DIN 69871 form AD/B
4730	GISS 2000 Basic
4736	HSK-A shrink fit chucks
4737	HSK-E shrink fit chucks
4738	ISO taper shrink fit chucks DIN 69871 form AD/B
4739	MAS-BT shrink fit chucks
4742	GISS 2000 induction shrink fit system comfort version
4743	Induction spindle
4744	ISO taper holders
4745	HSK holders
4747	SpeedCooler
4748	Trolley
4749	Tongs
4750	Protective gloves
4752	GISS 2000 ECO Plus
4753	GISS 3000 induction shrink fit system
4755	Guhrojet HSK-A shrink fit system with peripheral cooling
4758	HSK-C shrink fit chucks
4759	SpeedCooler Manager
4769	Limit stop washers
4773	Cooling adaptor
4774	HSK-A/E accessory sets
4775	HSK-C accessory sets
4776	ISO taper accessory sets
4777	MAS BT accessory sets
4919	MQL length pre-setting screws
4977	Setting screws with axial force damping

Modules

Guhring no.	Description
4297	Module 4x4 HSK-A alignment adaptor
4360	Module 4x4 hydraulic chuck flange
4363	Module 6x6 HSK adaptor flange
4713	Module 4x4 HSK adaptor flange
4714	Module 6x6 shrink fit chuck flange
4715	Angle alignment units for module flange and alignment adaptor 6x6 and 4x4
4716	Intermediate sleeves for module flange and alignment adaptor 6x6 and 4x4
4717	Module 6x6 shrink fit chuck flange
4722	Module 6x6 hydraulic chuck flange
4723	Module 6x6 HSK-A alignment adaptor
4724	Module 4x4 SK alignment adaptor
4725	Module 6x6 SK alignment adaptor
4760	Module 4x4 hydraulic chuck flange

Tool Holders

Guhring no.	Description
4206	Inserts for quick-change tapping chucks
4300	HSK-A precision clamping chucks
4301	SK-A precision clamping chucks
4302	Clamping sleeves for precision clamping chucks
4303	HSK-C collet holders
4304	HSK-A collet holders
4306	Retaining nuts, system DIN ISO 15488
4307	Collets to DIN ISO 15488
4308	Tapping collets
4317	ISO taper side lock holders
4318	ISO taper collet holders DIN 69871 form AD/B
4320	HSK-A Morse taper holders
4322	ISO taper side lock holders
4323	HSK-C collet holders, sealed version
4324	HSK-A collet holders, sealed version
4326	Synchro tapping chucks, straight shank
4327	Synchro tapping chucks, HSK-A
4328	Quick-change tapping chucks, HSK-A with IC
4329	HSK-A side lock holders
4333	HSK-C side lock holders
4334	HSK-A side lock holders
4335	Sealing washers
4340	Quick-change tapping chucks w/o IC
4342	Quick-change tapping chucks with IC
4343	HSK-A adaptors for tapping chucks
4346	HSK-A NC drilling chucks with IC
4361	HSK-A shell milling arbors
4362	Milling arbor HSK-A
4397	HSK-E collet holders
4901	Adjustment screws for HSK-C collet holders
4902	Adjustment screws for HSK-A/HSK-E collet holders
4903	Clamping screws
4904/4905	Adjustment screws
4906	Adjustment screws for tapping collets
4907	Screws DIN EN ISO 4762
4908	Milling cutter retaining screws DIN 6367
4909	Box spanner for retaining screws
4913	Chuck spanners
4922	Drive dog sets for shell milling arbors
4923	Keys DIN 6885 A
4982/4983	HSK-A/HSK-C blanks

Measuring and Inspection Instruments General Accessories

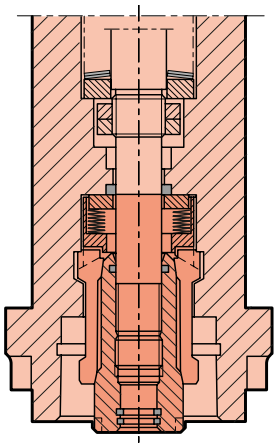
Guhring no.	Description
4038	Senso 3000 clamping force measuring instrument
4068	Flow rate measuring instrument PQ 3000
4076	Coolant supply measuring instrument CC 3000
4077	High-grade steel filters
4910/4911	Socket spanners
4912	Hexagon chuck keys
4914	HSK cleaning mandrels
4915	Torque wrenches
4916	Sockets
4918	Cylindrical cleaning mandrels
4921	Hexagon-socket offset screw key
4925	Pull studs DIN 69872, form A
4926	Pull studs DIN 69872, form B
4927/4928	Pull studs
4946	Tool setting fixture
4947	HSK cleaning cap
4949	Coolant delivery sets for conventional cooling
4968	Gauges for HSK tool shanks
4969	Gauges for HSK spindles
4970	ISO taper proofing bars
4971	HSK proofing bars
4973	ISO taper clamping force measuring instrument
4974	HSK clamping force measuring instrument
4975	Balancing masters for HSK spindles
4976	Centrifugal rings for short spindles to DIN 69002-3
4978	Gauges for HSK cams
4985	HSK-C sealing plugs
4990	Tool setting fixtures
4991	Interchangeable discs

Automatic tool clamping

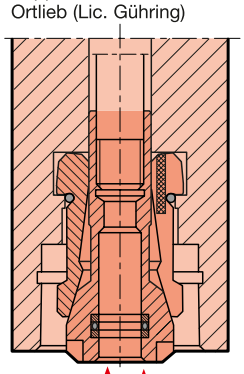
Spindle clamping systems with draw bar

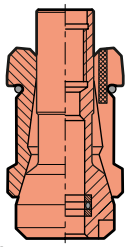
Application in machining centers, milling and turning machines

Suppliers:
Ott
Röhm (Lic. Gühring)
Berg (Lic. Gühring)

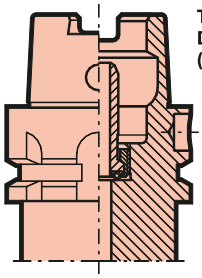


Supplier:
Ortlieb (Lic. Gühring)





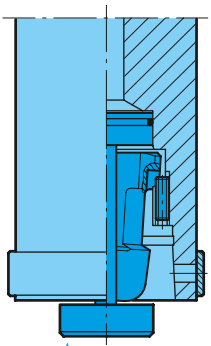
Segmental collet with drawing bar



Tool shanks DIN 69893 part 1 form A (with coolant supply set)

Direct installation in the spindle

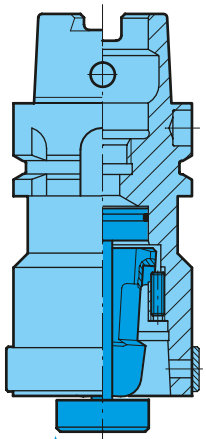
Application in transfer lines, fixtures, setting equipment (e.g. in drilling spindles), in multi spindle drilling heads



Installation in tool holders (examples)

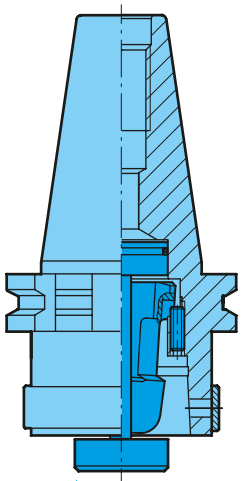
Application in machining centers, milling and turning machines

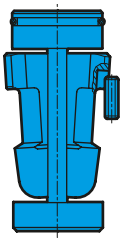
Extensions



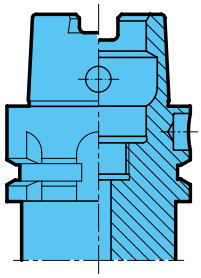
Application in existing machines using ISO taper spindles

ISO taper basic adaptors



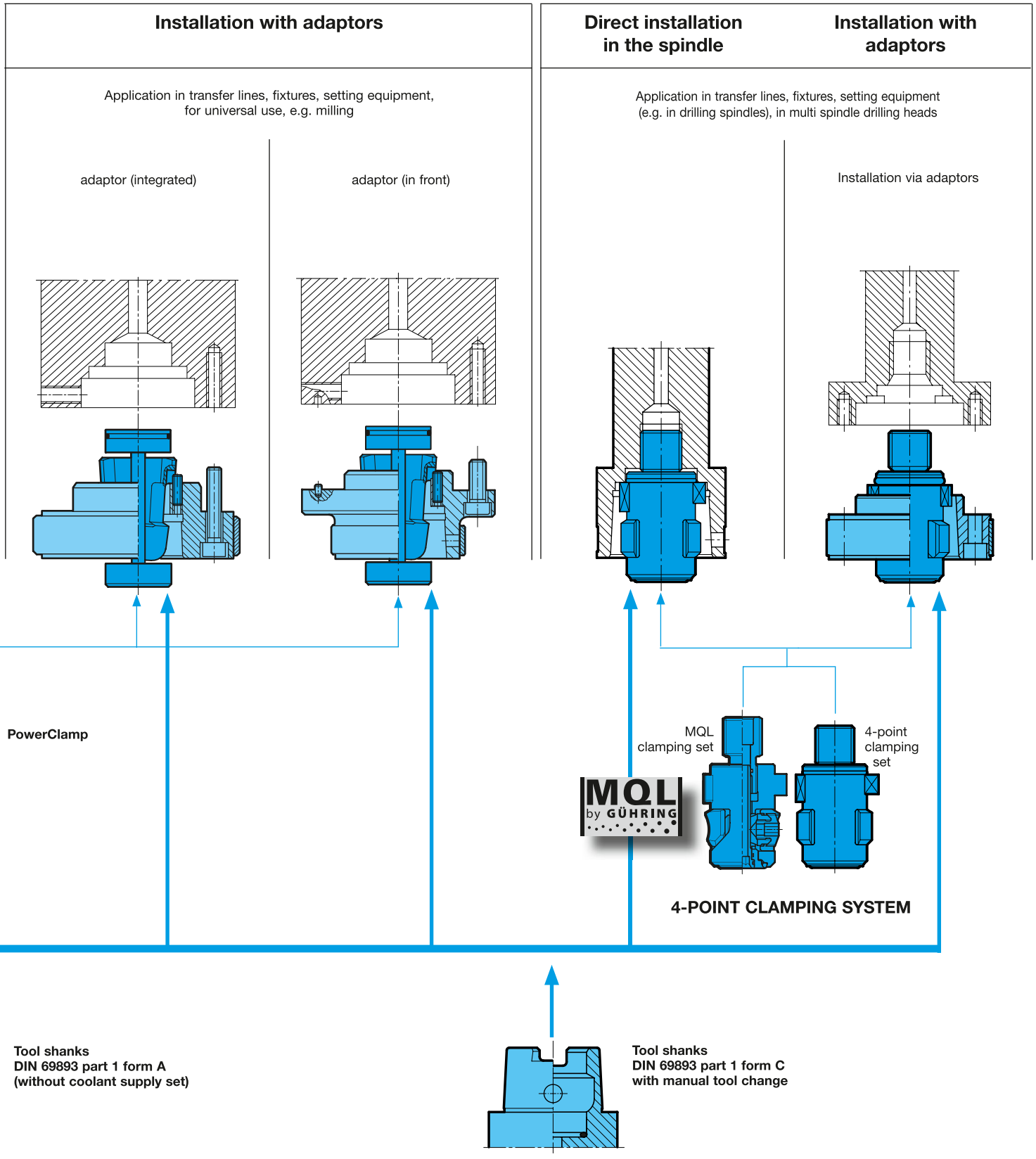


POWER-CLAMP SYSTEM



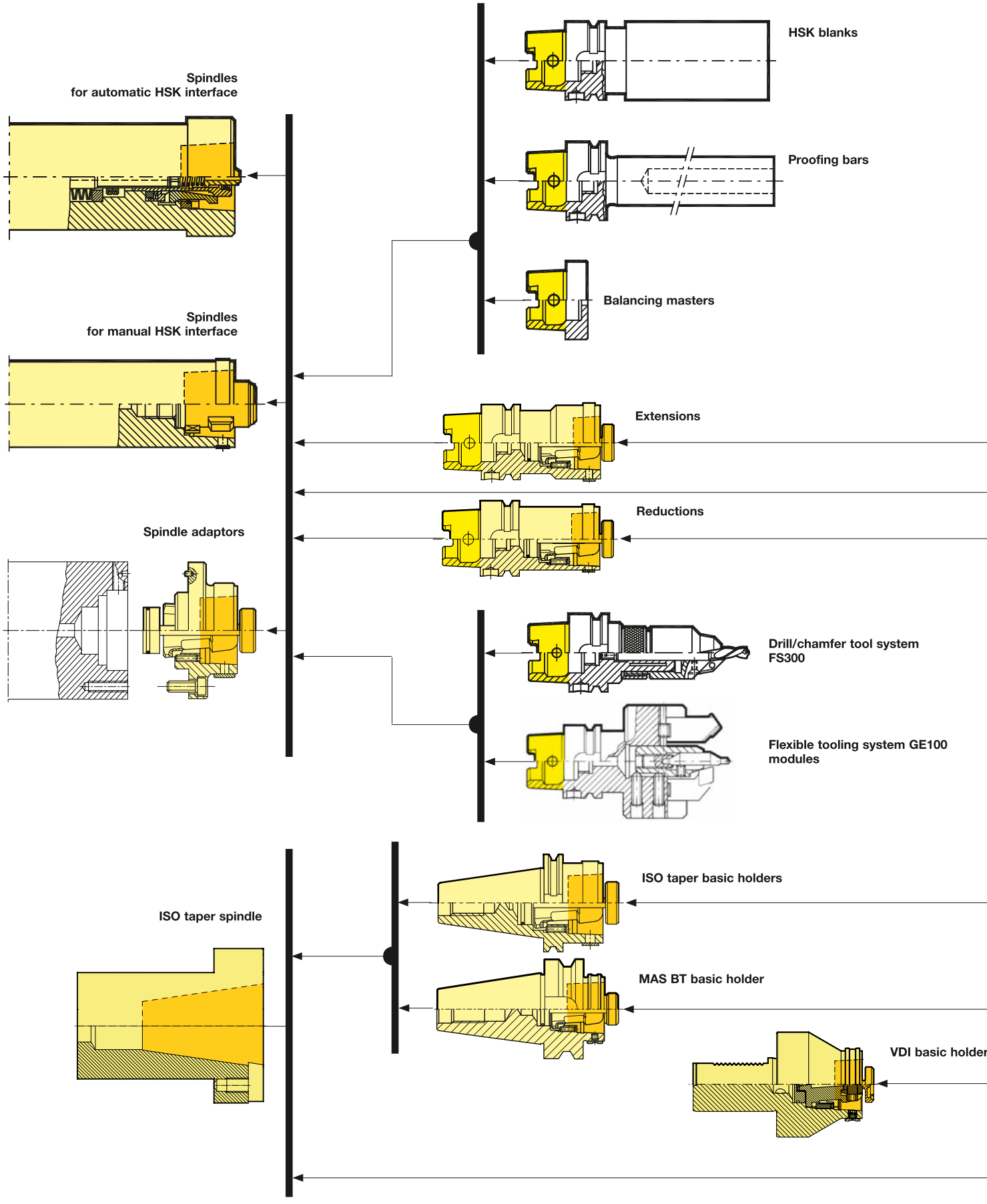
GM 300

Manual tool clamping

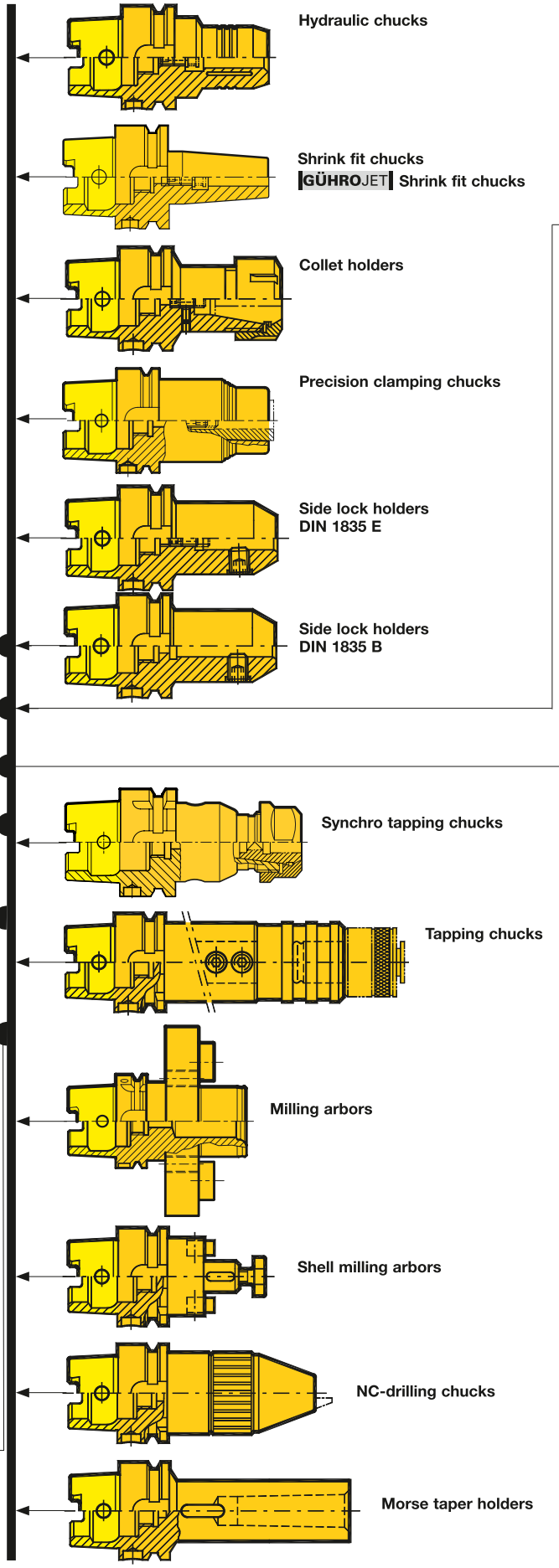


Spindles/basic holders

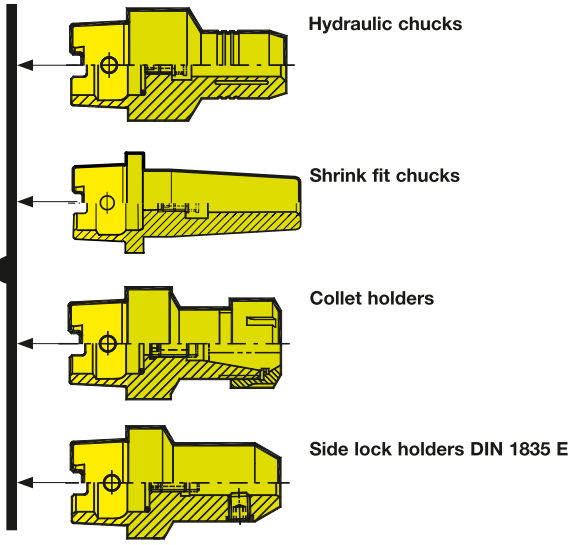
Tool holder modules, accessories
and GM 300 compatible Guhring tooling systems



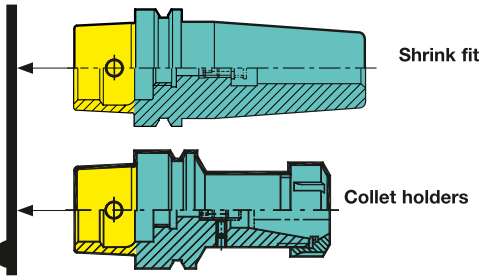
Tool holders
ISO 12164-1/DIN 69893-1 HSK-A



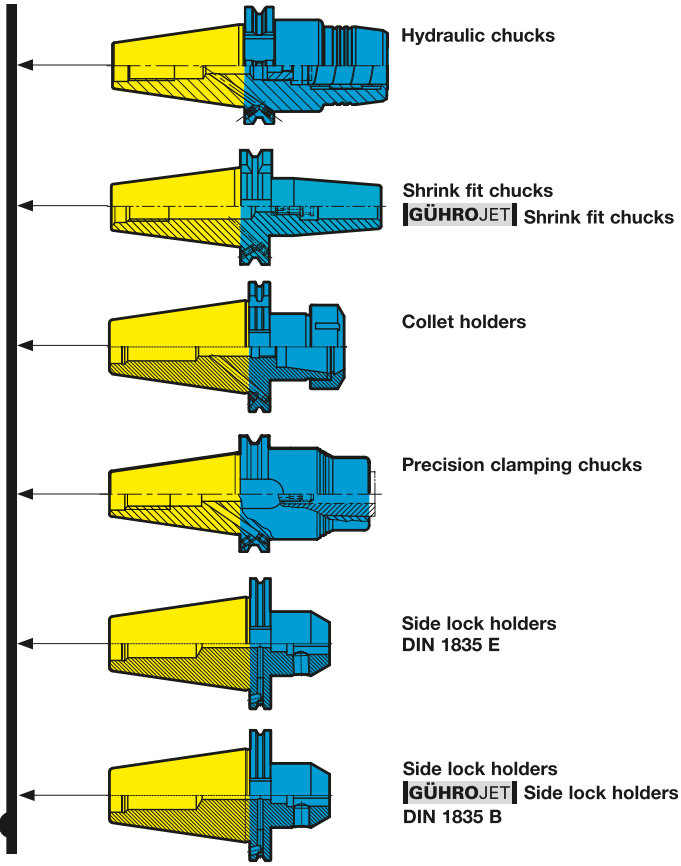
Tool holders
ISO 12164-1/DIN 69893-1 HSK-C



Tool holders
DIN 69893-5 HSK-E



Tool holders
DIN 69871/JIS B 6339 SK/MAS BT

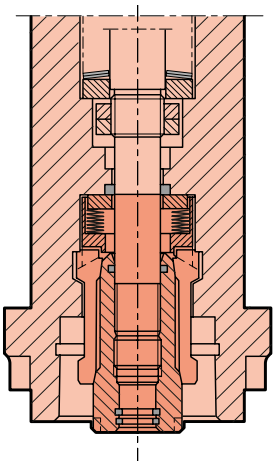


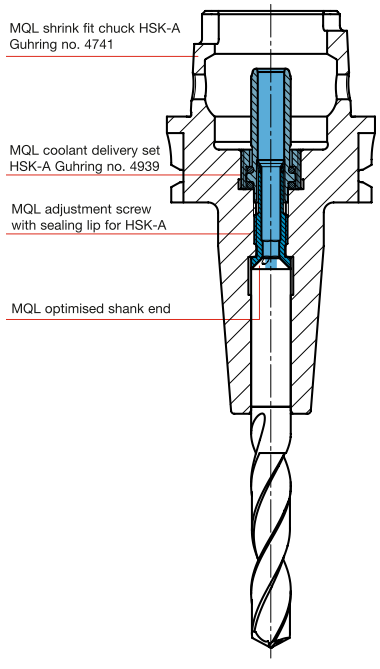
Automatic tool clamping with MQL

Spindle clamping systems with draw bar

Application in machining centres, milling and turning machines

Suppliers:
Ott
RÖHM (Lic. Guhring)
BERG (Lic. Guhring)



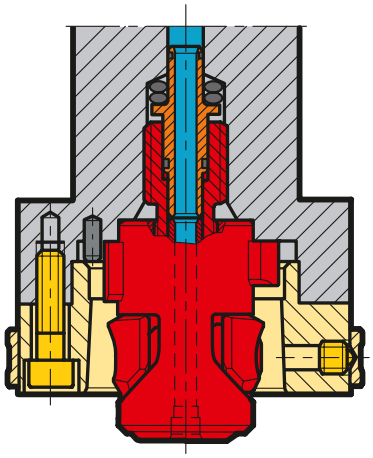


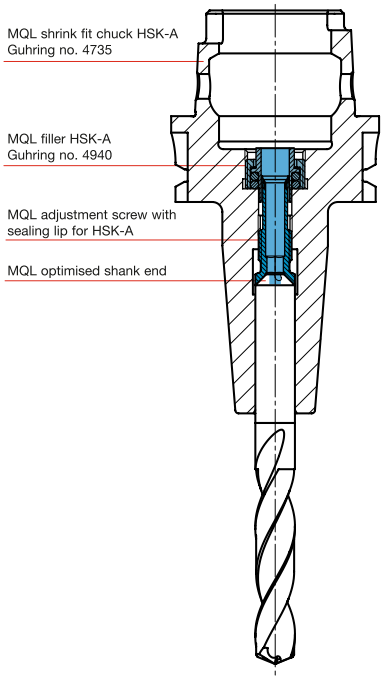
Manual tool clamping with MQL

Installation with adaptors

Application in transfer lines, fixtures, setting equipment (e.g. in drilling spindles), in multiple drilling heads

adaptor (integrated)



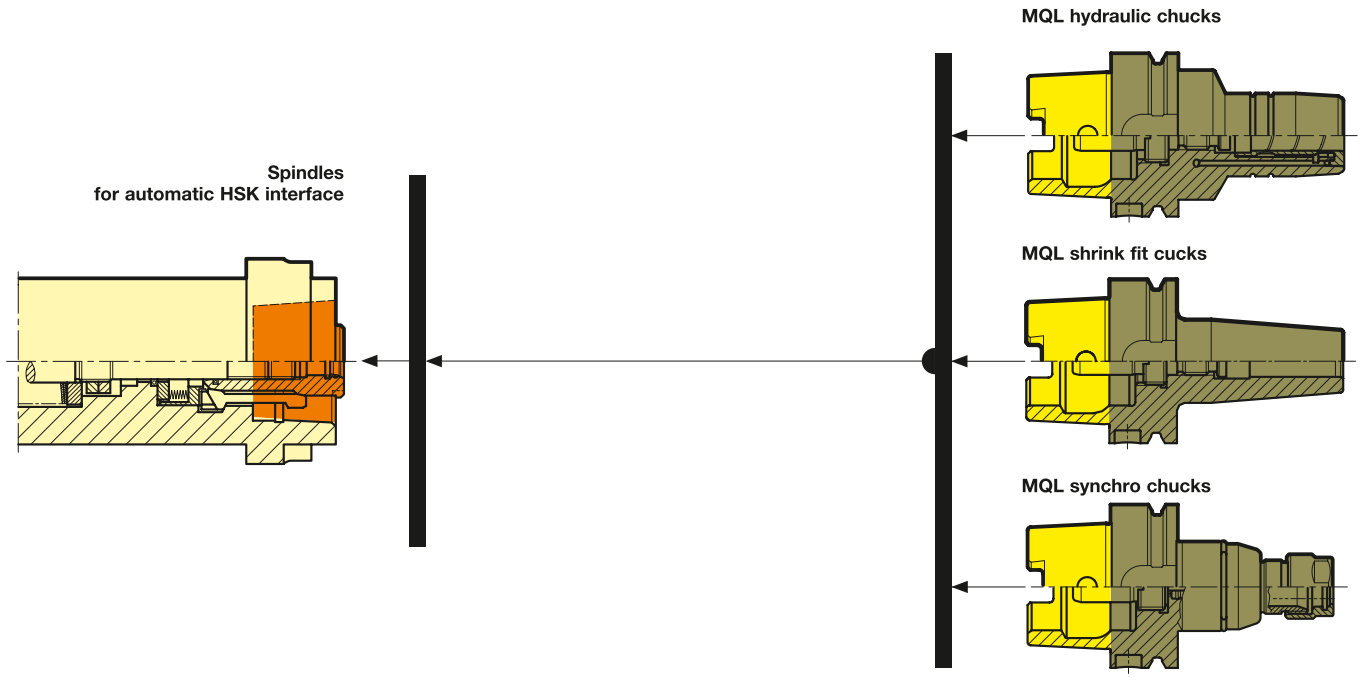


MQL by GÜHRING
Lic. HORKOS CORP

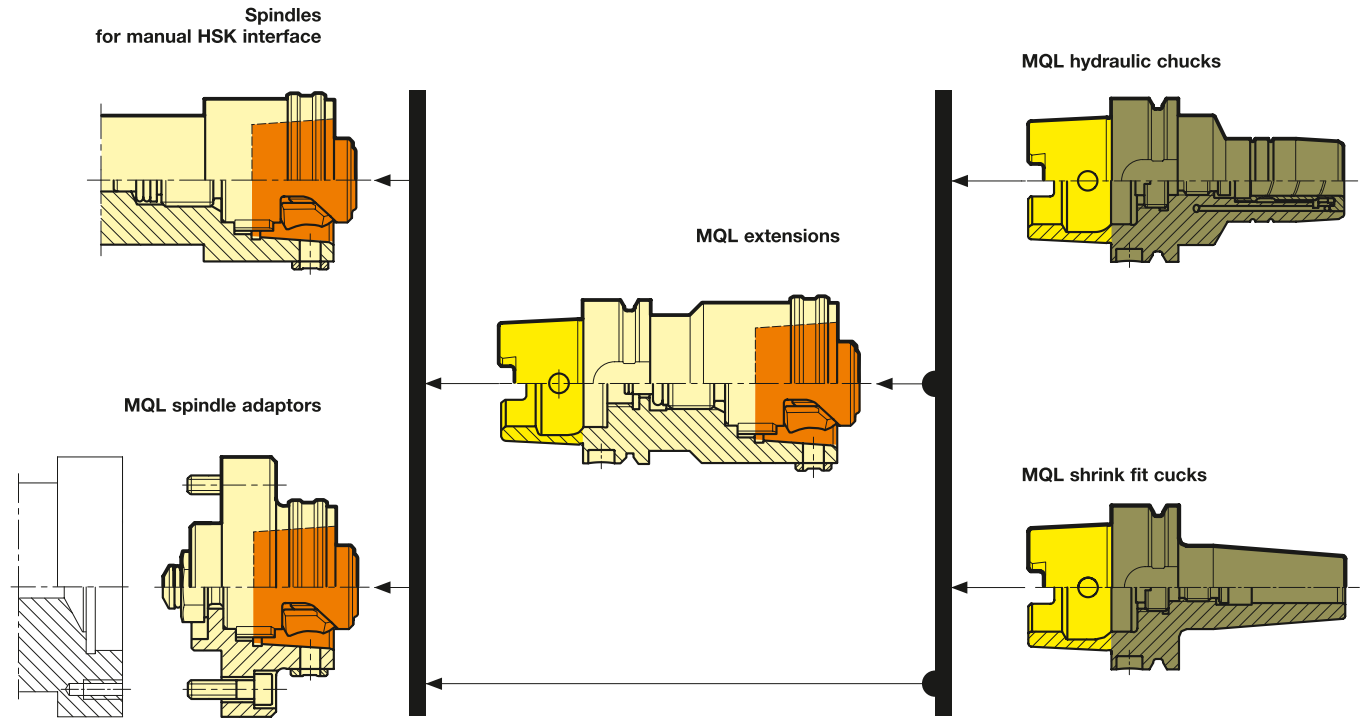
Spindle clamping systems

Tool holders
ISO 12164-1/DIN 69893-1 **HSK-A**

Automatic tool clamping



Manual tool clamping



Further information regarding MQL applications can be found in the Technical Section.

Technology and advantages

Our 4-point-clamping sets for minimum quantity lubrication MQL or conventional cooling are compatible. They are suitable for radial manual clamping. Primarily designed for installation in spindles (short drilling spindles, multiple-spindle drilling heads). Most prominent features:

- simple and hence more economic spindle manufacture
- short, small diameter spindles with constricted spindle bearing spacing.

Two clamping segments displaced by 180° with 2 clamping planes each are uniformly moved outwards with a differential threaded spindle, thereby generating the necessary clamping force. For conventional internal cooling our MQL 4-point clamping sets are suitable for up to 160 bar pressure.

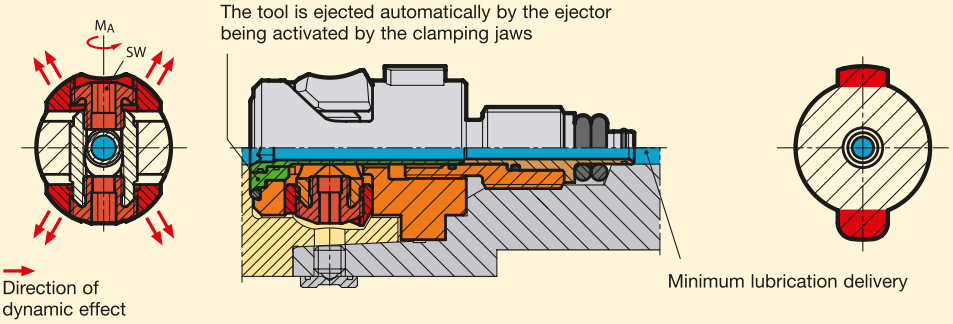
Thanks to their identical fitting contour, the 4-point clamping sets for MQL - especially developped for the application with minimum quantity lubrication (MQL) and with MQL-optimised tools - offer the following special features and advantages:

- A central, coaxial minimal quantity lubrication duct with a consistent internal diameter ensures a MQL coolant delivery to the tool without coolant pockets and offers quick operating times.
- sealed installation with MQL or coolant adaptor
- secure and wear-resistant hexagonal operation with long engagement length
- now also with M-contour as standard

① We recommend M_A max. for rough machining and milling operations. For drilling and reaming operations a lower deviation of M_A max. up to 30% is permissible. Please check the torque with a torque wrench.
② Depending on temperature and lubricating conditions these values can be up to 15% lower.
③ Due to the screwed connection, M_T max. can be lower with adaptors.

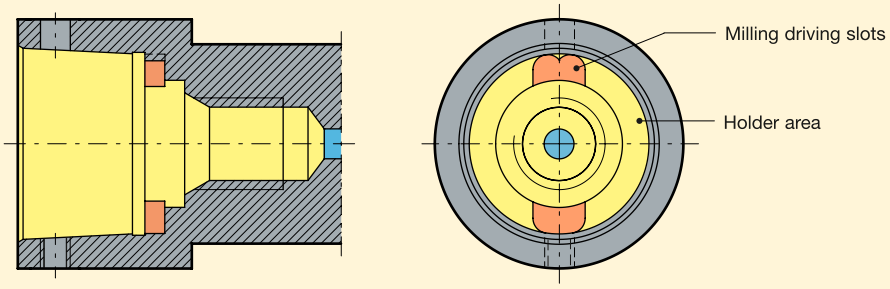
HSK-C	**max.** torque M_A [Nm] ①	Key size	**max.** drawing force [kN] ②	**max.** linear bending moment M_B [Nm] ②	**max.** transferable torsional moment M_T [Nm] ② ③
32	3	2.5	8.5	72	105
40	6	3	12.5	135	180
50	14	4	24	330	390
63	24	5	32	570	680
80	40	6	45	1000	1570
100	54	8	60	1620	4200

Installation and principle of operation



Technology and advantages

Internal contour of spindle



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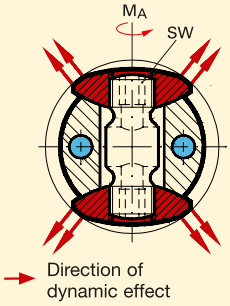
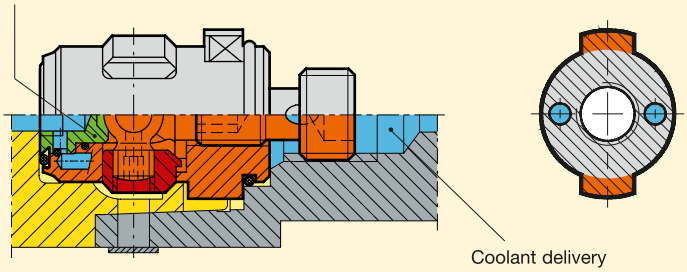
HSK-C	**max.** torque M_A [Nm] ①	Key size	**max.** drawing force [kN] ②	**max.** linear bending moment M_B [Nm] ②	**max.** transferable torsional moment M_T [Nm] ② ③
25	1.5	2.5	4.5	30	30
32	3.0	2.5	7.0	60	100
40	6.0	3.0	12.0	130	170
50	14.0	4.0	20.0	280	350
63	27.0	5.0	28.0	500	640
80	54.0	6.0	40.0	900	1330

Installation and principle of operation



The tool is ejected automatically by the ejector being activated by the clamping jaws

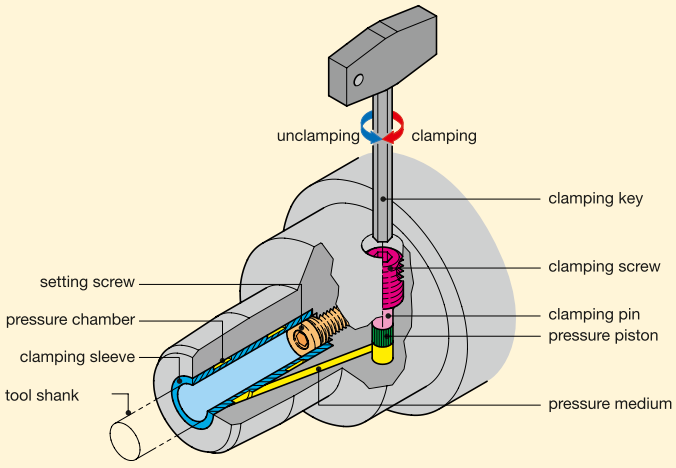


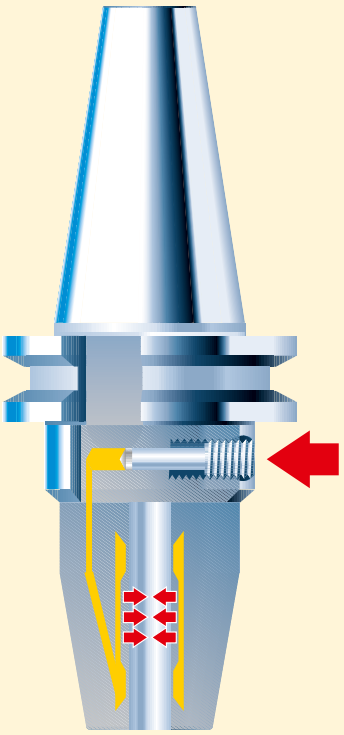
Technology and advantages

Modern machining processes place heavy demands on tool holding. Hydraulic chucks provides excellent clamping characteristics combined with precise concentricity. Furthermore, they enable a simple and fast tool change, with the assistance of a special extraction key.
Turning the pressure screw generates sufficient pressure in the pressure chamber resulting in an elastic deformation of the clamping bush, providing powerful tool clamping and precise concentricity. A safe and powerful fit is guaranteed. If reduction bushes are applied that are able to hold varying tool diameters, the tool application may be extended without problem. If such bushes are not applied, it is essential to observe the minimum clamping length!

A summary of the advantages:

- precise tool clamping with a maximum 3 µm deviation from concentricity
- transmission of high torque through (excellent clamping) optimised bush clamping system
- high speed compatibility (no centrifugal forces from clamping segments)
- precise concentricity, therefore excellent surface qualities and dimensional accuracy of the workpiece
- rapid tool change thanks to simple operation of the clamping screw
- optimal tool life
- hydraulic cushioning has vibration absorbing effect
- with new radial length setting
- MQL suitable by modifying the limit stop

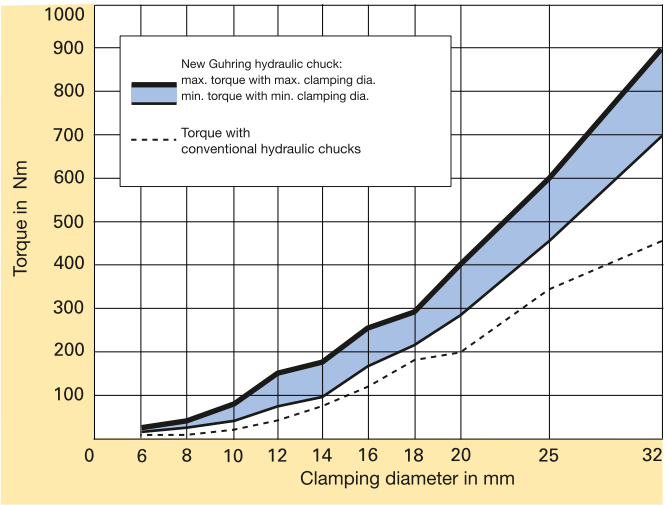




Convincing operation: the pressure medium is compressed via a screw and ensures safe positioning of the tool.

Technology and advantages

Guhring hydraulic chucks with increased clamping force
Hydraulic chucks are suitable for clamping rotary symmetrical tools or workpieces. Straight shank tools without drive flats may be clamped up to Ø 32 mm, but also shanks according to DIN 6535 form HA and HB up to Ø 20 mm without reduction bushes. The given values in the table below are not to be exceeded. If the inserted length is less than the given minimum insertion depth or other tool shanks than specified above are applied, lower accuracy and breakage may occur!



Considerably higher:
The clamping force of Guhring's new HSK-A hydraulic chuck in comparison to conventional chucks.

Above all it is the high revolutions with High-Speed-Cutting operations that puts special demands on the tool holder. The clamping of the tool in a hydraulic chuck is, therefore, especially significant. Guhring has developed a hydraulic chuck that offers reliable and powerful clamping with higher torque figures, guaranteeing excellent tool clamping in the tool holder.

Combined with precise concentricity (max. 3 µm deviation from concentricity), a very fast and simple tool change as well as the vibration cushioning effect of the pressure chamber, the new hydraulic chuck can tackle the most demanding of machining tasks. The result is optimal tool life and excellent surface qualities or dimensional accuracy of the workpiece respectively.

Technology and advantages

Guhring's shrink fit chucks ensure an optimal connection between shrink fit chuck and shank tool.
While some manufacturers use conventional case hardened steel, Guhring applies a special, application orientated tool steel. The result is an increased expansion rate as well as improved temperature adaptability. There is no limit to the number of shrink fit insertion or withdrawal operations.

Advantages:

- short shrink fit times
- maximum clamping force
- shrink fit chucks available for tool shank diameters from 3 mm to 32 mm
- longevity

These advantages are of particular interest in the field of HSC milling, difficult and rough cutting operations, drilling, reaming and internal grinding operations as well as for woodworking.

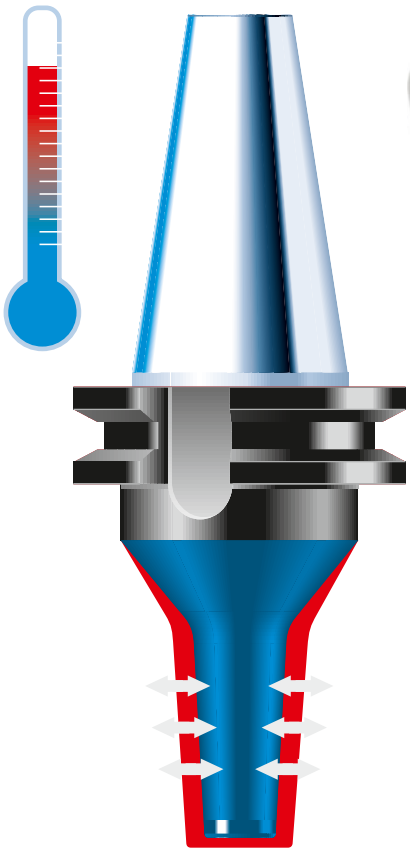
Convincing characteristics:

- excellent concentricity
- extreme clamping force and rigidity
- improved tool life
- insignificant imbalance through rotation symmetry
- economic efficiency

Perfect team: Guhring shrink fit chucks and shrink fit systems

For the shrink fitting for withdrawal and insertion of tools in our shrink fit chucks we offer various shrink fit systems to satisfy individual customer requirements: From high-tech solutions with integrated, highly accurate length pre-setting and special shrink fit systems for extra long tools to the cost-efficient HSV 2000 hot-air shrink fit system:

- GISS 5000
- GISS 4000
- GISS 3000
- GISS 2500
- GISS 2000
- HSV 2000

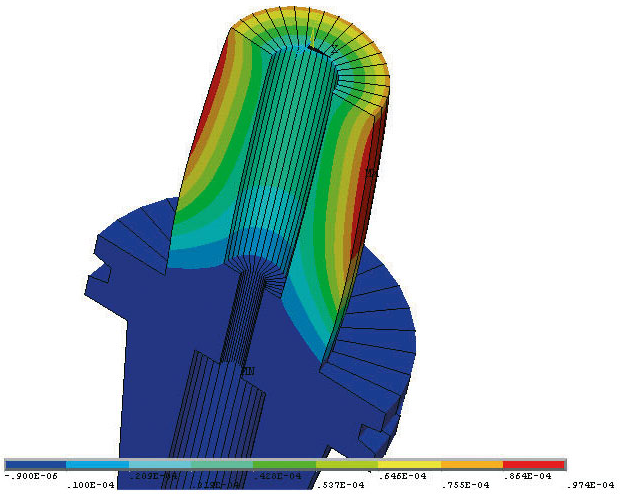


A gripping principle:
Heating and cooling ensures an optimal connection between shrink fit chuck and shank tool.

Technology and advantages

A gripping principle

When shrink fitting tools in shrink fit chucks, the decisive factors for ensuring the safe clamping of the tool in the tool holder are solely the heating and cooling of the tool holder. The heating process expands the shrink fit chuck enabling a tool to be inserted or withdrawn respectively. During the cooling process it contracts again and clamps the inserted tool with maximum clamping force.
Because the shrink fit chucks can become extremely hot in localised areas during the heating process and the tools shrink fitted for insertion or withdrawal respectively possess very sharp cutting edges, it is paramount that the operator wears Kevlar gloves during the shrink fit operation to prevent burns and cuts to the hands.



Shrink fit extensions: Increase performance

Shrink fit extensions increase the scope of a tool's performance and reduce tool surface imperfections. As with shrink fit chucks, the tool is clamped in the shrink fit extension and ideally in an hydraulic chuck. Naturally, shrink fit extensions can also be clamped in shrink fit chucks.

Technology and advantages

Guhring's precision clamping chucks offer highest clamping force particularly for milling operations but also for drilling and reaming as well as under HSC and HPC conditions. The special clamping sleeve is clamped via a worm gear and optimally transfers the enormous clamping force onto the clamped tool. This enables clamping forces of, for example, > 200 Nm for 12 mm shank diameters or > 300 Nm for 16 mm shank diameters. This system offers the following advantages:

- increased cutting depths in comparison to conventional tool holders
- increased radial engagement and subsequently higher material removal rate
- maintenance-free technology
- suitable for straight shanks to DIN 1835 A and B as well a to 6535 HA, HB and HE
- concentricity 3 µm at 2.5 x D

HSK-A precision clamping chucks

BT precision clamping chucks form AD

Technology and advantages

Guhring modules 6x6 and 4x4 are the perfect solution for a quick, simple and µ-accurate setting of tools in highly precise manufacturing areas such as fine machining.

The advantages for the user:
- up to 70% time saving in tool pre-setting
- cost reduction
- highly accurate, wobble-free tool setting
- an extremely solid and rigid connection
- cooling lubricant delivery without loss or flow disruption

Whilst module 4x4 is the market compatible solution the Guhring module 6x6 is providing further opportunities for modular technology to satisfy the highest demands. On Guhring's module 6x6 the setting screws for radial and axial setting sit much closer to each other than on conventional modules. This allows the elimination of errors in close proximity to the measuring point – even with 6-fluted tools with pinpoint accuracy!

The modules 6x6 and 4x4 have both been designed for conventional cooling lubrication as well as minimal quantity lubrication. Whatever type of cooling lubrication the user decides on, the delivery system components required are 100% compatible. Subsequently, it is possible to convert any modules in stock without a problem.

Module 6x6
- quick and targeted µ-accurate setting thanks to the close proximity of axial and radial setting screws to the error measuring point. Ideal for 6-fluted tools with a perfect fit to the cutting edge.
- quick and targeted balancing thanks to 6 deep balancing bores and threads providing a high balancing capacity.
- optimal setting results with multi-flute PCD/CBN fine machining tools or Guhring's HR 500 high performance reamer with 6 cutting edges.
- especially rigid connection thanks to 6 fastening screws.
- accurate wobble setting and optimal rigidity thanks to a high pre-clamping torque.
- minimal 'settlement behaviour' offering highest accuracy over a long application period.
- universal and modular designed system with hydraulic chucks, shrink fit chucks or HPC clamping chucks as well as HSK or SK interface.
- available in combination with monolithic special tools.

Module 4x4
- market compatible module
- extensive range, of modular design
- optimal cooling lubricant throughput with conventional cooling as well as with MQL (optional)
- hydraulic chucks and shrink fit chucks with increased insertion depth to current Guhring standard for conical shank ends and long MQL shank

MQL by GÜHRING Lic. HORKOS CORP

Technology and advantages

Pre-requisite for optimal machining is perfect tool clamping and a reliable coolant delivery. Tests with customers show that clamping and lubrication is often insufficient for the machining operation. Therefore, Guhring has developed a comprehensive range of measuring and inspection instruments enabling a quick, simple and accurate measurement or inspection on the premises of the customer. Defects can be recognised early and eliminated in order to prevent a reduction in cutting parameters and tool life or even damage to machine, clamping systems as well as tools.

Clamping force measuring instrument Senso 3000 for hydraulic chucks

The hydraulic clamping technology offers, thanks to its completely closed design, the system is impervious, requires low maintenance and guarantees longevity. Following many years of general use, however, thermal and mechanical influences can lead to a reduction in clamping force.

The new Guhring SENSO 3000 measuring instrument offers an accurate, quick and simple as well as consistent method of measuring the clamping force. An added advantage is the mobility of the system, i.e. for measuring within machines and fixtures.

SENSO 3000 determines the clamping force of the hydraulic chuck via a pressure sensitive plug gauge. The entire length of the plug gauge is clamped in the hydraulic chuck so that when tightening the clamping screw the clamping pressure of the chuck is optimally applied.

The clamping force measuring instrument displays the clamping force as an absolute measurement value on the one hand and as a percentage clamping force in relation to a reference value that can be set individually on the other.

Clamping force measuring instrument SENSO-SHRINK 3000 for shrink fit chucks

SENSO-SHRINK 3000 simply, quickly and accurately determines the clamping force of the shrink fit chuck by measuring the bore volume. The measuring result displayed by SENSO SHRINK 3000 is the deviation percentage from the nominal value of a reference chuck.

SENSO-SHRINK 3000 offers the user the following benefits:
- simple, quick and accurate measuring of the shrink fit chuck clamping force directly on the customer‘s premises,
- early recognition of wear and incorrect handling of shrink fit chucks,
- considerable increase of process reliability during use,
- quality assurance of overall system: tool, chuck and tool holder,
- wireless system, providing reproducible measuring data at any time.

Flow rate measuring instrument PQ 3000 for checking the pressure and the volume of the coolant flow

Guhring has developed the PQ 3000 instrument for quick, simple and direct checking of the existing coolant pressure and rate of flow for tools with internal cooling. The check is carried out when the actual tool is clamped directly in the

stationary tool spindle, making it possible to establish the real conditions of the relevant machine and tool configuration.

PQ 3000 provides the following information:
- pressure and volume flow of the coolant pump, the so-called P/Q characteristic curve,
- possible pump or seal wear as well rotary transmission losses,
- possible narrowed cross sections in the line through machine, spindle and tool holder,
- possible blocked filters,
- possible narrowed cross sections resulting from deposits on the surface of the coolant ducts in the tool,
- the coolant duct layout in the tool.

Coolant inspection instrument CC 3000 for checking the filtering efficiency of the coolant system

With Guhring‘s CC 3000 you can quickly and simply check the filtering efficiency of the coolant system. In order to analyse and rectify possible weak points of the filter system, the following information is provided:
- perfect operation of the coolant filtering system,
- defective filters,
- insufficient filtering for the applied tool.

In addition, it is possible to determine the oil concentration of the applied soluble oil with the included refractometer. Thus, it is possible to optimise the tool life of the applied tool, to prevent tool breakage and subsequent production stoppage!

MQL coolant inspection instrument MQL-CHECK 3000 for measuring the coolant volume and reaction time with minimal quantity lubrication

The development of Guhring‘s new MQL-CHECK 3000 allows simple and quick measuring of the coolant volume and the reaction time with minimal quantity lubrication MQL directly at the tool point. For the user, the result is a considerable increase in process reliability with MQL machining.

MQL-CHECK 3000 is simply installed in the machine, the tool point is passed into the measuring opening of the measuring unit and the coolant delivery is switched on. The measuring unit of the MQL-CHECK 3000 sends the recorded data wireless to the associated display equipment, a data interface allows the transfer of data to a PC as an option, making further evaluations and above all the documentation of the measurements possible.

Subsequently, the user benefits from:
- simple, quick measuring of the coolant volume at the tool point,
- ascertaining the actual response time, i.e. the time from starting the system to the coolant exiting at the tool point,
- reproducible and at any time comparable measuring data,
- a workshop suitable system, wireless operation - in terms of power supply as well as data transfer,
- comparitive measuring regarding function of MQL equipment, machine, spindle, tool holder and tool.

System Summary GE 100

Tool holder, radially adjustable

for internal operations	for external operations	for turning operations	for facing operations
45° 30°	Angle adjustable 15° - 60° 45° 30°	axial adjustment	

Clamping sleeves
to hold centre drills

Tool heads

with 2 clamping holders | with 3 clamping holders | with 4 clamping holders

Adaptors

with ISO taper to DIN 2080

with ISO taper to DIN 69 871

Adaptor

for UMA Ø 45/88,88*

* other systems on request

System characteristics

Endless possibilities

The flexible tooling system GE 100 puts no limits on your creativity. Modular construction, radially and axially adjustable short clamping holders as well as special practice-orientated indexable inserts make the GE 100 universally applicable, especially for shaft, pipe and casing operations.

The main application area is to be found on machines for end operations. It is intended for such operations as spot facing and centering. But also for stripping clamping pilots, facing, outer chamfering and centering (in preparation for CNC machining operations). Or for coning of bar stock for further operations on automatic machines. Even for the machining of casings or mountings, i.e. capping, radius operations or face piercing operations on machining centers, multiple station and special machines. In short, we now offer you an additional tool alternative (fig. 1) for the:

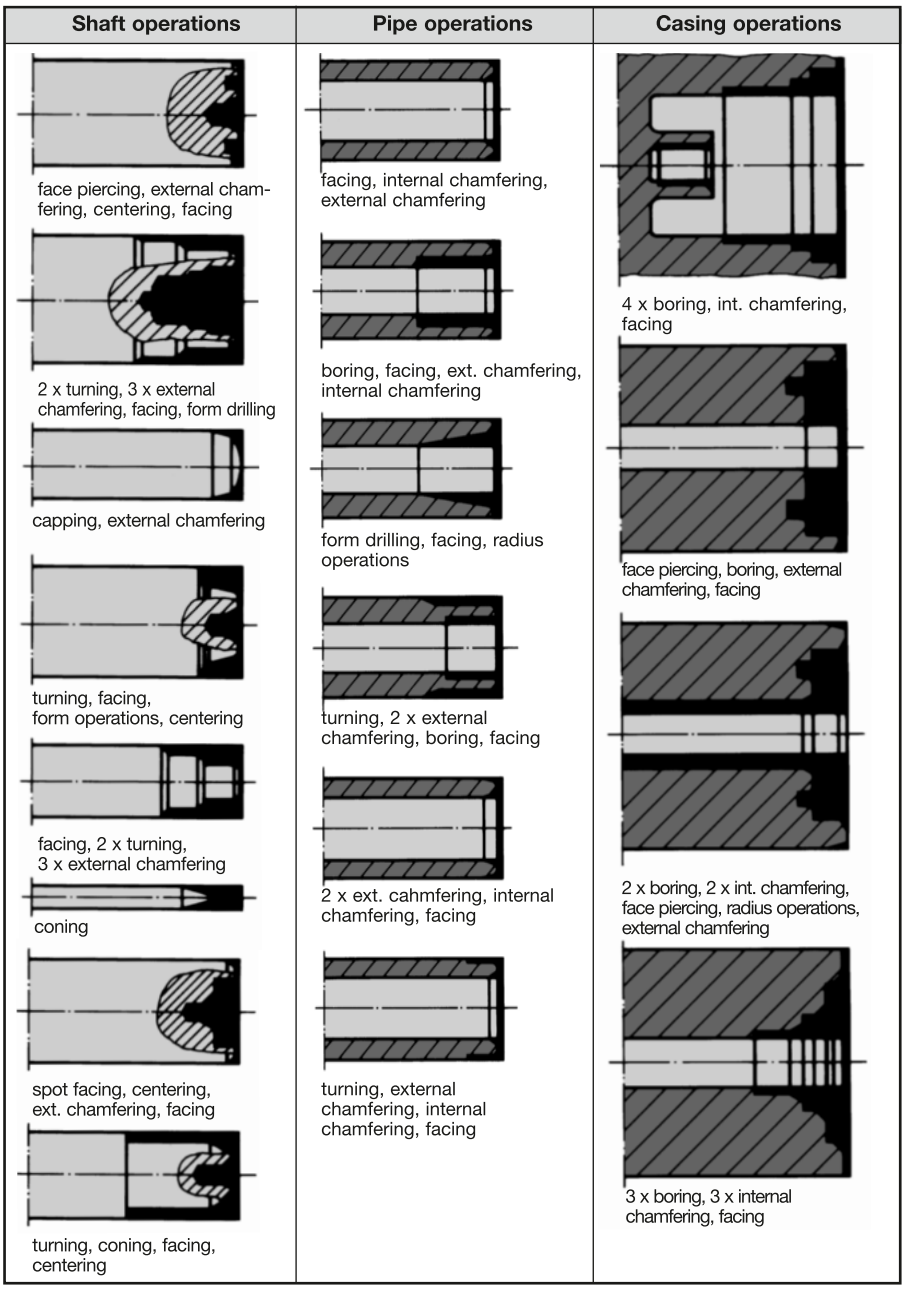
- automotive industry, motor manufacturers (gearing, shafts,bushes)
- pipe fittings industry
- mountings industry
- steel manufacturers (coning of bars for automatic machines)

Intelligent modular design

Standardised tools are generally less expensive, but they are rarely as efficient as special tooling. This is not the case with the GE 100. This well thought-out, standardised, modular design (fig. 2) is remarkable in its flexibility regarding diameter, precision and tool material. The GE 100 can be applied for machining diameters of between 15 and 240 mm. The tool head (figs. 3 and 4) permits the application on all standard machine adaptors, also on all rapid change systems. By switching the clamping holders or clamping sleeves, one can machine other workpieces with one and the same basic support, i.e. tool head. The bore hole in the tool head serves as a clamping sleeve adaptor for center drills, step drills, form drills or boring bars.

Figs 1 and 2:
Two up to a maximum of six axially and radially adjustable tool holders in combination with a center drill or step drill reduce the time needed for the complete machining of ends to mere seconds.

Fig 3:
The application possibilities for this system are almost infinite.
Here are a few theoretical examples from the fields of shaft, pipe and casing operations.



System characteristics

The set-up of the axially and radially adjustable tool holders proceeds via a set screw with a hexagon socket, the clamping proceeds via twin V-wedges (fig. 4). The twin V-wedges are arranged so that the common problem of self-locking no longer occurs and no longer hinders the setting-up process. Two hexagonal keys are sufficient in order to mount or re-equip a complete tool head. The insert program for tool holders is especially designed for the requirements of end operations.

There are two designs available: one precision design and one standard design. Indexable inserts with chip breaker grooves (fig 5) produce short controlled chips, absolutely necessary when carrying out multiple cutting operations. Efficiency is greatly increased with a four cutting edge arrangement. Other indexable inserts, however, are also available.

Advantages summary

- Combination of several operations into one.
- Modular design, i.e. shorter delivery times and lower costs.
- Absolute one-hundred percent facing and circular concentricity due to the rotation of all cutting edges.
- Axially and radially adjustable tool holders, thereby increased application ranges for each holder size.
- Precision ground indexable inserts with optimized, application-orientated chip-breakers ± 0.013 mm indexing precision.
- Separation point on short taper can fit all tool adaptors
- Tool heads with 2, 3 or 4 adaptors for tool holders, independent of the machining diameter.
- Tool heads with bore hole for receiving clamping sleeves for center drills, step drills etc.
- Easy operation, clamping of the drilling tool possible from the outside without need for dismantling the tool holder.

Tool head

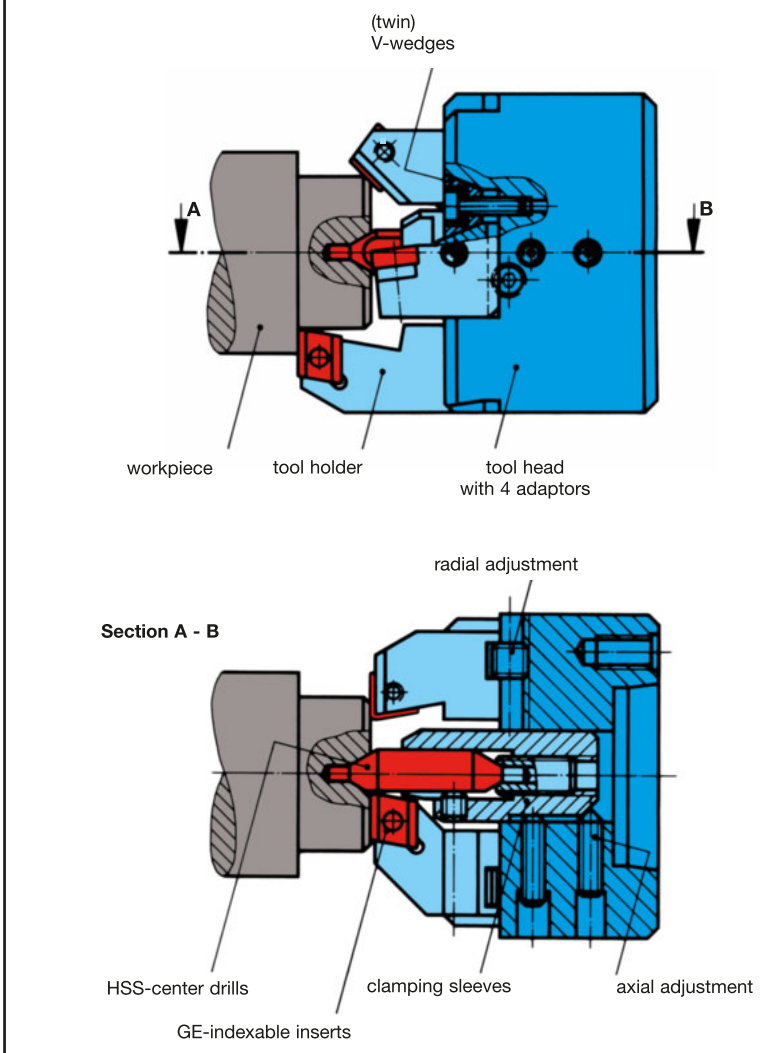


Fig. 4:
The tool head permits the fitting on all standard machine adaptors, also on all rapid change systems. By switching the clamping sleeves, one can carry out numerous operations sith one and the same tool head. A Belleville spring clamps the short clamping holder in the twin V-wedge.

Indexable inserts

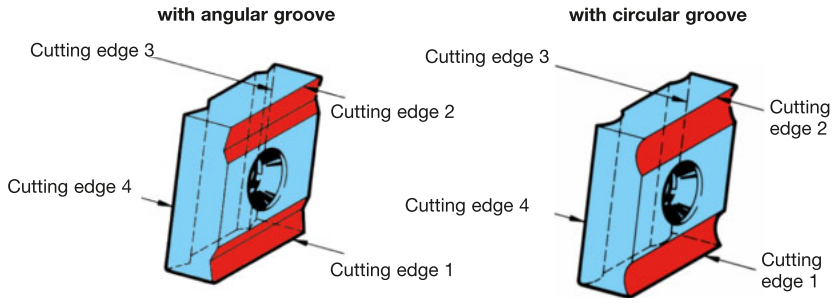


Fig. 5:
Indexable inserts with chip breaker grooves produce short controlled chips, absolutely necessary when carrying out multiple cutting operations. Efficiency is greatly increased with the four cutting edge arrangement.

2 practical examples

Example 1:

Workpiece:
GGG50, protective cap seats on wheel cylinders for a new ABS.

Task:
Production of the complicated profile of the protective cap seat (fig. 7).

Problem:
Drastic reduction in costs by combining the following operations:

facing
turning Ø = 25.5 mm
turning of radius (R2)
recessing

and naturally all on the same machine to minimise setting-up and transport times.

Solution:
The ideal situation, to carry out all the operations with only 1 tool was an illusion. However, our Guhring expert solved the task applying only 2 tools:

Tool I:
GE 100, set up for the operations: facing, turning Ø and turning of radius (fig. 8).

Tool II:
Another GE 100, set up for the recessing operation (fig. 8 and fig. 9). The machining is carried out using a stationary workpiece and rotating tools, a process in which all 3 cutting edges are simultaneously engaged. The workpiece is thereby not subjected to any one-sided imbalances and cutting edge wear is reduced.

Tool material:
carbide, carbide grade K10/K20 for both tools.

Cutting rates:
v_c = 314 m/min
f = 0.12 mm/rev.
(applicable for both tools)

The machining costs correspond to the required, extremely tight frame-work of calculations.

The task

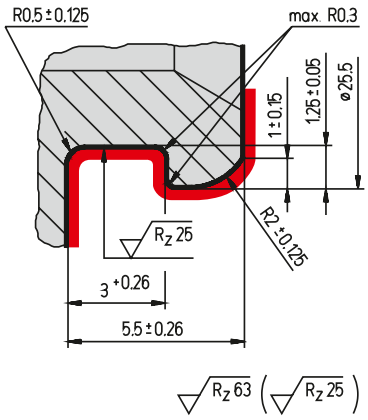


Fig. 7

Fig. 9:
tool II

The solution

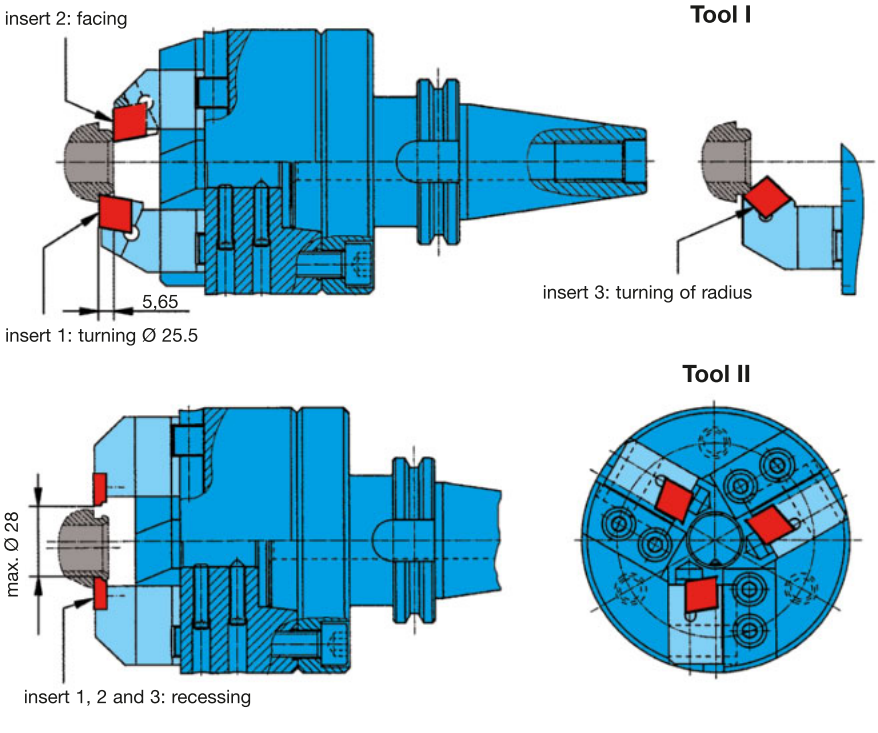


Fig. 8

2 practical examples

Example 2:

Workpiece:
Cold formed bolts in extrusion steel (Cq45) of 630 N/mm².
Basic dimensions: Ø $5.2_{-0.02}$ x 170 mm.

Task:
Turning of bolt to
Ø $3.5^{\pm 0.1}$x3.5 mm, chamfer 0.5x45°.

Problem:
Combining the operations „turning“ and „chamfering“ but retaining alignment accuracy of 4/100 mm (!) from Ø 3.5 mm to Ø 5.2 mm. Support is a genuine problem considering the unclamped distance of 30 mm.

Solution:
End operation system GE 100 with support (fig. 10). The support contains a sealed ball bearing with a guide bush, guaranteeing absolute concentricity. The radially adjustable clamping holder allows the exact setting of Ø 3.5 mm and chamfer 0.5 x 45°.

By choosing this tooling solution our expert not only reduced the task to one operation but also achieved extreme alignment accuracy of 0.04 mm on average, better than required. The 2 indexable inserts generally achieve 8000 parts, whereby the deviation from the nominal diameter never exceeded 0.02 mm. Inaccuracies of the rotary machine spindle did not influence the result.

A further advantage which must be mentioned is the simple, flexible adjustment for other components. It is sufficient to change clamping holder and guide bush.

Cutting rates:
v_c = 100 m/min,
f = 0.12 mm/rev.
Dry machining.

The task

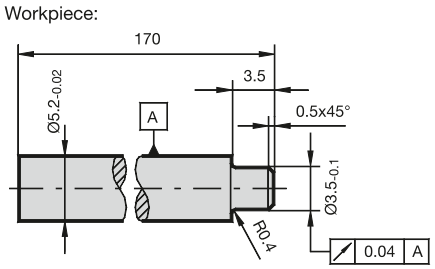


Fig 10

The solution

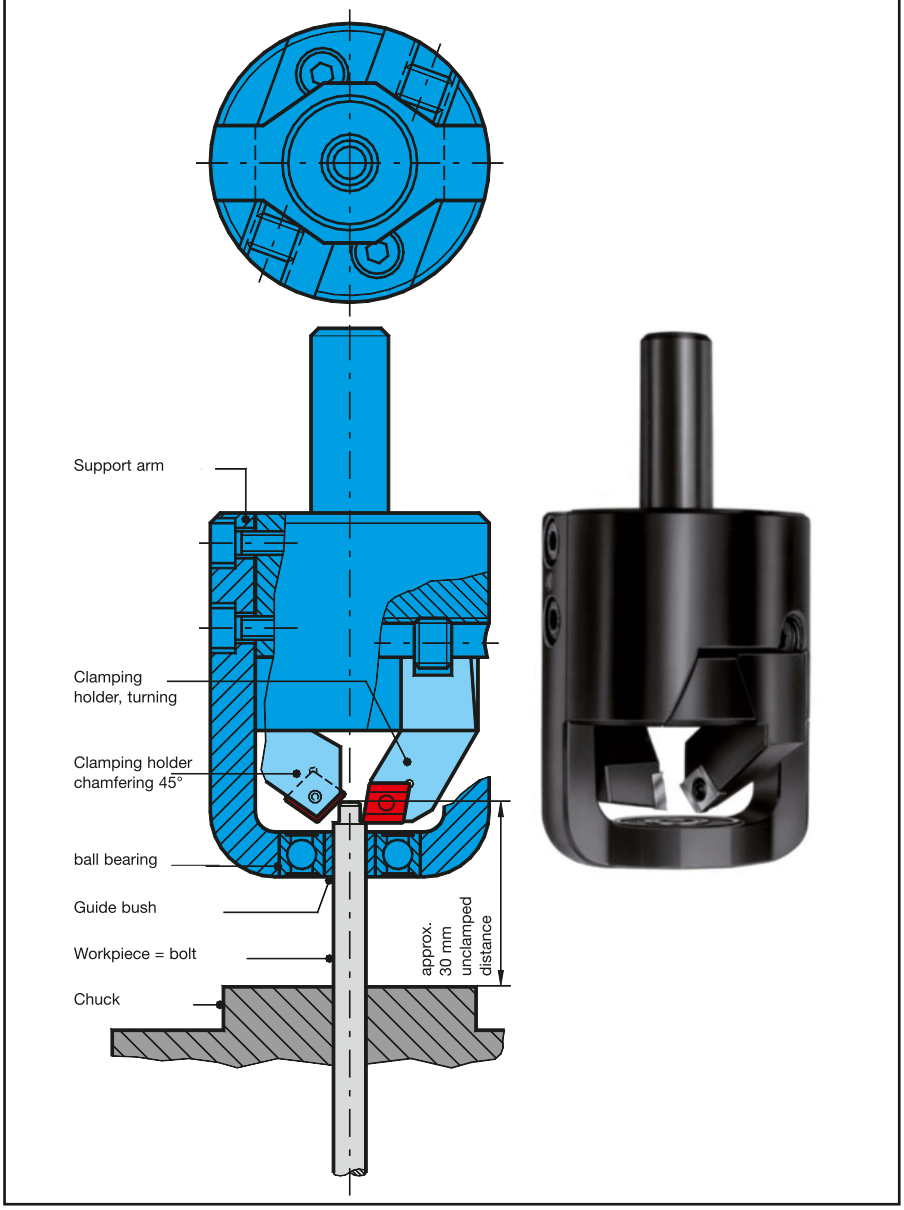
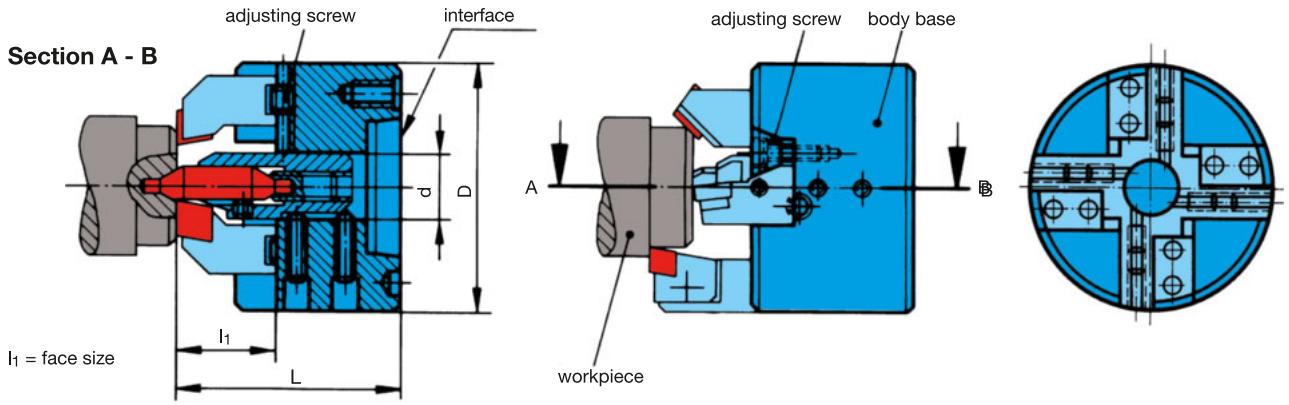
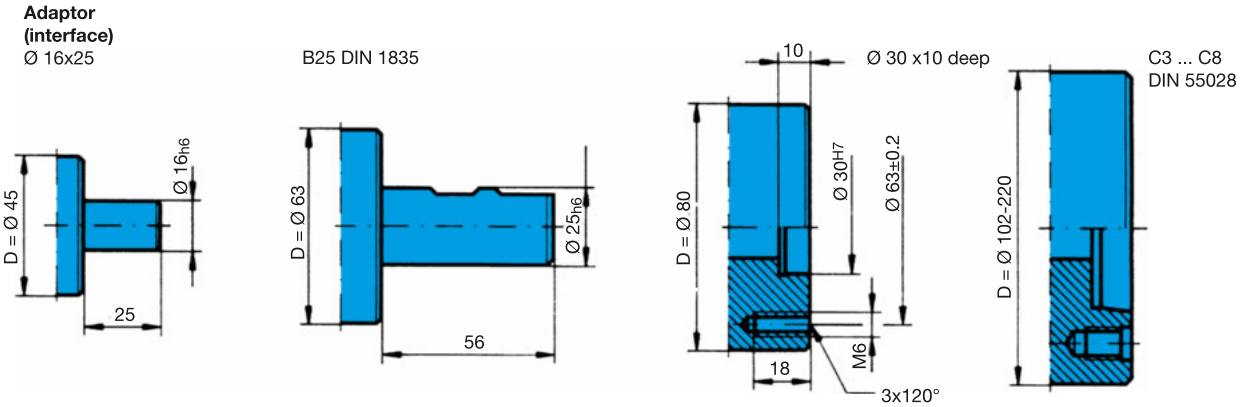


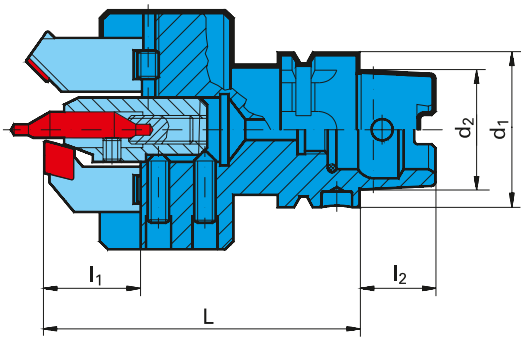
Fig 11

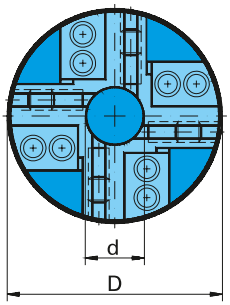




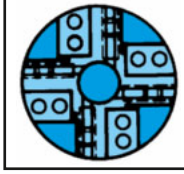
Tool head	Size	Code no.*	Availability discount group122	Dimensions D mm	d mm	L mm	l_1 mm	Adaptor (interface)	V-wedge Guh. no.**6021** Code no.*	Availability discount group122	adjust. screw Guh. no. **6022** Code no.*	Availability discount group122
2 clamp. holders		45,002	●	45	10.0	50	27	Ø 16 x 25	45,000	●	8,000	●
Guh. no. 6001	I								54,000	●		
									63,001	●		
		63,002	●	63	10.0	50	27	B25 DIN 1835	63,000	●	8,000	●
	II	80,002	●	80	20.0	75	35	Ø 30 x 10 deep	80,000	●	12,000	●
		102,002	●	102	20.0	80	35	C3 DIN 55028	102,000	●	12,000	●
	III	112,002	❍	112	31.5	100	45	C4 DIN 55028	112,000	●	12,000	●
		140,002	❍	140	31.5	105	45	C5 DIN 55028	140,000	●	12,000	●
3 clamp. holders	I								63,001	●		
Guh. no. 6002		63,003	●	63	10.0	50	27	B25 DIN 1835	63,000	●	8,000	●
	II	80,003	●	80	20.0	75	35	Ø 30 x 10 deep	80,001	●	12,000	●
		102,003	❍	102	20.0	80	35	C3 DIN 55028	102,000	●	12,000	●
	III	112,003	❍	112	31.5	100	45	C4 DIN 55028	112,000	●	12,000	●
		140,003	❍	140	31.5	105	45	C5 DIN 55028	140,000	●	12,000	●
4 clamp. holders	II	102,004	●	102	20.0	80	35	C3 DIN 55028	102,001	●	12,000	●
Guh. no. 6003		112,004	❍	112	31.5	100	45	C4 DIN 55028	112,001	●	12,000	●
	III	140,004	❍	140	31.5	105	45	C5 DIN 55028	140,001	●	12,000	●
									170,000	●		
	IV	170,004	❍	170	50.0	160	60	C6 DIN 55028	170,001	●	16,000	●
		220,004	❍	220	50.0	175	60	C8 DIN 55028	220,000	●	16,000	●

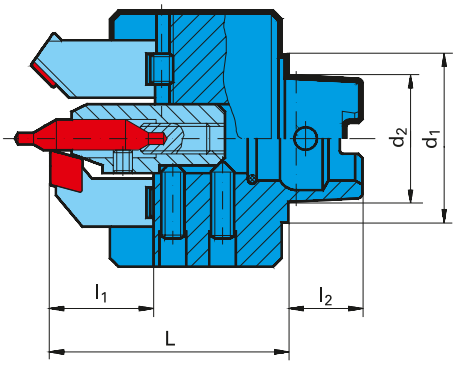
*) When ordering, please always state Guhring no. and code no.!

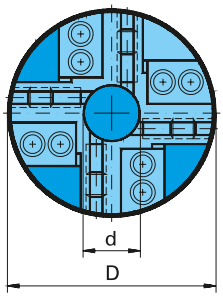




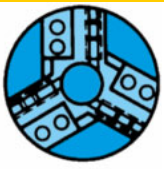
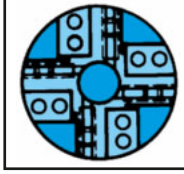
Tool head
with HSK-holder,
form A
automatic

Tool head	Size	Code no.*	Availability discount group 122	Dimensions D mm	d mm	d_1 mm form **A**	d_2 mm	L mm form **A**	l_1 m	l_2 mm	HSK holder
2 clamp. holders **Form A no. 6041**	I	45,032	●	45	10.0	32	24	85	27	16	32
		63,040	❍	63	10.0	40	30	85	27	20	40
	II	80,050	❍	80	20.0	50	38	105	35	25	50
		102,063	●	102	20.0	63	48	105	35	32	63
	III	112,080	❍	112	31.5	80	60	131	45	40	80
		140,100	❍	140	31.5	100	75	131	45	50	100
3 clamp. holders **Form A no. 6042**	I	63,040	❍	63	10.0	40	30	85	27	20	40
	II	80,050	❍	80	20.0	50	38	105	35	25	50
		102,063	●	102	20.0	63	48	105	35	32	63
	III	112,080	❍	112	31.5	80	60	131	45	40	80
		140,100	❍	140	31.5	100	75	131	45	50	100
4 clamp. holders **Form A no. 6043** 	II	102,063	❍	102	20.0	63	48	105	35	32	63
	III	112,080	❍	112	31.5	80	60	131	45	40	80
		140,100	❍	140	31.5	100	75	131	45	50	100





Tool head
with HSK-holder,
form C
manual
with increased
locating face

Tool head	Size	Code no.*	Availability discount group 122	Dimensions D mm	d mm	d_1 mm form **C**	d_2 mm	L mm form **C**	l_1 mm	l_2 mm	HSK holder
2 clamp. holders **Form C no. 6031**	I	45,032	●	45	10.0	40	24	59	27	16	32
		63,040	●	63	10.0	50	30	59	27	20	40
	II	80,050	●	80	20.0	63	38	75	35	25	50
		102,063	●	102	20.0	80	48	75	35	32	63
	III	112,080	●	112	31.5	100	60	100	45	40	80
		140,100	●	140	31.5	125	75	100	45	50	100
3 clamp. holders **Form C no. 6032** 	I	63,040	❍	63	10.0	50	30	59	27	20	40
	II	80,050	●	80	20.0	63	38	75	35	25	50
		102,063	●	102	20.0	80	48	75	35	32	63
	III	112,080	●	112	31.5	100	60	100	45	40	80
		140,100	❍	140	31.5	125	75	100	45	50	100
4 clamp. holders **Form C no. 6033** 	II	102,063	●	102	20.0	80	48	75	35	32	63
	III	112,080	❍	112	31.5	100	60	100	45	40	80
		140,100	❍	140	31.5	125	75	100	45	50	100

Tool holder type	Code no.*	Facing size l_1 mm	Availability discount group 122	Total length l_2 mm	Machining dia. range $d_1$min $d_1$max mm	For tool head D mm	For tool head size	For insert type	Spare parts: Tungst. carb. base no. 6126 Code no.	Spare parts: Threaded ring no. 6127 Code no.	Spare parts: Clamp. screw no. 6128 Code no.
									Availability/discount group 122		
Holder for facing operations											
Guhring no. 6101	11.006	27	●	–	0 - 20	45	I	CCH...0602	–	–	2.501 ●
					5 - 35	63					
	12.006		●		0 - 30	63					
	11.009		●		0 - 22	45					3.500 ●
					0 - 40	63					
	21.009	35	●	–	0 - 25	80	II	CCH...09T3	9.000 ●	5.000 ●	3.501 ●
					0(8**)- 44	102					
	22.009		●		10 - 40	80					
					10(17**)- 62	102					
	21.012		●		0 - 30	80		CNH...1204	12.000 ●	6.000 ●	4.000 ●
					0(8**)- 50	102					
	22.012		●		12 - 40	80					
					13 - 62	102					
	31.012	45	●	–	0 - 40	112	III				
					0 - 70	140					
	32.012		●		35 - 70	112					
					35 -100	140					
	31.016		●	–	0 - 46	112		CNH...1606	16.000 ●	8.000 ●	5.000 ●
					0 - 76	140					
	32.016		●		35 - 80	112					
					35 -110	140					
	41.016	60	○	–	0 - 80	170	IV				
					0 -130	220					
	42.016		○		50 -130	170					
					50 -180	220					
	41.019		○	–	0 - 86	170		CNH...1906	19.000 ●	8.000 ●	5.000 ●
					0 -138	220					
	42.019		○		50 -130	170					
					50 -180	220					
Holder for ext. chamfering operations											
Guhring no. 6102	11.006	27	●	30.4	8 - 13	45	I	CCH...0602	–	–	2.501 ●
					10 - 30	63					
	12.006		●		12 - 17	45					
					15 - 34	63					
	11.009		●	32.7	8 - 12	45		CCH...09T3	–	–	3.500 ●
					9 - 30	63					
	12.009		○		12 - 16	45					
					13 - 34	63					
	21.009	35	●	40.7	9 - 23	80	II		9.000 ●	5.000 ●	3.501 ●
					9(18**)- 45	102					
	22.009		●		20 - 33	80					
					20(29**)- 55	102					
	21.012		●	43.0	9 - 20	80		CNH...1204	12.000 ●	6.000 ●	4.000 ●
					9(17**)- 44	102					
	22.012		○		20 - 31	80					
					20(29**)- 55	102					
	31.012	45	●	53.0	15 - 38	112	III				
					15 - 68	140					
	32.012		○		38 - 60	112					
					38 - 90	140					
	31.016		●	53.3	15 - 38	112		CNH...1606	16.000 ●	8.000 ●	5.000 ●
					15 - 68	140					
	32.016		○		38 - 60	112					
					38 - 90	140					
	41.016	60	○	63.3	36 - 74	170	IV				
					36 -127	220					
	42.016		○		73 -114	170					
					73 -167	220					

*) When ordering, please always state Guhring no. and code no.!

**)Dimensions for tool head with 4 adaptors, Ø 102 mm (6003 102,004)!

Tool holder type	Code no.*	Facing size l_1 mm	Availability discount group 122	Total length l_2 mm	Machining dia. range $d_1$min $d_1$max mm	For tool head D mm	For tool head size	For insert type	Spare parts: Tungst. carb. base no. 6126 Code no.	Spare parts: Threaded ring no. 6127 Code no.	Spare parts: Clamp. screw no. 6128 Code no.
									Availability/discount group 122		
Holder for ext. chamfering operations **Guhring no. 6103**	11.006	27	●	31.5	8 - 13	45	I	CCH...0602	–	–	2.501 ●
					10 - 30	63					
	12.006		○		12 - 17	45					
					15 - 34	63					
	11.009		○	34.3	8 - 12	45		CCH...09T3	–	–	3.500 ●
					10 - 30	63					
	12.009		○		12 - 16	45					
					14 - 34	63					
	21.009	35	○	42.3	8 - 21	80	II		9.000 ●	5.000 ●	3.501 ●
					8(17**)- 43	102					
	22.009		●		20 - 32	80					
					20(29**)- 54	102					
	21.012		○	45.0	8 - 20	80		CNH...1204	12.000 ●	6.000 ●	4.000 ●
					8(17**)- 43	102					
	22.012		●		20 - 30	80					
					20(28**)- 54	102					
	31.012	45	○	55.1	15 - 38	112	III				
					15 - 68	140					
	32.012		○		38 - 60	112					
					38 - 90	140					
	31.016		○	57.9	15 - 38	112		CNH...1606	16.000 ●	8.000 ●	5.000 ●
					15 - 68	140					
	32.016		○	55.9	38 - 60	112					
					38 - 90	140					
	41.016	60	○	70.9	36 - 72	170	IV				
					36 - 124	220					
	42.016		○		71 - 114	170					
					71 - 166	220					
Holder for int. chamfering operations **Guhring no. 6104**	11.006	27	○	29.0	7 - 15	45	I	CCH...0602	–	–	2.501 ●
					14 - 30	63					
	12.006		○		7 - 25	63					
	11.007		○		7 - 15	45		DCM...0702			
					15 - 30	63					
	12.007		●		7 - 22	63					
	11.009		○		14 - 16	45		CCH...09T3	–	–	3.500 ●
					18 - 34	63					
	21.009	35	●	36.5	15 - 27	80	II		9.001 ●	5.000 ●	3.501 ●
					15(23**)- 49	102					
	22.009		○		25 - 35	80					
					25(30**)- 57	102					
	21.012		●	38.0	16 - 25	80		CNH...1204	12.001 ●	6.000 ●	4.000 ●
					16(24**)- 46	102					
	22.012		●		25 - 35	80					
					25(30**)- 53	102					
	31.012	45	●	47.0	15 - 40	112	III				
					15 - 70	140					
	32.012		○	48.0	40 - 60	112			12.000 ●		
					40 - 90	140					
	31.016		●	47.0	20 - 40	112		CNH...1606	16.001 ●	8.000 ●	5.000 ●
					20 - 70	140					
	32.016		○	48.0	40 - 60	112			16.000 ●		
					40 - 90	140					
	41.016	60	○	68.0	40 - 82	170	IV		–	–	
					40 - 132	220					
	42.016		○		78 - 120	170			16.000 ●	8.000 ●	
					78 - 170	220					

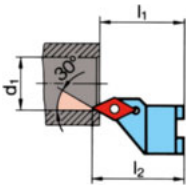
*) When ordering, please always state Guhring no. and code no.! **)Dimensions for tool head with 4 adaptors, Ø 102 mm (6003 102,004)!

GE 100

Tool holders, radially adjustable

Spare parts

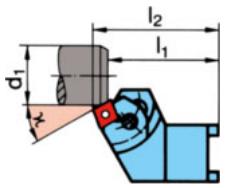
Tool holder type	Code no.*	Facing size l_1 mm	Availability discount group 122	Total length l_2 mm	Machining dia. range $d_1$min $d_1$max mm	For tool head D mm	For tool head size	For insert type	Tungst. carb. base no. 6126 Code no.	Threaded ring no. 6127 Code no.	Clamp. screw no. 6128 Code no.
									Availability discount group 122		
Holder for internal chamf. operations	11.006	27	●	29.5	7 - 15	45	I	CCH...0602	–	–	2.501 ●
					15 - 30	63					
	12.006		❍		7 - 20	63					
	11.007		❍		7 - 15	45		DCM...0702	–	–	
					15 - 30	63					
	12.007		❍		7 - 22	63					
Guhring no. 6105	11.009		❍		14 - 17	45		CCH...09T3	–	–	3.500 ●
					18 - 35	63					
	21.009	35	●	36.5	15 - 27	80	II		9.002 ●	5.000 ●	3.501 ●
					15(23**)- 49	102					
	22.009		❍		25 - 38	80					
					25(35**)- 60	102					
	21.012		❍	38.0	16 - 25	80		CNH...1204	12.002 ●	6.000 ●	4.000 ●
					16(24**)- 46	102					
	22.012		❍		26 - 36	80			12.000 ●		
					26(36**)- 58	102					
	31.012	45	❍	48.0	15 - 40	112	III		16.002 ●	8.000 ●	5.000 ●
					15 - 70	140					
	32.012		❍		40 - 60	112			16.000 ●		
					40 - 90	140					
	31.016		❍		20 - 40	112		CNH...1606	–	–	
					20 - 70	140					
	32.016		❍		40 - 60	112			16.000 ●	8.000 ●	
					40 - 90	140					
	41.016	60	❍	70.0	40 - 82	170	IV				
					40 - 132	220					
	42.016		❍		78 - 120	170					
					78 - 170	220					



*) When ordering, please always state Guhring no. and code no.!
**)Dimensions for tool head with 4 adaptors. Ø 102 mm (6003 102.004)!

Tool holders, axially, radially and angular adjustable

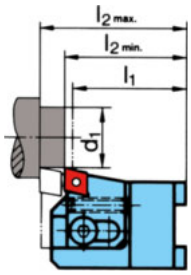
Holders with adjustable angle for external chamfering	Code no.*	Availability discount group 122	Angle adjustment range χ min. max.	Dimensions l_1 mm	Dimensions l_2 mm	Machining dia. range** d_1 min. d_1 max. mm	For tool head D mm	For tool head size	For insert type
Guhring no. 6111	80.000	●	15° - 60°	35	39.5	12 - 21	80	II	CCH... 0602
						12 - 44	102		
	170.000	●	15° - 60°	45	54.5	16 - 35	112	III	CNH... 1204
						16 - 65	140		
	112.000	❍	15° - 60°	60	76.5	30 - 67	170	IV	CNH... 1906
						30 - 120	220		



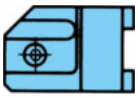
Components for Guhring no. **6111**

Basic holder Guh. no. 6112	Code no.*	Availability discount group 122	Holder inserts Guh. no. 6113	Code no.*	Availability discount group 122	Clamping screw Guh. no. 6128	Code no.*	Availability discount group 122	For Guh. no. holder **6111** Code no.*
	80.000	●		20.006	❍		2.501	●	80.000
	112.000	●		30.012	●		4.002	●	112.000
	170.000	❍		40.019	❍		5.000	❍	170.000

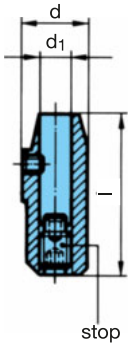
Tool holder type	Length adjustment range l_2 min. l_2 max. mm	Code no.*	Availability discount roup 122	Facing size l_1 mm	Machining dia. range** d_1 min. d_1 max. mm	For tool head D mm	For tool head size	For insert type
Holders for turning operations axially and radially adjustable	35 - 42	80.000	○	35	11.0 - 25.0	80	II	CCH... 0602
	42 - 49	80.001	○					
	49 - 56	80.002	○					
Guhring no. 6114	35 - 45	102.000	●		4.0 - 28.0	102		
	45 - 55	102.001	○					
	55 - 65	102.002	○					
	40 - 50	102.003	●					CNH... 1204
	50 - 60	102.004	○					
	60 - 70	102.005	○					
	40 - 50	102.013	○					CCH... 09T3
	50 - 60	102.014	○					
	60 - 70	102.015	○					
	45 - 55	112.000	○	45	6.0 - 35.0	112	III	CNH... 1204
	55 - 65	112.001	○					
	65 - 75	112.002	○					
	45 - 55	112.010	○		6.0 - 65.0	140		CCH... 09T3
	55 - 65	112.011	○					
	65 - 75	112.012	○					



Components for Guhring no. **6114**

Basic holder **Guh. no. 6115**	Code no.*	Availability discount group 122	Holder inserts **Guh. no. 6116**	Code no.*	Availability discount group 122	Clamping screw **Guh. no. 6128**	Code no.*	Availability discount group 122	For Guh. no. holder **6114** Code no.*
	80.000	○		20.006	●		2.501	●	80.000
	80.001	○							80.001
	80.002	○							80.002
	102.000	●		23.006	○		2.501	●	102.000
	102.001	●							102.001
	102.002	○							102.002
	102.000	●		23.012	●		4.002	●	102.003
	102.001	●							102.004
	102.002	●							102.005
	102.000	●		23.009	●		3.500	●	102.013
	102.001	●							102.014
	102.002	●							102.015
	112.000	●		23.012	●		4.002	●	112.003
	112.001	●							112.004
	112.002	●							112.005
	112.000	●		23.009	●		3.500	●	112.010
	112.001	○							112.011
	112.002	○							112.012

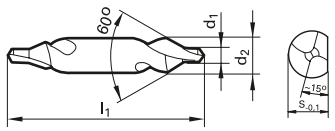
*) When ordering, please always state Guhring no. and code no.! **) without clamping sleeve

Version	Guhring no.	Code no.*	Availability discount group 122	Dimensions d_1 mm	Dimensions d mm	Dimensions l mm	For centre drills form A/R drill Ø	For centre drills form B drill Ø	For step drills	Stop (component) Guhring no. 6155 Code no.*	Stop (component) Guhring no. 6155 Av./DG 122
	**6151** for size I	4.000	●	4.0	10.0	32	1.6	–	–	6.000	●
		5.000	❍	5.0	10.0	32	2.0	–	–	6.001	●
		6.300	❍	6.3	10.0	32	2.5	1.6	–	6.002	●
	6152 for size II	4.000	❍	4.0	20.0	49	1.6	–	–	10.000	●
		5.000	●	5.0	20.0	49	2.0	–	–	10.001	●
		6.300	●	6.3	20.0	49	2.5	1.6	–	10.002	●
		8.000	❍	8.0	20.0	49	3.15	2.0	M 4	10.003	●
		10.000	●	10.0	20.0	49	4.0	2.5	M 5	10.004	●
	6153 for size III	6.300	❍	6.3	31.5	70	2.5	1.6	–	12.000	●
		8.000	❍	8.0	31.5	70	3.15	2.0	M 4	12.001	●
		10.000	●	10.0	31.5	70	4.0	2.5	M 5	12.002	●
		11.200	❍	11.2	31.5	70	–	3.15	–	12.003	●
		12.500	❍	12.5	31.5	70	5.0	–	M 6	12.004	●
		14.000	●	14.0	31.5	70	–	4.0	M 8	12.005	●
		16.000	❍	16.0	31.5	70	6.3	–	M 10	12.006	●
		18.000	●	18.0	31.5	70	–	5.0	–	12.007	●
	6154 for size IV	18.000	❍	18.0	50.0	116	–	5.0	–	20.000	●
		20.000	❍	20.0	50.0	116	8.0	6.3	M 12	20.001	●
		25.000	❍	25.0	50.0	116	10.0	8.0	M 16	20.002	●
		31.500	❍	31.5	50.0	116	12.5	10.0	M 20	20.003	●

Setting dimensions page 1586
*) When ordering, please always state Guhring no. and code no.!

Guhring no.	587	588
Standard	DIN 333	
Tool material	HSS	
Surface	❍	❍
Form	A	R
Cutting direction	right-hand	right-hand
Discount group	138	138
Techn. data page		

Please observe the setting dimensions page 1586.

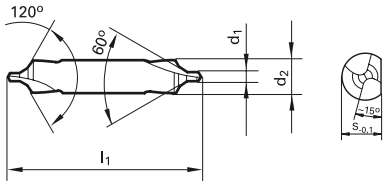


d1 mm	d2 mm	l1 mm	s mm	Availability	
1,000	3,150	31,50	2,35		❍
1,600	4,000	35,50	3,25	●	
2,000	5,000	40,00	4,20	●	●
2,500	6,300	45,00	5,35	●	●
3,150	8,000	50,00	6,95	●	●
4,000	10,000	56,00	8,40	●	●
5,000	12,500	63,00	10,95	●	●
6,300	16,000	71,00	14,00	●	●
8,000	20,000	80,00	17,90	❍	●
10,000	25,000	100,00	22,50	●	●

❍ bright

Guhring no.	**289**
Standard	**DIN 333**
Tool material	**HSS**
Surface	◯
Form	**B**
Cutting direction	**right-hand**
Discount group	**138**
Techn. data page	

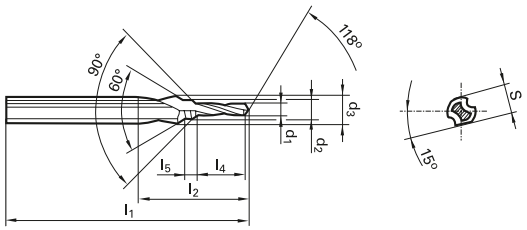
Please observe the setting dimensions page 1586.



d1	d2	l1	s	Availability
mm	mm	mm	mm	
1,600	6,300	45,00	5,35	●
2,000	8,000	50,00	6,95	●
2,500	10,000	56,00	8,40	●
3,150	11,200	60,00	10,00	●
4,000	14,000	67,00	12,65	●
5,000	18,000	75,00	16,40	●
6,300	20,000	80,00	17,90	●
8,000	25,000	100,00	22,50	●

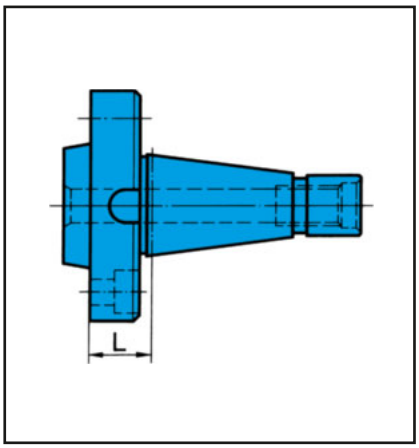
Guhring no.	274	574
Standard	Guhring std.	
Tool material	HSS	
Surface	●	●
Type	N	N
Form	for countersinks form D	for countersinks form DR
Cutting direction	right-hand	right-hand
Discount group	138	138
Techn. data page	184	184

Please observe the setting dimensions page 1586.



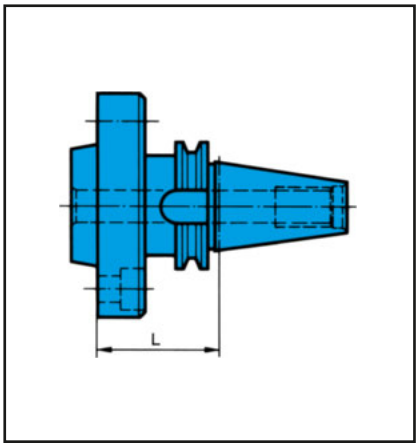
d3 h7	d2	d1 h8	s	l1	l2	l4	l5	for	Availability	
mm	mm	mm	mm	mm	mm	mm	mm	thread		
8.000	4.300	3.300	6.75	63.00	23.00	11.00	1.60	M 4	●	●
10.000	5.300	4.200	8.45	67.00	27.00	13.00	2.15	M 5	●	●
12.500	6.400	5.000	10.45	71.00	33.00	16.00	2.90	M 6	●	●
14.000	8.400	6.800	12.50	88.00	41.00	19.50	3.50	M 8	●	●
16.000	10.500	8.500	14.85	94.00	47.00	23.00	4.70	M10	●	●
20.000	13.000	10.200	18.45	105.00	59.00	28.00	6.50	M12	●	●
25.000	17.000	14.000	23.40	132.00	67.00	33.00	8.30	M16	●	●
31.500	21.000	17.500	29.35	145.00	76.50	38.00	10.35	M20	●	●
40.000	25.000	21.000	36.50	160.00	90.00	45.00	12.00	M24	●	●

● steam tempered



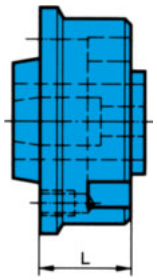
Adaptors with ISO taper to DIN 2080 — Guh. no. 6051

Code no.*	Availability discount group 122	Size	Tool head size	Interface	Size L mm	Head Ø
30.080	●	SK 30	II	Ø 30^{H6} x 10	16.6	80
40.080	●	SK 40	II	Ø 30^{H6} x 10	16.6	80
40.102	●	SK 40	II	C 3 DIN 55028	21.6	102
40.112	❍	SK 40	III	C 4 DIN 55028	21.6	112
40.140	●	SK 40	III	C 5 DIN 55028	21.6	140
50.140	❍	SK 50	III	C 5 DIN 55028	23.2	140



Adaptors with ISO taper to DIN 69871-1 AD — Guh. no. 6052

Code no.*	Availability discount group 122	Size	Tool head size	Interface	Size L mm	Head Ø
40.102	●	SK 40	II	C 3 DIN 55028	55	102
40.112	❍	SK 40	III	C 4 DIN 55028	55	112
40.140	❍	SK 40	III	C 5 DIN 55028	55	140
45.112	❍	SK 45	III	C 4 DIN 55028	55	112
45.140	❍	SK 45	III	C 5 DIN 55028	55	140
50.140	❍	SK 50	III	C 5 DIN 55028	55	140

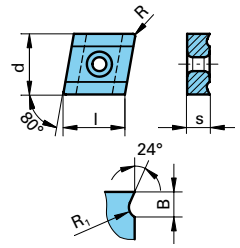


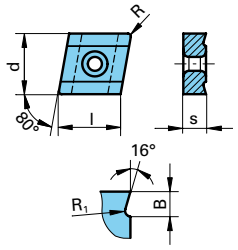
Note:
Tool head only usable if modified

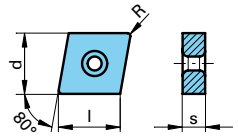
Adaptors for UMA Ø 45/88.88 — Guh. no. 6056

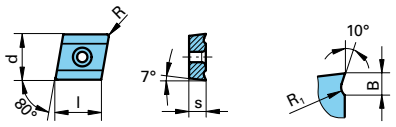
Code no.*	Availability discount group 122	Tool holder adaptors	Tool head size	Interface	Size L mm	Head Ø
3.004	❍	4	II	C 3 DIN 55028	40	102
4.002	❍	2	III	C 4 DIN 55028	40	112
4.003	❍	3	III	C 4 DIN 55028	40	112
4.004	❍	4	III	C 4 DIN 55028	40	112
5.004	❍	4	III	C 5 DIN 55028	45	140

*) When ordering, please always state Guhring no. and code no.! Other systems on request.

Indexable insert type	Dimensions of basic body mm				Dimensions of chipbreaker mm		Carbide grade / Surface finish / Cutting direction / Guhring no.		
Indexable insert with high radius chipbreaker and 4 cutting edges	R	d	l	s	B	R_1	ISO code*	Code no.	
	0.0	12.70	12.9	4.76	2.6	1.5	CNHX 12 0400(R/L) 226	124.000	
	0.4	12.70	12.9	4.76	2.6	1.5	CNHX 12 0404(R/L) 226	124.040	
	0.4	12.70	12.9	4.76	3.0	2.0	CNHX 12 0404(R/L) 230	124.041	
	0.8	12.70	12.9	4.76	2.6	1.5	CNHX 12 0408(R/L) 226	124.080	
	0.8	12.70	12.9	4.76	3.0	2.0	CNHX 12 0408(R/L) 230	124.081	
	0.2	15.88	16.1	6.35	2.6	1.5	CNHX 16 0602(R/L) 226	166.000	
	0.4	15.88	16.1	6.35	2.6	1.5	CNHX 16 0604(R/L) 226	166.040	
	0.4	15.88	16.1	6.35	2.6	1.5	CNHX 16 0604(R/L) 230	166.041	NEW
	0.8	15.88	16.1	6.35	2.6	1.5	CNHX 16 0608(R/L) 226	166.080	
	0.8	15.88	16.1	6.35	3.0	1.5	CNHX 16 0608(R/L) 230	166.081	
	0.4	19.05	19.3	6.35	3.0	2.0	CNHX 19 0604(R/L) 230	196.040	
	0.8	19.05	19.3	6.35	3.0	2.0	CNHX 19 0608(R/L) 235	196.080	

							Cutting direction / Guhring no.		
Indexable insert with standard chipbreaker and 4 cutting edges	R	d	l	s	B	R_1	ISO code*	Code no.	
	0.0	12.70	12.9	4.76	2.2	0.5	CNHX 12 0400(R/L) 122	124.000	
	0.0	12.70	12.9	4.76	2.6	0.5	CNHX 12 0400(R/L) 126	124.001	
	0.4	12.70	12.9	4.76	2.2	0.5	CNHX 12 0404(R/L) 122	124.040	
	0.4	12.70	12.9	4.76	2.6	0.5	CNHX 12 0404 (R/L) 126	124.041	
	0.4	12.70	12.9	4.76	2.6	0.5	CNHX 12 0404 (R/L) 130	124.042	NEW
	0.8	12.70	12.9	4.76	2.6	0.5	CNHX 12 0408(R/L) 126	124.080	
	0.8	12.70	12.9	4.76	3.0	0.5	CNHX 12 0408(R/L) 130	124.081	
	0.2	15.88	16.1	6.35	2.6	0.5	CNHX 16 0602(R/L) 126	166.000	
	0.4	15.88	16.1	6.35	2.6	0.5	CNHX 16 0604(R/L) 126	166.040	
	0.4	15.88	16.1	6.35	2.6	0.5	CNHX 16 0604(R/L) 130	166.041	
	0.8	15.88	16.1	6.35	3.0	0.5	CNHX 16 0608(R/L) 126	166.080	NEW
	0.8	15.88	16.1	6.35	3.0	0.5	CNHX 16 0608(R/L) 130	166.081	
	0.4	19.05	19.3	6.35	3.0	0.5	CNHX 19 06 04 (R/L) 130	196.040	

						Cutting direction / Guhring no.		
Indexable insert without chipbreaker and 4 cutting edges	R	d	l	s		ISO code*	Code no.	
	0.0	12.70	12.9	4.76		CNHQ 12 0400N	124.000	
	0.4	12.70	12.9	4.76		CNHQ 12 0404N	124.040	
	0.8	12.70	12.9	4.76		CNHQ 12 0408N	124.080	
	0.2	15.88	16.1	6.35		CNHQ 16 0602N	166.020	
	0.4	15.88	16.1	6.35		CNHQ 16 0604N	166.040	
	0.8	15.88	16.1	6.35		CNHQ 16 0608N	166.080	
	0.4	19.05	19.3	6.35		CNHQ 19 0604N	196.040	
	0.8	19.05	19.3	6.35		CNHQ 19 0608N	196.080	
	1.2	19.05	19.3	6.35		CNHQ 19 0612N	196.120	

							Cutting direction / Guhring no.		
Indexable insert with high radius chipbreaker and 2 cutting edges	R	d	l	s	B	R_1	ISO code*	Code no.	
	0.2	6.35	6.4	2.38	1.2	0.5	CCHX 060202(R/L) 212	62.020	
	0.4	6.35	6.4	2.38	1.2	0.5	CCHX 060204(R/L) 212	62.040	
	0.8	6.35	6.4	2.38	1.4	0.5	CCHX 060208(R/L) 214	62.080	
	0.2	9.525	9.6	3.97	1.6	1.0	CCHX 09T3 02(R/L) 216	93.020	
	0.4	9.525	9.6	3.97	1.6	1.0	CCHX 09T3 04(R/L) 216	93.040	
	0.8	9.525	9.6	3.97	1.8	1.0	CCHX 09T3 08(R/L) 218	93.080	
	0.2	12.70	12.9	4.76	1.6	1.0	CCHX 120402(R/L) 216	124.020	
	0.4	12.70	12.9	4.76	1.6	1.0	CCHX 120404(R/L) 216	124.040	
	0.8	12.70	12.9	4.76	1.6	1.0	CCHX 120408(R/L) 216	124.080	

bright (S) TiN (A) TiAlN (C) TiCN

K10		P10		P25		P40		P40		P40		P40		K10
○		○		○		○		S		A		C		S
right	left	right	left	right	left	right	left	right	left	right	left	right	left	
6208	6252	6209	6253	6210	6254	6211	6255	6212	6256	6213	6257	6214	6258	
Availability • discount group 122														
●	○	●	○	●		●	○	●	○					
●	●	○	○	●	●	●	●	●	●			●		
●	○		○	●		●	○	●	○			○		
●	○		○	●	○	●	○	●	○			○		
○	○		○	○		●	○	●	○			○		
●	○	○		○	○	●	○	●	○					
●	●	○		●	○	○	●	●	●					
	○	○		○		●		○						
○	○			○	○	●	●	●	○			○		
●	○	○		●		●	○	●				○		
●	○	○		○		●	○	●	○					
●	○			○		●	○	●	○					

right	left	right	left	right	left	right	left	right	left	right	left	right	left	
6201	6245	6202	6246	6203	6247	6204	6248	6205	6249	6206	6250	6207	6251	
Availability • discount group 122														
●	○	○	○	●	○	●	○	●	○			○		
○		○		●	○	○	○	●	○	○		○		
○	○	○		●	○	○	○	●	○	○		○		
○	○	○	○	●	○	●	○	●	○	○		○		
○		○		●	○	○	○	○	○	○		○		
●		○		○	○	○	○	○	○	○		○		
○		○		○	○	●	○	●	○	○		○		
○		○		○	●	●	○	●	○	○		○		
●		○	○	○		●	○	○	○	○		○		
○		○	○	○	○	○	○	○	○	○		○		
○		○	○	○	○	○	○	○	○	○		○		
○		○	○	○		●	○	○	○	○		○		
○		○	○			○	○	○	○	○		○		

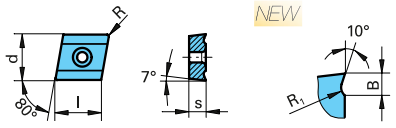
left and right	left and right	left and right	left and right				
6215	6234	6235	6236				
Availability • discount group 122							
●	○	○	●				
●	○	○	○				
●	○	○	●				
●	○	○	●				
●	○	○	●				
○	○	●	●				
○	○	●	●				
○		●	○				

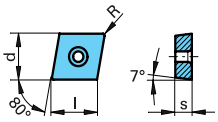
right	left	right	left		right	left	right	left			right	left
6277	6278	6279	6280		6281	6282	6283	6284			6293	6298
Availability • discount group 122												
●	●	○	○		●	●	●	●			●	●
●	●	○	○		●	●	●	●			●	●
○	●	○	○		●	●	●	●			●	○
●	●				○	●	●	●			●	●
●	●				●	●	●	●			●	●
●	●				○	●	●	●			●	●
●	●				○	○	●	●			○	○
●	●				●	●	●	●			●	●
●	●				●	●	●	●			○	○

GE 100

*)When ordering, please always state ISO code, carbide grade, Guhring no. and code no.! (example: CNHX120400R226 K10 6208 124,000)

all indexable insert sizes not shown as available can be supplied on request

Indexable insert type	Dimensions of basic body mm				Dimensions of chipbreaker mm		Carbide grade / Surface finish / Cutting direction / **Guhring no.**	
Indexable insert with high radius chipbreaker and 2 cutting edges	R	d	l	s	B	R_1	ISO code*	Code no.
	0.2	6.35	6.4	2.38	1.2	0.2	CCHX 060202(R/L) 112	62.020
	0.4	6.35	6.4	2.38	1.2	0.2	CCHX 060204(R/L) 112	62.040
	0.8	6.35	6.4	2.38	1.4	0.2	CCHX 060208(R/L) 114	62.080
	0.2	9.525	9.6	3.97	1.6	0.2	CCHX 09T3 02(R/L) 116	93.020
	0.4	9.525	9.6	3.97	1.6	0.2	CCHX 09T3 04(R/L) 116	93.040
	0.8	9.525	9.6	3.97	1.8	0.2	CCHX 09T3 08(R/L) 118	93.080
	0.2	12.90	12.9	4.76	1.6	0.2	CCHX 120402(R/L) 116	124.020
	0.4	12.90	12.9	4.76	1.6	0.2	CCHX 120404(R/L) 116	124.040
	0.8	12.90	12.9	4.76	1.6	0.2	CCHX 120408(R/L) 116	124.080

Indexable insert without chipbreaker and 2 cutting edges						Cutting direction / **Guhring no.**	
	R	d	l	s		ISO code*	Code no.
	0.2	6.35	6.4	2.38		CCHW 060202N	62.020
	0.4	6.35	6.4	2.38		CCHW060204N	62.040
	0.8	6.35	6.4	2.38		CCHW060208N	62.080
	0.2	9.525	9.6	3.97		CCHW09T3 02N	93.020
	0.4	9.525	9.6	3.97		CCHW09T3 04N	93.040
	0.8	9.525	9.6	3.97		CCHW09T3 08N	93.080
	0.2	12.70	12.9	4.76		CCHW 120402 N	124.020
	0.4	12.70	12.9	4.76		CCHW 120404 N	124.040
	0.8	12.70	12.9	4.76		CCHW 120408 N	124.080

GE 100

bright (S) TiN (A) TiAlN (C) TiCN

K10		K10		K10		K10		P10		P40		P40		P40		P40	
○		S		A		Proton		○		○		S		A		Proton	
right	left	right	left	right	left	right	left	right	left	right	left	right	left	right	left	right	left
6677	6678	6693	6698	6671	6680	6685	6686			6681	6682	6683	6684	6675	6676	6687	6688
Availability • discount group 122																	
●	●	on request		on request		on request				●	●	●	●	on request		on request	
●	●									●	●	●	●				
●	●									●	●	●	●				
●	●									●	●	●	●				
●	●									●	●	●	●				
●	●									●	●	●	●				
●	●									●	●	●	●				

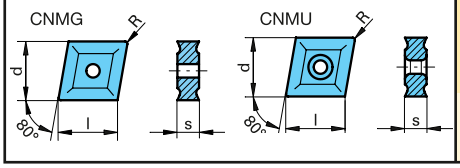
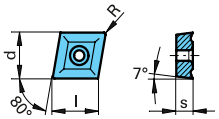
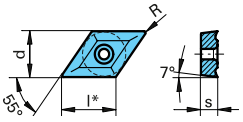
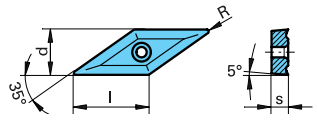
neutral				neutral	neutral			
6287				6288	6289			
Availability • discount group 122								
●				❍	●			
●				❍	●			
●					●			
●					●			
●					●			
●					●			
●					●			
●					●			
●					●			

GE 100

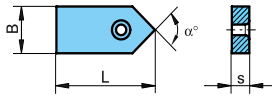
*)When ordering, please always state ISO code, carbide grade, Guhring no. and code no.! (example: CNHX120400R226 K10 6208 124,000)

all indexable insert sizes not shown as available can be supplied on request

Indexable inserts, sintered

Indexable insert type	Indexable insert dimensions mm					Carbide grade / Surface finish / Cutting direction	Guhring no.
	R	d	l	s		ISO code*	Code no.
Indexable insert with chipbreaker and 4 cutting edges							
	0.2	12.70	12.9	4.76		CNMU 12 0402N	124.020
	0.4	12.70	12.9	4.76		CNMG12 0404N	124.040
	0.8	12.70	12.9	4.76		CNMG12 0408N	124.080
	0.4	15.88	16.1	6.35		CNMU16 0604N	166.040
	0.8	15.88	16.1	6.35		CNMG16 0608N	166.080
Indexable insert with chipbreaker and 2 cutting edges							
	0.2	6.35	6.4	2.38		CCMT 060202N	62.020
	0.4	6.35	6.4	2.38		CCMT060204N	62.040
	0.8	6.35	6.4	2.38		CCMT060208N	62.080
	0.2	9.525	9.6	3.97		CCMT09T3 02N	93.020
	0.4	9.525	9.6	3.97		CCMT09T3 04N	93.040
	0.8	9.525	9.6	3.97		CCMT09T3 08N	93.080
	0.4	12.70	12.9	4.76		CCMT120404N	124.040
	0.8	12.70	12.9	4.76		CCMT120408N	124.080
Indexable insert with chipbreaker and 2 cutting edges							
	0.2	6.35	7.8	2.38		DCMT 070202N	72.020
	0.4	6.35	7.8	2.38		DCMT070204N	72.040
	0.4	9.525	11.0	3.97		DCMT11T304N	11.040
Indexable insert with chipbreaker and 2 cutting edges							
	0.2	6.35	11.0	2.38		VBMT 11 02 02N	11.020

Insert blanks for final grinding, precision ground

Insert blank	B	L	α°	s	Clamping screw Guhring no. 6128 Code-Nr.	Carbide grade / Surface finish / Cutting direction / Guhring no. Drawing no.	Guhring no. Code no.
	6.4	13.25	90	2.4	2.501	ES 060001	6.000
	7.4	16.70	60	2.5	2.501	ES 070001	7.000
	8.4	20.70	60	3.0	3.500	ES 080001	8.000
	9.4	18.65	90	4.0	4.000/4.001	ES090001	9.000
	10.4	18.70	90	4.0	4.000/4.001	ES100001	10.000
	13.4	23.50	90	4.0	4.000/4.001	ES130001	13.000

bright S TiN A TiAlN C TiCN

K10	P10	P25	P40	P40	P40
○	○	○	○	Ⓢ	Ⓢ
left/right	left/right	left/right	left/right	left/right	left/right
6294	**6295**	**6296**	**6275**	**6276**	**6297**
Availability • discount group 122					
❍	●	❍	●	●	❍
❍					●
❍				●	❍

left/right				left/right	
6271				**6273**	
Availability • discount group 122					
●				●	
●				●	
●					
❍				❍	
●				●	
❍				●	
❍				●	
❍				●	

left/right				left/right	
6290				**6231**	
Availability • discount group 122					
●				●	
●				●	
●				●	

left/right				left/right	
6291				**6292**	
Availability • discount group 122					
●				●	

K10	P10	P25	P40	P40	P40
○	○	○	○	Ⓢ	Ⓢ
left/right			left/right		
6285			**6286**		
Availability • discount group 122					
●			●		
●			●		
●			●		
●			●		
●			●		
●			●		

Indexable insert code sim. Guhring std.

Example

C	N	H	X		12	04	04		(R/L)	2	26
1	2	3	4		5	6	7		8	9	10

1 Basic form

C rhombus with 80° corner angle

D rhombus with 55° corner angle

V rhombus with 35° corner angle

2 Clearance angle

B 5°

C 7°

N 0°

3 Tolerance class

	insert thickness s	inscribed circle d	verification m
H	± 0.025	± 0.013	± 0.013
M	± 0.05 - 0.13*	± 0.05 - 0.1	± 0.08 - 0.2

4 Characteristics

G with chipbreakers on both faces and parallel bore

Q without chipbreaker, with fastening hole 40°...60°, on both sides

T with chipbreakers on one face and fastening hole 40°...60°, on one side

U with chipbreakers on both faces and fastening hole 40°...60°, on both sides

W without chipbreaker, with fastening hole 40°...60°, on one side

X special design (to drawing)

5 Size

Cutting edge length in mm without decimal point, 0 precedes one-figure numbers.

6 Thickness

Insert thickness in mm without decimal point, 0 precedes one-figure numbers.

7 Corner radius

Radius in 1/10 mm, 0 precedes one-figure numbers.

8 Cutting direction

R right-hand L left-hand N right-/left-hand

9 Cutting edge design

		actual angle
1 standard chip breaker	16°	10° (relief angle 6°)
2 high radius chip breaker	18°/24°	18° (relief angle 6°)

10 Chipbreaker width

in 1/10 mm without decimal point (example: 2.6 mm = 26).

*) When ordering, please always state ISO code, carbide grade, Guhring no. and code no.! (example: CNHX120400R226 K10 6208 124,000)

all indexable insert sizes not shown as available can be supplied on request

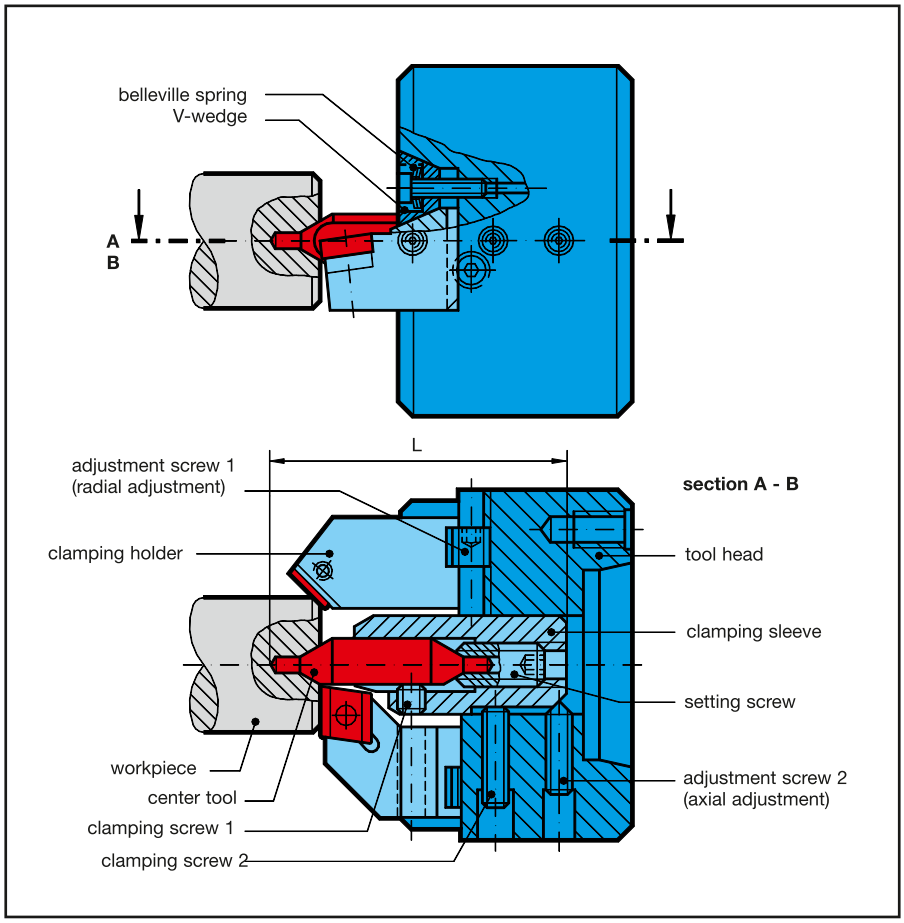
In order to clarify initial queries, we have developed the questionnaire on the following page. Please photocopy and complete. This assists us greatly.

Setting of clamping holder

1. Turn the clamping holder adjustment screw 1 in direction of adjustment until stop.
2. Loosen V-wedge, then pretension again via Bellville spring (do not tighten!).
3. Using hexagonal spanner set adjustment screw 1 (1 mm increments) to the required dimension (1 turn = 2 mm in diameter).
4. Tighten V-wedge.

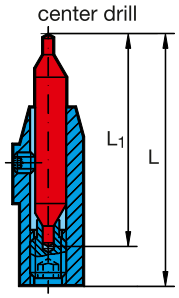
Setting and changing of center drills

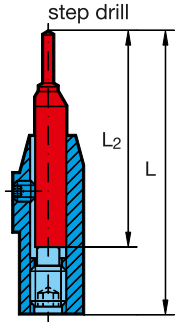
1. Pre-set length L according to setting dimensions via setting screw.
2. Place clamping sleeve in the bore of the tool head and finely adjust via tool head adjustment screw 2 which acts axially on chamfer of clamping sleeve.
3. Set clamping sleeve position with clamping screw.
4. Tool change is achieved by loosening clamping screw 2 via hole in the clamping holder without adjusting clamping holder.



Setting dimensions "L" for clamping sleeves with center drills or step drills with flats

No. 587, 588 | **No. 589** | **No. 274, 574**





Clamping sleeve Guh. no. Code no.*		Center drill with flat for center holes form A or R to DIN 332 sheet 1			Center drill with flat for center holes form B to DIN 332 sheet 1			Center drill with flat for center holes form D or DR to DIN 332 sheet 2		
		drill dia. mm	dimensions mm L	L_1	drill dia. mm	dimensions mm L	L_1	drill dia. mm	dimensions mm L	L_2
6151	4.000	1.60	47.5	35.5	–	–	–	–	–	–
	5.000	2.00	48.4	40.0	–	–	–	–	–	–
	6.300	2.50	49.5	45.0	–	–	–	–	–	–
6152	4.000	1.60	62.5	35.5	–	–	–	–	–	–
	5.000	2.00	63.4	40.0	–	–	–	–	–	–
	6.300	2.50	64.5	45.0	1.60	64.5	45.0	–	–	–
	8.000	3.15	66.0	50.0	2.00	66.0	50.0	M 4	74.7	58.0**
	10.000	4.00	67.9	56.0	2.50	67.9	56.0	M 5	77.8	61.0**
6153	6.300	2.50	83.0	45.0	1.60	83.0	45.0	–	–	–
	8.000	3.15	87.0	50.0	2.00	87.0	50.0	M 4	95.7	58.0**
	10.000	4.00	88.9	56.0	2.50	88.9	56.0	M 5	98.8	61.0**
	11.200	–	–	–	3.15	87.0	60.0	–	–	–
	12.500	5.00	91.1	63.0	–	–	–	M 6	103.2	71.0
	14.000	–	–	–	4.00	90.1	67.0	M 8	108.3	77.0**
	16.000	6.30	94.0	71.0	–	–	–	M 10	114.1	82.0**
	18.000	–	–	–	5.00	92.7	75.0	–	–	–
6154	18.000	–	–	–	5.00	148.7	75.0	–	–	–
	20.000	8.00	153.9	80.0	6.30	151.4	80.0	M 12	174.9	105.0
	25.000	10.00	158.5	100.0	8.00	155.4	100.0	M 16	186.7	132.0
	31.500	12.50	164.6	125.0	10.00	160.5	125.0	M 20	196.0	145.0

*)When ordering, always indicate Guhring no. and code no.!

**) reduced shank length

For the design of end operation tools

1. Tool

1.1 Technical data

Tool Ø max. ____ mm
Tool length max. ____ mm
Tool holder ____
Suggestion for indexable insert ____

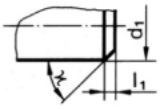
1.2 Required machining operations

(if possible, please enclose workpiece drawing)

❑ Facing

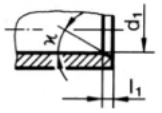
d_1 max.____mm, d_1 min.____mm

❑ External chamfering



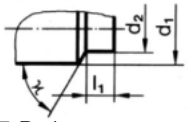
d_1 max. ____ mm, d_1 min. ____ mm
x ____ ° , l_1 max. ____ mm
x ____ ° , l_1 max. ____ mm
x ____ ° , l_1 max. ____ mm

❑ Internal chamfering



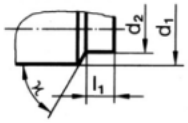
d_1 max. ____ mm, d_1 min. ____ mm
x ____ ° , l_1 max. ____ mm
x ____ ° , l_1 max. ____ mm
x ____ ° , l_1 max. ____ mm

❑ Turning



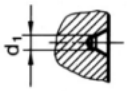
d_1 max. ____ mm, d_1 min. ____ mm
d_2 max. ____ mm, d_2 min. ____ mm
x ____ ° , l_1 max. ____ mm

❑ Boring

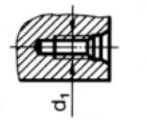


d_1 max. ____ mm, d_1 min. ____ mm
d_2 max. ____ mm, d_2 min. ____ mm
x ____ ° , l_1 max. ____ mm

❑ Centering



Centering to DIN 332
Form A d_1 ____ mm
Form B d_1 ____ mm
Form R d_1 ____ mm



Form D d_1 M ____
Form DR d_1 M ____

3. Machine

3.1 Technical data

Machine type ____
Drive power ____ kW

❑ Other machine operation

1.3 Quantity required

Basic body ____ short clamping holder ____
Accessories ____

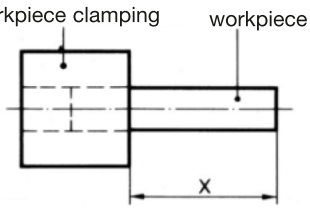
2. Workpiece

(if possible, please enclose workpiece drawing)

2.1 Material to be machined

Material designation (Mat. no. to DIN)

2.2 Position of workpiece



Proj. unclamped length x min. ____ mm

2.3 Other information

(please provide example drawing on reverse side)

Surface finish ____
Tolerances ____

GE 100

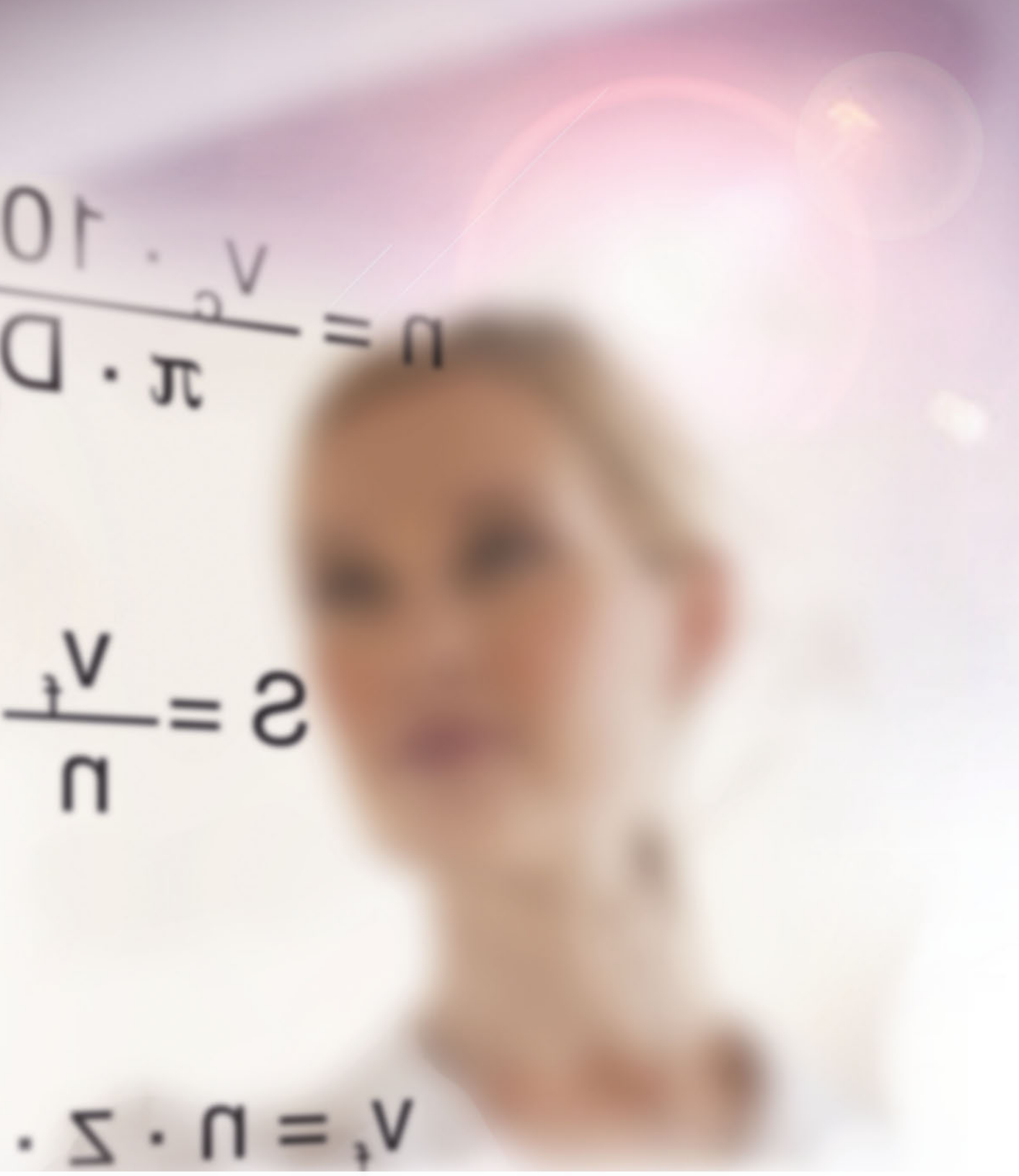
For technical queries please contact Mr.

Tel.

Company name and address

Date, signature

GUHRING



TECHNICAL SECTION

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High speed steels

Only high quality tool materials are used to produce HSS tools. Systematic selection of alloying elements ensure the tool possesses the optimal characteristics for the individual tasks.

Tungsten, Molybdenum: increase tempering- and wear-resistance
Vanadium: increases wear-resistance of finishing tools
Cobalt: enables increased hardening temperatures and improves heat-resistance.

Guhring description	German steel descript.	Material no. (steel code)	Range of application	comparable steels					
				USA	France	Italy	Great Britain	China	Japan
HSS	HS 6-5-2 (DMo5)	1.3343	standard tool material for most common applications	M 2	Z 90 WDCV 06-05-04-02	HS 6-5-2	BM 2	W6Mo5 Cr4V2	SKH51
HSCO HSS-E	HS 6-5-2-5 (EMo5Co5)	1.3243	high heat-resistance, especially suited for roughing or when coolant insufficient	M 35	Z 90 WDKCV 06-05-05-04-02	HS 6-5-2-5	BM 35	W6Mo5 Cr4V2Co5	SKH55
HSS-E	HS 6-5-3 (EMo5V3)	1.3344	high friction resistance and cutting edge stability, especially important for reaming operations	M 3	Z 120 WDCV 06-05-04-03	HS 6-5-3	–	W6Mo5 Cr4V3	SKH52
M42 **HSS-E**	HS 2-9-1-8	1.3247	increased heat resistance and hardness, suitable for difficult-to-machine materials	M 42	Z 110 DKCWV 09-08-04-02-01	HS 2-9-1-8	BM 42	W2Mo9Cr4 VCo8	SKH59
HSS-E-PM	10-2-5-8 PM52 HS 6-5-3-8 PM30	1.3253 1.3294	high hardness, heat-resistance and cutting edge stability, very dense structure	–					

Superhard tool materials

It is not only the extreme hardness of superhard tool materials but also their high heat-resistance which enables highest cutting rates and increased productivity. One disadvantage is however their low toughness.

Economical application is only possible on extremely rigid machines and for a specific range of application.

Guhring description	Classification	Range of application	Average grain size	Diamond content
PCD	Fine grain	Aluminium and AlSi-alloys <10%Si, magnesium alloys, brass, copper, bronze, wood composite materials excellent cutting edge quality high abrasion resistance excellent surface qualities	2-4µm	approx. 90%
	Medium grain	Universal grade (general finishing applications) AlSi-alloys <14%Si, copper alloys, graphite and graphite composite materials, wood composite materials, unsintered ceramic and carbide (<15% binding metal content) excellent resistance good surface qualities	5-10µm	approx. 92%
	Coarse grain	Roughing and finishing applications AlSi-alloys >14%Si and other abrasive machining applications, MMC, sintered ceramic and carbide (<15% binding metal content extreme abrasion resistance, high shock resistance long tool life with acceptable to good surface quality	25µm	approx. 94%
	Mixed grain	Abrasive machining applications (i.e.: >14% AlSi-alloys, MMC, composite materials) highest wear resistance, excellent shock resistance extreme abrasion resistance with good edge roughness long tool life with good surface quality	2-4µm+ 25µm	approx. 95%
CBN 10..	Low CBN-content with carbide base	CBN tool material with carbide base for finishing machining of, for example, case hardened steels, heat-treatable steels, tool steels, grey cast iron, suitable for continuous and interrupted cut applications (especially hard turning) with a chip removal <0.5mm, high pressure resistance, low thermal conductivity, excellent abrasion resistance, chemical stability, good shock toughness for high removal rates, excellent surface finish and long tool life	2µm	50-65% CBN content
CBN 20..	High CBN-content with carbide base	CBN tool material with carbide base for the machining of, for example, pearlitic grey cast iron (> 45 HRC), hardened steel, tool and structural profile steels, powder metallurgic Fe-sinter materials, alloys on Ni/Cr basis (nickel base alloys - „superalloys“) thermal sprayed alloy & hard coatings on Co-, Ni- and Fe-basis suitable for continuous and interrupted cut applications with a medium chip removal (typical 0.5 - 1.5mm) high thermal conductivity, high break toughness, high surface qualities	2µm	80-95% CBN content
CBN 30..	High CBN-content without carbide base	Solid CBN tool material without carbide base for rough machining of pearlitic grey cast iron, chilled cast iron (> 45 HRC), hardened steels with high break toughness, excellent wear resistance, very good chemical stability, high specific removal rates For the application in tool holders, drilling and boring tools, recessing tools as well as cutter heads with clamping element and negative rake angle geometry	15µm	80-95% CBN content
Cermet	TCN 54 P15/P20	high cutting edge stability, for finishing tools such as reamers	< 2.5µm	

Basic characteristics of carbide

Carbide
Carbide, similar to steel, is a less than precise and indeed a very general term for an entire material group. Carbide can be produced in an infinite number of variations with different characteristics through the combination of at least two basic constituents.

Carbide production
Carbide consists of a hardness carrier – tungsten carbide plus maybe one or more carbides – and an extremely tough component: Cobalt (Co). Cobalt basically serves as a cementing or binding agent in which the carbide particles are distributed.

In order to satisfy the diverse demands that, dependent on the individual application task, are placed on carbide, Guhring offers a choice of more than 20 different standard carbide types. Some are especially hard, others possess a very high toughness, some are ultra fine grain and others are coarse. Furthermore, on the request of the customer, any conceivable carbide grade can be developed and produced as a special carbide, so-to-speak.

Our carbide division has a state-of-the-art laboratory at its disposal to ensure our carbide always corresponds with customer requirements. From the raw material to the finished product, samples are continuously examined in order to guarantee and document the highest quality and process reliability in accordance with the certification.

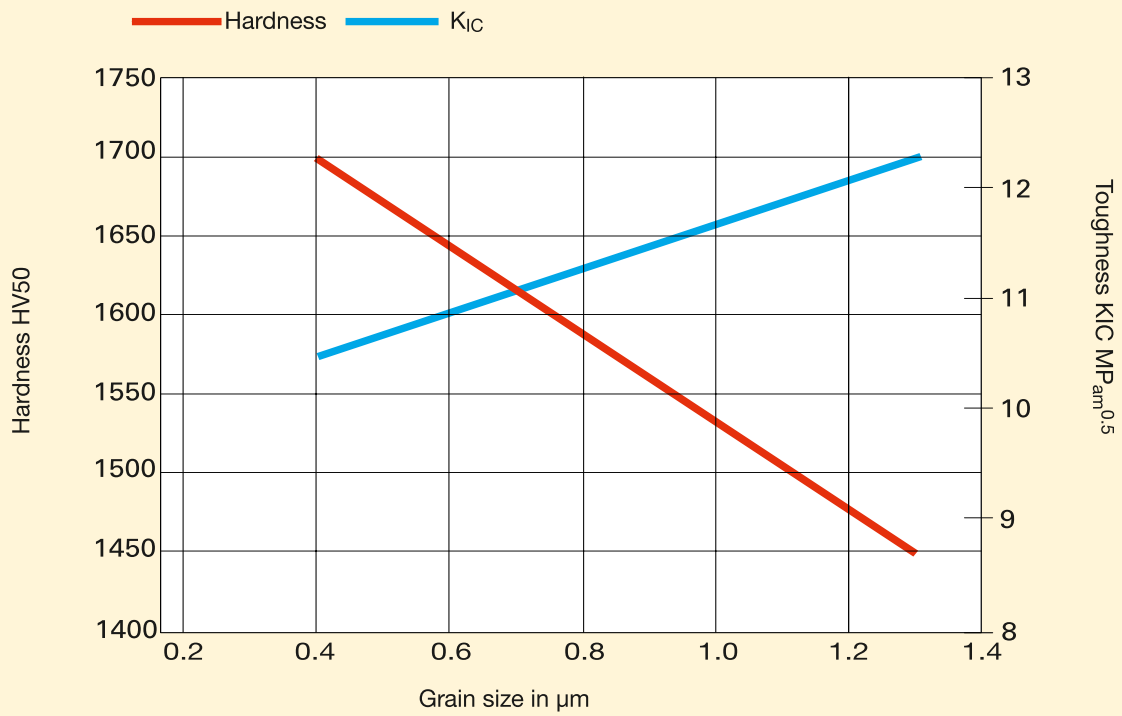
For drilling applications the following characteristics are of importance:

Rigidity
Rigidity is a measure of the energy that is required to force a material to deform elastically. With carbide it is determined by the cobalt content. The higher the cobalt content, the lower the rigidity of the material.

The rigidity of conventional carbide is more than double compared to that of steel. Subsequently, holes of considerably greater straightness can be produced with carbide drills than with steel drills. However, this positive effect of the rigidity is limited because of deformation forced upon the drill – for example through offset or imbalance – result in a heavy increase in load on the material. Therefore, more rigid materials are also more prone to breakage.

Hardness
Hardness is described as the resistance of a material against penetration of another. It is clear, that the tool material must be considerably harder than that of the workpiece, in order to not be exposed to excessive wear.

There are several possibilities to adjust the hardness of carbide: on the one hand by modifying the cobalt content and on the other hand by varying the carbide grain size. If the cobalt content is increased whilst retaining the same grain size, the hardness of the carbide is reduced. However, if the grain size is reduced whilst retaining the same cobalt content, the hardness is increased.



Basic characteristics of carbide

Toughness
Toughness is defined as the resistance the material offers against the growth of a fissure. A high fissure resistance is an indication of “good-natured” carbide, possessing high impact resistance. Unfortunately, hardness and toughness are opposing attributes.

High cobalt content and/or coarse hard material grains are an indication of tough carbide. High toughness is required when a sudden or high cutting load occurs during the machining process. A high cutting load arises when there is a high friction coefficient between tool and workpiece. The coefficient of friction is determined by the surface roughness of the tool and by the chemical relationship between the tool surface and the workpiece.

Please note, toughness is not synonymous with high bending strength. An important and specific characteristic for determining the bending strength is the cutting edge stability.

Cutting edge stability
Cutting edge stability is defined as the resistance of the cutting edge against the breakaway of individual hard material grains or larger grain formations. The bending strength provides a rough measure of the cutting edge stability. In addition to toughness, the size of the longest grain boundary within the structure of the material is also of importance for the bending strength. Subsequently, high toughness increases the bending strength, however, longer grain boundaries (= coarser grains) lowers it.

Reaction
Although today most carbide tools are coated, the reaction tendency between carbide and workpiece must be taken into consideration. Because of rapid wear of the coating at the cutting edge, a reaction between tool and workpiece is indeed a possibility.

Similar to pitting in the corrosion process, a localised attack can have a considerably longer lasting effect than any damage over a large area. Due to the high temperature development at the cutting edge, cobalt in particular reacts very quickly with ferrous metals. Other metals, such as titanium or silicon are prone to react with tungsten carbide. For these reasons, the cobalt content is of interest regarding the reaction of the tool.

Material selection
Dependent on the specific application task, the various attributes must, therefore, be carefully balanced. Subsequently, there are various carbides available. In order to find the correct carbide for a specific application task, several classification systems were experimented with and introduced as standard to simplify the selection. Widely accepted is the DIN ISO classification system to DIN ISO 513, revised in 2005.

Here, the application range of the carbide/coating combination is indicated by an identification letter, the hardness/toughness ratio by an index number. A low index number indicates a high hardness requirement for the application, a high number a high toughness requirement.

The most important carbide grades for Guhring tools

Main material group P
This group includes long-chipping ferrous metals except stainless and austenitic steels and is, according to the cutting load, divided into the application groups 01-50.

Main material group M
Group M includes austenitic stainless steels, austenitic/ ferritic steels and cast steels. The group is subdivided into the application groups 01-40, dependent on the cutting load. At Guhring, P and M applications are achieved with coated K carbide.

Main material group K
Group K incorporates all forms of grey cast iron and malleable cast iron. Dependent on cutting load it is subdivided into the application groups 01-40.

Main material group S
Heat-resistant “super alloys” based on iron, nickel or cobalt as well as titanium alloys are included in group S. It is divided into the application groups 01-30, dependent on the cutting load.

Main material group N
This group includes non-ferrous metals, especially aluminium-alloys and non-metal materials. It is, depending on the cutting load, divided into the application groups 01-30.

Main material group H
This group includes hard machining of hardened steels. The application groups are from 01-30, depending on the cutting load.

Many carbide grades cover the broad spectrum of the main material groups, especially when coated tools are applied. For example, most of the FIRE-coated carbide drills in the Guhring range are assigned to the main material groups K and P.

Individual Guhring grades
The following table lists the most important carbides that are available from Guhring ex-stock for general applications. Further carbide grades are available on request and detailed information can be found at www.guehring-carbide.de

In more than 80% of applications known to Guhring, the results of DK460UF carbide grade tools together with a specially adapted coating could not be surpassed by any other carbide grades, including coated tools. This and the availability of the material ex-stock simplify tool selection immensely. For further information regarding the application of other carbide grades please contact our technical engineers.

Guhring description	Co-content [M-%]	Tungsten carbide grain size [µm]	Hard-ness [HV]	ISO classification [ISO 513]	Characteristics
DK460UF	10	0.5	1620	K20-K40 coated: P, M20-M40, H, S, N25	A carbide grade with wide range of application possibilities. It is applied, mostly coated, for the machining of steel, soft Al alloys, cast iron as well as “super alloys” such as Inconel 718. This grade is the backbone of our carbide production.
DK500UF	12	0.5	1680	K25 coated: P, M, H, S, N25	The grade has been especially developed for hard machining. It possesses a higher hardness and deformation tolerance in comparison to DK460UF. Due to the high Co-content, a coated application is strongly recommended.
DK255F	8	0.7	1720	K20 coated: P, M, H, S, N20	The grade is recommended for hard machining, the machining of high tensile grey cast iron and hard AlSi-alloys. Dry machining is possible. A coated application is preferable.
DK120	6	1.3	1620	K15 coated: N15	The grade is especially suitable for the application with diamond coating.
DK120UF	7	0.5	1850	K05	Ultra fine grain type offering extreme wear resistance, suitable for absolutely rigid machines, preferred for reamers.
K55SF	9	0.2 -0.5	1920	K10-K30	For application with high wear resistant materials, stainless steels, composite materials such as Kevlar and GRP, high speed machining and dry machining.
DK400N	10	0.7	1580	K35M coated: P, M, S, N35M	An extremely tough grade for the machining of high heat resistant metals.

Basic properties

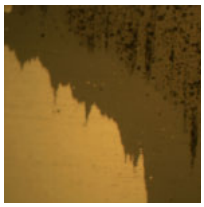
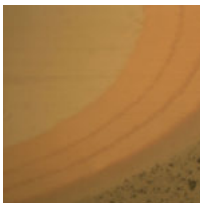
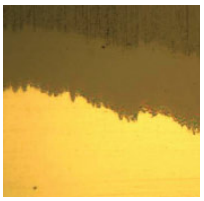
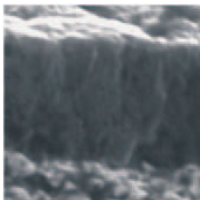
◯ bright
High speed steel or carbide tools generally offer good basic properties even without surface refinement or coating. In addition, bright tools from Guhring's standard range serve as base tools for a cost-efficient coating with all Guhring coatings to customer specification

● steam nitrided
◓ nitrided lands
This finish is recommended for the machining of grey cast iron, aluminium with a high silicon content, plastics, steels with a high perlite content etc.Our tools are nitrided using different application orientated processes.

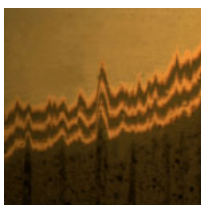
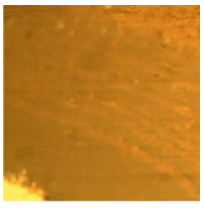
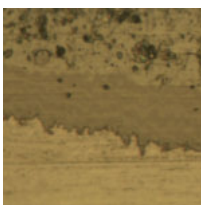
Surface refining processes
For special application cases a surface refinement is recommended that improves the wear-resistance as well as the gliding properties and decreases the welding tendency. Because hard or soft material coatings provide much better results surface refinement is increasingly losing importance.

● steam tempered
Steam tempered tools can prevent cold welding that can occur when machining low-carbon steels. However, they are only suitable for the machining of ferrous materials.

Guhring coatings

	TiAlN (A)	TiAlN Super A/nanoA (A) (a)	TiCN (C)	Carbo (Cb)	Cristall (D)
					
Colour	violet	grey-violet	grey violet	black	anthrazite
hardness	3200 HV	3400 HV	3000 HV	> 6000 HV	> 8000 HV
Friction coefficient	0.55	0.6	0.4	< 0.1	< 0.1
max. application temperature	< 800°	< 900°	< 400°	< 700°	< 700°
Thermal expansion	7.2 * 10-6 /K	6.9 * 10-6 /K	–	3 * 10-6 /K	1.1 * 10-6 /K
Brief description	Hard coating for abrasive applications, HPC and MQL	Hard coating for difficult and hard machining, HPC as well as MQL	Tough hard coating	Extremely hard coating	Extremely hard diamond coating

Special coatings

	FIRE/nano-FIRE (F)	AlCrN (P)	TiN/·TiN+ (S) (S+)	Signum (Y)	ICE
					
Colour	violet	grey-blue	golden yellow	bronze-red	grey metallic
hardness	3300 HV	3200 HV	2300 HV	5500 HV	3500 HV
Friction coefficient	0.6	0.35	0.5	0.55	0.6
max. application temperature	< 800°	< 1100°	< 600°	< 800°	< 1000°
Thermal expansion	–	6.4 * 10 - 6 /K	9.3 * 10 - 6 /K	7.5 * 10 - 6 /K	–
Brief description	Wear-resistant multi-layer coating, also for MQL	Wear-resistant coating with high oxidation resistance and temperature hardness	Cost-efficient standard coating	Extremely hard, heat-resistant multi-layer coating	Hard, high heat-resistant coating

Application recommendations

	Drilling			Milling			Tapping			Thread milling		Fluteless tapping			Reaming		
	Carbide		HSS	Carbide		HSS	Carbide		HSS	Carbide		Carbide		HSS	Carbide		HSS
	conv.	MQL		conv.	MQL		conv.	MQL		conv.	MQL	conv.	MQL		conv.	MQL	
Steel unalloyed	F A Y	F A Y	F S	F a A	F a A	F C	C S	S	C S A	C A	A	C S	S	C S P	A	A	S
Steel alloyed	F A Y	F A Y	F S	F a Y	F a Y	F C	C S	S	C A S	C A	A	C S	C S	C S P	A		S
Steel hardened <55·HRc	F A Y	F A		Y A A	Y A A		A A C	A A	C	C A	A	C S	C S	C S P	A	A	
Steel hardened 55·-65·HRc	A F Y	F Y		Y A	Y A		A			A					A		
Steel rust and acid-resistant	a F Y	a F Y	F S	a F Y	a F Y	F S	A A C	A A	C S	C A	A	C S		C P S	A	A	S
Cast iron	Y F A	Y F A	F	Y F	Y F	F C	a A	a	A C S	A	A	C S		P C S	A		S
Aluminium wrought alloys	Cb D	Cb D	Cb	Cb D	Cb D	Cb	Cb	Cb	Cb			Cb C		Cb	Cb		
Aluminium cast alloys	D Cb	D Cb	Cb	Cb D	D Cb	Cb	Cb	Cb	Cb			Cb		Cb	Cb		
Nickel alloys	a F	a F	F	a F	a F	F			A C	C A	A	C		P C	A		S
Titanium	a F	a		a F		F			A C	C A	A	C		C	A		S
Copper	ICE	ICE	S	ICE	ICE	S	ICE	ICE				ICE	ICE	S	A		S
Bronze/ brass	ICE	ICE	S	ICE	ICE	S	ICE	ICE				ICE	ICE	S	A		S
Cobalt-chro-mium Alloys	a F	a F		a Y F	a Y F										A		S
Precious metals	a	a		a	a										A	A	S
Ceramics, pre-sintered	D	D		D	D												
fibre-reinforced Plastics	D Y	D Y		D Y	D Y												

The order in the material groups shows our application recommendation from top to bottom. The optimum suitability for each specific material in your application can only be determined in machining trials.

Dry machining and minimal quantity lubrication (MQL)

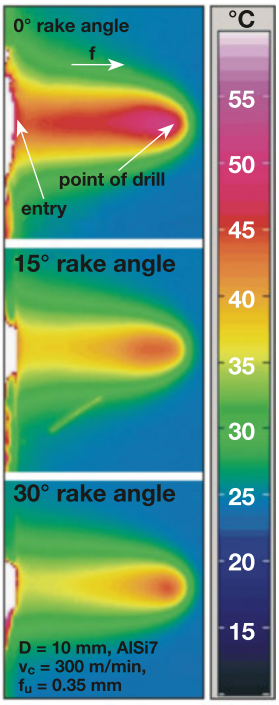
Dry machining and minimal quantity lubrication (MQL) are important current technologies with the aim of reducing production costs. Guhring has invested heavily in these technologies and developed tools as well as tool holders with optimal geometries for this type of machining. An observation of the thermal conditions at the tool and the workpiece was therefore extremely important.

Basic observations
Because with dry and MQL machining, any generated heat is not dissipated via coolant like with conventional wet machining, the design of the optimised tool must ensure that

- heat generation is minimised during the machining process (i.e. through sharp cutting edges and a positive rake angle whilst increasing the cutting parameters),
- friction is minimised (i.e. through a width reduction of the leading margins in comparison to the wet tool and increasing the back taper of the tool),
- heat transfer between chip and tool is reduced (i.e. through heat insulating hard coatings and polished tool surfaces to reduce the friction between chip and face),
- heat transfer between chip and workpiece is reduced (i.e. through improved chip evacuation from the hole or from the workpiece surface respectively).

Influence of rake angle on temperature

To examine this parameter, Guhring produced three drilling test tools in 10 mm diameter for a drilling depth of 100 mm. The tools were geometrically the same, however, the tools had different spirals and subsequently different rake angles. The test tools had 0° (i.e. straight-fluted), 15° and 30° rake angles. The internal coolant duct diameter of the tools was identical.



Using a thermal imaging camera, the heat generated during the machining of a hole in Al-alloy AlSi7 was taken in real time and documented. The sheets applied for the test had a thickness of 14.00 mm and were drilled on the face so that the remaining residual wall between the hole and thermo-graphic examination of the sheet surface was 2.00 mm. Using the above test layout it was possible to make a qualitative analysis of the heat generated by the individual tools.

The thermal imaging of the tool point show a clear connection between the rake angle and the heat generated. A positive rake angle resulted in a clearly lower temperature being generated in the shear zone of the chip, because with a tool with a 30° helix the chip only requires deflecting by 60° (reduced shearing action), whilst the chip deflection for a straight-fluted tool is 90° (increased shearing action).

The heat generated in the shear zone directly enters the process as cutting heat. A shorter chip transfers less frictional heat to the tool due to a smaller contact area on the flute surface resulting in improved temperature conditions

In addition, the chipflow was recorded using a high-speed camera. With the cutting parameters v_c = 300 m/min and f = 0.35 mm/rev., distinct differences were apparent regarding the chip evacuation and the process heat. Chip evacuation, i.e. the continuous transportation of chips from the hole, improved when the helix angle of the tool was increased.

This is primarily due to a positive geometry and the resulting improved chip fracture, providing a shorter shearing chip that, due to its improved surface-volume-relationship, can be evacuated from the hole with greater ease and is less prone to jamming in the flute.

Thanks to considerably improved chip evacuation and comparatively lower process temperatures, spiral-fluted tools play an important role in the increased process reliability in dry machining and MQL applications.

However, the application of straight-fluted drills can be of advantage for the machining of aluminium and cast iron materials, where the demand for hole quality (improved roundness and reduced run-out) is high. This is because straight-fluted tools generally possess four leading margins. In addition, the temperature profile of straight-fluted drilling tools can be reduced by an optimised, geometric design of the coolant ducts to an extent that the thermal disadvantage in comparison to spiral drilling tools is compensated to a large degree.

Dry machining and minimal quantity lubrication (MQL)

Influence of friction on the process temperature
In an additional, three-part test, holes were produced in spheroidal graphite iron GGG40. An identical test tool was applied for completely dry machining, MQL machining and machining with air cooling.

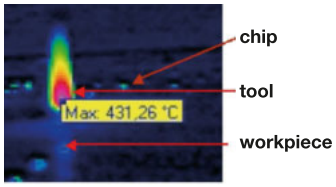
The test tool was a diameter 8.5 mm drill, optimised for MQL. The drilling depth was 42.00 mm. The cutting rates were v_c = 130 m/min and f = 0.26 mm/rev.

A thermo-graphic camera recorded the temperature at the point during the return stroke from the hole. A machining sequence of seven consecutive drilling operations was recorded for this purpose. From the first to the fifth hole a temperature increase at the point was recorded, however, following the fifth hole the maximum temperature at the point during the withdrawal process did not change (quasi stationary condition). For this reason the temperature of the drill was always recorded following the seventh hole.

Consequently, this temperature is lower than that occurring at the point of the drill during the cutting process. Measuring with thermal elements below the face and just behind the cutting lip have shown that temperatures up to 900° C can occur in this area. However, the temperature comparison carried out in this test is admissible because the measurement was always taken at the same point in time.

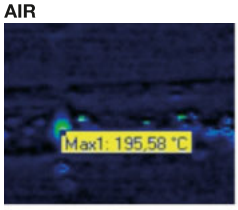
During a completely dry application, the temperature at the point of the drill reached a maximum 431° C. This temperature does not pose a particular problem for modern tool materials and hard coatings, even a completely dry application offers process reliability.

WITHOUT



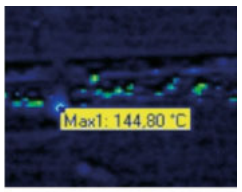
However, the diffusion and adhesion wear mechanisms both accelerate at higher temperature levels, which in turn reduces tool life. Furthermore, an increased level of heat can lead to a thermal expansion of the workpiece, that in turn can jeopardise the close tolerance dimensions if the suitability of the machining strategy is not observed. In addition, with steel machining it can come to fringe zone hardening of the hole wall, making follow-up operations such as tapping or reaming more difficult.

AIR



In the second test, the heat measured at the point of the drill with internal air cooling was 196° C, evidence that the flow of air dissipates a considerable amount of the generated heat. In addition, chip evacuation was considerably improved, confirming that in contrast to completely dry machining the spiral flute of a drilling tool alone is not sufficient for an optimal chip evacuation.

MQL



Under similar test conditions, the heat measured at the point of the drill applied with MQL, i.e. air mixed with small quantities of oil, was only 145° C. An oil volume of only 30 ml/h could not be regarded a major contributing factor in the cooling process, therefore, it must be presumed that the small quantities of oil mixed with air caused a considerable reduction in friction. It also confirms, in contrast to pure air cooling, a further increase in speed of chip evacuation. The lower chip temperature, in comparison to pure air cooling, is further clear evidence of oil reaching the effective area and improving chip evacuation from the face thanks to improved friction characteristics.

Dry machining
Dry machining dispenses with the use of coolant entirely resulting in savings in various areas. For example, less expensive tools without internal coolant ducts can be applied. Furthermore, machines and tool holders suffice without elaborate coolant delivery techniques and obviously there are no longer the costs of coolant and their disposal. Coolant does not have to be removed from components and the surrounding machine area.

Without lubrication, the heat generated during the machining process must be kept to a minimum and dissipated solely via the chip. Otherwise, tool and workpiece are exposed to excessive heat, resulting in increased wear to the tool and hardening of the hole surface in the workpiece. Suitable coatings can prevent overheating of the tool. However, excessive heat to the workpiece can only be achieved by a good chip evacuation, whereby the tool geometry also plays an important role. Short chips, large flutes with polished surfaces – possibly MolyGlide-coated – can provide the solution.

Dry machining and minimal quantity lubrication (MQL)

In a few dry machining applications, air is used for cooling. Obviously, tools with coolant ducts are applied, through which air is delivered to the hole. Air not only cools tool and workpiece, but under the correct pressure also improves chip evacuation.

Interestingly, dry and HSC machining do not exclude one another, as one would expect. On the contrary, modern carbide drills and coatings allow so-called dry HSC – dry high speed machining, combining the advantages of the two machining trends, as for example, a reduction in production costs in certain applications.

Minimal quantity lubrication MQL

MQL or minimal quantity lubrication works with an air-lubricant-mixture, that only contains a small part of lubricant.

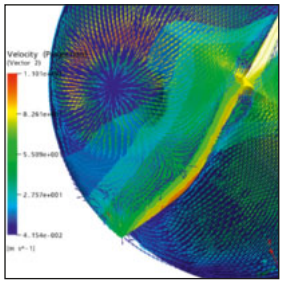
In the past, the technology of minimal quantity lubrication was generally applied on the own initiative of the user, in order to reduce costs. Often, tools for wet machining were simply applied under MQL conditions. With this approach, the limits of the tools' efficiency were reached very quickly and it became clear that a mere substitution of the lubricant was not a targeted approach.

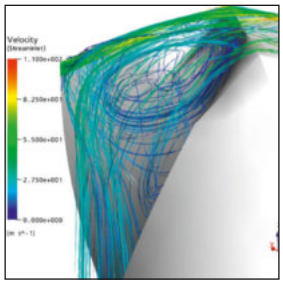
A professional approach during the design of MQL suitable tools nowadays allows considerable performance increases whilst maintaining process reliability. Hereby, all the drill's relevant attributes for providing efficiency and process reliability, from the cutting edge to the flute as well as the shank end, are adapted to satisfy the special demands of MQL. As well as the choice of carbide, this also includes the special tool geometry, the tool coating and the design of the shank end for MQL drills.

To optimise drills for the MQL technology, Guhring is increasingly applying the Finite-Element-Method (FEM). FEM allows the dimensioning and optimisation of the tools during the design phase. The flute in the area directly behind the cutting edge has the task to mould the chip in order to break it as small as possible. In the rear area its task is to evacuate the chip as quickly as possible. These tasks apply to wet machining, minimal quantity lubrication as well as dry machining. With minimal quantity lubrication and dry machining, however, it is extremely important to provide the chip with minimal frictional resistance in the rear area, in order to ensure a problem-free chip evacuation. This is aided by an optimised flute form as well as a specially polished fute surface.

Flute design to suit MQL

With the assistance of the aforementioned FEM-analysis, it is possible to simulate the flow resistance of a flute with chip, subsequently providing optimised flute forms for different material classes. The following image shows a flow optimised flute form and point design, providing optimal chip flow and also minimising the thermal load of the cutting edge thanks to an optimised throughflow of the point area and the flute by the MQL aerosol.





In addition, improved chip evacuation and therefore increased process reliability is provided by a MQL-suitable coating. Guhring has developed a double coating, consisting of a hard coating with an additional soft coating, MolyGlide. Tests confirm a considerably higher chip evacuation speed for the MQL tool with the above coating in comparison with conventional tools.

Coolant delivery to suit MQL

Because an extremely low volume of lubricant is applied with minimal quantity lubrication, the delivery of these low coolant quantities to the effective area is of utmost importance. Hereby, the geometric design of the shank end is of main significance for a safe delivery of the lubricant.

Dry machining and minimal quantity lubrication (MQL)

In order to satisfy the demand for more efficiency and process reliability with MQL drilling operations, Guhring has examined the design of the shank end and subsequently the coolant delivery in great detail.

Due to the low volumes of coolant involved, it is important that four basic demands are met in the design stage.

- minimal dead areas that could lead to consolidation of coolant
- sealed coolant transfer surface between shank end and delivery screw preventing the escape of coolant in the clamping area of the chuck or in the internal areas of HSK (preventing swarf deposits that could lead to concentricity errors following the next tool change).
- simple handling
- cost-effective production

The technologies applied in the design solution of a MQL suitable shank end are based on spray tests as well as computer based simulation programs. CAD-CFD combination has proved to be an especially effective technology. CFD (Computational Fluid Dynamics) assists in determining flow fields. The final choice of suitable shank end is confirmed by spray tests.

Via CAD-CFD and spray tests Guhring has examined four different shank ends and the corresponding adjustment screws regarding their efficiency:

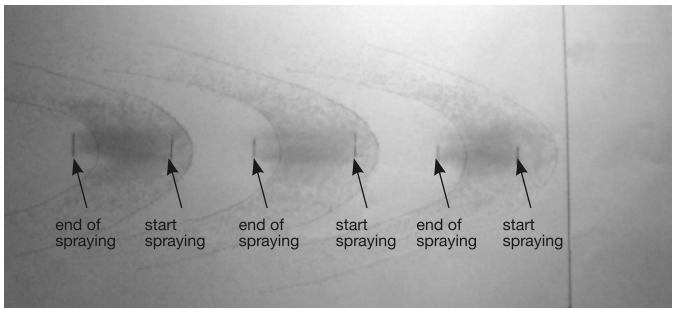
1. Plain shank end without groove with plain screw (left)
2. Plain shank end with sickle-shaped groove to connect the two coolant ducts with plain screw (second from left).
3. Conical shank end with circular groove and taper screw (second from right)
4. Recessed shank end (labyrinth seal) without connection groove with corresponding screw (including indexing facility for orientation of coolant ducts, right)

In intermittent spray tests the different shank ends were examined regarding coolant consolidation in the clamping area of the tool shank and inside the HSK. A test period of one hour with intervals of 5 seconds spraying with a spindle speed of 10,000 rev./min and 2 seconds dry running with a stationary spindle provided the following results for the four examined shank ends:

re.: 1. and 2.: Heavy oil contamination in clamping area and inside HSK.
re.: 3. and 4.: No oil contamination in clamping area and inside HSK

The conical shank end and the shank end with labyrinth seal proved to possess optimal sealing characteristics.

In a second test, the various shank ends were examined regarding response time and the conveyed volume accuracy of the transferred cooling agent. A slotted pipe was fitted at an angle into the working area of the machine tool. The tool was inserted into the slot. During a Z/Y travel sequence the MQL delivery was switched on and off. The internal area of the pipe was fitted with blotting paper to collect the flow of coolant. The blotting paper was then removed to examine the spray pattern.



Layed flat, the blotting paper shows a geometry dependent parabolic spray pattern. By analysing the spray pattern at the beginning and at the end of the test whilst simultaneously observing the axis stabilisation signal for the machine tool axes it is possible to calculate the reaction time of the various shank end design solutions.

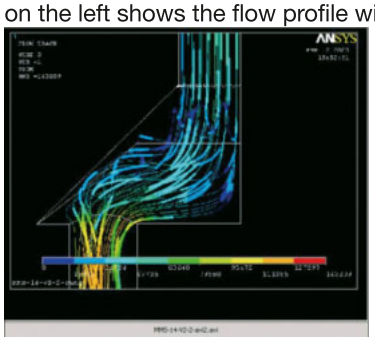
There are clear differences dependent on the shank end design. Furthermore, through the spray volume shown in a broader spray pattern, it is possible to deduce the conveyed volume during the spray period.

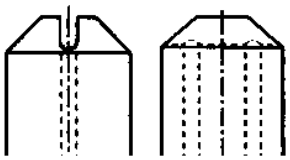
By the way, with Guhring‘s new measuring instrument MQL-Check 3000 it is possible to evaluate the MQL aerosol flow characteristics of tools quantitatively and time-resolved. The measuring instrument provides the user with reliable data to adapt the air pressure and the lubricant content of the MQL aerosol to the process.

The Guhring MQL system

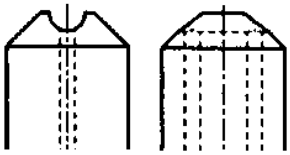
Both findings (spray pattern and reaction time) show the conical shank end and the shank end with labyrinth seal to be superior to those with plain shank end. Subsequently, only the conical shank end and the shank end with labyrinth seal were deemed suitable for further examination and optimisation.

With the assistance of a CFD analysis, the form and size of the connection slot at the shank end were examined. The picture on the left shows the flow profile within the connection shank end – adjustment screw for a conical shank end. Various slot forms were analysed.

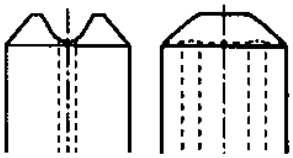




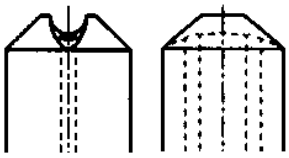
A: Narrow slot with rounded base



B: Wide slot with rounded base



C: Wide slot with round-convex base



D: Wide slot with convex base

Spray patterns were also produced for the above slot forms, showing a tendency to solution B. However, the variations were marginal but the CFD analysis showed a clearer picture.

Because a vector analysis is carried out for the flow, it is possible to analyse the flow pattern according to the direction of flow. Hereby, the speed vectors are examined for forward and reverse flow. Any turbulence formation has a forward and reverse flow. Often, turbulence occurs in dead areas. At this point totally opposing statements can be made for single and two coolant duct systems.

Whilst dead areas in single coolant duct systems lead the medium to be deposited on the wall and separating thanks to the flow speed within the turbulence, dead areas in two coolant duct systems are areas requiring to be filled before the medium can continue. Based on the produced flow patterns, conical shank end B with wide connection slot and rounded base proved to be the optimal solution.

An analysis of the two requirements “simple handling” and “cost-effective production” painted a similar picture. The following table shows the respective evaluation, whereby the data refers to the shank end and the corresponding screw. Relevant features for process reliability, such as “minimal dead areas” and being “leakproof” provide criteria for excluding the two versions with plain shank ends. Subsequently, the most favoured shank end is the one with a conical end and a wide slot with rounded base.

Shank end	Handling	Cost-effective production	Minimal dead areas geom. analysis	Leak-proof
Plain w/o slot	++	++	-	-
Plain w. sickle-shaped slot	++	+	-	-
Conical with slot	++	+	+	++
Recessed end with labyrinth seal	-	-	++	++

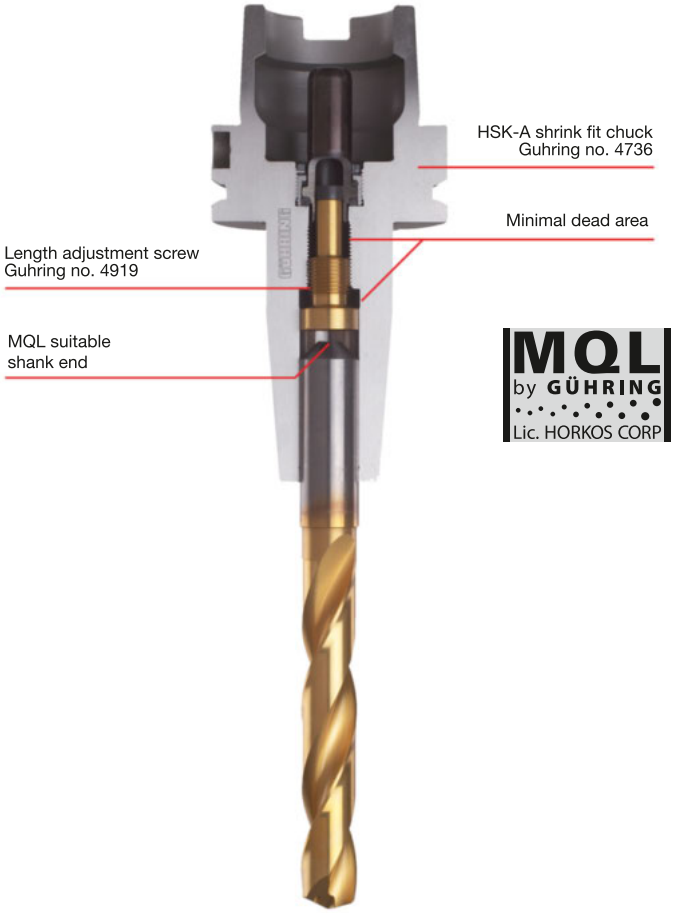
++ = very good properties, + = good properties, - = poor properties

The Guhring MQL system

A further decisive criteria for the process reliability of MQL tools is a problem-free system assembly. Guhring's solution is a recently developed MQL delivery system consisting of a one-piece delivery pipe with a thin-walled stainless steel pipe glued inside and a MQL adjustment screw.

The MQL pipe installed in conventional MQL systems is not optimally suited for a process reliable installation due to its high flexibility and its low thermal resistance. Therefore, Guhring uses a stainless steel pipe, eliminating the disadvantages mentioned above. Its large internal diameter also ensures improved flow conditions. The necessary radial flexibility of the coolant delivery pipe installed in the chuck is ensured because it is not glued along its entire length, only a few millimetres of its axial length at the base. Following the glued area, the bore is enlarged so that the coolant delivery pipe has radial flexibility. In addition, Guhring's MQL system provides access and also its axial adjustment at the shank end via hexagon screw.

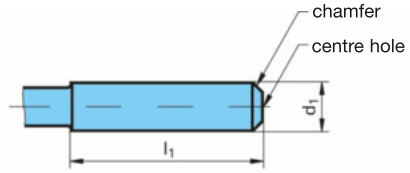
Guhring has perfected every proposed design feature for an optimum MQL delivery including the design of MQL specific tools for its entire program ensuring the possibility of process reliable MQL operations with solid carbide tools. In addition, our GM300 program includes tool holders, clamping systems and accessories that are specifically designed to satisfy the requirements of MQL machining. Furthermore, our entire MQL system was completed by a two channel MQL version in manual and automatic construction, see MQL system summary in the chapter „Modular Tooling Systems".



High speed steel straight shanks, DIN 1835-1 (extract)

Form A, plain

Dimensions in mm

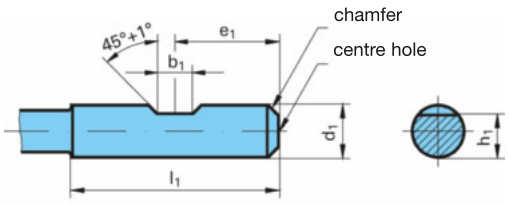


d_1 h8	l_1 +2 0	d_1 h8	l_1 +2 0	d_1 h8	l_1 +2 0
3	28	12	45	50	80
4	28	16	48	63	90
5	28	20	50		
6	36	25	56		
8	36	32	60		
10	40	40	70		

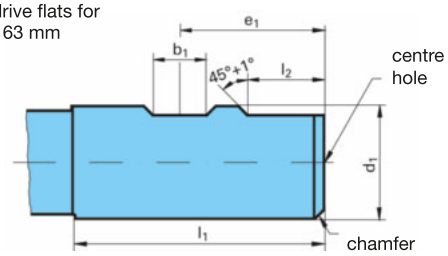
Form B, with drive flat

Dimensions in mm

with one drive flat for d_1 = 6 ... 20 mm



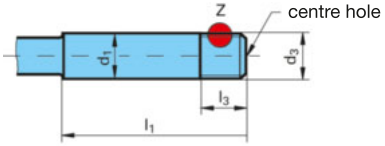
with two drive flats for d_1 = 25 ... 63 mm



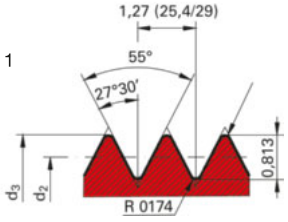
d_1 h6	b_1 +0.05 0	e_1 0 -1	h_1 h13	l_1 +2 0	l_2 +1 0	centre hole form R DIN 332 sect. 1
6	4.2	18	4.8	36	-	1.6x2.5
8	5.5	18	6.6	36	-	1.6x3.35
10	7	20	8.4	40	-	1.6x3.35
12	8	22.5	10.4	45	-	1.6x3.35
16	10	24	14.2	48	-	2.0x4.25
20	11	25	18.2	50	-	2.5x5.3
25	12	32	23	56	17	2.5x5.3
32	14	36	30	60	19	3.15x6.7
40	14	40	38	70	19	3.15x6.7
50	18	45	47.8	80	23	3.15x6.7
63	18	50	60.8	90	23	3.15x6.7

Form D, screwed shank

Dimensions in mm



detail Z
(cross section)
thread profile to
DIN ISO 228 part 1

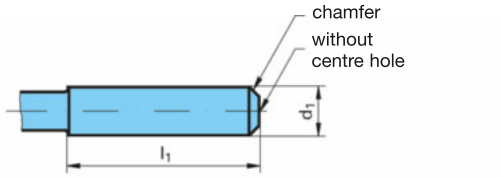


d_1 h8	d_3	tol. zone	d_2	tol. zone	l_1 +2 0	l_3 +2 0	centre hole form R DIN 332 sect. 1
6	5.9	0 -0.1	5.087	0 -0.1	36	10	1.6 x 2.5
10	9.9	0 -0.1	9.087	0 -0.1	40	10	1.6 x 3.35
12	11.9	0 -0.1	11.087	0 -0.1	45	10	1.6 x 3.35
16	15.9	0 -0.1	15.087	0 -0.1	48	10	2.0 x 4.25
20	19.9	0 -0.15	19.087	0 -0.15	50	15	2.5 x 5.3
25	24.9	0 -0.15	24.087	0 -0.15	56	15	2.5 x 5.3
32	31.9	0 -0.15	31.087	0 -0.15	60	15	3.15 x 6.7

Carbide straight shanks DIN 6535 for twist drills and end mills

Form HA, plain

Dimensions in mm

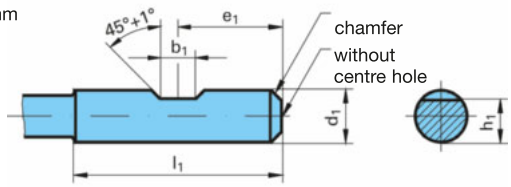


d_1 h6	l_1 +2 0	d_1 h6	l_1 +2 0
2	28	14	45
3	28	16	48
4	28	18	48
5	28	20	50
6	36	25	56
8	36	32	60
10	40		
12	45		

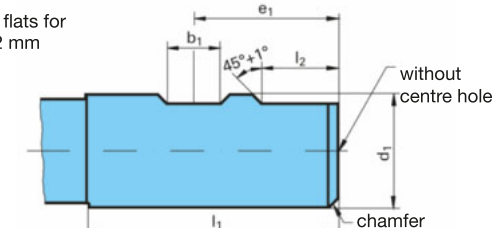
Form HB, with drive flat

Dimensions in mm

with **one** drive flat for d_1 = 6 and 20 mm



with **two** drive flats for d_1 = 25 and 32 mm



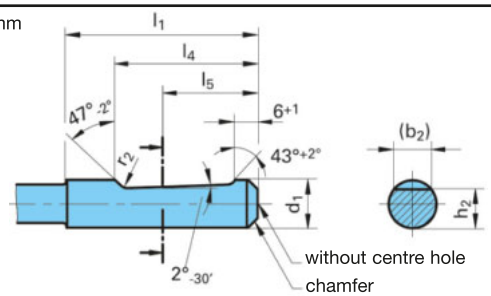
d_1 h6	b_1 +0.05 0	e_1 0 -1	h_1 h11	l_1 +2 0	l_2 +1 0
6	4.2	18	5.1	36	–
8	5.5	18	6.9	36	–
10	7	20	8.5	40	–
12	8	22.5	10.4	45	–
14	8	22.5	12.7	45	–
16	10	24	14.2	48	–
18	10	24	16.2	48	–
20	11	25	18.2	50	–
25	12	32	23	56	17
32	14	36	30	60	19

Form HE, with whistle notch flat without coolant ducts*

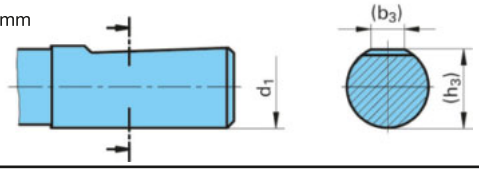
* Design: Straight shanks to DIN 6335 are available with or without oil feed holes. Applications for various tools, dimensions and position of oil feed holes are fully described within the standard range sections.

Dimensions in mm

for d_1 = 6 to 20 mm



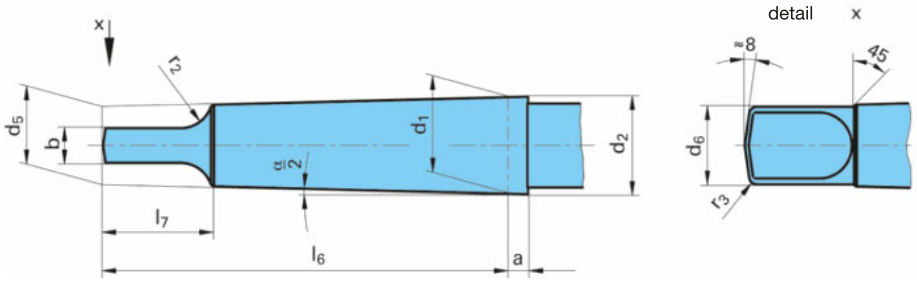
for d_1 = 25 and 32 mm



d_1 h6	(b_2) ≈	(b_3)	h_2 h11	(h_3)	l_1 +2 0	l_4 0 -1	l_5 nom. size	r_2 min.
6	4.3	–	5.1	–	36	25	18	1.2
8	5.5	–	6.9	–	36	25	18	1.2
10	7.1	–	8.5	–	40	28	20	1.2
12	8.2	–	10.4	–	45	33	22.5	1.2
14	8.1	–	12.7	–	45	33	22.5	1.2
16	10.1	–	14.2	–	48	36	24	1.6
18	10.8	–	16.2	–	48	36	24	1.6
20	11.4	–	18.2	–	50	38	25	1.6
25	13.6	9.3	23.0	24.1	56	44	32	1.6
32	15.5	9.9	30.0	31.2	60	48	35	1.6

Morse taper shanks DIN 228 part 1 (extract)

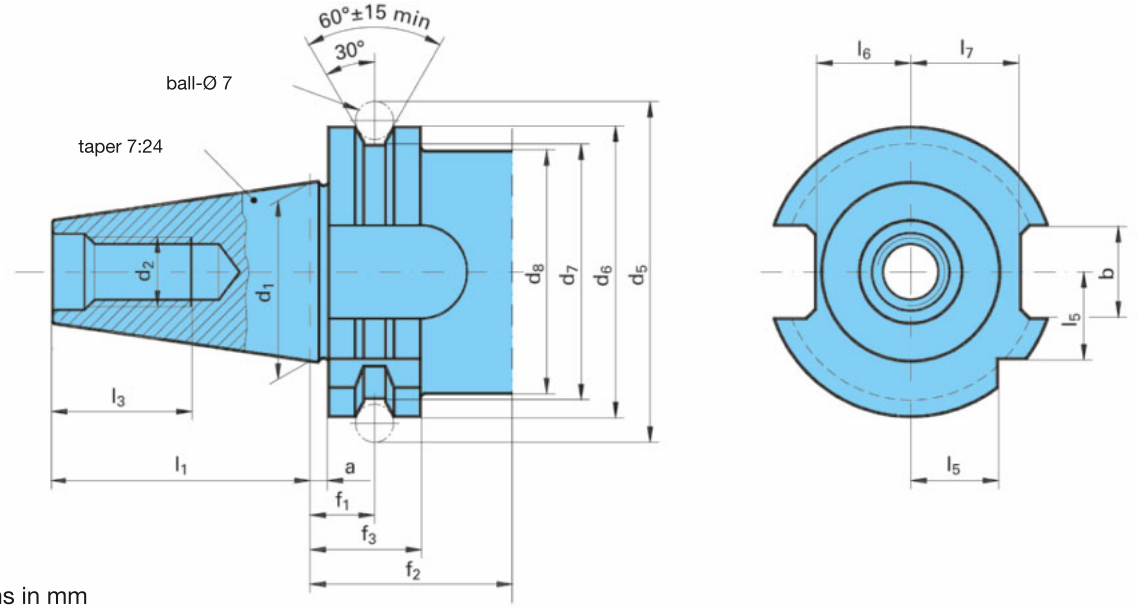
Form B, Morse taper with tang



Dimensions in mm

shank to DIN 228 form B size	a limiting dim.	b	d_1	d_2 ≈	d_5 ≈	d_6 max.	l_6 0 -1	l_7 max.	r_2 max.	r_3 ≈	$\frac{\alpha}{2}$
MT 1	3.5 +1.4 0	5.2	12.065	12.2	9.0	8.7	62	13.5	5	1.2	1°25′43″
MT 2	5.0 +1.4 0	6.3	17.780	18.0	14.0	13.5	75	16	6	1.6	1°25′50″
MT 3	5.0 +1.7 0	7.9	23.825	24.1	19.1	18.5	94	20	7	2	1°26′16″
MT 4	6.5 +1.9 0	11.9	31.267	31.6	25.2	24.5	117.5	24	8	2.5	1°29′15″
MT 5	6.5 +1.9 0	15.9	44.399	44.7	36.5	35.7	149.5	29	10	3	1°30′26″

ISO tapers for automatic tool change, DIN 69871 (extract)
Form A, with gripper groove, without through hole



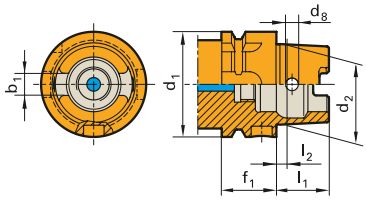
Dimensions in mm

ISO taper no.	a ±0.1	b H12	d_1	d_2	d_5 ±0.05	d_6 0 -0.1	d_7 0 -0.5	d_8 max.	f_1 ±0.1	f_2 min.	f_3 0 -0.1	l_1 0 -0.3	l_3 min.	l_5 0 -0.3	l_6 0 -0.4	l_7 0 -0.4
30	3.2	16.1	31.75	M12	59.3	50.00	44.30	45	11.1	35	19.1	47.8	24	15	16.4	19
40	3.2	16.1	44.45	M16	72.3	63.55	63.55	50	11.1	35	19.1	68.4	32	18.5	22.8	25
45	3.2	19.3	57.15	M20	91.35	82.55	82.55	63	11.1	35	19.1	82.7	40	24	29.1	31.3
50	3.2	25.7	69.85	M24	107.25	97.50	97.50	80	11.1	35	19.1	101.75	47	30	35.5	37.7

General overview of HSK shanks ISO 12164-1/DIN 69893

Form A DIN 69893 part 1

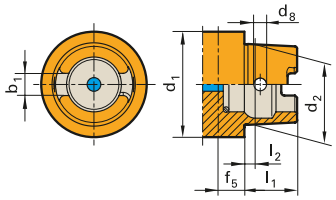
HSK-sizes 32…160



HSK for automatic tool change with gripper groove and index notch. Manual operation is via access hole in taper. Form B relies on driving dogs on the joint face as shank isn't slotted. Torque is transmitted through highly accurate connnection.

Form C DIN 69893 part 1

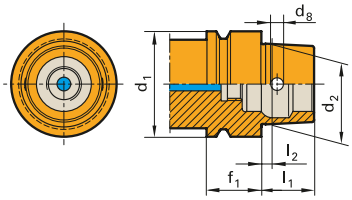
HSK-sizes 32…160



HSK for manual tool change. Operation is via access hole in taper. Form D relies on driving dogs on the joint face as shank isn't slotted. Torque is transmitted through highly accurate connnection.

Form E DIN 69893 part 5

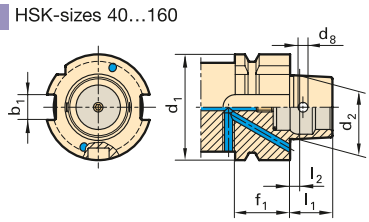
HSK-sizes 25…63



HSK for automatic tool change. Torque is transmitted through highly accurate connnection. Version with access hole acc. to DIN 69893-1 by arrangement.

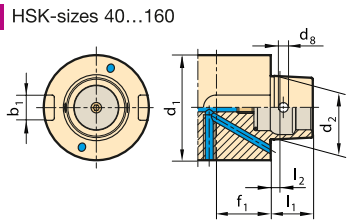
Form B DIN 69893 part 2

HSK-sizes 40…160



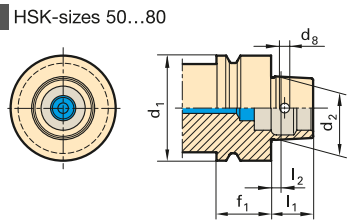
(**Form D** DIN 69893 part 2)

HSK-sizes 40…160



Form F DIN 69893 part 6

HSK-sizes 50…80



HSK form A C E								
Nominal Ø d_1 mm	d_2 mm	l_1 mm	l_2 mm	f_1 mm	f_5 mm	d_8 mm	b_1 mm
25	19.000	13	2.5	10	-	-	-
32	24.007	16	3.2	20	10.0	4.0	7.05
40	30.007	20	4.0	20	10.0	4.6	8.05
50	38.009	25	5.0	26	12.5	6.0	10.54
63	48.010	32	6.3	26	12.5	7.5	12.54
80	60.012	40	8.0	26	16.0	8.5	16.04
100	75.013	50	10.0	29	16.0	12.0	20.02
125	95.016	63	12.5	29	-	-	25.02
160	120.016	90	16.0	31	-	-	30.02

HSK form B D F						
Nominal Ø d_1 mm	d_2 mm	l_1 mm	l_2 mm	f_1 mm	d_8 mm	b_1 mm
25	-	-	-	-	-	-
32	-	-	-	-	-	-
40	24.007	16	3.2	20	4.0	10
50	30.007	20	4.0	26	4.6	12
63	38.009	25	5.0	26	6.0	16
80	48.010	32	6.3	26	7.5	18
100	60.012	40	8.0	29	8.5	20
125	75.013	50	10.0	29	12.0	25
160	95.016	63	12.5	31	12.0	32

Because the rotational speed is the largest influencing factor together with the limits regarding the spindle or spindle bearing interface, the following r.p.m. limits for HSK interfaces have been recommended as guidelines within the HSK standards:

HSK-A/C 32	to 50.000 rev./min
HSK-A/C 40	to 42.000 rev./min
HSK-A/C 50	to 30.000 rev./min
HSK-A/C 63	to 25.000 rev./min
HSK-A/C 80	to 20.000 rev./min
HSK-A/C 100	to 16.000 rev./min

From 1/64 to 11 63/64

Size (inch)	mm	Part of inch (decimal)	Size (inch)	mm	Part of inch (decimal)	Size (inch)	mm	Part of inch (decimal)	Size (inch)	mm	Part of inch (decimal)
-	0.10	0.0039	51	1.70	0.0670	4	5.31	0.2090	-	14.00	0.5512
97	0.15	0.0059		1.75	0.0689	3	5.41	0.2130	9/16	14.29	0.5625
96	0.16	0.0063	50	1.78	0.0700		5.50	0.2165		14.50	0.5709
95	0.17	0.0067		1.80	0.0709	7/32	5.56	0.2188	37/64	14.68	0.5781
94	0.18	0.0071	49	1.85	0.0730	2	5.61	0.2210	-	15.00	0.5906
93	0.19	0.0075		1.90	0.0748	1	5.79	0.2280	19/32	15.08	0.5938
92	0.20	0.0079	48	1.93	0.0760	A	5.94	0.2340	39/64	15.48	0.6094
91	0.21	0.0083		1.95	0.0768	15/64	5.95	0.2344		15.50	0.6102
90	0.22	0.0087	5/64	1.98	0.0781	-	6.00	0.2362	5/8	15.88	0.6250
89	0.23	0.0091	47	1.99	0.0785	B	6.05	0.2380	-	16.00	0.6299
88	0.24	0.0095	-	2.00	0.0787	C	6.15	0.2420	41/64	16.27	0.6406
-	0.25	0.0098		2.05	0.0807	D	6.25	0.2460		16.50	0.6496
87	0.25	0.0100	46	2.06	0.0810	1/4	6.35	0.2500	21/32	16.67	0.6562
	0.26	0.0102	45	2.08	0.0820	E	6.35	0.2500	-	17.00	0.6693
86	0.27	0.0105		2.15	0.0846		6.50	0.2559	43/64	17.07	0.6719
	0.27	0.0106	44	2.18	0.0860	F	6.53	0.2570	11/16	17.46	0.6875
85	0.28	0.0110	43	2.26	0.0890	G	6.63	0.2610		17.50	0.6890
	0.29	0.0114	42	2.37	0.0935	17/64	6.75	0.2656	45/64	17.86	0.7031
84	0.29	0.0115	3/32	2.38	0.0938		6.75	0.2657	-	18.00	0.7087
-	0.30	0.0118	41	2.44	0.0960	H	6.76	0.2660	23/32	18.26	0.7188
83	0.30	0.0120	40	2.50	0.0980	I	6.91	0.2720		18.50	0.7283
82	0.32	0.0125	39	2.53	0.0995	-	7.00	0.2756	47/64	18.65	0.7344
	0.32	0.0126	38	2.58	0.1015	J	7.04	0.2772	-	19.00	0.7480
81	0.33	0.0130	37	2.64	0.1040	K	7.14	0.2810	3/4	19.05	0.7500
80	0.34	0.0135	36	2.71	0.1065	9/32	7.14	0.2812	49/64	19.45	0.7656
79	0.37	0.0145	7/64	2.78	0.1094	L	7.37	0.2900		19.50	0.7677
1/64	0.40	0.0156	35	2.79	0.1100	M	7.49	0.2949	25/32	19.84	0.7812
78	0.41	0.0160	34	2.82	0.1110		7.50	0.2953	-	20.00	0.7874
77	0.46	0.0180	33	2.87	0.1130	19/64	7.54	0.2969	51/64	20.24	0.7969
-	0.50	0.0197		2.90	0.1142	N	7.67	0.3020		20.50	0.8071
76	0.51	0.0200	32	2.95	0.1160		7.75	0.3051	13/16	20.64	0.8125
75	0.53	0.0210	-	3.00	0.1181	5/16	7.94	0.3125	-	21.00	0.8268
74	0.57	0.0225	31	3.05	0.1200	-	8.00	0.3150	53/64	21.03	0.8281
-	0.60	0.0236	1/8	3.18	0.1250	O	8.03	0.3160	27/32	21.43	0.8438
73	0.61	0.0240	30	3.26	0.1285	P	8.20	0.3230		21.50	0.8465
72	0.64	0.0250		3.30	0.1299	21/64	8.33	0.3281	55/64	21.84	0.8594
71	0.66	0.0260	29	3.45	0.1360	Q	8.43	0.3320	-	22.00	0.8661
-	0.70	0.0276		3.50	0.1378		8.50	0.3346	7/8	22.23	0.8750
70	0.71	0.0280	28	3.57	0.1405	R	8.61	0.3390		22.50	0.8858
69	0.74	0.0292	9/64	3.57	0.1406	11/32	8.73	0.3438	57/64	22.62	0.8906
-	0.75	0.0295	27	3.66	0.1440		8.75	0.3445	-	23.00	0.9055
68	0.79	0.0310	26	3.73	0.1470	S	8.84	0.3480	29/32	23.02	0.9062
1/32	0.79	0.0313		3.75	0.1476	-	9.00	0.3543	59/64	23.42	0.9219
-	0.80	0.0315	25	3.80	0.1495	T	9.09	0.3580		23.50	0.9252
67	0.81	0.0320	24	3.86	0.1520	23/64	9.13	0.3594	15/16	23.81	0.9375
66	0.84	0.0330	23	3.91	0.1540	U	9.35	0.3680	-	24.00	0.9449
65	0.89	0.0350	5/32	3.97	0.1562		9.50	0.3740	61/64	24.21	0.9531
-	0.90	0.0354	22	3.99	0.1570	3/8	9.53	0.3750		24.50	0.9646
64	0.91	0.0360	-	4.00	0.1575	V	9.56	0.3770	31/32	24.61	0.9688
63	0.94	0.0370	21	4.04	0.1590	W	9.80	0.3860	-	25.00	0.9843
62	0.97	0.0380	20	4.09	0.1610	25/64	9.92	0.3906	63/64	25.00	0.9844
61	0.99	0.0390		4.20	0.1654	-	10.00	0.3937	1	25.40	1.0000
-	1.00	0.0394	19	4.22	0.1660	X	10.08	0.3970			
60	1.02	0.0400	18	4.31	0.1695	Y	10.26	0.4040			
59	1.04	0.0410	11/64	4.37	0.1719	13/32	10.32	0.4062			
58	1.07	0.0420	17	4.39	0.1730	Z	10.49	0.4130			
57	1.09	0.0430	16	4.50	0.1770		10.50	0.4134			
56	1.18	0.0465	15	4.57	0.1800	27/64	10.72	0.4219			
3/64	1.19	0.0469	14	4.62	0.1820	-	11.00	0.4331			
	1.20	0.0472	13	4.70	0.1850	7/16	11.11	0.4375			
	1.25	0.0492	3/16	4.76	0.1875		11.50	0.4528			
	1.30	0.0512	12	4.80	0.1890	29/64	11.51	0.4531			
55	1.32	0.0520	11	4.85	0.1910	15/32	11.91	0.4688			
54	1.40	0.0550	10	4.91	0.1935	-	12.00	0.4724			
	1.45	0.0571	9	4.98	0.1960	31/64	12.30	0.4844			
	1.50	0.0591	-	5.00	0.1968		12.50	0.4921			
53	1.51	0.0595	8	5.05	0.1990	1/2	12.70	0.5000			
	1.55	0.0610	7	5.11	0.2010	-	13.00	0.5118			
1/16	1.59	0.0625	13/64	5.16	0.2031	33/64	13.10	0.5156			
	1.60	0.0630	6	5.18	0.2040	17/32	13.49	0.5312			
52	1.61	0.0635	5	5.22	0.2055		13.50	0.5315			
	1.65	0.0650		5.25	0.2067	35/64	13.89	0.5469			

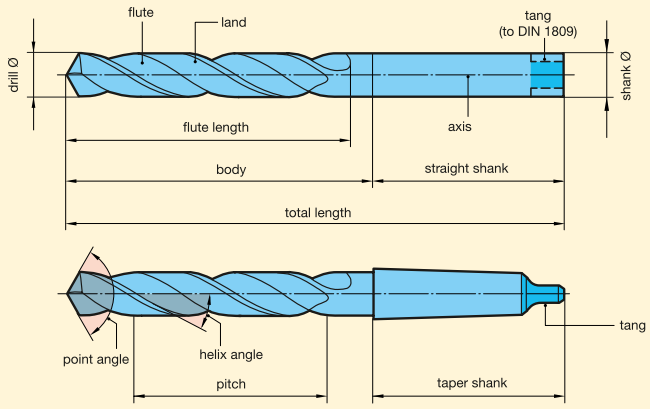
1 inch = 25.400 0 mm, see DIN 4890 (issue 2/75)

The new material abbreviations (selection)

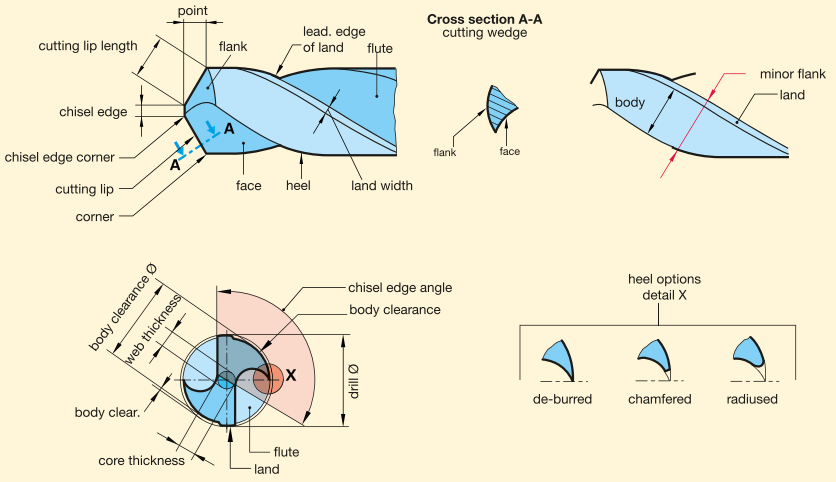
mat. nos.	abbreviation old	abbreviation new
0.6010	GG10	EN-GJL-100
0.6020	GG20	EN-GJL-200
0.6025	GG25	EN-GJL-250
0.6035	GG35	EN-GJL-350
0.7050	GGG50	EN-GJS-500-7
0.7070	GGG70	EN-GJS-700-2
0.8035	GTW35	EN-GJMW-350-4
0.8155	GTS55	EN-GJMB-550-4
0.8170	GTS70	EN-GJMB-700-2
1.0022	St 01Z	–
1.0035	St 33	S185
1.0039	St 37 -2	S235JRH
1.0044	St 44 -2	S275JR
1.0050	St 50 -2	E295
1.0060	St 60 -2	E335
1.0070	St 70 –2	E360
1.0114	St 37 –3U	S235J0
1.0226	St 02Z	DX51D
1.0242	StE 250 -2Z	S250GD
1.0244	StE 280 -2Z	S280GD
1.0250	StE 320 -3Z	S320GD
1.0301	C 10	–
1.0302	C 10 Pb	–
1.0306	St 06 Z	DX54D
1.0312	St 15	DC05 [Fe P05]
1.0319	RRStE 210.7	L210GA
1.0322	–	DX56D
1.0330	St 12 [St 2]	DC01 [Fe P01]
1.0333	USt 13	–
1.0338	St 14 [St 4]	DC04 [Fe P04]
1.0345	H I	P235GH
1.0347	RRSt 13 [RRSt 3]	DC03 [Fe P03]
1.0348	UH I	P195GH
1.0350	St 03Z	DX52D
1.0355	St 05Z	DX53D
1.0356	TTSt 35 N	P215NL
1.0358	St 05 Z	–
1.0401	C 15	–
1.0402	C 22	C22
1.0403	C 15 Pb	–
1.0406	C 25	C25
1.0419	St 52.0	L355
1.0424	St 45.8 (ersetzt)	P265
1.0424	St 42.8 (ersetzt)	P265
1.0425	H2	P265GH
1.0429	StE 290.7 TM	L290MB
1.0457	StE 240.7	L245NB
1.0459	RRStE 240.7	L245GA
1.0461	StE 255	S255N
1.0473	19 Mn 6	P355GH
1.0481	17 Mn 4	P295GH
1.0484	StE 290.7	L290NB
1.0486	StE 285	P275N
1.0501	C 35	C35
1.0503	C 45	C45
1.0505	StE 315	P315N
1.0511	C 40	C40
1.0528	C 30	C30
1.0529	StE 350 -3Z	S350GD
1.0535	C 55	C55
1.0539	StE 355N	S355NH
1.0540	C 50	C50
1.0547	St 52 –3U	S355J0H
1.0582	StE 360.7	L360NB
1.0601	C 60	C60
1.0710	15 S 10	–
1.0715	9 SMn 28	11SMn30
1.0718	9 SMnPb 28	11SMnPb30
1.0721	10 S 20	10S20
1.0722	10 S Pb 20	10SPb20
1.0726	35 S 20	35S20
1.0727	45 S 20	46S20
1.0728	60 S 20	–
1.0736	9 SMn 36	11SMn37
1.0737	9 SMnPb 36	11SMnPb37
1.0756	35 SPb 20	35SPb20
1.0757	45 SPb 20	46SPb20
1.0760	–	38SMn26
1.0761	–	38SMnPb26
1.0762	–	44SMn28
1.0763	–	44SMnPb28
1.0873	–	DC06 [Fe P06]
1.1103	EStE 255	S255NL1
1.1105	EStE 315	S315NL1
1.1121	Ck 10	C10E
1.1141	Ck15	C15E
1.1151	Ck 22	C22E
1.1158	Ck 25	C25E
1.1170	28 Mn 6	28Mn6
1.1178	Ck 30	C30E
1.1181	Ck 35	C35E
1.1186	Ck 40	C40E
1.1191	Ck 45	C45E
1.1203	Ck 55	C55E
1.1206	Ck 50	C50E
1.1221	Ck 60	C60E
1.1241	Cm 50	C50R
1.1750	C 75 W	C75W
1.2067	102 Cr 6	102Cr6
1.2080	–	X210Cr12
1.2083	–	X42Cr13
1.2419	–	105WCr6
1.2767	–	X45NiCrMo4
1.3243	S6-5-2-5	S 6-5-2-5
1.3343	S6-5-2	S 6-5-2
1.3344	S6-5-3	S 6-5-3
1.4000	X6Cr 13	X6Cr13
1.4002	X6CrAl 13	X6CrAl13
1.4003	X2Cr 11	X2CrNi12
1.4005	–	X12CrS13
1.4006	X10Cr 13	X12Cr13
1.4016	X6Cr 17	X6Cr17
1.4021	X20Cr 13	X20Cr13
1.4028	X30Cr 13	X30Cr13
1.4031	X38Cr 13	X38Cr13
1.4034	X46Cr 13	X46Cr13
1.4037	X65Cr13	X65Cr13
1.4057	X20CrNi 17 2	X17CrNi16-2
1.4104	X12CrMoS 17	X14CrMoS17
1.4105	X4CrMoS 18	X6CrMoS17
1.4109	X65CrMo 14	X70CrMo15
1.4110	X55CrMo 14	X55CrMo14
1.4112	X90CrMoV 18	X90CrMoV18
1.4113	X6CrMo 17 1	X6CrMo17-1
1.4116	X45CrMoV 15	X50CrMoV15
1.4120	X20CrMo 13	X20CrMo13
1.4122	X35CrMo 17	X39CrMo17-1
1.4125	X105CrMo 17	X105CrMo17
1.4301	X5CrNi 18 10	X5CrNi18-10
1.4303	X5CrNi 18 12	X4CrNi18-12
1.4305	X10CrNiS 18 9	X8CrNiS18-9
1.4306	X2CrNi 19 11	X2CrNi19-11
1.4310	X12CrNi 17 7	X10CrNi18-8
1.4311	X2CrNiN 18 10	X2CrNiN18-10
1.4313	X4CrNi 13 4	X3CrNiMo13-4
1.4318	X2CrNiN 18 7	X2CrNiN18-7
1.4335	X1CrNi 25 21	X1CrNi25-21
1.4361	X1CrNiSi 18 15	X1CrNiSi18-15-4
1.4362	X2CrNiN 23 4	X2CrNiN23-4
1.4401	X5CrNiMo 17 12 2	X5CrNiMo17-12-2
1.4404	X2CrNiMo 17 13 2	X2CrNiMo17-12-2
1.4410	X10CrNiMo 18 9	X2CrNiMoN25-7-4
1.4418	X4CrNiMo 16 5	X4CrNiMo16-5-1
1.4435	X2CrNiMo 18 14 3	X2CrNiMo18-14-3
1.4436	X5CrNiMo 17 13 3	X3CrNiMo17-13-3
1.4438	X2CrNiMo 18 16 4	X2CrNiMo18-15-4
1.4460	X4CrNiMo 27 5 2	X3CrNiMoN27-5-2
1.4462	X2CrNiMoN 22 5 3	X2CrNiMoN22-5-3
1.4509	X6CrTiNb 18	X2CrTiNb18
1.4510	X6CrTi 17	X3CrTi17
1.4511	X6CrNb 17	X3CrNb17
1.4512	X6CrTi 12	X2CrTi12
1.4520	X1CrTi 15	X2CrTi17
1.4521	X2CrMoTi 18 2	X2CrMoTi18-2
1.4522	X2CrMoNb 18 2	X2CrMoNb18-2
1.4532	X7CrNiMoAl 15 7	X8CrNiMoAl15-7-2
1.4541	X6CrNiTi18 10	X6CrNiTi18-10
1.4542	X5CrNiCuNb 17 4	X5CrNiCuNb16-4
1.4550	X6CrNiNb 18 10	X6CrNiNb18-10
1.4558	X2NiCrAlTi 32 20	X2NiCrAlTi32-20
1.4567	X3CrNiCu 18 9 X	X3CrNiCu18-9-4
1.4568	X7CrNiAl 17 7	X7CrNiAl17-7
1.4571	–	X6CrNiMoTi17-12-2
1.4577	X3CrNiMoTi 25 25	X3CrNiMoTi25-25
1.4592	X1CrMoTi 29 4	X2CrMoTi29-4
1.4713	X10CrAl 7	X10CrAlSi7
1.4724	X10CrAl 13	X10CrAlSi13
1.4742	X10CrAl 18	X10CrAlSi18
1.4762	X10CrAl 24	X10CrAlSi25
1.4821	X20CrNiSi 25 4	X20CrNiSi25-4
1.4828	X15CrNiSi 20 12	X15CrNiSi20-12
1.4833	X7CrNi 23 14	X7CrNi23-12
1.4841	X15CrNiSi 25 20	X15CrNiSi25-21
1.4845	X12CrNi 25 21	X12CrNi25-21
1.4864	X12NiCrSi 36 16	X12NiCrSi35-16
1.4878	X12CrNiTi18 9	X10CrNiTi18-10
1.4903	–	X10CrMoVNb9-1
1.5026	55 Si 7	55Si7
1.5131	50 MnSi 4	50MnSi4
1.5415	15 Mo 3	16Mo3
1.5530	21 MnB 5	20MnB5
1.5531	30 MnB 5	30MnB5
1.5532	38 MnB 5	38MnB5
1.5637	10 Ni 14	12Ni14
1.5662	–	X11CrMo5+I
1.5680	–	X12Ni5
1.5710	36 NiCr 6	36NiCr6
1.5715	–	16NiCrS4
1.5752	14 NiCr 14	15NiCr13
1.6210	15 MnNi 6 3	15MnNi6-3
1.6211	16 MnNi 6 3	16MnNi6-3
1.6310	20 MnMoNi 5 5	20MnMoNi5-5
1.6311	20 MnMoNi 4 5	20MnMoNi4-5
1.6341	11 NiMoV 5 3	11NiMoV5-3
1.6368	15 NiCuMoNb 5	15NiCuMoNb5
1.6511	36 CrNiMo 4	36CrNiMo4
1.6523	21 NiCrMo 2	21NiCrMo2-2
1.6526	21 NiCrMoS 2	21NiCrMoS2-2
1.6580	30 CrNiMo 8	30CrNiMo8
1.6582	34 CrNiMo 6	34CrNiMo6
1.6587	17 CrNiMo 6	18CrNiMo7-6
1.7003	38 Cr 2	38Cr2
1.7006	46 Cr 2	46Cr2
1.7016	17 Cr 3	17Cr3
1.7023	38 CrS 2	38CrS2
1.7025	46 CrS 2	46CrS2
1.7030	28 Cr 4	28Cr4
1.7033	34 Cr 4	34Cr4
1.7034	37 Cr 4	37Cr4
1.7035	41 Cr 4	41Cr4
1.7036	28 CrS 4	28CrS4
1.7037	34 CrS 4	34CrS4
1.7038	37 CrS 4	37CrS4
1.7039	41 CrS 4	41CrS4
1.7131	16 MnCr 5	16MnCr5
1.7139	16 MnCrS 5	16MnCrS5
1.7043	–	38Cr4
1.7147	20 MnCr 5	20MnCr5
1.7149	20 MnCrS 5	20MnCrS5
1.7176	55 Cr 3	55Cr3
1.7182	27 MnCrB 5 2	27MnCrB5-2
1.7185	33 MnCrB 5 2	33MnCrB5-2
1.7189	39 MnCrB 6 2	39MnCrB6-2
1.7213	25 CrMoS 4	25CrMoS4
1.7218	25 CrMo 4	25CrMo4
1.7219	–	26CrMo4-2
1.7220	34 CrMo 4	34CrMo4
1.7225	42 CrMo 4	42CrMo4
1.7226	34 CrMoS 4	34CrMoS4
1.7227	42 CrMoS 4	42CrMoS4
1.7228	50 CrMo 4	50CrMo4
1.7264	20 CrMo 5	20CrMo5
1.7321	20 MoCr 4	20MoCr4
1.7323	20 MoCrS 4	20MoCrS4
1.7333	22 CrMoS 3 5	22CrMoS3-5
1.7335	13 CrMo 4 4	13CrMo4-5
1.7362	12 CrMo 19 5	12CrMo19-5
1.7380	10 CrMo 9 10	10CrMo9-10
1.7383	–	11CrMo9-10
1.7779	–	20CrMoV13-5-5
1.8159	50 CrV 4	51CrV4
1.8504	34 CrAl 6	34CrAl6
1.8519	31 CrMoV 9	31CrMoV9
1.8550	34 CrAlNi 7	34CrAlNi7
1.8807	13 MnNiMoV 5 4	13MnNiMoV5-4
1.8812	18 MnMoV 5 2	18MnMoV5-2
1.8815	18 MnMoV 6 3	18MnMoV6-3
1.8821	StE 355 TM	P355M
1.8824	StE 420 TM	P420M
1.8826	StE 460 TM	P460M
1.8828	EStE 420 TM	P420ML2
1.8831	EStE 460 TM	P460ML2
1.8832	TStE 355 TM	P355ML1
1.8835	TStE 420 TM	P420ML1
1.8837	TStE 460 TM	P460ML1
1.8879	StE ...	P690Q
1.8880	WStE ...	P690QH
1.8881	TStE ...	P690QL1
1.8882	10 MnTi 3	10MnTi3
1.8888	EStE ...	P690QL2
1.8900	StE 380	S380N
1.8901	StE 460	S460N
1.8902	StE 420	S420N
1.8903	TStE 460	S460NL
1.8905	StE 460	P460N
1.8907	StE 500	S500N
1.8910	TStE 380	S380NL
1.8911	EStE 380	S380NL1
1.8912	TStE 420	S420NL
1.8913	EStE 420	S420NL1
1.8915	TStE 460	P460NL1
1.8917	WStE 500	S500NL
1.8918	EStE 460	P460NL2
1.8919	EStE 500	S500NL1
1.8930	WStE 380	P380NH
1.8932	WStE 420	P420NH
1.8935	WStE 460	P460NH
1.8937	TStE 500	P500NH
1.8972	StE 415.7	L415NB
1.8973	StE 415.7 TM	L415MB
1.8975	StE 445.7 TM	L450MB
1.8977	StE 480.7 TM	L485MB
1.8978	StE 550.7 TM	L555MB

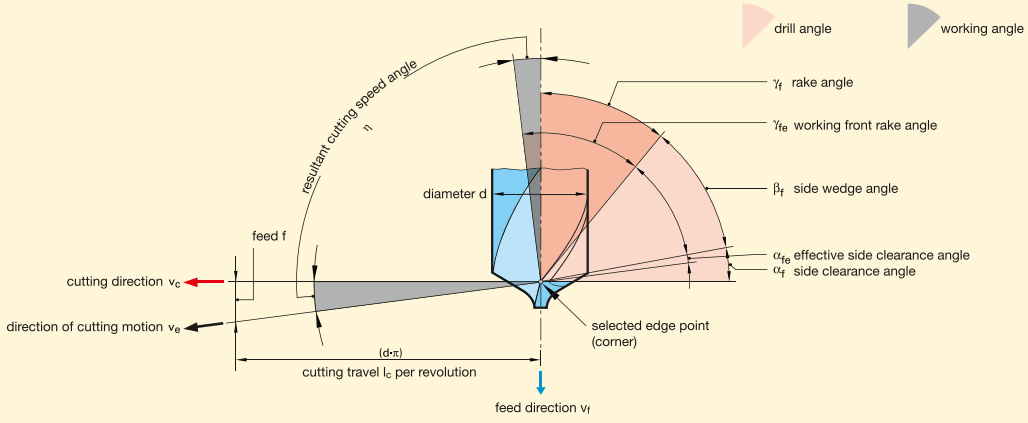
Definitions, dimensions and angles DIN ISO 5419 (extract; edition 06/98)

Twist drills with straight/Morse taper shank



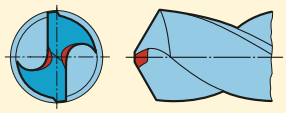
Cutting portion



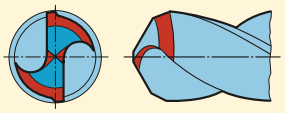


Special point geometry and manufacturing tolerances

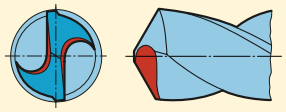
Special point geometry to DIN 1412 (extract; edition 03/01)



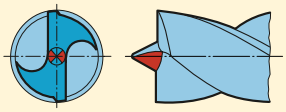
Form A
Thinned chisel edge



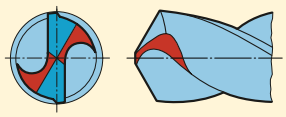
Form D
Point ground for cast iron



Form B
Thinned chisel edge with corrected cutting lips



Form E
Brad point (center point)



Form C
Split point

Twist drill manufacturing tolerances to DIN ISO 286, part 2

diameter (nominal size) up to and incl. mm	tolerance range mm h8	h7
0.38 ... 0.60	10	7
0.95	12	8
3.00	14	10
6.00	18	12
10.00	22	15
18.00	27	18
30.00	33	21
50.00	39	25
80.00	46	30
120.00	54	35

* If you need tolerances other than ISO h8 please let us know. Additional charges for closer diameter tolerance see additional charges at the end of chapter Drilling Tools.

Reference to other relevant standards

DIN 228	Part 1 machine tapers; Morse tapers and metric tapers, taper shank
DIN 1414-1	Directions for design and use for high speed steel twist drills
DIN 6580	Definitions of the metal-cutting industry; motions and geometry of the cutting process
DIN 6581	Definitions of the metal-cutting industry; Cutting portion reference systems and angles

The standard descriptions above are given with the permission from the German Standards Institute (Deutsches Institut für Normung). The most recent editions of the standard sheets apply and are available in DIN A 4 format from Beuth-Verlag GmbH, D-10787 Berlin.

Straight shank twist drills

dia. to (incl.) mm	DIN 338		DIN 339		DIN 340		DIN 1897		DIN 1869 Extra length twist drills series 1		series 2		series 3	
	total length mm	flute length mm	total length mm	flute length mm	total length mm	flute length mm	total length mm	flute length mm	total length mm	flute length mm	total length mm	flute length mm	total length mm	flute length mm
≤ 0.24	19	2.5					19	1.5						
0.30	19	3					19	1.5						
0.38	19	4					19	2						
0.48	20	5			30*	10*	19	2.5						
0.53	22	6			32*	12*	20	3						
0.60	24	7	32*	15*	35*	15*	21	3.5						
0.67	26	8	36*	18*	38*	18*	22	4						
0.75	28	9	39*	20*	42*	21*	23	4.5						
0.85	30	10	42*	22*	46*	25*	24	5						
0.95	32	11	45*	24*	51*	29*	25	5.5						
1.06	34	12	48	26	56	33	26	6						
1.18	36	14	50	28	60	37	28	7						
1.32	38	16	52	30	65	41	30	8						
1.50	40	18	55	33	70	45	32	9						
1.70	43	20	58	35	76	50	34	10	115*	75*				
1.90	46	22	62	38	80	53	36	11	120*	80*				
2.12	49	24	66	41	85	56	38	12	125	85	160*	110*	205*	135*
2.36	53	27	70	44	90	59	40	13	135	90	170*	115*	215*	145*
2.65	57	30	74	47	95	62	43	14	140	95	180*	120*	225*	150*
3.00	61	33	79	51	100	66	46	16	150	100	190	130	240*	160*
3.35	65	36	84	55	106	69	49	18	155	105	200	135	250*	170*
3.75	70	39	91	60	112	73	52	20	165	115	210	145	265	180
4.25	75	43	96	64	119	78	55	22	175	120	220	150	280	190
4.75	80	47	102	69	126	82	58	24	185	125	235	160	295	200
5.30	86	52	108	74	132	87	62	26	195	135	245	170	315	210
6.00	93	57	116	80	139	91	66	28	205	140	260	180	330	225
6.70	101	63	124	86	148	97	70	31	215	150	275	190	350	235
7.50	109	69	133	93	156	102	74	34	225	155	290	200	370	250
8.50	117	75	142	100	165	109	79	37	240	165	305	210	390	265
9.50	125	81	151	107	175	115	84	40	250	175	320	220	410	280
10.60	133	87	162	116	184	121	89	43	265	185	340	235	430	295
11.80	142	94	173	125	195	128	95	47	280*	195*	365*	250*	455*	310*
13.20	151	101	184	134	205	134	102	51	295*	205*	375*	260*	480*	330*
14.00	160	108	194	142	214	140	107	54						
15.00	169	114	202	147	220	144	111	56						
16.00	178	120	211	153	227	149	115	58						
17.00	184	125	218	159	235	154	119	60						
18.00	191	130	226	165	241	158	123	62						
19.00	198	135	234	171	247	162	127	64						
20.00	205	140	242	177	254	166	131	66						
21.20					261	171	136	68						
22.40					268	176	141	70						
23.60					275	180	146	72						
25.00					282	185	151	75						
26.50					290	190	156	78						
28.00					298	195	162	81						
30.00					307	201	168	84						
31.50					316	207	174	87						
33.50							180	90						
35.50							186	93						
37.50							193	96						
40.00							200	100						
42.50							207	104						
45.00							214	108						
47.50							221	112						
50.00							228	116						

Guhring delivers twist drills to Guhring standard up to total length of 1000 mm
Guhring no. 242, 243, 244

* Guhring std.

Morse taper twist drills

dia. to (incl.) mm	DIN 345			DIN 346			DIN 341			Bushing drills with oversize taper*			GV/VA-drills* for drilling difficult materials			DIN 1870 Extra length twist drills series 1			DIN 1870 Extra length twist drills series 2		
	total length	flute length	Morse taper	total length	flute length	Morse taper	total length	flute length	Morse taper	total length	flute length	Morse taper	total length	flute length	Morse taper	total length	flute length	Morse taper	total length	flute length	Morse taper
	mm			mm			mm			mm			mm			mm			mm		
2.65	111*	30*	1*																		
3.00	114	33	1																		
3.35	117	36	1																		
3.75	120	39	1																		
4.25	124	43	1				145*	64*	1*												
4.75	128	47	1				150*	69*	1*												
5.30	133	52	1				155	74	1												
6.00	138	57	1				161	80	1												
6.70	144	63	1				167	86	1												
7.50	150	69	1				174	93	1												
8.50	156	75	1				181	100	1				130	49	1	265	165	1	330	210	1
9.50	162	81	1				188	107	1				134	53	1	275	175	1	345	220	1
10.60	168	87	1	185*	87*	2*	197	116	1	214	116	2	138	57	1	285	185	1	360	235	1
11.80	175	94	1	192*	94*	2*	206	125	1	223	125	2	142	61	1	300	195	1	375	250	1
13.20	182	101	1	199	101	2	215	134	1	232	134	2	147	66	1	310	205	1	395	260	1
14.00	189	108	1	206	108	2	223	142	1	240	142	2	168	70	2	325	220	1	410	275	1
15.00	212	114	2	235*	114*	3*	245	147	2	268	147	3	172	74	2	340	220	2	425	275	2
16.00	218	120	2	241*	120*	3*	251	153	2	274	153	3	176	78	2	355	230	2	445	295	2
17.00	223	125	2	246*	125*	3*	257	159	2	280	159	3	179	81	2	355	230	2	445	295	2
18.00	228	130	2	251*	130*	3*	263	165	2	286	165	3	183	85	2	370	245	2	465	310	2
19.00	233	135	2	256	135	3	269	171	2	292	171	3	186	88	2	370	245	2	465	310	2
20.00	238	140	2	261	140	3	275	177	2	298	177	3	212	91	3	385	260	2	490	325	2
21.20	243	145	2	266	145	3	282	184	2	305	184	3	216	95	3	385	260	3	490	325	3
22.40	248	150	2	271	150	3	289	191	2	312	191	3	219	98	3	405	270	3	515	345	3
23.02	253	155	2	276	155	3	296	198	2	319	198	3	222	101	3	405	270	3	515	345	3
23.60	276	155	3	304*	155*	4*	319	198	3	347	198	4	222	101	3	425	270	3	535	345	3
25.00	281	160	3	309*	160*	4*	327	206	3	355	206	4	225	104	3	440	290	3	555	365	3
26.50	286	165	3	314*	165*	4*	335	214	3	363	214	4	256	107	4	440	290	3	555	365	3
28.00	291	170	3	319	170	4	343	222	3	371	222	4	259	110	4	460	305	3	580	385	3
30.00	296	175	3	324	175	4	351	230	3	379	230	4	263	114	4	460	305	3	580	385	3
31.50	301	180	3	329	180	4	360	239	3	388	239	4	266	117	4	480	320	3	610	410	3
31.75	306	185	3	334	185	4	369	248	3	397	248	4	269	120	4	480	320	3	610	410	3
33.50	334	185	4	372*	185*	5*	397	248	4	435	248	5	269	120	4	505	320	4	635	410	4
35.50	339	190	4	377*	190*	5*	406	257	4				272	123	4	530	340	4	665	430	4
37.50	344	195	4	382*	195*	5*	416	267	4				276	127	4	530	340	4	665	430	4
40.00	349	200	4	387*	200*	5*	426	277	4				317	130	5	555	360	4	695	460	4
42.50	354	205	4	392	205	5	436	287	4				320	133	5	555	360	4	695	460	4
45.00	359	210	4	397	210	5	447	298	4				323	136	5	585	385	4	735	490	4
47.50	364	215	4	402	215	5	459	310	4							585	385	4	735	490	4
50.00	369	220	4	407	220	5	470	321	4							605	405	4	765	510	4
50.80	374	225	4	412	225	5	475*	326*	4*												
53.00	412	225	5	479*	225*	6*	513*	326*	5*												
56.00	417	230	5	484*	230*	6*	518*	331*	5*												
60.00	422	235	5	489*	235*	6*	523*	336*	5*												
63.00	427	240	5	494*	240*	6*															
67.00	432	245	5	499	245	6															
71.00	437	250	5	504	250	6															
75.00	442	255	5	509	255	6															
76.50	447	260	5	514	206	6															
80.00	514	260	6																		
85.00	519	265	6																		
90.00	524	270	6																		
95.00	529	275	6																		
100.00	534	280	6																		
106.00	539*	285*	6*																		

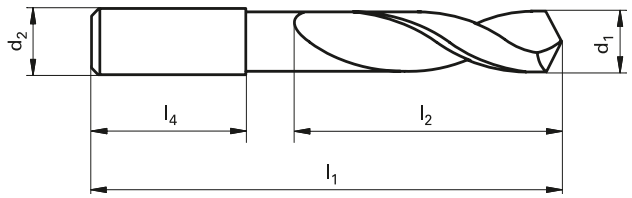
Guhring delivers twist drills to Guhring standard up to total length of 1000 mm Guhring no. 293, 298, 299, 563, 564, 565, 566

* Guhring std.

Carbide twist drills (Ratio drills)

Carbide twist drills (Ratio drills) DIN 6537

Applies to solid carbide twist drills with 2 or 3 cutting edges and straight shank to DIN 6535

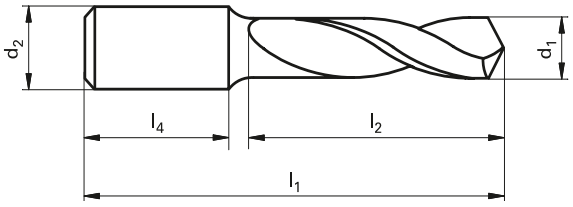


Dimensions in mm

nom. Ø-range up to d1m7	shank Ø d2h6	Ratio drills for 3 x D		Ratio drills for 5 x D		shank length l4
		overall length l1	max. flute length l2	overall length l1	max. flute length l2	
2.9...3.75	6	62	20	66	28	36
4.75	6	66	24	74	36	36
6.00	6	66	28	82	44	36
7.00	8	79	34	91	53	36
8.00	8	79	41	91	53	36
10.00	10	89	47	103	61	40
12.00	12	102	55	118	71	45
14.00	14	107	60	124	77	45
16.00	16	115	65	133	83	48
18.00	18	123	73	143	93	48
20.00	20	131	79	153	101	50

Carbide twist drills (Ratio drills) DIN 6538

Applies to twist drills with brazed carbide tip or head with reinforced straight shank (steel) to DIN 6535. The brazed head can be a part or the complete cutting portion.



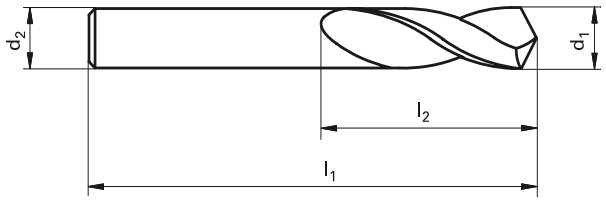
Dimensions in mm

nom. Ø-range up to d1h7	shank Ø d2h6	Ratio drills for 3 x D		Ratio drills for 5 x D		Ratio drills for 7 x D		shank length l4
		overall length l1	max. flute length l2	overall length l1	max. flute length l2	overall length l1	max. flute length l2	
9.5...12.0	16	103	51	127	75	151	99	48
14.0	16	111	59	139	87	167	115	48
16.0	20	122	68	154	100	186	132	50
18.0	20	130	76	166	112	202	148	50
20.0	25	144	84	184	124	224	164	56
22.0	25	153	93	197	137	241	181	56
24.0	25	161	101	209	149	257	197	56
26.0	32	174	110	226	162	278	214	60
28.0	32	182	118	238	174	294	230	60
30.0	32	190	126	250	186	310	246	60

Carbide twist drills (Ratio drills)

Carbide twist drills (Ratio drills) DIN 6539

Applies to solid carbide twist drills with parallel shank, i.e. equal nom. drill and shank diameter.

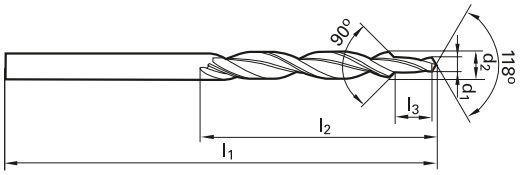


Dimensions in mm

nom. Ø-range up to (= shank Ø d2) d1	overall length l1	flute length l2
1.90...2.12	38	12
2.36	40	13
2.65	43	14
3.00	46	16
3.35	49	18
3.75	52	20
4.25	55	22
4.75	58	24
5.30	62	26
6.00	66	28
6.70	70	31
7.50	74	34
8.00	79	37
8.50	79	37
9.50	84	40

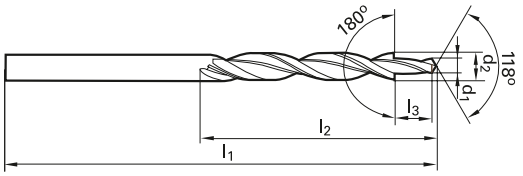
nom. Ø-range up to (= shank Ø d2) d1	overall length l1	flute length l2
10.00	89	43
10.60	89	43
11.80	95	47
12.00	102	51
13.20	102	51
14.00	107	54
15.00	111	56
16.00	115	58
17.00	119	60
18.00	123	62
19.00	127	64
20.00	131	66

Straight shank subland drills, 90° step angle



body Ø d2 h8 mm	step Ø d1 h9 mm	overall length l1 mm	flute length l2 mm	step length l3 mm	for thread	range of application
HSS DIN 8378/ Carbide Guhring std.						
3.4	2.5	70	39	8.8	M 3	For tapping size holes to DIN 336 and countersinks in accordance with clearance holes to DIN-ISO 273 (old) and DIN EN 20273 »medial tolerance«.
4.5	3.3	80	47	11.4	M 4	
5.5	4.2	93	57	13.6	M 5	
6.6	5.0	101	63	16.5	M 6	
9.0	6.8	125	81	21.0	M 8	
11.0	8.5	142	94	25.5	M10	
13.5	10.2	160	108	30.0	M12	
DIN 8374 for countersinks, fine tolerance						
6.0	3.2	93	57	9.0	M 3	For clearance holes to DIN-ISO 273 (old), DIN EN 20273 »fine tolerance« and screwhead countersinks form A and B to DIN 74 part 1 (old) »fine tolerance« and screwhead countersinks to DIN 74 form F. For screws to DIN 963 (old) and DIN 964 (old).
8.0	4.3	117	75	11.0	M 4	
10.0	5.3	133	87	13.0	M 5	
11.5	6.4	142	94	15.0	M 6	
15.0	8.4	169	114	19.0	M 8	
19.0	10.5	198	135	23.0	M10	
Guhring std. for countersinks, medial tolerance						
6.6	3.4	101	63	9.0	M 3	For clearance holes to DIN-ISO 273 (old) and screwhead countersinks form A and B to DIN 74 part 1 (old) »medial tolerance«. For screws to DIN 963 (old) and DIN 964 (old).
9.0	4.5	125	81	11.0	M 4	
11.0	5.5	142	94	13.0	M 5	
13.0	6.6	151	101	15.0	M 6	
17.2	9.0	191	130	19.0	M 8	
DIN 8374 for countersinks, medial tolerance						
7.5	3.4	109	69	9.0	M 3	For clearance holes to DIN-ISO 273 (old) and screwhead countersinks form A and B to DIN 74 part 1 (old) »medial tolerance«. For screws to DIN 963 (old) and DIN 964 (old).
9.7	4.5	133	87	11.0	M 4	
12.0	5.5	151	101	13.0	M 5	
14.5	6.6	169	114	15.0	M 6	
19.9	9.0	198	135	19.0	M 8	

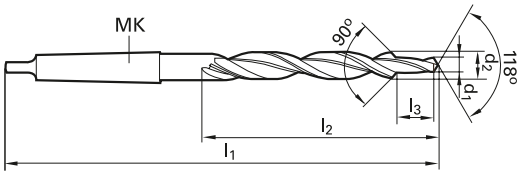
Straight shank subland drills, 180° step angle



body Ø d2 h8 mm	step Ø d1 h9 mm	overall length l1 mm	flute length l2 mm	step length l3 mm	for thread	range of application
HSS DIN 8376/ Carbide Guhring std.						
6.0**	3.4	93**	57**	9.0	M 3	For clearance holes to DIN-ISO 273 (old), DIN EN 20273 »medial tolerance«, screwhead countersinks to DIN 974-1 and screwhead countersinks form H, J and K to DIN 74 part 2 (old): »medial tolerance«. For screws to DIN 84 (old), 912 (old), 6912, 7513 and DIN 7984.
6.5	3.4	101	63	9.0	M 3	
8.0	4.5	117	75	11.0	M 4	
10.0	5.5	133	87	13.0	M 5	
11.0	6.6	142	94	15.0	M 6	
15.0	9.0	169	114	19.0	M 8	
18.0	11.0	191	130	23.0	M10	
Guhring std.						
6.0	3.2	93	57	9.0	M 3	For clearance holes to DIN-ISO 273 (old) and screwhead countersinks form H, J and K to DIN 74 part 2 (old): »fine tolerance«. For screws to DIN 84 (old), 912 (old), 6912, 7513 and DIN 7984.
8.0	4.3	117	75	11.0	M 4	
Guhring std. for countersinks, fine tolerance (old*)						
5.9	3.2	93	57	11.0	M 3	For screws to DIN 84 (old), DIN 912 (old) and DIN 6912. For old type screwhead countersinks form H, J and K to DIN 75 part 2: »fine tolerance«.
7.4	4.3	109	69	13.0	M 4	
9.4	5.3	125	81	16.0	M 5	
10.4	6.4	133	87	19.0	M 6	
13.5	8.4	160	108	22.0	M 8	
16.5	10.5	184	125	25.0	M10	
Guhring std. for countersinks, medial tolerance (old*)						
8.0	4.8	117	75	13.0	M 3	For screws to DIN 84 (old), DIN 912 (old) and DIN 6912. For old type screwhead countersinks form H, J and K to DIN 75 part 2: »medial tolerance«.
10.0	5.8	133	87	16.0	M 4	
11.0	7.0	142	94	19.0	M 5	
14.5	9.5	169	114	22.0	M 6	
17.5	11.5	191	130	25.0	M 8	

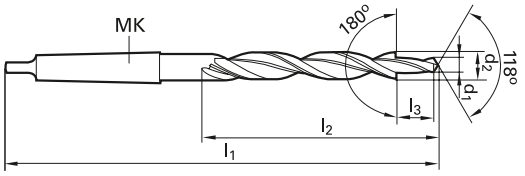
* DIN 75, part 2; ** Guhring std

Morse taper subland drills, 90° step angle



body Ø d2 h8 mm	step Ø d1 h9 mm	overall length l1 mm	flute length l2 mm	Morse taper MK	step length l3 mm	for thread	range of application
Guhring std.							
11.0	5.5	175	94	1	13.0	M 5	For clearance holes to DIN-ISO 273 (old), DIN EN 20273 »medial tolerance«, screwhead countersinks to DIN 74 form F and screwhead countersinks form A and B to DIN 74 part 1 (old) »medial tolerance«. For screws to DIN 963 (old) and DIN 964 (old).
13.0	6.6	182	101	1	15.0	M 6	
17.2	9.0	228	130	2	19.0	M 8	
21.5	11.0	248	150	2	23.0	M10	
26.0	14.0	286	165	3	27.0	M12	
29.0	16.0	296	175	3	31.0	M14	
DIN 8375							
12.0	5.5	182	101	1	13.0	M 5	For clearance holes to DIN-ISO 273 (old), DIN EN 20273 »medial tolerance«, screwhead countersinks to DIN 74 form F and screwhead countersinks form A and B to DIN 74 part 1 (old) »medial tolerance«. For screws to DIN 963 (old) and DIN 964 (old).
14.5	6.6	---	108	1	15.0	M 6	
19.0	9.0	253	135	2	19.0	M 8	
23.0	11.0	248	155	2	23.0	M10	
Guhring std.							
11.5	6.4	175	94	1	15.0	M 6	For clearance holes to DIN-ISO 273 (old) and screwhead countersinks form A and B to DIN 74 part 1 (old) »fine tolerance«. For screws to DIN 963 (old) and DIN 964 (old).
15.0	8.4	212	114	2	19.0	M 8	
19.0	10.5	233	135	2	23.0	M10	
23.0	13.0	253	155	2	27.0	M12	
26.0	15.0	286	165	3	31.0	M14	
30.0	17.0	296	175	3	35.0	M16	
DIN 8379							
9.0	6.8	162	81	1	21.0	M 8	For tapping size holes to DIN 336, DIN EN 20273 »medial tolerance« and countersinks in accordance with clearance holes to DIN-ISO 273 (old).
11.0	8.5	175	94	1	25.5	M10	
13.5	10.2	189	108	1	30.0	M12	
15.5	12.0	218	120	2	34.5	M14	
17.5	14.0	228	130	2	38.5	M16	
20.0	15.5	238	140	2	43.5	M18	
22.0	17.5	248	150	2	47.5	M20	

Morse taper subland drills, 180° step angle



body Ø d2 h8 mm	step Ø d1 h9 mm	overall length l1 mm	flute length l2 mm	Morse taper MK	step length l3 mm	for thread	range of application
HSS DIN 8377/ Carbide Guhring std.							
10.0	5.5	168	87	1	13.0	M 5	For clearance holes to DIN-ISO 273 (old), DIN EN 20273 »medial tolerance«, screwhead countersinks to DIN 974-1 and screwhead countersinks form H, J and K to DIN 74 part 2 (old): »medial tolerance«. For screws to DIN 84 (old), 912 (old), 6912, 7513 and DIN 7984.
11.0	6.6	175	94	1	15.0	M 6	
15.0	9.0	212	114	2	19.0	M 8	
18.0	11.0	228	130	2	23.0	M10	
20.0	13.5	238	140	2	27.0	M12	
24.0	15.5	281	160	3	31.0	M14	
26.0	17.5	286	165	3	35.0	M16	
30.0	20.0	296	175	3	39.0	M18	
33.0	22.0	334	185	4	43.0	M20	
Guhring std.							
10.0	5.3	168	87	1	13.0	M 5	For clearance holes to DIN-ISO 273 (old) and screwhead countersinks form H, J and K to DIN 74 part 2 (old): »fine tolerance«. For screws to DIN 84 (old), 912 (old), 6912, 7513 and DIN 7984.
11.0	6.4	175	94	1	15.0	M 6	
15.0	8.4	212	114	2	19.0	M 8	
18.0	10.5	228	130	2	23.0	M10	
20.0	13.0	238	140	2	27.0	M12	
24.0	15.0	281	160	3	31.0	M14	
26.0	17.0	286	165	3	35.0	M16	
Guhring std. for countersinks, fine tolerance (old*)							
9.4	5.3	162	81	1	16.0	M 5	For screws DIN 84 (old), DIN 912 (old) and DIN 6912. For old countersinks form H, J and K to DIN 75 part 2: »fine tolerance«.
10.4	6.4	168	87	1	19.0	M 6	
13.5	8.4	189	108	1	22.0	M 8	
16.5	10.5	223	125	2	25.0	M10	
19.0	13.0	233	135	2	28.0	M12	
23.0	15.0	253	155	2	30.0	M14	
25.0	17.0	281	160	3	33.0	M16	
28.0	19.0	291	170	3	36.0	M18	
31.0	21.0	301	180	3	39.0	M 20	
Guhring std. for countersinks, medial tolerance (old*)							
10.0	5.8	168	87	1	16.0	M 5	For screws DIN 84 (old), DIN 6912. For old countersinks form H, J and K to DIN 75 part 2: »medial tolerance«.
11.0	7.0	175	94	1	19.0	M 6	
14.5	9.5	212	114	2	22.0	M 8	
17.5	11.5	228	130	2	25.0	M10	
20.0	14.0	238	140	2	28.0	M12	
24.0	16.0	281	160	3	30.0	M14	
26.0	18.0	286	165	3	33.0	M16	
29.0	20.0	296	175	3	36.0	M18	
33.0	23.0	334	185	4	39.0	M20	

inch	mm	inch	mm	inches	mm	inches	mm	MK	inches	mm	for thread	range of application
British Standard												
19/32	15.08	25/64	9.92	8 5/8	219	4 3/4	121	2	3/4	19.05	3/8 inch	For British Standard caphead screws.
21/32	16.67	29/64	11.51	8 3/4	222	4 7/8	124	2	7/8	22.22	7/16 inch	
25/32	19.84	33/64	13.10	9 3/8	238	5 1/2	140	2	1	25.40	1/2 inch	

* DIN 75, part 2

Straight shank core drills

diameter up to incl. mm	DIN 344				
	overall length mm	flute length mm	diameter up to incl. mm	overall length mm	flute length mm
4.25	96*	64*	11.70	173	125
4.75	102*	69*	13.20	184	134
5.30	108	74	14.00	194	142
6.00	116	80	15.00	202	147
6.70	124	86	16.00	211	153
7.50	133	93	17.00	218	159
8.50	142	100	18.00	226	165
9.50	151	107	19.00	234	171
10.60	162	116	20.00	242	177

Shell-core drills

DIN 222		
nom. Ø up to incl. mm	overall length mm	nom. Ø of hole mm
35.5	45	13
45.0	50	16
53.0	56	19
63.0	63	22
75.0	71	27
90.0	80	32
101.6	90	40

Taper shank core drills

diameter up to incl. mm	DIN 343			DIN 1864		
	overall length mm	flute length mm	Morse taper	overall length mm	flute length mm	Morse taper
7.50	150*	69*	1*	174*	93*	1*
8.50	156*	75*	1*	181*	100*	1*
9.50	162	81	1	188	107	1
10.60	168	87	1	197	116	1
11.70	175	94	1	206	125	1
13.20	182	101	1	215	134	1
14.00	189	108	1	223	142	1
15.00	212	114	2	245	147	2
16.00	218	120	2	251	153	2
17.00	223	125	2	257	159	2
18.00	228	130	2	263	165	2
19.00	233	135	2	269	171	2
20.00	238	140	2	275	177	2
21.20	243	145	2	282	184	2
22.40	248	150	2	289	191	2
23.60	253	155	2	296	198	2
25.00	281	160	3	327	206	3
26.50	286	165	3	335	214	3
28.00	291	170	3	343	222	3
30.00	296	175	3	351	230	3
31.50	301	180	3	360	239	3
33.50	334	185	4			
35.50	339	190	4			
37.50	344	195	4			
40.00	349	200	4			
42.50	354	205	4			
45.00	359	210	4			
47.50	364	215	4			
50.00	369	220	4			

*Guhring std.

Micro-precision drills (total length 25 mm)

DIN 1899					
diameter up to incl. mm	shank Ø mm	flute length mm	diameter up to incl. mm	shank Ø mm	flute length mm
from 0.1 . . . 0.12	1.0	0.5	0.67	1.0	4.2
0.15	1.0	0.8	0.75	1.0	4.8
0.19	1.0	1.1	0.79	1.0	5.3
0.24	1.0	1.5	0.85	1.5	5.3
0.30	1.0	1.9	0.95	1.5	6.0
0.38	1.0	2.4	1.06	1.5	6.8
0.48	1.0	3.0	1.18	1.5	7.6
0.53	1.0	3.4	1.32	1.5	8.5
0.60	1.0	3.9	1.45	1.5	9.5

Coolant pressure and volumes

The illustrated optimum, good and minimum required coolant volume apply only to spiral-fluted Ratio drills type RT 100. In contrast to the pressure, which is a feature of the machine tool; the cooling system fitted to it and also the possibility of leakage, volume does not depend on the machine (fig. 1). The pressure figures given are therefore recommendations which serve only as guidelines.
Ratio drills type RT 80 with central coolant duct are subject to different standards (fig. 2). The diagrams shown are for Ratio drills in their most important application, machining of steel. But they are also guidelines for the machining of other materials, primarily because the highest coolant pressures are constantly required for the machining of steel. The effects of cooling using straight-fluted Ratio drills type RT 150 is particularly sensitive and is clearly demonstrated in the examples for particular workpiece materials. For example, the loss in tool life through low pressures when machining grey cast iron is considerably higher than when machining AlSi alloys. But this is only the case when the AlSi alloy is short-chipping! The absolute necessary minimum pressure or good pressure should, when machining cast iron, be generally a little higher than for AlSi machining (figures 3 and 4).

The recommended values are to be used only for drilling depths of up to approx. 5 x D. Deeper holes should be produced with tools having internal coolant ducts, as for example RT 150 GN, otherwise the production of deeper holes (depending on the material) becomes uneconomical.

Required coolant pressures
optimum pressure
good pressure
minimum pressure

Required coolant volumes
optimum volume
good volume
minimum volume

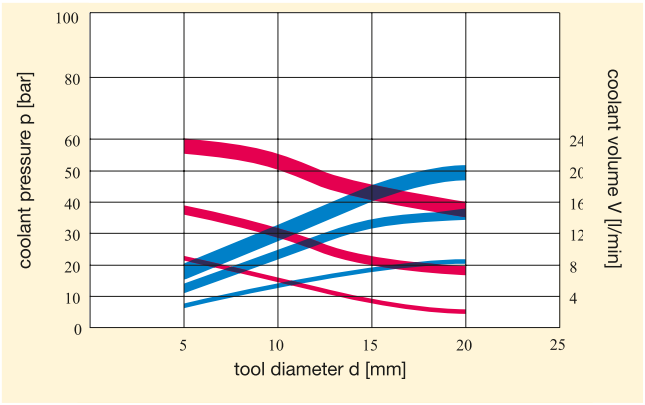


fig. 1:
Required coolant pressures and volumes for RT 100 Ratio drills with internal spiral coolant ducts.

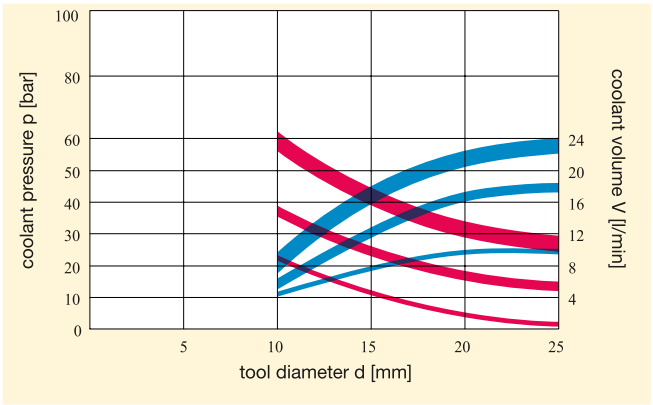


fig. 2:
Required coolant pressures and volumes for RT 80 Ratio drills with central internal coolant duct.

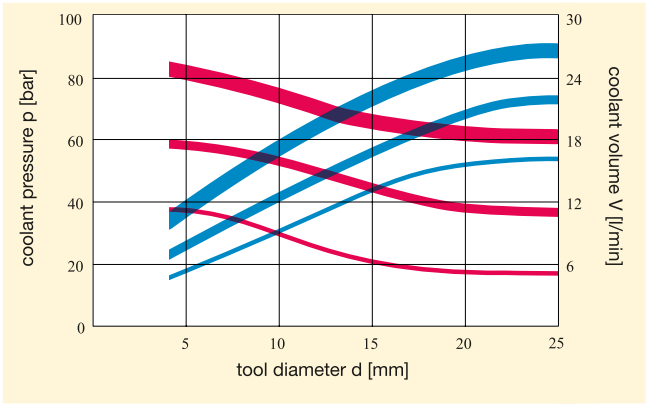


fig. 3:
Required coolant pressures and volumes for straight-fluted Ratio drill type 150 GG when machining cast iron.

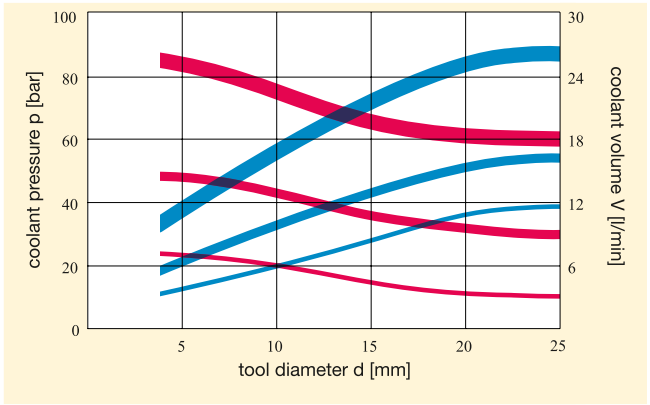


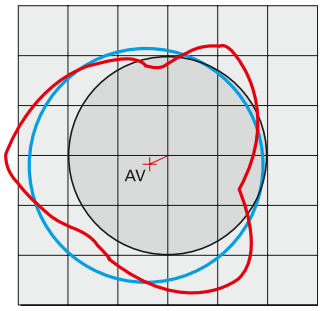
fig. 4:
Required coolant pressures and volumes for straight-fluted Ratio drill type 150 GG when machining AlSi7.

Typical hole quality characteristics

1. in 42CrMo4V, Ø 14.5 mm

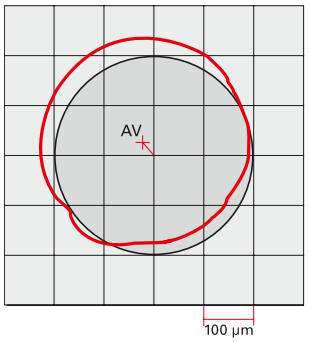
HSS drills, type N
Guhring no. 651 (S)

vc = 25 m/min
f = 0.25 mm/rev.
+Rmax = 131.8 µm
-Rmax = -49.1 µm
actual D = 14.566 mm
dRmax = 103.5 µm
AV = 49.2 µm
Ra = 2.6 µm, Rz = 6.8 µm **IT12**



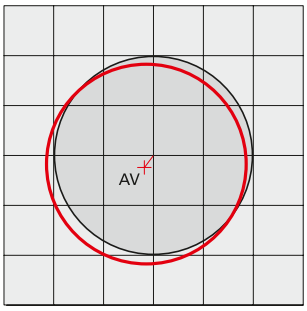
Ratio drills, type RT 80
Guhring no. 1171 (S)

vc = 70 m/min
f = 0.25 mm/rev.
+Rmax = 42.7 µm
-Rmax = -29.6 µm
actual D = 14.515 mm
dRmax = 12.9 µm
AV = 35.3 µm
Ra = 1.4 µm, Rz = 4.31 µm **IT9**



Ratio drills, type RT 100
Guhring no. 1181 (S)

vc = 70 m/min
f = 0.25 mm/rev.
+Rmax = 26.7 µm
-Rmax = -17.2 µm
actual D = 14.509 mm
dRmax = 5.2 µm
AV = 22.8 µm
Ra = 1.04 µm, Rz = 3.2 µm **IT8**



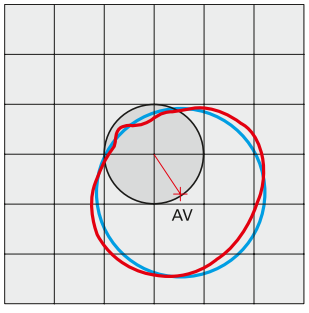
The overall total of the maximum positive and negative deviations is the sum of the total run-out in relation to the black circle as measured on standard instruments (dRmax). The red lines at the hole centres indicate the direction and amplitude of the displacements AV (Axis Shifting) of the produced hole from the true centre point. The parameter showing the largest deviation is decisive for the IT quality class of the hole in relation to the tool diameter.

The black circle in the diagram represents the nominal hole diameter which the tool should ideally produce. The red circle indicates the form actually produced.
The mean value of the radius of the red circle, i.e. the average diameter, is shown by the blue circle. (with our Ratio drills the average diameter is practically identical to the actual diameter produced).

2. in GGG40, Ø 10.0 mm

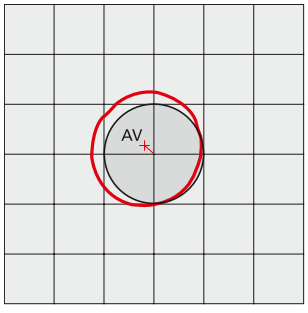
HSS drills, type N
Guhring no. 651 (S)

vc = 30 m/min
f = 0.2 mm/rev.
actual D = 10.077 mm
+Rmax = 106 µm
-Rmax = -28 µm
dRmax = 42 µm
AV = 68.5 µm
Ra = 3.7 µm, Rz = 17.2 µm **IT12**



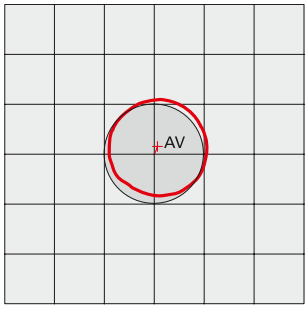
Ratio drills, type RT 100
Guhring no. 1181 (S)

vc = 90 m/min
f = 0.3 mm/rev.
actual D = 10.027 mm
+Rmax = 34 µm
-Rmax = -9.2 µm
dRmax = 6.5 µm
AV = 22.5 µm
Ra = 2.2 µm, Rz = 11.5 µm **IT9**



Ratio drills, type RT 150 GG
Guhring no. 768 ◯

vc = 130 m/min
f = 0.2 mm/rev.
actual D = 9.994 mm
+Rmax = 11.5 µm
-Rmax = -18 µm
dRmax = 5 µm
AV = 14 µm
Ra = 1.99 µm, Rz = 11.2 µm **IT8**



Tolerances

DIN 333	
Ø-range mm	tolerance zones mm
0.50 – 2.50	0 +0.14
3.15 – 5.00	0 +0.18
6.30 – 10.00	0 +0.22
12.50	0 +0.27

for Guhring nos. 285/286	
Ø-range mm	tolerance zones mm
1.00 –1.25	0 +0.10
1.60 – 3.15	0 +0.15
3.15 – 10.00	0 +0.20

to B.S. 328	
Ø-range mm	tolerance zones mm
1.19 – 1.59	0 ±0.05
2.38 – 3.17	0 ±0.07
4.76	0 ±0.07
6.35 – 7.94	0 ±0.12

to B.S. 328	
Shank Ø-range mm	tolerance zones mm
3.17 – 4.76	-0.020
6.35	-0.025
7.94 – 11.11	-0.050
15.87 – 19.05	-0.050

to ASA	
Ø-range mm	tolerance zones mm
all	0 + 0.07 mm

Master standards for dimensions to DIN 2184

The standard DIN 2184 stipulates the major dimensions for taps and fluteless taps required for the thread production with nominal diameter d1 > 0.9 ... 113 mm . Part 1 is the master standard for dimensions for a long tool design, part 2 the master standard for dimensions for the short tool design. According to the nominal diameter range and dependent on the pitch, the number of teeth and the ratio total length these master standards include : the max. thread length, the shank designs “reinforced shank“ and “reduced shank“. A detailed illustration of shank designs and characteristic features can be found on the following page.

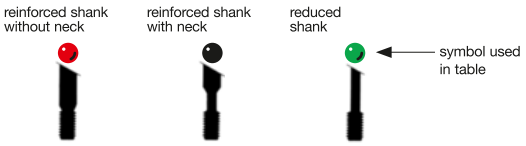
Taps

DIN 2184-1			DIN 2184-2			
Machine taps, long			Hand taps and machine taps			
ISO metric thread	ISO metric fine thread		ISO metric thread	ISO metric fine thread		
DIN 371 DIN 376	DIN 371 DIN 374		DIN 352	DIN 2181		
UNC/BSW* thread	UNF thread	G- thread	UNC/BSW thread	UNF thread	G thread	Pg thread
~DIN 371 ~DIN 376	~DIN 371 ~DIN 374	DIN 5156	~DIN 352	~DIN 2181	DIN 5157	DIN 40 432

Fluteless taps

DIN 2184-1				
DIN 2174		DIN 2184-1		
ISO metric thread	ISO metric fine thread	UNC thread	UNF thread	G thread
previously DIN 371 DIN 376	previously DIN 371 DIN 374	previously ~DIN 371 ~DIN 376	previously ~DIN 371 ~DIN 374	previously DIN 5156

Shank designs for thread cutting tools



Thread type	DIN Taps / Fluteless taps	contained in the master standards	Nominal diameter ranges mm 0.9 … 2.6	>2.6 … 6.35	>6.35 … 10.0	>10.0
M/MJ ISO metric threads	DIN 371	2184-1	●	●	●	–
	DIN 376	2184-1	●	●	●	●
	DIN 352	2184-**2**	●	●	●	●
	DIN 2174	2184-1	●	●	●	●
MF/MJF ISO metric fine threads	DIN 371	2184-1	●	●	●	–
	DIN 374	2184-1	–	●	●	●
	DIN 2181	2184-**2**	●	●	●	●
	DIN 2174	2184-1	●	●	●	●
UNC/UNJC/BSW threads	~DIN 371	2184-1	●	●	●	–
	~DIN 376	2184-1	●	●	●	●
	~DIN 352	2184-**2**	●	●	●	●
UNF/UNJF threads	~DIN 371	2184-1	●	●	●	–
	~DIN 374	2184-1	–	●	●	●
	~DIN 2181	2184-**2**	●	●	●	●
G threads	DIN 5156	2184-1	–	●	●	●
	DIN 5157	2184-**2**	–	●	●	●
Pg threads	DIN 40 432	2184-**2**	–	–	–	●

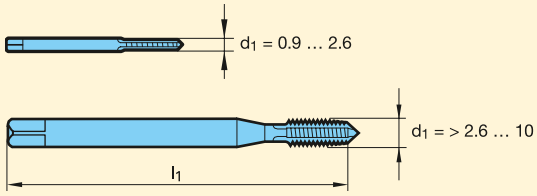
Master standards for dimensions to DIN 2184-1

Ø nom. mm	Shank designs mm			Metric pitch mm	Total length mm	Max. thread length mm
	Reinforced shank		Reduced shank			
from…to	Ø	Effective length	Ø			
0.9…1.20	2.5	5.5	–	≤0.20	40	5.5
1.20…1.40	2.5	7.0	–	≤0.35	40	7.0
1.40…1.80	2.5	8.0	–	≤0.35	40	8.0
1.80…2.00	2.8	8.0	–	≤0.40	45	8.0
2.00…2.30	2.8	9.0	–	≤0.40	45	9.0
2.30…2.60	2.8	9.0	–	≤0.50	50	9.0
2.60…3.20	3.5	18	2.2	≤0.45	56	8.0
2.60…3.20	3.5	18	2.2	0.50…0.60	56	11.0
3.20…3.55	4.0	20	2.5	≤0.50	56	9.0
3.20…3.55	4.0	20	2.5	0.60…0.80	56	12.0
3.55…4.20	4.5	21	2.8	≤0.50	63	10.0
3.55…4.20	4.5	21	2.8	0.60…0.80	63	13.0
4.20…4.55	6.0	25	3.5	≤0.60	70	12.0
4.20…4.55	6.0	25	3.5	0.70…0.80	70	16.0
4.55…5.00	6.0	25	3.5	≤0.75	70	12.0
4.55…5.00	6.0	25	3.5	0.80…1.00	70	16.0
5.00…5.60	6.0	30	4.0	≤0.75	80	12.0
5.00…5.60	6.0	30	4.0	0.80…1.00	80	17.0
5.60…6.10	6.0	30	4.5	≤0.80	80	14.0
5.60…6.10	6.0	30	4.5	1.0	80	19.0
6.10…6.40	7.0	30	4.5	≤0.80	80	14.0
6.10…6.40	7.0	30	4.5	1.00…1.25	80	19.0
6.40…7.00	7.0	30	5.5	≤0.80	80	14.0
6.40…7.00	7.0	30	5.5	1.00…1.25	80	19.0
7.00…8.00	8.0	30	6.0	≤0.80	80	18.0
7.00…8.00	8.0	35	6.0	1.00…1.50	90	22.0
8.00…9.00	9.0	30	7.0	≤0.80	90	18.0
8.00…9.00	9.0	35	7.0	1.00…1.50	90	22.0
9.00…10.15	10.0	35	7.0	≤1.00	90	20.0
9.00…10.15	10.0	39	7.0	1.25…1.50	100	24.0
10.15…11.15	–	–	8.0	0.25…1.00	90	20.0
10.15…11.15	–	–	8.0	1.25…1.75	100	24.0
11.15…12.80	–	–	9.0	0.25…1.50	100	22.0
11.15…12.80	–	–	9.0	1.75…2.00	110	28.0
12.80…14.35	–	–	11.0	0.25…1.50	100	22.0
12.80…14.35	–	–	11.0	1.75…2.00	110	30.0
14.35…17.10	–	–	12.0	0.25…1.50	100	22.0
14.35…17.10	–	–	12.0	1.75…2.00	110	32.0
17.10…19.10	–	–	14.0	0.25…1.50	110	25.0
17.10…19.10	–	–	14.0	1.75…2.50	125	34.0
19.10…21.15	–	–	16.0	0.25…1.75	125	25.0
19.10…21.15	–	–	16.0	2.00…2.50	140	34.0
21.15…23.00	–	–	18.0	0.25…1.75	125	25.0
21.15…23.00	–	–	18.0	2.00…2.50	140	34.0
23.00…26.00	–	–	18.0	0.25…2.00	140	28.0
23.00…26.00	–	–	18.0	2.50…3.00	160	38.0
26.00…28.15	–	–	20.0	0.25…2.00	140	28.0
26.00…28.15	–	–	20.0	2.50…3.00	160	38.0
28.15…30.20	–	–	22.0	0.25…2.00	150	28.0
28.15…30.20	–	–	22.0	2.50…3.50	180	45.0
30.20…32.00	–	–	22.0	0.25…2.00	150	28.0
30.20…32.00	–	–	22.0	2.50…3.50	180	50.0
32.00…33.30	–	–	25.0	0.25…2.00	160	30.0
32.00…33.30	–	–	25.0	2.50…3.50	180	50.0
33.30…38.20	–	–	28.0	0.25…2.00	170	30.0
33.30…38.20	–	–	28.0	2.50…4.50	200	56.0
38.20…42.00	–	–	32.0	0.25…2.00	170	30.0
38.20…42.00	–	–	32.0	2.50…4.50	200	60.0
42.00…45.00	–	–	36.0	0.25…2.00	180	32.0
42.00…45.00	–	–	36.0	2.50…3.00	200	50.0
42.00…45.00	–	–	36.0	3.50…5.00	220	69.0
45.00…50.00	–	–	36.0	0.25…2.00	190	82.0
45.00…50.00	–	–	36.0	2.50…3.00	225	50.0
45.00…50.00	–	–	36.0	3.50…5.00	250	70.0

Characteristic features of the individual standards

DIN 371

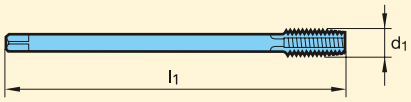
in the master standard
DIN 2184-**1**



Standard for machine taps with reinforced shank for standard ISO metric threads and ISO metric fine threads. Long design.
Shank design in accordance with diameter ranges shown above (mm).

DIN 376

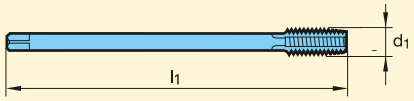
in the master standard
DIN 2184-**1**



Standard for machine taps with reduced shank for standard ISO metric threads. Long design.
Diameter range d_1 = 1.6 … 68 mm
(≤ Ø M3, shank without square)

DIN 374

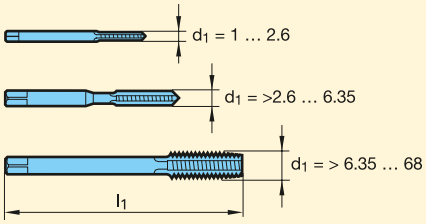
in the master standard
DIN 2184-**1**



Standard for machine taps with reduced shank for ISO metric fine threads. Long design.
Diameter range d_1 = 3 … 52 mm

DIN 352

in the master standard
DIN 2184-**2**

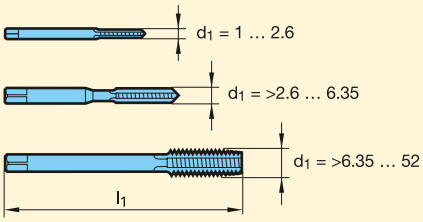


Standard for hand and machine taps for standard ISO metric threads. Short design.
Shank design in accordance with diameter ranges shown opposite (mm).

Characteristic features of the individual standards

DIN 2181

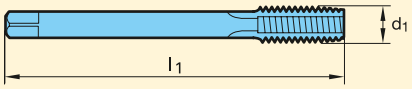
in the master standard
DIN 2184-**2**



Standard for hand and machine taps for standard ISO metric threads. Short design. Shank design in accordance with diameter ranges shown opposite (mm).

DIN 5156

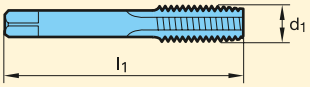
in the master standard
DIN 2184-**1**



Standard for machine taps for BSP threads to DIN ISO 228 and for BSW threads to DIN 2999. Long design.
Diameter ranges:
BSP threads G $^1/_{16}$“ ... G 4“
BSW threads W $^1/_{16}$“... W 4“

DIN 5157

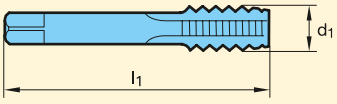
in the master standard
DIN 2184-**2**



Standard for machine taps for BSP threads to DIN ISO 228 and for BSW threads to DIN EN 10 226-1. Short design.
Diameter ranges:
BSP threads G $^1/_{16}$“ ... G 4“
BSW threads W $^1/_{16}$“...W 4“

DIN 40 432

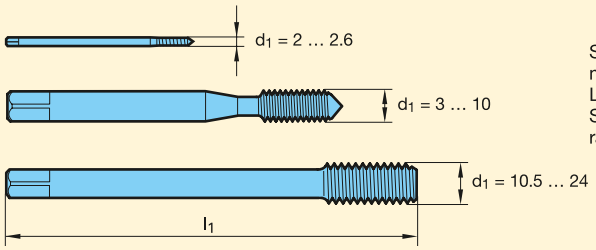
in the master standard
DIN 2184-**2**



Standard for machine taps for steel armoured conduit threads to DIN 40 430. Short design.
Diameter range:
Pg 7 (12.5 mm) ... Pg 48 (59.3 mm)
Will be replaced by DIN 374 ISO 3 6G.

DIN 2174

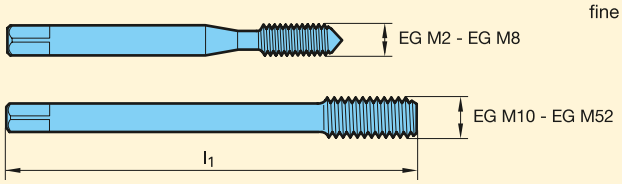
in the master standard
DIN 2184-**1**



Standard for fluteless taps for standard ISO metric threads and ISO metric fine threads.
Long design.
Shank design in accordance with diameter ranges shown opposite (mm).

DIN 40 435

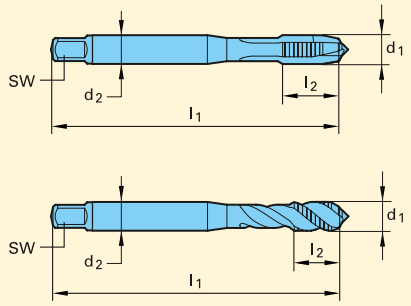
in the master standard
DIN 2184-**1**



Standard for machine taps for tapped holes (EG) for wire thread inserts as in DIN 8140 for ISO metric threads.
Standard thread tapped holes EG M2 to EG M52 and fine thread tapped holes EG M8 x1 to EG M48 x 3

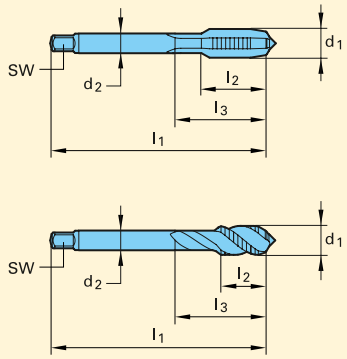
DIN - International Standards

DIN 2184-1
DIN 2184-2

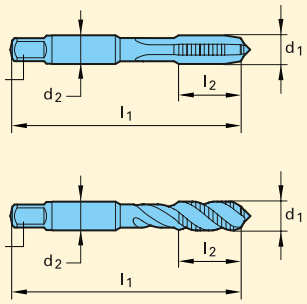


JIS B 4430

Japan Industrial Standard

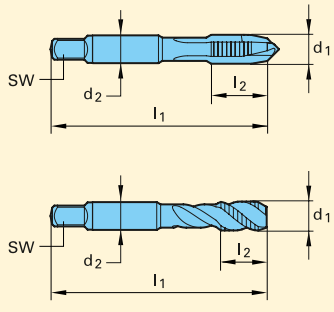


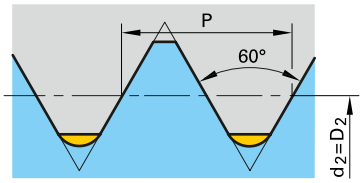
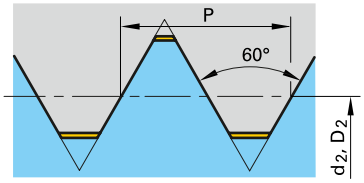
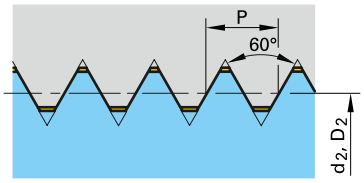
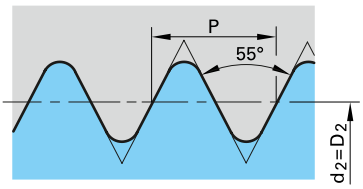
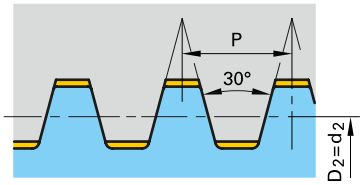
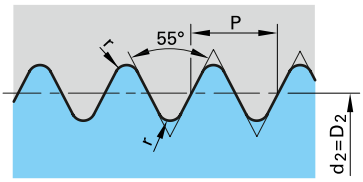
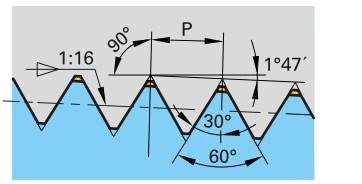
ISO 529

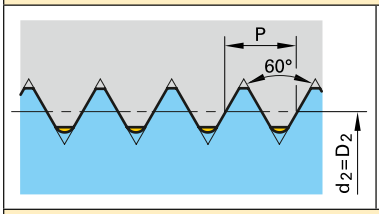
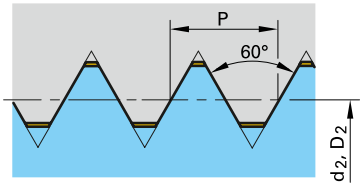
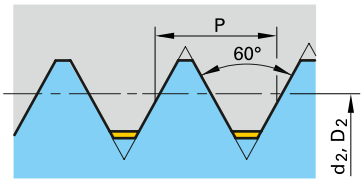
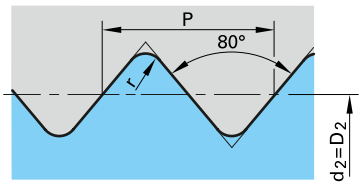
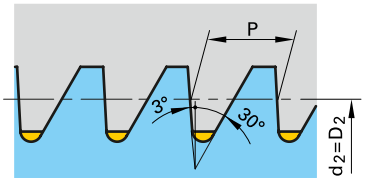
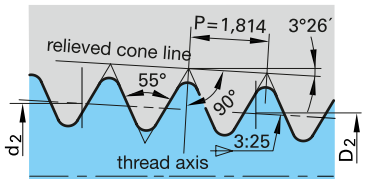
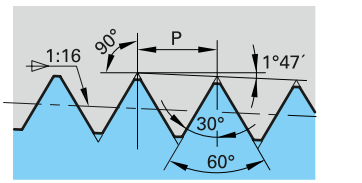


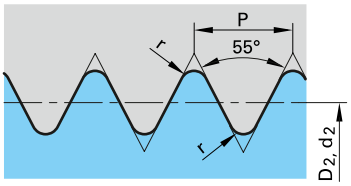
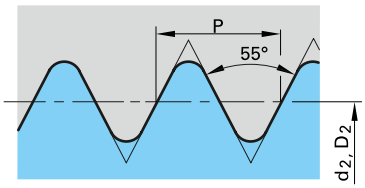
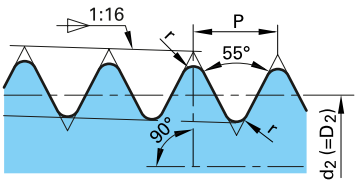
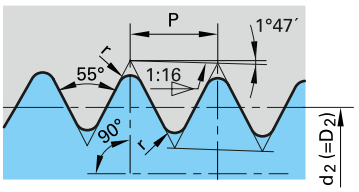
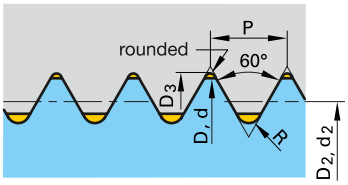
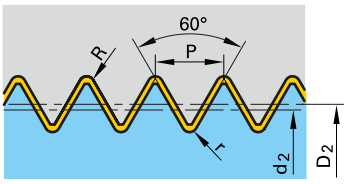
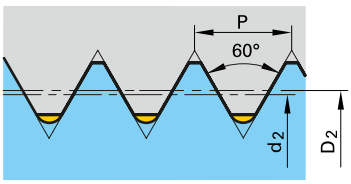
ASME B94.9

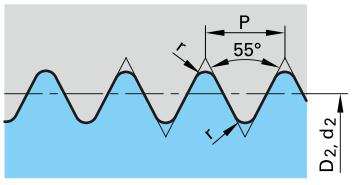
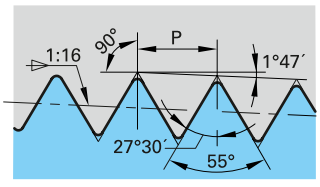
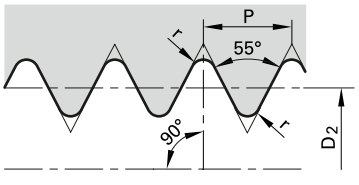
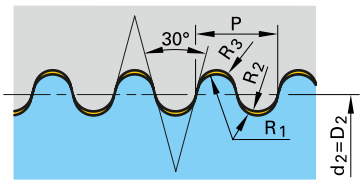
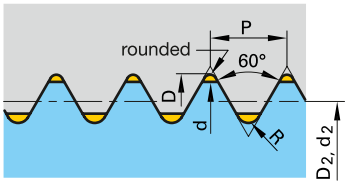
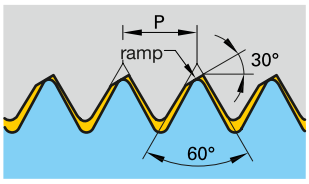
The American Society of Mechanical Engineers



geometry drawing	Standard	application
M ISO-metric thread		
	DIN 13-1	General standard thread
UNC Unified National Coarse Thread		
	ASME B1.1	General UN standard thread
UNEF Unified National Extra Fine Thread		
	ASME B1.1	General UN Extra Fine Thread
G Cylindrical Pipe Thread without thread sealing connections		
	DIN EN ISO 228-1	Threads for pipes, pipe connections and fittings
TR ISO-metric trapezoidal thread		
	DIN 103	General, draw collets, rolling stock
W Cylindrical Whitworth Thread		
	DIN 477	Side connector and accessories for gas bottle valves
NPT American Standard Pipe Threads tapered for sealing		
	ANSI/ ASME B1.20.1	pipe threads and fittings

geometry drawing	Standard	application
MF ISO-metric fine thread		
	DIN 13-2 to DIN 13-11	General fine thread
UNF Unified National Fine Thread		
	ASME B1.1 ISO-metric trapezoidal thread	General UN Fine Thread
UNS Unified Special Thread		
	ASME B1.1	General UN Special Thread
PG steel conduit thread		
	DIN 40430 cylindrical round thread	electrical engineering
S metric saw thread		
	DIN 513	when absorbing uni-directional forces
W Whitworth Taper Thread		
	DIN 477	Threaded connection in gas cylinder bottles for valves
NPTF American Standard Pipe Thread tapered for dry sealing		
	ANSI B1.20.3	pipe threads and fittings

geometry drawing	Standard	application
BSW cylindrical Whitworth thread		
	B.S. 84 British Standard	Threads for pipes, pipe connections and fittings
BSP pipe thread cylindrical (identical to G)		
	B.S. 93 British Standard	Threads for pipes, pipe connections and fittings
R Whitworth pie thread tapered external thread		
	DIN EN 10226-1 (based on ISO 7-1) replace-ment for DIN 2999-1	External thread for pipe threads and fittings (for in the thread sealing connections)
Rc Whitworth pipe thread tapered internal thread		
	DIN ISO 10226-2 (hardly used in Europe, replaceable with pipe threads to ISO 7-1)	Internal thread for pipe threads and fittings (for in the thread sealing connections)
MJ thread metric thread		
	DIN ISO 5855-1	For the aero-space industry
Vg valve thread		
	DIN 7756	Valves for car tyres manifold block
MFS		
	DIN 8141	Interference fits in Aluminium-cast alloys

geometry drawing	Standard	application
BSF Whitworth fine thread cylindrical		
	B.S. 84 British Standard Fine	Threads for pipes, pipe con-nections and fittings
BSPT pipe thread tapered (identical to Rc)		
	B.S. 93 British Standard	Internal thread for pipe threads and fittings
Rp Whitworth pipe thread cylindrical internal thread		
	DIN EN 10226-1 (based on ISO 7-1) Replace-ment for DIN 2999-1	Internal thread for pipe threads and fittings (for in the thread sealing connections)
RD cylindrical round thread		
	DIN 405	General, load hook, mining, food industry
UNJ inch thread		
	ISO 3161	For the aero-space industry
MSG lock nut thread		
	Guhring standard	Self-locking thread transmission housing etc.

external thread

internal thread

play

Tapping size holes for thread cutting

Std. ISO metric threads DIN 13

nom. Ø	pitch P mm	tapping size hole Ø DIN 336 mm	core diameter of int. thread 6H* min. mm	core diameter of int. thread 6H* max. mm
M 1	0.25	**0.75**	0.729	0.785
M 1.1	0.25	**0.85**	0.829	0.885
M 1.2	0.25	**0.95**	0.929	0.985
M 1.4	0.30	**1.10**	1.075	1.142
M 1.6	0.35	**1.25**	1.221	1.321
M 1.8	0.35	**1.45**	1.421	1.521
M 2	0.40	**1.60**	1.567	1.679
M 2.2	0.45	**1.75**	1.713	1.838
M 2.5	0.45	**2.05**	2.013	2.138
M 3	0.50	**2.50**	2.459	2.599
M 3.5	0.60	**2.90**	2.850	3.010
M 4	0.70	**3.30**	3.242	3.422
M 4.5	0.75	**3.70**	3.688	3.878
M 5	0.80	**4.20**	4.134	4.334
M 6	1.00	**5.00**	4.917	5.153
M 7	1.00	**6.00**	5.917	6.153
M 8	1.25	**6.80**	6.647	6.912
M 9	1.25	**7.80**	7.647	7.912
M 10	1.50	**8.50**	8.376	8.676
M 11	1.50	**9.50**	9.376	9.676
M 12	1.75	**10.20**	10.106	10.441
M 14	2.00	**12.00**	11.835	12.210
M 16	2.00	**14.00**	13.835	14.210
M 18	2.50	**15.50**	15.294	15.744
M 20	2.50	**17.50**	17.294	17.744
M 22	2.50	**19.50**	19.294	19.744
M 24	3.00	**21.00**	20.752	21.252
M 27	3.00	**24.00**	23.752	24.252
M 30	3.50	**26.50**	26.211	26.771
M 33	3.50	**29.50**	29.211	29.771
M 36	4.00	**32.00**	31.670	32.270
M 39	4.00	**35.00**	34.670	35.270
M 42	4.50	**37.50**	37.129	37.799
M 45	4.50	**40.50**	40.129	40.799
M 48	5.00	**43.00**	42.587	43.297
M 52	5.00	**47.00**	46.587	47.297
M 56	5.50	**50.50**	50.046	50.796

ISO metric fine threads DIN 13

nom. x Ø	pitch P mm	tapping size hole Ø DIN 336 mm	core diameter of int. thread 6H min. mm	core diameter of int. thread 6H max. mm
M 2.5 x	0.35	**2.15**	2.121	2.221
M 3.0 x	0.35	**2.65**	2.621	2.721
M 3.5 x	0.35	**3.15**	3.121	3.221
M 4.0 x	0.50	**3.50**	3.459	3.599
M 4.5 x	0.50	**4.00**	3.959	4.099
M 5.0 x	0.50	**4.50**	4.459	4.599
M 5.5 x	0.50	**5.00**	4.959	5.099
M 6.0 x	0.75	**5.20**	5.188	5.378
M 7.0 x	0.75	**6.20**	6.188	6.378
M 8.0 x	0.50	**7.50**	7.459	7.599
M 8.0 x	0.75	**7.20**	7.188	7.378
M 8.0 x	1.00	**7.00**	6.917	7.153
M 9.0 x	0.75	**8.20**	8.188	8.378
M 9.0 x	1.00	**8.00**	7.917	8.153
M 10 x	0.75	**9.20**	9.188	9.378
M 10 x	1.00	**9.00**	8.917	9.153
M 10 x	1.25	**8.80**	8.647	8.912
M 11 x	0.75	**10.20**	10.188	10.378
M 11 x	1.00	**10.00**	9.917	10.153
M 12 x	1.00	**11.00**	10.917	11.153
M 12 x	1.25	**10.80**	10.647	10.912
M 12 x	1.50	**10.50**	10.376	10.676
M 14 x	1.00	**13.00**	12.917	13.153
M 14 x	1.25	**12.80**	12.647	12.912
M 14 x	1.50	**12.50**	12.376	12.676
M 15 x	1.00	**14.00**	13.917	14.153
M 15 x	1.50	**13.50**	13.376	13.676
M 16 x	1.00	**15.00**	14.917	15.153
M 16 x	1.25	**14.80**	14.647	14.912
M 16 x	1.50	**14.50**	14.376	14.676
M 17 x	1.00	**16.00**	15.917	16.153
M 17 x	1.50	**15.50**	15.376	15.676
M 18 x	1.00	**17.00**	16.917	17.153
M 18 x	1.50	**16.50**	16.376	16.676
M 20 x	1.00	**19.00**	18.917	19.153
M 20 x	1.50	**18.50**	18.376	18.676
M 20 x	2.00	**18.00**	17.835	18.210
M 22 x	1.00	**21.00**	20.917	21.153
M 22 x	1.50	**20.50**	20.376	20.676
M 22 x	2.00	**20.00**	19.835	20.210
M 24 x	1.00	**23.00**	22.917	23.153
M 24 x	1.50	**22.50**	22.376	22.676
M 24 x	2.00	**22.00**	21.835	22.210
M 25 x	1.00	**24.00**	23.917	24.153
M 25 x	1.50	**23.50**	23.376	23.676
M 25 x	2.00	**23.00**	22.835	23.210
M 27 x	1.00	**26.00**	25.917	26.153
M 27 x	1.50	**25.50**	25.376	25.676
M 27 x	2.00	**25.00**	24.835	25.210
M 28 x	1.00	**27.00**	26.917	27.153
M 28 x	1.50	**26.50**	26.376	26.676
M 28 x	2.00	**26.00**	25.835	26.210
M 30 x	1.00	**29.00**	28.917	29.153
M 30 x	1.50	**28.50**	28.376	28.676
M 30 x	2.00	**28.00**	27.835	28.210
M 30 x	3.00	**27.00**	26.752	27.252
M 32 x	1.50	**30.50**	30.376	30.676
M 32 x	2.00	**30.00**	29.835	30.210
M 33 x	1.50	**31.50**	31.376	31.676
M 33 x	2.00	**31.00**	30.835	31.210
M 33 x	3.00	**30.00**	29.752	30.252
M 35 x	1.50	**33.50**	33.376	33.676
M 36 x	1.50	**34.50**	34.376	34.676

UNC threads ASME B1.1

nom. Ø	threads per inch	tapping size hole Ø DIN 336 mm	core diameter of int. thread 2B min. mm	core diameter of int. thread 2B max. mm
Nr. 1 -	64	**1.55**	1.425	1.580
Nr. 2 -	56	**1.85**	1.694	1.872
Nr. 3 -	48	**2.10**	1.941	2.146
Nr. 4 -	40	**2.35**	2.157	2.385
Nr. 5 -	40	**2.65**	2.487	2.698
Nr. 6 -	32	**2.85**	2.642	2.896
Nr. 8 -	32	**3.50**	3.302	3.531
Nr. 10 -	24	**3.90**	3.683	3.937
Nr. 12 -	24	**4.50**	4.343	4.597
1/4 -	20	**5.10**	4.978	5.258
5/16 -	18	**6.60**	6.401	6.731
3/8 -	16	**8.00**	7.798	8.153
7/16 -	14	**9.40**	9.144	9.550
1/2 -	13	**10.80**	10.592	11.024
9/16 -	12	**12.20**	11.989	12.446
5/8 -	11	**13.50**	13.386	13.868
3/4 -	10	**16.50**	16.307	16.840
7/8 -	9	**19.50**	19.177	19.761
1 -	8	**22.25**	21.971	22.606
1 1/8 -	7	**25.00**	24.638	25.349
1 1/4 -	7	**28.00**	27.813	28.524
1 3/8 -	6	**30.75**	30.353	31.115
1 1/2 -	6	**34.00**	33.528	34.290
1 3/4 -	5	**39.50**	38.938	39.802
2 -	4.5	**45.00**	44.679	45.593

* M 1.1 up to M 1.4 tapping size hole of int. thread 5H

MJ threads DIN ISO 5855

nom. Ø	x	pitch P mm	tapping size hole Ø DIN 336 mm	core diameter of int. thread 5H* min. mm	core diameter of int. thread 5H* max. mm
MJ 3	x	0.50	**2.60**	2.513	2.653
MJ 4	x	0.70	**3.40**	3.318	3.498
MJ 5	x	0.80	**4.30**	4.221	4.421
MJ 6	x	0.50	**5.55**	5.513	5.625
MJ 6	x	0.75	**5.35**	5.269	5.419
MJ 6	x	1.00	**5.10**	5.026	5.216
MJ 8	x	0.50	**7.55**	7.513	7.625
MJ 8	x	0.75	**7.35**	7.269	7.419
MJ 8	x	1.00	**7.10**	7.026	7.216
MJ 8	x	1.25	**6.90**	6.782	6.994
MJ 10	x	1.00	**9.10**	9.026	9.216
MJ 10	x	1.25	**8.90**	8.782	8.994
MJ 10	x	1.50	**8.60**	8.539	8.775
MJ 12	x	1.75	**10.40**	10.295	10.560
MJ 16	x	2.00	**14.20**	14.051	14.351

UNC threads ISO 3161

nom. Ø	threads per inch	tapping size hole Ø DIN 336 mm	core diameter of int. thread 3B min. mm	core diameter of int. thread 3B max. mm
Nr. 6 -	32	**2.85**	2.733	2.939
Nr. 8 -	32	**3.55**	3.393	3.599
Nr. 10 -	24	**4.00**	3.795	4.064
Nr. 12 -	24	**4.60**	4.455	4.704
1/4 -	20	**5.30**	5.113	5.387
5/16 -	18	**6.75**	6.563	6.833
3/8 -	16	**8.20**	7.978	8.255
7/16 -	14	**9.60**	9.346	9.639
1/2 -	13	**11.00**	10.798	11.095
9/16 -	12	**12.40**	12.228	12.482
5/8 -	11	**13.80**	13.627	13.904

UNF threads ISO 3161

nom. Ø	threads per inch	tapping size hole Ø DIN 336 mm	core diameter of int. thread 3B min. mm	core diameter of int. thread 3B max. mm
Nr. 6 -	40	**3.00**	2.888	3.053
Nr. 8 -	36	**3.60**	3.480	3.663
Nr. 10 -	32	**4.20**	4.054	4.255
Nr. 12 -	28	**4.75**	4.602	4.816
1/4 -	28	**5.60**	5.466	5.662
5/16 -	24	**7.00**	6.906	7.109
3/8 -	24	**8.60**	8.494	8.679
7/16 -	20	**10.00**	9.876	10.084
1/2 -	20	**11.60**	11.463	11.661
9/16 -	18	**13.00**	12.913	13.122
5/8 -	18	**14.60**	14.501	14.702

* MJ3 x 0.50 up to MJ 5 x 0.80 tapping size hole of int. thread 6H

UNF threads ASME B1.1

nom. Ø	threads per inch	tapping size hole Ø DIN 336 mm	core diameter of int. thread 2B min. mm	core diameter of int. thread 2B max. mm
Nr. 1	72	**1.55**	1.473	1.610
Nr. 2	64	**1.85**	1.755	1.910
Nr. 3	56	**2.15**	2.024	2.197
Nr. 4	48	**2.40**	2.271	2.459
Nr. 5	44	**2.70**	2.550	2.741
Nr. 6	40	**2.95**	2.819	3.023
Nr. 8	36	**3.50**	3.404	3.607
Nr. 10	32	**4.10**	3.962	4.166
Nr. 12	28	**4.60**	4.496	4.724
1/4	28	**5.50**	5.359	5.588
5/16	24	**6.90**	6.782	7.036
3/8	24	**8.50**	8.382	8.636
7/16	20	**9.90**	9.728	10.033
1/2	20	**11.50**	11.328	11.608
9/16	18	**12.90**	12.751	13.081
5/8	18	**14.50**	14.351	14.681
3/4	16	**17.50**	17.323	17.678
7/8	14	**20.40**	20.269	20.650
1	12	**23.25**	23.114	23.571
1 1/8	12	**26.50**	26.289	26.746
1 1/4	12	**29.50**	29.464	29.921
1 3/8	12	**32.75**	32.639	33.096
1 1/2	12	**36.00**	35.814	36.271

BSW (Whitworth) threads BS84

nom. Ø inch	threads per inch	tapping size hole Ø DIN 336 mm	core diameter of int. thread min. mm	core diameter of int. thread max. mm
W 1/16	60	**1.20**	1.045	1.230
W 3/32	48	**1.80**	1.704	1.912
W 1/8	40	**2.50**	2.362	2.591
W 5/32	32	**3.20**	2.952	3.214
W 3/16	24	**3.60**	3.407	3.745
W 7/32	24	**4.50**	4.201	4.539
W 1/4	20	**5.10**	4.724	5.156
W 5/16	18	**6.50**	6.130	6.590
W 3/8	16	**7.90**	7.492	7.987
W 7/16	14	**9.20**	8.789	9.330
W 1/2	12	**10.50**	9.989	10.591
W 9/16	12	**12.00**	11.577	12.179
W 5/8	11	**13.50**	12.918	13.558
W 3/4	10	**16.25**	15.797	16.483
W 7/8	9	**19.25**	18.611	19.353
W 1	8	**22.00**	21.334	22.147
W 1 1/8	7	**24.50**	23.928	24.832
W 1 1/4	7	**27.75**	27.103	28.007
W 1 3/8	6	**30.50**	29.504	30.528
W 1 1/2	6	**33.50**	32.679	33.703
W 1 5/8	5	**35.50**	34.769	35.963
W 1 3/4	5	**39.00**	37.944	39.138
W 2	4.5	**44.50**	43.571	44.877

(Whitworth) threads (DIN-ISO 228-1)

nom. Ø inch	threads per inch	tapping size hole Ø DIN 336 mm	core diameter of int. thread min. mm	core diameter of int. thread max. mm
G 1/16	28	**6.80**	6.561	6.843
G 1/8	28	**8.80**	8.566	8.848
G 1/4	19	**11.80**	11.445	11.890
G 3/8	19	**15.25**	14.950	15.395
G 1/2	14	**19.00**	18.631	19.172
G 5/8	14	**21.00**	20.587	21.128
G 3/4	14	**24.50**	24.117	24.658
G 7/8	14	**28.25**	27.877	28.418
G 1	11	**30.75**	30.291	30.931
G 1 1/8	11	**35.50**	34.939	35.579
G 1 1/4	11	**39.50**	38.952	39.592
G 1 1/2	11	**45.25**	44.845	45.485
G 1 3/4	11	**51.00**	50.788	51.428
G 2	11	**57.00**	56.656	57.296

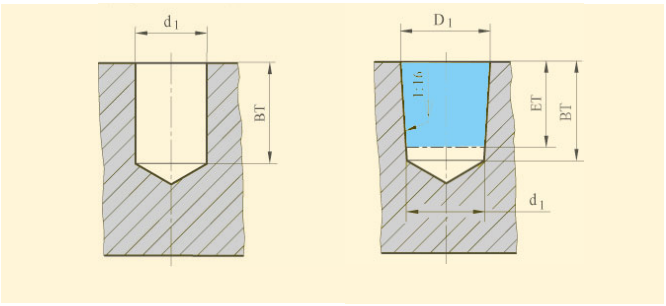
Steel armoured conduit threads to DIN 40430

nom. Ø	threads per inch	tapping size hole Ø DIN 336 mm	core diameter of int. thread min. mm	core diameter of int. thread max. mm
Pg 7	20	**11.40**	11.280	11.430
Pg 9	18	**14.00**	13.860	14.010
Pg 11	18	**17.30**	17.260	17.410
Pg 13.5	18	**19.00**	19.060	19.210
Pg 16	18	**21.30**	21.160	21.310
Pg 21	16	**26.90**	26.780	27.030
Pg 29	16	**35.50**	35.480	35.730
Pg 36	16	**45.50**	45.480	45.730
Pg 42	16	**52.50**	52.480	52.730
Pg 48	16	**57.80**	57.780	58.030

NPT ANSI B 2.1 American tapered pipe thread 1:16

Version A (avoid if possible)

Version B



nom. Ø	threads per inch	tapp. size hole Ø cylindrical (A) d_1	tapp. size hole Ø conical (B) D_1	cutting depth ET mm	cutting depth BT (min) mm
1/16	27	**6.15**	6.39	9.29	10.7
1/8	27	**8.40**	8.74	9.32	10.8
1/4	18	**11.10**	**11.36**	13.52	15.6
3/8	18	**14.30**	**14.80**	13.83	16.0
1/2	14	**17.90**	**18.32**	18.07	20.8
3/4	14	**23.30**	**23.67**	18.55	21.3
1	11.5	**29.00**	**29.69**	22.29	25.6
1 1/4	11.5	**37.70**	**38.45**	22.80	26.1
1 1/2	11.5	**43.70**	**44.52**	22.80	26.1
2	11.5	**55.60**	**56.56**	23.20	26.5
2 1/2	8	**66.30**	**67.62**	31.75	36.3
3	8	**82.30**	**83.52**	33.74	38.5

Metric/metric fine EG-threads (EG M14 x 1.25) for wire thread inserts DIN 8140

nom. Ø	x pitch P mm	tapping size hole Ø DIN 336 mm	core diameter of int. thread min. mm	core diameter of int. thread max. mm
EG M 4	0.70	**4.20**	4.152	4.292
EG M 5	0.80	**5.25**	5.174	5.334
EG M 6	1.00	**6.30**	6.217	6.407
EG M 8	1.25	**8.40**	8.271	8.483
EG M10	1.50	**10.50**	10.324	10.560
EG M12	1.75	**12.50**	12.379	12.644
EG M14 x	1.25	**14.40**	14.271	14.483
EG M16	2.00	**16.50**	16.433	16.733

UNC (UNC-STI) EG-threads for wire thread inserts ASME B18.29.1

nom. Ø	threads per inch	tapping size hole Ø DIN 336 mm	core diameter of int. thread min. mm	core diameter of int. thread max. mm
EG Nr. 6	32	**3.80**	3.678	3.879
EG Nr. 8	32	**4.40**	4.338	4.524
EG Nr. 10	24	**5.20**	5.055	5.283
EG Nr. 12	24	**5.80**	5.715	5.944
EG 1/4	20	**6.70**	6.624	6.868
EG 5/16	18	**8.40**	8.242	8.489
EG 3/8	16	**10.00**	9.868	10.127
EG 7/16	14	**11.60**	11.506	11.783
EG 1/2	13	**13.30**	13.122	13.393
EG 9/16	12	**14.90**	14.747	15.032
EG 5/8	11	**16.50**	16.375	16.673

UNF (UNF-STI) EG-threads for wire thread inserts ASME B18.29.1

nom. Ø	threads per inch	tapping size hole Ø DIN 336 mm	core diameter of int. thread min. mm	core diameter of int. thread max. mm
EG Nr. 6	40	**3.70**	3.644	3.818
EG Nr. 8	36	**4.40**	4.321	4.498
EG Nr. 10	32	**5.10**	4.999	5.184
EG Nr. 12	28	**5.70**	5.682	5.809
EG 1/4	28	**6.60**	6.546	6.721
EG 5/16	24	**8.25**	8.166	8.352
EG 3/8	24	**9.80**	9.754	9.931
EG 7/16	20	**11.50**	11.389	11.585
EG 1/2	20	**13.10**	12.974	13.172
EG 9/16	18	**14.70**	14.592	14.798
EG 5/8	18	**16.25**	16.180	16.386

Recommended tapping size holes for thread forming

Std. ISO metric threads DIN 13

nom. Ø	pitch	tapp. size hole Ø	tapp. size hole Ø		core Ø of int. thread 7H*	
mm		mm	min. mm	max. mm	min. mm	max. mm
M 2	0.40	**1.85**	1.84	1.88	1.567	1.679
M 2.2	0.45	**2.00**	2.01	2.05	1.713	1.838
M 2.5	0.45	**2.30**	2.28	2.32	2.013	2.138
M 3	0.50	**2.80**	2.78	2.85	2.459	2.639
M 3.5	0.60	**3.25**	3.23	3.30	2.850	3.050
M 4	0.70	**3.70**	3.68	3.76	3.242	3.466
M 4.5	0.75	**4.20**				
M 5	0.80	**4.65**	4.62	4.71	4.134	4.384
M 6	1.00	**5.55**	5.52	5.62	4.917	5.217
M 7	1.00	**6.55**	6.52	6.62	5.917	6.217
M 8	1.25	**7.40**	7.36	7.47	6.647	6.982
M 9	1.25	**8.40**	8.36	8.47	7.647	7.982
M 10	1.50	**9.30**	9.26	9.38	8.376	8.751
M 11	1.50	**10.30**	10.26	10.38	9.376	9.751
M 12	1.75	**11.20**	11.15	11.29	10.106	10.531
M 14	2.00	**13.10**	13.05	13.20	11.835	12.310
M 16	2.00	**15.10**	15.05	15.20	13.835	14.310
M 18	2.50	**16.90**	16.83	17.02	15.294	15.854
M 20	2.50	**18.90**	18.83	19.02	17.294	17.854
M 22	2.50	**20.90**	20.83	21.02	19.294	19.854
M 24	3.00	**22.70**	22.62	22.80	20.752	21.382
M 27	3.00	**25.70**	25.62	25.80	23.752	24.382
M 30	3.50	**28.50**	28.40	28.60	26.211	26.921
M 33	3.50	**31.50**	31.40	31.60	29.211	29.921
M 36	4.00	**34.30**	34.17	34.40	31.670	32.420
M 39	4.00	**37.30**	37.17	37.40	34.670	35.420
M 42	4.50	**40.10**	39.95	40.20	37.129	37.979

* M 2 up to M 2.5 tapping size hole of int. thread 6H

ISO metric fine threads DIN 13

nom. x pitch Ø	tapp. size hole Ø	tapp. size hole Ø		core Ø of int. thread 7H*	
mm	mm	min. mm	max. mm	min. mm	max. mm
M 2.5 x 0.35	**2.35**	2.35	2.38	2.121	2.221
M 3 x 0.35	**2.85**	2.85	2.88	2.621	2.721
M 4 x 0.35	**3.85**	3.85	3.88	3.621	3.721
M 4 x 0.50	**3.80**	3.78	3.83	3.459	3.639
M 5 x 0.50	**4.80**	4.78	4.83	4.459	4.639
M 5.5 x 0.50	**5.30**	5.28	5.33	4.959	5.139
M 6 x 0.75	**5.65**	5.62	5.70	5.188	5.424
M 7 x 0.75	**6.65**	6.62	6.70	6.188	6.424
M 8 x 0.75	**7.65**	7.62	7.70	7.188	7.424
M 8 x 1.00	**7.55**	7.52	7.62	6.917	7.217
M 9 x 0.75	**8.65**	8.62	8.70	8.188	8.424
M 9 x 1.00	**8.55**	8.52	8.62	7.917	8.217
M 10 x 0.75	**9.65**	9.62	9.70	9.188	9.424
M 10 x 1.00	**9.55**	9.52	9.62	8.917	9.217
M 10 x 1.25	**9.40**	9.36	9.47	8.647	8.982
M 11 x 0.75	**10.65**	10.62	10.70	10.188	10.424
M 11 x 1.00	**10.55**	10.52	10.62	9.917	10.217
M 12 x 1.00	**11.55**	11.52	11.62	10.917	11.217
M 12 x 1.25	**11.40**	11.36	11.47	10.647	10.982
M 12 x 1.50	**11.30**	11.26	11.38	10.376	10.751
M 14 x 1.00	**13.55**	13.52	13.62	12.917	13.217
M 14 x 1.25	**13.40**	13.36	13.47	12.647	12.982
M 14 x 1.50	**13.30**	13.26	13.38	12.376	12.751
M 15 x 1.00	**14.55**	14.52	14.62	13.917	14.217
M 15 x 1.50	**14.30**	14.26	14.38	13.376	13.751
M 16 x 1.00	**15.55**	15.52	15.62	14.917	15.217
M 16 x 1.50	**15.30**	15.26	15.38	14.376	14.751
M 17 x 1.00	**16.55**	16.52	16.62	15.917	16.217
M 17 x 1.50	**16.30**	16.26	16.38	15.376	15.751
M 18 x 1.00	**17.55**	17.52	17.62	16.917	17.217
M 18 x 1.50	**17.30**	17.26	17.38	16.376	16.751
M 18 x 2.00	**17.10**	17.05	17.20	15.835	16.310
M 20 x 1.00	**19.55**	19.52	19.62	18.917	19.217
M 20 x 1.50	**19.30**	19.26	19.38	18.376	19.751
M 24 x 1.00	**23.55**	23.52	23.62	22.917	23.217
M 24 x 1.50	**23.30**	23.26	23.38	22.376	22.751
M 24 x 2.00	**23.10**	23.05	23.20	21.835	22.310
M 27 x 1.50	**26.30**	26.26	26.38	25.376	25.751
M 30 x 1.50	**29.30**	29.26	29.38	28.376	28.751
M 33 x 1.50	**32.30**	32.26	32.38	31.376	31.751
M 36 x 1.50	**35.30**	35.26	35.38	34.376	34.751
M 39 x 1.50	**38.30**	38.26	38.38	37.376	37.751
M 42 x 1.50	**41.30**	41.26	41.38	42.376	42.751

* M 2.5 x 0.35 up to M 4 x 0.35 tapping size hole of int. thread 6H

Tapping size hole diameter tolerance zone for thread forming (to DIN 13, section 50)

Due to the tensile strength it is not necessary to adhere to the tapping size hole diameter tolerance class 6H; tolerance class 7H satisfies the requirement that the flank coverage of external and internal threads should not fall below 0.32 x P.
In addition, formed threads generally possess a higher tensile strength in comparison to cut threads thanks to an uninterrupted grain flow and subsequent work hardening.

UNC threads ASME B1.1

nom. Ø	threads per inch	tapp. size hole Ø mm	tapp. size hole Ø min. mm	tapp. size hole Ø max. mm	core Ø of int. thread 2B min. mm	core Ø of int. thread 2B max. mm
Nr. 1	64	**1.68**	1.67	1.70	1.425	1.580
Nr. 2	56	**1.98**	1.97	2.01	1.694	1.872
Nr. 3	48	**2.28**	2.27	2.32	1.941	2.146
Nr. 4	40	**2.55**	2.54	2.59	2.157	2.385
Nr. 5	40	**2.90**	2.89	2.94	2.487	2.698
Nr. 6	32	**3.15**	3.14	3.19	2.642	2.896
Nr. 8	32	**3.80**	3.78	3.82	3.302	3.531
Nr. 10	24	**4.35**	4.33	4.39	3.683	3.937
Nr. 12	24	**5.00**	4.97	5.03	4.343	4.597
1/4	20	**5.75**	5.72	5.80	4.978	5.258
5/16	18	**7.30**	7.26	7.37	6.401	6.731
3/8	16	**8.80**	8.77	8.88	7.798	8.153
7/16	14	**10.30**	10.27	10.37	9.144	9.550
1/2	13	**11.80**	11.77	11.88	10.592	11.024
9/16	12	**13.30**	13.28	13.39	11.989	12.446
5/8	11	**14.80**	14.78	14.90	13.386	13.868
3/4	10	**17.90**	17.85	17.97	16.307	16.840
7/8	9	**21.00**	20.95	21.10	19.177	19.761
1	8	**24.00**	23.95	24.12	21.971	22.606

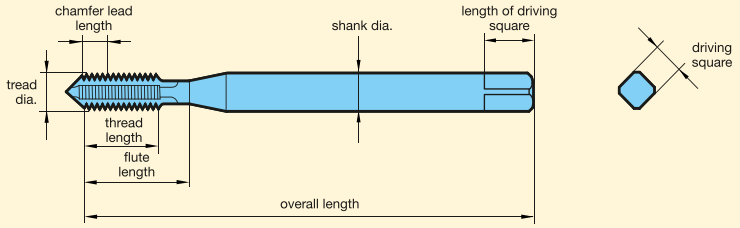
UNF threads ASME B1.1

nom. Ø	threads per inch	tapp. size hole Ø mm	tapp. size hole Ø min. mm	tapp. size hole Ø max. mm	core Ø of int. thread 2B min. mm	core Ø of int. thread 2B max. mm
Nr. 1	72	**1.70**	1.69	1.72	1.473	1.610
Nr. 2	64	**2.00**	1.99	2.03	1.755	1.910
Nr. 3	56	**2.30**	2.29	2.34	2.024	2.197
Nr. 4	48	**2.60**	2.59	2.63	2.271	2.459
Nr. 5	44	**2.90**	2.89	2.93	2.550	2.741
Nr. 6	40	**3.20**	3.19	3.24	2.819	3.023
Nr. 8	36	**3.85**	3.83	3.88	3.404	3.607
Nr. 10	32	**4.45**	3.43	4.49	3.962	4.166
Nr. 12	28	**5.10**	5.07	5.13	4.496	4.724
1/4	28	**5.95**	5.92	5.99	5.359	5.588
5/16	24	**7.45**	7.42	7.50	6.782	7.036
3/8	24	**9.05**	9.02	9.10	8.838	8.636
7/16	20	**10.55**	10.48	10.58	9.728	10.033
1/2	20	**12.10**	12.08	12.18	11.328	11.608
9/16	18	**13.65**	13.61	13.72	12.751	13.081
5/8	18	**15.25**	15.21	15.32	14.351	14.681
3/4	16	**18.35**	15.30	18.41	17.323	17.678
7/8	14	**21.40**	21.35	21.49	20.269	20.650
1	12	**24.45**	24.40	24.54	23.114	23.571

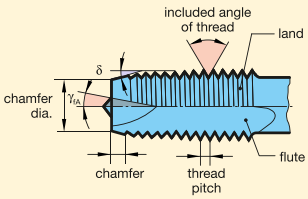
(Whitworth) threads DIN EN ISO 228-1

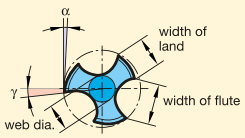
nom. Ø inch	threads per inch	tapp. size hole Ø mm	tapp. size hole Ø min. mm	tapp. size hole Ø max. mm	core Ø of int. thread min. mm	core Ø of int. thread max. mm
G 1/16	28	**7.30**	7.28	7.35	6.561	6.843
G 1/8	28	**9.30**	9.28	9.35	8.566	8.848
G 1/4	19	**12.50**	12.48	12.55	11.445	11.890
G 3/8	19	**16.00**	15.98	16.05	14.950	15.395
G 1/2	14	**20.00**	19.98	20.12	18.631	19.172
G 5/8	14	**22.00**	21.98	22.12	20.587	21.128
G 3/4	14	**25.50**	25.48	25.62	24.117	24.658
G 7/8	14	**29.25**	29.23	29.37	27.877	28.418
G 1	11	**32.00**	31.98	32.15	30.291	30.931
G 1 1/4	11	**40.75**	40.70	40.85	38.952	39.592

Definitions and angles, centres and flute forms



δ = try square
γ fA = spiral point angle
α = clearance angle
γ = rake angle





Flute forms

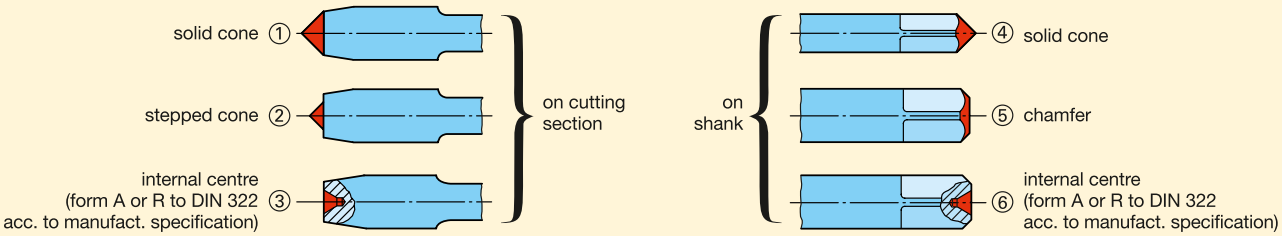
straight fluted, form C
without spiral point

straight fluted, form B
with spiral point

helix angle
15°

helix angle
40°

Types of centres (standard, to DIN 2197/DIN 2175)



Thread dia. range mm	Centre on cutting section		Centre on shank
	with chamfer forms A, C, D, E	with chamfer form B	
≤ 4.2	①	①	④ ⑤ ⑥
> 4.2 … 5.6	① ②	①	④ ⑤ ⑥
> 5.6 … 10.0	① ② ③	① ② ③	④ ⑤ ⑥
> 10.0	③	③	⑥

Coolant duct geometries

axial coolant delivery with axial coolant duct exit

axial coolant delivery with radial coolant duct exit in the flutes at the chamfer

Chamfer forms, selection and application

When cutting internal threads, all the machining is carried out by the cutting teeth of the chamfer. Therefore, a decision on the best type of chamfer form has to be carefully made as both tool life and quality of thread are thereby greatly affected.

Generally speaking, the form and length of chamfer depend on the type of hole to be tapped. The tapping of through holes does not normally give rise to any difficulties whereas the production of blind holes can create certain problems associated with the need to evacuate swarf in the reverse direction to the feed, i.e. up to the flutes of the tap and then cut off such swarf when the tap is reversed out of the hole.

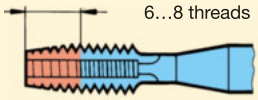
The length of chamfer is determined by taking into account various conflicting factors. To avoid overloading, premature bluntness and oversize threads the number of chamfer cutting threads must not be kept too low. A too long chamfer lead, however, increases the torque and thus the danger of breakage. The spiral point with form B ensures a chip removal always in the direction of feed.

through hole

blind hole

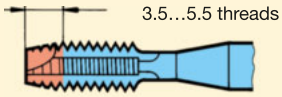
Chamfer forms to DIN 2197

Form A



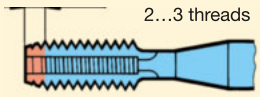
long, 6 - 8 threads
for short
through holes

Form B



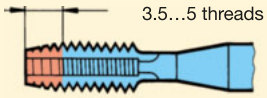
medium, 3.5 - 5.5 threads,
with spiral point,
for all through holes
and deep tapping holes in medium
and long-chipping materials

Form C



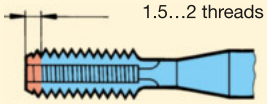
short, 2 - 3 threads
for blind holes
and generally for
aluminium, grey cast iron
and brass

Form D



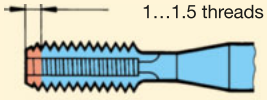
medium, 3.5 - 5 threads
for short
through holes

Form E



extremely short, 1.5-2 threads,
for blind holes with
little run-out depth.

Form F

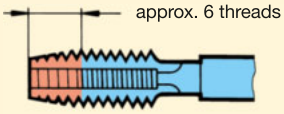


extremely short, 1-1.5 threads,
for blind holes with
little run-out depth.
Avoid use if possible.

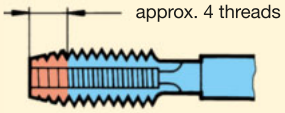
Chamfer forms, selection and application

Chamfer lead length for sets of 3 taps

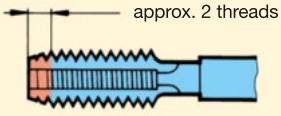
Form A
first tap



Form D
second tap

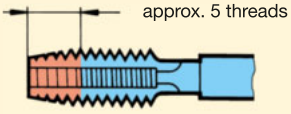


Form C
bottoming tap

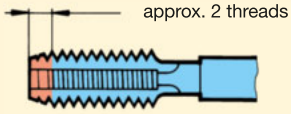


Chamfer lead length for sets of 2 taps

Form D
first tap



Form C
bottoming tap



Application recommendations

While in the first instance, the type of tapped hole required determines the chamfer, generally the tap geometry - i.e. form, number and direction of flutes, cutting angle, etc. - depend on the material to be machined and on the application. Basically, taps up to M16 for tapping ISO metric threads or for the engineering industry in general, have 3 flutes, and above this size 4 or more flutes.

Taps with left-hand flutes and taps with spiral points remove the chips in the cutting direction or direction of feed and are therefore especially suitable for tapping through holes. Taps with straight flutes and long chamfer lead (form D) also give good results.

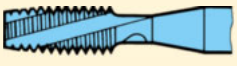
As far as blind holes are concerned we recommend taps with right-hand spiral flutes or straight fluted taps with a short chamfer lead length. Tools with right-hand spiral flutes have the chip flow in the backward direction, i.e. up the flutes. The chamfer lead length is designed in such a way so that during the return movement chips do not jam and are reliably sheared off.

The tapping of aluminium, grey cast iron and brass requires taps with a short chamfer lead length, regardless of whether through or blind holes are required. In these materials a long chamfer lead length would act as a core drill with chip breaker grooves and would only drill the tapping size hole to the major diameter instead of cutting a thread.

Straight fluted taps without spiral point are general purpose tools and have the disadvantage of not showing optimum results in particular materials. It's well worth the effort to take the trouble of ascertaining the most suitable tool for any given metal-cutting task.

through hole

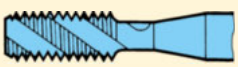
Straight fluted tap with spiral point



Left-hand spiral fluted tap

Straight fluted tap with long chamfer lead

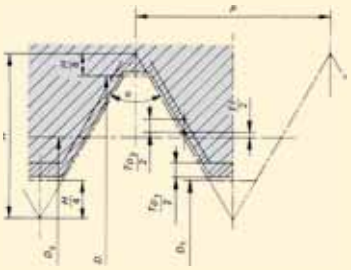
blind hole



Right-hand spiral fluted tap

Straight fluted tap with short chamfer lead

Taps for ISO metric threads DIN EN 22857 (extract)



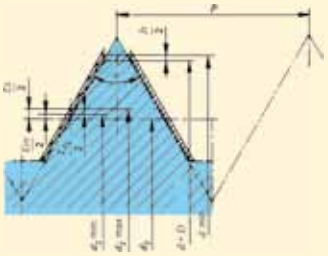
Profile of the nut thread

Basic profile:

D	major diameter
D_1	nom. dia. of tapping size hole
D_2	basic pitch diameter
P	pitch of diameter
α	included angle of thread
H	height of peak to peak thread profile
EI	basic deviation of pitch, zero with tolerance zone H, positive with tolerance zone G

Tolerances:

T_{D1}	tolerance on tapping size hole dia
T_{D2}	tolerance on tap pitch dia.



Profile of the tap

Basic profile:

d=D	major diameter
d min.	d min. permissible min. tap major dia.
Js	minimum clearance on major diameter
$d_2=D_2$	basic pitch diameter
d_2 min.	minimum tap pitch diameter
d_2 max.	maximum tap pitch diameter
Es	upper deviation of pitch diameter
Em	lower deviation of pitch diameter

Tolerance:

T_{d2}	tolerance on tap pitch diameter

With the aim of unifying threads on an international basis, the ISO thread was brought out and has in the meantime been accepted by all concerned. Nowadays the ISO metric thread is the most common type. As you can see, our tap program demonstrates this fact in the clearest possible way.

Tolerance qualities (figure identification)
Tolerance qualities of external threads are defined by figures 3 to 9, those of nut threads by figures 4 to 8. 3 stands for the narrowest and 9 for the widest tolerance.

Tolerance positions (letter identification)
ISO metric internal threads are identified by capital letters A to H, ISO metric external threads by small letters a to h. Tolerance zones A to G have positive and a to g negative basic pitch deviations in contrast to the tolerance zones H and h which commence at zero. Generally, tolerance zones H and g are used. For threads destined for surface treatment tolerance zones G and e are applied.

When manufacturing ISO-external threads the deviations that are determined for the major diameter with regard to the tolerance zones a to g have to be taken into account.

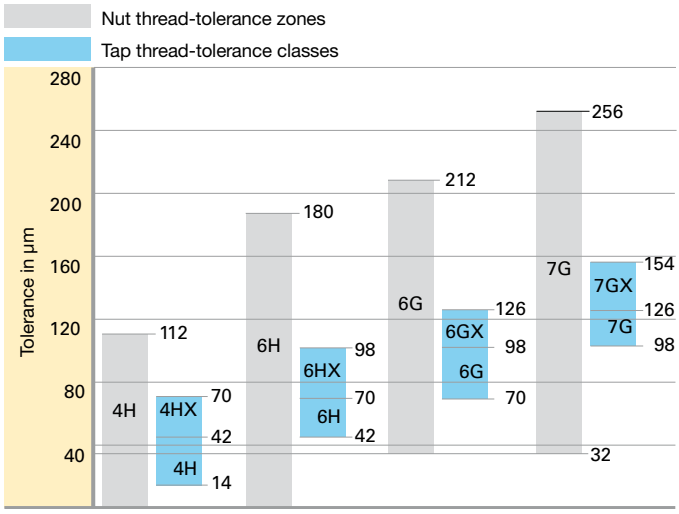
Tolerance zones (nut thread)/
Tolerance classes (tap thread)
Quality and position of tolerance determine the tolerance zone, which is identified by the appropriate figures and letters.

The abbreviation for the tolerance class of tap corresponds to the tolerance zone of the internal thread for which the tap is used in most cases. Therefore, it is not identical with the tolerance zone of the cut nut thread in every application

Taps with deviating tolerances according to DIN 802 part 1 will be given additional marking “X” (6 HX, 6 GX).

We recommend the application of taps in accordance with the adjacent table:

Tolerance zone / tolerance class allocation



DIN EN 22857		Tolerance zone of internal thread to be cut					DIN 802 part 1 (withdrawn))
Application class of tap							Tolerance class of tap
Designation*	Reference						
Class 1	ISO 1	4H	5H				4H
Class 2	ISO 2			6H			6H
Class 3	ISO 3				6G		6G
–	–					7G	7G

* The tolerance of the 3 application classes is calculated in accordance to the following data dependent on one tolerance unit t the value of which corresponds to the value of the basic pitch diameter TD2 in tolerance class 5 of the nut thread (polished to a pitch of 0.2 mm):
$t = t_{D2}$ Tolerance class 5 of nut thread

Taps for ISO metric threads DIN EN 22857 (extract)

Thread clearances and fits
Fits between internal and external threads are separated by a diagonal stroke, as for example 6H/6g (internal/external thread). The fit has to be selected in conjunction with the appropriate thread connection.
The tolerance zones of the tolerance classes fine, medium and coarse are allocated to three screw-in lengths short S), normal (N) and long (L). Generally, the following rules apply for selecting a tolerance class:

Fine tolerance zone (S):
For precision threads, when only a small variation in the fit is permitted.

Medium tolerance zone (N):
General application

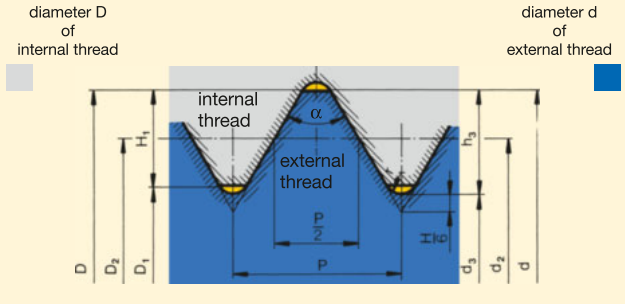
Coarse tolerance zone (L):
There are no special precision requirements and in cases where production difficulties may occur, e.g. thread production in hot-rolled rods, deep blind holes or plastic components.

Screw-in lengths
The quality of thread connection is also affected by the screw-in length. The ISO tolerance system was, especially as regards the pitch diameter, divided into three groups, i.e.

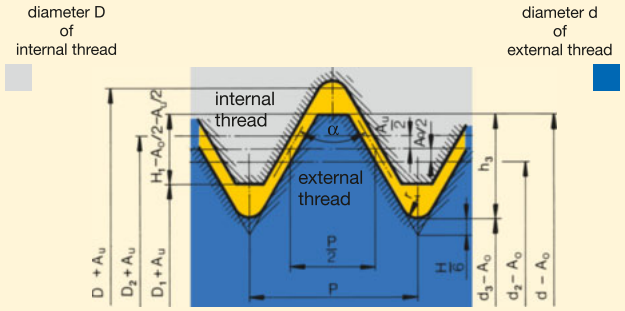
S	(Short)	= short screw-in length
N	(Normal)	= normal screw-in length
L	(Long)	= long screw-in length

The following fit should be selected for normal screw-in length N:
To ensure a tighter fit of thread connections, we recommend for short screw-in lengths a narrower fit. As far as long screw-in lengths are concerned, fits with a larger tolerance must be used to compensate for pitch deviations.

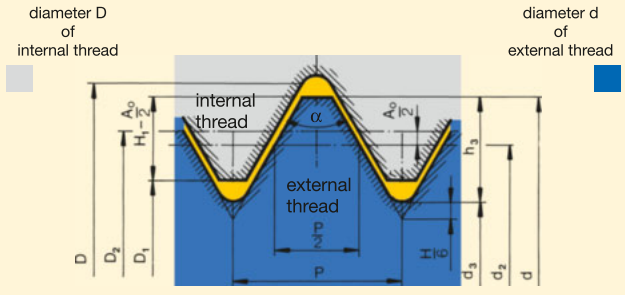
Thread fits with different flank clearance



Zero profile of thread fit without flank clearance (H/h-fit).



Thread fit with wide flank clearance (G/g-fit or G/e-fit) in external and internal thread.



Thread fit with narrow flank (H/g- or H/e-fit) by basic deviation of external thread.

Explanation of symbols

D	=	Ø nom. of internal thread
D_1	=	Tapping size hole Ø of internal thread
D_2	=	Basic pitch Ø of internal thread
d	=	Ø nom. of external thread
d_2	=	Basic pitch Ø of external thread
d_3	=	Tapping size hole Ø of external thread
P	=	Pitch
α	=	Included angle of thread
H	=	Height of peak to peak thread profile
A_o	=	Upper tolerance limit
A_u	=	Lower tolerance limit

Application problems with new taps

Problem	Possible causes	Solution
1 Thread produced is too large	incorrect tap, tap geometry not suitable for the application	apply correct tap for the material to be machined
	tapping size hole too small	observe tapping size hole table in the technical section. Note different tapping size hole diameters for fluteless taps.
	alignment error of tapping size hole or position	- check for correct tool clamping - apply floating tap holder - check core drill
	machine spindle axially restricted	- use mechanical feed - apply tension/compression tap chuck
	cold welding at the flank of the tap	- apply new tap - apply coated tap - optimise lubrication
	lead of tap unsatisfactory due to insufficient thread depth	- tap with forced feed - apply tap with modified lead
	cutting speed too high	- reduce cutting speed - improve lubrication
	lubrication or coolant supply insufficient	ensure sufficient and suitable coolant supply and check concentration
	tolerance specification on tap does not correspond to specifications on drawing and/or thread gauge	apply correct tap for required tolerances
2 Thread axially miscut	spiral-fluted taps, corresponding to our design, are applied with too much pressure for initial tapping	with spiral-fluted taps only light pressure required for initial tapping. The tap should immediately be applied within the tension/compression range
	initial tapping pressure too low for taps with spiral point corresponding to our form “B”	taps with spiral point or left hand spiral require higher axial pressure. Ensure tap operates within the tension/ compression range
3 Thread produced is too small	tolerance specification on tap does not correspond to specifications on drawing and/or thread gauge	apply correct tap for required tolerance
	incorrect tap	apply correct tap for the material to be machined
	tap does not cut accurately (thread plug gauge)	avoid strong axial forces during the cutting process
	machine spindle is axially too rigid	apply tension/compression chuck

Application problems with new taps

Problem	Possible causes	Solution
4 Thread surface not according to require-ments	cutting edge geometry not suitable for the application	apply “correct” tap for the material to be machined
	cutting speed too high	- reduce cutting speed - optimise lubrication
	insufficient coolant (concentration and supply)	ensure suitable coolant and sufficient volume
	chip congestion	apply suitable tap type
	tapping size hole too small	observe tapping size hole diameter specifications to DIN 336 or respective standards. Observe table for fluteless taps
	with tough, hard materials loading on tool too much or pitch too steep	apply hand tap sets
	built-up edge	apply coated tap
	cold welding	improve coolant supply
5 Tool life insufficient	surface hardening of tappinge size hole	- check drill (cutting edge) for wear - heat or surface treatment following thread production
	reasons listed under: “thread surface not according to requirements“	reasons listed under: thread surface “not according to requirements“
	chip congestion	apply correct tap
6 Tool breakage during advance or return	tapping size hole too small	observe tapping size hole dia. acc. to DIN 336 or respective standards
	teeth of chamfer lead overloaded	- longer chamfer lead (blind or through hole) - increase no. of teeth of chamfer lead by increasing no. of flutes - apply tap sets
	tap hits bottom of tapping size hole	- check hole depth - apply tension/compression tap chuck
	- lack of or incorrect chamfer of tapping size hole - postional or angle error of tapping size hole	- correct chamfer angle of tapping size hole - ensure correct tool clamping - apply floating tap holder - check core drill
	- tool hardness not suitable for the application - cutting edge geometry not suitable for the application	apply suitable tap for the individual application

Errors and difficulties with reground taps

Problem	Possible causes	Solution
7 Thread produced is too large	burrs	remove burrs
	cutting edge geometry (chamfer lead, rake-, chamfer-, spiral point angle) not retained	- observe technical specifications when regrinding. - observe regrinding instruction
8 Thread produced is too small	worn section has not been reground correctly	- regrind again or apply new tool. - observe max. regrinding limits.
	tap too small due to no. of regrinds	- max. regrinding limit reached. - apply new tap
9 Thread produced not according to require-ments	burrs	remove burrs
	cutting edge geometry (chamfer lead, rake-, chamfer-, spiral point angle) not retained	- observe technical specifications when regrinding. - observe regrinding instruction
	peak-to-valley height of the reground tap too large	- regrind again or apply new tool. - observe max. regrinding limits.
	cold welding at the flanks	remove cold welding marks
10 Tool life insufficient	cutting edge geometry (chamfer lead, rake-, chamfer-, spiral point angle) not retained	- regrind again or apply new tool. - observe max. regrinding limits.
	loss of tap hardness due to heat development during the regrinding process	- check quality of grinding wheel - check coolant supply
	loss of coating	- recoat - check coating of the material to be machined

Thread production by pressure deformation

Fluteless taps are used for the forming of internal threads without chip removal. In contrast to conventional tapping where material is cut from the workpiece, thread forming is a pressure deformation process without chip removal for the production of internal threads. During the process the material is cold formed without interrupting the grain flow.

According to DIN 8583, thread forming is described as “pressing the thread into the workpiece with a tool possessing a spiral working area”. The spiral threaded, polygonal portion of the fluteless tap is “screwed” into the pre-drilled workpiece with an appropriate constant feed rate equal to the thread pitch. Hereby the thread profile is pressed gradually via the forming lead into the material of the workpiece so to speak. Subsequently, the pressure in the deformation zone exceeds the compression limit, the workpiece becomes ductile and is deformed. The material yields radially, “flows” along the thread profile in the unoccupied base of the tool and forms the minor diameter of the nut thread. The flow process creates the process specific form pockets (claws).

The tapping size hole diameter is heavily dependent on the formability of the material, the workpiece geometry and the required effective depth of the thread. In comparison to conventional tapping, a larger diameter tapping size hole should be selected. With a larger diameter tapping size hole the load on the tool is reduced whilst increasing the tool life. Thanks to the uninterrupted grain flow, the loading capacity of the thread remains sufficient with a 50% effective thread depth.

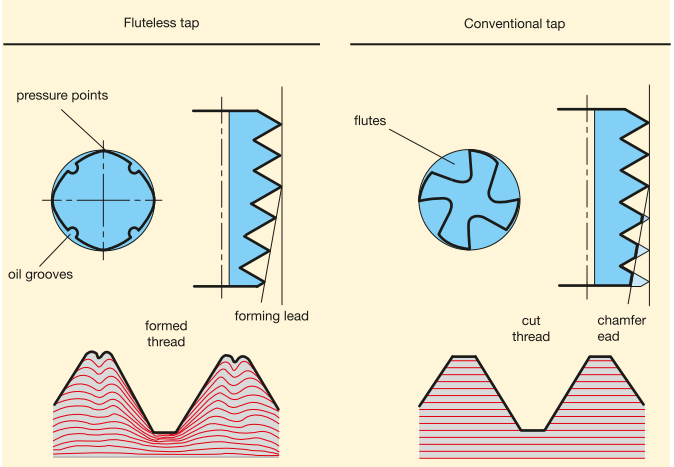
The partially formed crests of the thread with decreasing effective thread depth are a typical characteristic of threads produced by the thread forming process. With the flanks of the thread fully formed, they have no influence on the tensile strength of the thread. If necessary, the required deformation level of the thread should be determinded by performing a test.

Lubrication is of significant importance. The lubrication prevents material from building up on the thread flanks and ensures that the necessary torque for the forming process is not too high. Therefore, under no circumstances should there ever be a break-down in lubrication! Preference should be given to lubricants such as cooling agents of oils containing graphite such as those used in rolling processes. Always follow the rule: “The better the lubrication the easier the thread forming process!”

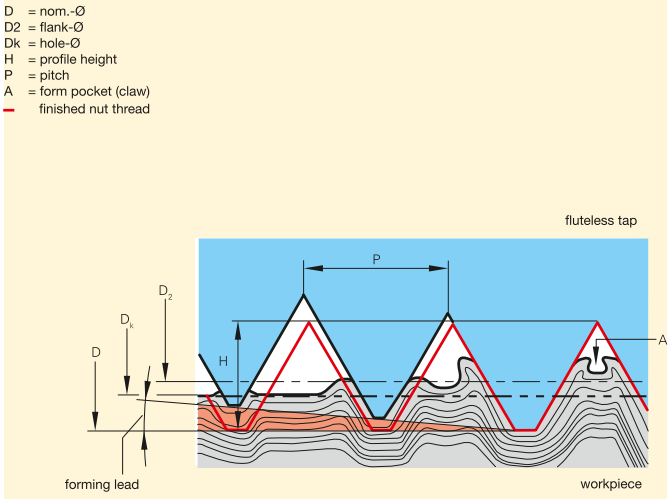
It offers the following advantages:

- no chip formation.
- one tool for the production of threads in through and blind holes.
- application in wide range of materials.
- no cutting errors.
- pitch and angle of thread errors that can occur with thread cutting are eliminated.
- internal threads produced by thread forming possess a higher tensile strength particularly at the thread flanks thanks to the so-called “uninterrupted grain flow” and the cold forming process.
- the surface of the thread is improved.
- fluteless taps can be applied at higher speeds because the formability of many materials increases with the forming speed. This does not have a negative effect on the tool life.
- reduced danger of breakage through rigid design

Process
The production of internal threads without chip removal (thread forming) in comparison to conventional tapping



Flow characteristics of the material during thread forming and the deformation process



“Profile“- Guhring’s new fluteless tap generation Characteristics and advantages

Conventional fluteless taps, produced by a grinding process only, show traces of microscopic, very fine grinding marks on the surface of the tool. This also applies to the threaded portion of the tool required to perform the thread forming operation.

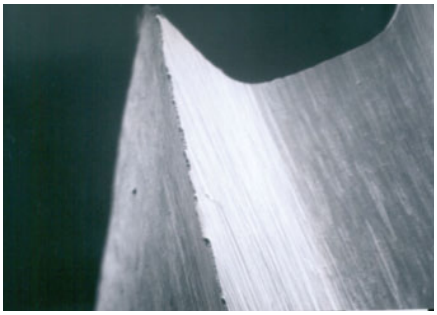
This surface topography (structure) has a negative effect on the friction between the tool and the material to be re-formed as well as on the herewith associated heat development, on the necessary torque and last but not least on the wear of the pressure points of the fluteless tap. In addition, the “grinding marks” encourage the build-up of the material to be re-formed in the thread flanks of the fluteless tap. This is also called cold welding.

Thanks to a special process to improve the surface topography (structure), Guhring’s new Profile fluteless taps no longer possess these “grinding marks”. This has been confirmed in research and tool life studies in varying materials under production conditions.

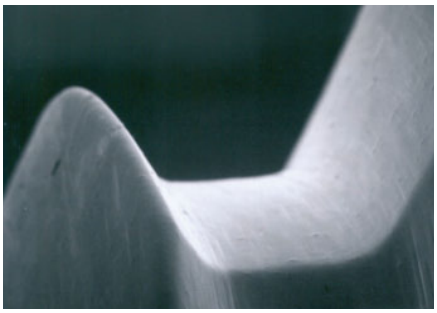
For the user, a longer tool life and increased cutting speeds are the benefits of this special process. The tool life can be increased considerably depending on the material to be machined and the application conditions. A 100% increase in tool life is not unusual.

The improved surface topography is not only of benefit to tools with bright finish. Particularly coated tools also benefit from the new process. Outer contour and forming lead greatly determine the performance of the fluteless tap. Numerous tests have shown that fluteless taps with optimal pressure point geometry and quantity achieve increased tool life and dimensional accuracy.

Further improvements in quality are achieved when the fluteless tap is produced completely in one setting and with one grinding wheel - set-up with a special roll. Pitch errors between the thread crests and former lead transition area do not occur as with the conventional grinding process.

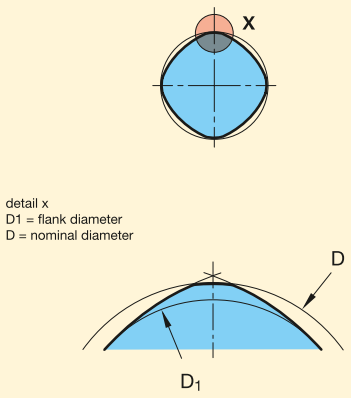


Surface of a conventional fluteless tap

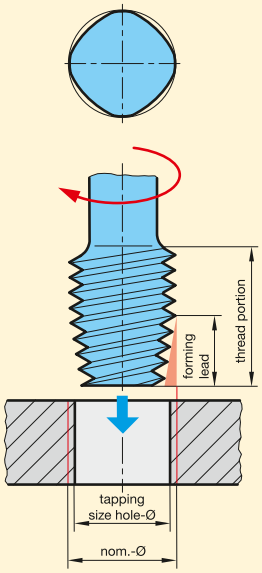


Optimised surface of a Guhring Profile fluteless tap

Cross section of fluteless tap



The principle



Types of tapping size hole

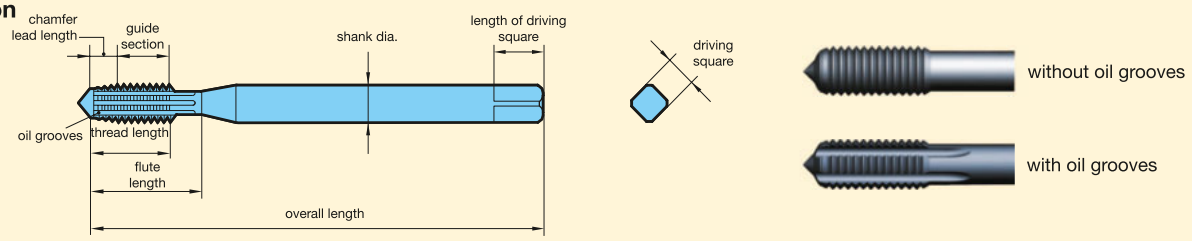
with fluteless taps without oil grooves for thread depth ≤ 1 x D

for thread depth ≥ 1 x D

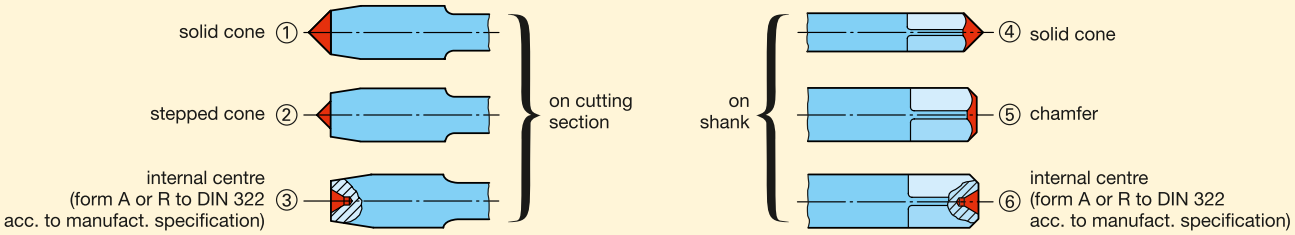
with fluteless taps with oil grooves for all thread depths

Definitions, angles, centres, thread tolerances and fits

Thread portion



Types of centres (standard, to DIN 2197/DIN 2175)



Thread dia. range mm	Centre on cutting section		Centre on shank
	with chamfer forms A, C, D, E	with chamfer form B	
≤ 5.6	①	①	④ ⑤ ⑥
> 5.6 ... 12.8	① ② ③	① ② ③	④ ⑤ ⑥
> 12.8	③	③	⑥

Thread tolerances and fits

Fits between internal and external threads are separated by a diagonal stroke, as for example 6H/6g (internal/external thread). The fit has to be selected in conjunction with the appropriate thread connection.
The tolerance zones of the tolerance classes fine, medium and coarse are allocated to three screw-in lengths short S), normal (N) and long (L). Generally, the following rules apply for selecting a tolerance class:

Fine tolerance zone (S):
For precision threads, when only a small variation in the fit is permitted.

Medium tolerance zone (N):
General application

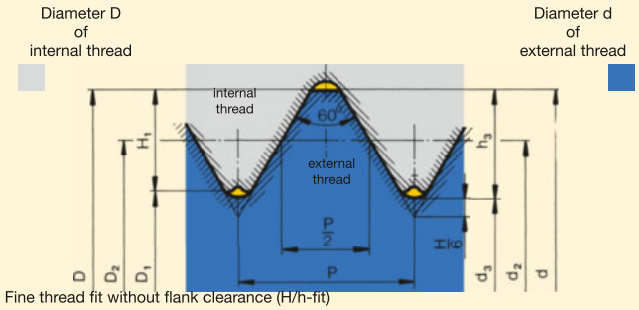
Coarse tolerance zone (L):
There are no special precision requirements and in cases where production difficulties may occur, e.g. thread production in hot-rolled rods, deep blind holes or plastic components.

Screw-in lengths
The quality of thread connection is also affected by the screw-in length. The ISO tolerance system was, especially as regards the pitch diameter, divided into three groups, i.e.

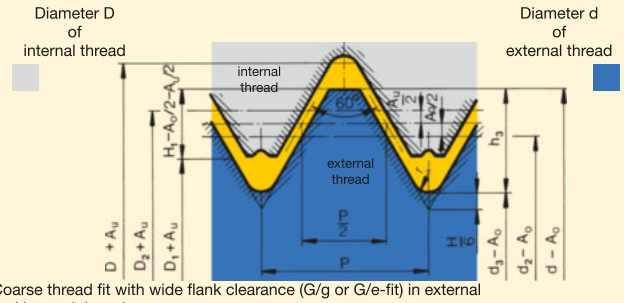
S (Short) = short screw-in length
N (Normal) = normal screw-in length
L (Long) = long screw-in length

The following fit should be selected for normal screw-in length N:
To ensure a tighter fit of thread connections, we recommend for short screw-in lengths a narrower fit.

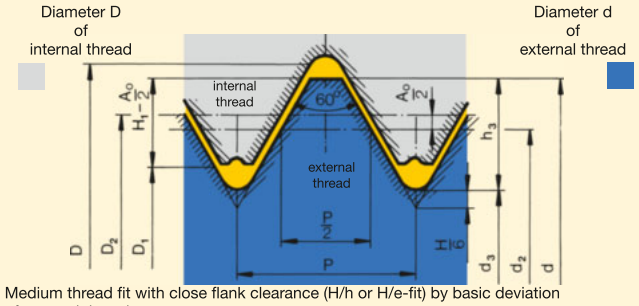
Thread fit with varying flank clearance



Fine thread fit without flank clearance (H/h-fit)



Coarse thread fit with wide flank clearance (G/g or G/e-fit) in external and internal thread.



Medium thread fit with close flank clearance (H/h or H/e-fit) by basic deviation of external thread.

Explanation
of symbols

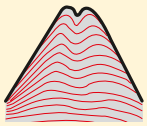
D	= major diameter of internal thread
D1	= nominal diameter of tapping size hole
D2	= effective diameter of internal thread
d	= major diameter of external thread
d2	= effective diameter of external thread
d3	= root diameter of external thread
P	= pitch
s	= pitch angle
H	= peak to valley height of thread profile
Ao	= positive tolerance
Au	= negative tolerance

Tapping size hole diameter

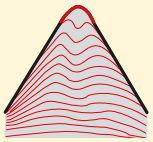
With fluteless tapping, the tapping size hole diameter influences the distinction of the formed thread. A too small tapping size hole diameter results in an over-forming of the thread which must definitely be prevented because this can lead to tool breakage. A too large tapping size hole is acceptable with certain tolerances because formed threads have a sufficient loading capacity from a 50% bearing depth.

Tapping size hole diameter is too large:
- thread not formed
- large form pocket (claw)
- height of profile too low

Optimal tapping size hole diameter:
- thread fully formed
- small form pocket (claw)
- optimal height of profile



Tapping size hole too small:
- thread over-formed
- no form pocket (claw)
- profile too high



Cooling lubricants with fluteless taps

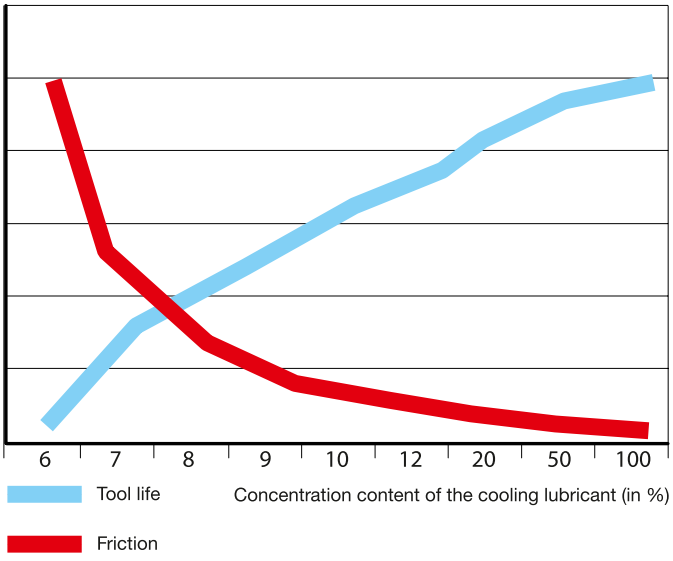
With fluteless taps the main task of the coolant is lubrication. The better the lubrication with the maximum concentration, the longer the tool life.
There are two different types of lubricant:

Oil based lubricants

These are mineral oils with the best lubricating characteristics. They reduce friction and achieve optimal life.

Soluble lubricants

These soluble lubricants are a concentrate thinned to an emulsion prior to the use with water. The concentration must not be below 6%. A content more than 12% is ideal in order to achieve a long life thanks to a good lubrication effect



Application problems with new fluteless taps

Problem	Possible causes	Solution
1 Thread produced is too large	Insufficient tool clamping	Apply synchro chuck
	Fluteless tap with short cutting portion	Apply fluteless tap with long cutting portion
2 Thread produced is too small	Tapping size hole diameter too large	Select correct tapping size hole diameter according to table
3 Thread overformed	Tapping size hole diameter too small	Select correct tapping size hole diameter according to table
4 Thread surface not according to require-ments	Cold welding on the tool	Increase oil content in lubricant or apply neat oil
	Lubricant with too little oil content	Increase oil content in lubricant or apply neat oil
5 Tool life insufficient	Lubricant with too little oil content	Increase oil content in lubricant or apply neat oil
	Tapping size hole diameter too small	Select correct tapping size hole diameter according to table
	Cutting speed too high	Adjust cutting speed
	Lubricant soiled	Check filtration

Application problems with new fluteless taps

Problem	Possible causes	Solution
6 Tool breakage	Lubricant with too little oil content	Increase oil content in lubricant or apply neat oil
	Tapping size hole diameter too small	Select correct tapping size hole diameter according to table
	Incorrect tool clamping	Check tool clamping

Thread production with thread milling cutters and their advantages

Thread milling is like thread cutting in that it is a chip forming production process. A major benefit of thread milling is the size of the thread to be produced, as the cost of taps in large dimensions can question the economic efficiency of the production process. Furthermore, with larger diameters thread cutting requires more power from the machine tool. The possibility of machining materials with a higher tensile strength or hardness can also be a decisive factor in choosing thread milling.

With conventional thread cutting the thread is produced from the image of the tool profile, conditional on the chamfer lead for the workpiece. In contrast, with thread milling the thread is produced via a series of cutting paths by the milling cutter, whereby the pitch is generated by the machine. The thread mill makes numerous passes through the axis section of a thread during a spiral motion in axial tool-workpiece direction and thereby interpolates the contour of the thread.

A major factor is that cutting speeds and feed rates can be chosen independently of each other. Chip formation and tool loading can be considerably influenced via these setting parameters. A feature of the process is the formation of short, comma shaped chips in contrast to thread cutting.

To detach the chips, the direction of rotation of the machine spindle does not need to be reversed. The tools applied have a thread profile without pitch. Initially, the thread milling cutter is lowered along the hole axis to the required thread depth. In the approach cycle the thread milling cutter is plunged to the nominal diameter of the thread.

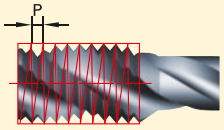
The thread is produced by a 360° circular interpolation. Finally, in the exit cycle the thread milling cutter is radially returned to the hole axis and then axially withdrawn from the thread.

A thread milling cutter can produce threads of varying diameters (or tolerances) with the same pitch. Right- or left-handed threads can be produced with the one tool. As thread milling produces only short chips, chip evacuation does not cause any problems.

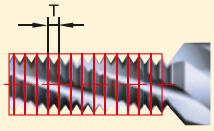
With thread milling, an identical tool geometry can be applied for a multitude of materials. This considerably limits the multiplicity of tools required. In contrast to thread cutting, thread milling produces a complete thread which is virtually the total length of the applied tool.

Comparison of tool design between taps/thread milling cutters

In contrast to a tap, which basically consists of a single spiral shaped tooth, the series of teeth of a thread milling cutter do not form a spiral but are configured without pitch. This fundamental difference in tool design is attributed to the different processes which have already been described in an earlier chapter.



Tap
The pitch P is produced by the tap/fluteless tap.



Milling cutter
The pitch P is produced by CNC control circular program)

Dimensions and cutting section measurements

Apart from the thread pitch of the tool, the design of a thread milling cutter is principally very similar to that of a tap. Thread milling cutters are also characterised by dimensions and the size of the cutting section. The thread length l_2 and the total length l_1 are also part of the dimensions.

The different design forms incorporate milling cutters with or without collar as well as with or without countersinking chamfer. The cutting section sizes of a thread milling cutter consist of the flute length l_4, the flute profile, the tooth with Z_b and the relief S. As with a tap, the flute length also incorporates the run-out of the flutes. They do not have to be as large as the flutes of a tap, as this machining process produces smaller chips. The chips do not remain in the flutes during the process and do therefore not restrict further chip development. The width of the tooth is therefore larger than with taps. The relief grinding helps to create the clearance angle required for milling cutters.

The Guhring thread milling cutter types

TM SP – thread milling cutter w/o countersinking step
Straight shank with spiral flute and internal coolant deli-very, standard type for the milling of one thread size
Thread type: M, G, NPT, NPTF

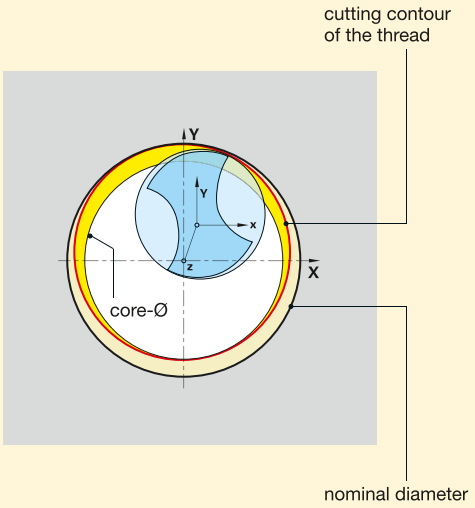
TMU SP – universal thread milling cutter
Straight shank with spiral flute and internal coolant delivery, multi-range tool for the production of various thread sizes with the same pitch
Thread type: M/MF, G, NPT, NPTF

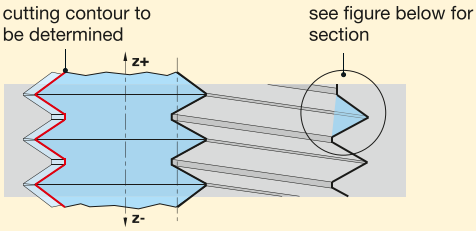
TMC SP – thread milling cutter with countersinking step
45° countersinking step, spiral flute and internal coolant delivery, for countersinking and thread milling one thread size
Thread type: M, MF, G, UNC, UNF, NPT, NPTF

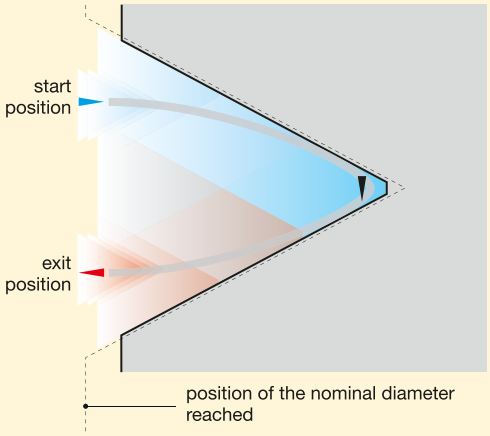
DTMC SP – drill/thread milling cutter
2-fluted drill/thread milling cutter with 45° countersinking step, spiral flute and with/without internal coolant delivery, for tapping size holes, countersinking and thread milling of one thread size
Thread type: M, MF

Special thread milling cutters
In addition to the four standard types described above, the following thread milling cutters can be supplied on request:
- TM SP and TMC SP thread milling cutters for thread length 3xD
- DTMC SP three-fluted drill/thread milling cutter with or without internal cooling, thread length 1.5xD, 2xD, 2.5xD, 3xD
- Solid carbide thread milling cutters to customer specific demands and drawings

Tooth profile
The tooth form generally corresponds to the form of the thread to be produced. In some cases it may be necessary to correct the tooth profile. This is the case, if the diameter of the thread to be produced is not in specific ratio to the diameter of the thread milling cutter. A thread milling cutter can mill threads of different diameters. A variation of the thread pitch is however not possible.

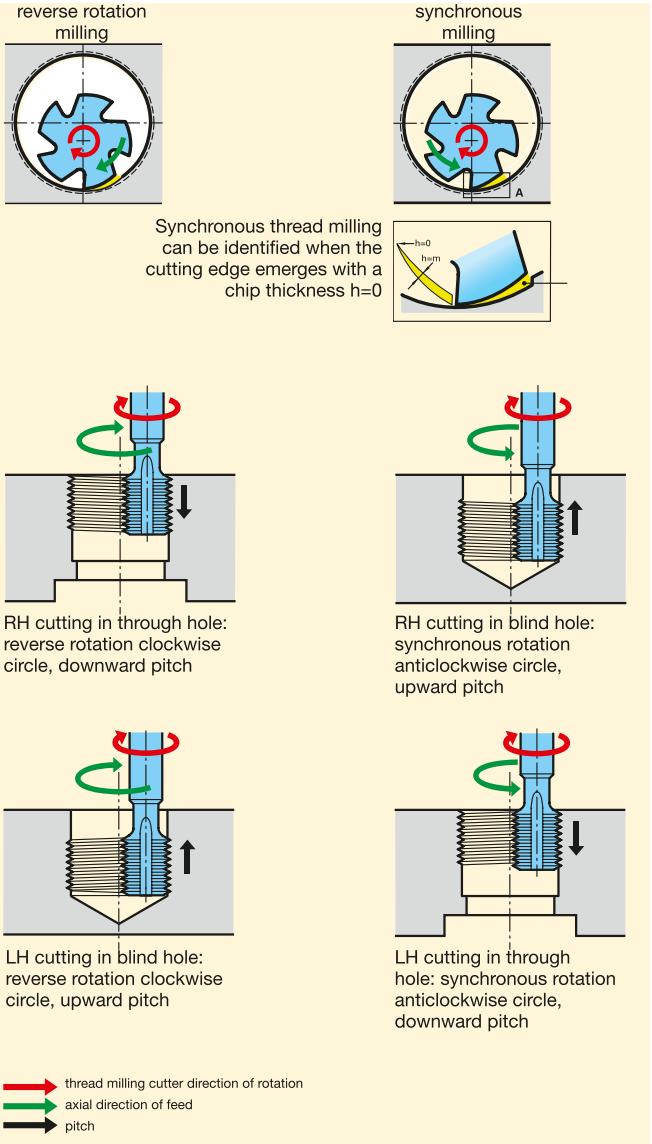






Thread milling process and technology

Machining combinations (reverse rotation/synchr. milling)
As the thread milling cutters are designed for right hand cutting, the direction of rotation is generally clockwise. By altering the axial direction of feed, reverse rotation or synchronous milling, all thread combinations can be produced.
The application conditions, such as blind or through hole, horizontal or vertical machining methods as well as the type of lubrication and chip removal determine the correct choice of milling procedure.
For thread milling, synchronous milling should be applied whenever possible, in order to achieve lower cutting forces, improved chip formation, a better tool life and surface quality. Synchronous milling can be identified when the cutting edge emerges with chip thickness h = 0.



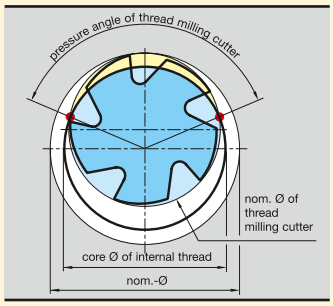
Interference and feed ratio
If the milling cutter diameter to the nominal thread diameter ratio of 70° is adhered to, a profile distortion, irrespective of the profile depth of the thread, should not occur. This factor is well proven.

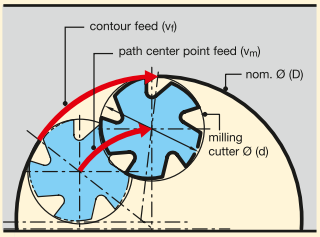
This drawing illustrates that the diameter of the thread milling cutter and the profile depth determine the pressure angle to the thread diameter.

The feed at the cutting edge of the thread milling cutter is calculated by the cutting speed revolutions) and the feed rate per tooth.

With linear movement, the feed rate at the cutting edge is identical to that at the tool centre. However, the helical interpolation follows the path of a circle in the plane. As the machine tool always calculates to the tool centre, a command must be programmed for converting the cutting speed (contour related program). If such a command does not exist or the central point is programmed, the feed rate must be first converted.

The interactive control at the control panel always indicates the speed at the centre point of the tool. When running with no load this is simple to check. If disregarded, the milling cutter runs at a speed many times faster than the feed which generally leads to tool breakages.





Formula of calculation

$v_c = \frac{d \cdot \pi \cdot n}{1000}$	[m/min]
$n = \frac{v_c \cdot 1000}{d \cdot \pi}$	[min^{-1}]
$v_f = n \cdot z \cdot f_z$	[mm/min]
$v_m = \frac{v_f \cdot (D - d)}{D}$	[mm/min]
$v_b = n \cdot f_b$	[mm/min]

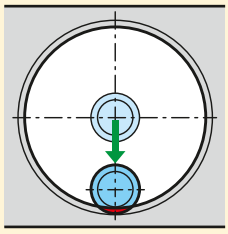
v_c = cutting speed
v_f = contour feed
v_m = centre point path feed
n = revolutions
z = number of teeth
f_z = feed per tooth
f_b = feed for drill per revolution*
v_b = drill feed rate*
D = Ø nom. of thread [mm]
d = milling cutter nom. Ø [mm]
* for drill/thread milling

Thread milling process and technology

Thread milling cutter entry cycles

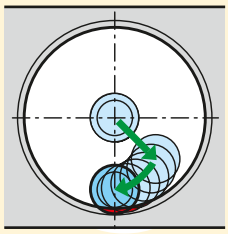
Linear plunging

With linear plunging of the thread milling cutter into the material, a very large angle of contact is created at the milling cutter which leads to long chips and a high loading on the tool. This is particularly the case when the difference in diameter between the hole size and the milling cutter is small. In addition, this method produces a small delay mark. This method is not suitable for accurate and small threads.



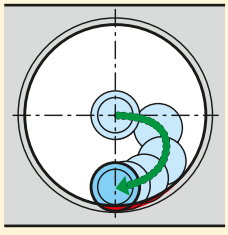
90° quarter circle entry cycle

A 90° entry cycle with a small difference in diameter between the tool and the thread removes a large part of chip volume during the linear section of the entry cycle. This method is therefore only recommended for relatively large differences in diameter between hole size and thread milling cutter (thread milling cutter TMU). The advantage using this entry method lies in the simple programming and the relatively short entry path.



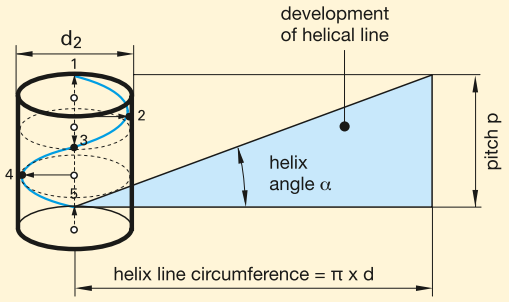
180° semicircle entry cycle

With a 180° entry cycle, the loading on the tool is the lowest when plunging, as the angle of contact is relatively small during the complete entry cycle. This method requires a little more sophistication in programming but has shown to be the most costefficient when thread milling with the TM, TMC and DTMC thread milling cutter.



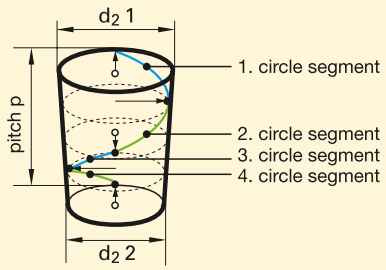
Helical interpolation (cyl. thread)

Helical interpolation is the overlaying of circular and linear movement. Different threads can be produced by the form of overlaying the direction of pitch and the direction of rotation of the circular movement.



Helical interpolation (conical thread)

In order to produce a perfectly round thread with a NPT thread milling cutter, it is necessary to take into account the pitch when NC-progamming. In contrast to cylindrical threads, the machining path is not a 360° circle but four segments of a circle. With every one of the four segments the taper is corrected inwards.

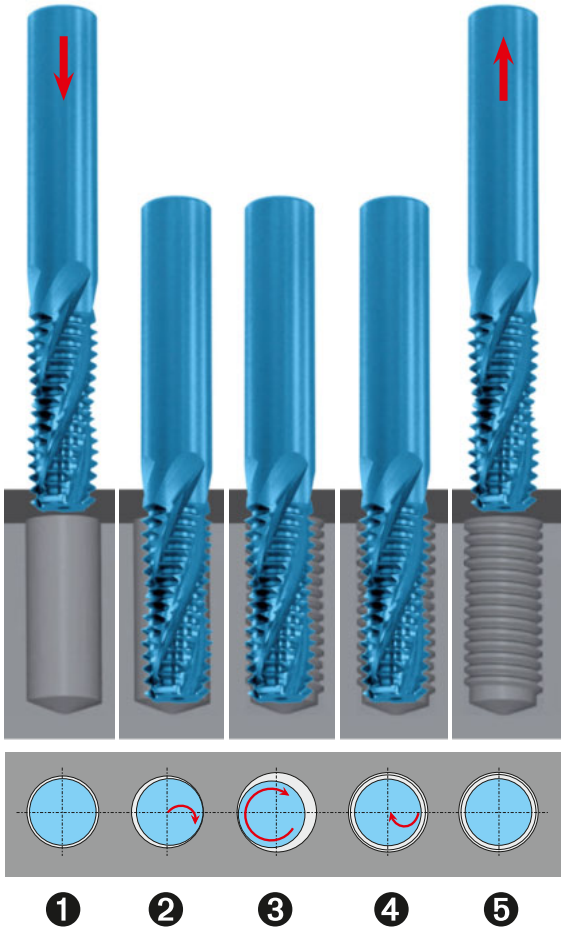


Thread milling cutters w/o countersinking step
Type TM SP

Machine example

Coating:	TiCN
Thread:	M12
Pitch:	1.75 mm
Thread depth:	24 mm / 2 x D

Tool material:	St 52
Cutting speed:	100 m/min
Feed per tooth:	0.08 mm
Cutting time:	2.7 s



Programming example:

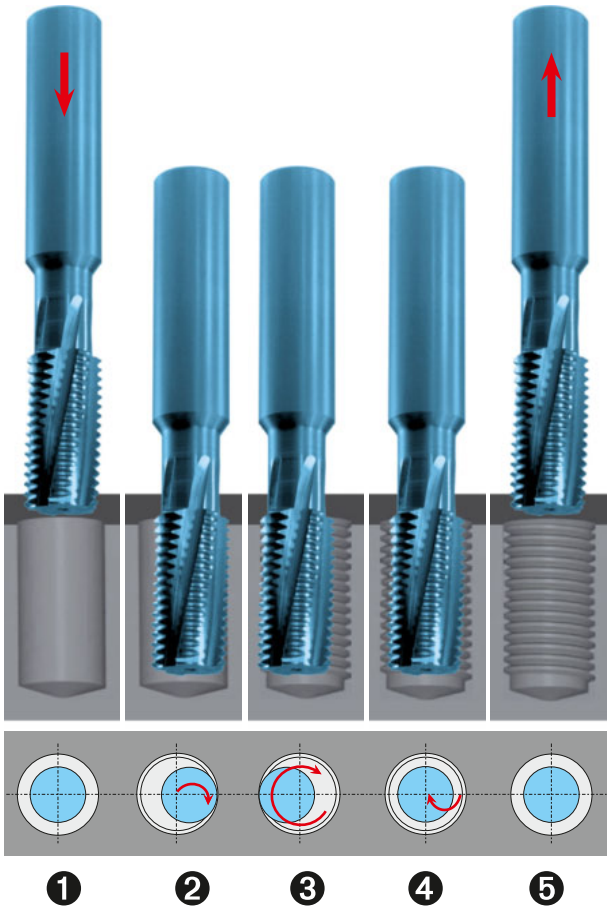
	CNC Code:	Plain text
	N10 M6 T1	Tool call
	N20 G90 G54 G00 X0.000 Y0.000	Work offset
❶	N30 Z2.000 S3199 M3 D1	Positioning centered on start position above tapping size hole and spindle speed call-up
	N40 G00 Z-21.725	Rapid movement to thread milling start position centered in tapping size hole
	N50 G91	Switch to incremental
	N60 G42 G01 X0.000 Y4.975 F1000	Cutter radius compensation on
❷	N70 G02 X0.000 Y-10.975 I0.000 J-5.488 Z-0.263 F87	180° entry cycle to profile depth, start thread milling process
❸	N80 G02 X0.000 Y0.000 I0.000 J6.000 Z-1.750 F175	360° thread milling cycle with axial movement of the thread pitch in Z-direction
❹	N90 G02 X0.000 Y10.975 I0.000 J5.488 Z-0.263 F350	180° withdrawal cycle to the thread centre, end of thread milling
	N100 G40 G01 X0.000 Y-4.975 F1000	Cutter radius compensation off
	N110 G90	Switch to absolute
❺	N120 G80 G53 G00 Z2.000	Withdrawal from hole to start position centered above tapping size hole
	N130 M30 M95	End

Universal thread milling cutter
Type TMU SP - 1 milling cycle

Machine example

Coating:	bright
Thread:	M24
Pitch:	1.5 mm
Thread depth:	24 mm / M16x1.5

Tool material:	AlSi7
Cutting speed:	220 m/min
Feed per tooth:	0.15 mm
Cutting time:	1.7 s



Programming example:

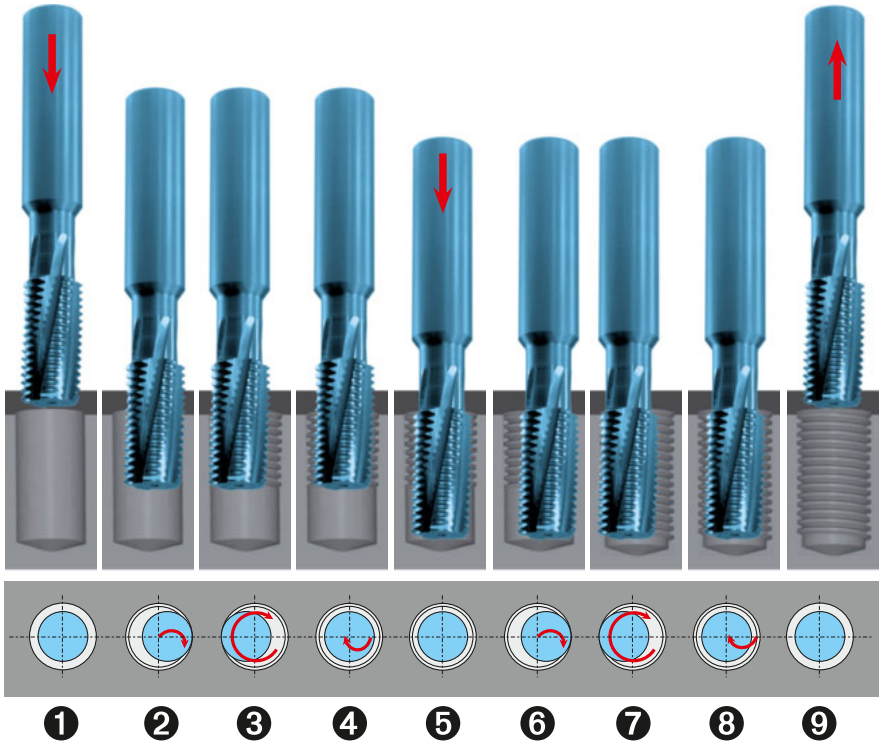
	CNC Code:	Plain text
	N10 M6 T1	Tool call
	N20 G90 G54 G00 X0.000 Y0.000	Work offset
❶	N30 Z2.000 S3199 M3 D1	Positioning centered on start position above tapping size hole and spindle speed call-up
	N40 G00 Z-21.725	Rapid movement to thread milling start position centered in tapping size hole
	N50 G91	Switch to incremental
	N60 G42 G01 X0.000 Y4.975 F1000	Cutter radius compensation on
❷	N70 G02 X0.000 Y-10.975 I0.000 J-5.488 Z-0.263 F87	180° entry cycle, start of thread milling
❸	N80 G02 X0.000 Y0.000 I0.000 J6.000 Z-1.750 F175	360° thread milling cycle with axial movement of the thread pitch in Z-direction
❹	N90 G02 X0.000 Y10.975 I0.000 J5.488 Z-0.263 F350	180° withdrawal cycle to the thread centre, end of thread milling
	N100 G40 G01 X0.000 Y-4.975 F1000	Cutter radius compensation off
	N110 G90	Switch to absolute
❺	N120 G80 G53 G00 Z2.000	Withdrawal from hole to start position centered above tapping size hole
	N130 M30 M95	End

Universal thread milling cutter
Type TMU SP - 2 milling cycles

Machine example

Coating:	bright
Thread:	M24
Pitch:	1.5 mm
Thread depth:	46 mm / M16x1.5

Tool material:	AlSi7
Cutting speed:	220 m/min
Feed per tooth:	0.15 mm
Cutting time:	3.5 s



Programming example:

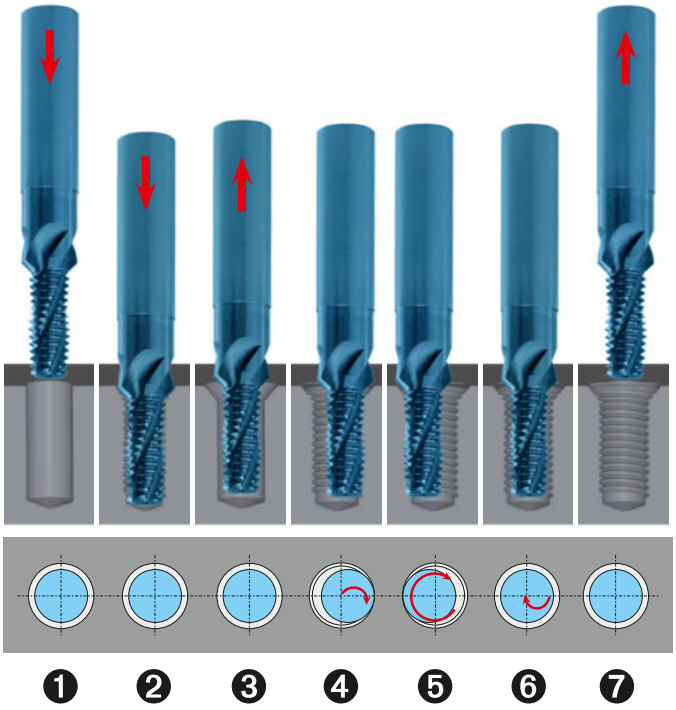
	CNC Code:	Plain text
	N10 M6 T1	Tool call
	N20 G90 G54 G00 X0.000 Y0.000	Work offset
❶	N30 Z2.000 S4390 M3 D1	Positioning centered on start position above tapping size hole and spindle speed call-up
	N40 G00 Z-21.550	Rapid movement to thread milling start position centered in tapping size hole
	N50 G91	Switch to incremental
	N60 G42 G01 X0.000 Y7.975 F1000	Cutter radius compensation on
❷	N70 G02 X0.000 Y-19.975 I0.000 J-9.988 Z-0.225 F552	180° entry cycle, start of first thread milling process
❸	N80 G02 X0.000 Y0.000 I0.000 J12.000 Z-1.500 F1104	1. thread milling process, 360° thread milling cycle with axial movement of the thread pitch in Z-direction
❹	N90 G02 X0.000 Y19.975 I0.000 J9.988 Z-0.225 F2209	1. thread milling process, 180° withdrawal cycle to the thread centre
❺	N100 G01 X0.000 Y0.000 Z-20.550 F1000	Rapid movement to thread milling start position centered in tapping size hole for 2. thread milling process
❻	N110 G02 X0.000 Y-19.975 I0.000 J-9.988 Z-0.225 F552	180° entry cycle, start of second thread milling process
❼	N120 G02 X0.000 Y0.000 I0.000 J12.000 Z-1.500 F1104	2. thread milling process, 360° thread milling cycle with axial movement of the thread pitch in Z-direction
❽	N130 G02 X0.000 Y19.975 I0.000 J9.988 Z-0.225 F2209	2. thread milling process, 180° withdrawal cycle to the thread centre
	N140 G40 G01 X0.000 Y-7.975 F1000	Cutter radius compensation off
	N150 G90	Switch to absolute
❾	N160 G80 G53 G00 Z2.000	Withdrawal from hole to start position centered above tapping size hole
	N170 M30 M95	End

Thread milling cutters with countersinking step
Type TMC SP

Machine example

Coating:	TiCN
Thread:	M16
Pitch:	1.5 mm
Thread depth:	40 mm / M16x1.5

Tool material:	16MnCr5
Cutting speed:	100 m/min
Feed per tooth:	0.06 mm
Cutting time:	6.4 s



Programming example:

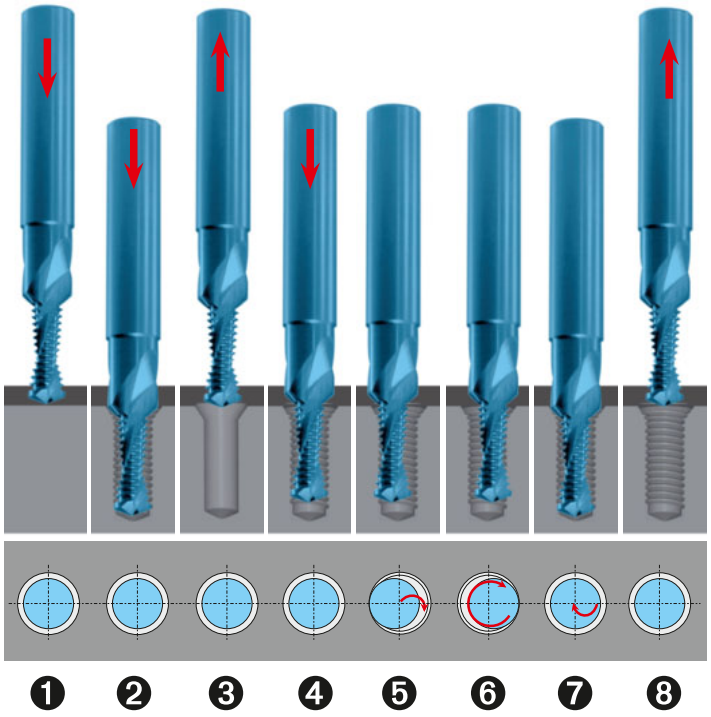
	CNC Code:	Plain text
	N10 M6 T1	Tool call
	N20 G90 G54 G00 X0.000 Y0.000	Work offset
❶	N30 Z2.000 S497 M3 D1	Positioning centered on start position above tapping size hole and spindle speed call-up
	N40 G00 X0.000 Y0.000 Z-41.300	Rapid movement to countersinking start position
❷	N50 G01 X0.000 Y0.000 Z-43.200 F119	Countersinking of 90° chamfer
❸	N60 G00 Z-38.050 S2487	Rapid movement to thread milling start position centered in tapping size hole
	N70 G91	Switch to incremental
	N80 G42 G01 X0.000 Y6.400 F1000	Cutter radius compensation on
❹	N90 G02 X0.000 Y-14.400 I0.000 J-7.200 Z-0.225 F60	180° entry cycle, start of thread milling
❺	N100 G02 X0.000 Y0.000 I0.000 J8.000 Z-1.500 F119	360° thread milling cycle with axial movement of the thread pitch in Z-direction
❻	N110 G02 X0.000 Y14.400 I0.000 J7.200 Z-0.225 F239	180° withdrawal cycle to the thread centre, end of thread milling
	N120 G40 G01 X0.000 Y-6.400 F1000	Cutter radius compensation off
	N130 G90	Switch to absolute
❼	N140 G80 G53 G00 Z2.000	Withdrawal from hole to start position centered above tapping size hole
	N150 M30 M95	End

Drill/thread milling cutter
Type DTMC SP

Machine example

Coating:	bright
Thread:	M8
Pitch:	1.25 mm
Thread depth:	16 mm / 2 x D

Tool material:	GGG 40
Cutting speed:	100 m/min
Feed per tooth:	0.06 mm
Cutting time:	5.3 s



Programming example:

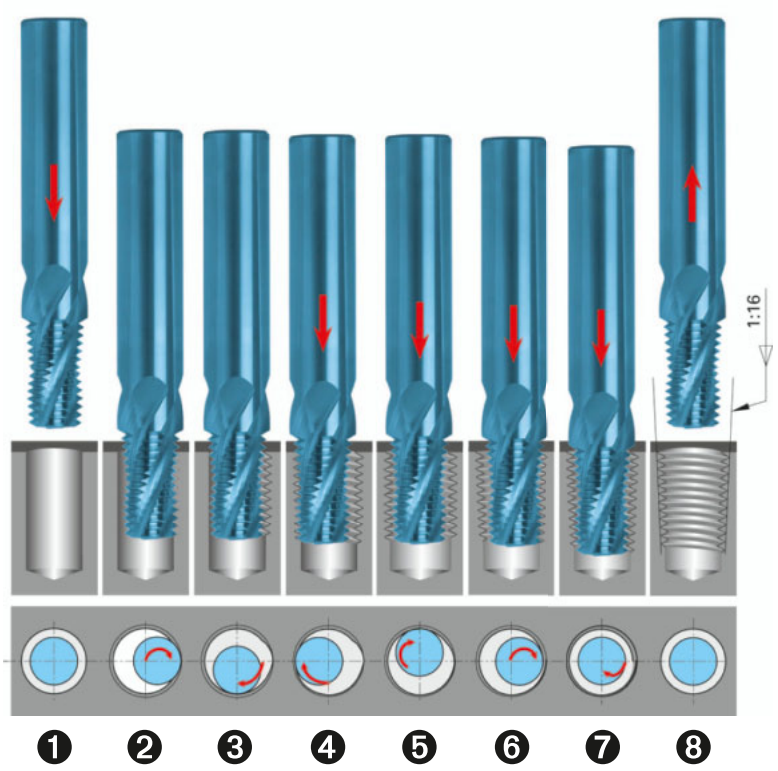
	CNC Code:	Plain text
	N10 M6 T1	Tool call
	N20 G90 G54 G00 X0.000 Y0.000	Work offset
❶	N30 Z2.000 S5013 M3 D1	Positioning centered on start position above tapping size hole and spindle speed call-up
	N40 G01 X0.000 Y0.000 Z-1.000 F251	Centering at half the feed rate
❷	N50 X0.000 Y0.000 Z-19.825 F501	Drilling the tapping size hole and countersinking 90° chamfer
❸	N60 G00 X0.000 Y0.000 Z0.000 S5013	Withdrawal of tool from the hole for pecking
❹	N70 Z-14.375	Rapid movement to thread milling start position centered in tapping size hole
	N80 G91	Switch to incremental
	N90 G42 G01 X0.000 Y3.175 F1000	Cutter radius compensation on
❺	N100 G02 X0.000 Y-7.175 I0.000 J-3.588 Z-0.188 F62	180° entry cycle, start of thread milling
❻	N110 G02 X0.000 Y0.000 I0.000 J4.000 Z-1.250 F124	360° thread milling cycle with axial movement of the thread pitch in Z-direction
❼	N120 G02 X0.000 Y7.175 I0.000 J3.588 Z-0.188 F248	180° withdrawal cycle to the thread centre, end of thread milling
	N130 G40 G01 X0.000 Y-3.175 F1000	Cutter radius compensation off
	N140 G90	Switch to absolute
❽	N150 G80 G53 G00 Z2.000	Withdrawal from hole to start position centered above tapping size hole
	N160 M30 M95	End

Thread milling cutter type TMC SP – NPT thread

Machine example

Coating:	TiAlN
Thread:	NPT 1 1/4
Pitch:	11.5
Thread depth:	1.5 x D

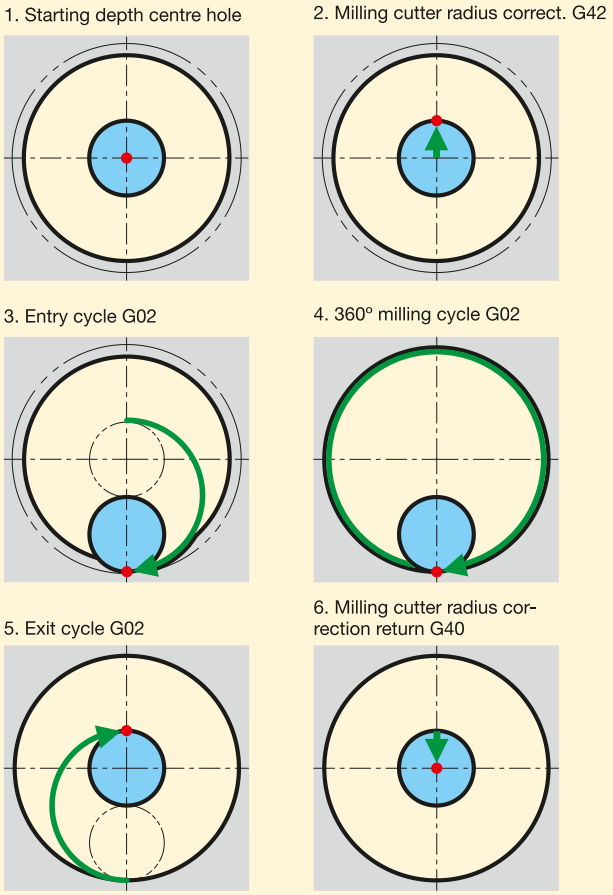
Tool material:	St 52
Cutting speed:	80 m/min
Feed per tooth:	0.05
Cutting time:	26 s



Programming example:

	CNC Code:	Plain text
	N10 M6 T1	Tool call
	N20 G90 G54 G00 X0.000 Y0.000	Work offset
❶	N30 Z2.000 S497 M3 D1	Positioning centered on start position above tapping size hole and spindle speed call-up
	N40 G00 Z-17.300	Positioning centered on start position above tapping size hole and spindle speed call-up
	N50 G91	Switch to incremental
	N60 G42 G01 X0.000 Y8.750 F1000	Cutter radius compensation on
❷	N70 G02 X0.000 Y-29.158 I0.000 J-14.579 Z-0.331 F103	180° entry cycle, start thread milling process
❸	N80 G02 X-20.408 Y20.408 I0.000 J20.408 Z-0.552 207	1. thread milling process, 90° thread milling cycle
❹	N90 G02 X20.391 Y20.391 I20.391 J-0.000 Z-0.552	2. thread milling process, 90° thread milling cycle with axial movement in Z-direction
❺	N100 G02 X20.374 Y20.374 I0.000 J20.374 Z-0.552	3. thread milling process, 90° thread milling cycle with axial movement in Z-direction
❻	N110 G02 X-20.356 Y-20.356 I-20.356 J0.000 Z-0.552	4. thread milling process, 90° thread milling cycle with axial movement in Z-direction
❼	N120 G02 X0.000 Y29.089 I0.000 J14.545 Z-0.331	4. thread milling process, 180° withdrawal cycle to the thread centre
	N130 G40 G01 X0.000 Y-8.750 F1000	Cutter radius compensation off
	N140 G90	Switch to absolute
❽	N150 G53 G00 Z2.000	Withdrawal from hole to start position centered above tapping size hole
	N160 M30	End

Thread milling cycle to DIN 66025



Address allocation to DIN 66025

Letter	Address for
A	Angular dimension around X-axis
B	Angular dimension around Y-axis
C	Angular dimension around Z-axis
D	Angular dimension around additional axis or free for any use
E	Angular dimension around additional axis or freely available (error code or similar)
F	Feed rate
G	Preparatory path condition
H	Tool length correction
I	Help parameters for circular interpolation or thread pitch parallel to X-axis
J	Help parameters for circular interpolation or thread pitch parallel to Y-axis
K	Help parameters for circular interpolation or thread pitch parallel to Z-axis
I	freely available
M	Machine commands, switching functions
N	Record number
O	Offset (axis parallel tool offset) if possible do not use
P	Third rapid traverse restriction
Q	Second rapid traverse restriction
R	First rapid traverse restriction or reference plane
S	Major spindle speed
T	Tool number, possibly with correction value
U	Second axis parallel to X-axis
V	Second axis parallel to Y-axis
W	Second axis parallel to Z-axis
X	First major axis
Y	Second major axis
Z	Third major axis

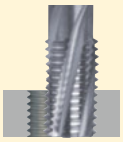
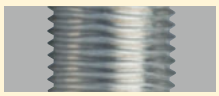
Path conditions (G-functions) to DIN 66025, sheet 2

col. no.	Function
G00	Positioning in rapid traverse
G01	Linear interpolation
G02	Circular interpolation, clockwise
G03	Circular interpolation, anticlockwise
G04	Dwell time
G17	Layer selection XY
G18	Layer selection XZ
G19	Layer selection YZ
G33	Thread cutting with constant pitch
G34	Thread cutting with increasing pitch
G35	Thread cutting with decreasing pitch
G40	Cancelling all called-up tool corrections
G41	Tool radius correction, offset left
G42	Tool radius correction, offset right
G43	Tool correction, positive
G44	Tool correction, negative
G53	Cancel called-up zero point offset
G54-G59	Work offset
G60	Drive-in tolerance 1
G61	Drive-in tolerance 2, also travel a loop
G62	Quick positioning, rapid traverse
G63	Set feed 100%, e.g. tapping
G64	Feed and/or speed change
G70	Drive Z-axis to starting position
G73	Programmed feed = axis feed
G74	Drive to reference point of 1rd and 2th axis
G75	Drive to reference point of 3rd and 4th axis
G80	Cancel called-up cycles
G81-G89	Specified drilling cycles
G90	Absolute dimensions entry
G91	Relative dimensions entry
G92	Programmed reference point offset
G94	Feed rate in mm per minute
G95	Feed rate in mm per rotation

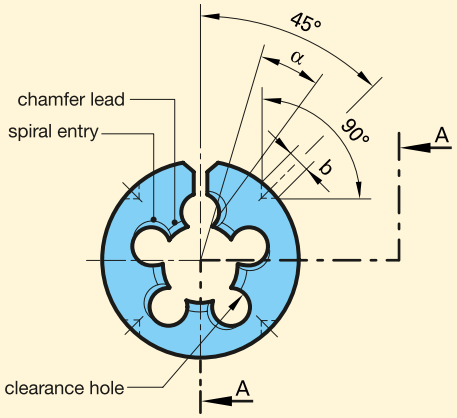
Switching functions to DIN 66025, sheet 2

col. no.	Function
M00	Program stop. Spindle, coolant and feed off. Renewed start via “Start” key.
M01	Selective stop. Works like M00. when switch “SELECTIVE STOP” is ON.
M02	Program END
M03	Spindle ON, clockwise rotation
M04	Spindle ON, anticlockwise rotation
M05	Spindle STOP
M06	Execute tool change
M07	Coolant 2 ON
M08	Coolant 1 ON
M09	Coolant OFF
M10	Clamping ON
M11	Clamping OFF
M13	Spindle ON, clockwise rotation and coolant ON
M14	Spindle ON, anticlockwise rotation and coolant ON
M19	Spindle STOP in specified angle position
M30	like M00, in addition rewind punched tape
M31	cancel locking
M40-M45	Gear stage switchover
M50	Coolant 3 ON
M51	Coolant 4 ON
M60	Change workpiece
M68	Clamp workpiece
M69	Unclamp workpiece

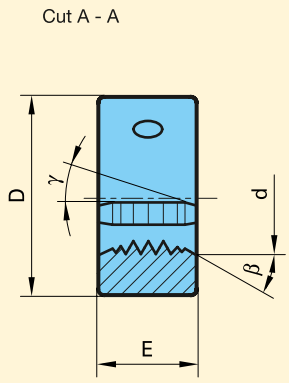
Application problems with new thread milling cutters

Problem	Possible causes	Solution
1 Thread produced is too large or too small 	Incorrect radius in CNC program and therefore milling of incorrect circle	Correct milling radius until thread is dimensionally correct
2 Thread not cylindrical	Feed rate too high Synchronous milling path with long threads	Reduce feed rate Modify milling direction to opposite direction
3 Thread surface not according to require-ments, chatter marks 	Cutting speed too high Insufficient tool or workpiece clamping	Adjust cutting speed Check tool and workpiece clamping
4 Tool breakage	CNC program error Cutting rates too high	Check CNC program Adjust cutting rates
5 Tool life insufficient	Cutting rates too high Tool applied uncoated Insufficient lubrication and chip evacuation	Adjust cutting rates Apply coated tool Improve lubrication, coolant delivery via the spindle
6 Tool breakage with drill/ milling cutter	Chip problems when drilling Feed rates too high when drilling	Apply tool with IC Incorporate pecking cycles

Definitions, dimensions and angles



b hole diameter for fixing screw
α rake angle



d nominal Ø
D major diameter, tolerance f 10
E width tolerance js 12
β chamfer angle, 1/2 countersinking angle
γ spiral entry angle

Rake angle
In order to achieve good cutting results, the rake angle must be suitable for the material to be machined. Long-chipping materials require a larger rake angle, short-chipping materials a smaller rake angle. If the order contains no material descriptions then dies are supplied for steels of medium tensile strength.

Chamfer lead
Similar to taps we differentiate between long, medium and short chamfer lead lengths. Our standard dies come with a medium chamfer, i.e. a chamfer lead length of 1.75 x pitch. The standard chamfer lead length is suitable for steels of medium tensile strength.
Dies applied on automatic machines must be ordered with spiral point. This ensures chip removal in the direction of the feed and avoids chip congestion. Decrease in torque, increased tool life and better surface qualities of the thread are further advantages of dies with spiral entry.

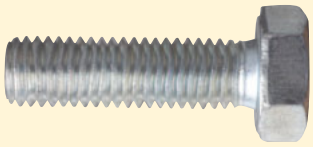
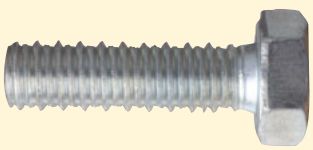
Dies with a short chamfer have a lead length of approx. 1.25 x pitch. These are especially designed for threads that need to be cut close to a face. Available as specials, prices on request.

For difficult to machine materials we recommend dies with a long chamfer lead, i.e. a chamfer lead length of approx. 2.25 x pitch, workpiece permitting. Also available as specials, prices on request.

Tolerance classes
If the order contains no tolerance requirements, dies for ISO metric, BSW, BSP, UNC, UNF and UNEF threads are supplied with ”medial“ tolerance for tolerance zones 6h, 6g. For ISO metric threads we can also supply dies for tolerance zones 4h and 6e on request.

Tolerance zone 4h	»fine« tolerance for bolts remaining bright finish or receiving only a minor surface treatment
Tolerance zone 6h	»medial« tolerance for thread diameters up to 1.4 mm.
Tolerance zone 6g	»medial« tolerance for bolts remaining bright finish or receiving only a minor surface treatment
Tolerance zone 6e	»medial« tolerance for bolts requiring major surface treatment

Application problems with new dies

Problem	Possible causes	Solution
1 Thread produced is too large or too small	Incorrect clamping of die in die holder Incorrect tolerance selected	Check clamping of die Apply die with correct tolerance
2 Thread breakage	Chips jamming Thread overloaded due to excessive cutting rates	Apply dies with spiral entry Increase chamfer lead
3 Thread surface not according to require-ments 	Surface in die too rough Lubrication not optimal Cold welding in the flanks	Apply lapped die Improve lubrication Check and clean flanks of thread
4 Tool life insufficient	Die not suitable for application	Apply HSS-E die Apply coated tool
5 Thread miscut 	Die jams	Apply split die

Technical questionnaire for the application of taps

Please copy the questionnaire, complete and fax to our technical department.

❑ Iinquery ❑ Order, Order No. _____ ❑ Sample

Customer

Company _____ Contact _____
Street _____ Tel. _____
Town, postcode _____ Fax _____
Country _____ e-Mail _____

Workpiece description _____
Cost centre _____
Drawing no. _____

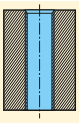
Tool

❑ Tap ❑ Thread milling cutter
❑ Fluteless Tap

Nom. thread size _____
Tolerance on thread _____
DIN _____
(if special thread, please supply dim. on sep. tool drawing)

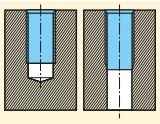
Current tool:
Manufacturer _____ Tool material _____
Dimensions _____ Coating _____
Tolerance _____ Coolant _____
Product no. _____ Cutting speed _____

Workpiece



Hole type through hole ❑
Thread length _____ mm

Drawing:



Hole type blind hole ❑
Hole depth ____ × D
Effective thread length _____ mm
Drawing:

Material _____
if possible material no. to DIN _____
Mat. characteristics ❑ short-chipping ❑ long-chipping
Tapping size hole
❑ drilled ❑ punched ❑ cast
Machining position and application
❑ horizontal ❑ vertical ❑ oblique

If special thread please indicate:
External Ø _____
Pitch _____
Basic pitch Ø _____
Incl. angle of thread _____
Tapping size hole Ø _____
❑ drawing encl.

Machine

Manufacturer and type _____
Performance _____
Speed _____
No. of spindles _____ ❑ with internal coolant
Spindle position:
❑ horizontal ❑ vertical
Tool holder:
❑ Tapping chuck ❑ draw ❑ pressure
❑ Tapping attachement
❑ Collet (rigid)
❑ Collet holder with length compensator
Workpiece holder: ❑ rotating ❑ rigid

Feed:
❑ manual ❑ hydraulic ❑ synchronized (with CNC/lead. spindle)
❑ mechanical ❑ pneumatic

Cooling/Lubricant:
❑ without ❑ compressed air
❑ neat oil ❑ petroleum
❑ soluble oil _____% ❑ minimal quantity lubrication

Coolant description _____
Coolant volume l/min _____
Coolant pressure at/bar _____

Questionnaire completed: _____ Date, signature _____

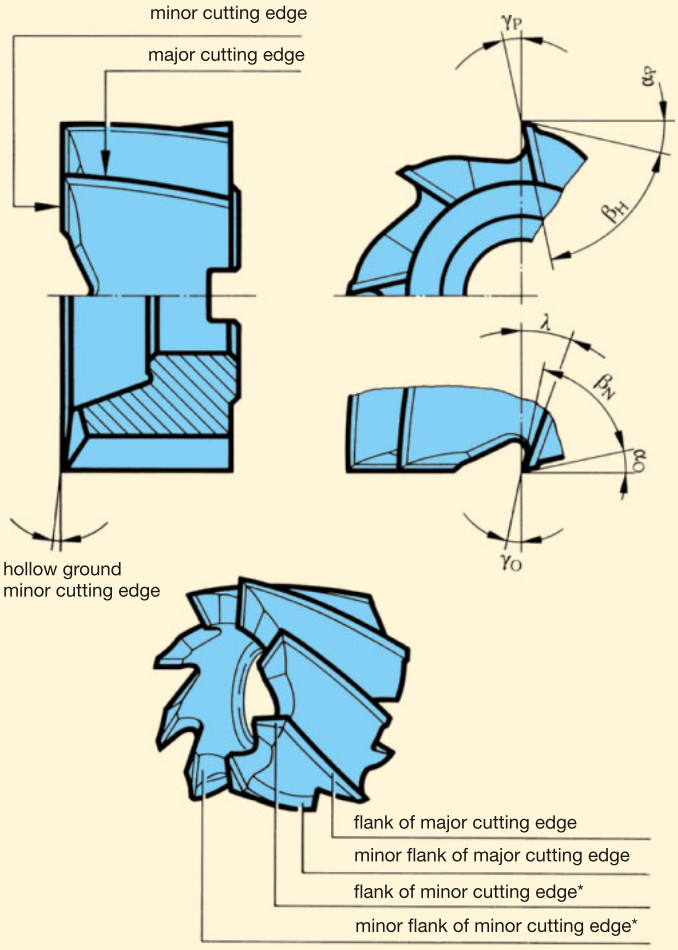
Order completed: GTN no. ._____ Date, signature _____

GUHRING

SPECIAL FLUTELESS TAPS

In addition to our standard catalogue range we produce special solutions with special thread sizes, thread types and tolerances on request. We also develop combination tools, i.e. with de-burring cutting edges that are tailor-made to your specific requirements.

Definitions and angles



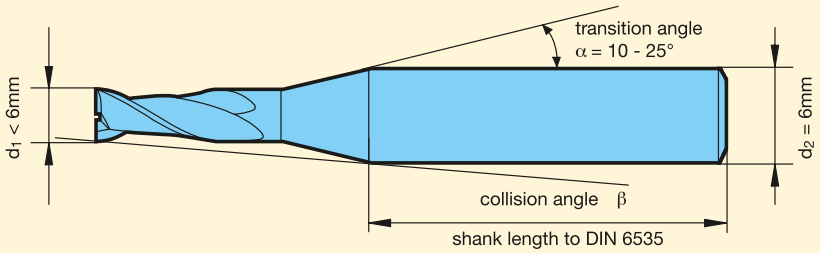
α_P = clearance angle, major cutting edge
β_H = lip angle, major cutting edge
γ_P = rake angle, major cutting edge

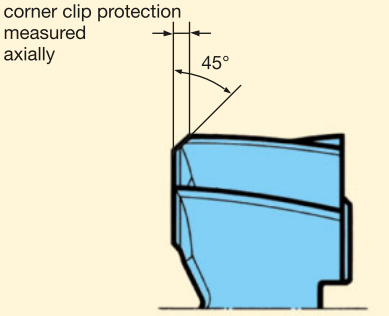
α_O = clearance angle, minor cutting edge
β_N = lip angle, minor cutting edge
γ_O = rake angle, minor cutting edge

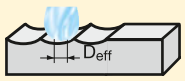
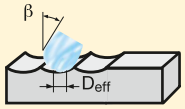
λ = spiral angle

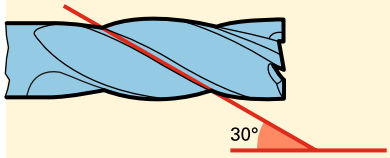
*) minor cutting edges do not cut in the direction of feed

Transition angle α and collision angle β with tools $d_1 < d_2$, tapered, dependent on flute and total length.



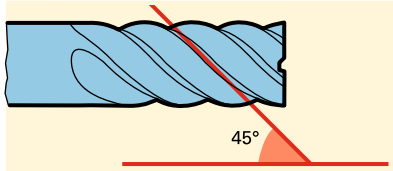


Symbol	Description	metric	Formula
v_c	Cutting speed	m/min	$v_c = \frac{\pi \cdot D_c \cdot n}{1000}$
D_c	Milling cutter diameter	mm	
n	Revolution per min.		$n = \frac{v_c \cdot 1000}{\pi \cdot D_c}$
S	Feed per revolution	mm	$S = \frac{v_f}{n}$
v_f	Feed per min.	mm	$v_f = n \cdot z \cdot f_z$
f_z	Feed per tooth	mm	$f_z = \frac{v_f}{n \cdot z}$
f	Feed per revolution	mm	$f = f_z \cdot z$
v_{fH}	Feed with one helix interpolation	mm/min	$v_{fH} = \frac{v_f \cdot (D_{h1} - D_{h2})}{D_{h1}}$ D_{h1}(mm)= external diameter of helix D_{h2}(mm)= diameter, inscribed by milling cutter
z	No. of teeth		
Q	Chip volume	cm^3/min	$Q = \frac{a_p \cdot a_e \cdot v_f}{1000}$
a_p	Depth of cut	mm	
a_e	Width of cut	mm	
T	Milling time	min	$T = \frac{l_f}{v_f}$
l_f	Milling length	mm	
$D_{(eff)}$	Effective diameter 	mm	$D_{(eff)} = 2 \cdot \sqrt{D \cdot a_p - a_p^2}$
	Effective diameter with approach angle 	mm	$D_{(eff)} = D \cdot \sin\left[\beta + \arccos\left(\frac{D - 2a_p}{D}\right)\right]$
R_{th}	Peak-to-valley height	mm	$R_{th} = \frac{D}{2} = \sqrt{\frac{D^2 - a_e^2}{4}}$
Z_b	Optimal step over for torus milling	mm	$Z_b = \frac{D - 2 \times R}{2}$



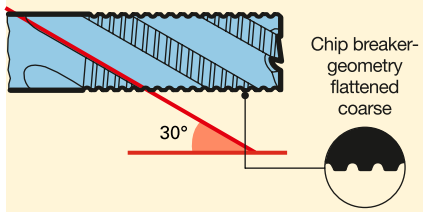
Type N

Quick spiral with 30° helical pitch, suitable for finish milling structural, case hardened and heat-treatable steels as well as short-chipping non-ferrous metals and materials up to
- 1200 N/mm² tensile strength applying high speed steel milling cutters
- 1600 N/mm² tensile strength applying solid carbide milling cutters



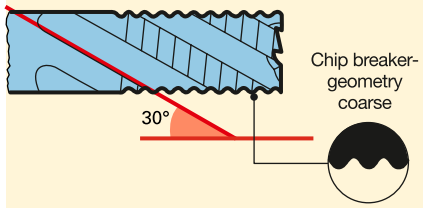
Type NH

Quick spiral with high 45° helical pitch, suitable for super fine finishing high-alloyed materials and grey cast iron up to appr.
- 1600 N/mm2 tensile strength



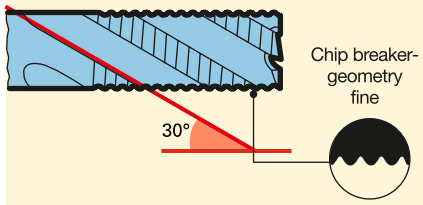
Type NF

Flat knuckle-type teeth/quick spiral, produces short chips and improved smoother surface quality in comparison to type NR or NRf. Suitable for milling standard materials up to appr.
- 1200 N/mm² tensile strength applying high speed steel milling cutters
- 1600 N/mm² tensile strength applying solid carbide milling cutters



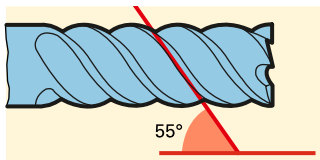
Type NR

Standard knuckle-type teeth, produces short chips and good chip evacuation. Suitable for milling standard materials up to appr.
- 1000 N/mm² tensile strength applying high speed steel milling cutters
- 1200 N/mm² tensile strength applying solid carbide milling cutters



Type NRf

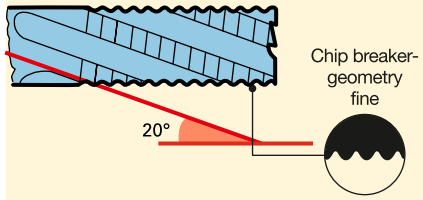
Fine knuckle-type teeth, produces short chips and good chip evacuation. Better feed rates possible than with type NR. Suitable for milling materials with a high tensile strength up to appr.
- 1400 N/mm² tensile strength applying high speed steel milling cutters
- 1600 N/mm² tensile strength applying solid carbide milling cutters



Type H

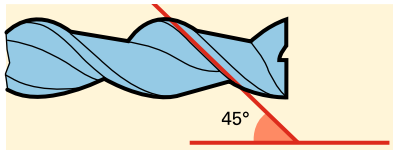
Quick spiral with high 55° helical pitch, suitable for super-fine finishing as well as HSC* machining of all hardened materials and chilled cast iron up to appr.
- 62 HRC hardness

* High Speed Cutting



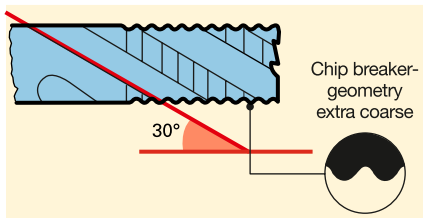
Type HR

Fine knuckle-type teeth, produces short chips with good chip evacuation. Suitable for milling hardened materials as well as grey and chilled cast iron with up to appr.
- 56 HRC hardness



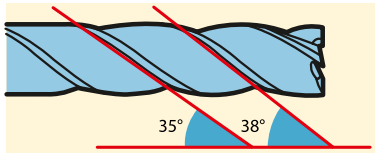
Type W

Quick spiral with 45° helical pitch, suitable for finish milling soft materials such as aluminium, Al-alloys and non-ferrous metals up to appr.
- 600 N/mm2 tensile strength



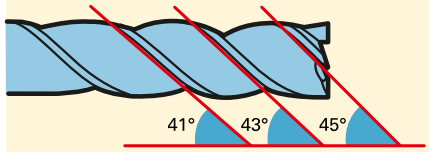
Type WR

Coarse knuckle-type teeth, produces short chips with good chip evacuation. Suitable for milling aluminium. non-ferrous metals as well as soft steels up to appr.
- 600 N/mm² tensile strength.



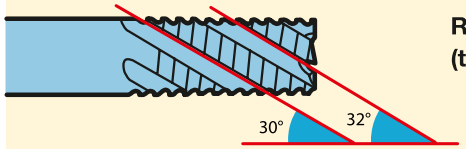
RF 100 U (type N)

35°/38° helix. Suitable for slotting, roughing and finishing steel, high-alloyed steel and hardened steel up to
•·1600·N/mm²·tensile strength·(48·HRC)



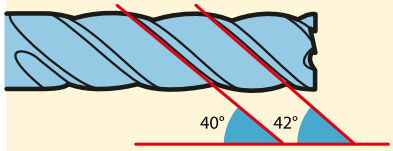
RF 100 U (type N) 3-fluted

41°/43°/45° helix. Suitable for slotting, roughing and finishing steel, high-alloyed steel and hardened steel up to
•·1400·N/mm²·tensile strength·(44·HRC)
3-fluted suitable for extreme cutting depths



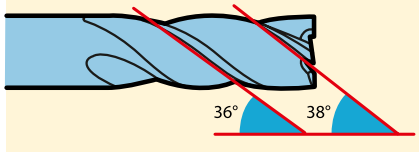
RF 100 U/HF (type HF)

30°/32° helix and roughing geometry. Suitable for slotting and roughing with large cutting widths and depths in steel, high-alloyed steel and hardened steel up to
•·1600·N/mm²·tensile strength·(48·HRC)



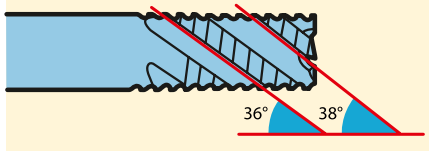
RF 100 F (type NH)

40°/42° helix. Suitable for slotting, roughing and finishing soft and tough steels as well as other long-chipping materials up to
•·850·N/mm²·tensile strength·(25·HRC)



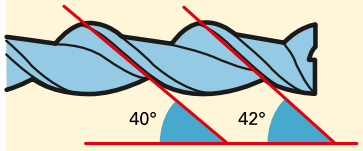
RF 100 VA (type N)

36°/38° helix. Suitable for slotting, roughing and finishing VA steels and stainless materials



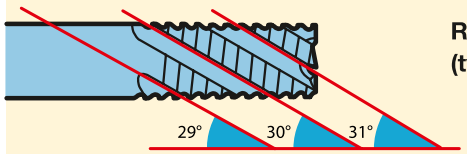
RF 100 VA/NF (type NF)

36°/38° helix and roughing geometry. Suitable for slotting and roughing VA steels and stainless materials



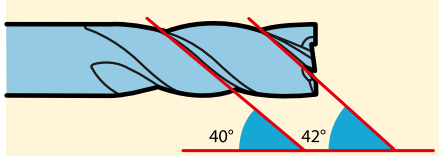
RF 100 A (type W)

40°/42° helix. Suitable for slotting, roughing and finishing aluminium and Al-alloys as well as long-chipping materials and non-ferrous metals



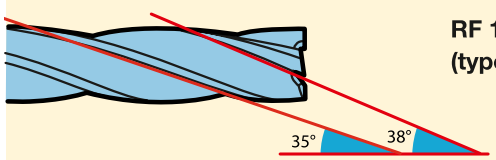
RF 100 A/WF (type WF)

29°/30°/31° helix and roughing geometry. Suitable for slotting and roughing aluminium and Al-alloys



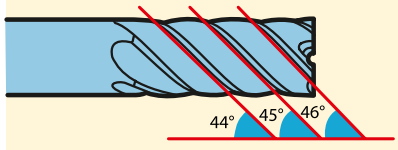
RF 100 H (type H)

40°/42° helix and progressive core diameter. Suitable for roughing up to 1xD in materials up to 54 HRC, for finishing over the entire cutting edge length in materials up to 60 HRC. With HPC strategy suitable for roughing materials > 60 HRC.



RF 100 Ti (type N)

35°/38° helix with corner radius. Suitable for slotting and roughing of titanium alloys



RF 100 SF (type NH)

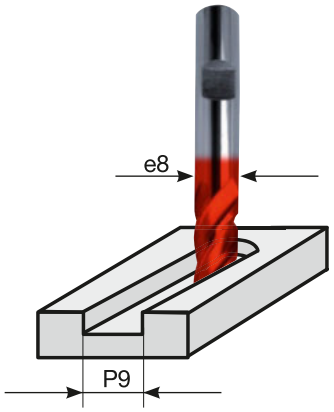
44°/45°/46° helix. Suitable for HSC super fine finishing for semi-roughing with feed widths up to max. 0.3xD and HPC roughing over the entire cutting edge length for standard steels, cast iron, non-ferrous metals and high-alloyed materials

Tens. strength (N/mm²)	HRC	HB30	HV10
240		71	75
255		76	80
270		81	85
285		86	90
305		90	95
320		95	100
335		100	105
350		105	110
370		109	115
385		114	120
400		119	125
415		124	130
430		128	135
450		133	140
465		138	145
480		143	150
495		147	155
510		152	160
530		157	165
545		162	170
560		166	175
575		171	180
595		176	185
610		181	190
625		185	195
640		190	200
660		195	205
675		199	210
690		204	215
705		209	220
720		214	225
740		219	230
755		223	235
770		228	240
785		233	245
800	22	238	250
820	23	242	255
835	24	247	260
860	25	255	268
870	26	258	272
900	27	266	280
920	28	273	287
940	29	278	293
970	30	287	302
995	31	295	310
1020	32	301	317
1050	33	311	327
1080	34	319	336
1110	35	328	345
1140	36	337	355
1170	37	346	364

Tens. strength (N/mm²)	HRC	HB30	HV10
1200	38	354	373
1230	39	363	382
1260	40	372	392
1300	41	383	403
1330	42	393	413
1360	43	402	423
1400	44	413	434
1440	45	424	446
1480	46	435	458
1530	47	449	473
1570	48	460	484
1620	49	472	497
1680	50	488	514
1730	51	501	527
1790	52	517	544
1845	53	532	560
1910	54	549	578
1980	55	567	596
2050	56	584	615
2140	57	607	639
2180	58	622	655
	59		675
	60		698
	61		720
	62		745
	63		773
	64		800
	65		829
	66		864
	67		900
	68		940

Tolerances: Position and Grade	Shafts		Nominal diameter range in mm/tolerances in µm									
			from 1 up to 3	over 3 up to 6	over 6 up to 10	over 10 up to 18	over 18 up to 30	over 30 up to 50	over 50 up to 80	over 80 up to 120	over 120 up to 180	over 180 up to 250
		d 9	-20	-30	-40	-50	-65	-80	-100	-120	-145	-170
			-45	-60	-76	-93	-117	-142	-174	-207	-245	-285
		d 11	-20	-30	-40	-50	-65	-80	-100	-120	-145	-170
			-80	-105	-130	-160	-195	-240	-290	-340	-395	-460
		e 8*	-14	-20	-25	-32	-40	-50	-60	-72	-85	-100
			-28	-38	-47	-59	-73	-89	-106	-126	-148	-172
		f 8	-6	-10	-13	-16	-20	-25	-30	-36	-43	-50
			-20	-28	-35	-43	-53	-64	-76	-96	-106	-122
		f 9	-6	-10	-13	-16	-20	-25	-30	-36	-43	-50
			-31	-40	-49	-59	-72	-87	-104	-123	-143	-165
		h 6	0	0	0	0	0	0	0	0	0	0
			-6	-8	-9	-11	-13	-16	-19	-22	-25	-29
		h 7	0	0	0	0	0	0	0	0	0	0
			-10	-12	-15	-18	-21	-25	-30	-35	-40	-46
		h 8	0	0	0	0	0	0	0	0	0	0
			-14	-18	-22	-27	-33	-39	-46	-54	-63	-72
		h 9	0	0	0	0	0	0	0	0	0	0
			-25	-30	-36	-43	-52	-62	-74	-87	-100	-115
		h 10	0	0	0	0	0	0	0	0	0	0
			-40	-48	-58	-70	-84	-100	-120	-140	-160	-185
		h 11	0	0	0	0	0	0	0	0	0	0
			-60	-75	-90	-110	-130	-160	-190	-220	-250	-290
		h 12	0	0	0	0	0	0	0	0	0	0
			-100	-120	-150	-180	-210	-250	-300	-350	-400	-460
		js 11	+30	+37.5	+45	+55	+65	+80	+95	+110	+125	+145
			-30	-37.5	-45	-55	-65	-80	-95	-110	-125	-145
		js 14	+125	+150	+180	+215	+260	+310	+370	+435	+500	+575
			-125	-150	-180	-215	-260	-310	-370	-435	-500	-575
		js 16	+300	+375	+450	+550	+650	+800	+950	+1100	+1250	+1450
			-300	-375	-450	-550	-650	-800	-950	-1100	-1250	-1450
		k 10	+40	+48	+58	+70	+84	+100	+120	+140	+160	+185
			0	0	0	0	0	0	0	0	0	0
		k 11	+60	+75	+90	+110	+130	+160	+190	+220	+250	+290
			0	0	0	0	0	0	0	0	0	0
		k 12	+100	+120	+150	+180	+210	+250	+300	+350	+400	+460
			0	0	0	0	0	0	0	0	0	0
		k 16	+600	+750	+900	+1100	+1300	+1600	+1900	+2200	+2500	+2900
			0	0	0	0	0	0	0	0	0	0

*Slot drills to tolerance e8 produce key slots to tolerance P9 with one cut.



Application report

Customer number | New cust. | RFQ/P.O. Number

Company | Contact

Street | Postcode | Contact

Telephone | Fax

Date | Signature

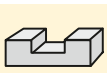
Tool:

Guhring no ..... (no.)
Manufacturer ..... (name)
Cutting edge Ø ..... (mm)
Cutting edge length ..... (mm)
Total length ..... (mm)
Shank Ø ..... (mm)
No. of flutes ..... (no.)
Coating ..... (type)
Machine .....(year/manufacturer)
Output ..... (KW)
Max. RPM ..... (1/N)
Range of feed rate .....(mm/min.)
Shank type .....(HSK/SK40/etc.)
Coolant .....(soluble oil/MQL/etc.)
Coolant pressure .....(bar/psi)

Workpiece material:

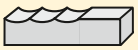
DIN description ..... (1.2222 etc.)
Composition ..... (42CrMo4 etc.)
Hardn./tens. strength.....(N/mm²/HRC/etc.)
Width of cut a_e ..... (mm)
Depth of cut a_p ..... (mm)
Milling length l_f ..... (mm)
Milling- time T ..... (min.)
Tool holder ..... (shrink fit/etc.)
Cutting speed .....(m/min.)
Feed .....(mm/min.)
Feed per tooth ..... (mm/tooth)
Conv./climb milling ..... (type)

Application:


Slot Drilling

Roughing

Finishing


Tracing

Notes/drawings

Customer number | New cust. | RFQ/P.O. Number

Company | Contact

Street | Postcode | Contact

Telephone | Fax

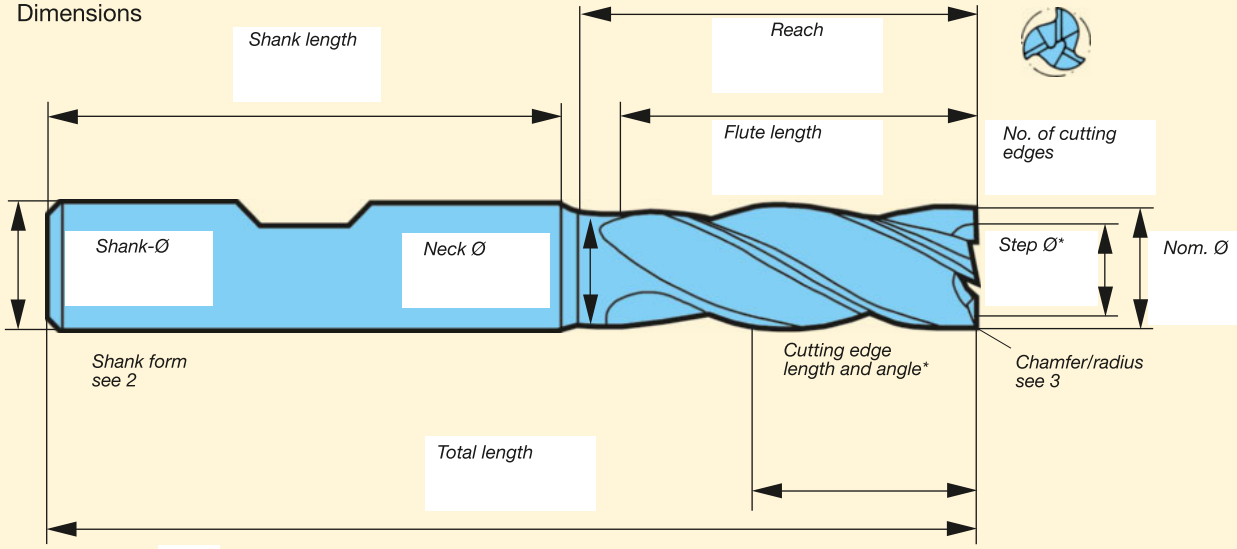
Date | Signature

❑ Enquiry ❑ Order per Fax to: +49 7431 17-185

(Please enter the required parameters into the boxes)

** only with step milling cutters*

1 Dimensions



❑ with internal cooling

2 Shank form

❑ Plain shank ❑ Flatted shank ❑ Whistle Notch

3 Chamfer/ radius

❑ Chamfer ❑ Corner radius ❑ Ball nose Size

4 Geometry

❑ Type N, W, H ❑ Type NF ❑ Type NRf, HR ❑ Type WR

5 Material Coating

❑ Solid carbide ❑ HSS M42 ❑ HSS-PM ❑ other: _____

❑ Bright ❑ SuperA-coated ❑ A-coated ❑ FIRE-coated

6 Operation

❑ Slotting ❑ Roughing ❑ Finishing ❑ Tracing

Depth of cut: _____

Width of cut: _____

7 Application

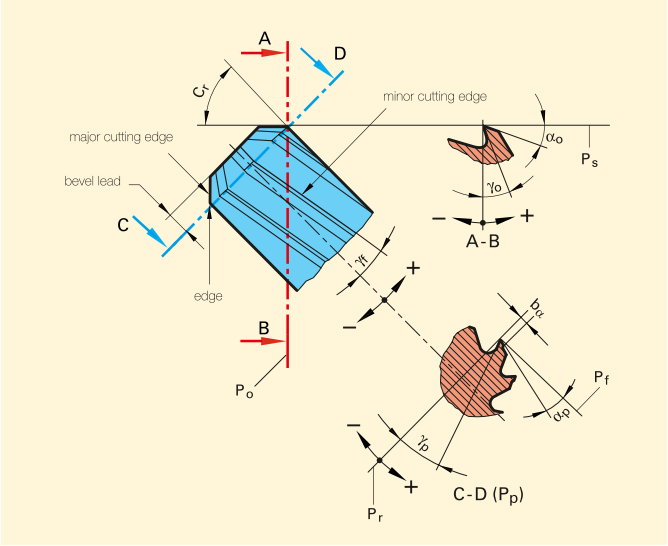
Workpiece material:

Hardness:

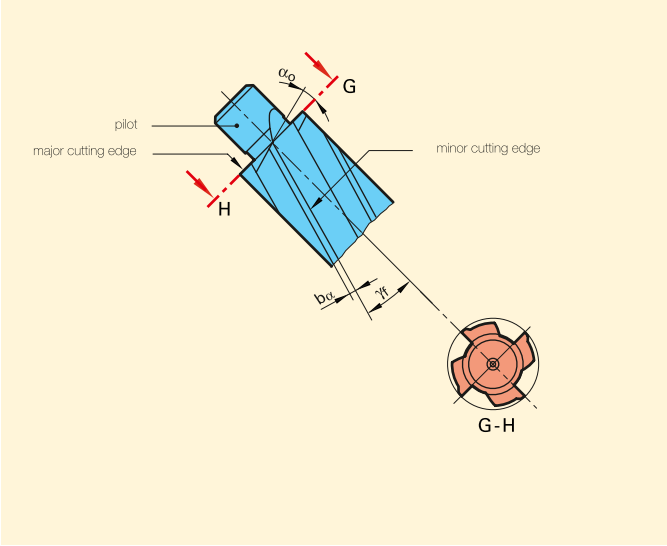
8 Required quantity:

Definitions, dimensions and angles

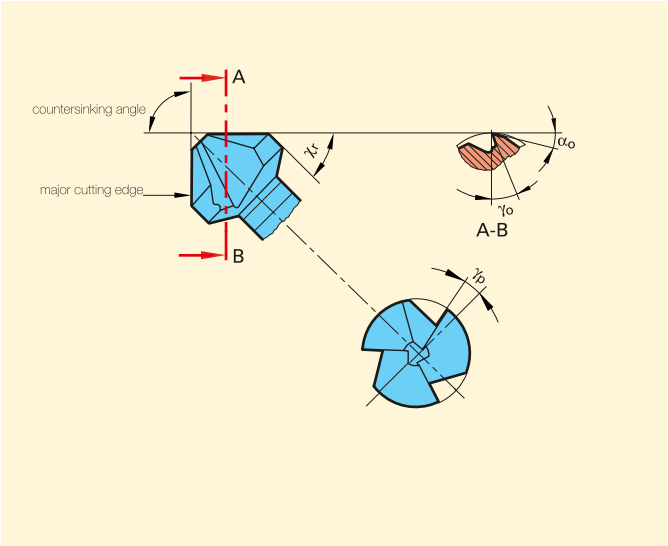
Reamers

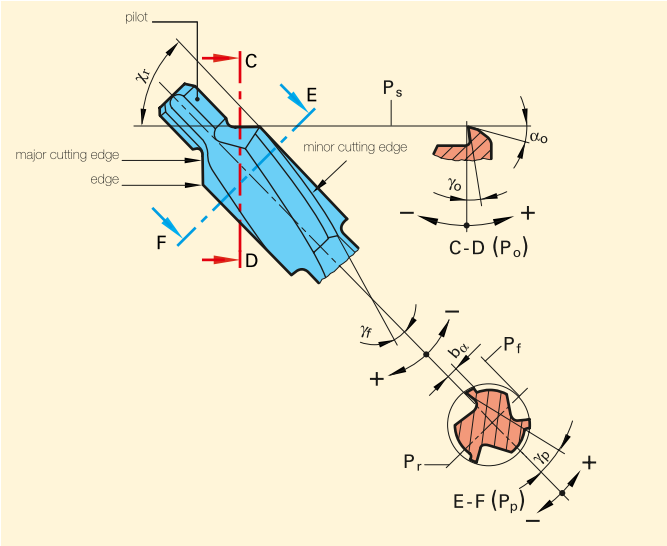


Counterbores



Countersinks





α_o = clearance angle
α_p = clearance angle of minor cutting edge
b_α = circular land width
γ_o = orthogonal rake angle
γ_f = helix angle
γ_p = back rake angle of minor cutting edge

χ_r = face setting angle
P_o = tool orthogonal plane
P_f = assumed operating plane
P_p = tool back plane
P_r = tool reference plane
P_s = tool cutting edge plane

The reamer is the most commonly used tool for the production of holes true to form and tolerance with high surface quality. The latter meets the requirement of ‘finishing’ or ‘fine finishing’ i.e. from approximately Ra 0.2 to 6.5 µm according to the scales laid down in DIN 4766. However, finishes to Ra = 0.5 µm can be regarded as satisfactory. Generally, the achievable tolerance ranks at IT 7. In special cases IT 6 or even IT 5 are possible, provided that the reamer is appropriately ground and all other operating conditions meet the high specifications.

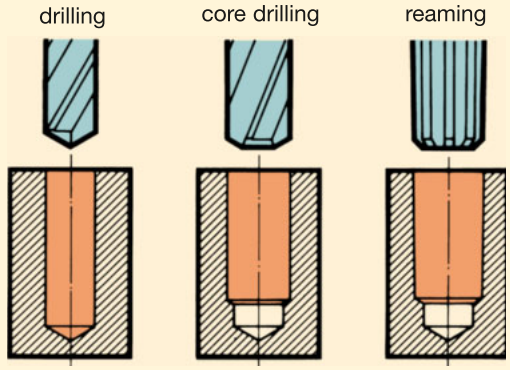


Fig. 1

In preparation for the reaming process, holes have to be pre-drilled and normally core drilled (fig. 1). Pre-drilled holes produced with gun drills, are due to their highly compressed surface, not particularly suitable for reaming. Moreover, holes produced with gun drills show generally excellent tolerances on fit and surface qualities, so that additional fine finishing is usually not required. Should any further information on our gun drills be needed, please do not hesitate to contact us.

Which reamer for which purpose?
With regard to their application we differentiate between:
- hand reamers
- machine reamers

Hand reamers
Hand reamers are turned in the hole by means of a tap wrench which is mounted on the square. The feeding action is produced manually. Because of the low cutting rates these tools are made of HSS. To ensure a proper guidance in the hole the taper lead length of hand reamers is made considerably longer than that of machine reamers. Hand reamers are available for both cylindrical and tapered holes.

Hand reamers to DIN 859 may be adjusted within the elasticity tolerance range of hardened HSS. This corresponds in practice to 1% of the diameter, i.e. for example 0.1 mm on a reamer with 10 mm diameter. In the fully expanded condition these tools are not very resistant to breakage and must therefore be protected against impact. They should be stored with the tension released.

Expanding reamers can be adjusted over a much larger range, even up to a few millimeters! For accuracy reasons setting must be carried out with a ring gauge.

A basic rule for reaming by hand: turn the tool only in the cutting direction, i.e. never reverse the tool contrary to standard practice in thread cutting. Cutting edges will become immediately blunt if the reamer is turned back.

Fig. 2: taper hand reamer

Fig. 3: adjustable hand reamer

Fig. 4: expanding hand reamer with blades

Machine reamers
Machine reamers are - as the name implies - exclusively designed for use on machines and differ with regard to the type of tool material. Due to the possibility of higher cutting values, these tools are available in HSS-E, solid carbide or carbide-tipped (fig. 5). The tool material should be selected in accordance with the material to be machined.

Fig. 5: carbide-tipped machine reamer

Carbide reamers offer the following advantages:

- Higher cutting speeds and feed rates.
- Most economic machining of materials of over 1200 mm^2 tensile strength.
- The tool life is much higher than that of HSS-E reamers.

Reamers with special form

Reamers with special form and to special tolerances have recently become more and more common place. Their manufacture requires a great deal of know-how as well as the most modern and sophisticated tooling. We have all the machines and the knowledge to produce even the most complicated tools very economically. Leave the machining problems to us. To meet and overcome them is the daily task of our engineers. They are ready to assist you at all times, to find the best possible solution and, if necessary, to arrange for an obligation-free demonstration of our tools on your own machines.

A further distinctive feature of hand and machine reamers is the geometry of the cutting section, standardised under the following headings:

- straight-fluted reamers
- LH spiral reamers
- reamers with quick spiral (45°) left-hand flutes

Tools with right-hand spiral flutes are only applied in special cases. They produce, as do twist drills, a chip flow up the flutes, which often results in an unsatisfactory surface finish quality.

Reamers with straight flutes are suitable for the machining of blind holes. Here again the absence of chip space at the bottom of the hole means that swarf must be evacuated up the reamer flutes. For all other machining tasks, and particularly for interrupted holes (e.g. holes with keyways, intersecting holes and the like), reamers with left-hand spiral flutes are much more suitable. Chip removal is always in the direction of the feed and for this reason this flute geometry is used almost exclusively for through holes. Their application in blind holes is limited to tasks where reaming to the full depth is not required, so that sufficient space for the chip volume created is available.

Fig. 6: machine roughing reamer

Fig. 7: machine bottoming reamer

The 45° LH quick spiral reamer (fig. 6) has been well tried and tested in long-chipping materials. For absolutely straight and precisely located deep holes we recommend our machine bottoming reamers (fig. 7). Their bevel lead is face-cutting, i.e., they do not cut in conformity with the pre-drilled hole, but correct it truly to size. Machine bottoming reamers should always be applied with bushings.

Fig. 8: stepped carbide-tipped machine reamer

Accuracy in surface quality and form is tremendously improved by dividing the machining process into rough and finishing reaming. For this and other reasons we supply taper pin reamers as rough and finishing reamers for both manual and machine operations. Stepped machine reamers (fig. 8) perform these two operations in one pass.

Badly worn taper pin reamers can be salvaged by resharpening of taper and reduction of circular land width.

Storage of reamers

Reamers are finishing tools and therefore very vulnerable. To avoid damage, individual storage and transport in our plastic sleeves is recommended. Tools reward careful treatment by producing excellent results and giving much higher operational life.

Stock allowance (recommended values in mm)

Material	Ø up to 6 mm	Ø up to 10 mm	Ø up to 16 mm	Ø up to 25 mm	Ø over 25 mm
Steels up to 700 N/mm2	0.1 - 0.2	0.2	0.2 - 0.3	0.3 - 0.4	0.4
Steel 700 -1000 N/mm2	0.1 - 0.2	0.2	0.2	0.3	0.3 - 0.4
Cast steel	0.1 - 0.2	0.2	0.2	0.2 - 0.3	0.3 - 0.4
Grey cast iron	0.1 - 0.2	0.2	0.2 - 0.3	0.3 - 0.4	0.3 - 0.4
Malleable cast iron	0.1 - 0.2	0.2	0.3	0.3 - 0.4	0.4
Copper	0.1 - 0.2	0.2 - 0.3	0.3 - 0.4	0.4	0.4 - 0.5
Brass, bronze	0.1 - 0.2	0.2	0.2 - 0.3	0.3	0.3 - 0.4
Light alloys	0.1 - 0.2	0.2 - 0.3	0.3 - 0.4	0.4	0.4 - 0.5
Plastics, hard	0.1 - 0.2	0.2	0.4	0.4 - 0.5	0.5
Plastics, soft	0.1 - 0.2	0.2	0.2	0.3	0.3 - 0.4

When using expanding machine reamers or reamers with inserted blades the metal removal allowance should be reduced by approximately 30%. Due to the efficient action of the spiral, the values for quick spiral reamers may be increased by 50 to 100%.

General remarks for the determination of manufacturing tolerances for reamers

The manufacturing tolerances to DIN 1420 are allocated to certain tolerance zones of the holes to be reamed. Generally, they ensure the positioning of reamed holes within the relevant tolerance zone as well as the most economical use of the reamer.

It must, however, be taken into account that the size of the reamed hole depends, in addition to the manufacturing tolerance of the reamer, on various other factors, such as angles of cutting edges; bevel lead of reamer; clamping of the workpiece; tool holder; condition of machine; the coolant and on the material of the workpiece. Therefore, from time to time other manufacturing tolerances might prove more advantageous.

However, in the interest of economic production and storage as well as for the sake of uniformity when using reamers obtained from different manufacturers, it is recommended that non-standard manufacturing tolerances be specified only in exceptional cases.

The following well-proven basic rules should be taken into account when determining manufacturing tolerances:

Determination of permissible max. and min. sizes of reamers

The permissible largest reamer diameter d_{1max} ranges at about 15% of the approximate hole tolerance (0.15 IT) below the permissible maximum diameter of the hole (fig. 9), whereby the value 0.15 IT will be rounded to the next higher integer or half µm-value, so that even µm values are derived for d_{1max}.

The permissible smallest reamer diameter $d_{1\ min}$ ranges at about 35% of the appropriate hole tolerance (0.35 IT) below the permissible maximum diameter d_{1max}*.

Example 1: for reamer 20 H 7

Nominal diameter d_1	= 20.000 mm
Maximum diameter of hole	= 20.021 mm
Hole tolerance (IT 7)	= 0.021 mm
15% of hole tolerance (0.15 IT 7)	= 0.0031 mm
	≈ 0.004 mm
Maximum reamer diameter:	
$d_{1\ max}$ = 20.021 – 0.004	= 20.017 mm
Manufacturing tolerance of reamer:	
35% of hole tolerance (0.35 IT 7)	= 0.0073 mm
	≈ 0.008 mm
Minimum reamer diameter:	
$d_{1\ min} = d_{1\ max}$ – 0.35 IT 7	
= 20.017 – 0.008	= 20.009 mm

Simplified determination of permissible max. and min. reamer dimensions

To facilitate calculations, the tables on the following pages indicate the upper and lower tolerance limits on the nominal diameter d_1 for the most common tolerance zones.

With the aid of these tolerance limits permissible maximum and minimum reamer dimensions can be calculated as follows:

Example 2: for reamer 20 H 7

Nominal diameter d_1	= 20.000 mm
upper tolerance limit to table + 17 µm	= 0.017 mm
lower tolerance limit to table + 9 µm	= 0.009 mm
i.e. $d_{1\ max}$ = 20.000 + 0.017	= <u>20.017</u> mm
$d_{1\ min}$ = 20.000 + 0.009	= <u>20.009</u> mm

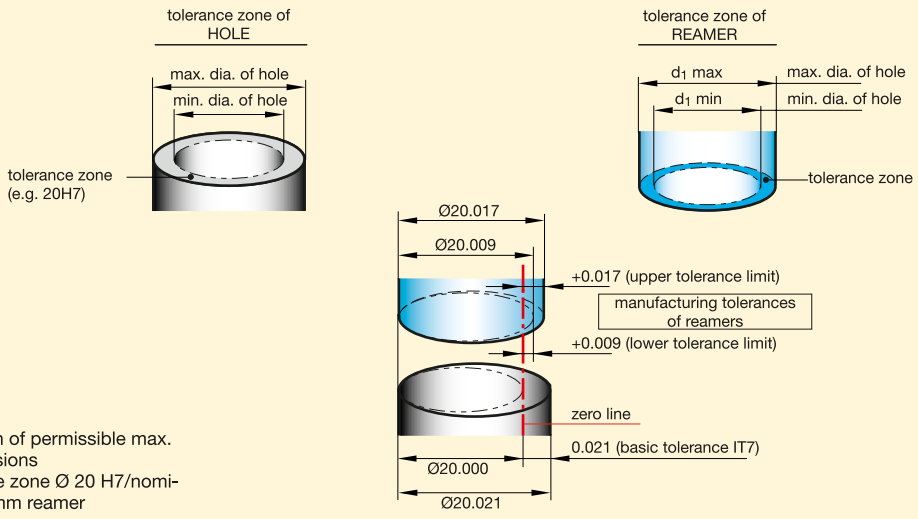


Fig. 9:
Simplified determination of permissible max. and min. reamer dimensions
Example: Hole tolerance zone Ø 20 H7/nominal diameter d1 for 20 mm reamer

*) with reference to the nominal diameter d1. As to the upper and lower tolerances please refer to the following pages.

Designation

For the designation of reamers the ISO abbreviation for the tolerance zone of the hole is indicated after the nominal diameter. Designation of a reamer with nominal diameter d1 = 20 mm, for hole tolerance H 7:

reamer 20 H 7 DIN ...
(" ... ": for DIN no. indication of appropriate reamer)

In special cases, reamers are ordered with maximum and minimum dimensions deviating from this standard, the ISO abbreviation for the hole tolerance zone must be replaced by the upper and lower tolerance limit of the reamer in µm, e.g. for a reamer with a nominal diameter d1 = 20 mm, upper tolerance limit = + (p) 25 µm and lower tolerance limit = + (p) 15 µm:

reamer 20 p 25 p 15 DIN ...

The designation shows a 'p' instead of the plus and an 'm' instead of the minus sign, because »+« and » – « cannot be written on all machines, particularly not on data processing machines.

(tolerance zones A ... G)
DIN 1420

Nominal diameter in mm		Permissible upper and lower tolerances on nominal reamer diameter d_1 in µm for hole tolerance zone									
over	to	A9	A11	B8	B9	B10	B11	C8	C9	C10	C11
1	3	+ 291 + 282	+ 321 + 300	+ 151 + 146	+ 161 + 152	+ 174 + 160	+ 191 + 170	+ 71 + 66	+ 81 + 72	+ 94 + 80	+ 111 + 90
3	6	+ 295 + 284	+ 333 + 306	+ 155 + 148	+ 165 + 154	+ 180 + 163	+ 203 + 176	+ 85 + 78	+ 95 + 84	+ 110 + 93	+ 133 + 106
6	10	+ 310 + 297	+ 356 + 324	+ 168 + 160	+ 180 + 167	+ 199 + 178	+ 226 + 194	+ 98 + 90	+ 110 + 97	+ 129 + 108	+ 156 + 124
10	18	+ 326 + 310	+ 383 + 344	+ 172 + 162	+ 186 + 170	+ 209 + 184	+ 243 + 204	+ 117 + 107	+ 131 + 115	+ 154 + 129	+ 188 + 149
18	30	+ 344 + 325	+ 410 + 364	+ 188 + 176	+ 204 + 185	+ 231 + 201	+ 270 + 224	+ 138 + 126	+ 154 + 135	+ 181 + 151	+ 220 + 174
30	40	+ 362 + 340	+ 446 + 390	+ 203 + 189	+ 222 + 200	+ 255 + 220	+ 306 + 250	+ 153 + 139	+ 172 + 150	+ 205 + 170	+ 256 + 200
40	50	+ 372 + 350	+ 456 + 400	+ 213 + 199	+ 232 + 210	+ 265 + 230	+ 316 + 260	+ 163 + 149	+ 182 + 160	+ 215 + 180	+ 266 + 210
50	65	+ 402 + 376	+ 501 + 434	+ 229 + 212	+ 252 + 226	+ 292 + 250	+ 351 + 284	+ 179 + 162	+ 202 + 176	+ 242 + 200	+ 301 + 234
65	80	+ 422 + 396	+ 521 + 454	+ 239 + 222	+ 262 + 236	+ 302 + 260	+ 361 + 294	+ 189 + 172	+ 212 + 186	+ 252 + 210	+ 311 + 244
80	100	+ 453 + 422	+ 567 + 490	+ 265 + 246	+ 293 + 262	+ 339 + 290	+ 407 + 330	+ 215 + 196	+ 243 + 212	+ 289 + 240	+ 357 + 280
100	120	+ 483 + 452	+ 597 + 520	+ 285 + 266	+ 313 + 282	+ 359 + 310	+ 427 + 350	+ 225 + 206	+ 253 + 222	+ 299 + 250	+ 367 + 290
120	140	+ 545 + 510	+ 672 + 584	+ 313 + 290	+ 345 + 310	+ 396 + 340	+ 472 + 384	+ 253 + 230	+ 285 + 250	+ 336 + 280	+ 412 + 324
140	160	+ 605 + 570	+ 732 + 644	+ 333 + 310	+ 365 + 330	+ 416 + 360	+ 492 + 404	+ 263 + 240	+ 295 + 260	+ 346 + 290	+ 422 + 334
160	180	+ 665 + 630	+ 792 + 704	+ 363 + 340	+ 395 + 360	+ 446 + 390	+ 522 + 434	+ 283 + 260	+ 315 + 280	+ 366 + 310	+ 442 + 354

Nominal diameter in mm		Permissible upper and lower tolerances on nominal reamer diameter d_1 in µm for hole tolerance zone											
over	to	D8	D9	D10	D11	E7	E8	E9	F6	F7	F8	F9	G6	G7
1	3	+ 31 + 26	+ 41 + 32	+ 54 + 40	+ 71 + 50	+ 22 + 18	+ 25 + 20	+ 35 + 26	+ 11 + 8	+ 14 + 10	+ 17 + 12	+ 27 + 18	+ 7 + 4	+ 10 + 6
3	6	+ 45 + 38	+ 55 + 44	+ 70 + 53	+ 93 + 66	+ 30 + 25	+ 35 + 28	+ 45 + 34	+ 16 + 13	+ 20 + 15	+ 25 + 18	+ 35 + 24	+ 10 + 7	+ 14 + 9
6	10	+ 58 + 50	+ 70 + 57	+ 89 + 68	+ 116 + 84	+ 37 + 31	+ 43 + 35	+ 55 + 42	+ 20 + 16	+ 25 + 19	+ 31 + 23	+ 43 + 30	+ 12 + 8	+ 17 + 11
10	18	+ 72 + 62	+ 86 + 70	+ 109 + 84	+ 143 + 104	+ 47 + 40	+ 54 + 44	+ 68 + 52	+ 25 + 21	+ 31 + 24	+ 38 + 28	+ 52 + 36	+ 15 + 11	+ 21 + 14
18	30	+ 93 + 81	+ 109 + 90	+ 136 + 106	+ 175 + 129	+ 57 + 49	+ 68 + 56	+ 84 + 65	+ 31 + 26	+ 37 + 29	+ 48 + 36	+ 64 + 45	+ 18 + 13	+ 24 + 16
30	50	+ 113 + 99	+ 132 + 110	+ 165 + 130	+ 216 + 160	+ 71 + 62	+ 83 + 69	+ 102 + 80	+ 38 + 32	+ 46 + 37	+ 58 + 44	+ 77 + 55	+ 22 + 16	+ 30 + 21
50	80	+ 139 + 122	+ 162 + 136	+ 202 + 160	+ 261 + 194	+ 85 + 74	+ 99 + 82	+ 122 + 96	+ 46 + 39	+ 55 + 44	+ 69 + 52	+ 92 + 66	+ 26 + 19	+ 35 + 24
80	120	+ 165 + 146	+ 193 + 162	+ 239 + 190	+ 307 + 230	+ 101 + 88	+ 117 + 98	+ 145 + 114	+ 54 + 46	+ 65 + 52	+ 81 + 62	+ 109 + 78	+ 30 + 22	+ 41 + 28
120	180	+ 198 + 175	+ 230 + 195	+ 281 + 225	+ 357 + 269	+ 119 + 105	+ 138 + 115	+ 170 + 135	+ 64 + 55	+ 77 + 63	+ 96 + 73	+ 128 + 93	+ 35 + 26	+ 48 + 34

(tolerance zones H ... P)
DIN 1420

Nominal diameter in mm over	to	Permissible upper and lower tolerances on nominal reamer diameter d_1 in µm for hole tolerance zone												
		H6	H7	H8	H9	H10	H11	H12	J6	J7	J8	JS6	JS7	JS8	JS9
1	3	+ 5 + 2	+ 8 + 4	+11 + 6	+21 +12	+ 34 + 20	+ 51 + 30	+ 85 + 50	+ 1 – 2	+ 2 – 2	+ 3 – 2	+ 2 – 1	+ 3 – 1	+ 4 – 1	+ 8 – 1
3	6	+ 6 + 3	+10 + 5	+15 + 8	+25 +14	+ 40 + 23	+ 63 + 36	+102 + 60	+ 3 0	+ 4 – 1	+ 7 0	+ 2 – 1	+ 4 – 1	+ 6 – 1	+10 – 1
6	10	+ 7 + 3	+12 + 6	+18 +10	+30 +17	+ 49 + 28	+ 76 + 44	+127 + 74	+ 3 – 1	+ 5 – 1	+ 8 0	+ 3 – 1	+ 5 – 1	+ 7 – 1	+12 – 1
10	18	+ 9 + 5	+15 + 8	+22 +12	+36 +20	+ 59 + 34	+ 93 + 54	+153 + 90	+ 4 0	+ 7 0	+10 0	+ 3 – 1	+ 6 – 1	+ 8 – 1	+15 – 1
18	30	+11 + 6	+17 + 9	+28 +16	+44 +25	+ 71 + 41	+110 + 64	+178 +104	+ 6 + 1	+ 8 0	+15 + 3	+ 4 – 1	+ 7 – 1	+11 – 1	+18 – 1
30	50	+13 + 7	+21 +12	+33 +19	+52 +30	+ 85 + 50	+136 + 80	+212 +124	+ 7 + 1	+10 + 1	+18 + 4	+ 5 – 1	+ 8 – 1	+13 – 1	+21 – 1
50	80	+16 + 9	+25 +14	+39 +22	+62 +36	+102 + 60	+161 + 94	+255 +150	+10 + 3	+13 + 2	+21 + 4	+ 6 – 1	+10 – 1	+16 – 1	+25 – 1
80	120	+18 +10	+29 +16	+45 +26	+73 +42	+119 + 70	+187 +110	+297 +174	+12 + 4	+16 + 3	+25 + 6	+ 7 – 1	+12 – 1	+18 – 1	+30 – 1
120	180	+21 +12	+34 +20	+53 +30	+85 +50	+136 + 80	+212 +124	+340 +200	+14 + 5	+20 + 6	+31 + 8	+ 8 – 1	+14 0	+22 – 1	+35 0

Our standard manufacturing accuracy

Nominal diameter in mm over	to	Permissible upper and lower tolerances on nominal reamer diameter d_1 in µm for hole tolerance zone												
		K6	K7	K8	M6	M7	M8	N6	N7	N8	N9	N10	N11	P6	P7
1	3	– 1 – 4	– 2 – 6	– 3 – 8	– 3 – 6	– 4 – 8		– 5 – 8	– 6 –10	– 7 –12	– 8 –17	–10 –24	– 13 – 34	– 7 –10	– 8 –12
3	6	0 – 3	+ 1 – 4	+ 2 – 5	– 3 – 6	– 2 – 7	– 1 – 8	– 7 –10	– 6 –11	– 5 –12	– 5 –16	– 8 –25	– 12 – 39	–11 –14	–10 –15
6	10	0 – 4	+ 2 – 4	+ 2 – 6	– 5 – 9	– 3 – 9	– 3 –11	– 9 –13	– 7 –13	– 7 –15	– 6 –19	– 9 –30	– 14 – 46	–14 –18	–12 –18
10	18	0 – 4	+ 3 – 4	+ 3 – 7	– 6 –10	– 3 –10	– 3 –13	–11 –15	– 8 –15	– 8 –18	– 7 –23	–11 –36	– 17 – 56	–17 –21	–14 –21
18	30	0 – 5	+ 2 – 6	+ 5 – 7	– 6 –11	– 4 –12	– 1 –13	–13 –18	–11 –19	– 8 –20	– 8 –27	–13 –43	– 20 – 66	–20 –25	–1 –26
30	50	0 – 6	+ 3 – 6	+ 6 – 8	– 7 –13	– 4 –13	– 1 –15	–15 –21	–12 –21	– 9 –23	–10 –32	–15 –50	– 24 – 80	–24 –30	–21 –30
50	80	+ 1 – 6	+ 4 – 7	+ 7 –10	– 8 –15	– 5 –16	– 2 –19	–17 –24	–14 –25	–11 –28	–12 –38	–18 –60	– 29 – 96	–29 –36	–26 –37
80	120	0 – 8	+ 4 – 9	+ 7 –12	–10 –18	– 6 –19	– 3 –22	–20 –28	–16 –29	–13 –32	–14 –45	–21 –70	– 33 –110	–34 –42	–30 –43
120	180	0 – 9	+ 6 – 8	+10 –13	–12 –21	– 6 –20	– 2 –25	–24 –33	–18 –32	–14 –37	–15 –50	–24 –80	– 38 –126	–40 –49	–43 –48

(tolerance zones R ... Z)
DIN 1420

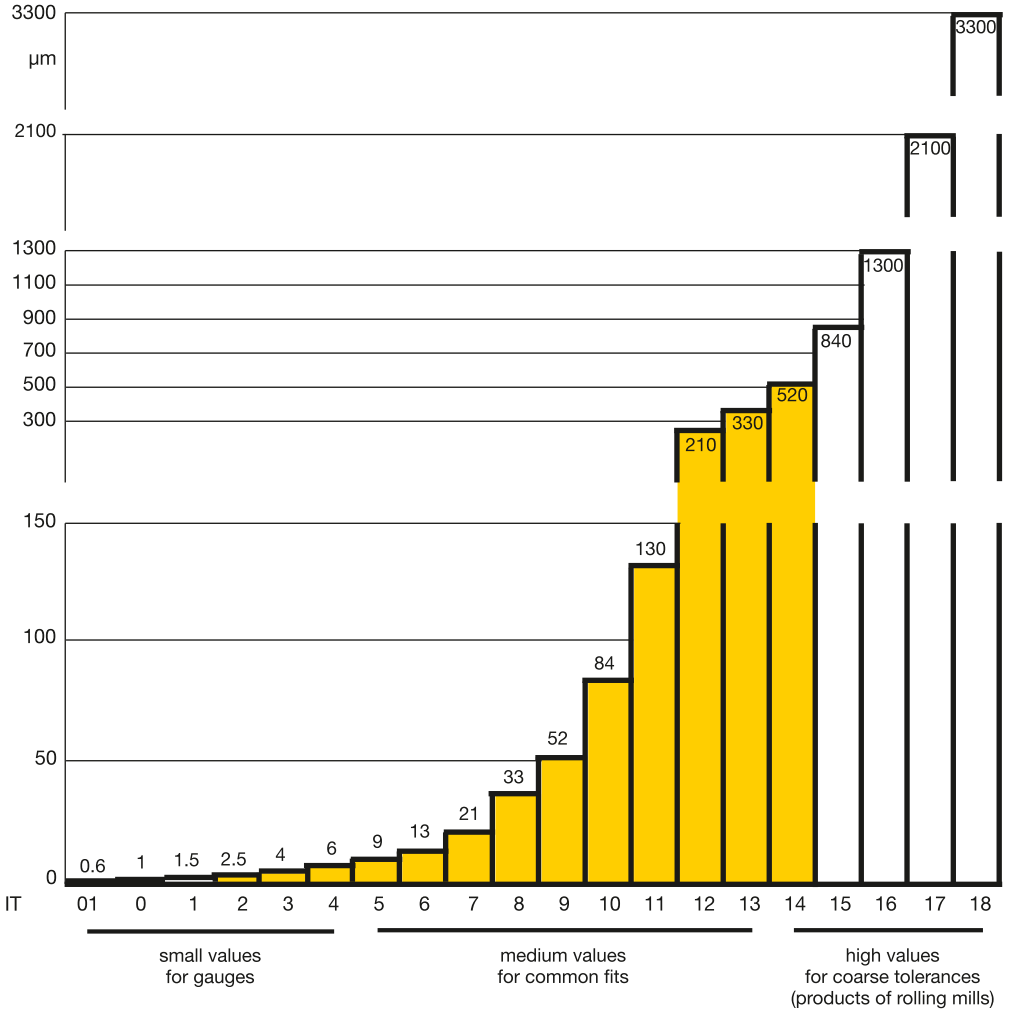
Nominal diameter in mm		Permissible upper and lower tolerances on nominal reamer diameter d_1 in µm for hole tolerance zone											
over	to	R6	R7	S6	S7	T6	U6	U7	U10	X10	X11	Z10	Z11
1	3	– 11 – 14	– 12 – 16	– 15 – 18	– 16 – 20		– 19 – 22	– 20 – 24				– 32 – 46	
3	6	– 14 – 17	– 13 – 18	– 18 – 21	– 17 – 22		– 22 – 25	– 21 – 26	– 31 – 48			– 43 – 60	
6	10	– 18 – 22	– 16 – 22	– 22 – 26	– 20 – 26		– 27 – 31	– 25 – 31	– 37 – 58			– 51 – 72	
10	14	– 22 – 26	– 19 – 26	– 27 – 31	– 24 – 31		– 32 – 36	– 29 – 36	– 44 – 69			– 61 – 86	
14	18	– 22 – 26	– 19 – 26	– 27 – 31	– 24 – 31		– 32 – 36	– 29 – 36	– 44 – 69	– 56 – 81		– 71 – 96	
18	24	– 26 – 31	– 24 – 32	– 33 – 38	– 31 – 39		– 39 – 44	– 37 – 45		– 67 – 97		– 86 –116	
24	30	– 26 – 31	– 24 – 32	– 33 – 38	– 31 – 39	– 39 – 44	– 46 – 51	– 44 – 52		– 77 –107		–101 –131	–108 –154
30	40	– 32 – 38	– 29 – 38	– 41 – 47	– 38 – 47	– 46 – 52	– 58 – 64	– 55 – 64		– 95 –130		–127 –162	–136 –192
40	50	– 32 – 38	– 29 – 38	– 41 – 47	– 38 – 47	– 52 – 58	– 68 – 74	– 65 – 74	– 85 –120	–112 –147		–151 –186	–160 –216
50	65	– 38 – 45	– 35 – 46	– 50 – 57	– 47 – 58	– 63 – 70	– 84 – 91	– 81 – 92	–105 –147	–140 –182	–151 –218	–190 –232	–201 –268
65	80	– 40 – 47	– 37 – 48	– 56 – 63	– 53 – 64	– 72 – 79	– 99 –106	– 96 –107	–120 –162	–164 –206	–175 –242	–228 –270	–239 –306
80	100	– 48 – 56	– 44 – 57	– 68 – 76	– 64 – 77	– 88 – 96	–121 –129	–117 –130	–145 –194	–199 –248	–211 –288	–279 –328	–291 –368
100	120	– 51 – 59	– 47 – 60	– 76 – 84	– 72 – 85	–101 –109	–141 –149	–137 –150	–165 –214	–231 –280	–243 –320	–331 –380	–343 –420
120	140	– 60 – 69	– 54 – 68	– 89 – 98	– 83 – 97	–119 –128	–167 –176	–161 –175	–194 –250	–272 –328	–286 –374	–389 –445	–403 –491
140	160	– 62 – 71	– 56 – 70	– 97 –106	– 91 –105	–131 –140	–187 –196	–181 –195	–214 –270	–304 –360	–318 –406	–439 –495	–453 –541
160	180	– 65 – 74	– 59 – 73	–105 –114	– 99 –113	–143 –152	–207 –216	–201 –215	–234 –290	–334 –390	–348 –436	–489 –545	–503 –591

Nominal diameter in mm		Further tolerances for machine reamers
over	to	mm
0.95	5.50	0.000 / +0.004
5.50	12.05	0.000 / +0.005

Basic ISO tolerances for length dimensions: 1 - 120 mm
DIN ISO 286-1

Range of nominal size mm		IT in µm											
		3	4	5	6	7	8	9	10	11	12	13	14
from to	1 3	2	3	4	6	10	14	25	40	60	100	140	250
over to	3 6	2.5	4	5	8	12	18	30	48	75	120	180	300
over to	6 10	2.5	4	6	9	15	22	36	58	90	150	220	360
over to	10 18	3	5	8	11	18	27	43	70	110	180	270	430
over to	18 30	4	6	9	13	21	33	52	84	130	210	330	520
over to	30 50	4	7	11	16	25	39	62	100	160	250	390	620
over to	50 80	5	8	13	19	30	46	74	120	190	300	460	740
over to	80 120	6	10	15	22	35	54	87	140	220	350	540	870

Example: Basic ISO tolerances for a range of nominal sizes over 18 to 30 mm



Nominal diameter in mm over	to	A		B				C			
		9	11	8	9	10	11	8	9	10	11
0	3	+295 +270	+330 +270	+154 +140	+165 +140	+180 +140	+200 +140	+74 +60	+85 +60	+100 +60	+120 +60
3	6	+300 +270	+345 +270	+158 +140	+170 +140	+188 +140	+215 +140	+88 +70	+100 +70	+118 +70	+145 +70
6	10	+316 +280	+370 +280	+172 +150	+186 +150	+208 +150	+240 +150	+102 +80	+116 +80	+138 +80	+170 +80
10	18	+333 +290	+400 +290	+177 +150	+193 +150	+220 +150	+260 +150	+122 +95	+138 +95	+165 +95	+205 +95
18	30	+352 +300	+430 +300	+193 +160	+212 +160	+244 +160	+290 +160	+143 +110	+162 +110	+194 +110	+240 +110
30	40	+372 +310	+470 +310	+209 +170	+232 +170	+270 +170	+330 +170	+159 +120	+182 +120	+220 +120	+280 +120
40	50	+382 +320	+480 +320	+219 +180	+242 +180	+280 +180	+340 +180	+169 +130	+192 +130	+230 +130	+290 +130
50	65	+414 +340	+530 +340	+236 +190	+264 +190	+310 +190	+380 +190	+186 +140	+214 +140	+260 +140	+330 +140
65	80	+434 +360	+550 +360	+246 +200	+274 +200	+320 +200	+390 +200	+196 +150	+224 +150	+270 +150	+340 +150
80	100	+467 +380	+600 +380	+274 +220	+307 +220	+360 +220	+440 +220	+224 +170	+257 +170	+310 +170	+390 +170
100	120	+497 +410	+630 +410	+294 +240	+327 +240	+380 +240	+460 +240	+234 +180	+267 +180	+320 +180	+400 +180

Nominal diameter in mm over	to	D					E			F			
		8	9	10	11	12	7	8	9	6	7	8	9
0	3	+34 +20	+45 +20	+60 +20	+80 +20	+120 +20	+24 +14	+28 +14	+39 +14	+12 +6	16 +6	+20 +6	+31 +6
3	6	+48 +30	+60 +30	+78 +30	+105 +30	+150 +30	+32 +20	+38 +20	+50 +20	+18 +10	+22 +10	+28 +10	+40 +10
6	10	+62 +40	+76 +40	+98 +40	+130 +40	+190 +40	+40 +25	+47 +25	+61 +25	+22 +13	+28 +13	+35 +13	+49 +13
10	18	+77 +50	+93 +50	+120 +50	+160 +50	+230 +50	+50 +32	+59 +32	+75 +32	+27 +16	+34 +16	+43 +16	+59 +16
18	30	+98 +65	+117 +65	+149 +65	+195 +65	+275 +65	+61 +40	+73 +40	+92 +40	+33 +20	+41 +20	+53 +20	+72 +20
30	50	+119 +80	+142 +80	+180 +80	+240 +80		+75 +50	+89 +50	+112 +50	+41 +25	+50 +25	+64 +25	+87 +25
50	80	+146 +100	+174 +100	+220 +100	+290 +100		+90 +60	+106 +60	+134 +60	+49 +30	+60 +30	+76 +30	+104 +30
80	120	+174 +120	+207 +120	+260 +120	+340 +120		+107 +72	+126 +72	+159 +72	+58 +36	+71 +36	+90 +36	+123 +36
120	180							+148 +85					
180	250							+172 +100					

Nominal diameter in mm		G		H							J		
over	to	6	7	6	7	8	9	10	11	12	6	7	8
0	3	+8 +2	+12 +2	+6 0	+10 0	+14 0	+25 0	+40 0	+60 0	+100 0	+2 -4	+4 -6	+6 -8
3	6	+12 +4	+16 +4	+8 0	+12 0	+18 0	+30 0	+48 0	+75 0	+120 0	+5 -3	+6 -6	+10 -8
6	10	+14 +5	+20 +5	+9 0	+15 0	+22 0	+36 0	+58 0	+90 0	+150 0	+5 -4	+8 -7	+12 -10
10	18	+17 +6	+24 +6	+11 0	+18 0	+27 0	+43 0	+70 0	+110 0	+180 0	+6 -5	+10 -8	+15 -12
18	30	+20 +7	+28 +7	+13 0	+21 0	+33 0	+52 0	+84 0	+130 0	+210 0	+8 -5	+12 -9	+20 -13
30	50	+25 +9	+34 +9	+16 0	+25 0	+39 0	+62 0	+100 0	+160 0	+250 0	+10 -6	+14 -11	+24 -15
50	80	+29 +10	+40 +10	+19 0	+30 0	+46 0	+74 0	+120 0	+190 0	+300 0	+13 -6	+18 -12	+28 -18
80	120	+34 +12	+47 +12	+22 0	+35 0	+54 0	+87 0	+140 0	+220 0	+350 0	+16 -6	+22 -13	+34 -20
120	180		+54 +14	+25 0	+40 0	+63 0	+100 0	+160 0	+250 0		+18 -7	+26 -14	+41 -22
180	250		+61 +15	+29 0	+46 0	+72 0	+115 0	+185 0	+290 0		+22 -7	+30 -16	+47 -25

Nominal diameter in mm		JS				K			M		
over	to	6	7	8	9	6	7	8	6	7	8
0	3	+3 -3	+5 -5	+7 -7	+12,5 -12.5	0 -6	0 -10	0 -14	-2 -8	-2 -12	-4 -18
3	6	+4 -4	+6 -6	+9 -9	+15 -15	+2 -6	+3 -9	+5 -13	-1 -9	0 -12	+2 -16
6	10	+4.5 -4.5	+7.5 -7.5	+11 -11	+18 -18	+2 -7	+5 -10	+6 -16	-3 -12	0 -215	+1 -21
10	18	+5.5 -5.5	+9 -9	+13.5 -13.5	+21.5 -21.5	+2 -9	+6 -12	+8 -19	-4 -15	0 -18	+2 -25
18	30	+6.5 -6.5	+10.5 -10.5	+16.5 -16.5	+26 -26	+2 -11	+6 -15	+10 -23	-4 -17	0 -21	+4 -29
30	50	+8 -8	+12.5 -12.5	+19.5 -19.5	+31 -31	+3 -13	+7 -18	+12 -27	-4 -20	0 -25	+5 -34
50	80	+9.5 -9.5	+15 -15	+23 -23	+37 -37	+4 -15	+9 -21	+14 -32	-5 -24	0 -30	+5 -41
80	120	+11 -11	+17.5 -17.5	+27 -27	+43.5 -43.5	+4 -18	+10 -25	+16 -38	-6 -28	0 -35	+6 -48
120	180					+4 -21	+12 -28				
180	250					+5 -24	+13 -33				

Nominal diameter in mm over	to	N						P			R	
		6	7	8	9	10	11	6	7	9	6	7
0	3	-4 -10	-4 -14	-4 -8	-4 -29	-4 -44	-4 -64	-6 -12	-6 -16	-6 -31	-10 -16	-10 -20
3	6	-5 -13	-4 -16	-2 -20	0 -30	0 -48	0 -75	-9 -17	-8 -20	-12 -42	-12 -20	-11 -23
6	10	-7 -16	-4 -19	-3 -25	0 -36	0 -58	0 -90	-12 -21	-9 -24	-15 -51	-16 -25	-13 -28
10	18	-9 -20	-5 -23	-3 -30	0 -43	0 -70	0 -110	-15 -26	-11 -29	-18 -61	-20 -31	-16 -34
18	30	-11 -24	-7 -28	-3 -36	0 -52	0 -84	0 -130	-18 -31	-14 -35	-22 -74	-24 -37	-20 -41
30	50	-12 -28	-8 -33	-3 -42	0 -62	0 -100	0 -160	-21 -37	-17 -42	-26 -88	-29 -45	-25 -50
50	65	-14 -33	-9 -39	-4 -50	0 -74	0 -120	0 -190	-26 -45	-21 -51	-32 -106	-35 -54	-30 -60
65	80	-14 -33	-9 -39	-4 -50	0 -74	0 -120	0 -190	-26 -45	-21 -51	-32 -106	-37 -56	-32 -62
80	100	-16 -38	-10 -45	-4 -58	0 -87	0 -140	0 -220	-30 -52	-24 -59	-37 -124	-44 -66	-38 -73
100	120	-16 -38	-10 -45	-4 -58	0 -87	0 -140	0 -220	-30 -52	-24 -59		-47 -69	-41 -76

Nominal diameter in mm over	to	S		T	U			X		Z	
		6	7	6	6	7	10	10	11	10	11
0	3	-14 -20	-14 -24	-18 -24	-18 -24	-18 -28	-18 -58	-20 -60	-20 -80	-26 -66	-26 -86
3	6	-16 -24	-15 -27	-20 -28	-20 -28	-19 -31	-23 -71	-28 -76	-28 -103	-35 -83	-35 -110
6	10	-20 -29	-17 -32	-25 -34	-25 -34	-22 -37	-28 -86	-34 -92	-34 -124	-42 -100	-42 -132
10	14	-25 -36	-21 -39	-30 -41	-30 -41	-26 -44	-33 -103	-40 -110	-40 -150	-50 -120	-50 -160
14	18	-25 -36	-21 -39	-30 -41	-30 -41	-26 -44	-33 -103	-45 -115	-45 -155	-60 -130	-60 -170
18	24	-31 -44	-27 -48	-37 -50	-37 -50	-33 -54	-41 -125	-54 -138	-54 -184	-73 -157	-73 -203
24	30	-31 -44	-27 -48	-37 -50	-44 -57	-40 -61	-48 -132	-64 -148	-64 -194	-88 -172	-88 -218
30	40	-38 -54	-34 -59	-43 -59	-55 -71	-51 -76	-60 -160	-80 -180	-80 -240	-112 -212	-112 -272
40	50	-38 -54	-34 -59	-49 -65	-65 -81	-61 -86	-70 -170	-97 -197	-97 -257	-136 -236	-136 -296
50	65	-47 -66	-42 -72	-60 -79	-81 -100	-76 -106	-87 -207	-122 -242	-122 -312	-172 -292	-172 -362
65	80	-53 -72	-48 -78	-69 -88	-96 -115	-91 -121	-102 -222	-146 -266	-146 -336	-210 -330	-210 -400
80	100	-64 -86	-58 -93	-84 -106	-117 -139	-111 -146	-124 -264	-178 -318	-178 -398	-258 -398	-258 -478
100	120	-72 -94	-66 -101	-97 -119	-137 -159	-131 -166	-144 -284	-210 -350	-210 -430	-310 -450	-310 -530

Carbide reamer designs

Our carbide grades are applied in the following reamer types:
- Solid carbide NC machine reamers:
  Solid carbide
- Carbide machine reamers:
  ≤ Ø 9.50 mm solid carbide
  > Ø 9.50 mm carbide tipped
- Carbide expanding machine reamers:
  Carbide tipped

Expanding Reamers
Adjustment range

Expanding reamers can be adjusted by the following values according to the diameter range:
≥ Ø 12 mm by approx. 0.015 mm
≥ Ø 17 mm by approx. 0.020 mm
≥ Ø 24 mm by approx. 0.025 mm
≥ Ø 32 mm by approx. 0.030 mm

Attention:
Only expand reamer! Because of risk of breakage the pre-tension should never be relieved by turning the set screw anti-clockwise!

Expanding reamers
Adjustment range

Expanding reamers have an adjustment range of approx. 0.03 mm via a tapered adjustment screw.

Adjustable hand reamers
Adjustment range

Adjustable hand reamers are ground to nominal size and not for holes with tolerance zone H7. The adjustment range is 1/100 of the nominal diameter, i.e. for Ø 10.00 mm approximately 0.1 mm. From Ø 6.50 mm adjustment is via lock nut.

Shell reamers
Taper bore

Shell reamers to DIN 219 have a taper bore with a taper 1:30 and a driving slot to DIN 138.

Cermet reamers

The following table contains a brief summary of the suitability of cermet reamers as well as the recommended cutting rates in relation to the material to be machined. They are approximate values only and can vary from application to application.

		Feed rates for the machining with cermet in mm/rev.		
Materials well suited for the machining with cermet	Cutting speeds for reaming with cermet	Diameter < 7 mm	Diameter 7-16 mm	Diameter > 16 mm
Structural steels, i.e. St33, St50-2	100-180 m/min	0.3-0.4	0.6-0.8	0.8-1.4
Case hardened steels, i.e. C10, 16MnCr5	80-140 m/min			
Free-cutting steels, i.e.11SMnPb30, 9SMn36	100-180 m/min			
Heat-treatable steels, i.e. 42CrMo4, 28Cr4	80-140 m/min			
Grey cast iron GGG, i.e. GGG40, GGG60	100-180 m/min			

GUHRING

SPECIAL REAMERS

Special application tasks require special tooling solutions. We, therefore, offer special solutions in addition to our comprehensive standard range:

- PCD tools for cylinder head parent metal machining
- CBN tools for the machining of cylinder head valve seats
- Carbide tools with specially developed geometries and specifically developed carbide grades for machining the cylinder head valve guide in sintered metal as well as in brass

Special reamer questionnaire

Customer no.	New cust.	RFQ/P.O. number	
Company		Contact	
Street		Town/postcode	Contact
Telephone		Fax	
Date		Signature	

❑ **Inquiry** ❑ **Order**

(Please fill in your required parameters into the yellow boxes)

Workpiece (if possible with technical drawing)

Nominal diameter of hole:		Hole zone tol.:		Reaming depth:	
Hole type:	❑ Through hole ❑ Blind hole				
Workpiece material:		Surface quality (R_z/R_a):			

Tool design	❑ **solid carbide** ❑ **carbide tipped** ❑ **HSS-E** ❑ **Cermet**		
Shank:	❑ DIN 6535 (h6):	Ø	mm
	❑ straight:	Ø	mm
	❑ Morse taper:	Morse taper size	
Required reach:	mm		
Reamer type: ❑ Hand reamer ❑ Machine reamer	Cooling: ❑ external ❑ int.:	bar	❑ MQL

Additional details

Machine type:			
Tool holder:	❑ Hydraulic/shrink fit chucks	❑ Collet	❑ Drilling chuck
Other:			

Notes/drawings:

Special taper reamer questionnaire

Customer no.	New cust.	RFQ/P.O. number	
Company		Contact	
Street		Town/postcode	Contact
Telephone		Fax	
Date		Signature	

❑ **Inquiry** ❑ **Order**

(Please fill in your required parameters into the yellow boxes)

In order to provide the optimal solution for your specific taper reamer application, please complete the questionnaire and include a drawing if possible. One of our reaming experts will contact you as soon as possible.

Workpiece (if possible with technical drawing)

Taper ratio:	:	small Ø:	mm	large Ø:	mm
Taper length:	mm	Straight pilot hole: ❑		with Ø	mm
Pre-drilling taper/step design ❑	small Ø	mm	large Ø		mm
Workpiece material:		Surface quality (R_z/R_a):			

Tool design	**❑ solid carbide ❑ carbide tipped ❑ HSS-E**			
Shank:	❑ DIN 6535 (h6):	Ø	mm	
	❑ straight:	Ø	mm	
	❑ Morse taper:	Morse taper size		
Required reach:	mm			
Reamer type: ❑ Hand reamer ❑ Machine reamer	Cooling: ❑ external ❑ int.:	bar	❑ MQL	

Additional details

Machine type:			
Tool holder:	❑ Hydraulic/shrink fit chucks	❑ Collet	❑ Drilling chuck
Other:			

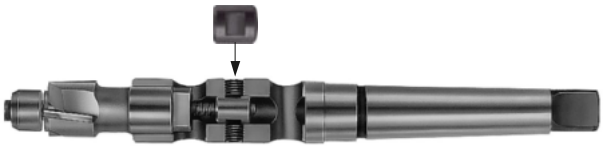
Notes/drawings:

1. Tool safety locking

For automatic machines we recommend that short counterbores be secured in the holder by the use of one of the following 2 alternatives:

a) Locking with safety bolt Guhring no. 1648
The safety bolt is screwed into the short counterbore and clamped in the holder (Guhring no. 1629, 1630) by means of 2 set screws.

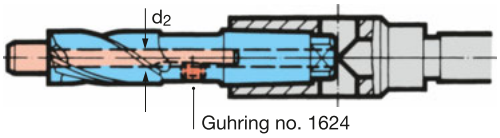
b) Locking with pilot Guhring no. 1645
The pilot together with the locknut, Guhring no. 1649, locks the short counterbore in the holder (Guhring no. 1629, 1630)



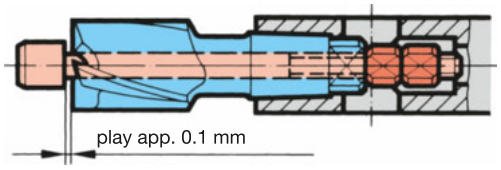
2. Mounting of pilot

Grease pilot on seat d2 and insert in hole of short counterbore. Attach nuts (exception: Guhring no. 1615). Set play and nuts. When mounted, the pilot must be easy to turn.

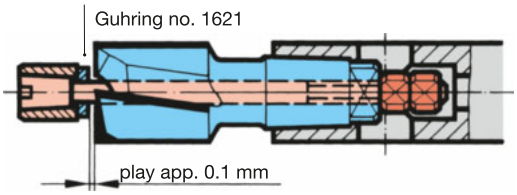
Mounting of pilot Guhring no. 1615
in short counterbores Guhring no. 1602 and 1603, for short taper size 0. The pilot is held directly in the short counterbore by 1 set screw, Guhring no. 1624.



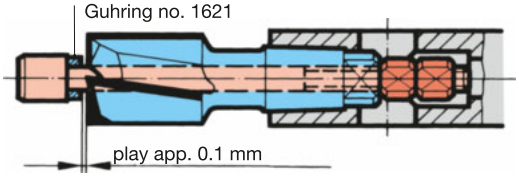
Mounting of pilot Guhring no. 1616
a) in short counterbores Guhring no. 1601, 1602 and 1605, taper size 1-7.
The pilot should be adjusted with the 2 locknuts so as to ensure a play of approx. 0.1 mm between pilot and short counterbore.



b) in short counterbores Guhring no. 1603, 1604, 1606
For carbide-tipped short counterbores insert the protective washer as per Guhring no. 1621 between the pilot and cutting edge with a play of approx. 0.1 mm so as to protect the cutting edge corner.

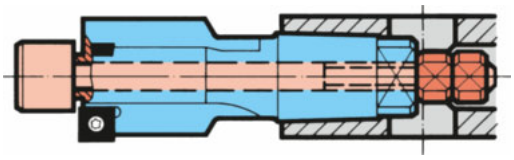


Mounting of pilot Guhring no. 1617
a) in all short counterbores except Guhring no. 1654.
Always insert protective washer, Guhring no. 1621, between tool and pilot by ensuring a play of approx. 0.1 mm.



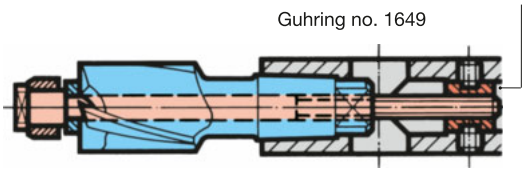
2. Mounting of pilot

b) in counterbore indexable insert Guhring no. 1654
Mounting of pilot requires no protective washer as the tool is provided with a special supporting face. Exception: pilot with reduced diameter (see table below).

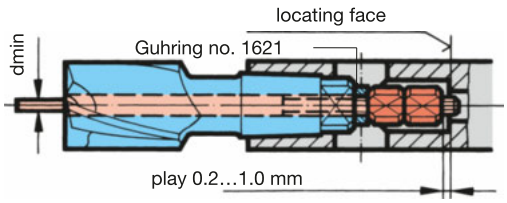


Mounting of pilot for tool safety locking Guhring no. 1645 in all short counterbores

Replace extractor bush in holder (see below) with locknut Guhring no. 1649. Insert counterbore in holder as described under item 3. Turn pilot together with protective washer and tighten.



Mounting of pilots in short counterbores with pilot diameter smaller (dmin) than those of the hole
When inserting a pilot with a diameter smaller than dmin insert several washers Guhring no. 1621 between the counterbore and nuts by ensuring a play of 0.2 to 1.0 mm in relation to the counterbore size. Thus, the axial pressure generated by the pilot is absorbed by the holder and not by the counterbore thus avoiding possible damage to the cutting edges.



Limiting values for pilot diameter mm dmin

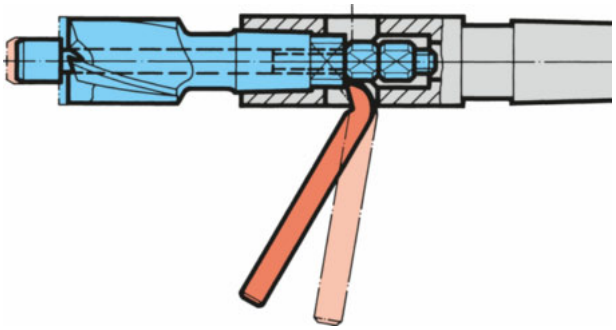
Taper size	HSS-counterbore	Carbide counterbore
1	4.5	6.5
2	6.0	8.5
3	7.0	9.5
4	9.0	12.0
5	11.0	15.0
5.5	12.0	18.0
6	14.0	19.0
7	17.0	22.0

3. Mounting of short counterbore in holder

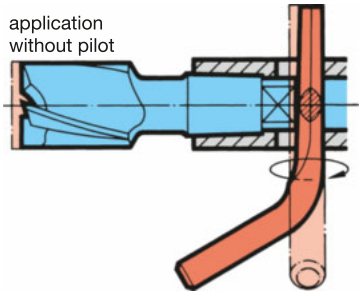
Thoroughly degrease inside taper of holder as well as outside taper of short counterbore. The tapers are precision ground. Proper seating is therefore only ensured when both inside and outside tapers are completely free from grease and foreign matter.
When mounting the short counterbore in the holder, turn it to the right until the drive pin stops. Fasten by tapping the holder against a hard wood, aluminium or lead surface.

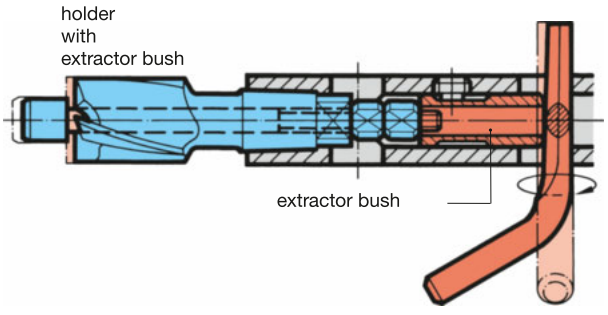
4. Removal of short counterbore from holder

a) for short counterbores with pilots use extractor Guhring no. 1650. Suitable for extracting short counterbore with taper sizes 1 to 7 from holders of Guhring no. 1625, 1626, 1627 and 1628.



b) with extractor Guhring no. 1651
Suitable for extracting short counterbores with taper sizes 1 to 7 from the holders of Guhring no. 1625, 1626, 1627 and 1628 as well as from holders Guhring no. 1629 and 1630.





Internal drawbolt threads for taper shank spot facers

MK	Internal drawbolt thread to DIN 228, part 1, form A
1	M6
2	M10
3	M12
4	M16

Drawbolt threads for pilot counterbores and spotfacers with drawbolt

Ø- mm	Internal drawbolt thread to DIN 228, part 1, form A
≤ 8.50	without
> 8	with

Pilots

Pilot counterbores and spotfacers are applied with interchangeable pilots on demand.

Back spotfacer fitment

Back spotfacers generally have a bayonet-fitting.

EW 100 G de-burring fork

The operating principle of the de-burring fork is simplicity itself. The nominal diameter of the de-burring fork is marginally smaller than the diameter of the hole to be de-burred. However, the tool is split in the cutting portion area so it can, with the assistance of a pivot located externally in one of the forks, be pressed together and fed through the hole. When this pivot exits the other end of the through hole, the fork expands again and is accurately positioned in the hole. The length of the split in the cutting portion as well as a defined pre-tension determines the pressure exerted by the fork against the workpiece.

Up to three cutting edges are positioned externally on the de-burring fork and perform des Bohrungsaustritts of the hole. The positioning and design determines if the tool merely performs a de-burring operation or also produces a chamfer or radius.

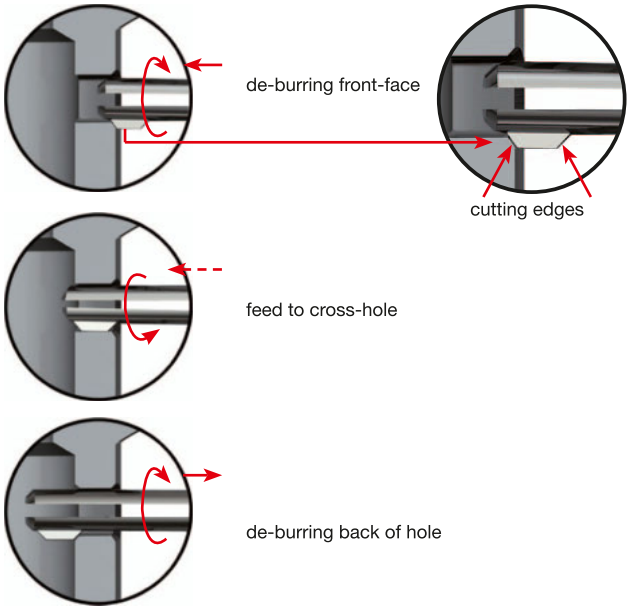
Advantages:

- cost-efficient, because the standard tool offers considerable cost-savings in comparison with special tooling.

- universal for tooling, milling, turning and robotic applications. In addition, the diameter bridging of 0.25 mm makes it possible to apply the de-burring fork in large tolerance holes. Valuable set-up time and set-up costs are eliminated!

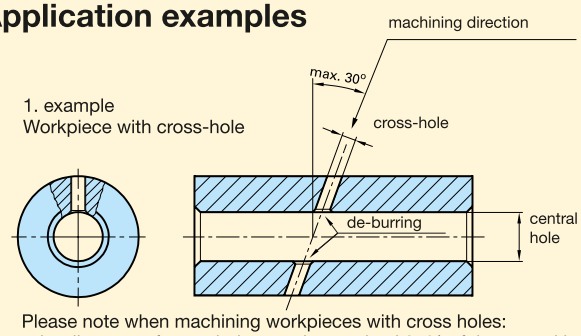
- increased productivity, because the de-burring fork de-burrs automatically with one set-up. Expensive and extensive manual operations are no longer required.

Operation



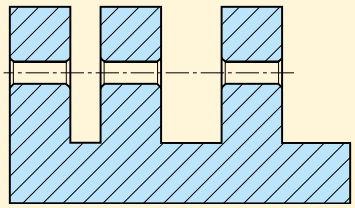
Step by step:
The automatically internal and external de-burring with de-burring fork EW 100 G is an easy and cost saving alternative to common, extensive manual operations. Just one tool is required for all machining steps.

Application examples



Please note when machining workpieces with cross holes:
- the diameter of cross hole must be maximal 35% of the central hole
- the diameter of cross hole must be 40% larger than the cutting length l4

2. example
Workpiece with multi-interrupted cut



Universal application:
The new ex-stock de-burring fork machines workpieces with one cross-hole as well as workpieces with multi-interrupted cut and produces high quality de-burred faces and ends of the hole.

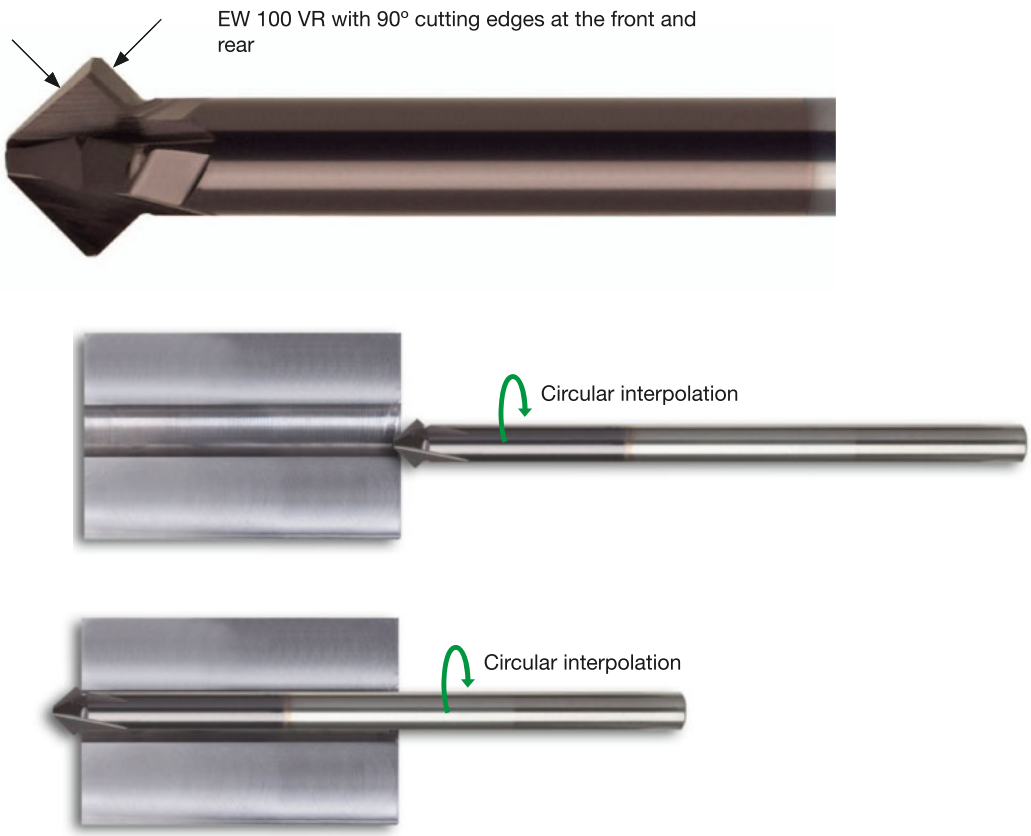
Diameter range (mm)	Speed (rev./min)
2 - 2.9	1000
3 - 3.9	960
4 - 4.9	940
5 - 5.9	900
6 - 6.9	880
7 - 8.1	860

Feed f: 0.1 - 0.2 mm/rev

Important:
Please note, that the cutting parameters are recommendations. They can be adapted to higher and lower cutting parameters.

EW 100 VR front/back de-burrer

Guhring's solid carbide EW 100 VR front/back de-burrer with TiAlN-coating as a standard tool enables de-burring as well as chamfering of hole entry and exit with a 90° angle. EW 100 VR possesses a milling head with a front and back cutting region. To de-burr or chamfer the tool performs a circular milling movement along the hole edge or contour.



Cutting parameters for front/back de-burrer

Material group	Tens. strength Hard- MPa (N/mm²) ness	v_c (m/min)	Feed col. no.
Steels	< 850	*120 - 200*	71
	850-1200	*100 - 180*	71
	> 1200	*80 - 140*	71
Hardened steels	< 54 HRC	*60 - 120*	71
	54-60 HRC	*40 - 80*	71
Stainless/acid-resistant steels	< 850	*80 - 120*	71
Nickel-based alloys	< 1300	*30 - 60*	71
Ti-alloys	< 1300	*50 - 100*	**71**
Cast materials	< 240 HB30	*120 - 180*	**72**
	> 240 HB30	*100 - 160*	72
Al wrought alloys < 3% Si		*150 - 250*	72
Al cast alloys > 3% Si		*100 - 200*	72
Magnesium alloys		*150 - 250*	72
Non-ferrous alloys	< 850	*30 - 200*	72

Feed column no. (mm/rev)

Ø	71	72
≤ 3.00	0.060	0.080
4.00	0.100	0.125
5.00	0.100	0.125
6.30	0.125	0.160
8.00	0.160	0.200
10.00	0.200	0.250
12.50	0.200	0.250

Important:
Please note that the cutting parameters are recommendations. They can be adjusted up or down.

Solid carbide de-burring spiral EW 100 S

For internal de-burring of cross-holes through the central hole, Guhring has developed the solid carbide de-burring spiral EW 100 S. The slotted tool is available as a semi-standard tool with immediate effect, i. e. inside the recommended diameter ranges tools can be supplied in one-hundreth increments with the respective shank and length dimensions as well as number of cutting edges with short delivery times and at favourable prices. In addition, at any time other customer specific solutions as special tools, for example, with further reach or other shank diameters.

The principle of function of the de-burring spiral EW 100 S is based on the pre-tension of the grooved cutting portion. In the area of the cutting portion, the de-burring spiral has a fractionally larger diameter than the bore to be machined. Through the run-on, the grooved cutting portion is pressed together on entry into the hole to be machined and thereby pre-tensioned. The pre-tension ensures that inside the bore and especially in the area of the cross-hole to be de-burred there is a perfect fit of the cutting spiral at the wall of the bore or the edges of the cross-hole respectively. The burr in the cross-hole is subsequently accurately and cleanly peeled off at the root. Thereby very small chips are created that can be evacuated problem-free from the hole.

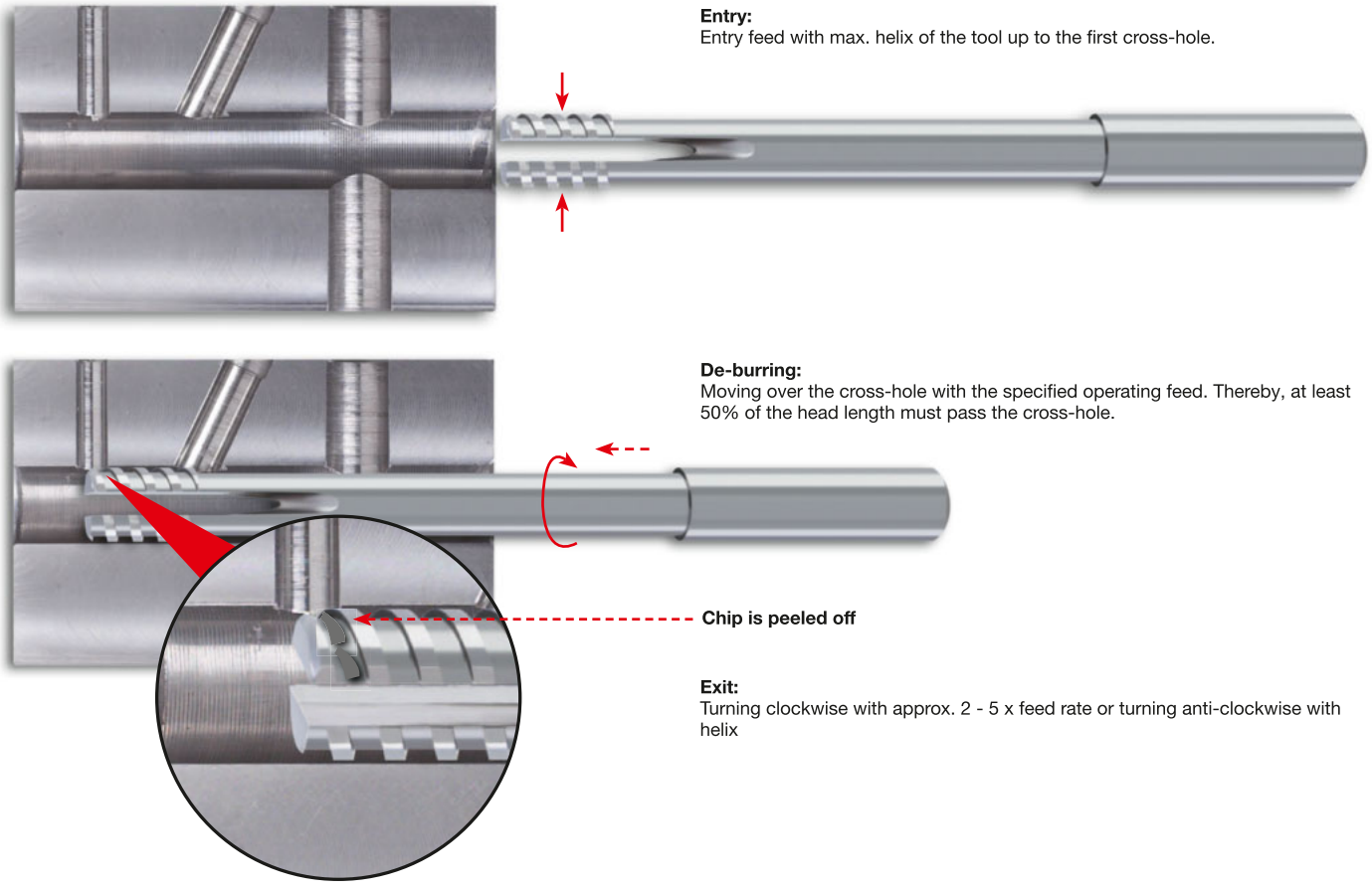
Pre-requisite for the development of the de-burring spiral EW 100 S was a carbide as tool material that possesses an accordingly low rigidity and permits the necessary deformation in the cutting edge area. Thanks to Guhring's carbide expertise in development and production, then a carbide with such special attributes is available.

Cutting parameters de-burring spiral

Ø range (mm)	v_c m/min	fu (mm)
< Ø 8	15 - 25	0.2 - 0.3
≥ Ø 8	15 - 25	0.4 - 0.8

Important:
Please note, that the cutting parameters are recommendations. They can be adapted to higher and lower cutting parameters.

Die Funktionsweise



Entry:
Entry feed with max. helix of the tool up to the first cross-hole.

De-burring:
Moving over the cross-hole with the specified operating feed. Thereby, at least 50% of the head length must pass the cross-hole.

Exit:
Turning clockwise with approx. 2 - 5 x feed rate or turning anti-clockwise with helix

Special solutions

Guhring is the first manufacturer world-wide to offer carbide tools for exit operations. This, however, does not involve machining in the fullest sense of the word - as with, for exemple, conventional drills, milling cutters, taps, reamers and countersinks. Instead, the de-burring tool very carefully shaves off the burr and can also, if required, create a chamfer.

For the quality of the workpiece – especially with intersecting and cross holes – in particular exit de-burring is gaining more and more importance. This applies to, for example, oil galleries in modern high performance engines, where an optimal flow rate is dependent on perfect exit de-burring. Highly accurate de-burring and producing a chamfer is also increasingly required in crankshafts, valve blocks, steering arms, rotational housings, drive elements, injector nozzles and brake cylinders.

Whilst the de-burring of the entry of the hole hardly cau-ses a problem, exit de-burring of drilled holes in many cases involves an extensive operation that is often carried out manually and is time and cost intensive.

With the newly developed and patented carbide tools for internal de-burring, Guhring is providing the possibility to automate and rationalise this production step applying high performance tools. This not only means a considerable cost and time saving for the production, but also, more importantly, improved quality and process reliability. Moreover Guhring offers a de-burring milling cutter for external de-burring to customer's specific application tasks.

The EW 100 L de-burring lance

EW 100 L
De-burring lance with oblique teeth.

The diameter of this tool is considerably smaller than that of the through hole and possesses coolant outlets on the one side. Through the high-pressure coolant supply and the lateral coolant exit the de-burring lance is excursed laterally at the hole intersection.
According to the application, different cutting portions can be positioned at the end of the de-burring lance in order to achieve the required results from the de-burring process.
The coolant pressure determines the pressure with which the cutting portion sits against the workpiece.
With this design the swarf is washed out of the hole simultaneously and it is also possible to combine this procedure with high-pressure de-burring (up to 2000 bar).

The EW 100 F de-burring milling cutter

EW 100 F
De-burring milling cutter, staggered.

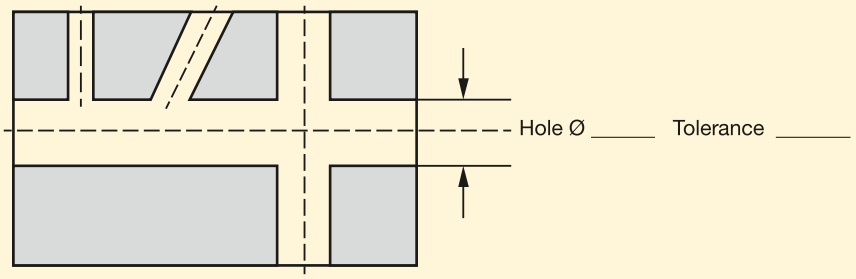
In addition to the de-burring lance, Guhring also offers de-burring milling cutters for de-burring of entrance. These tools can also be equipped with different cutting edge geometries in order for the de-burring operation to produce a chamfer or radius on the different workpiece materials.

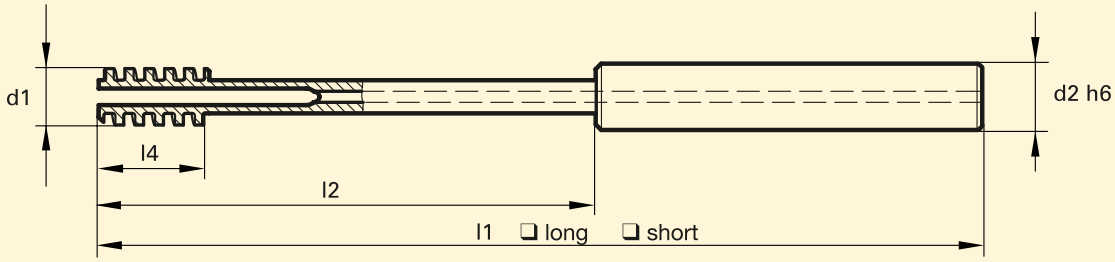
Solid carbide de-burring spiral EW 100 S semistandard

Fax Inquiry / Order
simply photo-copy, complete and fax...

❑ Inquiry ❑ Order ❑ Repeat order, no. of initial order

Number required: _____ **items**





The production Ø d1 of the de-burring spiral is determined by the hole Ø of the component. Shank Ø and lengths are dependent on the production Ø and the table below.

Dimensions d1 from ... to 1/100 increments	l4	Length long version		Length short version		Shank d2 h6
		l1	l2	l1	l2	
mm	mm	mm	mm	mm	mm	mm
3.00 - 4.10	12	68.00	40			4.00
4.11 - 6.10	12	76.00	40			6.00
6.11 - 8.10	16	101.00	65	76.00	40	8.00
8.11 - 10.10	19	101.00	61	76.00	36	10.00
10.11 - 12.10	19	130.00	85	80.00	35	12.00
12.11 - 14.10	22	130.00	85	80.00	35	14.00
14.11 - 16.10	22	150.00	102	90.00	42	16.00

Company: _____ **Company stamp:**

Telephone/fax: _____

Contact: _____ **Signature:** _____

Special solutions

Fax Inquiry / Order
simply photo-copy, complete and fax…

❑ Inquiry ❑ Order ❑ Repeat order, no. of initial order

❑ EW 100 G ❑ EW 100 VR ❑ EW 100 S

❑ EW 100 L ❑ EW 100 F ❑ Please recommend the optimal tool for the operation described below.

Drawing of lay-out

Machining:	De-burring	❑ Entry	❑ Exit	❑ Cross-hole
	Milling	❑ Entry, angle _____°		❑ Exit, angle _____°
Workpiece:	Hole Ø: _____mm		Hole depth: _____mm	
	Cross-hole:	❑ no	❑ yes, to _____mm	
	Material/designation: _____			
Maschine type:	❑ Machining centre		❑ Turning centre	❑ others: _____
Shank:	❑ HA	❑ HE	❑ others: _____	
Coolant:	❑ internal	❑ external		
	❑ Oil	❑ Soluble oil	❑ MQL	
	Pressure: _____bar		Quantity: _____l/min	

Company: _____ Company stamp:

Telephone/fax: _____

Contact: _____ Signature: _____

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
11	452	138	G.S.	Plastic stand for set of jobber drills				
36	452	138	G.S.	Cases for twist drill sets				
57	860	103	371	Machine taps for ISO metric threads	HSS-E-PM	H	B	
58	863	103	376	Machine taps for ISO metric threads	HSS-E-PM	H	B	
59	848	103	371	Machine taps for ISO metric threads	HSS-E-PM	VA R40	C	
60	851	103	376	Machine taps for ISO metric threads	HSS-E-PM	VA R40	C	
73	453	138	G.S.	Cases for twist drill sets				
121	1037	103	G.S.	Die nuts for ISO metric threads	HSS		B	
125	1036	103	G.S.	Die nuts for ISO metric threads	HSS		B	
128	468	138	G.S.	Stub drills with 16.0 mm dia. shank	HSCO	N		
129	469	138	G.S.	Stub drills with 25.4 mm dia. shank	HSCO	N		
130	1039	103	22568	Dies for ISO metric threads	HSS-E		B	
136	469	138	G.S.	Stub drills with 25.4 mm dia. shank	HSCO	N		
139	1038	103	382	Dies for ISO metric threads	HSS			
140	1040	103	382	Dies for ISO metric threads	HSS			
145	341	140	G.S.	Basic holders for chamfer collars FR 90		FR 90		
151	1041	103	22568	Dies for ISO metric threads	HSS		B	
152	1042	103	22568	Dies for ISO metric threads	HSS		B	
153	1041	103	22568	Dies for ISO metric threads	HSS		B	
155	1041	103	22568	Dies for ISO metric threads	HSS		B	
156	1041	103	22568	Dies for ISO metric threads	HSS		B	
161	1043	103	22568	Dies for ISO metric fine threads	HSS		B	
162	1043	103	22568	Dies for ISO metric fine threads	HSS		B	
163	1043	103	22568	Dies for ISO metric fine threads	HSS		B	
169	884	103	374	Machine taps for ISO metric fine threads	HSS-E	GG	C	
172	1047	103	22568	Dies for BSW-threads	HSS		B	
174	842	103	371	Machine taps for ISO metric threads	HSS-E	N R40	C(K)	
175	1048	103	24231	Dies for BSP-threads	HSS		B	
176	1048	103	24231	Dies for BSP-threads	HSS		B	
181	1045	103	22568	Dies for UNC-threads	HSS		B	
182	1045	103	22568	Dies for UNC-threads	HSS		B	
185	1046	103	22568	Dies for UNF-threads	HSS		B	
190	1050	103	22568	Dies for NPT-threads	HSS		B	
191	1050	103	22568	Dies for NPT-threads	HSS		B	
195	454	130	338	Set of jobber drills in case	HSCO	VA		
196	865	103	376	Machine taps for ISO metric threads	HSS-E	N R40	C(K)	
198	1049	103	24230	Dies for R-threads BSPT	HSS		B	
200	452	130	338	Set of jobber drills	HSS/HSCO	N		
201	452	130	338	Set of jobber drills in case	HSS/HSCO	N		
204	502	138	340	Long series twist drills	HSS	N		
205	342	130	338	Jobber drills	HSS	N		
206	342	134	338	Jobber drills	HSS	H		
207	342	134	338	Jobber drills	HSS	W		
208	342	134	338	Jobber drills	HSS	N		
209	342	134	338	Jobber drills	HSS	H		
210	342	138	338	Jobber drills	HSS	W		
211	495	134	339	Bushing length twist drills	HSS	N		
217	502	132	340	Long series twist drills	HSS	N		
218	502	134	340	Long series twist drills	HSS	H		
219	502	134	340	Long series twist drills	HSS	W		
220	502	138	340	Long series twist drills	HSS	N		
221	502	138	340	Long series twist drills	HSS	H		
223	412	132	1897	Stub drills	HSS	N		
224	412	138	1897	Stub drills	HSS	H		
225	412	138	1897	Stub drills	HSS	W		
226	412	134	1897	Stub drills	HSS	N		
227	412	138	1897	Stub drills	HSS	H		
228	412	138	1897	Stub drills	HSS	W		
229	555	138	345	Twist drills	HSS	N		
230	645	138	G.S.	Oil feed adapters				
235	527	134	1869	Extra length twist drills, series 1	HSS	N		
236	532	134	1869	Extra length twist drills, series 2	HSS	N		
237	535	138	1869	Extra length twist drills, series 3	HSS	N		
240	343	132	338	Jobber drills	HSS	N		
242	538	136	G.S.	Extra length twist drills	HSS	GT 100		
243	539	138	G.S.	Extra length twist drills	HSS	GT 100		
244	540	138	G.S.	Extra length twist drills	HSS	GT 100		
245	555	132	345	Twist drills	HSS	N		
246	555	138	345	Twist drills	HSS	H		
247	555	138	345	Twist drills	HSS	W		
248	555	138	345	Twist drills	HSS	N		
251	575	138	346	Twist drills	HSS	N		
257	577	132	341	Bushing length twist drills	HSS	N		
266	593	134	1870	Extra length twist drills, series 1	HSS	N		
267	596	138	1870	Extra length twist drills, series 2	HSS	N		

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
268	467	138	G.S.	Jobber drills with 12.7 mm dia. shank	HSS	N		
269	585	138	G.S.	Oil feed drills short	HSS	N		
270	588	138	G.S.	Oil feed drills, flute length to DIN 341	HSS	N		
271	588	138	G.S.	Oil feed drills, flute length to DIN 341	HSS	N		
272	588	138	G.S.	Oil feed drills, flute length to DIN 341	HSS	N		
273	878	103	374	Machine taps for ISO metric fine threads	HSS-E	N R40	C(K)	
274	606	138	G.S.	Stepped drills for centering to DIN 332	HSS	N		
280	628	138	G.S.	Center drills without flat	HSS		A	
281	626	138	333	Center drills without flat	HSS		A	
282	626	138	333	Center drills without flat	HSS		A	
283	626	138	333	Center drills without flat	HSS		R	
284	626	138	333	Center drills without flat	HSS		R	
285	629	138	G.S.	Center drills without flat	HSS		B	
287	631	138	333	Center drills with flat	HSS		A	
288	631	138	333	Center drills with flat	HSS		R	
289	633	138	G.S.	Center drills with flat	HSS		B	
292	623	138	328	Center drills without flat	HSS		A	
293	600	138	G.S.	Extra length twist drills	HSS	GT 100		
294	623	138	328	Center drills without flat	HSS		A	
297	933	103	376	Oil feed taps for ISO metric threads	HSS-E-PM	H	C	
298	602	138	G.S.	Extra length twist drills	HSS	GT 100		
299	603	138	G.S.	Extra length twist drills	HSS	GT 100		
301	476	134	1899	Micro-precision drills without oil feed	HSS-E-PM	N		
302	931	103	371	Oil feed taps for ISO metric threads	HSS-E-PM	H	C	
303	476	138	1899	Micro-precision drills without oil feed	HSS-E-PM	N		
305	380	134	338	Jobber drills	HSCO	N		
308	380	138	338	Jobber drills	HSCO	N		
311	495	138	339	Bushing length twist drills	HSCO	N		
313	854	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
315	872	103	376	Machine taps for ISO metric threads	HSS-E	N	B	
316	884	103	374	Machine taps for ISO metric fine threads	HSS-E	N	B	
317	503	134	340	Long series twist drills	HSCO	N		
318	931	103	371	Oil feed taps for ISO metric threads	HSS-E	GG	C	
319	932	103	376	Oil feed taps for ISO metric threads	HSS-E	GG	C	
322	954	103	~371	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
323	970	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	C	
324	1387	105	373	Counterbores with fixed pilots for fine tolerances	HSS			
325	1389	105	373	Counterbores with fixed pilots for medial tolerances	HSS			
326	1391	105	373	Counterbores with fixed pilots for tapping size holes	HSS			
327	1376	105	335	90° countersinks	HSS		C	
328	1377	105	335	90° countersinks	HSS		D	
329	413	134	1897	Stub drills	HSCO	GV 120		
330	413	138	1897	Stub drills	HSCO	GV 120		
333	963	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
336	503	136	340	Long series twist drills	HSCO	GT 100		
338	980	103	~374	Oil feed fluteless taps f. ISO metric fine threads	HSS-E-PM	N	C	
339	954	103	~376	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
342	971	103	~376	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	C	
345	567	134	345	Twist drills	HSCO	N		
347	937	103	374	Oil feed taps for ISO metric fine threads	HSS-E	GG	C	
351	575	138	346	Twist drills	HSCO	N		
357	577	138	341	Bushing length twist drills	HSCO	N		
361	842	103	371	Machine taps for ISO metric threads	HSS-E	H R40	C	
362	870	103	376	Machine taps for ISO metric threads	HSS-E	H R40	C	
363	553	134	G.S.	Jobber drills	HSCO	GV 120		
370	588	138	G.S.	Oil feed drills, flute length to DIN 341	HSCO	GT 100		
371	588	138	G.S.	Oil feed drills, flute length to DIN 341	HSCO	GT 100		
372	588	138	G.S.	Oil feed drills, flute length to DIN 341	HSCO	GT 100		
374	591	138	G.S.	Oil feed drills, flute length to DIN 1870	HSCO	GT 100		
375	591	138	G.S.	Oil feed drills, flute length to DIN 1870	HSCO	GT 100		
376	591	138	G.S.	Oil feed drills, flute length to DIN 1870	HSCO	GT 100		
378	609	138	G.S.	Straight shank short step drills	HSS	N		
379	610	138	G.S.	Straight shank short step drills	HSS	N		
380	611	138	G.S.	Straight shank short step drills	HSS	N		
381	625	138	333	Center drills without flat	HSCO		A	
390	494	136	G.S.	Oil feed drills	HSS	N		
396	503	137	340	Long series twist drills	HSCO	GT 100		
401	1286	105	212	Machine reamers	HSS-E		A	
402	1286	105	212	Machine reamers	HSS-E		B	
403	1296	105	212	Quick spiral reamers	HSS-E		C	
404	1284	105	208	Machine reamers	HSS-E		A	
405	1284	105	208	Machine reamers	HSS-E		B	
406	1297	105	208	Quick spiral reamers	HSS-E		C	
407	1303	105	219	Shell reamers	HSS-E		A	
408	1303	105	219	Shell reamers	HSS-E		B	

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
409	1304	105	219	Shell reamers	HSS-E		C	
410	1328	105	2179	Machine taper reamers	HSS-E			
411	1329	105	2180	Machine taper reamers	HSS-E			
412	1330	105	206	Hand reamers	HSS		A	
413	1330	105	206	Hand reamers	HSS		B	
414	1298	105	311	Machine bridge reamers	HSS			
415	1332	105	859	Adjustable hand reamers	HSS		B	
416	1334	105	G.S.	Expanding hand reamers	HSS			
417	1335	105	G.S.	Replacement blades for expanding hand reamers	HSS			
419	1299	105	G.S.	Machine bottoming reamers	HSS-E		A	
420	1300	105	G.S.	Machine bottoming reamers	HSS-E		A	
428	1326	105	9	Hand taper reamers	HSS		A	
429	1326	105	9	Hand taper reamers	HSS		B	
430	1301	105	G.S.	Expanding machine reamers	HSS-E		A	
431	1302	105	G.S.	Stepped machine reamers	HSS-E			
432	1397	105	1862	Spot facers	HSS-E			
433	1398	105	1862	Spot facers	HSS-E			
434	1399	105	1862	Spot facers	HSS-E			
435	1400	105	1862	Spot facers	HSS-E			
436	1380	105	1866	90° countersinks for fine tolerances	HSS			
437	1381	105	1866	90° countersinks for medial tolerances	HSS			
438	1382	105	1866	90° countersinks for tapping size holes	HSS			
440	1287	105	212-2	Machine reamers	HSS-E		A	
455	1280	105	212-3	NC machine reamers	HSS-E		B	
457	1286	105	212	Machine reamers	HSS-E		A	
458	1295	105	8089	Machine reamer sets	HSS-E		B	
463	1393	105	375	Counterbores with hole for detachable pilot	HSS			
464	1394	105	1868	Detachable pilot for fine tolerances	HSS			
465	1395	105	1868	Detachable pilot for medial tolerances	HSS			
466	1396	105	1868	Detachable pilot for taping size holes	HSS			
467	1287	105	212-2	Machine reamers	HSS-E		A	
468	1287	105	212-2	Machine reamers	HSS-E		B	
469	1296	105	212-2	Quick spiral reamers	HSS-E		C	
470	1372	105	334	60° countersinks	HSS		A	
471	1374	105	334	60° countersinks	HSS		B	
472	1371	105	334	60° countersinks	HSS		C	
473	1373	105	334	60° countersinks	HSS		D	
474	1375	105	335	90° countersinks	HSS		A	
475	1378	105	335	90° countersinks	HSS		B	
476	1376	105	335	90° countersinks	HSS		C	
477	1377	105	335	90° countersinks	HSS		D	
478	1383	105	347	120° countersinks	HSS		A	
479	1386	105	347	120° countersinks	HSS		B	
480	1384	105	G.S.	120° countersinks	HSS			
481	1385	105	G.S.	120° countersinks	HSS			
482	1387	105	373	Counterbores with fixed pilots for fine tolerances	HSS			
483	1389	105	373	Counterbores with fixed pilots for medial tolerances	HSS			
484	1391	105	373	Counterbores with fixed pilots for tapping size holes	HSS			
485	1388	105	G.S.	Counterbores with fixed pilots for fine tolerances	HSS			
486	1390	105	G.S.	Counterbores with fixed pilots for medial tolerances	HSS			
487	1392	105	G.S.	Counterbores with fixed pilots for tapping size holes	HSS			
488	1293	105	8089	Machine reamers	HSS-E		A	
489	1293	105	8089	Machine reamers	HSS-E		B	
490	1280	105	212-3	NC machine reamers	HSS-E		B	
495	1403	120	G.S.	Front/back deburrer 90°	Solid carbide	EW 100 VR		
496	1289	105	212	Machine reamers	HSS-E		B	
497	1294	105	8089	Machine reamers	HSS-E		B	
498	1379	105	335	90° countersinks	HSS		C	
499	1379	105	335	90° countersinks	HSS		C	
501	502	136	340	Long series twist drills	HSS	GT50		
502	527	136	1869	Extra length twist drills, series 1	HSS	GT 100		
503	532	136	1869	Extra length twist drills, series 2	HSS	GT 100		
504	535	136	1869	Extra length twist drills, series 3	HSS	GT 100		
505	577	138	341	Bushing length twist drills	HSS	GT50		
506	503	138	340	Long series twist drills	HSS	GT 100		
511	462	115	G.S.	Twist drills with oversize straight shank	HSCO	GU 500		
512	456	115	G.S.	Twist drills with oversize straight shank	HSCO	GU 500		
513	460	115	G.S.	Twist drills with oversize straight shank	HSS-E-PM	GT 500		
514	614	138	G.S.	Straight shank subland drills	HSS	N		
515	444	115	1897	Stub drills	HSS-E-PM	GT 500		
520	619	138	G.S.	Taper shank subland drills	HSS	N		
523	584	138	G.S.	Bushing length twist drills	HSS	N		
524	527	138	1869	Extra length twist drills, series 1	HSS	GT50		
525	593	138	1870	Extra length twist drills, series 1	HSS	GT50		
526	593	136	1870	Extra length twist drills, series 1	HSS	GT 100		

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
527	596	136	1870	Extra length twist drills, series 2	HSS	GT 100		
528	532	138	1869	Extra length twist drills, series 2	HSS	GT50		
529	535	138	1869	Extra length twist drills, series 3	HSS	GT50		
531	546	138	1898	Taper pin drills	HSS	N		
532	604	138	1898	Taper pin drills	HSS	N		
533	635	138	344	Straight shank core drills	HSS	N		
534	639	138	343	Taper shank core drills	HSS	N		
535	503	136	340	Long series twist drills	HSS	GT 100		
536	612	138	8374	Straight shank subland drills	HSS	N	A	
537	616	138	G.S.	Taper shank subland drills	HSS	N		
538	613	138	8376	Straight shank subland drills	HSS	N		
539	618	138	8377	Taper shank subland drills	HSS	N		
540	615	138	8378	Straight shank subland drills	HSS	N		
541	620	138	8379	Taper shank subland drills	HSS	N		
542	596	138	1870	Extra length twist drills, series 2	HSS	GT50		
546	473	102	G.S.	142° NC-spotting drills	Solid carbide	N		
549	343	136	338	Jobber drills	HSS	GT 100		
550	343	138	338	Jobber drills	HSS	GT 100		
551	577	136	341	Bushing length twist drills	HSS	GT 100		
552	412	136	1897	Stub drills	HSS	GT 80		
553	412	138	1897	Stub drills	HSS	GT 80		
554	474	134	G.S.	Straight shank drills double-ended	HSS	DK 77		
555	644	138	1864	Taper shank core drills	HSS	N		
556	472	134	G.S.	120° NC-spotting drills	HSS	N		
557	470	134	G.S.	90° NC-spotting drills	HSS	N		
558	555	138	345	Twist drills	HSS	GT 100		
559	471	138	G.S.	90° NC-spotting drills	HSS	N		
560	343	138	338	Jobber drills	HSS	N		
561	495	138	339	Bushing length twist drills	HSS	N		
563	599	138	G.S.	Extra length twist drills	HSS	GT 100		
564	600	138	G.S.	Extra length twist drills	HSS	GT 100		
565	601	138	G.S.	Extra length twist drills	HSS	GT 100		
566	599	138	G.S.	Extra length twist drills	HSS	GT 100		
567	472	139	G.S.	120° NC-spotting drills	HSS	N		
568	470	135	G.S.	90° NC-spotting drills	HSS	N		
569	612	138	8374	Straight shank subland drills	HSS	N	B	
571	535	136	1869	Extra length twist drills, series 3	HSCO	GT 100		
574	606/1578	138	G.S.	Stepped drills for centering to DIN 332	HSS	N		
575	607	138	G.S.	Stepped drills for centering to DIN 332	HSS	N		
576	608	138	G.S.	Stepped drills for centering to DIN 332	HSS	N		
577	541	138	NAS907	Aircraft extension drills, 6 inches long	HSS	N		
578	544	138	NAS907	Aircraft extension drills, 12 inches long	HSS	N		
579	541	138	NAS907	Aircraft extension drills, 6 inches long	HSS	N		
580	544	138	NAS907	Aircraft extension drills, 12 inches long	HSS	N		
581	624	132	333	Center drills without flat	HSS		A	
582	624	138	333	Center drills without flat	HSS		A	
583	624	138	333	Center drills without flat	HSS		R	
584	624	138	333	Center drills without flat	HSS		R	
585	627	138	333	Center drills without flat	HSS		B	
586	627	138	333	Center drills without flat	HSS		B	
587	630/1576	138	333	Center drills with flat	HSS		A	
588	630/1576	138	333	Center drills with flat	HSS		R	
589	632/1577	138	333	Center drills with flat	HSS		B	
590	625	138	333	Center drills without flat	HSS		A	
591	627	138	333	Center drills without flat	HSS		B	
592	555	138	345	Twist drills	HSS	N		
594	621	138	ASA	Center drills without flat	HSS		A	
595	622	138	ASA	Center drills without flat	HSS		B	
605	380	134	338	Jobber drills	HSCO	Ti		
606	567	139	345	Twist drills	HSS	GT 100		
608	380	138	338	Jobber drills	HSCO	Ti		
611	275	109	6539	3-flute Ratio drills	Solid carbide	GS 200 U		5xD
613	625	133	333	Center drills without flat	HSS		A	
614	625	139	333	Center drills without flat	HSS		R	
617	503	134	340	Long series twist drills	HSCO	Ti		
618	527	136	1869	Extra length twist drills, series 1	HSCO	GT 100		
619	532	138	1869	Extra length twist drills, series 2	HSCO	GT 100		
620	593	138	1870	Extra length twist drills, series 1	HSCO	GT 100		
621	596	138	1870	Extra length twist drills, series 2	HSCO	GT 100		
622	380	136	338	Jobber drills	HSCO	GT 100		
623	577	138	341	Bushing length twist drills	HSCO	GT 100		
634	639	138	343	Taper shank core drills	HSCO	N		
635	643	138	1864	Taper shank core drills	HSCO	N		
636	612	138	G.S.	Straight shank subland drills	HSS	N		
637	616	138	G.S.	Taper shank subland drills	HSS	N		

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
638	612	138	G.S.	Straight shank subland drills	HSS	N		
639	617	138	G.S.	Taper shank subland drills	HSS	N		
641	1287	105	212-2	Machine reamers	HSS-E		B	
642	1284	105	208	Machine reamers	HSS-E		B	
645	567	138	345	Twist drills	HSCO	GT 100		
651	343	131	338	Jobber drills	HSS	N		
652	343	137	338	Jobber drills	HSS	GT 100		
653	413	133	1897	Stub drills	HSS	N		
654	567	133	345	Twist drills	HSS	N		
655	577	133	341	Bushing length twist drills	HSS	N		
656	577	139	341	Bushing length twist drills	HSS	GT 100		
657	380	135	338	Jobber drills	HSCO	Ti		
658	381	137	338	Jobber drills	HSCO	GT 100		
659	413	135	1897	Stub drills	HSCO	GV 120		
660	476	135	1899	Micro-precision drills without oil feed	HSS-E-PM	N		
661	567	139	345	Twist drills	HSCO	N		
662	567	139	345	Twist drills	HSCO	GT 100		
663	553	139	G.S.	Jobber drills	HSCO	GV 120		
664	343	139	338	Jobber drills	HSS	N		
665	343	139	338	Jobber drills	HSS	GT 100		
666	495	139	339	Bushing length twist drills	HSS	N		
667	503	133	340	Long series twist drills	HSS	N		
668	503	137	340	Long series twist drills	HSS	GT 100		
669	503	139	340	Long series twist drills	HSCO	Ti		
670	527	137	1869	Extra length twist drills, series 1	HSS	GT 100		
671	532	139	1869	Extra length twist drills, series 2	HSS	GT 100		
672	413	139	1897	Stub drills	HSS	N		
674	1321	120	~8090	Machine reamers	Carbide		A	
701	476	102	G.S.	Micro-precision drills without oil feed	Solid carbide	N		
702	450	102	G.S.	Stub drills	Solid carbide	N		
703	547	102	8037	Carbide-tipped twist drill	Carbide	N		
704	547	102	8038	Carbide-tipped twist drill	Carbide	N		
705	605	102	8041	Carbide-tipped twist drill	Carbide	N		
706	526	102	G.S.	Long series twist drills	Solid carbide	N		
707	551	102	G.S.	Carbide tipped spade drills	Carbide			
710	406	102	G.S.	Jobber drills	Carbide	Duro 150		
716	552	102	G.S.	Masonry drills	Carbide	N		
717	1316	120	~8050	Machine reamers	Carbide		A	
718	1316	120	~8050	Machine reamers	Carbide		B	
719	1319	120	~8051	Machine reamers	Carbide		A	
720	1319	120	~8051	Machine reamers	Carbide		B	
723	470	102	G.S.	90° NC-spotting drills	Solid carbide	N		
724	472	102	G.S.	120° NC-spotting drills	Solid carbide	N		
727	1325	120	8054	Shell reamers	Carbide			
729	638	102	G.S.	Taper shank core drills	Carbide	N		
730	444	102	6539	Stub drills	Solid carbide	N		3xD
731	275	109	6539	3-flute Ratio drills	Solid carbide	GS 200 U		5xD
732	406	102	G.S.	Jobber drills	Solid carbide	N		
733	854	103	371	Machine taps for ISO metric threads	HSS-E	H	B	
734	872	103	376	Machine taps for ISO metric threads	HSS-E	H	B	
736	625	102	G.S.	Center drills without flat	Solid carbide		A	
737	1321	120	~8090	Machine reamers	Carbide		C	
738	613	102	G.S.	Straight shank subland drills	Solid carbide	N		
739	615	102	G.S.	Straight shank subland drills	Solid carbide	N		
740	1323	120	G.S.	Expanding machine reamers	Carbide		A	
743	1324	120	G.S.	Stepped machine reamers	Carbide			
745	275	109	6539	3-flute Ratio drills	Solid carbide	GS 200 G		5xD
749	1322	120	G.S.	Expanding machine reamers	Carbide		A	
750	634	102	G.S.	Straight shank core drills	Carbide	N		
761	852	103	371	Machine taps for ISO metric threads	HSS-E-PM	VA R50	C	
763	852	103	376	Machine taps for ISO metric threads	HSS-E-PM	VA R50	C	
764	877	103	374	Machine taps for ISO metric fine threads	HSS-E-PM	VA R50	C	
767	848	103	371	Machine taps for ISO metric threads	HSS-E-PM	N R50	C	
768	230	121	G.S.	Ratio drills with oil feed	Solid carbide	RT 150 GG		4xD
769	253	121	G.S.	Ratio drills with oil feed	Solid carbide	RT 150 GG		7xD
770	255	121	G.S.	Ratio drills with oil feed	Solid carbide	RT 150 GG		10xD
773	257	121	G.S.	Ratio drills with oil feed	Solid carbide	RT 150 GN		15xD
778	850	103	376	Machine taps for ISO metric threads	HSS-E	H	C	
783	842	103	371	Machine taps for ISO metric threads	HSS-E	N R40	C	
784	870	103	376	Machine taps for ISO metric threads	HSS-E	N R40	C	
785	850	103	376	Machine taps for ISO metric threads	HSS-E	VA R15	C	
786	842	103	371	Machine taps for ISO metric threads	HSS-E	N L40-LH	C	
787	850	103	376	Machine taps for ISO metric threads	HSS-E	N L40-LH	C	
788	854	103	371	Machine taps for ISO metric threads	HSS-E	H AZ	C	
789	854	103	371	Machine taps for ISO metric threads	HSS-E	N-LH	B	

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
790	862	103	376	Machine taps for ISO metric threads	HSS-E	N-LH	B	
791	855	103	371	Machine taps for ISO metric threads	HSS-E	H AZ	B	
792	862	103	376	Machine taps for ISO metric threads	HSS-E	VA AZ	B	
794	855	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
795	843	103	371	Machine taps for ISO metric threads	HSS-E	N	C	
796	855	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
797	855	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
799	843	103	371	Machine taps for ISO metric threads	HSS-E	N R15	C	
800	855	103	371	Machine taps for ISO metric threads	HSS-E	Ms	E	
801	855	103	371	Machine taps for ISO metric threads	HSS-E	N	D	
802	855	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
803	855	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
804	855	103	371	Machine taps for ISO metric threads	HSS-E	H	B	
805	855	103	371	Machine taps for ISO metric threads	HSS-E	Al	B	
806	843	103	371	Machine taps for ISO metric threads	HSS-E	N	C	
807	856	103	371	Machine taps for ISO metric threads	HSS-E	GG	C	
808	856	103	371	Machine taps for ISO metric threads	HSS-E	N L15	D	
809	843	103	371	Machine taps for ISO metric threads	HSS-E	N R15	C	
810	843	103	371	Machine taps for ISO metric threads	HSS-E	N R40	C	
811	843	103	371	Machine taps for ISO metric threads	HSS-E	H R40	C	
812	843	103	371	Machine taps for ISO metric threads	HSS-E	Al R45	C	
813	872	103	376	Machine taps for ISO metric threads	HSS-E	N	D	
814	843	103	371	Machine taps for ISO metric threads	HSS-E	VA R40	C	
815	873	103	376	Machine taps for ISO metric threads	HSS-E	N	B	
816	873	103	376	Machine taps for ISO metric threads	HSS-E	H	B	
817	862	103	376	Machine taps for ISO metric threads	HSS-E	Al	B	
818	870	103	376	Machine taps for ISO metric threads	HSS-E	N	C	
819	873	103	376	Machine taps for ISO metric threads	HSS-E	GG	C	
820	873	103	376	Machine taps for ISO metric threads	HSS-E	N L15	D	
821	870	103	376	Machine taps for ISO metric threads	HSS-E	N R15	C	
822	870	103	376	Machine taps for ISO metric threads	HSS-E	N R40	C	
823	871	103	376	Machine taps for ISO metric threads	HSS-E	H R40	C	
824	871	103	376	Machine taps for ISO metric threads	HSS-E	Al R45	C	
825	850	103	376	Machine taps for ISO metric threads	HSS-E	VA R40	C	
826	871	103	376	Machine taps for ISO metric threads	HSS-E	N R40	C	
827	887	103	374	Machine taps for ISO metric fine threads	HSS-E	N	B	
828	884	103	374	Machine taps for ISO metric fine threads	HSS-E	H	B	
829	878	103	374	Machine taps for ISO metric fine threads	HSS-E	N	C	
830	878	103	374	Machine taps for ISO metric fine threads	HSS-E	N	C	
831	884	103	374	Machine taps for ISO metric fine threads	HSS-E	GG	C	
832	887	103	374	Machine taps for ISO metric fine threads	HSS-E	N	B	
833	878	103	374	Machine taps for ISO metric fine threads	HSS-E	N R15	C	
834	878	103	374	Machine taps for ISO metric fine threads	HSS-E	N R40	C	
835	879	103	374	Machine taps for ISO metric fine threads	HSS-E	H R40	C	
836	844	103	371	Machine taps for ISO metric threads	HSS-E	N R40	C	
837	856	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
838	856	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
839	857	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
843	844	103	371	Machine taps for ISO metric threads	HSS-E	VA R15	C	
844	844	103	371	Machine taps for ISO metric threads	HSS-E	N R40	C	
845	873	103	376	Machine taps for ISO metric threads	HSS-E	N	B	
846	866	103	376	Machine taps for ISO metric threads	HSS-E	N	B	
847	873	103	376	Machine taps for ISO metric threads	HSS-E	N	B	
848	871	103	376	Machine taps for ISO metric threads	HSS-E	N R40	C	
849	862	103	376	Machine taps for ISO metric threads	HSS-E	H AZ	B	
851	942	103	357	Machine nut taps for ISO metric threads	HSS-E	N		
852	879	103	374	Machine taps for ISO metric fine threads	HSS-E	N R40	C	
853	826	118	352	Hand taps for ISO metric threads	HSS-E	VA		
854	826	118	352	Hand taps for ISO metric threads	HSS-E	VA	A	
855	826	118	352	Hand taps for ISO metric threads	HSS-E	VA	D	
856	826	118	352	Hand taps for ISO metric threads	HSS-E	VA	C	
857	827	118	352	Hand taps for ISO metric threads	HSS-E	H		
858	827	118	352	Hand taps for ISO metric threads	HSS-E	H	A	
859	827	118	352	Hand taps for ISO metric threads	HSS-E	H	D	
860	827	118	352	Hand taps for ISO metric threads	HSS-E	H	C	
861	822	118	352	Hand taps for ISO metric threads	HSS	N		
862	822	118	352	Hand taps for ISO metric threads	HSS	N	A	
863	822	118	352	Hand taps for ISO metric threads	HSS	N	D	
864	822	118	352	Hand taps for ISO metric threads	HSS	N	C	
864	822/824	118	352	Hand taps for ISO metric threads	HSS	N	C	
869	857	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
872	849	103	371	Machine taps for ISO metric threads	HSS-E-PM	H R15	C	
873	899	103	~371	Machine taps for UNC-threads	HSS-E	N	B	
874	883	103	374	Machine taps for ISO metric fine threads	HSS-E-PM	H R15	C	
875	860	103	371	Machine taps for ISO metric threads	HSS-E-PM	H	B	

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
876	895	103	~371	Machine taps for UNC-threads	HSS-E	N R40	C	
877	861	103	371	Machine taps for ISO metric threads	HSS-E-PM	VA	B	
878	901	103	~376	Machine taps for UNC-threads	HSS-E	N	B	
879	863	103	376	Machine taps for ISO metric threads	HSS-E-PM	VA	B	
881	897	103	~376	Machine taps for UNC-threads	HSS-E	N R40	C	
882	824	118	352	Hand taps for ISO metric threads	HSS	N		
883	824	118	352	Hand taps for ISO metric threads	HSS	N	D	
884	829	118	2181	Hand taps for ISO metric fine threads	HSS	N		
885	829	118	2181	Hand taps for ISO metric fine threads	HSS	N	D	
886	829	118	2181	Hand taps for ISO metric fine threads	HSS	N	C	
887	885	103	374	Machine taps for ISO metric fine threads	HSS-E-PM	VA	B	
888	846	103	G.S.	Machine taps for ISO metric threads	HSS-E	N R40	C	
889	844	103	371	Machine taps for ISO metric threads	HSS-E	N R40	C	
890	871	103	376	Machine taps for ISO metric threads	HSS-E	N R40	C	
903	945	103	~371	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
904	825	118	352	Hand taps for ISO metric threads	HSS	N-LH		
905	825	118	352	Hand taps for ISO metric threads	HSS	N-LH	A	
906	825	118	352	Hand taps for ISO metric threads	HSS	N-LH	D	
907	825	118	352	Hand taps for ISO metric threads	HSS	N-LH	C	
908	908	103	~374	Machine taps for UNF-threads	HSS-E	N	B	
909	849	103	371	Machine taps for ISO metric threads	HSS-E-PM	VA R40	C	
910	851	103	376	Machine taps for ISO metric threads	HSS-E-PM	VA R40	C	
911	905	103	~374	Machine taps for UNF-threads	HSS-E	N R40	C	
912	857	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
913	845	103	371	Machine taps for ISO metric threads	HSS-E	N R15	C	
914	845	103	371	Machine taps for ISO metric threads	HSS-E	N R40	C	
915	873	103	376	Machine taps for ISO metric threads	HSS-E	N	B	
916	865	103	376	Machine taps for ISO metric threads	HSS-E	N R15	C	
917	871	103	376	Machine taps for ISO metric threads	HSS-E	N R40	C	
918	956	103	~371	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
919	956	103	~371	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
920	944	103	~371	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
921	944	103	~371	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
922	958	103	~376	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
923	958	103	~376	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
924	945	103	~376	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
925	945	103	~376	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
926	964	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E	N	C	
927	964	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E	N	C	
928	948	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E	N	C	
929	948	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E	N	C	
930	857	103	371	Machine taps for ISO metric threads	HSS-E	GG	C	
931	874	103	376	Machine taps for ISO metric threads	HSS-E	GG	C	
932	887	103	374	Machine taps for ISO metric fine threads	HSS-E	GG	C	
935	851	103	376	Machine taps for ISO metric threads	HSS-E-PM	H R15	C	
936	883	103	374	Machine taps for ISO metric fine threads	HSS-E-PM	VA R40	C	
937	916	103	5156	Machine taps for BSP-threads	HSS-E	N R40	C(K)	
938	919	103	5156	Machine taps for BSP-threads	HSS-E-PM	VA	B	
939	917	103	5156	Machine taps for BSP-threads	HSS-E-PM	VA R40	C	
942	853	103	~371	Machine taps for ISO metric threads	Solid carbide	N	B	
943	890	103	~371	Machine taps for ISO metric fine threads	Solid carbide	N	B	
944	886	103	374	Machine taps for ISO metric fine threads	Solid carbide	N	B	
945	857	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
946	845	103	371	Machine taps for ISO metric threads	HSS-E	N R15	C	
947	845	103	371	Machine taps for ISO metric threads	HSS-E	H R40	C	
948	874	103	376	Machine taps for ISO metric threads	HSS-E	N	B	
949	871	103	376	Machine taps for ISO metric threads	HSS-E	N R15	C	
950	871	103	376	Machine taps for ISO metric threads	HSS-E	H R40	C	
952	945	103	~376	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
954	833	118	~352	Hand taps for BSW-threads	HSS	N		
955	833	118	~352	Hand taps for BSW-threads	HSS	N	A	
956	833	118	~352	Hand taps for BSW-threads	HSS	N	D	
957	833	118	~352	Hand taps for BSW-threads	HSS	N	C	
958	834	118	5157	Hand taps for BSP-threads	HSS	N		
959	834	118	5157	Hand taps for BSP-threads	HSS	N	D	
960	834	118	5157	Hand taps for BSP-threads	HSS	N	C	
961	918	103	5156	Machine taps for BSP-threads	HSS-E	GG	C	
962	918	103	5156	Machine taps for BSP-threads	HSS-E	N	B	
963	916	103	5156	Machine taps for BSP-threads	HSS-E	N	C	
964	916	103	5156	Machine taps for BSP-threads	HSS-E	N R15	C	
965	917	103	5156	Machine taps for BSP-threads	HSS-E	N R40	C	
966	952	103	2189	Fluteless machine taps for BSP-threads	HSS-E	N	C	
967	919	103	5156	Machine taps for BSP-threads	HSS-E	VA	B	
968	917	103	5156	Machine taps for BSP-threads	HSS-E	VA R40	C	
969	928	103	371	Oil feed taps for ISO metric threads	Solid carbide	H	C	

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
971	928	103	371	Oil feed taps for ISO metric threads	Solid carbide	N R15	C	
972	938	103	371	Oil feed taps for ISO metric fine threads	Solid carbide	H	C	
973	840	103	G.S.	Machine taps for NPT-threads	HSS-E	N	C	
974	939	103	374	Oil feed taps for ISO metric fine threads	Solid carbide	H	C	
975	938	103	371	Oil feed taps for ISO metric fine threads	Solid carbide	N L15	D	
976	939	103	374	Oil feed taps for ISO metric fine threads	Solid carbide	N L15	D	
977	938	103	371	Oil feed taps for ISO metric fine threads	Solid carbide	N R15	C	
978	939	103	374	Oil feed taps for ISO metric fine threads	Solid carbide	N R15	C	
979	839	103	40432	Machine taps for PG-threads for electr. conduits	HSS-E	N	C	
980	839	103	40432	Machine taps for PG-threads for electr. conduits	HSS-E	N	B	
981	831	118	~352	Hand taps for UNC-threads	HSS	N		
982	831	118	~352	Hand taps for UNC-threads	HSS	N	A	
983	831	118	~352	Hand taps for UNC-threads	HSS	N	D	
984	831	118	~352	Hand taps for UNC-threads	HSS	N	C	
985	832	118	~2181	Hand taps for UNF-threads	HSS	N		
986	832	118	~2181	Hand taps for UNF-threads	HSS	N	D	
987	832	118	~2181	Hand taps for UNF-threads	HSS	N	C	
991	837	103	352	Machine taps for ISO metric threads	HSS-E	N	B	
992	835	103	352	Machine taps for ISO metric threads	HSS-E	N R15	C	
993	835	103	352	Machine taps for ISO metric threads	HSS-E	N R40	C	
995	836	103	352	Machine taps for ISO metric threads	HSS-E	N	C	
997	838	103	2181	Machine taps for ISO metric fine threads	HSS-E	N	C	
998	876	103	G.S.	Machine taps for ISO metric threads	HSS-E	N	B	
1001	885	103	374	Machine taps for ISO metric fine threads	HSS-E-PM	VA	B	
1002	861	103	371	Machine taps for ISO metric threads	HSS-E-PM	VA	B	
1004	883	103	374	Machine taps for ISO metric fine threads	HSS-E-PM	VA R40	C	
1007	937	103	374	Oil feed taps for ISO metric fine threads	HSS-E-PM	H	E	
1008	929	103	371	Oil feed taps for ISO metric threads	Solid carbide	H	E	
1009	939	103	374	Oil feed taps for ISO metric fine threads	Solid carbide	H	E	
1010	923	103	40435	Machine taps for EG-threads	HSS-E	N	B	
1011	922	103	40435	Machine taps for EG-threads	HSS-E	N R40	C	
1025	275	109	6539	3-flute Ratio drills	Solid carbide	GS 200 G		5xD
1027	275	109	6539	3-flute Ratio drills	Solid carbide	GS 200 F		5xD
1032	279	109	G.S.	3-flute stepped Ratio drills	Solid carbide	GS 200 G		
1047	323/337	141	G.S.	Interchangeable inserts RT 800	Solid carbide			
1049	879	103	374	Machine taps for ISO metric fine threads	HSS-E	N R40	C	
1052	340	140	G.S.	Chamfer collar FR 90		FR 90		
1053	341	140	G.S.	Attachments for chamfer collars				
1054	341	140	G.S.	Attachments for chamfer collars				
1055	340	140	G.S.	Attachments for chamfer collars				
1056	340	142	G.S.	Indexable inserts for FR 90	Solid carbide			
1057	841	103	371	Machine taps for ISO metric threads	HSS-E-PM	Ti	B	
1058	891	103	371	Machine taps for ISO metric fine threads	HSS-E-PM	Ti	B	
1059	904	103	~371/~376	Machine taps for UNC-threads	HSS-E-PM	Ti	B	
1060	911	103	~371/~374	Machine taps for UNF-threads	HSS-E-PM	Ti	B	
1061	841	103	371/376	Machine taps for ISO metric threads	HSS-E-PM	Ti R15	C	
1062	891	103	371	Machine taps for ISO metric fine threads	HSS-E-PM	Ti R15	C	
1063	904	103	~371/~376	Machine taps for UNC-threads	HSS-E-PM	Ti R15	C	
1064	911	103	~371/~374	Machine taps for UNF-threads	HSS-E-PM	Ti R15	C	
1065	841	103	371/376	Machine taps for ISO metric threads	HSS-E-PM	Ni R10	C	
1066	891	103	371	Machine taps for ISO metric fine threads	HSS-E-PM	Ni R10	C	
1067	904	103	~371/~376	Machine taps for UNC-threads	HSS-E-PM	Ni R10	C	
1068	911	103	~371/~374	Machine taps for UNF-threads	HSS-E-PM	Ni R10	C	
1071	325/337	140	G.S.	Clamping screws RT 800				
1072	341	140	G.S.	Clamping screws for chamfer collars				
1082	941	103	~374	Oil feed taps for UNF threads	HSS-E	GG	C	
1084	861	103	371	Machine taps for ISO metric threads	HSS-E-PM	Ms	E	
1085	940	103	~371	Oil feed taps for UNC threads	HSS-E	GG	C	
1086	940	103	~376	Oil feed taps for UNC threads	HSS-E	GG	C	
1087	920	103	G.S.	Machine taps for NPT-threads	HSS-E	VA R25	C	
1088	920	103	G.S.	Machine taps for NPT-threads	HSS-E	VA R25	C	
1090	937	103	374	Oil feed taps for ISO metric fine threads	HSS-E-PM	H	C	
1091	931	103	371	Oil feed taps for ISO metric threads	HSS-E-PM	H	E	
1098	851	103	376	Machine taps for ISO metric threads	HSS-E-PM	N R50	C	
1100	883	103	374	Machine taps for ISO metric fine threads	HSS-E-PM	N R50	C	
1101	587	138	G.S.	Oil feed drills, flute length to DIN 341	HSS	N		
1131	492	134	G.S.	Oil feed drills	HSCO	GT 80 IK		
1132	492	135	G.S.	Oil feed drills	HSCO	GT 80 IK		
1139	934	103	371	Oil feed taps for ISO metric threads	HSS-E-PM	VA R50	C	
1142	934	103	376	Oil feed taps for ISO metric threads	HSS-E-PM	VA R50	C	
1144	935	103	374	Oil feed taps for ISO metric fine threads	HSS-E-PM	VA R50	C	
1146	381	138	338	Jobber drills	M42	N		
1147	609	138	G.S.	Straight shank short step drills	HSS	N		
1149	550	102	G.S.	Kevlar drills	Solid carbide	N		
1152	925	103	371	Oil feed taps for ISO metric threads	HSS-E-PM	N R50	C	

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
1156	340	142	G.S.	Indexable inserts for FR 90	Solid carbide			
1161	894	103	~371	Machine taps for ISO metric fine threads	Solid carbide	H	D	
1171	266	128	6538K	Ratio drills with oil feed	Carbide	RT 80 U		3xD
1172	269	128	6538M	Ratio drills with oil feed	Carbide	RT 80 U		5xD
1173	271	128	6538L	Ratio drills with oil feed	Carbide	RT 80 U		7xD
1180	217	121	6537K	Ratio drills with oil feed	Solid carbide	RT 100 F		3xD
1181	216	121	6537K	Ratio drills with oil feed	Solid carbide	RT 100 U		3xD
1182	235	121	6537L	Ratio drills with oil feed	Solid carbide	RT 100 F		5xD
1183	234	121	6537L	Ratio drills with oil feed	Solid carbide	RT 100 U		5xD
1184	198	121	6537K	Ratio drills without oil feed	Solid carbide	RT 100 U		3xD
1188	925	103	371	Oil feed taps for ISO metric threads	HSS-E-PM	H R15	C	
1194	927	103	376	Oil feed taps for ISO metric threads	HSS-E-PM	H R15	C	
1200	936	103	374	Oil feed taps for ISO metric fine threads	HSS-E-PM	H R15	C	
1201	868	103	371/376	Machine taps for ISO metric threads	HSS-E-PM	H	D	
1221	381	137	338	Jobber drills	HSCO	GT 100		
1222	567	139	345	Twist drills	HSCO	GT 100		
1223	381	137	338	Jobber drills	HSCO	GT 100		
1224	573	139	345	Twist drills	HSCO	GT 100		
1228	413	137	1897	Stub drills	HSCO	GT 80		
1242	209	121	6539	Ratio drills without oil feed	Solid carbide	RT 100 U		3xD
1243	213	121	G.S.	Ratio drills without oil feed	Solid carbide	RT 100 U		5xD
1246	857	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
1249	863	103	376	Machine taps for ISO metric threads	HSS-E	N	B	
1252	845	103	371	Machine taps for ISO metric threads	HSS-E	N R40	C	
1254	851	103	376	Machine taps for ISO metric threads	HSS-E	N R40	C	
1255	944	103	~371	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
1256	945	103	~376	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
1257	946	103	~371	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
1258	947	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
1259	444	138	1897	Stub drills	M42	N		
1260	381	134	338	Jobber drills	HSCO	VA		
1261	413	138	1897	Stub drills	HSCO	VA		
1262	573	134	345	Twist drills	HSCO	VA		
1266	957	103	~371	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
1267	957	103	~376	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
1268	961	103	~371	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
1269	960	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
1270	972	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	C	
1271	973	103	~376	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	C	
1272	978	103	~371	Oil feed fluteless taps f. ISO metric fine threads	HSS-E-PM	N	C	
1273	979	103	~374	Oil feed fluteless taps f. ISO metric fine threads	HSS-E-PM	N	C	
1275	961	103	~371	Fluteless machine taps for ISO metric fine threads	HSS-E	N	C	
1277	961	103	~371	Fluteless machine taps for ISO metric fine threads	HSS-E	N	C	
1280	946	103	~371	Fluteless machine taps for ISO metric fine threads	HSS-E	N	C	
1283	950	103	~371	Fluteless machine taps for UNF-threads	HSS-E	N	C	
1284	959	103	~371	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
1285	861	103	371	Machine taps for ISO metric threads	HSS-E-PM	N	B	
1286	863	103	376	Machine taps for ISO metric threads	HSS-E-PM	N	B	
1287	861	103	371	Machine taps for ISO metric threads	HSS-E-PM	N	B	
1288	849	103	371	Machine taps for ISO metric threads	HSS-E-PM	N R40	C	
1289	851	103	376	Machine taps for ISO metric threads	HSS-E-PM	N R40	C	
1290	849	103	371	Machine taps for ISO metric threads	HSS-E-PM	N R40	C	
1291	889	103	374	Machine taps for ISO metric fine threads	HSS-E-PM	N	B	
1292	883	103	374	Machine taps for ISO metric fine threads	HSS-E-PM	N R40	C	
1293	927	103	376	Oil feed taps for ISO metric threads	HSS-E-PM	N R50	C	
1294	936	103	374	Oil feed taps for ISO metric fine threads	HSS-E-PM	N R50	C	
1326	1376	105	335	90° countersinks	HSS		C	
1347	945	103	~371	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
1407	1321	120	~8090	Machine reamers	Carbide		B	
1408	1317	120	~8093	Machine reamers	Carbide		A	
1409	1317	120	~8093	Machine reamers	Carbide		B	
1410	1320	120	~8094	Machine reamers	Carbide		A	
1411	1320	120	~8094	Machine reamers	Carbide		B	
1427	1311	120	G.S.	NC machine reamers	Solid carbide		B	
1428	1317	120	~8093	Machine reamers	Carbide		A	
1429	1317	120	~8093	Machine reamers	Carbide		B	
1430	1321	120	~8090	Machine reamers	Carbide		A	
1431	1291	105	212-2	Machine reamers with coolant duct	HSS-E		A	
1432	1292	105	8089	Machine reamers with coolant duct	HSS-E		A	
1433	1327	105	G.S.	Hand taper reamers	HSS			
1434	1337	105	G.S.	Arbors without accessories				
1435	1338	105	G.S.	Draw-off nuts				
1436	1339	105	G.S.	Driving collars				
1437	1340	105	6888	Woodruff keys				
1438	1336	105	217	Arbors, complete				

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
1449	1311	120	G.S.	NC machine reamers	Solid carbide		B	
1565	945	103	~371	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
1567	945	103	~376	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
1568	947	103	~371	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
1569	947	103	~371	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
1575	861	103	371	Machine taps for ISO metric threads	HSS-E-PM	H	B	
1576	863	103	376	Machine taps for ISO metric threads	HSS-E-PM	H	B	
1577	849	103	371	Machine taps for ISO metric threads	HSS-E-PM	H R15	C	
1578	851	103	376	Machine taps for ISO metric threads	HSS-E-PM	H R15	C	
1580	947	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
1581	977	103	~371/~376	Oil feed fluteless taps f. ISO metric fine threads	Solid carbide	N	C	
1582	965	103	~371	Fluteless machine taps for UNC-threads	HSS-E	N	C	
1583	965	103	~376	Fluteless machine taps for UNC-threads	HSS-E	N	C	
1584	966	103	~371	Fluteless machine taps for UNF-threads	HSS-E	N	C	
1585	966	103	~374	Fluteless machine taps for UNF-threads	HSS-E	N	C	
1586	967	103	2189	Fluteless machine taps for BSP-threads	HSS-E	N	C	
1587	956	103	~371	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
1588	956	103	~371	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
1589	958	103	~376	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
1590	957	103	~376	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
1591	961	103	~371	Fluteless machine taps for ISO metric fine threads	HSS-E	N	C	
1592	961	103	~371	Fluteless machine taps for ISO metric fine threads	HSS-E	N	C	
1593	960	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E	N	C	
1594	960	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E	N	C	
1599	957	103	~371	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
1601	1404	104	G.S.	Pilot counterbores	HSS	KS 125		
1602	1405	104	G.S.	Pilot counterbores	HSS	KS 140		
1603	1406	104	G.S.	Pilot counterbores	Carbide	KS 108		
1604	1407	104	G.S.	Pilot counterbores	Carbide	KS 115		
1606	1408	104	G.S.	Spotfacers	Carbide	KS 100		
1612	315/328	140	G.S.	Torx screwdriver				
1615	1412	104	G.S.	Pilots with angled flat				
1616	1414	104	G.S.	Pilots complete				
1617	1418	104	G.S.	Pilots complete with pilot sleeve				
1622	1409	104	G.S.	90° countersinks	HSS	KS 100		
1624	1410	104	551	Threaded pins				
1625	1423	104	G.S.	Standard short holders with straight shank				
1626	1424	104	G.S.	Standard short holders with taper shank				
1628	1425	104	G.S.	Standard long holders with taper shank				
1647	1420	104	G.S.	Holding screws				
1648	1421	104	G.S.	Safety bolts				
1649	1422	104	G.S.	Locknuts				
1650	1411	104	G.S.	Tool extractors				
1651	1411	104	G.S.	Tool extractors				
1655	1476	104	G.S.	Indexable inserts SCHX	Solid carbide			
1656	1476	104	G.S.	Indexable inserts SCHX	Solid carbide			
1657	1476	104	G.S.	Indexable inserts SCHX	HSCO			
1660	217	121	6537K	Ratio drills with oil feed	Solid carbide	RT 100 F		3xD
1662	235	121	6537L	Ratio drills with oil feed	Solid carbide	RT 100 F		5xD
1663	234	121	6537L	Ratio drills with oil feed	Solid carbide	RT 100 U		5xD
1675	1307	166	G.S.	Carbide high performance reamers	Solid carbide	HR 500 S		
1676	1307	166	G.S.	Carbide high performance reamers	Solid carbide	HR 500 D		
1678	1306	166	G.S.	Carbide high performance reamers	Solid carbide	HR 500 Alu		
1679	1306	166	G.S.	Carbide high performance reamers	Solid carbide	HR 500 Alu		
1680	1309	166	G.S.	Carbide high performance reamers	Carbide	HR 500 GS		
1681	1309	166	G.S.	Carbide high performance reamers	Carbide	HR 500 GD		
1682	1310	166	G.S.	Cermet high performance reamers	Cermet tipped	HR 500 GS		
1683	1310	166	G.S.	Cermet high performance reamers	Cermet tipped	HR 500 GD		
1685	1305	166	G.S.	Carbide high performance reamers	Solid carbide	HR 500 S		
1686	1305	166	G.S.	Carbide high performance reamers	Solid carbide	HR 500 D		
1689	1537	113	G.S.	Locking threaded pins for short clamping holders				
1702	209	121	6539	Ratio drills without oil feed	Solid carbide	RT 100 F		3xD
1705	957	103	~371	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
1707	957	103	~376	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
1708	957	103	~376	Fluteless machine taps for ISO metric threads	HSS-E-PM	N	C	
1710	962	103	~371	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
1711	960	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
1712	960	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
1713	973	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	C	
1714	973	103	~376	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	C	
1715	979	103	~371	Oil feed fluteless taps f. ISO metric fine threads	HSS-E-PM	N	C	
1716	979	103	~374	Oil feed fluteless taps f. ISO metric fine threads	HSS-E-PM	N	C	
1717	972	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	C	
1718	973	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	C	
1719	973	103	~376	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	C	

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
1720	973	103	~376	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	C	
1721	978	103	~371	Oil feed fluteless taps f. ISO metric fine threads	HSS-E-PM	N	C	
1723	979	103	~374	Oil feed fluteless taps f. ISO metric fine threads	HSS-E-PM	N	C	
1725	972	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	E	
1726	972	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	E	
1727	973	103	~376	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	E	
1728	973	103	~376	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	E	
1729	976	103	~371	Oil feed fluteless taps f. ISO metric fine threads	HSS-E-PM	N	E	
1730	978	103	~371	Oil feed fluteless taps f. ISO metric fine threads	HSS-E-PM	N	E	
1731	979	103	~374	Oil feed fluteless taps f. ISO metric fine threads	HSS-E-PM	N	E	
1732	979	103	~374	Oil feed fluteless taps f. ISO metric fine threads	HSS-E-PM	N	E	
1740	947	103	~371	Fluteless machine taps for ISO metric fine threads	HSS-E-PM	N	C	
1818	828	118	352	Hand taps for ISO metric threads	HSS-E-PM	H		
1819	828	118	352	Hand taps for ISO metric threads	HSS-E-PM	H	A	
1820	828	118	352	Hand taps for ISO metric threads	HSS-E-PM	H	D	
1837	895	103	~371	Machine taps for UNC-threads	HSS-E	N R40	C(K)	
1838	905	103	~374	Machine taps for UNF-threads	HSS-E	N R40	C(K)	
1839	943	103	G.S.	Machine combination drill taps for ISO metric threads	HSS-E	N	D	
1858	929	103	371	Oil feed taps for ISO metric threads	Solid carbide	H	C	
1859	930	103	376	Oil feed taps for ISO metric threads	Solid carbide	H	C	
1860	939	103	374	Oil feed taps for ISO metric fine threads	Solid carbide	H	C	
1861	939	103	371	Oil feed taps for ISO metric fine threads	Solid carbide	H	C	
1870	857	103	371	Machine taps for ISO metric threads	HSS-E	VA	B	
1871	857	103	371	Machine taps for ISO metric threads	HSS-E	VA AZ	B	
1872	874	103	376	Machine taps for ISO metric threads	HSS-E	VA	B	
1873	884	103	374	Machine taps for ISO metric fine threads	HSS-E	VA	B	
1874	879	103	374	Machine taps for ISO metric fine threads	HSS-E	VA R15	C	
1875	857	103	371	Machine taps for ISO metric threads	HSS-E	GGT	C	
1876	866	103	376	Machine taps for ISO metric threads	HSS-E	GGT	C	
1883	930	103	376	Oil feed taps for ISO metric threads	Solid carbide	H	C	
1890	931	103	371	Oil feed taps for ISO metric threads	HSS-E	GG	C	
1891	924	103	371	Oil feed taps for ISO metric threads	HSS-E	N R15	C	
1892	924	103	371	Oil feed taps for ISO metric threads	HSS-E	VA R40	C	
1893	924	103	371	Oil feed taps for ISO metric threads	HSS-E	N R40	C	
1894	925	103	371	Oil feed taps for ISO metric threads	HSS-E	H R40	C	
1897	932	103	376	Oil feed taps for ISO metric threads	HSS-E	GG	C	
1898	926	103	376	Oil feed taps for ISO metric threads	HSS-E	N R15	C	
1899	926	103	376	Oil feed taps for ISO metric threads	HSS-E	VA R40	C	
1901	927	103	376	Oil feed taps for ISO metric threads	HSS-E	H R40	C	
1904	937	103	374	Oil feed taps for ISO metric fine threads	HSS-E	GG	C	
1905	936	103	374	Oil feed taps for ISO metric fine threads	HSS-E	N R15	C	
1906	936	103	374	Oil feed taps for ISO metric fine threads	HSS-E	VA R40	C	
1907	936	103	374	Oil feed taps for ISO metric fine threads	HSS-E	H R40	C	
1914	857	103	371	Machine taps for ISO metric threads	HSS-E	H	B	
1915	875	103	376	Machine taps for ISO metric threads	HSS-E	H	B	
1916	845	103	371	Machine taps for ISO metric threads	HSS-E	H R40	C	
1917	871	103	376	Machine taps for ISO metric threads	HSS-E	H R40	C	
1918	858	103	371	Machine taps for ISO metric threads	HSS-E	GG	C	
1919	875	103	376	Machine taps for ISO metric threads	HSS-E	GG	C	
1927	968	103	~371	Oil feed fluteless taps f. ISO metric threads	Solid carbide	N	E	
1931	971	103	~376	Oil feed fluteless taps f. ISO metric threads	Solid carbide	N	C	
1941	1184	140	G.S.	GF 200 WP		GF 200		
1942	1184	140	G.S.	GF 200 WP		GF 200		
1946	466/795	102	6537K	Twist drills with oversize straight shank	Solid carbide	H		
1947	1185	141	G.S.	Indexable inserts round	Cermet			
1970	838	103	2181	Machine taps for ISO metric fine threads	HSS-E	N R40	C	
1971	879	103	374	Machine taps for ISO metric fine threads	HSS-E	N R15	C	
1972	968	103	~371	Oil feed fluteless taps f. ISO metric threads	Solid carbide	N	C	
1977	895	103	~371	Machine taps for UNC-threads	HSS-E	N	C	
1978	895	103	~371	Machine taps for UNC-threads	HSS-E	N R15	C	
1979	899	103	~371	Machine taps for UNC-threads	HSS-E	GG	C	
1980	899	103	~371	Machine taps for UNC-threads	HSS-E	VA	B	
1981	895	103	~371	Machine taps for UNC-threads	HSS-E	VA R40	C	
1982	897	103	~376	Machine taps for UNC-threads	HSS-E	N	C	
1983	897	103	~376	Machine taps for UNC-threads	HSS-E	N R15	C	
1984	901	103	~376	Machine taps for UNC-threads	HSS-E	GG	C	
1985	901	103	~376	Machine taps for UNC-threads	HSS-E	VA	B	
1986	897	103	~376	Machine taps for UNC-threads	HSS-E	VA R40	C	
1987	905	103	~374	Machine taps for UNF-threads	HSS-E	N	C	
1988	905	103	~374	Machine taps for UNF-threads	HSS-E	N R15	C	
1989	908	103	~374	Machine taps for UNF-threads	HSS-E	GG	C	
1990	909	103	~374	Machine taps for UNF-threads	HSS-E	VA	B	
1991	905	103	~374	Machine taps for UNF-threads	HSS-E	VA R15	C	
2008	964	103	~374	Fluteless machine taps for ISO metric fine threads	HSS-E	N	C	
2012	955	103	~371	Fluteless machine taps for ISO metric threads	HSS-E	N	C	

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
2013	957	103	~376	Fluteless machine taps for ISO metric threads	HSS-E	N	C	
2047	381	134	338	Jobber drills	HSCO	P2000		
2048	413	135	1897	Stub drills	HSCO	P2000		
2049	455	134	338	Set of jobber drills in case	HSCO	P2000		
2050	455	135	1897	Set of jobber drills in case	HSCO	P2000		
2086	858	103	371	Machine taps for ISO metric threads	HSS-E	VA	B	
2087	875	103	376	Machine taps for ISO metric threads	HSS-E	VA	B	
2273	949	103	~371	Fluteless machine taps for UNC-threads	HSS-E	N	C	
2274	949	103	~376	Fluteless machine taps for UNC-threads	HSS-E	N	C	
2275	951	103	~374	Fluteless machine taps for UNF-threads	HSS-E	N	C	
2311	929	103	371	Oil feed taps for ISO metric threads	Solid carbide	H	C	
2424	879	103	374	Machine taps for ISO metric fine threads	HSS-E	N R40	C	
2425	845	103	371	Machine taps for ISO metric threads	HSS-E	N R40	C	
2426	871	103	376	Machine taps for ISO metric threads	HSS-E	N R40	C	
2427	858	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
2428	875	103	376	Machine taps for ISO metric threads	HSS-E	N	B	
2436	925	103	371	Oil feed taps for ISO metric threads	HSS-E	N R15	C	
2437	972	103	376	Oil feed taps for ISO metric threads	HSS-E	N R15	C	
2438	925	103	371	Oil feed taps for ISO metric threads	HSS-E	N R40	C	
2439	927	103	376	Oil feed taps for ISO metric threads	HSS-E	N R40	C	
2440	845	103	371	Machine taps for ISO metric threads	HSS-E	N R40	C	
2441	871	103	376	Machine taps for ISO metric threads	HSS-E	N R40	C	
2442	969	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E	N	C	
2443	969	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E	N	C	
2444	971	103	~376	Oil feed fluteless taps f. ISO metric threads	HSS-E	N	C	
2445	971	103	~376	Oil feed fluteless taps f. ISO metric threads	HSS-E	N	C	
2446	969	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E	N	C	
2447	970	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E	N	C	
2448	971	103	~376	Oil feed fluteless taps f. ISO metric threads	HSS-E	N	C	
2456	343	135	338	Jobber drills	HSS	N		
2457	343	137	338	Jobber drills	HSS	GT 100		
2458	381	135	338	Jobber drills	HSCO	Ti		
2459	381	137	338	Jobber drills	HSCO	GT 100		
2460	413	133	1897	Stub drills	HSS	N		
2461	413	135	1897	Stub drills	HSCO	GV 120		
2462	503	137	340	Long series twist drills	HSS	GT 100		
2463	444	102	6539	Stub drills	Solid carbide	N		
2464	406	102	G.S.	Jobber drills	Solid carbide	N		
2465	859	103	371	Machine taps for ISO metric threads	HSS-E	H	B	
2468	217	121	6537K	Ratio drills with oil feed	Solid carbide	RT 100 F		3xD
2469	216	121	6537K	Ratio drills with oil feed	Solid carbide	RT 100 U		3xD
2470	235	121	6537L	Ratio drills with oil feed	Solid carbide	RT 100 F		5xD
2471	234	121	6537L	Ratio drills with oil feed	Solid carbide	RT 100 U		5xD
2472	198	121	6537K	Ratio drills without oil feed	Solid carbide	RT 100 U		3xD
2473	209	121	6539	Ratio drills without oil feed	Solid carbide	RT 100 U		3xD
2474	213	121	G.S.	Ratio drills without oil feed	Solid carbide	RT 100 U		5xD
2475	198	121	6537K	Ratio drills without oil feed	Solid carbide	RT 100 F		3xD
2477	216	121	6537K	Ratio drills with oil feed	Solid carbide	RT 100 U		3xD
2478	235	121	6537L	Ratio drills with oil feed	Solid carbide	RT 100 F		5xD
2479	234	121	6537L	Ratio drills with oil feed	Solid carbide	RT 100 U		5xD
2480	198	121	6537K	Ratio drills without oil feed	Solid carbide	RT 100 U		3xD
2485	321/337	141	G.S.	Interchangeable inserts RT 800	Solid carbide			
2498	413	137	1897	Stub drills	HSCO	GT 80		
2506	929	103	371	Oil feed taps for ISO metric threads	Solid carbide	H	C	
2510	929	103	371	Oil feed taps for ISO metric threads	Solid carbide	N R15	C	
2514	925	103	371	Oil feed taps for ISO metric threads	HSS-E	N R40	C	
2515	969	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E	N	C	
2516	929	103	371	Oil feed taps for ISO metric threads	Solid carbide	N R15	C	
2517	931	103	371	Oil feed taps for ISO metric threads	HSS-E	N	B	
2518	953	103	~371	Oil feed fluteless taps f. ISO metric threads	Solid carbide	N	C	
2520	1185	141	G.S.	Indexable inserts round	Solid carbide			
2710	859	103	371	Machine taps for ISO metric threads	HSS-E	H	B	
2711	248	121	G.S.	Ratio drills with oil feed	Solid carbide	RT 100 U		7xD
2712	204	121	6537L	Ratio drills without oil feed	Solid carbide	RT 100 F		5xD
2713	273	109	6537L	3-flute Ratio drills	Solid carbide	FT 200 G		5xD
2717	204	121	6537L	Ratio drills without oil feed	Solid carbide	RT 100 U		5xD
2719	204	121	6537L	Ratio drills without oil feed	Solid carbide	RT 100 U		5xD
2747	319/337	141	G.S.	Interchangeable inserts RT 800	Solid carbide			
2790	846	103	371	Machine taps for ISO metric threads	HSS-E	N R40	E	
2791	865	103	376	Machine taps for ISO metric threads	HSS-E	N R40	E	
2792	879	103	374	Machine taps for ISO metric fine threads	HSS-E	N R40	E	
2838	879	103	374	Machine taps for ISO metric fine threads	HSS-E	N R15	C	
2839	896	103	~371	Machine taps for UNC-threads	HSS-E	N R15	C	
2840	897	103	~376	Machine taps for UNC-threads	HSS-E	N R15	C	
2841	906	103	~374	Machine taps for UNF-threads	HSS-E	N R15	C	

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
2842	917	103	5156	Machine taps for BSP-threads	HSS-E	N R15	C	
2843	879	103	374	Machine taps for ISO metric fine threads	HSS-E	N R40	C	
2844	896	103	~371	Machine taps for UNC-threads	HSS-E	N R40	C	
2845	898	103	~376	Machine taps for UNC-threads	HSS-E	N R40	C	
2846	906	103	~374	Machine taps for UNF-threads	HSS-E	N R40	C	
2847	913	103	~371	Machine taps for BSW-threads	HSS-E	N R40	C	
2848	912	103	~376	Machine taps for BSW-threads	HSS-E	N R40	C	
2849	917	103	5156	Machine taps for BSP-threads	HSS-E	N R40	C	
2850	846	103	371	Machine taps for ISO metric threads	HSS-E	H R40	C	
2851	865	103	376	Machine taps for ISO metric threads	HSS-E	H R40	C	
2852	879	103	374	Machine taps for ISO metric fine threads	HSS-E	H R40	C	
2853	879	103	374	Machine taps for ISO metric fine threads	HSS-E	N R40	C	
2854	896	103	~371	Machine taps for UNC-threads	HSS-E	N R40	C	
2855	896	103	~371	Machine taps for UNC-threads	HSS-E	N R40	C	
2856	898	103	~376	Machine taps for UNC-threads	HSS-E	N R40	C	
2857	898	103	~376	Machine taps for UNC-threads	HSS-E	N R40	C	
2858	907	103	~374	Machine taps for UNF-threads	HSS-E	N R40	C	
2859	907	103	~374	Machine taps for UNF-threads	HSS-E	N R40	C	
2860	917	103	5156	Machine taps for BSP-threads	HSS-E	N R40	C	
2861	917	103	5156	Machine taps for BSP-threads	HSS-E	N R40	C	
2862	846	103	371	Machine taps for ISO metric threads	HSS-E	VA R40	C	
2863	851	103	376	Machine taps for ISO metric threads	HSS-E	VA R40	C	
2864	882	103	374	Machine taps for ISO metric fine threads	HSS-E	VA R40	C	
2865	896	103	~371	Machine taps for UNC-threads	HSS-E	VA R40	C	
2866	898	103	~376	Machine taps for UNC-threads	HSS-E	VA R40	C	
2867	907	103	~374	Machine taps for UNF-threads	HSS-E	VA R40	C	
2868	907	103	~374	Machine taps for UNF-threads	HSS-E	VA R40	C	
2869	859	103	371	Machine taps for ISO metric threads	HSS-E	VA	B	
2870	866	103	376	Machine taps for ISO metric threads	HSS-E	VA	B	
2871	885	103	374	Machine taps for ISO metric fine threads	HSS-E	VA	B	
2872	899	103	~371	Machine taps for UNC-threads	HSS-E	VA	B	
2873	901	103	~376	Machine taps for UNC-threads	HSS-E	VA	B	
2874	909	103	~374	Machine taps for UNF-threads	HSS-E	VA	B	
2875	919	103	5156	Machine taps for BSP-threads	HSS-E	VA	B	
2876	859	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
2877	875	103	376	Machine taps for ISO metric threads	HSS-E	N	B	
2878	885	103	374	Machine taps for ISO metric fine threads	HSS-E	N	B	
2879	885	103	374	Machine taps for ISO metric fine threads	HSS-E	N	B	
2880	899	103	~371	Machine taps for UNC-threads	HSS-E	N	B	
2881	900	103	~371	Machine taps for UNC-threads	HSS-E	N	B	
2883	901	103	~376	Machine taps for UNC-threads	HSS-E	N	B	
2884	909	103	~374	Machine taps for UNF-threads	HSS-E	N	B	
2885	909	103	~374	Machine taps for UNF-threads	HSS-E	N	B	
2886	919	103	5156	Machine taps for BSP-threads	HSS-E	N	B	
2887	919	103	5156	Machine taps for BSP-threads	HSS-E	N	B	
2888	889	103	374	Machine taps for ISO metric fine threads	HSS-E	N	B	
2889	900	103	~371	Machine taps for UNC-threads	HSS-E	N	B	
2890	902	103	~376	Machine taps for UNC-threads	HSS-E	N	B	
2891	909	103	~374	Machine taps for UNF-threads	HSS-E	N	B	
2892	914	103	~371	Machine taps for BSW-threads	HSS-E	N	B	
2893	913	103	~376	Machine taps for BSW-threads	HSS-E	N	B	
2894	919	103	5156	Machine taps for BSP-threads	HSS-E	N	B	
2895	851	103	376	Machine taps for ISO metric threads	HSS-E	VA R15	C	
2896	847	103	371	Machine taps for ISO metric threads	HSS-E	VA R15	C	
2897	882	103	374	Machine taps for ISO metric fine threads	HSS-E	VA R15	C	
2898	907	103	~374	Machine taps for UNF-threads	HSS-E	VA R15	C	
2899	933	103	376	Oil feed taps for ISO metric threads	HSS-E	N AZ	E	
2901	863	103	371/376	Machine taps for ISO metric threads	HSS-E-PM	Ti	B	
2903	892	103	371	Machine taps for ISO metric fine threads	HSS-E-PM	Ti	B	
2905	900	103	~371	Machine taps for UNC-threads	HSS-E-PM	Ti	B	
2907	910	103	~371	Machine taps for UNF-threads	HSS-E-PM	Ti	B	
2909	863	103	371/376	Machine taps for ISO metric threads	HSS-E-PM	Ti R15	C	
2910	892	103	371	Machine taps for ISO metric fine threads	HSS-E-PM	Ti R15	C	
2912	903	103	~371/~376	Machine taps for UNC-threads	HSS-E-PM	Ti R15	C	
2914	910	103	~371/~374	Machine taps for UNF-threads	HSS-E-PM	Ti R15	C	
2916	863	103	371/376	Machine taps for ISO metric threads	HSS-E-PM	Ni	B	
2917	892	103	371	Machine taps for ISO metric fine threads	HSS-E-PM	Ni	B	
2918	900	103	~371	Machine taps for UNC-threads	HSS-E-PM	Ni	B	
2919	910	103	~371	Machine taps for UNF-threads	HSS-E-PM	Ni	B	
2920	863	103	371/376	Machine taps for ISO metric threads	HSS-E-PM	Ni R10	C	
2921	892	103	371	Machine taps for ISO metric fine threads	HSS-E-PM	Ni R10	C	
2922	903	103	~371/~376	Machine taps for UNC-threads	HSS-E-PM	Ni R10	C	
2923	910	103	~371/~374	Machine taps for UNF-threads	HSS-E-PM	Ni R10	C	
2940	882	103	374	Machine taps for ISO metric fine threads	HSS-E	H R40	C	
2941	859	103	371	Machine taps for ISO metric threads	HSS-E	H	B	

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
2942	875	103	376	Machine taps for ISO metric threads	HSS-E	H	B	
2943	885	103	374	Machine taps for ISO metric fine threads	HSS-E	H	B	
2944	869	103	~371	Machine taps for ISO metric threads	Solid carbide	H	D	
2982	885	103	374	Machine taps for ISO metric fine threads	HSS-E	H	B	
2983	885	103	374	Machine taps for ISO metric fine threads	HSS-E	H	B	
2984	847	103	371	Machine taps for ISO metric threads	HSS-E	H R40	C	
2985	847	103	371	Machine taps for ISO metric threads	HSS-E	H R40	C	
2986	847	103	371	Machine taps for ISO metric threads	HSS-E	H R40	C	
2987	882	103	374	Machine taps for ISO metric fine threads	HSS-E	H R40	C	
2988	882	103	374	Machine taps for ISO metric fine threads	HSS-E	H R40	C	
2989	883	103	374	Machine taps for ISO metric fine threads	HSS-E	H R40	C	
2990	859	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
2991	859	103	371	Machine taps for ISO metric threads	HSS-E	N	B	
2992	885	103	374	Machine taps for ISO metric fine threads	HSS-E	N	B	
2993	885	103	374	Machine taps for ISO metric fine threads	HSS-E	N	B	
2994	847	103	371	Machine taps for ISO metric threads	HSS-E	N R40	C	
2995	847	103	371	Machine taps for ISO metric threads	HSS-E	N R40	C	
2996	204	121	6537L	Ratio drills without oil feed	Solid carbide	RT 100 U		5xD
2997	381	135	338	Jobber drills	HSCO	N		
2998	883	103	374	Machine taps for ISO metric fine threads	HSS-E	N R40	C	
2999	883	103	374	Machine taps for ISO metric fine threads	HSS-E	N R40	C	
3011	1145	117	G.S.	XL slot drills (2-fluted)	Solid carbide	N		
3012	1155	117	G.S.	XL end mills (4-fluted)	Solid carbide	N		
3014	1172	117	G.S.	XL ball nose slot drills (2-fluted)	Solid carbide	N		
3015	1174	117	G.S.	XL ball nose end mills (4-fluted)	Solid carbide	N		
3016	1438	110	G.S.	HSC face milling cutters	PCD-tipped	PF 100 G		
3021	1145	117	G.S.	XL slot drills (2-fluted)	Solid carbide	N		
3023	1155	117	G.S.	XL end mills (4-fluted)	Solid carbide	N		
3024	1172	117	6527L	Ball nose slot drills (2-fluted)	Solid carbide	N		
3026	1173	117	6527L	Ball nose end mills (4-fluted)	Solid carbide	N		
3030	1172	117	G.S.	XL ball nose slot drills (2-fluted)	Solid carbide	N		
3043	1174	117	G.S.	XL ball nose end mills (4-fluted)	Solid carbide	N		
3044	1175	106	G.S.	GF 200 B - ball nose pr. cutters	Solid carbide	N		
3045	1175	106	G.S.	GF 200 B - ball nose pr. cutters	Solid carbide	N		
3047	1135	106	~6527L	GH 100 U - multi-tooth end mills	Solid carbide	NH		
3049	1172	117	6527L	Ball nose slot drills (2-fluted)	Solid carbide	N		
3050	1173	117	6527L	Ball nose end mills (4-fluted)	Solid carbide	N		
3059	1146	117	6527L	Al slot drills (2-fluted)	Solid carbide	W		
3077	1215	106	G.S.	RF 100 A	Solid carbide	W		
3078	1214	106	G.S.	RF 100 F	Solid carbide	NH		
3079	1213	106	G.S.	RF 100 U	Solid carbide	N		
3080	1214	106	G.S.	RF 100 VA	Solid carbide	N		
3081	1215	106	G.S.	RF 100 VA/NF	Solid carbide	NF		
3082	1213	106	G.S.	Rf 100 U/HF	Solid carbide	HF		
3086	1217	106	G.S.	GH 100 U - slot drills (3-fluted)	Solid carbide	NH		
3087	1230	106	G.S.	Slot drills (2-fluted)	Solid carbide	N		
3088	1230	106	G.S.	Slot drills (2-fluted)	Solid carbide	N		
3089	1231	106	G.S.	End mills (4-fluted)	Solid carbide	N		
3090	1231	106	G.S.	End mills (4-fluted)	Solid carbide	N		
3091	1232	106	G.S.	GH 100 U - multifluted end mills	Solid carbide	NH		
3092	1224	106	G.S.	Slot drills (2-fluted)	Solid carbide	N		
3093	1228	106	G.S.	End mills (4-fluted)	Solid carbide	N		
3097	1219	106	G.S.	RS 100 U	Solid carbide	NF		
3098	1219	106	G.S.	RS 100 F	Solid carbide	NF		
3099	1212	106	G.S.	RF 100 U	Solid carbide	N		
3100	1212	106	G.S.	RF 100 U	Solid carbide	N		
3101	1238	106	G.S.	GF 300 B - ball nose hard profile cutters	Solid carbide	H		
3106	1158	117	6527L	Slot drills with corner radius (2-fluted)	Solid carbide	N		
3111	1160	117	6527L	End mills with corner radius (4-fluted)	Solid carbide	N		
3113	1212	106	G.S.	RF 100 U	Solid carbide	N		
3114	1212	106	G.S.	RF 100 U	Solid carbide	N		
3115	1216	106	G.S.	RF 100 S/F (6-fluted)	Solid carbide	NH		
3117	1202	112	845K	Morse taper end mills	HSCO	NR		
3118	1202	112	845K	Morse taper end mills	HSCO	NF		
3120	1203	112	845L	Morse taper end mills	HSCO	N		
3121	1203	112	845L	Morse taper end mills	HSCO	NR		
3126	1145	117	6527K	Al slot drills (2-fluted)	Solid carbide	W		
3127	1133	117	6527L	GS 100 A - roughing end mills with coarse teeth	Solid carbide	WR		
3130	1204	112	2328K	End mills with international taper	HSCO	N		
3131	1204	112	2328K	End mills with international taper	HSCO	NR		
3133	1205	112	2328L	End mills with international taper	HSCO	N		
3134	1205	112	2328L	End mills with international taper	HSCO	NR		
3142	1195	112	G.S.	Mini-End Mill (3-fluted)	M42	N		
3143	1195	112	G.S.	Mini-End Mill (3-fluted)	M42	N		
3144	1195	112	G.S.	Mini-End Mill (3-fluted)	M42	N		

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
3145	1195	112	G.S.	Mini-End Mill (3-fluted)	M42	N		
3146	1224	106	G.S.	Slot drills (2-fluted)	Solid carbide	N		
3147	1225	106	G.S.	Slot drills (2-fluted)	Solid carbide	N		
3148	1224	106	G.S.	Slot drills (2-fluted)	Solid carbide	N		
3149	1225	106	G.S.	Slot drills (2-fluted)	Solid carbide	N		
3150	1228	106	G.S.	End mills (4-fluted)	Solid carbide	N		
3151	1229	106	G.S.	XL end mills (4-fluted)	Solid carbide	N		
3152	1229	106	G.S.	End mills (4-fluted)	Solid carbide	N		
3153	1228	106	G.S.	End mills (4-fluted)	Solid carbide	N		
3154	1143	117	6527L	Slot drills (2-fluted)	Solid carbide	N		
3155	1229	106	G.S.	XL end mills (4-fluted)	Solid carbide	N		
3156	1229	106	G.S.	End mills (4-fluted)	Solid carbide	N		
3157	1234	106	G.S.	Ball nose slot drills (2-fluted)	Solid carbide	N		
3158	1235	106	G.S.	Ball nose slot drills (2-fluted)	Solid carbide	N		
3159	1234	106	G.S.	Ball nose slot drills (2-fluted)	Solid carbide	N		
3160	1235	106	G.S.	Ball nose slot drills (2-fluted)	Solid carbide	N		
3161	1236	106	G.S.	Ball nose end mills (4-fluted)	Solid carbide	N		
3162	1237	106	G.S.	XL ball nose end mills (4-fluted)	Solid carbide	N		
3164	1236	106	G.S.	Ball nose end mills (4-fluted)	Solid carbide	N		
3165	1236	106	G.S.	Ball nose end mills (4-fluted)	Solid carbide	N		
3166	1237	106	G.S.	XL ball nose end mills (4-fluted)	Solid carbide	N		
3167	1236	106	G.S.	Ball nose end mills (4-fluted)	Solid carbide	N		
3168	1227	106	G.S.	Slot drills (3-fluted)	Solid carbide	N		
3169	1227	106	G.S.	XL slot drills (3-fluted)	Solid carbide	N		
3170	1227	106	G.S.	Slot drills (3-fluted)	Solid carbide	N		
3171	1227	106	G.S.	XL slot drills (3-fluted)	Solid carbide	N		
3172	1217	106	G.S.	GH 100 U - slot drills (3-fluted)	Solid carbide	NH		
3173	1217	106	G.S.	GH 100 U - slot drills (3-fluted)	Solid carbide	NH		
3174	1226	106	G.S.	Al slot drills (2-fluted)	Solid carbide	W		
3175	1226	106	G.S.	Al slot drills (2-fluted)	Solid carbide	W		
3176	1209	112	6518	Corner rounding cutters	HSCO	N	B	
3177	1218	106	G.S.	GA 200 A - slot drills (3-fluted)	Solid carbide	W		
3178	1222	106	G.S.	GH 100 U - multifluted end mills	Solid carbide	NH		
3179	1222	106	G.S.	GH 100 U - multifluted end mills	Solid carbide	NH		
3180	1222	106	G.S.	GH 100 U - multifluted end mills	Solid carbide	NH		
3181	1222	106	G.S.	GH 100 U - multifluted end mills	Solid carbide	NH		
3182	1223	106	G.S.	GH 100 H - hard multi-t. end mills	Solid carbide	H		
3183	1223	106	G.S.	GH 100 H - hard multi-t. end mills	Solid carbide	H		
3184	1220	106	G.S.	GS 100 A - roughing end mills with coarse teeth	Solid carbide	WR		
3185	1207	112	1880	Shell end mills	M42	NR		
3186	1220	106	G.S.	GS 100 U - rough. cutter, fine tooth	Solid carbide	NRf		
3187	1207	112	1880	Shell end mills	M42	NF		
3188	1220	106	G.S.	GS 100 U - rough. cutter, fine tooth	Solid carbide	NRf		
3189	1221	106	G.S.	GS 100 H - rough. cutter, fine tooth	Solid carbide	HR		
3190	1221	106	G.S.	GS 100 H - rough. cutter, fine tooth	Solid carbide	HR		
3191	1239	106	G.S.	GF 300 B - ball nose hard profile cutters	Solid carbide	H		
3192	1233	106	G.S.	GF 300 T - hard profile cutters with Torus form	Solid carbide	H		
3193	1125	106	6527K	GH 100 U - slot drills (3-fluted)	Solid carbide	NH		
3194	1142	117	6527K	Slot drills (2-fluted)	Solid carbide	N		
3195	1143	117	6527L	Slot drills (2-fluted)	Solid carbide	N		
3196	1126	106	6527L	GH 100 U - slot drills (3-fluted)	Solid carbide	NH		
3197	1153	117	6527L	End mills (4-fluted)	Solid carbide	N		
3198	1152	117	6527K	End mills (4-fluted)	Solid carbide	N		
3200	1101	106	6527K	RF 100 U	Solid carbide	N		
3201	1102	106	6527L	RF 100 U	Solid carbide	N		
3202	1114	106	6527L	RF 100 A	Solid carbide	W		
3203	1127	106	6528	GH 100 U - slot drills (3-fluted)	Solid carbide	NH		
3204	1132	117	6527L	GS 100 U - roughing end mills with fine teeth	Solid carbide	NRf		
3208	1102	106	6527L	RF 100 U	Solid carbide	N		
3209	1103	106	G.S.	RF 100 U	Solid carbide	N		
3212	1144	117	G.S.	Slot drills (2-fluted)	Solid carbide	N		
3220	1149	117	G.S.	Slot drills (3-fluted)	Solid carbide	N		
3257	1154	117	G.S.	End mills (4-fluted)	Solid carbide	N		
3294	1142	117	6527K	Slot drills (2-fluted)	Solid carbide	N		
3295	1143	117	6527L	Slot drills (2-fluted)	Solid carbide	N		
3296	1147	117	6527K	Slot drills (3-fluted)	Solid carbide	N		
3297	1148	117	6527L	Slot drills (3-fluted)	Solid carbide	N		
3298	1152	117	6527K	End mills (4-fluted)	Solid carbide	N		
3299	1153	117	6527L	End mills (4-fluted)	Solid carbide	N		
3303	1144	117	6528	Slot drills (2-fluted)	Solid carbide	N		
3304	1154	117	6528	End mills (4-fluted)	Solid carbide	N		
3306	1173	117	6528	Ball nose end mills (4-fluted)	Solid carbide	N		
3307	1149	117	6528	Slot drills (3-fluted)	Solid carbide	N		
3308	1171	117	6527L	Ball nose slot drills (2-fluted)	Solid carbide	N		
3309	1146	117	6527L	Al slot drills (2-fluted)	Solid carbide	W		

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
3310	1145	117	6527K	Al slot drills (2-fluted)	Solid carbide	W		
3311	1135	106	~6527L	GH 100 U - multi-tooth end mills	Solid carbide	NH		
3312	1136	106	G.S.	GH 100 U - multi-tooth end mills	Solid carbide	NH		
3313	1136	106	G.S.	GH 100 U - multi-tooth end mills	Solid carbide	NH		
3314	1150	117	G.S.	XL slot drills (3-fluted)	Solid carbide	N		
3319	1114	106	6527L	RF 100 A	Solid carbide	W		
3322	1191	112	844K	GS 40 - roughing end mills	HSS-E-PM	NRf		
3340	1191	112	844K	GS 40 - roughing end mills	HSS-E-PM	NRf		
3342	1201	112	844L	Roughing/finishing end mills	M42	NF		
3343	1201	112	844K	Roughing/finishing end mills	M42	NF		
3346	1200	112	844K	Roughing end mills	M42	NR		
3347	1200	112	844L	Roughing end mills	M42	NR		
3358	1146	117	G.S.	XL Al slot drills (2-fluted)	Solid carbide	W		
3359	1182	106	G.S.	GF 300 B - ball nose hard profile cutters	Solid carbide	H		
3360	1183	106	G.S.	GF 300 B - ball nose hard profile cutters	Solid carbide	H		
3361	1168	106	G.S.	GF 300 T - hard profile cutters with Torus form	Solid carbide	H		
3362	1169	106	G.S.	GF 300 T - hard profile cutters with Torus form	Solid carbide	H		
3363	1170	106	G.S.	GH 100 H - hard multi-tooth end mills with corner radius	Solid carbide	H		
3364	1133	106	6527L	GS 100 A - roughing end mills with coarse teeth	Solid carbide	WR		
3365	1132	106	6527L	GS 100 U - roughing end mills with fine teeth	Solid carbide	NRf		
3366	1109	106	6527L	RF 100 F	Solid carbide	NH		
3367	1129	106	~6527L	GA 200 A - slot drills (3-fluted)	Solid carbide	W		
3396	1156	117	G.S.	Chamfering milling cutters 90°	Solid carbide			
3428	1198	112	844K	End mills	M42	N		
3429	1190	112	844K	RF 40 - Ratio end mills	HSS-E-PM	N		
3431	1198	112	844L	End mills	M42	N		
3432	1190	112	844L	RF 40 - Ratio end mills	HSS-E-PM	N		
3433	1199	112	G.S.	End mills	M42	N		
3440	1202	112	845K	Morse taper end mills	HSCO	N		
3451	1192	112	327	Slot drills (2-fluted)	M42	N	D	
3452	1192	112	844K	Slot drills (2-fluted)	M42	N		
3453	1193	112	844L	Slot drills (2-fluted)	M42	N		
3458	1193	112	327	Slot drills (3-fluted)	M42	N	D	
3459	1194	112	844K	Slot drills (3-fluted)	M42	N		
3460	1194	112	844L	Slot drills (3-fluted)	M42	N		
3466	1196	112	327	Ball nose slot drills (2-fluted)	M42	N	D	
3467	1197	112	G.S.	Ball nose slot drills (2-fluted)	M42	N		
3468	1117	106	~6527L	RF 100 A/WF	Solid carbide	Type WF		
3469	1117	106	~6527L	RF 100 A/WF	Solid carbide	Type WF		
3470	1117	106	G.S.	RF 100 A/WF	Solid carbide	Type WF		
3471	1117	106	G.S.	RF 100 A/WF	Solid carbide	Type WF		
3472	1115	106	G.S.	RF 100 A (3-fluted)	Solid carbide	W		
3473	1115	106	G.S.	RF 100 A (3-fluted)	Solid carbide	W		
3498	1120	106	6527L	RF 100 Ti	Solid carbide	N		
3499	1120	106	6527L	RF 100 Ti	Solid carbide	N		
3504	1206	112	1880	Shell end mills	M42	N		
3507	1107	106	6527L	Rf 100 U/HF	Solid carbide	HF		
3508	1107	106	6527L	Rf 100 U/HF	Solid carbide	HF		
3509	1107	106	G.S.	Rf 100 U/HF	Solid carbide	HF		
3510	1006	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMC SP		1,5xD
3511	1008	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMC SP		2xD
3512	1012	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	TMC SP		1,5xD
3513	1013	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	TMC SP		2xD
3514	1020	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TMC SP		1,5xD
3515	1022	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TMC SP		2xD
3516	1015	108	G.S.	Thread milling cutters for UNC-threads	Solid carbide	TMC SP		1,5xD
3517	1016	108	G.S.	Thread milling cutters for UNC-threads	Solid carbide	TMC SP		2xD
3518	1017	108	G.S.	Thread milling cutters for UNF-threads	Solid carbide	TMC SP		1,5xD
3519	1018	108	G.S.	Thread milling cutters for UNF-threads	Solid carbide	TMC SP		2xD
3520	1026	108	G.S.	Thread milling cutters for NPT-threads	Solid carbide	TMC SP		
3521	1028	108	G.S.	Thread milling cutters for NPTF-threads	Solid carbide	TMC SP		
3522	1107	106	G.S.	Rf 100 U/HF	Solid carbide	HF		
3523	1030	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMU SP		
3524	1032	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TMU SP		
3525	1007	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMC SP		1,5xD
3526	1009	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMC SP		2xD
3527	1012	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	TMC SP		1,5xD
3528	1013	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	TMC SP		2xD
3529	1021	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TMC SP		1,5xD
3530	1206	112	885	Side and face cutters	HSCO	N		
3533	1023	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TMC SP		2xD
3534	1015	108	G.S.	Thread milling cutters for UNC-threads	Solid carbide	TMC SP		1,5xD
3535	1016	108	G.S.	Thread milling cutters for UNC-threads	Solid carbide	TMC SP		2xD
3536	1017	108	G.S.	Thread milling cutters for UNF-threads	Solid carbide	TMC SP		1,5xD
3537	1018	108	G.S.	Thread milling cutters for UNF-threads	Solid carbide	TMC SP		2xD

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
3538	1027	108	G.S.	Thread milling cutters for NPT-threads	Solid carbide	TMC SP		
3539	1029	108	G.S.	Thread milling cutters for NPTF-threads	Solid carbide	TMC SP		
3540	1125	106	6527K	GH 100 U - slot drills (3-fluted)	Solid carbide	NH		
3541	1030	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMU SP		
3542	1032	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TMU SP		
3543	1007	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMC SP		1,5xD
3544	1009	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMC SP		2xD
3545	1012	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	TMC SP		1,5xD
3546	1013	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	TMC SP		2xD
3547	1021	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TMC SP		1,5xD
3548	1023	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TMC SP		2xD
3550	1016	108	G.S.	Thread milling cutters for UNC-threads	Solid carbide	TMC SP		2xD
3551	1017	108	G.S.	Thread milling cutters for UNF-threads	Solid carbide	TMC SP		1,5xD
3552	1018	108	G.S.	Thread milling cutters for UNF-threads	Solid carbide	TMC SP		2xD
3553	1027	108	G.S.	Thread milling cutters for NPT-threads	Solid carbide	TMC SP		
3554	1029	108	G.S.	Thread milling cutters for NPTF-threads	Solid carbide	TMC SP		
3555	1147	117	6527K	Slot drills (3-fluted)	Solid carbide	N		
3556	1030	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMU SP		
3557	1032	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TMU SP		
3558	1147	117	6527K	Slot drills (3-fluted)	Solid carbide	N		
3559	1148	117	6527L	Slot drills (3-fluted)	Solid carbide	N		
3560	1148	117	6527L	Slot drills (3-fluted)	Solid carbide	N		
3561	1158	117	6527L	Slot drills with corner radius (2-fluted)	Solid carbide	N		
3562	1160	117	6527L	End mills with corner radius (4-fluted)	Solid carbide	N		
3563	1162	106	~6527L	GH 100 U - multi-tooth end mills with corner radius	Solid carbide	NH		
3570	1209	112	851	T-slot end mills	HSCO	N	A/B	
3572	1210	112	1833	Dovetail cutters	HSCO	H	C	
3574	1210	112	1833	Dovetail cutters	HSCO	H	C	
3576	1210	112	1833	Dovetail cutters	HSCO	H	D	
3577	1210	112	1833	Dovetail cutters	HSCO	H	D	
3579	1208	112	850	Woodruff cutters	HSCO	H	C	
3580	1208	112	850	Woodruff cutters	HSCO	N	D	
3595	1031	108	G.S.	Thread milling cutters for UN-threads	Solid carbide	TMU UN		
3596	1031	108	G.S.	Thread milling cutters for UN-threads	Solid carbide	TMU UN		
3597	1031	108	G.S.	Thread milling cutters for UN-threads	Solid carbide	TMU UN		
3598	1108	106	G.S.	Rf 100 U/HF	Solid carbide	HF		
3600	1108	106	G.S.	Rf 100 U/HF	Solid carbide	HF		
3627	1103	106	G.S.	RF 100 U	Solid carbide	N		
3629	1109	106	6527L	RF 100 F	Solid carbide	NH		
3630	1109	106	6527L	RF 100 F	Solid carbide	NH		
3631	1123	106	~6527L	RF 100 S/F (6-fluted)	Solid carbide	NH		
3632	1123	106	~6527L	RF 100 S/F (6-fluted)	Solid carbide	NH		
3633	1142	117	6527K	Slot drills (2-fluted)	Solid carbide	N		
3634	1142	117	6527K	Slot drills (2-fluted)	Solid carbide	N		
3635	1143	117	6527L	Slot drills (2-fluted)	Solid carbide	N		
3636	1126	106	6527L	GH 100 U - slot drills (3-fluted)	Solid carbide	NH		
3637	1152	117	6527K	End mills (4-fluted)	Solid carbide	N		
3649	1153	117	6527L	End mills (4-fluted)	Solid carbide	N		
3650	1200	112	844L	Roughing end mills	M42	NR		
3651	1193	112	327	Slot drills (3-fluted)	M42	N	D	
3654	1206	112	1880	Shell end mills	M42	N		
3660	1191	112	844K	GS 40 - roughing end mills	HSS-E-PM	NRf		
3663	1192	112	327	Slot drills (2-fluted)	M42	N	D	
3664	1194	112	844K	Slot drills (3-fluted)	M42	N		
3668	1191	112	844K	GS 40 - roughing end mills	HSS-E-PM	NRf		
3669	1201	112	844K	Roughing/finishing end mills	M42	NF		
3670	1198	112	844K	End mills	M42	N		
3676	1144	117	6528	Slot drills (2-fluted)	Solid carbide	N		
3677	1149	117	6528	Slot drills (3-fluted)	Solid carbide	N		
3678	1154	117	6528	End mills (4-fluted)	Solid carbide	N		
3679	1171	117	6527L	Ball nose slot drills (2-fluted)	Solid carbide	N		
3680	1150	117	G.S.	XL slot drills (3-fluted)	Solid carbide	N		
3682	1134	117	6527L	GS 100 H - roughing end mills with fine teeth	Solid carbide	HR		
3684	1151	117	G.S.	Mini slot drills (3-fluted)	Solid carbide	N		
3686	1127	106	G.S.	GH 100 U - mini-slot drills (3-fl.)	Solid carbide	NH		
3689	1135	106	~6527L	GH 100 U - multi-tooth end mills	Solid carbide	NH		
3690	1200	112	844K	Roughing end mills	M42	NR		
3691	1136	106	G.S.	GH 100 U - multi-tooth end mills	Solid carbide	NH		
3692	1198	112	844L	End mills	M42	N		
3693	1136	106	G.S.	GH 100 U - multi-tooth end mills	Solid carbide	NH		
3694	1192	112	844K	Slot drills (2-fluted)	M42	N		
3695	1193	112	844L	Slot drills (2-fluted)	M42	N		
3696	1112	106	6527L	RF 100 VA/NF	Solid carbide	NF		
3698	1201	112	844L	Roughing/finishing end mills	M42	NF		
3703	1196	112	327	Ball nose slot drills (2-fluted)	M42	N	D	

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
3704	1197	112	G.S.	Ball nose slot drills (2-fluted)	M42	N		
3705	1190	112	844K	RF 40 - Ratio end mills	HSS-E-PM	N		
3706	1190	112	844L	RF 40 - Ratio end mills	HSS-E-PM	N		
3709	1144	117	G.S.	Slot drills (2-fluted)	Solid carbide	N		
3711	1149	117	G.S.	Slot drills (3-fluted)	Solid carbide	N		
3713	1154	117	G.S.	End mills (4-fluted)	Solid carbide	N		
3715	1138	106	~6527L	GH 100 H - hard multi-t. end mills	Solid carbide	H		
3716	1138	106	G.S.	GH 100 H - hard multi-t. end mills	Solid carbide	H		
3718	1112	106	6527L	RF 100 VA/NF	Solid carbide	NF		
3719	1147	117	6527K	Slot drills (3-fluted)	Solid carbide	N		
3720	1148	117	6527L	Slot drills (3-fluted)	Solid carbide	N		
3721	1152	117	6527K	End mills (4-fluted)	Solid carbide	N		
3722	1153	117	6527L	End mills (4-fluted)	Solid carbide	N		
3723	1132	117	6527L	GS 100 U - roughing end mills with fine teeth	Solid carbide	NRf		
3727	1173	117	6528	Ball nose end mills (4-fluted)	Solid carbide	N		
3729	1125	106	6527K	GH 100 U - slot drills (3-fluted)	Solid carbide	NH		
3730	1126	106	6527L	GH 100 U - slot drills (3-fluted)	Solid carbide	NH		
3731	1101	106	6527K	RF 100 U	Solid carbide	N		
3732	1102	106	6527L	RF 100 U	Solid carbide	N		
3733	1112	106	G.S.	RF 100 VA/NF	Solid carbide	NF		
3734	996	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TM SP		2xD
3735	998	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TM SP		2,5xD
3736	1102	106	6527L	RF 100 U	Solid carbide	N		
3737	996	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TM SP		2xD
3740	998	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TM SP		2,5xD
3741	1127	106	6528	GH 100 U - slot drills (3-fluted)	Solid carbide	NH		
3743	996	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TM SP		2xD
3744	998	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TM SP		2,5xD
3745	999	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TM SP		2xD
3746	1000	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TM SP		2,5xD
3748	999	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TM SP		2xD
3749	1207	112	1880	Shell end mills	HSCO	NR		
3750	1000	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TM SP		2,5xD
3751	999	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TM SP		2xD
3752	1000	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TM SP		2,5xD
3753	1001	108	G.S.	Thread milling cutters for NPT-threads	Solid carbide	TM SP		
3754	1001	108	G.S.	Thread milling cutters for NPT-threads	Solid carbide	TM SP		
3755	1001	108	G.S.	Thread milling cutters for NPT-threads	Solid carbide	TM SP		
3756	1002	108	G.S.	Thread milling cutters for NPTF-threads	Solid carbide	TM SP		
3757	1002	108	G.S.	Thread milling cutters for NPTF-threads	Solid carbide	TM SP		
3758	1002	108	G.S.	Thread milling cutters for NPTF-threads	Solid carbide	TM SP		
3759	1010	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMC SP		2,5xD
3760	1011	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMC SP		2,5xD
3761	1011	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMC SP		2,5xD
3762	1014	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	TMC SP		2,5xD
3763	1014	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	TMC SP		2,5xD
3764	1014	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	TMC SP		2,5xD
3765	1024	108	G.S.	Thread milling cutters for BSP-threads	Solid carbide	TMC SP		2,5xD
3768	1033	108	G.S.	Thread milling cutters for NPT-threads	Solid carbide	TMU SP		
3769	1033	108	G.S.	Thread milling cutters for NPT-threads	Solid carbide	TMU SP		
3770	1033	108	G.S.	Thread milling cutters for NPT-threads	Solid carbide	TMU SP		
3772	1034	108	G.S.	Thread milling cutters for NPTF-threads	Solid carbide	TMU SP		
3773	1034	108	G.S.	Thread milling cutters for NPTF-threads	Solid carbide	TMU SP		
3774	984	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	DTMC SP		1,5xD
3775	985	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	DTMC SP		1,5xD
3776	985	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	DTMC SP		1,5xD
3777	985	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	DTMC SP		1,5xD
3778	986	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	DTMC SP		2xD
3779	987	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	DTMC SP		2xD
3780	987	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	DTMC SP		2xD
3781	987	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	DTMC SP		2xD
3782	988	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	DTMC SP		2,5xD
3783	989	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	DTMC SP		2,5xD
3784	989	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	DTMC SP		2,5xD
3785	989	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	DTMC SP		2,5xD
3787	991	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	DTMC SP		1,5xD
3788	990	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	DTMC SP		1,5xD
3789	991	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	DTMC SP		1,5xD
3790	992	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	DTMC SP		2xD
3791	993	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	DTMC SP		2xD
3792	993	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	DTMC SP		2xD
3793	993	108	G.S.	Thread milling cutters for ISO metric fine threads	Solid carbide	DTMC SP		2xD
3800	1110	106	6527L	RF 100 VA	Solid carbide	N		
3803	1110	106	6527L	RF 100 VA	Solid carbide	N		
3804	1110	106	6527K	RF 100 VA	Solid carbide	N		

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
3805	1110	106	6527K	RF 100 VA	Solid carbide	N		
3806	1111	106	G.S.	RF 100 VA	Solid carbide	N		
3807	1111	106	G.S.	RF 100 VA	Solid carbide	N		
3836	1194	112	844L	Slot drills (3-fluted)	M42	N		
3837	1104	106	G.S.	RF 100 U	Solid carbide	N		
3838	1104	106	G.S.	RF 100 U	Solid carbide	N		
3839	1104	106	G.S.	RF 100 U	Solid carbide	N		
3848	1178	106	G.S.	GF 500 B - HSC-ball nose profile cutters	Solid carbide	N		
3849	1181	106	G.S.	GF 500 B - HSC-ball nose profile cutters	Solid carbide	N		
3853	1180	106	G.S.	GF 500 B - HSC-ball nose profile cutters	Solid carbide	N		
3854	1176	106	G.S.	GF 500 B - HSC-ball nose profile cutters	Solid carbide	N		
3855	1179	106	G.S.	GF 500 B - HSC-ball nose profile cutters	Solid carbide	N		
3856	1164	106	G.S.	GF 500 T - HSC-profile cutters with Torus form	Solid carbide	N		
3859	1167	106	G.S.	GF 500 T - HSC-profile cutters with Torus form	Solid carbide	N		
3860	1166	106	G.S.	GF 500 T - HSC-profile cutters with Torus form	Solid carbide	N		
3863	1163	106	G.S.	GF 500 T - HSC-profile cutters with Torus form	Solid carbide	N		
3865	1165	106	G.S.	GF 500 T - HSC-profile cutters with Torus form	Solid carbide	N		
3866	1177	106	G.S.	GF 500 B - HSC-ball nose profile cutters	Solid carbide	N		
3871	1104	106	G.S.	RF 100 U	Solid carbide	N		
3872	1105	106	6527L	RF 100 U	Solid carbide	N		
3873	1105	106	6527L	RF 100 U	Solid carbide	N		
3876	1216	106	G.S.	RF 100 Ti	Solid carbide	N		
3885	1112	106	G.S.	RF 100 VA/NF	Solid carbide	NF		
3887	1131	106	6527L	RS 100 U	Solid carbide	NF		
3888	1131	106	6527L	RS 100 U	Solid carbide	NF		
3889	1131	106	6527L	RS 100 F	Solid carbide	NF		
3890	1131	106	6527L	RS 100 F	Solid carbide	NF		
3891	1106	106	~6527L	RF 100 U (3-fluted)	Solid carbide	N		
3892	1106	106	~6527L	RF 100 U (3-fluted)	Solid carbide	N		
3893	1106	106	~6527L	RF 100 U (3-fluted)	Solid carbide	N		
3894	1106	106	~6527L	RF 100 U (3-fluted)	Solid carbide	N		
3895	1118	106	6527L	RF 100 H	Solid carbide	H		
3896	1118	106	6527L	RF 100 H	Solid carbide	H		
3897	1122	106	G.S.	RF 100 S/F (5-fluted)	Solid carbide	NH		
3898	1122	106	G.S.	RF 100 S/F (5-fluted)	Solid carbide	NH		
3899	483	102	G.S.	Micro-precision drills without oil feed	Solid carbide	N		
4007	1539	113	G.S.	Adjusters GKV		GKV		
4044	248	121	G.S.	Ratio drills with oil feed	Solid carbide	RT 100 U		7xD
4045	248	121	G.S.	Ratio drills with oil feed	Solid carbide	RT 100 U		7xD
4058	1538	113	G.S.	Adjustment screws for short clamping holders				
4059	1535	113	G.S.	Clamping screws for short clamping holders				
4060	1536	113	G.S.	Threaded pins for short clamping holders				
4071	312/698	140	G.S.	Clamping screws HT 800				
4072	340	140	G.S.	Attachments for chamfer collars				
4080	1521	113	G.S.	Short clamping holders 15°		KV 400		
4081	1523	113	G.S.	Short clamping holders 30°		KV 400		
4082	1525	113	G.S.	Short clamping holders 45°		KV 400		
4083	1527	113	G.S.	Short clamping holders 60°		KV 400		
4084	1529	113	G.S.	Short clamping holders 75°		KV 400		
4085	1531	113	G.S.	Short clamping holders 90°		KV 400		
4086	1533	113	G.S.	Short clamping holders for special indexable inserts		KV 400		
4088	1522	113	G.S.	Short clamping holders 15°		KV 400		
4089	1524	113	G.S.	Short clamping holders 30°		KV 400		
4090	1526	113	G.S.	Short clamping holders 45°		KV 400		
4091	1528	113	G.S.	Short clamping holders 60°		KV 400		
4092	1530	113	G.S.	Short clamping holders 75°		KV 400		
4093	1532	113	G.S.	Short clamping holders 90°		KV 400		
4094	1534	113	G.S.	Short clamping holders for special indexable inserts		KV 400		
4100	1402	120	G.S.	De-burring forks	Solid carbide	EW 100 G		
4101	1401	120	G.S.	De-burring forks	Solid carbide	EW 100 G		
4104	336	114	G.S.	Serrated lock washer				
4105	295	140	G.S.	Tool holders for interchangeable inserts HT 800		HT 800 WP		1xD
4106	280	140	G.S.	Tool holders for interchangeable inserts HT 800		HT 800 WP		1,5xD
4107	283	140	G.S.	Tool holders for interchangeable inserts HT 800		HT 800 WP		3xD
4108	286	140	G.S.	Tool holders for interchangeable inserts HT 800		HT 800 WP		5xD
4109	289	140	G.S.	Tool holders for interchangeable inserts HT 800		HT 800 WP		7xD
4110	292	140	G.S.	Tool holders for interchangeable inserts HT 800		HT 800 WP		10xD
4111	304	141	G.S.	Interchangeable inserts HT 800	Solid carbide			
4112	296	141	G.S.	Interchangeable inserts HT 800	Solid carbide			
4113	297	141	G.S.	Interchangeable inserts HT 800	Solid carbide			
4114	297	141	G.S.	Interchangeable inserts HT 800	Solid carbide			
4115	297	141	G.S.	Interchangeable inserts HT 800	Solid carbide			
4127	921	103	G.S.	Machine taps for NPTF-threads	HSS-E	VA R25	C	
4132	997	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TM SP		2xD
4133	997	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TM SP		2xD

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
4134	1003	108	G.S.	Thread milling cutters for UNC-threads	Solid carbide	TM SP		2xD
4135	1003	108	G.S.	Thread milling cutters for UNC-threads	Solid carbide	TM SP		2xD
4136	1004	108	G.S.	Thread milling cutters for UNF-threads	Solid carbide	TM SP		2xD
4137	1004	108	G.S.	Thread milling cutters for UNF-threads	Solid carbide	TM SP		2xD
4138	994	108	G.S.	Thread milling cutters for UNC-threads	Solid carbide	DTMC SP		2xD
4139	994	108	G.S.	Thread milling cutters for UNC-threads	Solid carbide	DTMC SP		2xD
4140	995	108	G.S.	Thread milling cutters for UNF-threads	Solid carbide	DTMC SP		2xD
4141	995	108	G.S.	Thread milling cutters for UNF-threads	Solid carbide	DTMC SP		2xD
4142	331	114	G.S.	LT 800 basic holder		LT 800		
4143	974	103	G.S.	Oil feed fluteless taps f. ISO metric threads	HSS-E-PM	N	C	
4144	331	114	G.S.	LT 800 basic holder		LT 800		
4145	981	103	G.S.	Oil feed fluteless taps f. ISO metric fine threads	HSS-E-PM	N	C	
4146	969	103	~371	Oil feed fluteless taps f. ISO metric threads	HSS-E	N	C	
4147	975	103	~371	Oil feed fluteless taps f. ISO metric fine threads	HSS-E	N	C	
4148	332	114	G.S.	LT 800 extension		LT 800		3xD
4149	332	114	G.S.	LT 800 extension		LT 800		3xD
4150	333	114	G.S.	LT 800 drill heads		LT 800		1xD
4151	975	103	~371	Oil feed fluteless taps f. ISO metric fine threads	HSS-E	N	C	
4152	982	103	2189	Oil feed fluteless taps f. BSP-threads	HSS-E	N	C	
4153	867	103	G.S.	Machine taps for ISO metric threads	HSS-E	N R40	C	
4154	847	103	371	Machine taps for ISO metric threads	HSS-E	N R15	C	
4155	847	103	371	Machine taps for ISO metric threads	HSS-E	N R15	E	
4156	883	103	374	Machine taps for ISO metric fine threads	HSS-E	N R15	C	
4157	883	103	374	Machine taps for ISO metric fine threads	HSS-E	N R15	E	
4158	917	103	5156	Machine taps for BSP-threads	HSS-E	N R15	E	
4159	915	103	5156	Machine taps for BSP-threads	HSS-E-PM	VA R40	C	
4160	335	114	G.S.	Cartridges LT 800 for indexable inserts		LT 800		
4161	893	103	371	Machine taps for ISO metric fine threads	HSS-E-PM	H	D	
4162	1035	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMU SP		
4163	1035	108	G.S.	Thread milling cutters for ISO metric threads	Solid carbide	TMU SP		
4164	334	114	G.S.	LT 800 retention spindles		LT 800		
4165	933	103	376	Oil feed taps for ISO metric threads	HSS-E-PM	H	E	
4166	338	114	G.S.	Clamping screws with countersunk 75°				
4168	336	114	G.S.	LT 800 distance piece sets		LT 800		
4170	338	142	G.S.	Indexable inserts LTT	Solid carbide			
4171	338	142	G.S.	Indexable inserts LTT	Solid carbide			
4172	338	142	G.S.	Indexable inserts LTT	Solid carbide			
4173	338	142	G.S.	Indexable inserts LTT	Solid carbide			
4179	338	142	G.S.	Indexable inserts CCHX	Solid carbide			
4180	338	142	G.S.	Indexable inserts CCHX	Solid carbide			
4181	338	142	G.S.	Indexable inserts CCHX	Solid carbide			
4182	338	142	G.S.	Indexable inserts CCHX	Solid carbide			
4188	334	114	G.S.	Torx socket sets				
4189	335	114	G.S.	Clamping screws for tool system T 800				
4355	330	114	G.S.	HSK-A reduction tools HSK-C				
4510	329	114	G.S.	Basic adaptors VDI holders / HSK-C				
4512	329	114	G.S.	ISO-taper basic adaptors DIN 69871 / HSK-C				
4549	330	114	G.S.	Extensions HSK-A/HSK-C				
4907	335	114	4762	Hexagon socket clamping screws				
4912	341	114	G.S.	Hexagon allen keys for holding				
4915	313/337	114	G.S.	Torque wrenches				
4917	314/337	140	G.S.	Torx socket sets				
5018	676	123	G.S.	EB 80 single-fluted gun drills	Carbide	EB 80		20xD
5019	700	123	G.S.	ZB 80 two-fluted gun drills	Carbide	ZB 80		30xD
5020	673	123	G.S.	EB 100 single-fluted gun drills	Solid carbide	EB 100		
5021	675	123	G.S.	EB 100 single-fluted gun drills	Solid carbide	EB 100		
5022	678	123	G.S.	EB 80 single-fluted gun drills	Carbide	EB 80		40xD
5023	679	123	G.S.	EB 80 single-fluted gun drills	Carbide	EB 80		80xD
5024	672	123	G.S.	EB 100 single-fluted gun drills	Solid carbide	EB 100		
5026	674	123	G.S.	EB 100 single-fluted gun drills	Solid carbide	EB 100		
5029	682	123	G.S.	Inserts for single-fluted gun drills EB 800	Solid carbide			
5030	690	123	G.S.	Supporting strips for Single-fluted gun drills EB 800	Solid carbide			
5242	316	140	G.S.	Tool holders for interchangeable inserts RT 800		RT 800 WP		3xD
5243	317	140	G.S.	Tool holders for interchangeable inserts RT 800		RT 800 WP		5xD
5248	318	140	G.S.	Tool holders for interchangeable inserts RT 800		RT 800 WP		7xD
5460	677	123	G.S.	EB 80 single-fluted gun drills	Carbide	EB 80		30xD
5492	1186/1439	110	G.S.	Slot drills (2-fluted)	PCD			
5493	1187/1440	110	G.S.	Slot drills (2-fluted)	PCD			
5495	1188/1441	110	G.S.	Slot drills (3-fluted)	PCD			
5496	1189/1442	110	G.S.	Slot drills (3-fluted)	PCD			
5632	672	123	G.S.	EB 100 single-fluted gun drills	Solid carbide	EB 100		
5633	673	123	G.S.	EB 100 single-fluted gun drills	Solid carbide	EB 100		
5637	674	123	G.S.	EB 100 single-fluted gun drills	Solid carbide	EB 100		
5638	675	123	G.S.	EB 100 single-fluted gun drills	Solid carbide	EB 100		
5639	676	123	G.S.	EB 80 single-fluted gun drills	Carbide	EB 80		20xD

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
5640	677	123	G.S.	EB 80 single-fluted gun drills	Carbide	EB 80		30xD
5641	678	123	G.S.	EB 80 single-fluted gun drills	Carbide	EB 80		40xD
5642	679	123	G.S.	EB 80 single-fluted gun drills	Carbide	EB 80		80xD
5643	700	123	G.S.	ZB 80 two-fluted gun drills	Carbide	ZB 80		30xD
5644	681	123	G.S.	EB 800 single-fluted gun drills with indexable inserts	Carbide	EB 800		30xD
5646	669	123	G.S.	EB 100 single-fluted gun drills	Solid carbide	EB 100		25xD
5647	670	123	G.S.	EB 100 single-fluted gun drills	Solid carbide	EB 100		50xD
5648	671	123	G.S.	EB 100 single-fluted gun drills	Solid carbide	EB 100		75xD
5747	701	123	G.S.	Drill bushes	HSS			
5748	701	123	G.S.	Drill bushes	Solid carbide			
5749	709	123	G.S.	Steady rest bushings for single- and double-fluted gun drills	Vulkollan			
5750	711	123	G.S.	Moulded steady rest bushings for single-fluted gun drills	Vulkollan			
5751	713	123	G.S.	Moulded steady rest bushing for two-fluted gun drills	Vulkollan			
5752	706	123	G.S.	Sealing disks for single-fluted gun drills	Vulkollan			
5753	708	123	G.S.	Sealing disks for gun drills with 2 cutting lips	Vulkollan			
5754	703	123	G.S.	Adjustment screws without sealing element				
5755	704	123	G.S.	Adjustment screws with sealing element				
6001	1569	122	G.S.	Tool heads		GE 100		
6002	1569	122	G.S.	Tool heads		GE 100		
6003	1569	122	G.S.	Tool heads		GE 100		
6021	1569	122	G.S.	Accessories		GE 100		
6022	1569	122	G.S.	Accessories		GE 100		
6031	1571	122	G.S.	Tool heads		GE 100		
6032	1571	122	G.S.	Tool heads		GE 100		
6033	1571	122	G.S.	Tool heads		GE 100		
6041	1570	122	G.S.	Tool heads		GE 100		
6042	1570	122	G.S.	Tool heads		GE 100		
6043	1570	122	G.S.	Tool heads		GE 100		
6051	1579	122	G.S.	Adaptors, tool holders		GE 100		
6052	1579	122	G.S.	Adaptors, tool holders		GE 100		
6056	1579	122	G.S.	Adaptors, tool holders		GE 100		
6068	230	121	G.S.	Ratio drills with oil feed	Solid carbide	RT 150 GG		4xD
6069	253	121	G.S.	Ratio drills with oil feed	Solid carbide	RT 150 GG		7xD
6070	255	121	G.S.	Ratio drills with oil feed	Solid carbide	RT 150 GG		10xD
6101	1572	122	G.S.	clamping holder		GE 100		
6102	1572	122	G.S.	clamping holder		GE 100		
6103	1573	122	G.S.	clamping holder		GE 100		
6104	1573	122	G.S.	clamping holder		GE 100		
6105	1574	122	G.S.	clamping holder		GE 100		
6111	1574	122	G.S.	clamping holder		GE 100		
6112	1574	122	G.S.	Accessories		GE 100		
6114	1575	122	G.S.	clamping holder		GE 100		
6116	1575	122	G.S.	Accessories		GE 100		
6126	1572	122	G.S.	Accessories	Solid carbide	GE 100		
6127	1572	122	G.S.	Accessories		GE 100		
6128	311/1572	122	G.S.	Clamping screws HT 800				
6151	1576/1586	122	G.S.	Accessories		GE 100		
6152	1576/1586	122	G.S.	Accessories		GE 100		
6153	1576/1586	122	G.S.	Accessories		GE 100		
6154	1576/1586	122	G.S.	Accessories		GE 100		
6155	1576	122	G.S.	Accessories				
6201	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6202	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6203	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6204	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6205	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6206	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6207	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6208	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6209	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6210	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6211	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6212	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6214	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6215	1581	122	G.S.	Indexable inserts without chipbreaker CNHQ	Solid carbide			
6231	1585	122	G.S.	Indexable inserts with chipbreaker DCMT	Solid carbide			
6234	1581	122	G.S.	Indexable inserts without chipbreaker CNHQ	Solid carbide			
6235	1581	122	G.S.	Indexable inserts without chipbreaker CNHQ	Solid carbide			
6236	1581	122	G.S.	Indexable inserts without chipbreaker CNHQ	Solid carbide			
6237	1468	142	G.S.	Indexable inserts DCMT	Solid carbide			
6238	1514	142	G.S.	Indexable inserts TCMT	Solid carbide			
6239	1488	142	G.S.	Indexable inserts SCMT	Solid carbide			
6245	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6246	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6247	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
6248	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6249	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6252	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6253	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6254	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6255	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6256	1581	122	G.S.	Indexable inserts with chipbreaker CNHX	Solid carbide			
6271	1585	122	G.S.	Indexable inserts with chipbreaker CCMT	Solid carbide			
6272	1455	142	G.S.	Indexable inserts CCMT	Solid carbide			
6273	1585	122	G.S.	Indexable inserts with chipbreaker CCMT	Solid carbide			
6275	1585	122	G.S.	Indexable inserts with chipbreaker CNMU	Solid carbide			
6276	1585	122	G.S.	Indexable inserts with chipbreaker CNMU	Solid carbide			
6277	1581	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6278	1581	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6279	1581	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6280	1581	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6281	1581	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6282	1581	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6283	1581	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6284	1581	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6285	1585	122	G.S.	Insert blanks	Solid carbide			
6286	1585	122	G.S.	Insert blanks	Solid carbide			
6287	1583	122	G.S.	Indexable inserts without chipbreaker CCHW	Solid carbide			
6288	1583	122	G.S.	Indexable inserts without chipbreaker CCHW	Solid carbide			
6289	1583	122	G.S.	Indexable inserts without chipbreaker CCHW	Solid carbide			
6290	1585	122	G.S.	Indexable inserts with chipbreaker DCMT	Solid carbide			
6291	1585	122	G.S.	Indexable inserts with chipbreaker VBMT	Solid carbide			
6292	1585	122	G.S.	Indexable inserts with chipbreaker VBMT	Solid carbide			
6293	1581	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6294	1585	122	G.S.	Indexable inserts with chipbreaker CNMG	Solid carbide			
6295	1585	122	G.S.	Indexable inserts with chipbreaker CNMU	Solid carbide			
6296	1585	122	G.S.	Indexable inserts with chipbreaker CNMU	Solid carbide			
6297	1585	122	G.S.	Indexable inserts with chipbreaker CNMG	Solid carbide			
6298	1581	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6300	1475	122	G.S.	Indexable inserts SCHW	Solid carbide			
6301	1486	122	G.S.	Indexable inserts SCHX	Solid carbide			
6302	1484	122	G.S.	Indexable inserts SCHX	Solid carbide			
6303	1480	122	G.S.	Indexable inserts SCHX	Solid carbide			
6304	1477	122	G.S.	Indexable inserts SCHX	Solid carbide			
6305	1480	122	G.S.	Indexable inserts SCHX	Solid carbide			
6306	1477	122	G.S.	Indexable inserts SCHX	Solid carbide			
6307	1504	122	G.S.	Indexable inserts TCHW	Solid carbide			
6308	1510	122	G.S.	Indexable inserts TCHX	Solid carbide			
6309	1506	122	G.S.	Indexable inserts TCHX	Solid carbide			
6310	1510	122	G.S.	Indexable inserts TCHX	Solid carbide			
6311	1506	122	G.S.	Indexable inserts TCHX	Solid carbide			
6312	1486	122	G.S.	Indexable inserts SCHX	Solid carbide			
6313	1484	122	G.S.	Indexable inserts SCHX	Solid carbide			
6314	1480	122	G.S.	Indexable inserts SCHX	Solid carbide			
6315	1477	122	G.S.	Indexable inserts SCHX	Solid carbide			
6316	1481	122	G.S.	Indexable inserts SCHX	Solid carbide			
6317	1477	122	G.S.	Indexable inserts SCHX	Solid carbide			
6318	1510	122	G.S.	Indexable inserts TCHX	Solid carbide			
6319	1506	122	G.S.	Indexable inserts TCHX	Solid carbide			
6320	1511	122	G.S.	Indexable inserts TCHX	Solid carbide			
6321	1507	122	G.S.	Indexable inserts TCHX	Solid carbide			
6322	1486	122	G.S.	Indexable inserts SCHX	Solid carbide			
6323	1484	122	G.S.	Indexable inserts SCHX	Solid carbide			
6324	1481	122	G.S.	Indexable inserts SCHX	Solid carbide			
6325	1478	122	G.S.	Indexable inserts SCHX	Solid carbide			
6326	1481	122	G.S.	Indexable inserts SCHX	Solid carbide			
6327	1478	122	G.S.	Indexable inserts SCHX	Solid carbide			
6328	1511	122	G.S.	Indexable inserts TCHX	Solid carbide			
6329	1507	122	G.S.	Indexable inserts TCHX	Solid carbide			
6330	1511	122	G.S.	Indexable inserts TCHX	Solid carbide			
6331	1507	122	G.S.	Indexable inserts TCHX	Solid carbide			
6332	1487	122	G.S.	Indexable inserts SCHX	Solid carbide			
6333	1485	122	G.S.	Indexable inserts SCHX	Solid carbide			
6334	1481	122	G.S.	Indexable inserts SCHX	Solid carbide			
6335	1478	122	G.S.	Indexable inserts SCHX	Solid carbide			
6336	1481	122	G.S.	Indexable inserts SCHX	Solid carbide			
6337	1478	122	G.S.	Indexable inserts SCHX	Solid carbide			
6338	1511	122	G.S.	Indexable inserts TCHX	Solid carbide			
6339	1507	122	G.S.	Indexable inserts TCHX	Solid carbide			
6340	1511	122	G.S.	Indexable inserts TCHX	Solid carbide			

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
6341	1507	122	G.S.	Indexable inserts TCHX	Solid carbide			
6350	1475	122	G.S.	Indexable inserts SCHW	Solid carbide			
6351	1487	122	G.S.	Indexable inserts SCHX	Solid carbide			
6352	1485	122	G.S.	Indexable inserts SCHX	Solid carbide			
6353	1482	122	G.S.	Indexable inserts SCHX	Solid carbide			
6354	1479	122	G.S.	Indexable inserts SCHX	Solid carbide			
6355	1482	122	G.S.	Indexable inserts SCHX	Solid carbide			
6356	1479	122	G.S.	Indexable inserts SCHX	Solid carbide			
6357	1504	122	G.S.	Indexable inserts TCHW	Solid carbide			
6358	1512	122	G.S.	Indexable inserts TCHX	Solid carbide			
6359	1508	122	G.S.	Indexable inserts TCHX	Solid carbide			
6360	1512	122	G.S.	Indexable inserts TCHX	Solid carbide			
6361	1508	122	G.S.	Indexable inserts TCHX	Solid carbide			
6362	1487	122	G.S.	Indexable inserts SCHX	Solid carbide			
6363	1485	122	G.S.	Indexable inserts SCHX	Solid carbide			
6364	1482	122	G.S.	Indexable inserts SCHX	Solid carbide			
6365	1479	122	G.S.	Indexable inserts SCHX	Solid carbide			
6366	1483	122	G.S.	Indexable inserts SCHX	Solid carbide			
6367	1479	122	G.S.	Indexable inserts SCHX	Solid carbide			
6368	1512	122	G.S.	Indexable inserts TCHX	Solid carbide			
6369	1508	122	G.S.	Indexable inserts TCHX	Solid carbide			
6370	1513	122	G.S.	Indexable inserts TCHX	Solid carbide			
6371	1509	122	G.S.	Indexable inserts TCHX	Solid carbide			
6372	1487	122	G.S.	Indexable inserts SCHX	Solid carbide			
6373	1485	122	G.S.	Indexable inserts SCHX	Solid carbide			
6374	1483	122	G.S.	Indexable inserts SCHX	Solid carbide			
6375	1479	122	G.S.	Indexable inserts SCHX	Solid carbide			
6376	1483	122	G.S.	Indexable inserts SCHX	Solid carbide			
6377	1479	122	G.S.	Indexable inserts SCHX	Solid carbide			
6378	1513	122	G.S.	Indexable inserts TCHX	Solid carbide			
6379	1509	122	G.S.	Indexable inserts TCHX	Solid carbide			
6380	1513	122	G.S.	Indexable inserts TCHX	Solid carbide			
6381	1509	122	G.S.	Indexable inserts TCHX	Solid carbide			
6382	1487	122	G.S.	Indexable inserts SCHX	Solid carbide			
6383	1485	122	G.S.	Indexable inserts SCHX	Solid carbide			
6384	1483	122	G.S.	Indexable inserts SCHX	Solid carbide			
6385	1479	122	G.S.	Indexable inserts SCHX	Solid carbide			
6386	1483	122	G.S.	Indexable inserts SCHX	Solid carbide			
6387	1479	122	G.S.	Indexable inserts SCHX	Solid carbide			
6388	1513	122	G.S.	Indexable inserts TCHX	Solid carbide			
6389	1509	122	G.S.	Indexable inserts TCHX	Solid carbide			
6390	1513	122	G.S.	Indexable inserts TCHX	Solid carbide			
6391	1509	122	G.S.	Indexable inserts TCHX	Solid carbide			
6400	485	164	G.S.	Micro-precision drills without oil feed	Solid carbide	N		4xD
6401	487	164	G.S.	Micro-precision drills without oil feed	Solid carbide	N		7xD
6408	489	164	G.S.	Micro-precision drills with oil feed	Solid carbide	N		8xD
6412	491	164	G.S.	Micro-precision drills with oil feed	Solid carbide	N		15xD
6501	235	165	6537L	Ratio drills with oil feed	Solid carbide	RT 100 R		5xD
6502	248	165	G.S.	Ratio drills with oil feed	Solid carbide	RT 100 R		7xD
6509	258	165	G.S.	Ratio drills with oil feed	Solid carbide	RT 100 T		15xD
6511	260	165	G.S.	Ratio drills with oil feed	Solid carbide	RT 100 T		20xD
6512	262	165	G.S.	Ratio drills with oil feed	Solid carbide	RT 100 T		25xD
6513	264	165	G.S.	Ratio drills with oil feed	Solid carbide	RT 100 T		30xD
6514	265	165	G.S.	Ratio drills with oil feed	Solid carbide	RT 100 T		40xD
6661	1454	122	G.S.	Indexable inserts CCHX	Solid carbide			
6662	1454	122	G.S.	Indexable inserts CCHX	Solid carbide			
6663	1454	122	G.S.	Indexable inserts CCHX	Solid carbide			
6664	1454	122	G.S.	Indexable inserts CCHX	Solid carbide			
6675	1453	122	G.S.	Indexable inserts CCHX	Solid carbide			
6676	1453	122	G.S.	Indexable inserts CCHX	Solid carbide			
6677	1583	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6678	1583	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6679	1452	122	G.S.	Indexable inserts CCHX	Solid carbide			
6680	1453	122	G.S.	Indexable inserts CCHX	Solid carbide			
6681	1583	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6682	1583	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6683	1583	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6684	1583	122	G.S.	Indexable inserts with chipbreaker CCHX	Solid carbide			
6685	1453	122	G.S.	Indexable inserts CCHX	Solid carbide			
6686	1453	122	G.S.	Indexable inserts CCHX	Solid carbide			
6687	1453	122	G.S.	Indexable inserts CCHX	Solid carbide			
6688	1453	122	G.S.	Indexable inserts CCHX	Solid carbide			
6693	1453	122	G.S.	Indexable inserts CCHX	Solid carbide			
6698	1453	122	G.S.	Indexable inserts CCHX	Solid carbide			
6700	1111	106	6527L	RF 100 VA	Solid carbide	N		

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
6701	1111	106	6527L	RF 100 VA	Solid carbide	N		
6702	1116	106	G.S.	RF 100 A (3-fluted)	Solid carbide	W		
6703	1116	106	G.S.	RF 100 A (3-fluted)	Solid carbide	W		
6704	1134	106	6527L	GS 100 H - roughing end mills with fine teeth	Solid carbide	HR		
6705	1134	106	6527L	GS 100 H - roughing end mills with fine teeth	Solid carbide	HR		
6706	1101	106	6527K	RF 100 U	Solid carbide	N		
6707	1113	106	6527L	RF 100 VA with ball nose	Solid carbide	N		
6708	1113	106	6527L	RF 100 VA with ball nose	Solid carbide	N		
6709	1122	106	~6527L	RF 100 S/F (5-fluted)	Solid carbide	NH		
6710	1122	106	~6527L	RF 100 S/F (5-fluted)	Solid carbide	NH		
6711	1156	117	G.S.	Chamfering milling cutters 60°	Solid carbide			
6712	1156	117	G.S.	Chamfering milling cutters 60°	Solid carbide			
6713	1156	117	G.S.	Chamfering milling cutters 90°	Solid carbide			
6714	1157	117	G.S.	Chamfering milling cutters 120°	Solid carbide			
6715	1157	117	G.S.	Chamfering milling cutters 120°	Solid carbide			
6716	1139	106	~6527L	Pilot end mill 180°	Solid carbide	N		
6717	1140	106	G.S.	CR 100 - End mills	Solid carbide	N		
6718	1141	106	G.S.	CR 100 Air - End mills with internal cooling	Solid carbide	N		
6719	1140	106	G.S.	CR 100 - End mills	Solid carbide	N		
6720	1140	106	G.S.	CR 100 - End mills	Solid carbide	N		
6721	1150	106	G.S.	XL slot drills (3-fluted)	Solid carbide	N		
6722	1159	106	6527L	Slot drills with corner radius (2-fluted)	Solid carbide	N		
6723	1161	106	6527L	End mills with corner radius (4-fluted)	Solid carbide	N		
6724	1171	106	6527L	Ball nose slot drills (2-fluted)	Solid carbide	N		
6725	1174	106	G.S.	XL ball nose end mills (4-fluted)	Solid carbide	N		
7632	310/1464	142	G.S.	Countersinking insert HT 800	Solid carbide			
7634	1463	142	G.S.	Indexable inserts CPGT	Solid carbide			
7635	308/1462	142	G.S.	Countersinking insert HT 800	Solid carbide			
7636	1463	142	G.S.	Indexable inserts CPGT	Solid carbide			
7637	1502	142	G.S.	Indexable inserts TCGW	Solid carbide			
7638	1501	142	G.S.	Indexable inserts TCGT	Solid carbide			
7639	1462	142	G.S.	Indexable inserts CPGT	Solid carbide			
7640	1496	142	G.S.	Indexable inserts SPGW	Solid carbide			
7641	1472	142	G.S.	Indexable inserts SCGT	Solid carbide			
7642	1472	142	G.S.	Indexable inserts SCGT	Solid carbide			
7643	1472	142	G.S.	Indexable inserts SCGT	Solid carbide			
7644	1472	142	G.S.	Indexable inserts SCGT	Solid carbide			
7645	309/1462	142	G.S.	Countersinking insert HT 800	Solid carbide			
7646	1462	142	G.S.	Indexable inserts CPGT	Solid carbide			
7647	1493	142	G.S.	Indexable inserts SPGT	Solid carbide			
7648	1493	142	G.S.	Indexable inserts SPGT	Solid carbide			
7649	1493	142	G.S.	Indexable inserts SPGT	Solid carbide			
7650	1489	122	G.S.	Indexable inserts SCMT	Solid carbide			
7651	1489	122	G.S.	Indexable inserts SCMT	Solid carbide			
7652	1489	122	G.S.	Indexable inserts SCMT	Solid carbide			
7653	1518	142	G.S.	Indexable inserts TPGW	Solid carbide			
7654	1516	142	G.S.	Indexable inserts TPGT	Solid carbide			
7655	1516	142	G.S.	Indexable inserts TPGT	Solid carbide			
7656	1516	142	G.S.	Indexable inserts TPGT	Solid carbide			
7657	1451	122	G.S.	Indexable inserts CCGX	Solid carbide			
7658	1455	122	G.S.	Indexable inserts CCMT	Solid carbide			
7659	1455	122	G.S.	Indexable inserts CCMT	Solid carbide			
7660	1455	122	G.S.	Indexable inserts CCMT	Solid carbide			
7661	1497	142	G.S.	Indexable inserts SPGW	Solid carbide			
7663	1517	142	16463	Indexable inserts TPGW	PCD			
7664	1503	142	16463	Indexable inserts TCGW	PCD			
7665	1443	142	16463	Indexable inserts CCGW	PCD			
7666	1449	142	16463	Indexable inserts CCGW	PCD			
7667	1448	142	16463	Indexable inserts CCGW	PCD			
7668	1465	142	16463	Indexable inserts CPGW	PCD			
7669	1466	142	16463	Indexable inserts CPGW	PCD			
7670	1445	142	16463	Indexable inserts CCGW	PCD			
7671	1444	142	16463	Indexable inserts CCGW	PCD			
7672	1447	142	16463	Indexable inserts CCGW	PCD			
7673	1446	142	16463	Indexable inserts CCGW	PCD			
7674	1474	142	16463	Indexable inserts SCGW	PCD			
7675	1473	142	16463	Indexable inserts SCGW	PCD			
7676	1494	142	16463	Indexable inserts SPGW	PCD			
7677	1495	142	16463	Indexable inserts SPGW	PCD			
7678	1500	142	16462	Indexable inserts TCCN	CBN 2028			
7679	1499	142	16462	Indexable inserts TCCN	CBN 2028			
7680	1498	142	16462	Indexable inserts TCCN	CBN 1023			
7681	1499	142	16462	Indexable inserts TCCN	CBN 2028			
7683	1450	142	16462	Indexable inserts CCGW	CBN 1023			
7684	1450	142	16462	Indexable inserts CCGW	CBN 2028			

Guhring no.	Standard range page	Discount group	Standard	Description	Tool material	Type	Form	Drilling depth
7685	1461	142	16462	Indexable inserts CNMA	CBN 1023			
7686	1461	142	16462	Indexable inserts CNMA	CBN 2028			
7687	1460	142	16462	Indexable inserts CNMA	CBN 1023			
7688	1460	142	16462	Indexable inserts CNMA	CBN 2028			
7689	1458	142	16462	Indexable inserts CNGN	CBN 3018			
7690	1492	142	16462	Indexable inserts SNGN	CBN 3018			
7691	1467	142	16462	Indexable inserts DCGW	CBN 1023			
7692	1467	142	16462	Indexable inserts DCGW	CBN 2028			
7693	1515	142	16462	Indexable inserts TNGA	CBN 1023			
7694	1515	142	16462	Indexable inserts TNGA	CBN 1023			
7695	1456	142	16462	Indexable inserts CNGA	CBN 1023			
7696	1457	142	16462	Indexable inserts CNGA	CBN 1023			
7697	1456	142	16462	Indexable inserts CNGA	CBN 1023			
7698	1457	142	16462	Indexable inserts CNGA	CBN 1023			
7699	1491	142	16462	Indexable inserts SNGA	CBN 1023			
7700	1490	142	16462	Indexable inserts SNGA	CBN 1023			
7701	1469	142	16462	Indexable inserts DNGA	CBN 1023			
7702	1469	142	16462	Indexable inserts DNGA	CBN 1023			
7703	1499	142	16462	Indexable inserts TCCN	CBN 1023			
7704	1500	142	16462	Indexable inserts TCCN	CBN 2028			
7705	1499	142	16462	Indexable inserts TCCN	CBN 1024			
7706	1500	142	16462	Indexable inserts TCCN	CBN 2026			
7707	1499	142	16462	Indexable inserts TCCN	CBN 1023			
7708	1499	142	16462	Indexable inserts TCCN	CBN 2028			
7709	1499	142	16462	Indexable inserts TCCN	CBN 1024			
7710	1500	142	16462	Indexable inserts TCCN	CBN 2026			
7711	1498	142	G.S.	Indexable inserts TCCN	Solid carbide			
7712	1498	142	16463	Indexable inserts TCCN	PCD			
7713	1459	142	16462	Indexable inserts CNGW	CBN 1023			
7714	1459	142	16462	Indexable inserts CNGW	CBN 2028			
7715	1470	142	G.S.	Indexable inserts RNGN	CBN 3018			
7716	1471	142	16462	Indexable inserts SCGN	CBN 2028			
7717	1519	142	16462	Indexable inserts VBMW	CBN 1023			
7718	1519	142	16462	Indexable inserts VBMW	CBN 2028			
7719	1520	142	16462	Indexable inserts VBMW	CBN 1023			
7720	1520	142	16462	Indexable inserts VBMW	CBN 1023			
7721	1520	142	16462	Indexable inserts VBMW	CBN 2028			
7722	1520	142	16462	Indexable inserts VBMW	CBN 2028			
8510	217	121	6537K	Ratio drills with oil feed	Solid carbide	RT 100 VA		3xD
8511	235	121	6537L	Ratio drills with oil feed	Solid carbide	RT 100 VA		5xD
8520	217	121	6537K	Ratio drills with oil feed	Solid carbide	RT 100 HF		3xD
8521	235	121	6537L	Ratio drills with oil feed	Solid carbide	RT 100 HF		5xD
8522	248	121	G.S.	Ratio drills with oil feed	Solid carbide	RT 100 HF		7xD
8524	198	121	6537K	Ratio drills without oil feed	Solid carbide	RT 100 HF		3xD
8610	217	121	6537K	Ratio drills with oil feed	Solid carbide	RT 100 VA		3xD
8611	235	121	6537L	Ratio drills with oil feed	Solid carbide	RT 100 VA		5xD
8620	217	121	6537K	Ratio drills with oil feed	Solid carbide	RT 100 HF		3xD
8621	235	121	6537L	Ratio drills with oil feed	Solid carbide	RT 100 HF		5xD

Certificate to DIN ISO 9001:2008
DIN ISO 14001:2004
DIN ISO 13485:2003 + AC:2009

audit* to VDA 6.1, VDA 6.4, TS 16949
EFQM, FDA and aircraft industry

Quality is not about winning awards. Nevertheless, we have done extremely well in this department. Awards like „Supplier of the Year 2002“ from Volkswagen as well as from Caterpillar, British Aerospace, MTU Munich and INA bring enthusiasm and are recognition of all employees involved.

Since December 1993, we have attained the international DIN EN ISO 9001 certificate by DQS and since July 2004 DIN EN ISO 14001 accreditation. Since March 2010 we are also certificated to EN ISO 13485.

However, our striving for quality is predominantly in order to fully satisfy your expectations regarding product and service.

* An „audit“ is an „evaluation of efficiency of the quality management system by means of an independent systematic inspection“.

Customer references, audits and awards:

2001	Product audit VDA 6.4	Mannesmann-Sachs Eidorf
	Supplier audit	VW Braunschweig
	VDA 6.4 Toolmanagement	VW Sachsen Chemnitz
	Customer assessment	BMW Munich
2002	Supplier of the Year	Volkswagen
2003	DIN EN ISO 9001:2000	DQS Rezertifizierung
	Product audit solid carb. tools aircraft ind.	Techspace Aero Belgien
	VDA 6.4 Toolmanagement	Daimler Chrysler Berlin
	Validation EMAS II	Werk Sulkov
	Acknowledgement “Special cust. proximity”	Grob, Mindelheim
2004	Product audit VDA 6.4 HDF aircraft industry	MTU Munich
	Process audit aircraft industry	Airbus Hamburg
	System audit VDA 6.4	DQS Audit
	Process audit medical tools	Stryker Kiel
	System audit DIN EN ISO 14001	DQS certification
2005	Product audit solid carbide tools	INA Herzogenaurach
	Product audit VDA 6.4 gun drills aircraft ind.	MTU Munich
	Process audit projects	Körber GmbH
	Award “A” supplier	LINCOLN GmbH & Co. KG
2006	Process audit solid carbide tools	Delphi France
	Product audit medical tools	K. Leibinger Mühlheim
	Supplier of the Year	INA Schaeffler
	System audit DIN EN 9001:2000	DQS recertification
2007	Product audit aircraft industry A380	Airbus Hamburg
	Product audit R&D solid carbide tools	Körber GmbH Berlin
	System audit DIN EN ISO 14001:2000	DQS recertification
	Supplier of the Year	INA Schaeffler
2008	QM contract conlusion	MTU Munich
	Product audit HSCO cil. tools	Misumi Japan
	Product audit solid carbide reamers	Burgmaier Laupheim
2009	System audit DIN EN ISO 9001:2008	DQS recertification
	Product audit solid carbide tools	Robert Bosch Homburg
	System audit DIN EN ISO 9001:2008 (new subsidiaries)	DQS new certification
2010	System audit DIN 13485 medical tools	DQS new certification
	Top supplier “worldwide” 2008	John Deere Mannheim
	Product audit medical tools	Karl Storz Endoscope
	Insurance audit	Chubb Insurance
	Product audit HSCO milling cutters	MTU Munich
	Supplier screening	BMW Munich
	Product audit solid carbide milling cutters	Robert Bosch Homburg
2011	System audit to TS 16949	Robert Bosch Homburg
	System audit medical tools to FDA	Stryker Leibinger Freiburg

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