

GUHRING

GM 300



GM 300

TOOLHOLDERS, CLAMPING SYSTEMS
AND ACCESSORIES

EDITION NO. 62

A close-up photograph of a metal drill bit. The bit has a standard double-flute design. At the tip, a fine mist of coolant is being sprayed out. The background is a plain, light-colored surface.

HIGH CLAMPING FORCE

PERFECT CONCENTRICITY

MAXIMUM OPERATIONAL SAFETY

OPTIMAL COOLANT DELIVERY

FROM THE SPINDLE TO THE CUTTING EDGE

INNOVATIONS FOR THE METAL-CUTTING INDUSTRY



*MODULAR TOOL HOLDERS FROM
THE TOOL MANUFACTURER'S
PERSPECTIVE!*



*DECADES OF OUR
KNOWLEDGE & EXPERIENCE
OFFERED TO YOU!*



*HOLDERS PERFECTLY ADAPTED
TO SUIT THE DEMANDS
OF MODERN TOOLS!*

ORDERING

When ordering, please always state

Guhring no. and code no., i.e.:

„HMC 3000 hydraulic chucks

for small clamping diameters HSK-A50,

for shank Ø 3mm“ = **4618 3,050**

Code no.

Guhring no.

HSK-A hydraulic chucks HMC 3000 for small clamping diameters

								Guhring no.	4618
								Discount group	114
HSK-A d ₃	for shank Ø d ₁ h ₆ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	l ₅ mm	SW	Code no.	Availability
32	3	28	40.0	84.0	34	33	4	3,032	●
32	4	28	40.0	84.0	34	33	4	4,032	●
32	5	28	40.0	84.0	34	33	4	5,032	●
40	3	28	33.5	74	34	40	4	3,040	●
40	4	28	33.5	74	34	40	4	4,040	●
40	5	28	33.5	74	34	40	4	5,040	●
50	3	28	40	74	34	32	4	3,050	●
50	4	28	40	74	34	32	4	4,050	●
50	5	28	40	74	34	32	4	5,050	●
63	3	28	50	74	34	28.5	5	3,063	●
63	4	28	50	74	34	28.5	5	4,063	●
63	5	28	50	74	34	28.5	5	5,063	●
100	3	28	50	79	34	30	5	3,100	●
100	4	28	50	79	34	30	5	4,100	●
100	5	28	50	79	34	30	5	5,100	●

GUHRING

GM 300

TOOLHOLDERS, CLAMPING SYSTEMS
AND ACCESSORIES

PRICELIST NO. 62

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GUHRING

GM 300



GÜHRING



WE SET
THE STANDARDS
FOR THE FUTURE

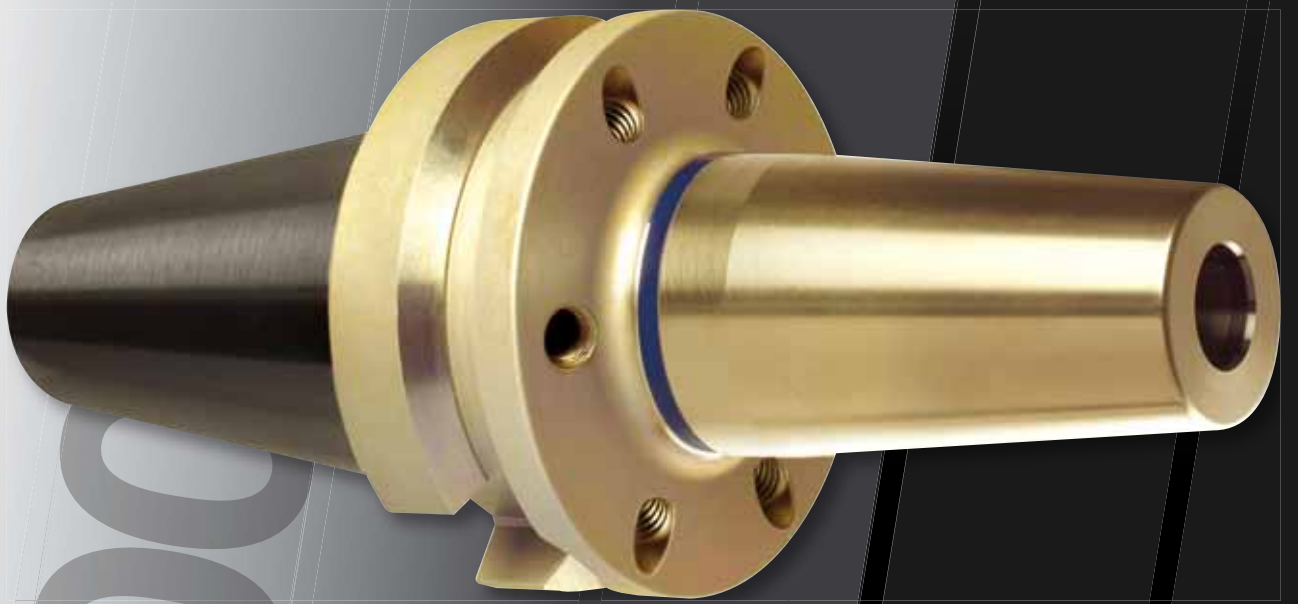


*DEVELOPMENT OF THE
HSK INTERFACE, PIONEER
OF FINE MACHINING*



*MQL TECHNOLOGY
"FROM THE SPINDLE
TO THE CUTTING EDGE"*

HSK



*HIGH OPERATING SAFETY
THANKS TO TEMPERATURE
INDICATOR*



*PVD-COATING FOR LONG
TOOL LIFE*

**DEVELOPMENTS
NEVER BEEN
SEEN BEFORE.**



TOOLS FROM Ø 3MM
DIRECT HYDRAULIC
CLAMPING



AXIALLY AND RADIALY
 μ -ADJUSTABLE
PRECISION CLAMPING



HMC 3000
EXG MODULE

MQL

GUHRING MQL SYSTEMS

DELIVERING
ONLY THE
REQUIRED AMOUNT



As one of the pioneers of MQL technology we have an extensive knowledge of minimal quantity lubrication. Guhring standard MQL Chucks have been supplied a thousand fold throughout the world and are recognised by the automotive industry as ideal MQL solutions as either the one or two channel systems.

Higher cutting speeds and longer tool life are possible thanks to adapted cooling as well as highest surface qualities thanks to the pure lubricant. Workpieces and chips remain dry! Save the cost of de-greasing your workpieces as well as disposal of swarf and soluble oil.

1 MQL BY GÜHRING

Our products for the MQL 1-channel technology are identified by this symbol.

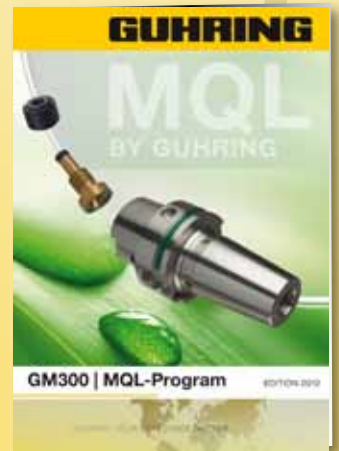
Visual feature of the 1-channel system is the gold coloured MQL length setting screw.



2 MQL BY GÜHRING

Our products for the MQL 2-channel technology are identified by this symbol.

Visual feature of the 2-channel system is the black coloured MQL length setting screw.



YOU CAN NOW
REQUEST THE
MQL CATALOGUE!

All Guhring tool holders as well as much information on MQL technology applications in the new MQL catalogue at a glance.

GUHRING

HYDRAULIC CHUCKS

SHRINK FIT TECHNOLOGY

HPC CLAMPING CHUCKS

TAPPING CHUCKS

TOOL HOLDERS



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HOLDERS FOR FINE MACHINING

HSK CLAMPING TECHNOLOGY








MEASURING TOOLS AND GENERAL ACCESSORIES

TECHNICAL INFORMATION



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* combined with appropriate side lock holder or basic adaptor

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HMC 3000 MICRO-PRECISION DRILLS HR 500

PERFECT CLAMPING

HMC 3000 HYDRAULIC CHUCKS
TOGETHER WITH SOLID CARBIDE
MICRO-PRECISION DRILLS OR HR
500 HIGH-PERFORMANCE REAMERS



- ⇒ direct hydraulic clamping of shanks from $\text{Ø } 3 \text{ mm}$
- ⇒ quick, simple and accurate length setting
- ⇒ perfect concentricity $R < 3 \text{ }\mu\text{m}$ with $10 \times d1$

Please request our "HMC 3000", "HR 500" and "solid carbide micro-precision drills" brochures.



HYDRAULIC CHUCKS

HMC 3000

EXTREMELY FAST
EXTREMELY ACCURATE
EXTREMELY SMALL



***DIRECT HYDRAULIC
CLAMPING OF TOOLS
FROM Ø 3 MM***



***HIGH-SPEED
MACHINING***



***PERFECT
CONCENTRICITY
 $R < 3 \mu\text{M}$
WITH $10 \times D1$***



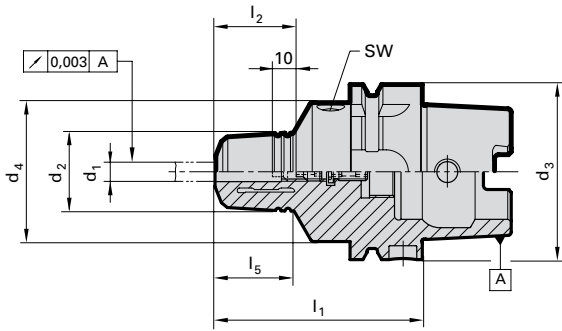
HSK-A hydraulic chucks HMC 3000 for clamping small diameters

Product information

- perfect concentricity: < 3 µm at 10xd1
- balancing quality: G6.3 / 30,000 rev./min
- HSK-A to DIN 69893
- high clamping force
- quick, simple handling and accurate length setting
- IC and GÜHROJET peripheral cooling ensure optimal chip evacuation and tool lubrication

Scope of delivery

- incl. length adjustment screw
- incl. hexagon chuck key Guhring no. 4912
- order coolant delivery set Guhring no. 4949 separately



GÜHROJET

Guhring no. **4618**

Discount group **114**

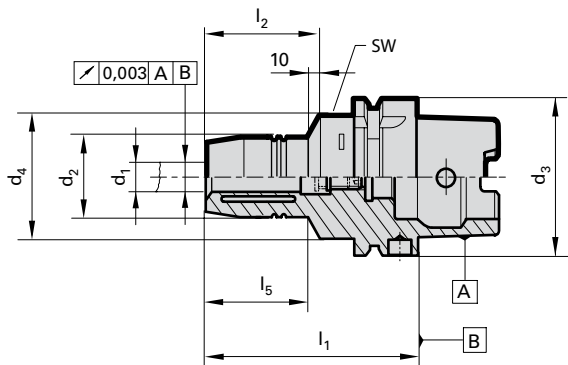
HSK-A d ₃	for shank Ø d ₁ h ₆ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	l ₅ mm	SW	Code no.	Availability
32	3	28	40.0	84.0	34	33	4	3,032	●
32	4	28	40.0	84.0	34	33	4	4,032	●
32	5	28	40.0	84.0	34	33	4	5,032	●
40	3	28	33.5	74	34	40	4	3,040	●
40	4	28	33.5	74	34	40	4	4,040	●
40	5	28	33.5	74	34	40	4	5,040	●
50	3	28	40	74	34	32	4	3,050	●
50	4	28	40	74	34	32	4	4,050	●
50	5	28	40	74	34	32	4	5,050	●
63	3	28	50	74	34	28.5	5	3,063	●
63	4	28	50	74	34	28.5	5	4,063	●
63	5	28	50	74	34	28.5	5	5,063	●
100	3	28	50	79	34	30	5	3,100	●
100	4	28	50	79	34	30	5	4,100	●
100	5	28	50	79	34	30	5	5,100	●

Product information

- balancing quality: G6.3 / 15,000 rev./min
- axial length setting
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- to DIN 69882-7
- also available in extra-long lengths
l1 = 150 / 160 mm and 200 mm

Scope of delivery

- incl. adjustment screw Guhring no. 4900
- incl. hexagon chuck key Guhring no. 4912
- order coolant delivery set Guhring no. 4949 separately



Guhring no.

4299

Discount group

147

HSK-A d ₃	for shank Ø d ₁ h ₆ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	l ₅ mm	incl. setting screw 4900 ...	SW	kg	Code no.	Availability
32	6	26	40.0	80	37	29	6.014	4	0.44	6,032	●
32	8	28	40.0	80	37	29	8.014	4	0.40	8,032	●
32	10	30	40.0	85	41	35	8.014	4	0.40	10,032	●
32	12	32	40.0	90	46	40	8.014	4	0.40	12,032	●
40	6	26	33.5	70	37	36	6.014	4	0.60	6,040	●
40	8	28	33.5	70	37	36	8.014	4	0.60	8,040	●
40	10	30	33.5	75	41	42	8.014	4	0.60	10,040	●
40	12	32	33.5	80	46	48	8.014	4	0.60	12,040	●
50	6	26	40.0	70	37	28	6.014	4	0.80	6,050	●
50	8	28	40.0	70	37	28	8.014	4	0.80	8,050	●
50	10	30	40.0	75	41	34	10.014	4	0.80	10,050	●
50	12	32	40.0	85	46	44	12.014	4	0.80	12,050	●
50	14	34	40.0	85	46	44	12.014	5	0.80	14,050	●
50	16	38	53.0	90	49	30	16.014	5	1.10	16,050	●
50	18	40	57.0	90	49	30	16.014	5	1.10	18,050	●
50	20	42	60.0	90	51	29	20.014	5	1.10	20,050	●
63	6	26	50.0	70	37	24.5	6.014	5	1.00	6,063	●
63	8	28	50.0	70	37	24.5	8.014	5	1.00	8,063	●
63	10	30	50.0	80	41	35.5	10.014	5	1.00	10,063	●
63	12	32	50.0	85	46	41.5	12.014	5	1.10	12,063	●
63	14	34	50.0	85	46	41.5	12.014	5	1.10	14,063	●
63	16	38	50.0	90	49	45.5	16.014	5	1.20	16,063	●
63	18	40	50.0	90	49	48.5	16.014	5	1.20	18,063	●
63	20	42	50.0	90	51	47.5	20.114	5	1.20	20,063	●
63	25	57	63.0	120	57	55.3	20.114	6	2.10	25,063	●
63	32	64	75.0	125	61	63	20.114	6	2.40	32,063	●
63	6	26	50.0	150	37	103	6.014	5	1.50	6,163	●
63	8	28	50.0	150	37	104	8.014	5	1.50	8,163	●
63	10	30	50.0	150	41	104	10.014	5	1.50	10,163	●
63	12	32	50.0	150	46	105	12.014	5	1.50	12,163	●
63	14	34	50.0	150	46	105	12.014	5	1.70	14,163	●
63	16	38	50.0	150	49	106	16.014	5	1.80	16,163	●
63	18	40	50.0	150	49	107	16.014	5	1.90	18,163	●
63	20	42	50.0	150	51	108	20.114	5	1.90	20,163	●
63	6	26	50.0	200	37	153	6.014	5	1.70	6,263	●
63	8	28	50.0	200	37	154	8.014	5	1.70	8,263	●
63	10	30	50.0	200	41	154	10.014	5	1.80	10,263	●
63	12	32	50.0	200	46	155	12.014	5	1.80	12,263	●
63	14	34	50.0	200	46	155	12.014	5	2.00	14,263	●
63	16	38	50.0	200	49	156	16.014	5	2.20	16,263	●

HSK-A hydraulic chucks with increased clamping force

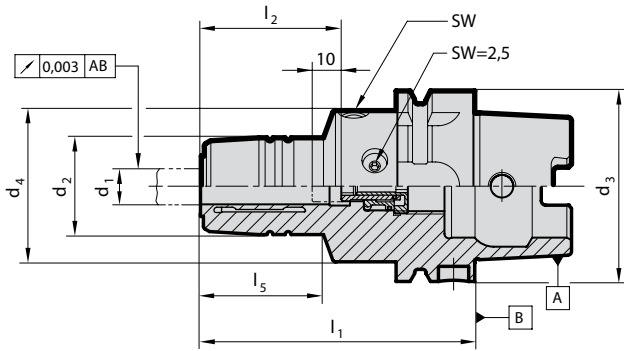
										Guhring no. 4299	
										Discount group 147	
HSK-A d ₃	for shank Ø d ₁ h ₆ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	l ₅ mm	incl. setting screw 4900 ...	SW	kg	Code no.	Availability
63	18	40	50.0	200	49	157	16.014	5	2.30	18,263	●
63	20	42	50.0	200	51	158	20.114	5	2.50	20,263	●
80	6	26	50.0	70	37	24	6.014	5	1.50	6,080	●
80	8	28	50.0	70	37	24	8.014	5	1.50	8,080	●
80	10	30	50.0	80	41	35	10.014	5	1.50	10,080	●
80	12	32	50.0	85	46	40	12.014	5	1.60	12,080	●
80	14	34	50.0	85	46	40	12.014	5	1.60	14,080	●
80	16	38	50.0	95	49	51	16.014	5	1.70	16,080	●
80	18	40	50.0	95	49	51	16.014	5	1.80	18,080	●
80	20	42	50.0	95	51	52	20.114	5	1.80	20,080	●
80	25	57	63.0	110	57	65	20.114	6	2.60	25,080	●
80	32	64	75.0	125	61	63	20.114	6	3.20	32,080	●
100	6	26	50.0	75	37	26	6.014	5	2.40	6,100	●
100	8	28	50.0	75	37	26	8.014	5	2.40	8,100	●
100	10	30	50.0	90	41	42	10.014	5	2.50	10,100	●
100	12	32	50.0	95	46	47	12.014	5	2.50	12,100	●
100	14	34	50.0	95	46	47	12.014	5	2.50	14,100	●
100	16	38	50.0	100	49	53	16.014	5	2.70	16,100	●
100	18	40	50.0	100	49	53	16.014	5	2.70	18,100	●
100	20	42	50.0	105	51	59	20.114	5	3.20	20,100	●
100	25	57	63.0	110	57	62	20.114	6	3.30	25,100	●
100	32	64	75.0	110	61	62	20.114	6	3.80	32,100	●
100	6	27	50.0	160	37	104	6.014	5	2.80	106,100	●
100	8	27	50.0	160	37	104	8.014	5	2.80	108,100	●
100	10	32	50.0	160	41	105	10.014	5	2.90	110,100	●
100	12	32	50.0	160	46	105	12.014	5	2.90	112,100	●
100	14	34	50.0	160	46	107	12.014	5	2.90	114,100	●
100	16	34	50.0	160	49	107	16.014	5	3.20	116,100	●
100	18	42	50.0	160	49	108	16.014	5	3.20	118,100	●
100	20	42	50.0	160	51	108	20.114	5	3.60	120,100	●
100	25	53	63.0	160	57	110	20.114	6	3.70	125,100	●
100	32	53	75.0	160	61	110	20.114	6	4.20	132,100	●
100	6	27	50.0	200	37	144	6.014	5	3.00	206,100	●
100	8	27	50.0	200	37	144	8.014	5	3.00	208,100	●
100	10	32	50.0	200	41	145	10.014	5	3.10	210,100	●
100	12	32	50.0	200	46	145	12.014	5	3.10	212,100	●
100	14	34	50.0	200	46	147	12.014	5	3.10	214,100	●
100	16	34	50.0	200	49	147	16.014	5	3.40	216,100	●
100	18	42	50.0	200	49	148	16.014	5	3.40	218,100	●
100	20	42	50.0	200	51	148	20.114	5	3.80	220,100	●
100	25	53	63.0	200	57	150	20.114	6	3.90	225,100	●
100	32	53	75.0	200	61	150	20.114	6	4.40	232,100	●

Product information

- balancing quality: G6.3 / 15,000 rev./min
- robust, radially operated length setting
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- to DIN 69882-7

Scope of delivery

- incl. hexagon chuck key Guhring no. 4912
- incl. hexagon key inserts for radial length setting
- order coolant delivery set Guhring no. 4949 separately
- MQL design available as an option



Guhring no. 4296
Discount group 147

HSK-A d3	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	l5 mm	SW	kg	Code no.	Availability
50	6	26	40	80	37	35	5	0.80	6,050	●
50	8	28	40	80	37	36	5	0.80	8,050	●
50	10	30	40	85	41	41	5	0.90	10,050	●
50	12	32	40	90	46	47	5	0.90	12,050	●
50	14	34	40	90	46	46	5	1.00	14,050	●
50	16	38	53	95	49	36.5	5	1.20	16,050	●
50	18	40	57	95	49	36.5	5	1.20	18,050	●
50	20	42	60	100	51	39	5	1.30	20,050	●
63	6	26	50	80	37	33	5	1.00	6,063	●
63	8	28	50	80	37	33	5	1.10	8,063	●
63	10	30	50	85	41	38	5	1.10	10,063	●
63	12	32	50	90	46	40	5	1.20	12,063	●
63	14	34	50	90	46	46	5	1.20	14,063	●
63	16	38	50	95	50.5	51	5	1.30	16,063	●
63	18	40	50	95	49	52	5	1.30	18,063	●
63	20	42	50	100	51	58	5	1.40	20,063	●
63	25	57	63	120	57	59.5	6	2.30	25,063	●
63	32	64	75	125	61	62.5	6	2.30	32,063	●
80	6	26	50	85	37	35.5	5	1.50	6,080	●
80	8	28	50	85	37	36	5	1.50	8,080	●
80	10	30	50	90	41	38	5	1.50	10,080	●
80	12	32	50	95	46	40	5	1.60	12,080	●
80	14	34	50	95	46	41	5	1.60	14,080	●
80	16	38	50	100	49	46	5	1.60	16,080	●
80	18	40	50	100	49	46	5	1.80	18,080	●
80	20	42	50	105	51	51	5	1.80	20,080	●
80	25	57	63	115	57	58.5	6	2.60	25,080	●
80	32	64	75	125	61	58.5	6	2.60	32,080	●
100	6	26	50	85	37	33	5	2.50	6,100	●
100	8	28	50	85	37	33	5	2.70	8,100	●
100	10	30	50	90	41	36	5	2.80	10,100	●
100	12	32	50	95	46	40	5	2.80	12,100	●
100	14	34	50	95	46	46	5	2.70	14,100	●
100	16	38	50	100	49	51	5	2.90	16,100	●
100	18	40	50	100	49	52	5	2.80	18,100	●
100	20	42	50	105	51	58	5	3.20	20,100	●
100	25	57	63	115	57	60	6	3.40	25,100	●
100	32	64	75	120	61	68	6	3.40	32,100	●

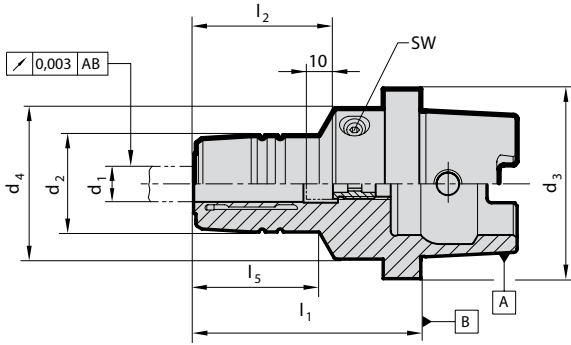
HSK-C hydraulic chucks with increased clamping force

Product information

- balancing quality: G6.3 / 15,000 rev./min
- axial length setting
- for tool shank tolerance h6

Scope of delivery

- incl. adjustment screw Guhring no. 4900
- incl. hexagon chuck key Guhring no. 4912



Guhring no.	4267
Discount group	147

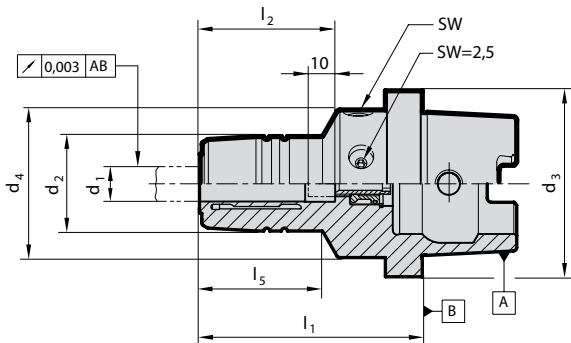
HSK-C d ₃	for shank Ø d ₁ h6 mm	d ₂ mm	l ₁ mm	l ₂ mm	l ₄ mm	l ₅ mm	incl. setting screw 4900 ...	SW	kg	Code no.	Availability
32	6	26	65	37.5	40	33	6.014	4	0.4	6,032	●
32	8	28	67	37.5	40	34	8.014	4	0.4	8,032	●
32	10	30	72.7	42.5	40	39	8.014	4	0.4	10,032	●
32	12	31.5	76	46	40	45	8.014	4	0.4	12,032	●
40	6	26	60	37	33.5	35	6.014	4	0.4	6,040	●
40	8	28	60	37	33.5	36	8.014	4	0.4	8,040	●
40	10	30	65	41	33.5	41	8.014	4	0.5	10,040	●
40	12	32	70	46	33.5	47	8.014	4	0.6	12,040	●
50	6	26	60	37	40	30	6.014	4	0.7	6,050	●
50	8	28	60	37	40	30	8.014	5	0.7	8,050	●
50	10	30	65	41	40	35	10.014	5	0.7	10,050	●
50	12	32	75	46	40	44	12.014	5	0.8	12,050	●
50	14	34	75	46	40	46	12.014	5	0.7	14,050	●
50	16	38	80	49	53	51	16.014	5	0.8	16,050	●
50	18	40	80	49	57	51	16.014	5	1.5	18,050	●
50	20	42	80	51	60	52	20.114	5	1.2	20,050	●
63	6	26	60	37	50	25	6.014	5	1.0	6,063	●
63	8	28	60	37	50	26	8.014	5	1.0	8,063	●
63	10	30	65	41	50	31	10.014	5	1.0	10,063	●
63	12	32	75	46	50	41	12.014	5	1.1	12,063	●
63	14	34	75	46	50	42	12.014	5	1.0	14,063	●
63	16	38	80	49	50	48	16.014	5	1.1	16,063	●
63	18	40	80	49	50	48	16.014	5	1.2	18,063	●
63	20	42	80	51	50	49	20.114	5	1.2	20,063	●
63	25	50	95	57	63	63	20.114	5	2.0	25,063	●
63	32	60	100	61	75	60	20.114	5	2.0	32,063	●

Product information

- balancing quality: G6.3 / 15,000 rev./min
- robust, radially operated length setting
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- to DIN 69882-7

Scope of delivery

- incl. hexagon chuck key Guhring no. 4912
- incl. hexagon key inserts for radial length setting



Guhring no. 4295
Discount group 147

HSK-C d3	for shank Ø d1 h6 mm	d2 mm	l1 mm	l2 mm	l4 mm	l5 mm	SW	kg	Code no.	Availability
40	6	26	60	37	33.5	32.5	5	0.5	6,040	●
40	8	28	60	37	33.5	33.0	5	0.5	8,040	●
40	10	30	65	41	33.5	38.5	5	0.5	10,040	●
40	12	32	70	46	33.5	44.0	5	0.6	12,040	●
50	6	26	60	37	40	29.5	5	0.6	6,050	●
50	8	28	60	37	40	29.5	5	0.6	8,050	●
50	10	30	65	41	40	35.5	5	0.6	10,050	●
50	12	32	75	46	40	46.0	5	0.8	12,050	●
50	14	34	75	46	40	47.0	5	0.9	14,050	●
50	16	38	80	49	53	53.0	5	0.9	16,050	●
50	18	40	80	49	57	53.5	5	1.0	18,050	●
50	20	42	80	51	60	54.0	5	1.0	20,050	●
63	6	26	60	37	50	26.0	5	1.0	6,063	●
63	8	28	60	37	50	26.0	5	1.1	8,063	●
63	10	30	65	41	50	32.0	5	1.1	10,063	●
63	12	32	75	46	50	42.5	5	1.1	12,063	●
63	14	34	75	46	50	43.0	5	1.1	14,063	●
63	16	38	80	49	50	49.0	5	1.2	16,063	●
63	18	40	80	49	50	50.0	5	1.2	18,063	●
63	20	42	80	51	50	50.5	5	1.2	20,063	●
63	25	50	95	57	63	52.0	6	1.8	25,063	●
63	32	60	100	61	75	60.0	6	2.3	32,063	●

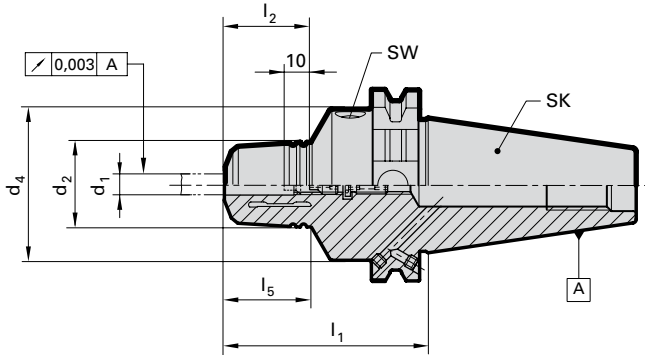
ISO taper hydraulic chucks HMC 3000 for clamping small diameters

Product information

- perfect concentricity: <math>< 3\ \mu\text{m}</math> at - balancing quality: G6.3 / 30,000 rev./min
- ISO taper to DIN 69871 form AD/B
- high clamping force
- quick, simple handling and accurate length setting
- IC and GÜHROJET peripheral cooling ensure optimal chip evacuation and tool lubrication

Scope of delivery

- incl. length adjustment screw
- incl. hexagon chuck key Guhring no. 4912
- order pull studs Guhring no. 4925, 4926 separately



GÜHROJET

Guhring no.	4619
Discount group	114

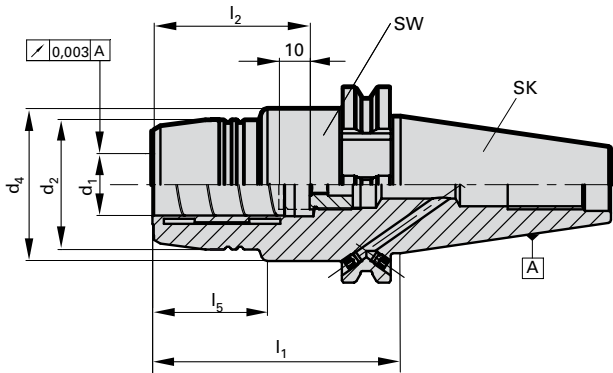
ISO taper	for shank \varnothing d_1 h6 mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	SW	Code no.	Availability
40	3	28.0	49.5	84.5	34.0	34.0	5	3,040	●
40	4	28.0	49.5	84.5	34.0	34.0	5	4,040	●
40	5	28.0	49.5	84.5	34.0	34.0	5	5,040	●

Product information

- ISO taper to DIN 69871 form AD/B
- form B supplied with threaded pins in bores
- balancing quality: G6.3 / 15,000 rev./min
- axial length setting
- for tool shank tolerance h6

Scope of delivery

- incl. adjustment screw Guhring no. 4900
- incl. hexagon chuck key Guhring no. 4912
- order pull studs Guhring no. 4925, 4926 separately



Guhring no. 4213
Discount group 147

ISO taper	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	l5 mm	incl. setting screw 4900 ...	SW	kg	Code no.	Availability
40	6	26.0	49.5	80.5	37	29.5	6.014	5	1.5	6,040	●
40	8	28.0	49.5	80.5	37	30.0	8.014	5	1.5	8,040	●
40	10	30.0	49.5	80.5	41	31.0	10.014	5	1.5	10,040	●
40	12	32.0	49.5	80.5	46	31.5	12.014	5	1.5	12,040	●
40	14	34.0	49.5	80.5	46	31.5	12.014	5	1.5	14,040	●
40	16	38.0	49.5	80.5	49	33.0	16.014	5	1.5	16,040	●
40	18	40.0	49.5	80.5	49	33.0	16.014	5	1.5	18,040	●
40	20	49.5	49.5	64.5	51	-	20.114	6	1.5	20,040	●
40	20	42.0	49.5	80.5	51	34.0	20.114	6	1.5	20,140	●
40	20	42.0	49.5	110.0	51	34.0	20.114	6	2.0	20,240	●
40	25	49.5	49.5	80.5	57	61.5	20.014	6	2.0	25,040	●
40	32	63.0	80.0	80.5	61	25.5	20.014	6	2.0	32,040	●
50	12	32.0	49.5	80.5	46	31.5	12.014	5	3.5	12,050	●
50	20	42.0	49.5	80.5	51	34.0	20.114	6	4.0	20,050	●
50	20	42.0	49.5	110.0	51	34.0	20.114	6	4.0	20,150	●
50	32	72.0	72.0	81.0	61	-	20.114	6	4.0	32,050	●

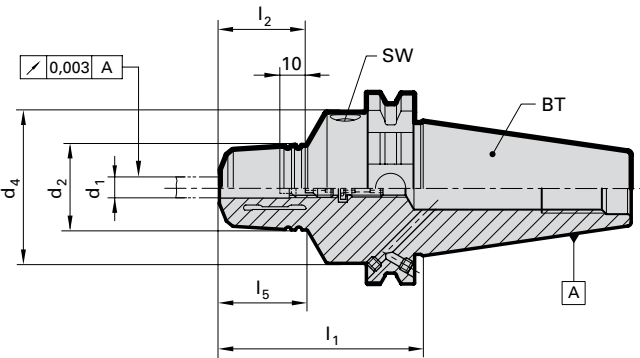
MAS/BT hydraulic chucks HMC 3000 for clamping small diameters

Product information

- perfect concentricity: < 3 μm at 10xd1
- balancing quality: G6.3 / 30,000 rev./min
- MAS/BT to JIS B 6339 form AD/B (*: version AD without coolant supply over collar)
- high clamping force
- quick, simple handling and accurate length setting
- IC and GÜHROJET peripheral cooling ensure optimal chip evacuation and tool lubrication

Scope of delivery

- incl. length adjustment screw
- incl. hexagon chuck key Guhring no. 4912
- order pull studs Guhring no. 4927, 4928 separately



GÜHROJET

Guhring no.	4620
Discount group	114

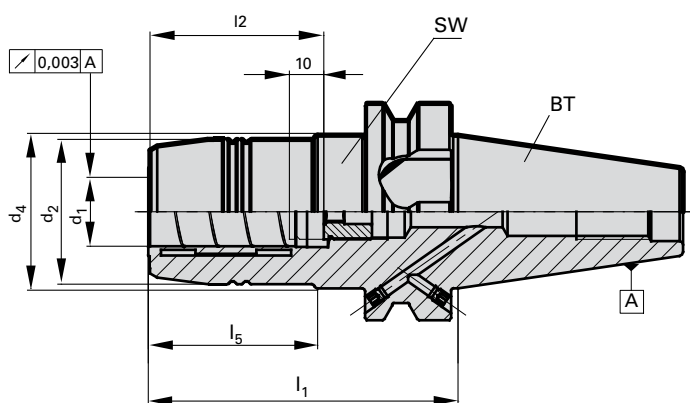
BT	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	l5 mm	SW	Code no.	Availability
30*	3	28.0	-	55.0	34	22.5	4	3,030	●
30*	4	28.0	-	55.0	34	22.5	4	4,030	●
30*	5	28.0	-	55.0	34	22.5	4	5,030	●
40	3	28.0	44.5	94.0	34	48.5	5	3,040	●
40	4	28.0	44.5	94.0	34	48.5	5	4,040	●
40	5	28.0	44.5	94.0	34	48.5	5	5,040	●

Product information

- balancing quality: G6.3 / 15,000 rev./min
- axial length setting
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- MAS/BT to JIS B 6339 form AD/B
(*: version AD without coolant supply over collar)

Scope of delivery

- incl. adjustment screw Guhring no. 4900
- incl. hexagon chuck key Guhring no. 4912
- order pull studs Guhring no. 4927, 4928 separately



Guhring no. 4221
Discount group 147

BT	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	l5 mm	incl. setting screw 4900 ...	SW	kg	Code no.	Availability
30*	6	26.0	-	51.0	37	18.0	6.014	4	0.6	6,030	●
30*	8	28.0	-	51.0	37	18.5	12.014	4	0.6	8,030	●
30*	10	30.0	-	51.0	41	19.0	10.014	4	0.6	10,030	●
30*	12	32.0	-	51.0	46	19.5	12.014	4	0.6	12,030	●
30*	16	38.0	-	90.0	49	50.0	16.014	4	1.0	16,030	●
30*	20	42.0	-	90.0	51	50.0	20.114	4	1.0	20,030	●
40	6	26.0	44.5	90.0	37	43.0	6.014	5	1.5	6,040	●
40	8	28.0	44.5	90.0	37	44.5	8.014	5	1.5	8,040	●
40	10	30.0	44.5	90.0	41	44.5	10.014	5	1.5	10,040	●
40	12	32.0	44.5	90.0	46	44.5	12.014	5	1.5	12,040	●
40	14	34.0	44.5	90.0	46	44.5	12.014	5	1.5	14,040	●
40	16	38.0	44.5	90.0	49	47.5	16.014	5	1.5	16,040	●
40	18	40.0	49.5	90.0	49	47.5	16.014	5	1.5	18,040	●
40	20	-	49.5	72.5	51	-	20.114	6	1.5	20,040	●
40	20	42.0	44.5	90.0	51	47.5	20.114	6	1.5	20,140	●
40	25	49.5	49.5	83.0	57	-	20.114	6	1.8	25,040	●
40	32	63.0	80.0	83.0	61	25.5	20.114	6	2.0	32,040	●
50	12	32.0	44.5	90.0	46	34.0	12.014	5	4.0	12,050	●
50	20	42.0	44.5	90.0	51	34.0	20.114	6	4.0	20,050	●
50	32	-	72.0	90.0	61	-	20.114	6	4.0	32,050	●

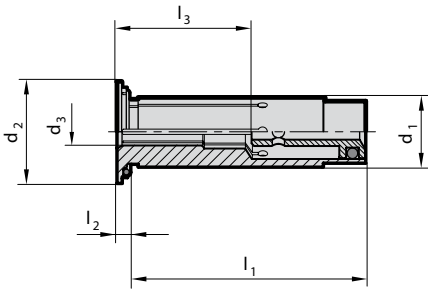
Reduction bushes, sealed, for hydraulic chucks

Product information

- for clamping smaller shank-Ø in hydraulic chucks
- clamping-Ø for tool shank tolerance h6
- closed endface, therefore leakproof up to 80 bar
- concentricity $\leq 2\ \mu\text{m}$
- with adjustable limit stop
- the application of reduction bushes makes it possible to increase the permissible transferable torque by approx. 25% in comparison to direct clamping

Scope of delivery

- incl. stop element
- special dimensions on request



Guhring no. 4368
Discount group 114

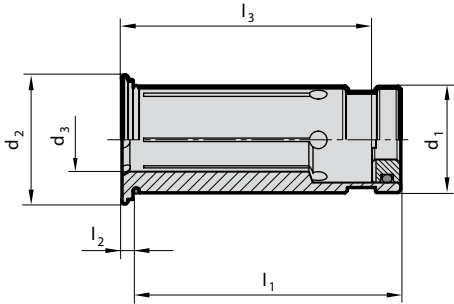
d1 mm	for shank Ø d3 h6 mm	d2 mm	l1 mm	l2 mm	l3 mm	Code no.	Availability
12	3	16.5	45	2	26.5	3,012	●
12	4	16.5	45	2	26.5	4,012	●
12	5	16.5	45	2	26.5	5,012	●
12	6	16.5	45	2	34.5	6,012	●
12	8	16.5	45	2	34.5	8,012	●
20	3	24	50.5	2	28.5	3,020	●
20	4	24	50.5	2	28.5	4,020	●
20	5	24	50.5	2	28.5	5,020	●
20	6	24	50.5	2	37.5	6,020	●
20	7	24	50.5	2	37.5	7,020	●
20	8	24	50.5	2	37.5	8,020	●
20	9	24	50.5	2	42.5	9,020	●
20	10	24	50.5	2	42.5	10,020	●
20	11	24	50.5	2	42.5	11,020	●
20	12	24	50.5	2	47.5	12,020	●
20	13	24	50.5	2	47.5	13,020	●
20	14	24	50.5	2	47.5	14,020	●
20	15	24	50.5	2	47.5	15,020	●
20	16	24	50.5	2	47.5	16,020	●
32	6	35.5	60.5	2	37.5	6,032	●
32	8	35.5	60.5	2	37.5	8,032	●
32	10	35.5	60.5	2	40.5	10,032	●
32	12	35.5	60.5	2	44.5	12,032	●
32	14	35.5	60.5	2	44.5	14,032	●
32	16	35.5	60.5	2	50.5	16,032	●
32	18	35.5	60.5	2	50.5	18,032	●
32	20	35.5	60.5	2	50.5	20,032	●
32	25	35.5	60.5	2	58.5	25,032	●

Product information

- for clamping smaller shank-Ø in hydraulic chucks
- clamping-Ø for tool shank tolerance h6
- with coolant slots for peripheral cooling, therefore process and tool life improvement
- concentricity ≤ 2 µm
- with adjustable limit stop
- the application of reduction bushes makes it possible to increase the permissible transferable torque by approx. 25% in comparison to direct clamping

Scope of delivery

- incl. stop element
- special dimensions on request



GÜHROJET

Guhring no. 4369
Discount group 114

d1 mm	for shank Ø d3 h6 mm	d2 mm	l1 mm	l2 mm	l3 mm	Code no.	Availability
12	3	16.5	45	2	26.5	3,012	●
12	4	16.5	45	2	26.5	4,012	●
12	5	16.5	45	2	26.5	5,012	●
12	6	16.5	45	2	34.5	6,012	●
12	8	16.5	45	2	34.5	8,012	●
20	3	24	50.5	2	28.5	3,020	●
20	4	24	50.5	2	28.5	4,020	●
20	5	24	50.5	2	28.5	5,020	●
20	6	24	50.5	2	37.5	6,020	●
20	7	24	50.5	2	37.5	7,020	●
20	8	24	50.5	2	37.5	8,020	●
20	9	24	50.5	2	42.5	9,020	●
20	10	24	50.5	2	42.5	10,020	●
20	11	24	50.5	2	42.5	11,020	●
20	12	24	50.5	2	47.5	12,020	●
20	13	24	50.5	2	47.5	13,020	●
20	14	24	50.5	2	47.5	14,020	●
20	15	24	50.5	2	47.5	15,020	●
20	16	24	50.5	2	47.5	16,020	●
32	6	35.5	60.5	2	37.5	6,032	●
32	8	35.5	60.5	2	37.5	8,032	●
32	10	35.5	60.5	2	40.5	10,032	●
32	12	35.5	60.5	2	44.5	12,032	●
32	14	35.5	60.5	2	44.5	14,032	●
32	16	35.5	60.5	2	50.5	16,032	●
32	18	35.5	60.5	2	50.5	18,032	●
32	20	35.5	60.5	2	50.5	20,032	●
32	25	35.5	60.5	2	58.5	25,032	●

Extraction key for reduction bushes

Product information

- for Guhring no. 4368 and 4369
- for the simple removal of reduction bushes



	Guhring no.	4099	
	Discount group	114	
for reduction bushes d ₁	Code no.	Availability	
12 to 32	1,000	●	

Senso 3000

Product information

- accurate, quick and simple measuring of the clamping force of hydraulic chucks
- mobility allows measuring within machines and fixtures
- determines clamping force via a pressure sensitive plug gauge
- display of absolute measuring value or percentage clamping force in relation to reference value

Scope of delivery

- incl. carbide proofing bar for determining the torque
- incl. type CR 2430 battery
- incl. sturdy case



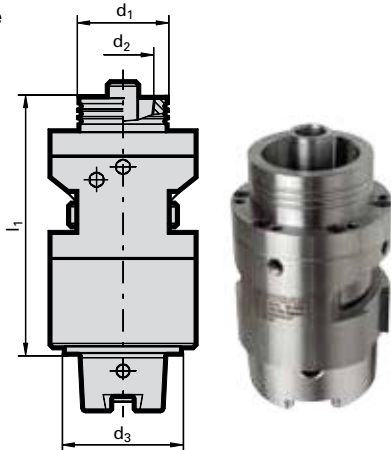
	Guhring no.	4038	
	Discount group	Net price	
clamping diameter	Code no.	Availability	
mm	kg		
6.0	1.1	6,000	●
8.0	1.1	8,000	●
10.0	1.3	10,000	●
12.0	1.3	12,000	●
14.0	1.3	14,000	●
16.0	1.3	16,000	●
18.0	1.5	18,000	●
20.0	1.5	20,000	●
25.0	2.0	25,000	●
32.0	2.5	32,000	●

Product information

- for application with presetting facilities for the accurate length pre-setting of axially adjustable chucks.
- thanks to precise clamping also suitable for measuring and setting the diameter.

Scope of delivery

- order plug insert, Guhring no. 4993, separately



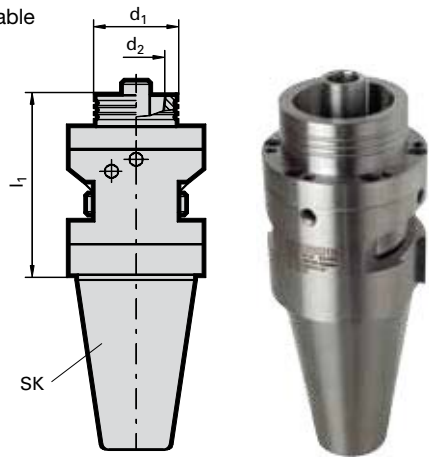
		Guhring no. 4316			
		Discount group		Net price	
HSK-C d3	for HSK-A/C/E d1	d2 mm	l1 mm	Code no.	Availability
63	50	38	104.6	63,050	●
63	63	48	111.6	63,063	●

Product information

- for application with presetting facilities for the accurate length pre-setting of axially adjustable chucks.
- thanks to precise clamping also suitable for measuring and setting the diameter.

Scope of delivery

- order plug insert, Guhring no. 4993, separately

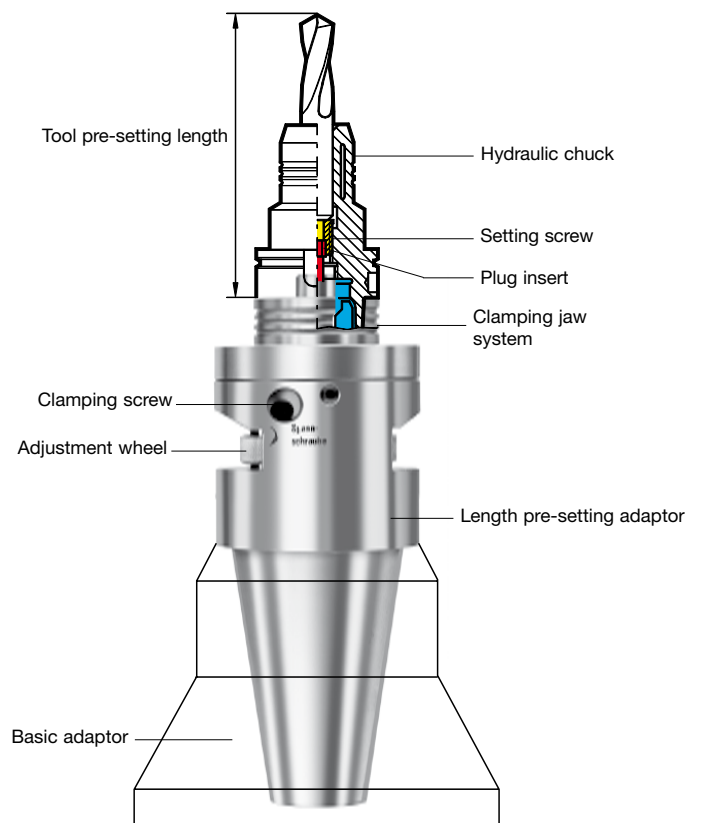


		Guhring no. 4319			
		Discount group		Net price	
SK	for HSK-A/C/E d1	d2 mm	l1 mm	Code no.	Availability
40	50	38	99.3	40,050	●
40	63	48	106.3	40,063	●
50	32	24	90.5	50,032	●
50	40	30	93.8	50,040	●
50	50	38	99.3	50,050	●
50	63	48	106.3	50,063	●
50	100	75	128.3	50,100	●

Design features

of the universal length pre-setting adaptor

- tool length pre-setting via an external adjustment wheel
- tool length optimally pre-set in the universal length presetting adaptor via HSK clamping system similar to a tool spindle.
- controlling concentricity of cutting edges and simultaneous axial length pre-setting possible on presetting adaptor.
- applicable are tool holders such as hydraulic chucks, collet holders, side lock holders DIN 1835 E
- access hole in taper not required, all HSK forms from HSK-A to HSK-F can be applied.
- axial length pre-setting via plug insert set, Guhring no. 4993.
- if a radial rotation of your pre-setting equipment is not possible, a rotatable version of the universal length presetting adaptor is available (on request).
- cannot be applied for cutting operations.
- not necessary to remove coolant supply.



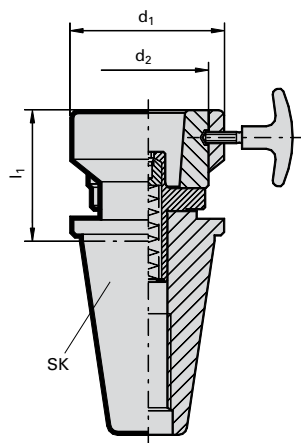
ISO taper length pre-setting adaptor

Product information

- application without removal of coolant supply
- simple design with radial clamping for easuring tool length
- for the application on pre-setting equipment for precise length pre-setting of axially adjustable chucks

Scope of delivery

- incl. taper insert, Guhring no. 4992
- order separately:
plug inserts, Guhring no. 4993

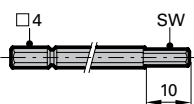


					Guhring no.	4315	
					Discount group	114	
ISO taper	for HSK-A/C/E	d ₁ mm	d ₂ mm	l ₁ mm	Code no.	Availability	
40	32	80	63	68.2	40,032	●	
40	40	80	63	68.2	40,040	●	
40	50	80	63	68.2	40,050	●	
40	63	80	63	68.2	40,063	●	
50	25	80	63	68.2	50,025	●	
50	32	80	63	68.2	50,032	●	
50	40	80	63	68.2	50,040	●	
50	50	80	63	68.2	50,050	●	
50	63	80	63	68.2	50,063	●	
50	80	120	100	88.2	50,080	●	
50	100	120	100	88.2	50,100	●	

Plug inserts

Product information

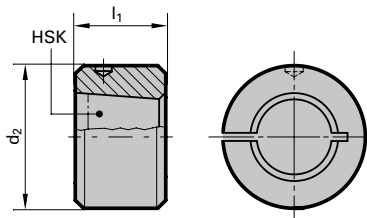
- for length pre-setting adaptors, Guhring nos. 4316, 4319 and 4315



Taper inserts

Product information

- for length pre-setting adaptor, Guhring no. 4315

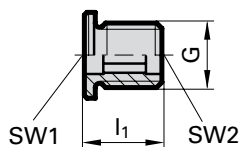


		Guhring no.	4993	
		Discount group	114	
for HSK	Set with key sizes	Code no.	Availability	
C	2.5/3/4/5/6	100,000	●	
A/E	2.5/3/4/5/6	200,000	●	
A (for MQL)	3/4/5	300,000	●	

			Guhring no.	4992	
			Discount group	114	
for HSK-A/C/E	d ₂ mm	l ₁ mm	Code no.	Availability	
25	63	40	25,000	●	
32	63	40	32,000	●	
40	63	40	40,000	●	
50	63	40	50,000	●	
63	63	40	63,000	●	
80	100	55	80,000	●	
100	100	55	100,000	●	

Product information

- for hydraulic chucks
- for conventional internal cooling
- with facing stop for standard shank ends
- for HSK 32/40 with clamping-Ø 10,0 and 12,0 mm use code no. 8,014



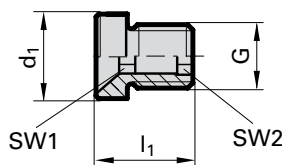
Guhring no. 4900
Discount group 114

for clamping-Ø	l ₁ mm	G	SW1	SW2	Code no.	Availability
6	14	M5	2.5	2.5	6,014	●
8	14	M6	3.0	3.0	8,014	●
10	14	M8x1	4.0	4.0	10,014	●
12/14	14	M10x1	5.0	5.0	12,014	●
16/18	14	M12x1	6.0	6.0	16,014	●
20/25/32	14	M16x1	6.0	6.0	20,014	●
20/25/32	14	M16x1	8.0	6.0	20,114	●

MQL length pre-setting screws for the conversion

Product information

- for hydraulic chucks and shrink fit chucks
- optimised for MQL with special geometry
- with tapered stop for MQL conical shank ends



Guhring no. 4919
Discount group 114

d ₁ mm	l ₁ mm	G	SW1	SW2	Code no.	Availability
6	14.8	M5	2.5	2.5	6,000	●
8	15.6	M6	3.0	3.0	8,000	●
10	16.1	M8x1	4.0	4.0	10,000	●
10	16.6	M8x1	3.0	3.0	10,040	●
10	16.6	M6	3.0	3.0	10,032	●
12	16.6	M10x1	5.0	5.0	12,000	●
12	17.6	M6	3.0	3.0	12,032	●
14	17.6	M10x1	5.0	5.0	14,000	●
14	18.6	M6	3.0	3.0	14,040	●
16	18.6	M12x1	5.0	5.0	16,000	●
16	19.6	M6	3.0	3.0	16,040	●
18	19.6	M12x1	5.0	5.0	18,000	●
20	20.6	M16x1	5.0	5.0	20,000	●
25	22.6	M16x1	8.0	6.0	25,000	●
32	26.1	M16x1	8.0	6.0	32,000	●

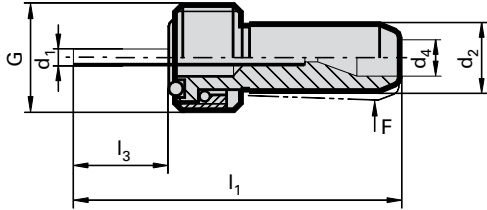
MQL coolant delivery sets HSK-A for the conversion

Product information

- replace conventional coolant delivery sets, Guhring no. 4949, when applying MQL
- for hydraulic chucks to DIN 69882-7

Scope of delivery

- complete MQL coolant delivery set consisting of :
coolant pipe, cap nut
MQL tube and O-rings



Guhring no.

4924

Discount group

114

for HSK-A	clamping-Ø mm	d ₁ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₃ mm	G	Code no.	Availability
32	6	2.5	6	3.5	54.2	28.0	M10x1	32,010	●
32	8	3.0	6	3.5	54.3	28.1	M10x1	32,030	●
32	10	3.0	6	3.5	55.8	29.6	M10x1	32,050	●
32	12	3.0	6	3.5	56.6	30.4	M10x1	32,070	●
40	6	2.5	8	4.0	45.1	16.0	M12x1	40,010	●
40	8	3.0	8	4.0	56.2	15.8	M12x1	40,030	●
40	10	3.0	8	4.0	46.3	17.1	M12x1	40,050	●
40	12	3.0	8	4.0	46.7	17.5	M12x1	40,070	●
50	6	2.5	10	4.0	44.6	11.9	M16x1	50,010	●
50	8	3.0	10	4.0	46.1	13.4	M16x1	50,030	●
50	10	4.0	10	4.0	45.7	13.0	M16x1	50,050	●
50	12	5.0	10	4.0	46.1	13.4	M16x1	50,070	●
50	14	5.0	10	4.0	51.5	18.8	M16x1	50,090	●
50	16	5.0	10	4.0	52.8	20.1	M16x1	50,110	●
50	18	5.0	10	4.0	53.2	20.5	M16x1	50,130	●
50	20	5.0	10	4.0	51.5	18.8	M16x1	50,150	●
63	6	2.5	12	4.0	45.7	9.5	M18x1	63,010	●
63	6	2.5	12	4.0	126.9	90.6	M18x1	63,011	●
63	6	2.5	12	4.0	176.9	140.6	M18x1	63,012	●
63	8	3.0	12	4.0	46.0	9.8	M18x1	63,030	●
63	8	3.0	12	4.0	126.1	89.9	M18x1	63,031	●
63	8	3.0	12	4.0	176.2	139.9	M18x1	63,032	●
63	10	4.0	12	4.0	51.7	15.5	M18x1	63,050	●
63	10	4.0	12	4.0	122.2	86.0	M18x1	63,051	●
63	10	4.0	12	4.0	172.2	135.9	M18x1	63,052	●
63	12/14/20	5.0	12	4.0	52.1	15.9	M18x1	63,070	●
63	16/18	5.0	12	4.0	53.8	17.6	M18x1	63,090	●
63	12/14	5.0	12	4.0	117.6	81.4	M18x1	63,091	●
63	12/14	5.0	12	4.0	167.6	131.3	M18x1	63,092	●
63	16	5.0	12	4.0	114.3	78.0	M18x1	63,111	●
63	25/32	6.0	12	4.0	77.0	40.8	M18x1	63,120	●
63	18	5.0	12	4.0	114.6	78.3	M18x1	63,131	●
63	16/18	5.0	12	4.0	164.6	128.3	M18x1	63,132	●
63	20	5.0	12	4.0	112.9	76.6	M18x1	63,151	●
63	20	5.0	12	4.0	162.9	126.6	M18x1	63,152	●
80	6	2.5	14	4.0	44.8	5.5	M20x1.5	80,010	●
80	8	3.0	14	4.0	44.9	5.6	M20x1.5	80,030	●
80	10	4.0	14	4.0	50.9	11.6	M20x1.5	80,050	●
80	12	5.0	14	4.0	51.3	12.0	M20x1.5	80,070	●
80	14	5.0	14	4.0	51.6	12.3	M20x1.5	80,090	●
80	16	5.0	14	4.0	57.9	18.6	M20x1.5	80,110	●
80	18	5.0	14	4.0	58.3	19.0	M20x1.5	80,130	●
80	20	5.0	14	4.0	56.6	17.3	M20x1.5	80,150	●
80	25	6.0	14	4.0	53.1	13.8	M20x1.5	80,170	●
80	32	6.0	14	4.0	77.2	37.9	M20x1.5	80,190	●
100	6	2.5	16	4.0	53.0	9.2	M24x1.5	100,010	●
100	8	3.0	16	4.0	53.7	9.9	M24x1.5	100,030	●
100	10	4.0	16	4.0	63.3	19.5	M24x1.5	100,050	●
100	12	5.0	16	4.0	63.8	20.0	M24x1.5	100,070	●
100	14	5.0	16	4.0	64.2	20.4	M24x1.5	100,090	●
100	16	5.0	16	4.0	65.4	21.6	M24x1.5	100,110	●
100	18	5.0	16	4.0	65.8	22.0	M24x1.5	100,130	●
100	20	5.0	16	4.0	69.2	25.4	M24x1.5	100,150	●
100	25	6.0	16	4.0	68.6	24.8	M24x1.5	100,170	●
100	32	6.0	16	4.0	64.6	20.8	M24x1.5	100,190	●

TSG 3000



SHRINK FIT TECHNOLOGY

Shrink fit technology

Shrink fit technology

TSG 3000

THE SAFEST
SHRINK FIT CHUCK!



**HIGHEST OPERATIONAL
SAFETY THANKS
TO TEMPERATURE
INDICATOR**



**PVD-COATING FOR
LONG TOOL LIFE**



**LENGTH SETTING
SCREW WITH AXIAL
DAMPING**

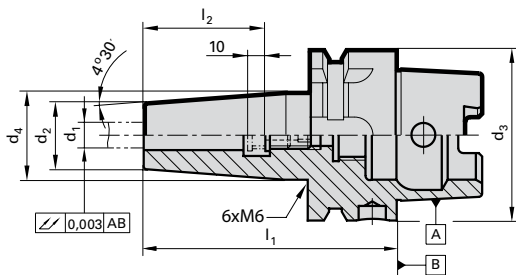


Product information

- coating for protection against oxidation, cleanliness and longevity
- safety colour ring for maximum operator safety
- with axial damping screw for optimal concentricity
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- to DIN 69882-8
- balancing quality G6.3 / 15,000 rev./min
- designed with 6xM6 balancing screws for the highest accuracy

Scope of delivery

- incl. length setting screw with axial force damping Guhring no. 4941 for conventional cooling
- for conventional cooling order coolant delivery set, Guhring no. 4949, separately
- for MQL application order as special tool holder
- special dimensions and extra lengths on request



Guhring no. 4726
Discount group 148

HSK-A d3	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	incl. setting screw Guh. no. 4941 ...	SW	Code no.	Availability
63	6	21	27	80	36	6.100	1.00	6,063	●
63	8	21	27	80	36	8.100	1.00	8,063	●
63	10	24	32	85	41	10.100	1.00	10,063	●
63	12	24	32	90	46	12.100	1.00	12,063	●
63	14	27	34	90	46	14.100	1.00	14,063	●
63	16	27	34	95	49	16.100	1.00	16,063	●
63	18	33	42	95	49	18.100	1.00	18,063	●
63	20	33	42	100	51	20.100	1.00	20,063	●
63	25	44	53	115	57	25.100	2.00	25,063	●
63	32	44	53	120	61	32.100	2.00	32,063	●
100	6	21	27	85	36	6.100	2.00	6,100	●
100	8	21	27	85	36	8.100	2.00	8,100	●
100	10	24	32	90	41	10.100	2.00	10,100	●
100	12	24	32	95	46	12.100	2.00	12,100	●
100	14	27	34	95	46	14.100	2.00	14,100	●
100	16	27	34	100	49	16.100	2.00	16,100	●
100	18	33	42	100	49	18.100	2.50	18,100	●
100	20	33	42	105	51	20.100	2.50	20,100	●
100	25	44	53	115	57	25.100	3.00	25,100	●
100	32	44	53	120	61	32.100	3.00	32,100	●

Product information

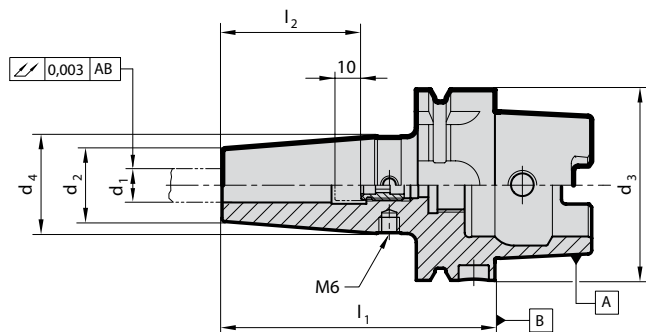
- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- to DIN 69882-8
- for tool shank tolerance h6
- also available in the lengths $l_1 = 120$ mm, 160 mm (concentricity $5 \mu\text{m}$) and 200 mm (concentricity $7 \mu\text{m}$)

Scope of delivery

- incl. setting screw Guhring no. 4977 or 4904
- for conventional cooling order coolant delivery set, Guhring no. 4949, separately
- special dimensions on request



Shrink fit technology



Guhring no. 4736
Discount group 148

HSK-A d ₃	for shank Ø d ₁ h6 mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	incl. setting screw		kg	Code no.	Availability
						Guhr. no.	Code no.			
32	6	21	26	70	36	4977	6.014	0.30	6,032	●
32	8	21	26	70	36	4977	8.014	0.30	8,032	●
32	10	24	29	75	41	4977	10.014	0.30	10,032	●
32	12	24	29	80	46	4977	12.014	0.30	12,032	●
40	6	21	27	80	36	4977	6.014	0.40	6,040	●
40	8	21	27	80	36	4977	8.014	0.40	8,040	●
40	10	24	32	80	41	4977	10.014	0.50	10,040	●
40	12	24	32	90	46	4977	12.014	0.50	12,040	●
40	14	27	34	90	46	4977	12.014	0.60	14,040	●
40	16	27	34	90	49	4977	16.014	0.50	16,040	●
40	18	33	42	95	49	4977	16.014	0.90	18,040	●
40	20	33	42	100	51	4977	20.114	0.90	20,040	●
50	6	21	27	80	36	4977	6.014	0.60	6,050	●
50	8	21	27	80	36	4977	8.014	0.60	8,050	●
50	10	24	32	85	41	4977	10.014	0.70	10,050	●
50	12	24	32	90	46	4977	12.014	0.70	12,050	●
50	14	27	34	90	46	4977	12.014	0.70	14,050	●
50	16	27	34	95	49	4977	16.014	1.00	16,050	●
50	18	33	42	95	49	4977	16.014	0.90	18,050	●
50	20	33	42	100	51	4977	20.114	0.90	20,050	●
63	3	10	18	80	30	4904	5.016	0.70	3,063	●
63	4	10	18	80	35	4904	6.016	0.70	4,063	●
63	5	10	18	80	40	4904	8.018	0.70	5,063	●
63	6	21	27	80	36	4977	6.014	0.80	6,063	●
63	8	21	27	80	36	4977	8.014	0.80	8,063	●
63	10	24	32	85	41	4977	10.014	0.90	10,063	●
63	12	24	32	90	46	4977	12.014	0.90	12,063	●
63	14	27	34	90	46	4977	12.014	1.00	14,063	●
63	16	27	34	95	49	4977	16.014	1.00	16,063	●
63	18	33	42	95	49	4977	16.014	1.20	18,063	●
63	20	33	42	100	51	4977	20.114	1.20	20,063	●
63	25	44	53	115	57	4977	20.114	1.80	25,063	●
63	32	44	53	120	61	4977	20.114	1.70	32,063	●
63	3	10	25	120	30	4904	5.016	0.80	203,063	●
63	4	10	25	120	35	4904	6.016	0.80	204,063	●
63	5	10	25	120	40	4904	8.018	0.80	205,063	●
63	6	21	27	120	36	4977	6.014	0.90	206,063	●
63	8	21	27	120	36	4977	8.014	1.00	208,063	●
63	10	24	32	120	41	4977	10.014	1.10	210,063	●
63	12	24	32	120	46	4977	12.014	1.20	212,063	●
63	14	27	34	120	46	4977	12.014	1.20	214,063	●
63	16	27	34	120	49	4977	16.014	1.20	216,063	●
63	18	33	42	120	49	4977	16.014	1.40	218,063	●
63	20	33	42	120	51	4977	20.014	1.40	220,063	●

										Guhring no. 4736
										Discount group 148
HSK-A	for shank Ø	d ₂	d ₄	l ₁	l ₂	incl. setting screw		kg	Code no.	Availability
d ₃	d ₁ h ₆ mm	mm	mm	mm	mm	Guh. no.	Code no.			
63	3	10	31	160	30	4904	5.016	0.90	103,063	●
63	4	10	31	160	35	4904	6.016	0.90	104,063	●
63	5	10	31	160	40	4904	8.018	0.90	105,063	●
63	6	21	27	160	36	4977	6.014	1.10	106,063	●
63	8	21	27	160	36	4977	8.014	1.10	108,063	●
63	10	24	32	160	41	4977	10.014	1.30	110,063	●
63	12	24	32	160	46	4977	12.014	1.30	112,063	●
63	14	27	34	160	46	4977	12.014	1.40	114,063	●
63	16	27	34	160	49	4977	16.014	1.40	116,063	●
63	18	33	42	160	49	4977	16.014	1.60	118,063	●
63	20	33	42	160	51	4977	20.114	1.60	120,063	●
63	25	44	53	160	57	4977	20.114	1.80	125,063	●
63	32	44	53	160	61	4977	20.114	1.70	132,063	●
63	6	21	27	200	36	4977	6.014	1.30	306,063	●
63	8	21	27	200	36	4977	8.014	1.30	308,063	●
63	10	24	32	200	41	4977	10.014	1.50	310,063	●
63	12	24	32	200	46	4977	12.014	1.50	312,063	●
63	14	27	34	200	46	4977	12.014	1.70	314,063	●
63	16	27	34	200	49	4977	16.014	1.70	316,063	●
63	18	33	42	200	49	4977	16.014	1.80	318,063	●
63	20	33	42	200	51	4977	20.114	1.80	320,063	●
63	25	44	53	200	57	4977	20.114	2.00	325,063	●
63	32	44	53	200	61	4977	20.114	1.90	332,063	●
80	6	21	27	85	36	4977	6.014	1.30	6,080	●
80	8	21	27	85	36	4977	8.014	1.30	8,080	●
80	10	24	32	90	41	4977	10.014	1.40	10,080	●
80	12	24	32	95	46	4977	12.014	1.40	12,080	●
80	14	27	34	95	46	4977	12.014	1.50	14,080	●
80	16	27	34	100	49	4977	16.014	1.50	16,080	●
80	18	33	42	100	49	4977	16.014	1.70	18,080	●
80	20	33	42	105	51	4977	20.114	1.70	20,080	●
80	25	44	53	115	57	4977	20.114	2.20	25,080	●
80	32	44	53	120	61	4977	20.114	2.10	32,080	●
80	6	21	27	160	36	4977	6.014	1.60	106,080	●
80	8	21	27	160	36	4977	8.014	1.60	108,080	●
80	10	24	32	160	41	4977	10.014	1.80	110,080	●
80	12	24	32	160	46	4977	12.014	1.80	112,080	●
80	14	27	34	160	46	4977	12.014	1.90	114,080	●
80	16	27	34	160	49	4977	16.014	1.90	116,080	●
80	18	33	42	160	49	4977	16.014	2.30	118,080	●
80	20	33	42	160	51	4977	20.114	2.30	120,080	●
80	25	44	53	160	57	4977	20.114	3.00	125,080	●
80	32	44	53	160	61	4977	20.114	2.80	132,080	●
100	6	21	27	85	36	4977	6.014	2.20	6,100	●
100	8	21	27	85	36	4977	8.014	2.20	8,100	●
100	10	24	32	90	41	4977	10.014	2.30	10,100	●
100	12	24	32	95	46	4977	12.014	2.30	12,100	●
100	14	27	34	95	46	4977	12.014	2.30	14,100	●
100	16	27	34	100	49	4977	16.014	2.30	16,100	●
100	18	33	42	100	49	4977	16.014	2.50	18,100	●
100	20	33	42	105	51	4977	20.114	2.50	20,100	●
100	25	44	53	115	57	4977	20.114	3.00	25,100	●
100	32	44	53	120	61	4977	20.114	3.00	32,100	●
100	6	21	27	160	36	4977	6.014	2.60	106,100	●
100	8	21	27	160	36	4977	8.014	2.50	108,100	●
100	10	24	32	160	41	4977	10.014	2.70	110,100	●
100	12	24	32	160	46	4977	12.014	2.70	112,100	●
100	14	27	34	160	46	4977	12.014	2.80	114,100	●
100	16	27	34	160	49	4977	16.014	2.80	116,100	●
100	18	33	42	160	49	4977	16.014	3.20	118,100	●
100	20	33	42	160	51	4977	20.114	3.10	120,100	●
100	25	44	53	160	57	4977	20.114	3.90	125,100	●
100	32	44	53	160	61	4977	20.114	3.70	132,100	●
100	6	21	27	200	36	4977	6.014	2.80	306,100	●
100	8	21	27	200	36	4977	8.014	2.80	308,100	●

										Guhring no. 4736	
										Discount group 148	
HSK-A d ₃	for shank Ø d ₁ h ₆ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	incl. setting screw		kg	Code no.	Availability	
						Guh. no.	Code no.				
100	10	24	32	200	41	4977	10.014	2.90	310,100	●	
100	12	24	32	200	46	4977	12.014	2.90	312,100	●	
100	14	27	34	200	46	4977	12.014	3.00	314,100	●	
100	16	27	34	200	49	4977	16.014	3.00	316,100	●	
100	18	33	42	200	49	4977	16.014	3.40	318,100	●	
100	20	33	42	200	51	4977	20.114	3.30	320,100	●	
100	25	44	53	200	57	4977	20.114	4.00	325,100	●	
100	32	44	53	200	61	4977	20.114	3.90	332,100	●	

Shrink fit technology



GÜHROJET

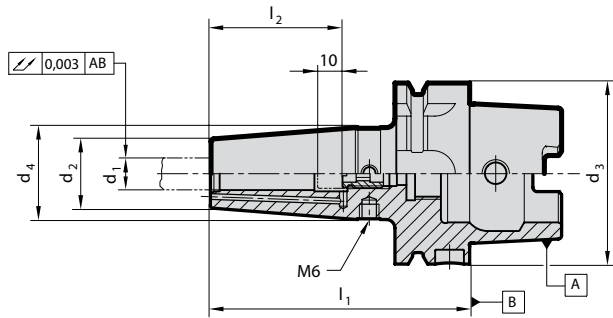
The perfect combination from one reliable supplier: High performance milling cutters and GÜHROJET shrink fit chucks made by Guhring

Product information

- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- for tool shank tolerance h6
- to DIN 69882-8
- optimised cooling for tools without internal coolant ducts
- good chip evacuation and increased process reliability

Scope of delivery

- incl. setting screw Guhring no. 4938
- for conventional cooling order coolant delivery set, Guhring no. 4949, separately
- special dimensions on request



GÜHROJET

Guhring no. 4755

Discount group 148

HSK-A d ₃	for shank Ø d ₁ h ₆ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	incl. setting screw Guh. no. 4938 ...	kg	Code no.	Availability
40	6	21	27	80	36	6.000	0.50	6,040	●
40	8	21	27	80	36	8.000	0.50	8,040	●
40	10	24	32	80	41	10.000	0.50	10,040	●
40	12	24	32	90	46	12.000	0.50	12,040	●
40	14	27	33.5	90	46	12.000	0.50	14,040	●
40	16	27	33.5	90	49	16.000	0.50	16,040	●
50	6	21	27	80	36	6.000	0.60	6,050	●
50	8	21	27	80	36	8.000	0.60	8,050	●
50	10	24	32	85	41	10.000	0.60	10,050	●
50	12	24	32	90	46	12.000	0.70	12,050	●
50	14	27	34	90	46	12.000	0.70	14,050	●
50	16	27	34	95	49	16.000	0.70	16,050	●
50	18	33	41.5	95	49	16.000	0.90	18,050	●
50	20	33	41.5	100	51	20.000	0.90	20,050	●
63	6	21	27	80	36	6.000	0.80	6,063	●
63	8	21	27	80	36	8.000	0.80	8,063	●
63	10	24	32	85	41	10.000	0.90	10,063	●
63	12	24	32	90	46	12.000	0.90	12,063	●
63	14	27	34	90	46	12.000	1.00	14,063	●
63	16	27	34	95	49	16.000	1.00	16,063	●
63	18	33	42	95	49	16.000	1.20	18,063	●
63	20	33	42	100	51	20.000	1.20	20,063	●
63	6	21	27	120	36	6.000	0.90	206,063	●
63	8	21	27	120	36	8.000	0.90	208,063	●
63	10	24	32	120	41	10.000	1.10	210,063	●
63	12	24	32	120	46	12.000	1.20	212,063	●
63	14	27	34	120	46	12.000	1.20	214,063	●
63	16	27	34	120	49	16.000	1.20	216,063	●
63	18	33	42	120	49	16.000	1.20	218,063	●
63	20	33	42	120	51	20.000	1.40	220,063	●
100	6	21	27	85	36	6.000	2.20	6,100	●
100	8	21	27	85	36	8.000	2.20	8,100	●
100	10	24	32	90	41	10.000	2.30	10,100	●
100	12	24	32	95	46	12.000	2.30	12,100	●
100	14	27	34	95	46	12.000	2.30	14,100	●
100	16	27	34	100	49	16.000	2.30	16,100	●
100	18	33	42	100	49	16.000	2.50	18,100	●
100	20	33	42	105	51	20.000	2.50	20,100	●
100	25	44	53	115	57	20.000	3.00	25,100	●
100	32	44	53	120	61	20.000	3.00	32,100	●

Product information

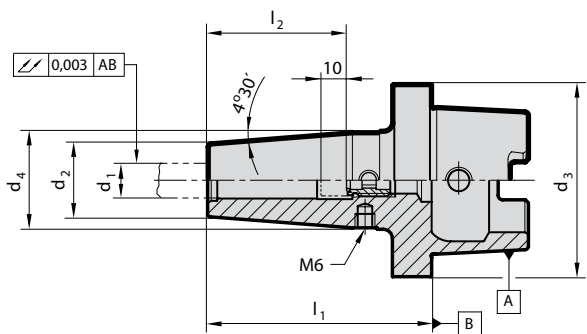
- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- for tool shank tolerance h6
- to DIN 69882-8

Scope of delivery

- incl. setting screw Guhring no. 4977
- special dimensions on request



Shrink fit technology



Guhring no. 4758
Discount group 148

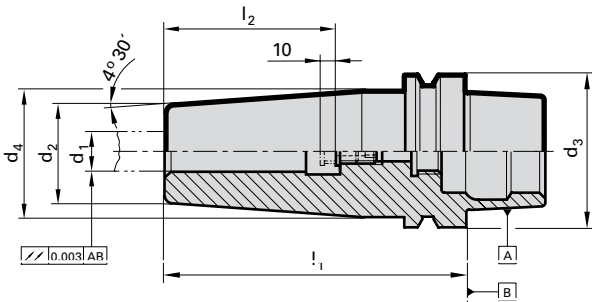
HSK-C d ₃	for clamping-Ø d ₁ h ₆ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	incl. setting screw Guhring no. 4977 ...	kg	Code no.	Availability
32	6	21	26.0	65	36	6.014	0.30	6,032	●
32	8	21	26.0	65	36	8.014	0.30	8,032	●
32	10	24	30.0	65	41	10.014	0.30	10,032	●
32	12	24	32.0	75	46	12.014	0.40	12,032	●
40	6	21	30.0	70	36	6.014	0.50	6,040	●
40	8	21	30.0	70	36	8.014	0.30	8,040	●
40	10	24	33.5	70	41	10.014	0.40	10,040	●
40	12	24	35.0	80	46	12.014	0.40	12,040	●
40	14	27	38.0	80	46	12.014	0.50	14,040	●
40	16	27	38.0	80	49	16.014	0.50	16,040	●
50	6	21	30.0	70	36	6.014	0.50	6,050	●
50	8	21	30.0	70	36	8.014	0.40	8,050	●
50	10	24	33.0	75	41	10.014	0.50	10,050	●
50	12	24	34.0	80	46	12.014	0.50	12,050	●
50	14	27	37.0	80	46	12.014	0.60	14,050	●
50	16	27	38.5	85	49	16.014	0.60	16,050	●
50	18	33	44.5	85	49	16.014	0.80	18,050	●
50	20	33	45.0	90	51	20.114	0.80	20,050	●
63	6	21	30.0	70	36	6.014	0.60	6,063	●
63	8	21	30.0	70	36	8.014	0.60	8,063	●
63	10	24	34.0	75	41	10.014	0.70	10,063	●
63	12	24	34.0	80	46	12.014	0.70	12,063	●
63	14	27	36.0	80	46	12.014	0.80	14,063	●
63	16	27	36.0	85	49	16.014	0.80	16,063	●
63	18	33	44.0	85	49	16.014	1.00	18,063	●
63	20	33	45.0	90	51	20.114	1.00	20,063	●
63	25	44	53.0	100	57	20.114	1.50	25,063	●
63	32	44	53.0	110	61	20.114	1.50	32,063	●

Product information

- balancing quality G2.5 / 25,000 rev./min or U < 1 gmm
- for tool shank tolerance h6

Scope of delivery

- incl. setting screw Guhring no. 4977 or 4904
- for conventional cooling order coolant delivery set, Guhring no. 4949, separately
- special dimensions on request



Guhring no. 4737
Discount group 148

HSK-E d3	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	incl. setting screw Guh. no. Code no.		kg	Code no.	Availability
32	3	10	16	60	-	-	-	0.16	3,032	●
32	4	10	16	60	-	-	-	0.16	4,032	●
32	5	10	16	60	-	-	-	0.16	5,032	●
32	6	21	26	70	36	4977	6.014	0.18	6,032	●
32	8	21	26	70	36	4977	8.014	0.20	8,032	●
32	10	24	29	75	41	4977	10.014	0.25	10,032	●
32	12	24	29	80	46	4977	12.014	0.25	12,032	●
40	3	10	19	80	-	-	-	0.28	3,040	●
40	4	10	19	80	-	-	-	0.28	4,040	●
40	5	10	19	80	-	-	-	0.27	5,040	●
40	6	21	27	80	36	4977	6.014	0.41	6,040	●
40	8	21	27	80	36	4977	8.014	0.41	8,040	●
40	10	24	32	80	41	4977	10.014	0.48	10,040	●
40	12	24	32	90	46	4977	12.014	0.52	12,040	●
40	14	27	34	90	46	4977	12.014	0.57	14,040	●
40	16	27	34	90	49	4977	16.014	0.55	16,040	●
50	3	10	18	80	30	4904	5.016	0.49	3,050	●
50	4	10	18	80	35	4904	6.016	0.49	4,050	●
50	5	10	18	80	-	-	-	0.49	5,050	●
50	6	21	27	80	36	4977	6.014	0.59	6,050	●
50	8	21	27	80	36	4977	8.014	0.58	8,050	●
50	10	24	32	85	41	4977	10.014	0.57	10,050	●
50	12	24	32	90	46	4977	12.014	0.69	12,050	●
50	14	27	34	90	46	4977	12.014	0.74	14,050	●
50	16	27	34	95	49	4977	16.014	0.75	16,050	●
50	18	33	42	95	49	4977	16.014	0.92	18,050	●
50	20	33	42	100	51	4977	20.114	0.94	20,050	●
63	6	21	27	80	36	4977	6.014	0.86	6,063	●
63	8	21	27	80	36	4977	8.014	0.85	8,063	●
63	10	24	32	85	41	4977	10.014	0.94	10,063	●
63	12	24	32	90	46	4977	12.014	0.96	12,063	●
63	14	27	34	90	46	4977	12.014	1.01	14,063	●
63	16	27	34	95	49	4977	16.014	1.02	16,063	●
63	18	33	42	95	49	4977	16.014	1.19	18,063	●
63	20	33	42	100	51	4977	20.114	1.21	20,063	●
63	25	44	53	115	57	4977	20.114	1.80	25,063	●
63	32	44	53	120	61	4977	20.114	1.73	32,063	●

Product information

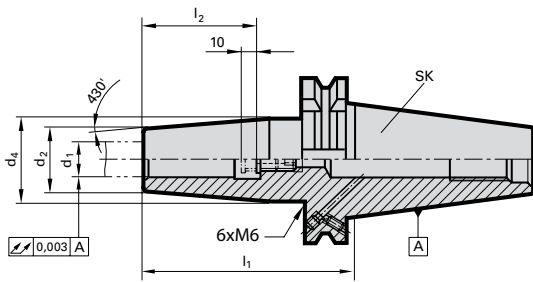
- coating for protection against oxidation, cleanliness and longevity
- safety colour ring for maximum operator safety
- with axial damping screw for optimal concentricity
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- ISO taper to DIN 69871 form AD/B
- balancing quality G6.3 / 15,000 rev./min
- designed with 6xM6 balancing screws for the highest accuracy

Scope of delivery

- incl. length setting screw with axial force damping Guh. no. 4941 for conventional cooling
- order pull studs Guhring no. 4925, 4926 separately
- special dimensions on request
- for MQL application order as special tool holder



Shrink fit technology



Guhring no. 4727
Discount group 148

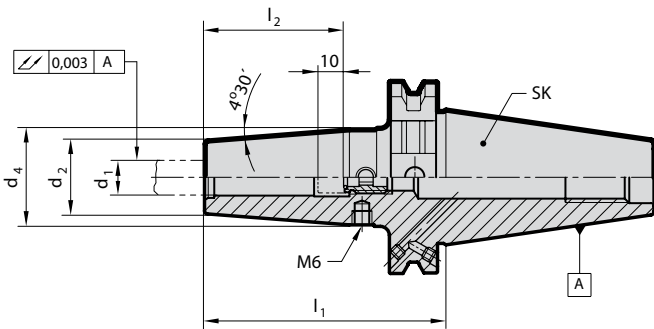
ISO taper	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	incl. setting screw Guh. no. 4941 ...	kg	Code no.	Availability
40	6	21	27	80	36	6.041	1.00	6,040	●
40	8	21	27	80	36	8.040	1.00	8,040	●
40	10	24	32	80	41	10.050	1.00	10,040	●
40	12	24	32	80	46	12.100	1.00	12,040	●
40	14	27	34	80	46	14.100	1.00	14,040	●
40	16	27	34	80	49	16.100	1.00	16,040	●
40	18	33	42	80	49	18.100	1.00	18,040	●
40	20	33	42	80	51	20.100	1.50	20,040	●
40	25	44	53	100	57	25.100	1.50	25,040	●
40	32	44	53	100	61	32.100	1.50	32,040	●

Product information

- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- ISO taper to DIN 69871 form AD/B
- for tool shank tolerance h6
- also available in the lengths l1 = 120 mm, 160 mm (concentricity 5 µm) and 200mm (concentricity 7 µm)

Scope of delivery

- incl. setting screw Guhring no. 4977 bzw. 4904
- order pull studs Guhring no. 4925, 4926 separately
- special dimensions on request



Guhring no. 4738

Discount group 148

ISO taper	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	incl. setting screw Guh. no. Code no.		kg	Code no.	Availability
40	3	10	18	80	30	4904	5.016	0.90	3,040	●
40	4	10	18	80	35	4904	6.016	0.90	4,040	●
40	5	10	18	80	40	4904	8.018	0.90	5,040	●
40	6	21	27	80	36	4977	6.014	1.00	6,040	●
40	8	21	27	80	36	4977	8.014	1.00	8,040	●
40	10	24	32	80	41	4977	10.014	1.10	10,040	●
40	12	24	32	80	46	4977	12.014	1.00	12,040	●
40	14	27	34	80	46	4977	12.014	1.10	14,040	●
40	16	27	34	80	49	4977	16.014	1.10	16,040	●
40	18	33	42	80	49	4977	16.014	1.20	18,040	●
40	20	33	42	80	51	4977	20.114	1.50	20,040	●
40	25	44	53	100	57	4977	20.114	1.50	25,040	●
40	32	44	53	100	61	4977	20.114	1.50	32,040	●
40	3	10	24	120	30	4904	5.016	1.00	203,040	●
40	4	10	24	120	35	4904	6.016	1.00	204,040	●
40	5	10	24	120	40	4904	8.018	1.00	205,040	●
40	6	21	27	120	36	4977	6.014	1.10	206,040	●
40	8	21	27	120	36	4977	8.014	1.10	208,040	●
40	10	24	32	120	41	4977	10.014	1.20	210,040	●
40	12	24	32	120	46	4977	12.014	1.20	212,040	●
40	14	27	34	120	46	4977	12.014	1.40	214,040	●
40	16	27	34	120	49	4977	16.014	1.40	216,040	●
40	18	33	42	120	49	4977	16.014	1.50	218,040	●
40	20	33	42	120	51	4977	20.114	1.50	220,040	●
40	3	10	31	160	30	4904	5.016	1.10	103,040	●
40	4	10	31	160	35	4904	6.016	1.10	104,040	●
40	5	10	31	160	40	4904	8.018	1.10	105,040	●
40	6	21	27	160	36	4977	6.014	1.30	106,040	●
40	8	21	27	160	36	4977	8.014	1.30	108,040	●
40	10	24	32	160	41	4977	10.014	1.50	110,040	●
40	12	24	32	160	46	4977	12.014	1.50	112,040	●
40	14	27	34	160	46	4977	12.014	1.70	114,040	●
40	16	27	34	160	49	4977	16.014	1.70	116,040	●
40	18	33	42	160	49	4977	16.014	1.90	118,040	●
40	20	33	42	160	51	4977	20.114	1.90	120,040	●
40	25	44	53	160	57	4977	20.114	2.20	125,040	●
40	6	21	27	200	36	4977	6.014	1.60	306,040	●
40	8	21	27	200	36	4977	8.014	1.60	308,040	●
40	10	24	32	200	41	4977	10.014	1.80	310,040	●
40	12	24	32	200	46	4977	12.014	1.80	312,040	●
40	14	27	34	200	46	4977	12.014	2.10	314,040	●
40	16	27	34	200	49	4977	16.014	2.10	316,040	●

ISO taper shrink fit chucks

								Guhring no.		4738	
								Discount group		148	
ISO taper	for shank Ø d ₁ h ₆ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	incl. setting screw Guh. no. Code no.		kg	Code no.	Availability	
40	18	33	42	200	49	4977	16.014	2.30	318,040	●	
40	20	33	42	200	51	4977	20.114	2.30	320,040	●	
40	25	44	53	200	58	4977	20.114	2.60	325,040	●	
40	32	44	53	200	61	4977	20.114	2.50	332,040	●	
50	3	10	18	80	30	4904	5.016	2.60	3,050	●	
50	4	10	18	80	35	4904	6.016	2.60	4,050	●	
50	5	10	18	80	40	4904	8.018	2.60	5,050	●	
50	6	21	27	80	36	4977	6.014	2.90	6,050	●	
50	8	21	27	80	36	4977	8.014	2.90	8,050	●	
50	10	24	32	80	41	4977	10.014	2.90	10,050	●	
50	12	24	32	80	46	4977	12.014	2.90	12,050	●	
50	14	27	34	80	46	4977	12.014	3.00	14,050	●	
50	16	27	34	80	49	4977	16.014	3.00	16,050	●	
50	18	33	42	80	49	4977	16.014	3.00	18,050	●	
50	20	33	42	80	51	4977	20.114	3.00	20,050	●	
50	25	44	53	100	57	4977	20.114	3.60	25,050	●	
50	32	44	53	100	61	4977	20.114	3.50	32,050	●	
50	6	21	27	160	36	4977	6.014	3.10	106,050	●	
50	8	21	27	160	36	4977	8.014	3.10	108,050	●	
50	10	24	32	160	41	4977	10.014	3.40	110,050	●	
50	12	24	32	160	46	4977	12.014	3.40	112,050	●	
50	14	27	34	160	46	4977	12.014	3.70	114,050	●	
50	16	27	34	160	49	4977	16.014	3.70	116,050	●	
50	18	33	42	160	49	4977	16.014	4.10	118,050	●	
50	20	33	42	160	51	4977	20.114	4.10	120,050	●	
50	25	44	53	160	57	4977	20.114	4.70	125,050	●	
50	32	44	53	160	61	4977	20.114	4.60	132,050	●	
50	6	21	27	200	36	4977	6.014	3.40	306,050	●	
50	8	21	27	200	36	4977	8.014	3.40	308,050	●	
50	10	24	32	200	41	4977	10.014	3.70	310,050	●	
50	12	24	32	200	46	4977	12.014	3.70	312,050	●	
50	14	27	34	200	46	4977	12.014	4.00	314,050	●	
50	16	27	34	200	49	4977	16.014	4.00	316,050	●	
50	18	33	42	200	49	4977	16.014	4.40	318,050	●	
50	20	33	42	200	51	4977	20.114	4.40	320,050	●	
50	25	44	53	200	57	4977	20.114	5.00	325,050	●	
50	32	44	53	200	61	4977	20.114	4.90	332,050	●	

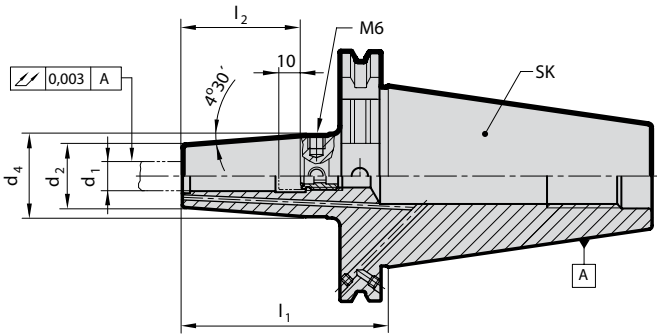
Shrink fit technology

Product information

- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- ISO taper to DIN 69871 form AD/B
- for tool shank tolerance h6
- optimised cooling for tools without internal coolant ducts
- good chip evacuation and increased process reliability

Scope of delivery

- incl. setting screw Guhring no. 4977
- order pull studs Guhring no. 4925, 4926 separately
- special dimensions on request



GÜHROJET

Guhring no. **4729**

Discount group **148**

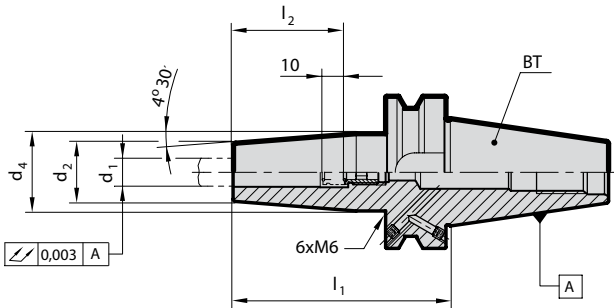
ISO taper	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	incl. setting screw		kg	Code no.	Availability
						Guh. no.	Code no.			
40	6	21	27	80	36	4977	6.014	1.00	6,040	●
40	8	21	27	80	36	4977	8.014	1.00	8,040	●
40	10	24	32	80	41	4977	10.014	1.10	10,040	●
40	12	24	32	80	46	4977	12.014	1.00	12,040	●
40	14	27	34	80	46	4977	12.014	1.10	14,040	●
40	16	27	34	80	49	4977	16.014	1.10	16,040	●
40	18	33	42	80	49	4977	16.014	1.20	18,040	●
40	20	33	42	80	51	4977	20.114	1.50	20,040	●
50	6	21	27	80	36	4977	6.014	2.80	6,050	●
50	8	21	27	80	36	4977	8.014	2.80	8,050	●
50	10	24	32	80	41	4977	10.014	2.80	10,050	●
50	12	24	32	80	46	4977	12.014	2.80	12,050	●
50	14	27	34	80	46	4977	12.014	2.80	14,050	●
50	16	27	34	80	49	4977	16.014	2.80	16,050	●
50	18	33	42	80	49	4977	16.014	3.00	18,050	●
50	20	33	42	80	51	4977	20.114	3.00	20,050	●
50	25	44	53	100	57	4977	20.114	3.50	25,050	●
50	32	44	53	100	61	4977	20.114	3.30	32,050	●

Product information

- coating for protection against oxidation, cleanliness and longevity
- safety colour ring for maximum operator safety
- with axial damping screw for optimal concentricity
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- MAS/BT to JIS B 6339 form AD/B
- balancing quality G6.3 / 15,000 rev./min
- designed with 6xM6 balancing screws for the highest accuracy

Scope of delivery

- incl. length setting screw with axial force damping Guh. no. 4941 for conventional cooling
- order pull studs Guhring no. 4927, 4928 separately
- special dimensions on request
- MAS/BT 50 on request
- for MQL application order as special tool holder



Shrink fit technology

Guhring no.	4728
Discount group	148

MAS/BT	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	incl. setting screw Guh. no. 4941 ...	kg	Code no.	Availability
40	6	21	27	90	36	6.041	1.00	6,040	●
40	8	21	27	90	36	8.040	1.00	8,040	●
40	10	24	32	90	41	10.050	1.00	10,040	●
40	12	24	32	90	46	12.100	1.00	12,040	●
40	14	27	34	90	46	14.100	1.50	14,040	●
40	16	27	34	90	49	16.100	1.50	16,040	●
40	18	33	42	90	49	18.100	2.00	18,040	●
40	20	33	42	90	51	20.100	2.00	20,040	●
40	25	44	53	100	57	25.100	2.00	25,040	●
40	32	44	53	100	57	32.100	2.00	32,040	●



|GÜHROJET|

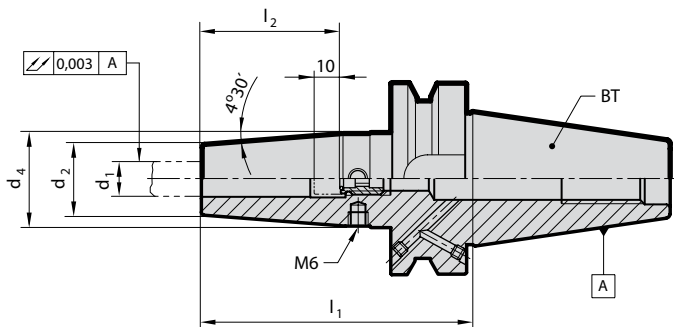
The perfect combination from one reliable supplier: High performance milling cutters and GÜHROJET shrink fit chucks made by Guhring

Product information

- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- MAS/BT to JIS B 6339 form AD/B
(*: version AD without coolant supply over collar)
- for tool shank tolerance h6

Scope of delivery

- incl. setting screw Guhring no. 4977 bzw. 4904
- order pull studs Guhring no. 4927, 4928 separately
- special dimensions on request



Guhring no. 4739
Discount group 148

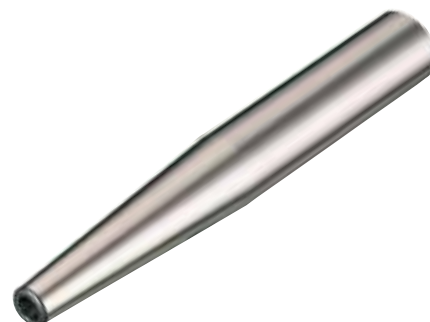
MAS/BT	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	incl. setting screw Guh. no. Code no.		kg	Code no.	Availability
30*	3	10	18	80	30	4904	5.016	0.60	3,030	●
30*	4	10	18	80	35	4904	6.016	0.60	4,030	●
30*	5	10	18	80	40	4904	8.018	0.6	5,030	●
30*	6	21	27	80	36	4977	6.014	0.70	6,030	●
30*	8	21	27	80	36	4977	8.014	0.70	8,030	●
30*	10	24	32	80	41	4977	10.014	0.80	10,030	●
30*	12	24	32	80	46	4977	12.014	0.80	12,030	●
30*	14	27	34	80	46	4977	12.014	0.80	14,030	●
30*	16	27	34	80	49	4977	16.014	0.80	16,030	●
30*	18	33	42	90	49	4977	16.014	0.90	18,030	●
30*	20	33	42	90	51	4977	20.114	0.90	20,030	●
40	3	10	18	85	30	4904	5.016	1.00	3,040	●
40	4	10	18	85	35	4904	6.016	1.00	4,040	●
40	5	10	18	85	40	4904	8.018	1.00	5,040	●
40	6	21	27	90	36	4977	6.014	1.20	6,040	●
40	8	21	27	90	36	4977	8.014	1.20	8,040	●
40	10	24	32	90	41	4977	10.014	1.30	10,040	●
40	12	24	32	90	46	4977	12.014	1.30	12,040	●
40	14	27	34	90	46	4977	12.014	1.40	14,040	●
40	16	27	34	90	49	4977	16.014	1.40	16,040	●
40	18	33	42	90	49	4977	16.014	1.40	18,040	●
40	20	33	42	90	51	4977	20.114	1.70	20,040	●
40	25	44	53	100	57	4977	20.114	1.80	25,040	●
40	32	44	53	100	61	4977	20.114	1.70	32,040	●
40	6	21	27	130	36	4977	6.014	1.30	6,140	●
40	8	24	32	130	41	4977	8.014	1.30	8,140	●
40	10	24	32	130	46	4977	10.014	1.40	10,140	●
40	12	27	34	130	46	4977	12.014	1.40	12,140	●
40	14	27	34	130	49	4977	12.014	1.40	14,140	●
40	16	33	42	130	49	4977	16.014	1.50	16,140	●
40	18	33	42	130	51	4977	16.014	1.50	18,140	●
40	20	44	53	130	57	4977	20.114	1.80	20,140	●
40	25	44	53	130	58	4977	20.114	2.00	25,140	●
40	32	44	53	130	61	4977	20.114	1.90	32,140	●
50	6	21	27	100	36	4977	6.014	2.90	6,050	●
50	8	21	27	100	36	4977	8.014	2.90	8,050	●
50	10	24	32	100	41	4977	10.014	2.90	10,050	●
50	12	24	32	100	46	4977	12.014	2.90	12,050	●
50	14	27	34	100	46	4977	12.014	3.00	14,050	●
50	16	27	34	100	49	4977	16.014	3.00	16,050	●
50	18	33	42	100	49	4977	16.014	1.90	18,050	●
50	20	33	42	100	51	4977	20.114	1.90	20,050	●
50	25	44	53	110	57	4977	20.114	2.20	25,050	●
50	32	44	53	110	61	4977	20.114	2.20	32,050	●

Product information

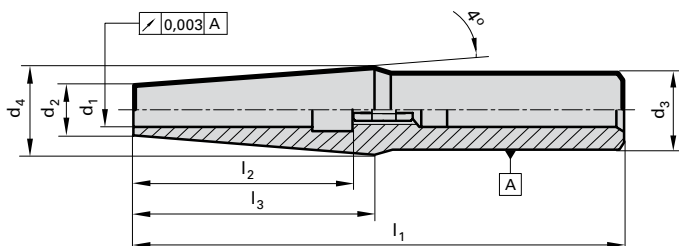
- for clamping in hydraulic chucks or shrink fit chucks
- internal cooling suitable
- we recommend the use of special cooling adaptors Guhring no. 4419
- for carbide tool shanks in tolerance h6 (from d1 14mm also HSS possible)

Scope of delivery

- incl. setting screw Guhring no. 4977 or 4904
- special dimensions on request



Shrink fit technology

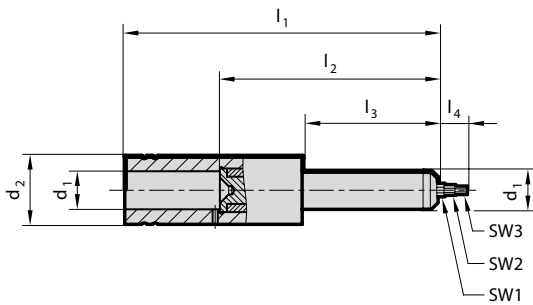


Guhring no. 4719
Discount group 148

for shank Ø d1 h6 mm	d2 mm	d3 h6 mm	d4 mm	l1 mm	l2 mm	l3 mm	incl. setting screw Guh. no. Code no.		Code no.	Availability
3	7	16	16	115	30	64.4	4904	5.016	3,016	●
4	7	16	16	115	35	64.4	4904	6.016	4,016	●
5	8	16	16	115	40	57	4904	8.018	5,016	●
6	10	16	16	115	36	43	4977	6.014	6,016	●
8	12	16	16	115	36	29	4977	8.014	8,016	●
10	14	16	16	115	41	14	4977	10.014	10,016	●
12	16	16	23	115	46	51.5	4977	12.014	12,016	●
3	7	20	16	115	30	65	4904	5.016	3,020	●
4	8	20	17	115	35	65	4904	6.016	4,020	●
5	9	20	18	115	40	65	4904	8.018	5,020	●
6	10	20	19	115	36	65	4977	6.014	6,020	●
8	12	20	20	115	36	57	4977	8.014	8,020	●
10	14	20	20	115	41	43	4977	10.014	10,020	●
12	16	20	20	115	46	29	4977	12.014	12,020	●
14	20	20	29	150	46	63	4977	12.014	14,020	●
14	20	25	29	150	46	63	4977	12.014	14,025	●
16	24	25	33	150	49	64	4977	16.014	16,025	●
3	10	20	20	160	30	71.5	4904	5.016	3,120	●
4	10	20	20	160	35	71.6	4904	6.016	4,120	●
5	10	20	20	160	40	71.5	4904	8.018	5,120	●
6	14	20	20	160	36	43	4977	6.014	6,120	●
8	14	20	20	160	36	43	4977	8.014	8,120	●
10	20	25	25	160	41	35.8	4977	10.014	10,125	●
12	20	25	25	160	46	35.8	4977	12.014	12,125	●
14	20	25	29	160	46	62.9	4977	16.014	14,125	●
16	22	25	33	160	49	78.7	4977	16.014	16,125	●
18	27	32	32	160	49	35.8	4977	16.014	18,132	●
20	27	32	32	160	51	35.8	4977	20.114	20,132	●
3	10	20	20	200	30	71.5	4904	5.016	3,220	●
4	10	20	20	200	35	71.5	4904	6.016	4,220	●
5	10	20	20	200	40	71.5	4904	8.018	5,220	●
6	14	20	20	200	36	42.9	4977	6.014	6,220	●
8	14	20	20	200	36	42.9	4977	8.014	8,220	●
10	20	25	25	200	41	35.8	4977	10.014	10,225	●
12	20	25	25	200	46	35.8	4977	12.014	12,225	●
14	20	32	32	200	46	85.8	4977	16.014	14,232	●
16	24	32	32	200	49	57.2	4977	16.014	16,232	●
18	27	32	32	200	49	35.8	4977	20.014	18,232	●
20	27	32	32	200	51	35.8	4977	20.114	20,232	●

Product information

- for shrink fit and hydraulic chucks
- for length pre-setting of the setting screw with the cutting tool (less difference dimension l_2 , see sketch)
- flexibly mounted hexagonal key SW1/SW2 (*only available as rigid design)
- with standard screws suitable for wet application Guhring no. 4900, 4941, 4977
- suitable with MQL setting screws Guhring no. 4621, 4919, 4937



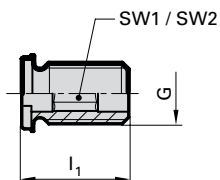
Guhring no. 4718
Discount group 114

d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	l4 mm	SW1	SW2	SW3	Code no.	Availability
6	25	115	80	50	10	2.0	1.5	-	6,001	●
6	25	115	80	50	10	3.0	2.5	-	6,000	●
6*	25	115	80	50	10	4.0	-	-	6,002	●
8	25	115	80	50	10	2.0	1.5	-	8,001	●
8	25	115	80	50	10	3.0	-	-	8,000	●
8*	25	115	80	50	10	4.0	-	-	8,002	●
10	25	115	80	50	10	2.0	1.5	-	10,001	●
10	25	115	80	50	10	4.0	3.0	-	10,000	●
12	25	115	80	50	10	3.0	2.0	1.5	12,001	●
12	25	115	80	50	10	5.0	4.0	-	12,000	●
14	25	115	80	50	10	3.0	2.0	1.5	14,001	●
14	25	115	80	50	10	5.0	4.0	-	14,000	●
16	25	120	85	55	10	3.0	2.0	1.5	16,001	●
16	25	120	85	55	10	6.0	5.0	4.0	16,000	●
18	30	120	85	55	10	3.0	2.0	1.5	18,001	●
18	30	120	85	55	10	6.0	5.0	4.0	18,000	●
20	30	135	90	65	10	4.0	3.0	2.0	20,001	●
20	30	135	90	65	10	8.0	5.0	-	20,000	●
25	35	140	100	70	10	4.0	3.0	2.0	25,001	●
25	35	140	100	70	10	8.0	5.0	-	25,000	●
32	45	150	100	70	10	4.0	3.0	2.0	32,001	●
32	45	150	100	70	10	8.0	5.0	-	32,000	●

Setting screws for GÜHROJET shrink fit chucks

Product information

- setting screws for GÜHROJET-shrink fit chucks Guhring no. 4755 and 4729.
- slotted for reliable coolant supply for conventional internal cooling



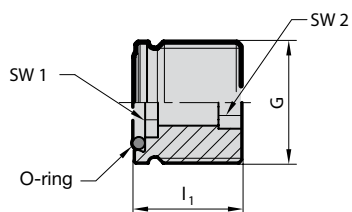
Guhring no.	4938
Discount group	114

for clamping-Ø	l ₁ mm	G	SW1	SW2	Code no.	Availability
6	14	M5	2.5	2.5	6,000	●
8	14	M6	3.0	3.0	8,000	●
10	14	M8x1	4.0	4.0	10,000	●
12/14	14	M10x1	5.0	5.0	12,000	●
16/18	14	M12x1	6.0	6.0	16,000	●
20/25/32	14	M16x1	8.0	6.0	20,000	●

Shrink fit chuck length setting screw with axial force damping

Product information

- for shrink fit chucks
- for conventional internal cooling
- with facing stop for standard shank ends
- with patented axial force damping.
- O-ring reduces the concentricity error when shrink fitting on the setting screw

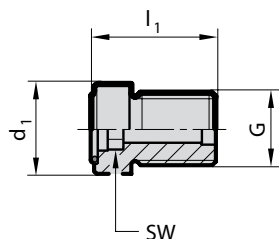


Guhring no.	4977
Discount group	114

for clamping-Ø	l ₁ mm	G	SW1	SW2	O-ring	Code no.	Availability
6	14	M5	2.5	2.5	3x1	6,014	●
8	14	M6	3.0	3.0	3.5x1	8,014	●
10	14	M8x1	4.0	4.0	6x1	10,014	●
12/14	14	M10x1	5.0	5.0	6x1	12,014	●
16/18	14	M12x1	6.0	6.0	7.5x1.5	16,014	●
20/25/32	14	M16x1	8.0	6.0	10x1.5	20,114	●

Product information

- To adapt MQL tool holders to meet the requirements of conventional wet machining. For plain end shanks. The height of screw head compensates the height of MQL taper.
- for MQL HSK-A shrink fit chucks hydraulic chucks
- for use with shank according to DIN 6535 with plain shank end for conventional cooling
- The patented face orientated o-ring provides axial force clamping which eliminates concentricity errors.



Guhring no. 4941
Discount group 114

for HSK-A	clamping- Ø	G	d1 mm	l1 mm	SW	Code no.	Availability
40	6	M5	6	15	2.5	6,041	●
40	6	M7x1	6	15	2.5	6,040	●
40	8	M7x1	6	18	3	8,040	●
50	6	M8x1	8	14	2.5	6,050	●
50	8	M8x1	7	18	3	8,050	●
40 / 50	10	M8x1	10	17.7	4	10,050	●
63/ 80/ 100	6	M10x1	9	22	2.5	6,100	●
63/ 80/ 100	8	M10x1	9	22	3	8,100	●
63/ 80/ 100	10	M10x1	10	16.2	4	10,100	●
40/ 50/ 63/ 80/ 100	12	M10x1	10	16.2	5	12,100	●
40/ 50/ 63/ 80/ 100	14	M10x1	10	17.2	5	14,100	●
50/ 63/ 80/ 100	16	M12x1	16	18.2	6	16,100	●
50/ 63/ 80/ 100	18	M12x1	16	19.2	6	18,100	●
50/ 63/ 80/ 100	20	M16x1	16	19.2	8	20,100	●
63/ 80/ 100	25	M16x1	16	22.7	8	25,100	●
63/ 80/ 100	32	M16x1	16	26.7	8	32,100	●

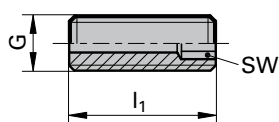
Setting screws

Product information

- for HSK-A side lock holders with bore to DIN 1835-2, form E, shrink fit chuck and shrink fit extensions

Scope of delivery

- minimum order quantity 5



Guhring no. 4904
Discount group 114

G	l1 mm	SW	Code no.	Availability
M5	16	2.5	5,016	●
M5	20	2.5	5,020	●
M6	16	3.0	6,016	●
M6	20	3.0	6,020	●
M8	12	3.0	8,012	●
M8	18	4.0	8,018	●
M10	17	3.0	10,017	●
M10	20	5.0	10,020	●
M12	14	3.0	12,014	●
M12	20	5.0	12,020	●
M16	25	5.0	16,025	●
M20	25	6.0	20,025	●

TSG 3000
RF 100

MILLING AT THE HIGHEST LEVEL

TSG 3000 shrink fit chucks and
Ratio end mills RF 100



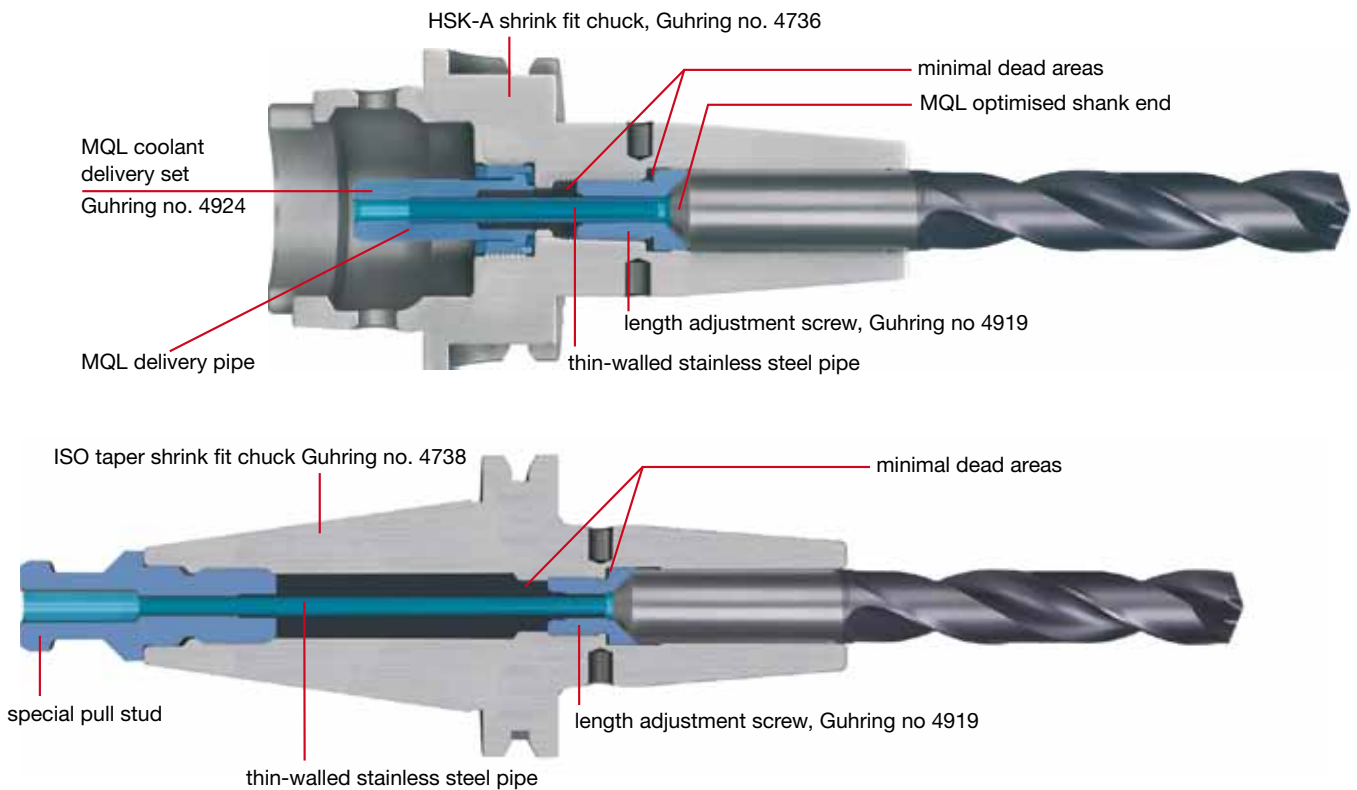
- ⇒ secure tool clamping
- ⇒ perfect concentricity
- ⇒ vibration free operation
- ⇒ optimal surface finish
- ⇒ long tool life

Please request our "TSG
3000" and "RF 100"
brochures.

MQL conversion of tool holders for conventional cooling

With the assistance of Guhring's MQL length adjustment screw, Guhring no. 4919, and MQL coolant delivery set, Guhring no. 4924, tool holders such as shrink fit chucks, Guhring no. 4736, from Guhring's GM 300 program can be converted for application under MQL conditions and automatic tool clamping. This combination is suitable for 2-channel MQL systems. The insertion depth is reduced by the length of the cone on the MQL shank and does not correspond with our Guhring standard. Special solutions for SK/BT are available on request.

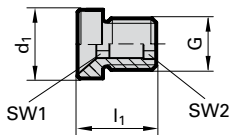
Shrink fit technology



MQL length setting screws to convert

Product information

- for hydraulic chucks and shrink fit chucks
- with special geometry optimised for MQL
- with conical end for tapered MQL shank ends



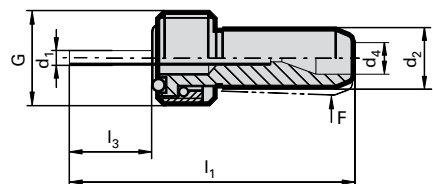
						Guhring no.	4919
						Discount group	114
d1 mm	l1 mm	G	SW1	SW2		Code no.	Availability
6	14.8	M5	2.5	2.5		6,000	●
8	15.6	M6	3.0	3.0		8,000	●
10	16.1	M8x1	4.0	4.0		10,000	●
10	16.6	M8x1	3.0	3.0		10,040	●
10	16.6	M6	3.0	3.0		10,032	●
12	16.6	M10x1	5.0	5.0		12,000	●
12	17.6	M6	3.0	3.0		12,032	●
14	17.6	M10x1	5.0	5.0		14,000	●
14	18.6	M6	3.0	3.0		14,040	●
16	18.6	M12x1	5.0	5.0		16,000	●
16	19.6	M6	3.0	3.0		16,040	●
18	19.6	M12x1	5.0	5.0		18,000	●
20	20.6	M16x1	5.0	5.0		20,000	●
25	22.6	M16x1	8.0	6.0		25,000	●
32	26.1	M16x1	8.0	6.0		32,000	●

Product information

- replace conventional coolant delivery sets, Guhring no. 4949, when applying MQL
- for shrink fit chucks to DIN 69882-8

Scope of delivery

- complete MQL coolant delivery sets



Shrink fit technology

Guhring no. 4924

Discount group 114

for HSK-A	clamping-Ø mm	d1 mm	d2 mm	d4 mm	l1 mm	l3 mm	G	Code no.	Availability
32	6	2.5	6	3.5	45.1	18.9	M10x1	32,020	●
32	10	3.0	6	3.5	45.7	19.5	M10x1	32,060	●
32	8/12	3.0	6	3.5	45.2	19.0	M10x1	32,080	●
40	6	2.5	8	4.0	56.0	26.9	M12x1	40,020	●
40	8	3.0	8	4.0	56.2	27.0	M12x1	40,040	●
40	10	3.0	8	4.0	51.7	22.5	M12x1	40,060	●
40	12/14	3.0	8	4.0	57.2	28.0	M12x1	40,100	●
40	16	3.0	8	4.0	54.2	25.0	M12x1	40,120	●
50	6	2.5	10	4.0	55.4	22.7	M16x1	50,020	●
50	8	3.0	10	4.0	46.5	13.8	M16x1	50,040	●
50	10	4.0	10	4.0	46.1	13.4	M16x1	50,060	●
50	12	5.0	10	4.0	55.7	23.0	M16x1	50,080	●
50	14	5.0	10	4.0	55.7	22.9	M16x1	50,100	●
50	16/18	5.0	10	4.0	57.7	25.0	M16x1	50,140	●
50	20	5.0	10	4.0	60.7	28.0	M16x1	50,160	●
63	6	2.5	12	4.0	56.7	20.5	M18x1	63,020	●
63	6	2.5	12	4.0	137.7	101.4	M18x1	63,021	●
63	8	3.0	12	4.0	57.0	20.8	M18x1	63,040	●
63	8	3.0	12	4.0	137.0	100.7	M18x1	63,041	●
63	10	4.0	12	4.0	55.7	19.5	M18x1	63,060	●
63	10	4.0	12	4.0	132.2	95.9	M18x1	63,061	●
63	12/14	5.0	12	4.0	55.7	19.5	M18x1	63,080	●
63	12/14	5.0	12	4.0	127.1	90.8	M18x1	63,081	●
63	16/18	5.0	12	4.0	57.5	21.3	M18x1	63,100	●
63	16/18	5.0	12	4.0	124.3	88.0	M18x1	63,141	●
63	20	5.0	12	4.0	60.7	24.5	M18x1	63,110	●
63	20	5.0	12	4.0	122.1	85.8	M18x1	63,161	●
63	25	6.0	12	4.0	69.0	32.8	M18x1	63,130	●
63	25	6.0	12	4.0	116.2	79.9	M18x1	63,181	●
63	32	6.0	12	4.0	70.7	34.5	M18x1	63,140	●
63	32	6.0	12	4.0	112.2	75.9	M18x1	63,201	●
80	6	2.5	14	4.0	61.2	21.9	M20x1.5	80,020	●
80	8	3.0	14	4.0	61.3	22.0	M20x1.5	80,040	●
80	10	4.0	14	4.0	61.3	22.0	M20x1.5	80,060	●
80	12/14	5.0	14	4.0	61.3	22.0	M20x1.5	80,100	●
80	16/18	5.0	14	4.0	63.3	24.0	M20x1.5	80,140	●
80	20	5.0	14	4.0	66.3	27.0	M20x1.5	80,160	●
80	25	6.0	14	4.0	70.3	31.0	M20x1.5	80,180	●
80	32	6.0	14	4.0	71.3	32.0	M20x1.5	80,200	●
100	6	2.5	16	4.0	63.9	20.1	M24x1.5	100,020	●
100	8	3.0	16	4.0	64.6	20.8	M24x1.5	100,040	●
100	10	4.0	16	4.0	63.3	19.5	M24x1.5	100,060	●
100	12/14	5.0	16	4.0	63.3	19.5	M24x1.5	100,100	●
100	16/18	5.0	16	4.0	65.3	21.5	M24x1.5	100,140	●
100	20	5.0	16	4.0	68.3	24.5	M24x1.5	100,160	●
100	25	6.0	16	4.0	72.3	28.5	M24x1.5	100,180	●
100	32	6.0	16	4.0	73.3	29.5	M24x1.5	100,200	●

GSS
2000

Simple operation

The movement of the spindle and its heating is a single handed operation.

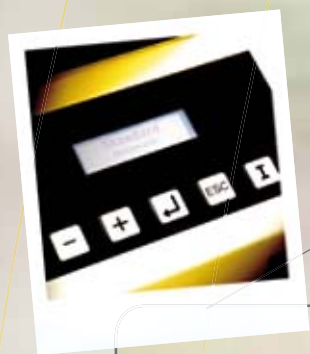
Tool clamping cannot be simpler and quicker!

Quick cooling

The water-cooled cooling elements cool down the shrink fit chuck quickly and safely. The shrink fit chuck remains clean and dry, **so that it can be applied again without drying and without rusting.** Hot spots remain safely screened during the cooling process in order to prevent burns.

Safe shrink fitting

The minimal heating of the shrink fit chuck ensures **maximum operating safety** on the one hand, on the other the controlled heating ensures the **long life** of the shrink fit chuck.



The control panel

The clear control panel with display makes the operation of the GSS 2000 **very user-friendly.**

Benefit from the advantages of GSS 2000

GSS
2000

Efficient operation

The turntable allows simultaneous preparation, heating and cooling of the shrink fit chucks. **Subsequently, there is no waiting time, tool clamping is seamless and with maximum efficiency.**



All under control

Practical locations and compartments provide room for accessories such as stop discs or gloves in close proximity to the equipment. **Thus all the necessary components are always at hand.**

- > **high-performance spindle**, hence quick change time
- > **overheating protection** for holder
- > **automatic mode** possible (equipment automatically selects the correct heating program)
- > **error detection** choosing wrong chuck/program
- > **heating programs** for standard/reinforced and very small holder/shrink fit extensions
- > **maximum rigidity**
- > **highest cutting rates**

Product information

- 3-station system with turntable

Scope of delivery

- incl. base system with turntable
- incl. induction coil Guhring no. 4743 / version 2008
- incl. 1 limit stop collar set Guhring no. 4769 / version 2008
- incl. SpeedCooler Guhring no. 4747
- incl. 1 pair of gloves Guhring no. 4750
- with integrated SpeedCooler-Manager

- order HSK-/ISO-holders Guhring nos. 4745, 4744 separately!



	Guhring no.	4742	
	Discount group	Net price	
	Code no.	Availability	
European version 50/60 Hz / 400-480 V, SpeedCooler 230 V	10,000	●	
US version 50/60 Hz / 400-480 V, SpeedCooler 115 V	20,000	●	

GSS 2000 HSK holders

Product information

- for GSS 2000 Comfort Plus Guhring no. 4742
- holder (spider) for turn-table to hold max. 3 shrink fit chucks.



GSS 2000 ISO taper holders

Product information

- for GSS 2000 Comfort Plus Guhring no. 4742
- also suitable for MAS-BT
- holder (spider) for turn-table to hold max. 3 shrink fit chucks.



	Guhring no.	4745	
	Discount group	Net price	
for HSK-A/C/E	Code no.	Availability	
32	32,000	●	
40	40,000	●	
50	50,000	●	
63	63,000	●	
80	80,000	●	
100	100,000	●	

	Guhring no.	4744	
	Discount group	Net price	
for ISO taper and BT	Code no.	Availability	
30	30,000	●	
40	40,000	●	
50	50,000	●	

System cart

Product information

- for GSS 2000
- for mobile and stationary application
- systematic storage of cooler and accessories



Shrink fit technology

	Guhring no.	4748	
	Discount group	Net price	
		Code no.	Availability
System cart		1,000	●

Swivel compartments for GSS 2000

Product information

- for the clean storage of GSS shrink fit system accessories, i.e. limit stop washers, gloves, measuring instruments etc.
- suitable for GSS 2000 Comfort Plus and ECO Plus Guhring no. 4742 and 4752

Scope of delivery

- swivel compartment does not include accessories shown



	Guhring no.	4763	
	Discount group	Net price	
		Code no.	Availability
Swivel compartments for GSS 2000 accessories		1,000	●

Tongs

Product information

- for the safe handling of hot tools



	Guhring no.	4749	
	Discount group	Net price	
		Code no.	Availability
Tongs		1,000	●

Cooling adaptor set, complete

Product information

- cooling adaptor set for shrink fit system GSS 2000 Comfort Plus and ECO Plus Guhring no. 4742 and 4752
- for inserting in the cooling adaptor Ø14-16, in order to effectively and safely cool the small shrink fit holders with clamping diameter Ø 3-5



Guhring no.		4419	
Discount group		Net price	
for cooling adaptor	for shank Ø	Code no.	Availability
Ø14-16	Ø 3-5	5,000	●

Protective gloves

Product information

- Kevlar gloves providing protection against sharp cutting edges and high temperatures
- as specified for all shrink fit applications

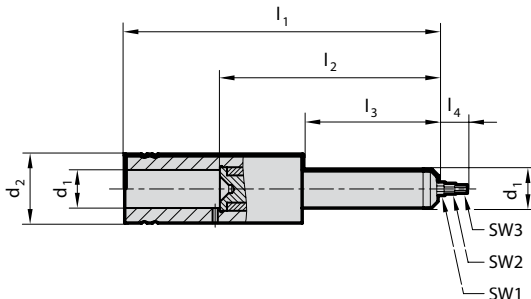


Guhring no.		4750	
Discount group		Net price	
		Code no.	Availability
Protective gloves		1,000	●

Universal length setting adaptor

Product information

- for shrink fit chuck to DIN 69 882-8
- for length pre-setting of the setting screw Guhring no. 4977 with the cutting tool (less difference dimension l₂, see sketch)
- flexibly mounted hexagonal key SW1/SW2 (*only available as rigid design)
- with standard screws suitable for wet application Guhring no. 4900, 4941, 4977
- suitable with MQL setting screws Guhring no. 4621, 4919, 4937



Guhring no.		4718	
Discount group		114	

d ₁ mm	d ₂ mm	l ₁ mm	l ₂ mm	l ₃ mm	l ₄ mm	SW1	SW2	SW3	Code no.	Availability
6	25	115	80	50	10	2.0	1.5	-	6,001	●
6	25	115	80	50	10	3.0	2.5	-	6,000	●
6*	25	115	80	50	10	4.0	-	-	6,002	●
8	25	115	80	50	10	2.0	1.5	-	8,001	●
8	25	115	80	50	10	3.0	-	-	8,000	●
8*	25	115	80	50	10	4.0	-	-	8,002	●
10	25	115	80	50	10	2.0	1.5	-	10,001	●
10	25	115	80	50	10	4.0	3.0	-	10,000	●
12	25	115	80	50	10	3.0	2.0	1.5	12,001	●
12	25	115	80	50	10	5.0	4.0	-	12,000	●
14	25	115	80	50	10	3.0	2.0	1.5	14,001	●
14	25	115	80	50	10	5.0	4.0	-	14,000	●
16	25	120	85	55	10	3.0	2.0	1.5	16,001	●
16	25	120	85	55	10	6.0	5.0	4.0	16,000	●
18	30	120	85	55	10	3.0	2.0	1.5	18,001	●
18	30	120	85	55	10	6.0	5.0	4.0	18,000	●
20	30	135	90	65	10	4.0	3.0	2.0	20,001	●
20	30	135	90	65	10	8.0	5.0	-	20,000	●
25	35	140	100	70	10	4.0	3.0	2.0	25,001	●
25	35	140	100	70	10	8.0	5.0	-	25,000	●
32	45	150	100	70	10	4.0	3.0	2.0	32,001	●
32	45	150	100	70	10	8.0	5.0	-	32,000	●

Product information

- 1-place system

Scope of delivery

- incl. base system
- incl. induction coil Guhring no. 4743 / version 2008
- incl. 1 limit stop collar set Guhring no. 4769 / version 2008
- incl. SpeedCooler Guhring no. 4747
- incl. 1 pair of gloves Guhring no. 4750
- with integrated SpeedCooler-Manager

- order HSK-/ISO-holders Guhring nos. 4761, 4762 separately!



Shrink fit technology

	Guhring no.	4752	
	Discount group	Net price	
		Code no.	Availability
European version 50/60 Hz / 400-480 V, SpeedCooler 230 V		10,000	●
US version 50/60 Hz / 400-480 V, SpeedCooler 115 V		20,000	●

HSK holder carriers GSS 2000

Product information

- for GSS 2000 Basic and ECO Plus Guhring no. 4730 and 4752
- holder carriers for HSK shrink fit chucks



ISO taper holder carriers GSS 2000

Product information

- for GSS 2000 Basic and ECO Plus Guhring no. 4730 and 4752
- also suitable for MAS-BT
- holder carriers for SK or MAS/BT shrink fit chucks



	Guhring no.	4761	
	Discount group	Net price	
for HSK- A/C/E		Code no.	Availability
32		32,000	●
40		40,000	●
50		50,000	●
63		63,000	●
80		80,000	●
100		100,000	●

	Guhring no.	4762	
	Discount group	Net price	
for ISO taper and BT		Code no.	Availability
30		30,000	●
40		40,000	●
50		50,000	●

Product information

- 1-place system

Scope of delivery

- incl. base system
- incl. 1 limit stop collar set Guhring no. 4769 / version 2008
- incl. 1 pair of gloves Guhring no. 4750
- order HSK-/ISO-holders Guhring nos. 4761, 4762 separately!



	Guhring no. 4730	
	Discount group Net price	
	Code no.	Availability
Version 50/60 Hz / 400-480 V	10,000	●

HSK holder carriers GSS 2000

Product information

- for GSS 2000 Basic and ECO Plus Guhring no. 4730 and 4752
- holder carriers for HSK shrink fit chucks



ISO taper holder carriers GSS 2000

Product information

- for GSS 2000 Basic and ECO Plus Guhring no. 4730 and 4752
- also suitable for MAS-BT
- holder carriers for SK or MAS/BT shrink fit chucks



	Guhring no. 4761	
	Discount group Net price	
for HSK- A/C/E	Code no.	Availability
32	32,000	●
40	40,000	●
50	50,000	●
63	63,000	●
80	80,000	●
100	100,000	●

	Guhring no. 4762	
	Discount group Net price	
for ISO taper and BT	Code no.	Availability
30	30,000	●
40	40,000	●
50	50,000	●

SpeedCooler Cooling system

Product information

- for GSS 2000 Comfort Version and Eco-Plus



Discount group	Guhring no. 4747	
	Net price	
	Code no.	Availability
European version 50/60 Hz, 230 V	1,000	●
US version 50/60 Hz, 115 V	2,000	●

SpeedCooler Manager

Product information

- for automatic switch on and off of the SpeedCooler
- preserves the cooling system and reduce the service intervals



Discount group	Guhring no. 4759	
	Net price	
	Code no.	Availability
European version 50/60 Hz, 230 V	1,000	●
US version 50/60 Hz, 115 V	2,000	●

Shrink fit technology

Induction coil

Product information

- for GSS 2000 / version 2008
- HSS for Ø 6...32 mm, carbide for Ø 3...32 mm



Discount group	Guhring no. 4743	
	Net price	
Ø range mm	Code no.	Availability
3...32	32,000	●

Limit stop collars

Product information

- for induction coil
- suitable for all GSS systems
- for extra short standard shrink fit chucks with Code no.,100



Discount group	Guhring no. 4769	
	Net price	
for tool shank diameter	Code no.	Availability
3 - 5 mm	5,000	●
6 - 12 mm	12,000	●
14 - 16 mm	16,000	●
18 - 20 mm	20,000	●
25 - 32 mm	32,000	●
6 - 12 mm	12,100	●
14 - 20 mm	20,100	●
25 - 32 mm	32,100	●

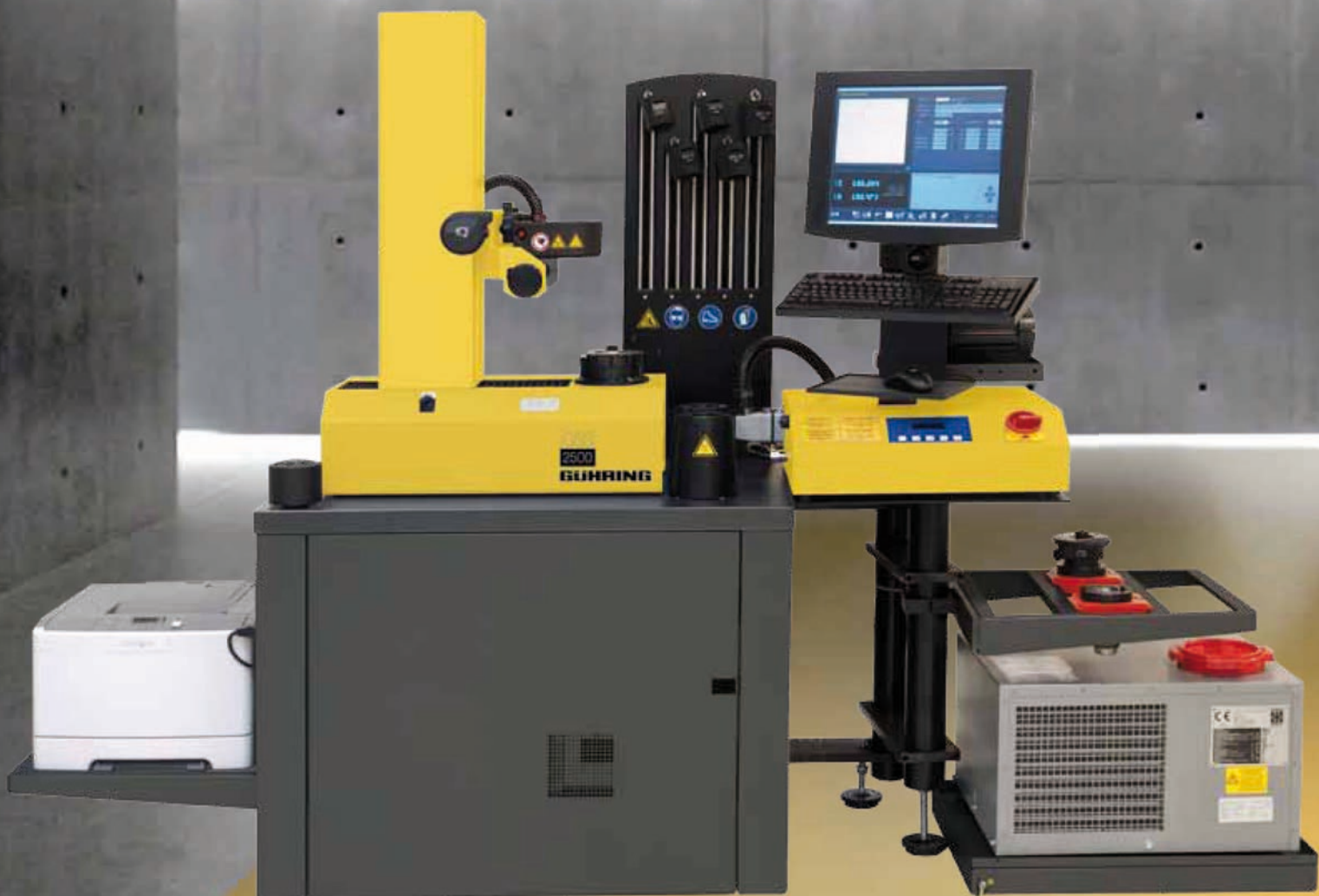
GSS 2500

*Complete
solution*

Shrink fitting, pre-setting and measuring!

GSS 2500 can shrink fit, pre-set and measure. It can be applied as a tool setting and measuring system or as a stand-alone system for shrink fitting tools for insertion or withdrawal.

Thanks to the extensive measuring range and software features GSS 2500 can be adapted to the requirements of the customer.



GSS 3000

3 in
1 system

GSS
3000

with automatic length pre-setting

GSS 3000 offers the operations shrink fitting, cooling and high precision length pre-setting in one system.

GSS 3000 is especially suitable for the automated production in multi-spindle machines and transfer lines in the automotive industry, in the aerospace industry as well as in volume production.

Guhring no. 4753



Product information

- with axial adjustment pin
- setting accuracy $\pm 0,02$ mm
- max. setting dimension 450 mm
- adjustment stroke 20 mm

Scope of delivery

- incl. cooling unit
- incl. 1 cooling adaptor set (5 adaptors for shank- \varnothing 6 up to 32 mm)
- incl. induction coil
- incl. limit stop collars for measuring arm
- incl. limit stop collars for induction coil
- incl. 1 pair of protective gloves
- incl. 1 water-cooled tool depository



Guhring no.	4753	
Discount group	149	
	Code no.	Availability
European version 50/60 Hz / 400-480 V, SpeedCooler 230 V	1,000	on request
US version 50/60 Hz / 400-480 V, SpeedCooler 115 V	2,000	on request

Limit stop collars

Product information

- for induction coil
- suitable for all GSS shrink fit systems
- for extra short standard shrink fit chucks with Code no.,100



	Guhring no.	4769	
	Discount group	Net price	
		Code no.	Availability
for tool shank diameter			
3 - 5 mm		5,000	●
6 - 12 mm		12,000	●
14 - 16 mm		16,000	●
18 - 20 mm		20,000	●
25 - 32 mm		32,000	●
6 - 12 mm		12,100	●
14 - 20 mm		20,100	●
25 - 32 mm		32,100	●

HSK-A/E accessory sets

Product information

- for GSS 3000
- incl. support collars for shrink fit station
- incl. support collars for cooling station
- incl. adjustment gauge
- incl. adjustment pins for standard chucks



Guhring no. 4774
Discount group 149

for holder	Größe	Code no.	Availability
HSK-A/E	32	32,000	●
HSK-A/E	40	40,000	●
HSK-A/E	50	50,000	●
HSK-A/E	63	63,000	●
HSK-A/E	80	80,000	●
HSK-A/E	100	100,000	●

HSK-C accessory sets

Product information

- for GSS 3000
- incl. support collars for shrink fit station
- incl. support collars for cooling station
- incl. adjustment gauge
- incl. adjustment pins for standard chucks



Guhring no. 4775
Discount group 149

for holder	Größe	Code no.	Availability
HSK-C	32	32,000	●
HSK-C	40	40,000	●
HSK-C	50	50,000	●
HSK-C	63	63,000	●

Shrink fit technology

ISO taper accessory sets

Product information

- for GSS 3000
- incl. support collars for shrink fit station
- incl. support collars for cooling station
- incl. adjustment gauge
- incl. adjustment pins for standard chucks



Guhring no. 4776
Discount group 149

for holder	Größe	Code no.	Availability
ISO taper AD/B	SK40	40,000	●
ISO taper AD/B	SK50	50,000	●

MAS/BT accessory sets

Product information

- for GSS 3000
- incl. support collars for shrink fit station
- incl. support collars for cooling station
- incl. adjustment gauge
- incl. adjustment pins for standard chucks



Guhring no. 4777
Discount group 149

for holder	Größe	Code no.	Availability
MAS/BT	BT40	40,000	●

GSS 5000

*Intelligent
technology*

You can't get more into a system!

In addition to the functions pre-setting, shrink fitting and measuring GSS 5000 also offers the possibility of a fully automatic cutting edge form recognition and length pre-setting. Depending on the configuration a measuring range up to 800 mm and a measuring diameter up to 600 mm can be covered.

- GSS 5000 like GSS 2500 can be adapted to customer requirements.

GSS
5000



GÜHRING
GSS 5000

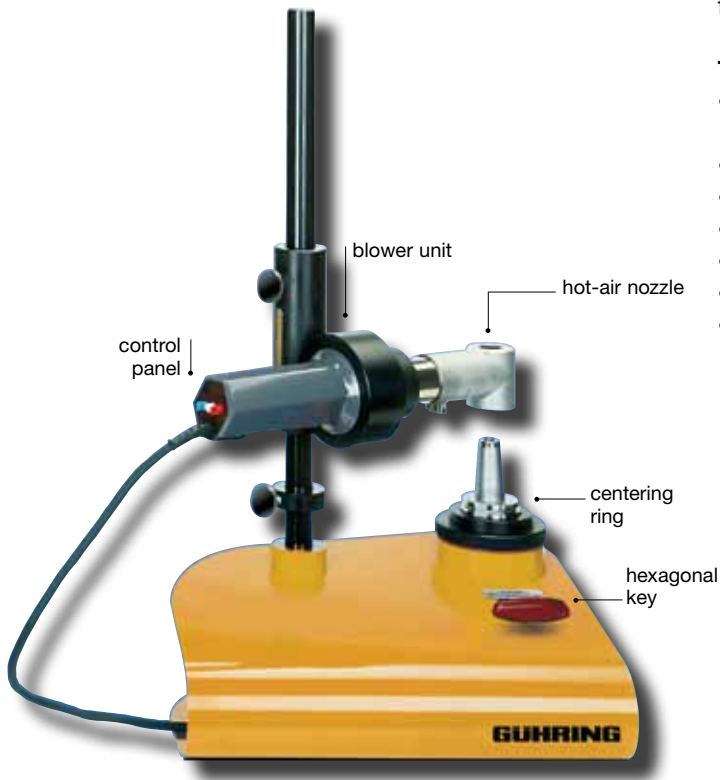


Guhring no 4721 Code 2,000
 Technical data:
 230V/50Hz/16A
 Control panel: temperature and air-flow regulator
 Output: 3400 Watt
 Display: LED temperature display
 Air vol.: max. 800 l/min (fan blower)
 Dimensions: 450 x 320 x 770 mm
 Temperature: 25...600° C
 Weight: 17,5 kg

The hot-air shrink fit technology is ideally suitable for shrink fitting tools with **carbide shanks** for insertion and withdrawal. Created by a fan blower, the incoming hot air causes the expansion of the shrink fit chuck allowing the shank tool to be inserted. The following cold air then contracts the bore and the tool is securely clamped. Attention: HSS tool shanks can only be shrink fitted for insertion, a withdrawal is not possible as they have similar expansion coefficient properties to shrink fit chucks.

The main advantages:

- suitable for HSK, SK and MAS/BT, clamping-Ø 3...20 mm, length 200 mm or shrink fit extensions shank Ø 16...20 mm
- compressed air not required, therefore cost-efficient
- location-independent; only mains supply required
- internal fan cooling
- low energy consumption
- problem-free tool length pre-setting (Ø 3 to 12 mm)
- uncomplicated operation



Guhring no.	4721	
Discount group	Net price	
	Code no.	Availability
	2,000	●

Centering ring

Product information

- heat insulated centering ring for HSV 2000
- with locking screw to fixate shrink fit chuck



				Guhring no.	4720	
				Discount group	Net price	
HSK	ISO taper	BT	extension Ø mm	Code no.	Availability	
-	-	-	16	16,000	●	
-	-	-	20	20,000	●	
25	-	-	-	25,000	●	
32	-	-	-	32,000	●	
40	-	-	-	40,000	●	
50	30	30	-	50,000	●	
63	40	40	-	63,000	●	
80	-	-	-	80,000	●	
100	50	50	-	100,000	●	

HPC



HPC CLAMPING CHUCKS

HPC clamping chucks

HPC clamping chucks

AT FULL SPEED

A FIRM GRASP
ON EVERYTHING!





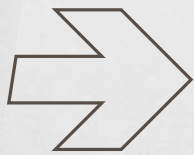
HIGH CLAMPING



***IDEAL CLAMPING
FORCE TRANSFER
TO THE TOOL***



IMMENSE SPEEDS



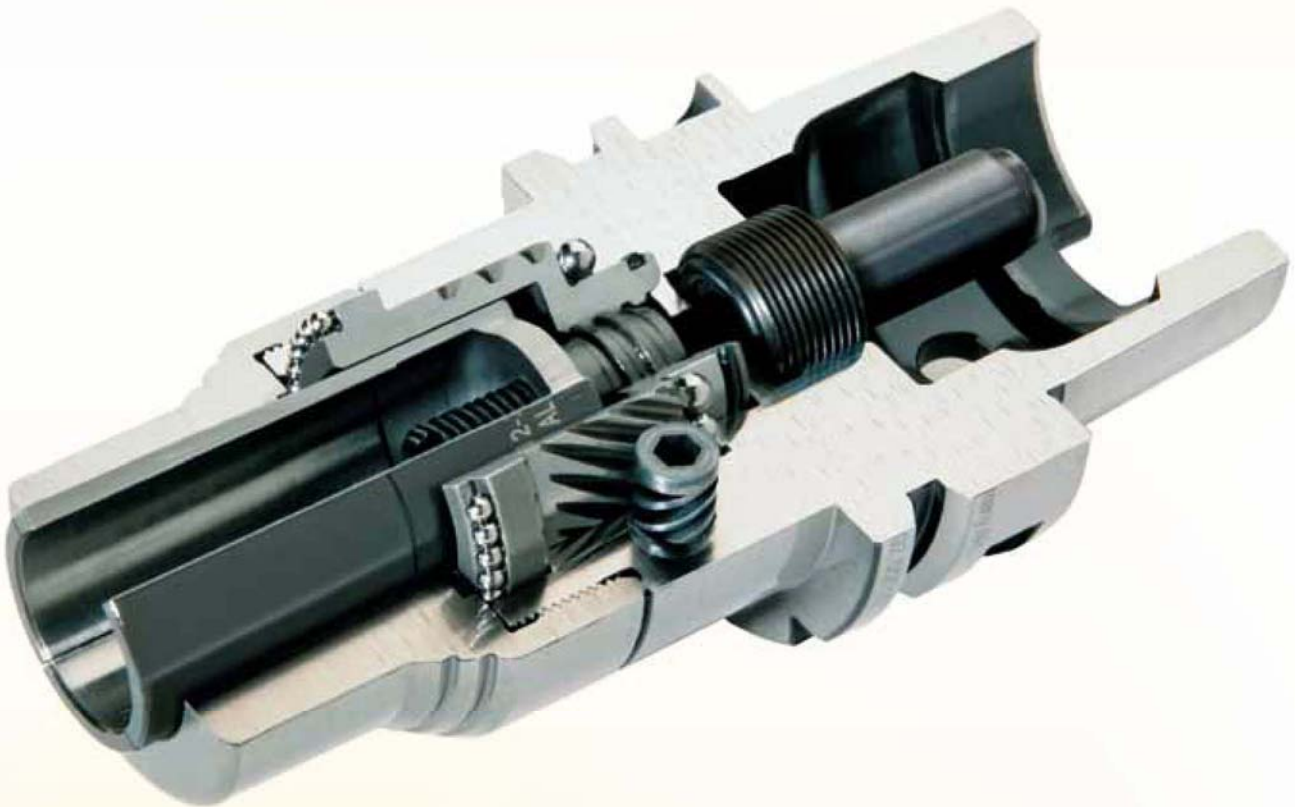
MAXIMUM RIGIDITY



PRECISION CLAMPING 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 as to 6535 HA, HB and HE
- concentricity 3 μ m with 2,5 x D

HSK-A precision clamping chucks

Product information

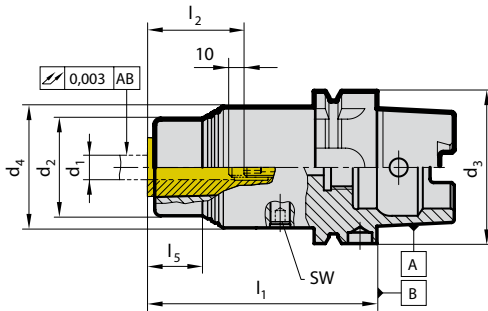
- for heavy-duty cutting as well as HSC and HPC
- to DIN 69893
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- highest clamping force and stability thanks to mech. tension gearing
- actuation torque for clamping initiation 12Nm
- suitable for internal cooling up to 80 bar

Scope of delivery

- hexagon clamping key Guhring no. 4912 4,010
- order clamping sleeves Guhring no. 4302, 4235, 4236, 4237 separately
- order coolant delivery set Guhring no. 4949 separately
- for optimal operation order torque wrench 12 Nm Guhring no. 4915 12,0 and sockets Guhring no. 4916 4,0 separately



HPC clamping chucks



Guhring no.	4300
Discount group	114

HSK-A d3	for clamping-Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l5 mm	SW	Code no.	Availability
63	3-20	40	50	92	20	4	20,063	●
100	3-20	40	50	100	20	4	20,100	●
100	20-32	56	70	135	3	4	32,100	●

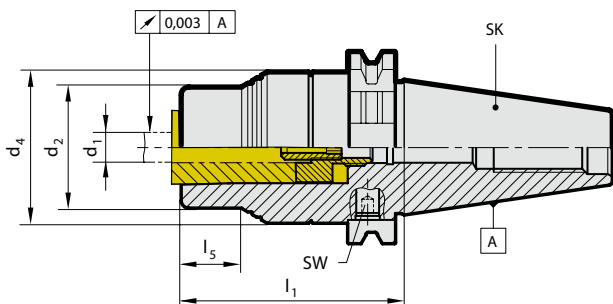
ISO taper precision clamping chucks

Product information

- for heavy-duty cutting as well as HSC and HPC
- ISO taper to DIN 69871 form AD
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- highest clamping force and stability thanks to mech. tension gearing
- actuation torque for clamping initiation 12Nm
- suitable for internal cooling up to 80 bar central coolant supply form AD

Scope of delivery

- hexagon clamping key Guhring no. 4912 4,010
- order clamping sleeves Guhring no. 4302, 4235, 4236, 4237 separately
- order pull studs Guhring no. 4925 or 4926 separately
- for optimal operation order torque wrench 12 Nm Guhring no. 4915 12,0 and sockets Guhring no. 4916 4,0 separately
- form AD/B on request



Guhring no.	4301
Discount group	114

ISO taper	for clamping-Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l5 mm	SW	Code no.	Availability
40	3-20	40	50	63	20	4	20,040	●
50	3-20	40	50	74	20	4	20,050	●
50	20-32	56	70	110	3	4	32,050	●

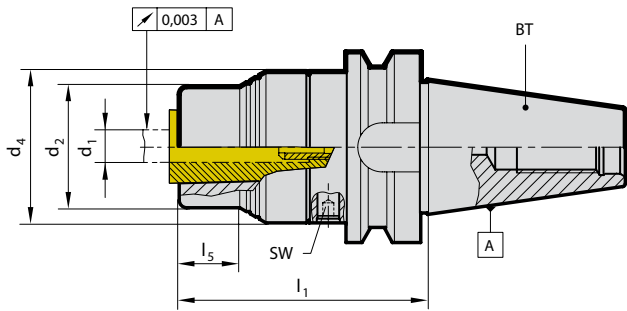
MAS/BT precision clamping chucks

Product information

- for heavy-duty cutting as well as HSC and HPC
- MAS/BT to JIS B 6339
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- highest clamping force and stability thanks to mech. tension gearing
- actuation torque for clamping initiation 12Nm
- suitable for internal cooling up to 80 bar central coolant supply form AD

Scope of delivery

- hexagon clamping key Guhring no. 4912 4,010
- order clamping sleeves Guhring no. 4302, 4235, 4236, 4237 separately
- order pull studs Guhring no. 4927 or 4928 separately
- for optimal operation order torque wrench 12 Nm Guhring no. 4915 12,0 and sockets Guhring no. 4916 4,0 separately
- form AD/B on request



Guhring no.
Discount group

4244
114

MAS/BT	for clamping-Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l5 mm	SW	Code no.	Availability
30	3-20	40	50	82	20	4	20,030	●
40	3-20	40	50	70	20	4	20,040	●
40	3-20	40	50	110	20	4	120,040	●
40	20-32	56	70	135	3	4	32,040	●
50	3-20	40	50	93	20	4	20,050	●
50	3-20	40	50	160	20	4	120,050	●
50	20-32	56	70	130	3	4	32,050	●

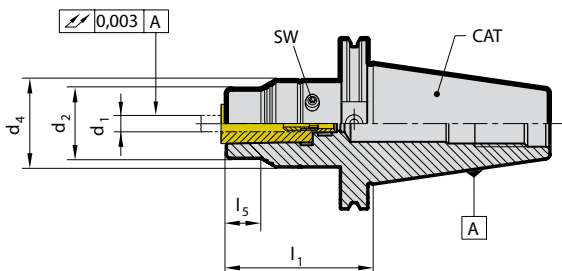
CAT precision clamping chucks

Product information

- for heavy-duty cutting as well as HSC and HPC
- CAT to ANSI B5.50
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- highest clamping force and stability thanks to mech. tension gearing
- actuation torque for clamping initiation 12Nm
- suitable for internal cooling up to 80 bar
- central coolant supply form AD
- CAT40 d4: does not correspond to ANSI B5.50

Scope of delivery

- hexagon clamping key Guhring no. 4912 4,010
- order clamping sleeves Guhring no. 4302, 4235, 4236, 4237 separately
- order pull studs with imperial thread separately
- for optimal operation order torque wrench 12 Nm Guhring no. 4915 12,0 and sockets Guhring no. 4916 4,0 separately



Guhring no.
Discount group

4243
114

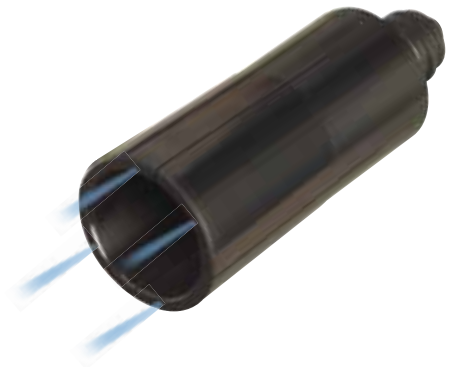
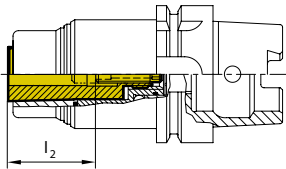
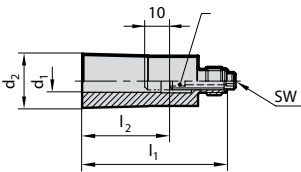
CAT	for clamping-Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l5 mm	SW	Code no.	Availability
40	3-20	30	50	62.5	11	4	20,040	●
50	3-20	40	50	77.95	20	4	20,050	●
50	20-32	56	70	110	3	4	32,050	●

Product information

- for clamping tools with straight shank
- for maximum holding torque
- design with peripheral cooling
- for tool shank tolerance h6

Scope of delivery

- incl. length setting screw



GÜHROJET

Guhring no.	4302
Discount group	114

nom. size	for shank Ø d1 h6 mm	d2 mm	l1 mm	l2 mm	SW	Code no.	Availability
20	3	24.6	66	28	4	3,020	●
20	4	24.6	66	28	4	4,020	●
20	5	24.6	66	28	4	5,020	●
20	6	24.6	66	36	4	6,020	●
20	8	24.6	66	36	4	8,020	●
20	10	24.6	66	40	4	10,020	●
20	12	24.6	66	45	4	12,020	●
20	14	24.6	66	45	4	14,020	●
20	16	24.6	66	48	4	16,020	●
20	18	24.6	66	48	4	18,020	●
20	20	24.6	66	50	4	20,020	●
32	20	45.5	90	50	4	20,032	●
32	22	45.5	90	50	4	22,032	●
32	25	45.5	90	56	4	25,032	●
32	32	45.5	90	59	4	32,032	●

HPC clamping chucks



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

Clamping sleeves for precision clamping chucks, sealed version

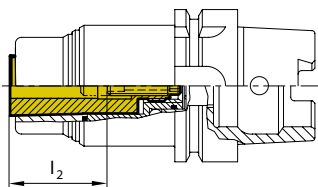
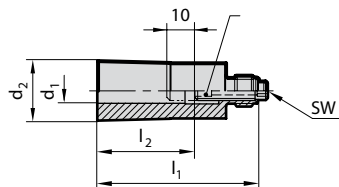
Product information

- for clamping tools with straight shank
- for maximum holding torque
- sealed version
- for tool shank tolerance h6

Scope of delivery

- incl. length setting screw

HPC clamping chucks



Guhring no. **4235**
Discount group **114**

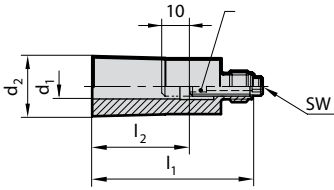
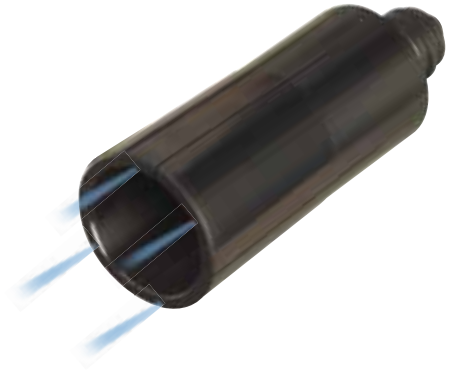
nom. size	for shank Ø d1 h6 mm	d2 mm	l1 mm	l2 mm	SW	Code no.	Availability
20	3	24.6	66	28	4	3,020	●
20	4	24.6	66	28	4	4,020	●
20	5	24.6	66	28	4	5,020	●
20	6	24.6	66	36	4	6,020	●
20	8	24.6	66	36	4	8,020	●
20	10	24.6	66	40	4	10,020	●
20	12	24.6	66	45	4	12,020	●
20	14	24.6	66	45	4	14,020	●
20	16	24.6	66	48	4	16,020	●
20	18	24.6	66	48	4	18,020	●
20	20	24.6	66	50	4	20,020	●
32	20	45.5	90	50	4	20,032	●
32	22	45.5	90	50	4	22,032	●
32	25	45.5	90	56	4	25,032	●
32	32	45.5	90	59	4	32,032	●

Product information

- for clamping imperial tool shanks
- for maximum holding torque
- design with peripheral cooling
- for tool shank tolerance h6

Scope of delivery

- incl. length setting screw



GÜHROJET

Guhring no. **4236**

Discount group **114**

nom. size	for shank Ø d1 h6 inch	d2 mm	l1 mm	l2 mm	SW	Code no.	Availability
20	1/8"	24.6	66	28	4	1,020	●
20	3/16"	24.6	66	28	4	2,020	●
20	1/4"	24.6	66	36	4	3,020	●
20	5/16"	24.6	66	36	4	4,020	●
20	3/8"	24.6	66	40	4	5,020	●
20	7/16"	24.6	66	45	4	6,020	●
20	1/2"	24.6	66	45	4	7,020	●
20	9/16"	24.6	66	45	4	8,020	●
20	5/8"	24.6	66	48	4	9,020	●
20	11/16"	24.6	66	48	4	10,020	●
20	3/4"	24.6	66	50	4	11,020	●
32	3/4"	45.5	90	50	4	1,032	●
32	1"	45.5	90	56	4	2,032	●
32	1-1/4"	45.5	90	59	4	3,032	●

HPC clamping chucks

Clamping sleeves, imperial, for precision clamping chucks, sealed version

Product information

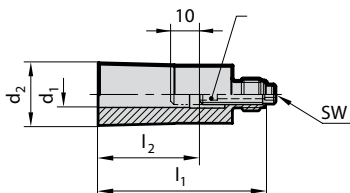
- for clamping imperial tool shanks
- for maximum holding torque
- sealed version
- for tool shank tolerance h6

Scope of delivery

- incl. length setting screw



HPC clamping chucks



Guhring no.	4237
Discount group	114

nom. size	for shank Ø d1 h6 inch	d2 mm	l1 mm	l2 mm	SW	Code no.	Availability
20	1/8"	24.6	66	28	4	1,020	●
20	3/16"	24.6	66	28	4	2,020	●
20	1/4"	24.6	66	36	4	3,020	●
20	5/16"	24.6	66	36	4	4,020	●
20	3/8"	24.6	66	40	4	5,020	●
20	7/16"	24.6	66	45	4	6,020	●
20	1/2"	24.6	66	45	4	7,020	●
20	9/16"	24.6	66	45	4	8,020	●
20	5/8"	24.6	66	48	4	9,020	●
20	11/16"	24.6	66	48	4	10,020	●
20	3/4"	24.6	66	50	4	11,020	●
32	3/4"	45.5	90	50	4	1,032	●
32	1"	45.5	90	56	4	2,032	●
32	1-1/4"	45.5	90	59	4	3,032	●

SYNCHRO



TAPPING CHUCKS

Tapping chucks

PERFORMANCE THROUGH COMPENSATION

Tapping chucks



**COMPENSATES
SYNCHRONISATION
ERRORS**



**SHORTER
CYCLE TIMES**



**HIGHER
CUTTING RATES**



**AXIAL COMPENSATION
 $\pm 0,15$ MM**



MQL coolant delivery set for manual tool change



4298

HSK-A synchro tapping chucks for manual tool change for MQL single and double channel systems



Coolant delivery set for automatic tool change



4330

HSK-A synchro tapping chucks for MQL single channel systems for automatic tool change



MQL coolant delivery set for automatic tool change



4341

HSK-A synchro tapping chucks for MQL double channel systems for automatic tool change



4305

MQL setting screw with internal taper for MQL synchro tapping chucks



4308

tap collet



4335

sealing washer for retaining nuts



tap

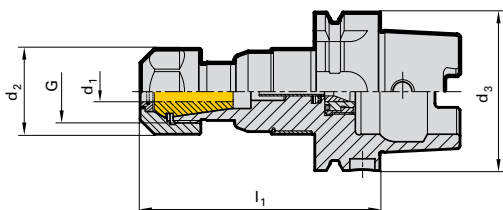
MQL HSK-A synchro tapping chucks for manual tool change

Product information

- for MQL single and double channel systems
- compensate synchronisation errors
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap, which can cause high frictional forces on the thread flanks and increase thread quality and tool life
- length-setting screw allows 2 to 3 mm readjustment
- MQL pressure up to max. 10 bar
- mounted MQL coolant supply pipe
- Guhring MQL identifiable by green coloured ring

Scope of delivery

- incl. MQL coolant delivery set for manual tool change (filler)
- Incl. sealed IC/ER clamping nut Guhring no. 4306 (*see torque)
- incl. adjustment key for MQL adjustment screw
- order MQL adjustment screw Guhring no. 4305 separately
- order sealing washer Guhring no. 4335 separately
- order collet Guhring no. 4308 separately
- order chuck spanner Guhring no. 4913 for ER retaining nut separately



Guhring no. 4298

Discount group 114

HSK-A d ₃	nom. size	for thread	G	d ₁ mm	d ₂ mm	l ₁ mm	tension/compr. ± mm	torque* Nm	kg	Code no.	Availability
63	ER20	M3.5-M14	M25x1.5	4.5-11	34	95.5	0.15	40	1.00	20,063	●
63	ER32	M3.5-M28	M40x1.5	4.5-20	50	109	0.15	170	1.50	32,063	●

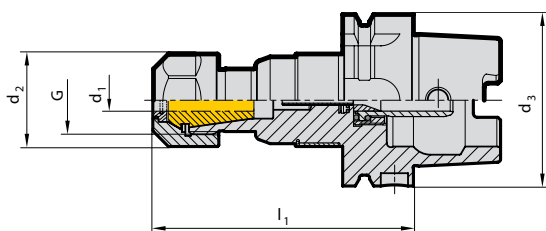
MQL HSK-A synchro tapping chucks for single channel systems for automatic tool change

Product information

- for MQL single channel systems
- compensate synchronisation errors
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap, which can cause high frictional forces on the thread flanks and increase thread quality and tool life
- length-setting screw allows 2 to 3 mm readjustment
- MQL pressure up to max. 10 bar
- mounted MQL coolant supply pipe
- Guhring MQL identifiable by green coloured ring

Scope of delivery

- incl. MQL coolant delivery set for automatic tool change
- Incl. sealed IC/ER clamping nut Guhring no. 4306 (*see torque)
- incl. adjustment key for MQL adjustment screw
- order MQL adjustment screw Guhring no. 4305 separately
- order sealing washer Guhring no. 4335 separately
- order collet Guhring no. 4308 separately
- order chuck spanner Guhring no. 4913 for ER retaining nut separately



Guhring no. 4330

Discount group 114

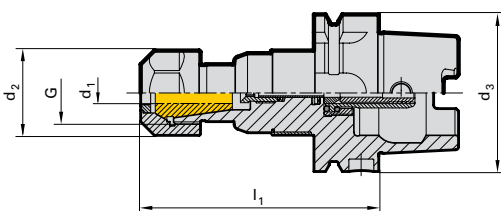
HSK-A d ₃	nom. size	for thread	G	d ₁ mm	d ₂ mm	l ₁ mm	tension/compr. ± mm	torque* Nm	kg	Code no.	Availability
63	ER20	M3.5-M14	M25x1.5	4.5-11	34	95.5	0.15	40	1.00	20,063	●
63	ER32	M3.5-M28	M40x1.5	4.5-20	50	109	0.15	170	1.50	32,063	●
100	ER20	M3.5-M14	M25x1.5	4.5-11	34	102	0.15	40	2.40	20,100	●
100	ER32	M3.5-M28	M40x1.5	4.5-20	50	115.5	0.15	170	3.00	32,100	●

Product information

- for MQL double channel systems
- compensate synchronisation errors
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap, which can cause high frictional forces on the thread flanks
- length-setting screw allows 2 to 3 mm readjustment
- MQL pressure up to max. 10 bar
- mounted MQL coolant supply pipe
- Guhring MQL identifiable by green coloured ring

Scope of delivery

- incl. MQL coolant delivery set for automatic tool change
- Incl. sealed IC/ER clamping nut Guhring no. 4306 (*see torque)
- incl. adjustment key for MQL adjustment screw
- order MQL adjustment screw Guhring no. 4305 separately
- order sealing washer Guhring no. 4335 separately
- order collet Guhring no. 4308 separately
- order chuck spanner Guhring no. 4913 for ER retaining nut separately



Guhring no.	4341
Discount group	114
Code no.	Availability
20,063	●
32,063	●
20,100	●
32,100	●

HSK-A d3	nom. size	for thread	G	d1 mm	d2 mm	l1 mm	tension/compr. ± mm	torque* Nm	kg
63	ER20	M3.5-M14	M25x1.5	4.5-11	34	95.5	0.15	40	1.00
63	ER32	M3.5-M28	M40x1.5	4.5-20	50	109	0.15	170	1.50
100	ER20	M3.5-M14	M25x1.5	4.5-11	34	102	0.15	40	2.40
100	ER32	M3.5-M28	M40x1.5	4.5-20	50	115.5	0.15	170	3.00

Tapping chucks

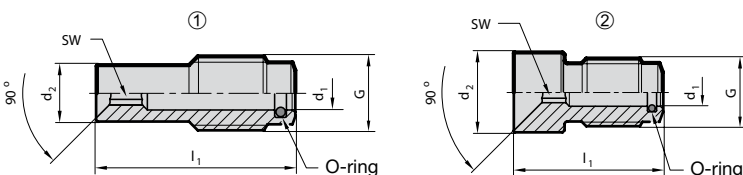
MQL setting screws with internal cone for MQL synchro tapping chucks

Product information

- MQL setting screws with internal cone
- for MQL single and double channel systems
- for MQL taps with external cone
- for MQL synchro tapping chucks Guhring no. 4298, 4330 and 4341

Scope of delivery

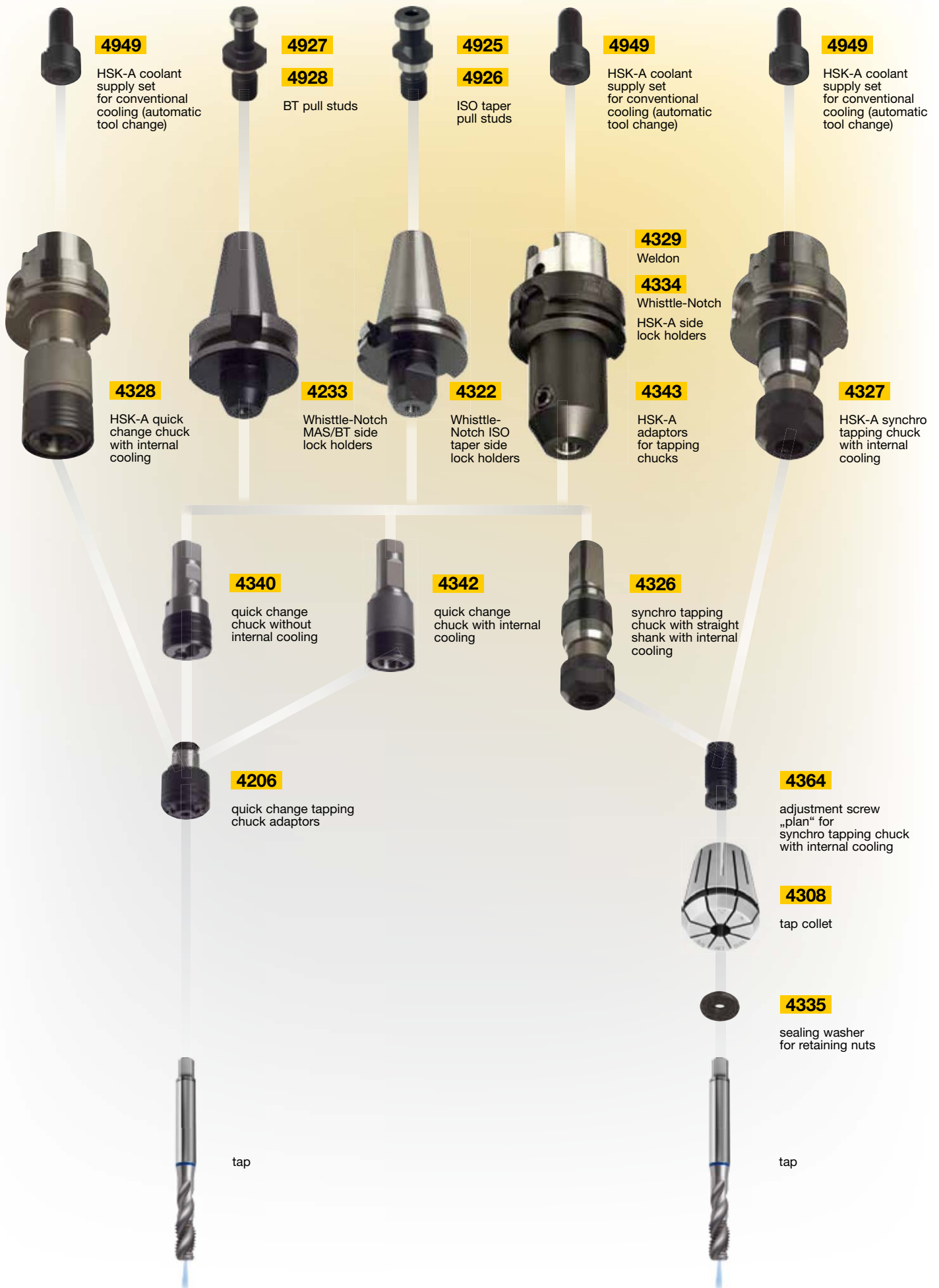
- with O-ring for secure seal



Guhring no.	4305
Discount group	114

nom. size	for tap-shank Ø x VKT	G	d1 mm	d2 mm	l1 mm	SW	picture	Code no.	Availability
ER20	6 x 4.9	M 8x1	3.6	4.8	26.5	2.5	1	6,020	●
ER20	7 x 5.5	M 8x1	3.6	5.4	26.5	2.5	1	7,020	●
ER20	8 x 6.2	M 8x1	3.6	6.1	21.5	2.5	1	8,020	●
ER20	9 x 7	M 8x1	3.6	6.9	21	2.5	1	9,020	●
ER20	10 x 8	M 8x1	3.6	7.8	17	2.5	2	10,020	●
ER20	11 x 9	M 8x1	3.6	8.9	16	2.5	2	11,020	●
ER32	6 x 4.9	M10x1	4.1	4.8	34.5	3	1	6,032	●
ER32	7 x 5.5	M10x1	4.1	5.4	34.5	3	1	7,032	●
ER32	8 x 6.2	M10x1	4.1	6.1	29.5	3	1	8,032	●
ER32	9 x 7	M10x1	4.1	6.9	29	3	1	9,032	●
ER32	10 x 8	M10x1	4.1	7.9	25	3	1	10,032	●
ER32	11x9 & 12x 9	M10x1	4.1	8.9	24	3	1	11,032	●
ER32	14 x 11	M10x1	4.1	10.9	22.5	3	2	14,032	●
ER32	16 x 12	M10x1	4.1	11.9	22	3	2	16,032	●
ER32	18x14.5 & 20x16	M10x1	4.1	14.3	20.5	3	2	18,032	●

Configuration of synchro tapping chucks for conventional cooling



Tapping chucks

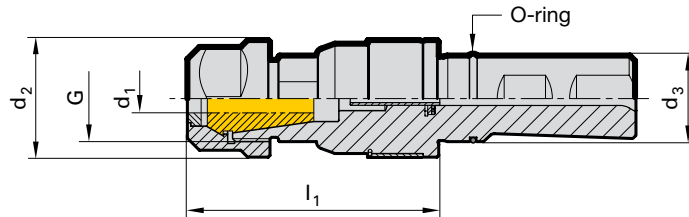
Synchro tapping chucks with straight shank

Product information

- compensate synchronisation errors
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap, which can cause high frictional forces on the thread flanks
- length-setting screw allows 2 to 3 mm readjustment
- suitable for internal cooling
- max. coolant pressure up to 50 bar

Scope of delivery

- incl. sealed IC/ER clamping nut Guhring no. 4306 (*see torque)
- incl. adjustment key for adjustment screws
- order adjustment screws „plan“ Guhring no. 4364, tapping collet, Guhring no. 4308, sealing washer, Guhring no. 4325 and clamping key, Guhring no. 4913 separately



Guhring no.	4326
Discount group	114
Code no.	Availability
20,025	●
32,025	●

d ₃ ~DIN 1835 mm	nom. size	for thread	d ₁ mm	d ₂ mm	l ₁ mm	tension/ compr. mm	torque* Nm	G	kg
25	ER20	M3.5-M14	4-11.0	34	73	0.15	40	M25x1.5	0.50
25	ER32	M3.5-M28	4-20.0	50	88	0.15	170	M40x1.5	1.30

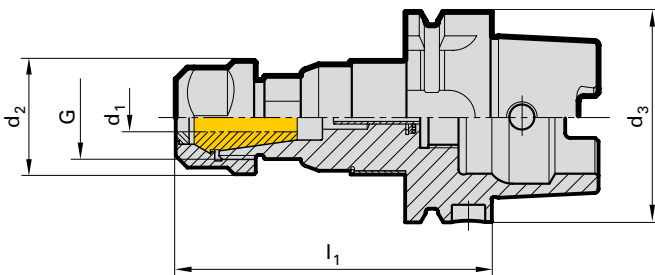
HSK-A synchro tapping chucks

Product information

- compensate synchronisation errors
- guarantee high thread quality and optimal tool life with conventional taps
- minimal length compensation in tension and compression direction between synchronous spindle and tap reduces excessive thread flank friction
- reduces a possible increase in axial forces during the cutting cycle to a minimum
- length-setting screw allows 2 to 3 mm readjustment
- suitable for internal cooling
- max. coolant pressure up to 50 bar

Scope of delivery

- incl. sealed IC/ER clamping nut Guhring no. 4306 (*see torque)
- incl. adjustment key for adjustment screws
- order adjustment screws „plan“ Guhring no. 4364, tapping collet, Guhring no. 4308, sealing washer, Guhring no. 4325 and clamping key, Guhring no. 4913 separately
- for conventional cooling order coolant supply set Guhring no. 4949 separately



Guhring no.	4327
Discount group	114
Code no.	Availability
20,063	●
20,163	●
32,063	●
20,100	●
32,100	●

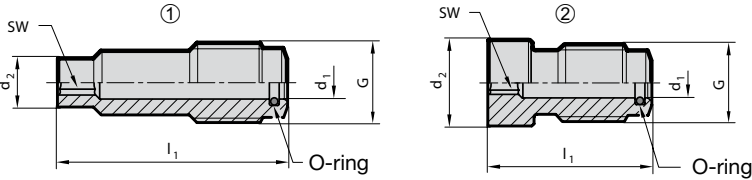
d ₃ ~DIN 1835 mm	nom. size	for thread	d ₁ mm	d ₂ mm	l ₁ mm	tension/ compr. mm	torque* Nm	G	kg
63	ER20	M3.5-M14	4-11.0	34	95.5	0.15	40	M25x1.5	1.00
63	ER20	M3.5-M14	4-11.0	34	160.0	0.15	40	M25x1.5	1.50
63	ER32	M3.5-M28	4-20.0	50	109.0	0.15	170	M40x1.5	1.70
100	ER20	M3.5-M14	4-11.0	34	102.0	0.15	40	M25x1.5	2.50
100	ER32	M3.5-M28	4-20.0	50	115.5	0.15	170	M40x1.5	2.70

Product information

- for synchro tapping chucks with straight shank Guhring no. 4326
- for HSK-A synchro tapping chucks Guhring no. 4327
- for conventional internal cooling
- with facing stop for standard shank ends

Scope of delivery

- with O-ring for secure seal



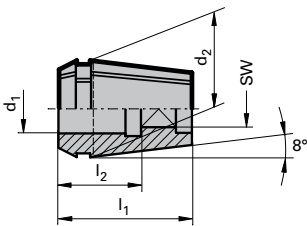
Guhring no. 4364

Discount group 114

for nom. size	for tap-shank Ø x VKT	G	d1 mm	d2 mm	l1 mm	SW	O-ring	picture	Code no.	Availability
ER20	6x4.9	M8x1	3.6	4.8	26	2.5	3.5x1	1	6,020	●
ER20	7x5.5	M8x1	3.6	5.4	26	2.5	3.5x1	1	7,020	●
ER20	8x6.2	M8x1	3.6	6.1	21	2.5	3.5x1	1	8,020	●
ER20	9x7	M8x1	3.6	6.9	20.2	2.5	3.5x1	1	9,020	●
ER20	10x8	M8x1	3.6	7.8	16	2.5	3.5x1	2	10,020	●
ER20	11x9	M8x1	3.6	8.8	15	2.5	3.5x1	2	11,020	●
ER32	6x4.9	M10x1	4.1	4.8	34	3	4x1	1	6,032	●
ER32	7x5.5	M10x1	4.1	5.4	34	3	4x1	1	7,032	●
ER32	8x6.2	M10x1	4.1	6.1	29	3	4x1	1	8,032	●
ER32	9x7	M10x1	4.1	6.9	28.2	3	4x1	1	9,032	●
ER32	10x8	M10x1	4.1	7.8	24	3	4x1	1	10,032	●
ER32	11x9 & 12x9	M10x1	4.1	8.8	23	3	4x1	1	11,032	●
ER32	14x11	M10x1	4.1	10.8	20.7	3	4x1	2	14,032	●
ER32	16x12	M10x1	4.1	11.8	19.7	3	4x1	2	16,032	●
ER32	18x14.5	M10x1	4.1	14.3	18	3	4x1	2	18,032	●

Product information

- for clamping taps with square shank in synchro tapping chucks or collet holders
- smaller Ø4mm are clamped with collet, Guh. no. 4306 without sq. drive



Guhring no. **4308**
Discount group **114**

nom. size d ₂	for shank Ø d ₁ mm	square SW	d ₁ mm	l ₂ mm	Code no.	Availability
ER16	4.5	3.4	27.5	18	4,516	●
ER16	5.5	4.3	27.5	18	5,516	●
ER16	6.0	4.9	27.5	18	6,016	●
ER16	7.0	5.5	27.5	18	7,016	●
ER16	8.0	6.2	27.5	22	8,016	●
ER20	4.0	3.0	31.5	15	4,020	●
ER20	4.5	3.4	31.5	18	4,520	●
ER20	5.5	4.3	31.5	18	5,520	●
ER20	6.0	4.9	31.5	18	6,020	●
ER20	7.0	5.5	31.5	18	7,020	●
ER20	8.0	6.2	31.5	22	8,020	●
ER20	9.0	7.0	31.5	22	9,020	●
ER20	10.0	8.0	31.5	25	10,020	●
ER20	11.0	9.0	31.5	25	11,020	●
ER25	4.5	3.4	34.0	18	4,525	●
ER25	5.5	4.3	34.0	18	5,525	●
ER25	6.0	4.9	34.0	18	6,025	●
ER25	7.0	5.5	34.0	18	7,025	●
ER25	8.0	6.2	34.0	22	8,025	●
ER25	9.0	7.0	34.0	22	9,025	●
ER25	10.0	8.0	34.0	25	10,025	●
ER25	11.0	9.0	34.0	25	11,025	●
ER25	12.0	9.0	34.0	25	12,025	●
ER32	4.0	3.0	40.0	15	4,032	●
ER32	4.5	3.4	40.0	18	4,532	●
ER32	5.5	4.3	40.0	18	5,532	●
ER32	6.0	4.9	40.0	18	6,032	●
ER32	7.0	5.5	40.0	18	7,032	●
ER32	8.0	6.2	40.0	22	8,032	●
ER32	9.0	7.0	40.0	22	9,032	●
ER32	10.0	8.0	40.0	25	10,032	●
ER32	11.0	9.0	40.0	25	11,032	●
ER32	12.0	9.0	40.0	25	12,032	●
ER32	14.0	11.0	40.0	25	14,032	●
ER32	16.0	12.0	40.0	25	16,032	●
ER32	18.0	14.5	40.0	25	18,032	●
ER32	20.0	16.0	40.0	28	20,032	●
ER40	7.0	5.5	46.0	18	7,040	●
ER40	8.0	6.2	46.0	22	8,040	●
ER40	9.0	7.0	46.0	22	9,040	●
ER40	10.0	8.0	46.0	25	10,040	●
ER40	11.0	9.0	46.0	25	11,040	●
ER40	12.0	9.0	46.0	25	12,040	●
ER40	14.0	11.0	46.0	25	14,040	●
ER40	16.0	12.0	46.0	25	16,040	●
ER40	18.0	14.5	46.0	25	18,040	●
ER40	20.0	16.0	46.0	28	20,040	●
ER40	22.0	18.0	46.0	28	22,040	●

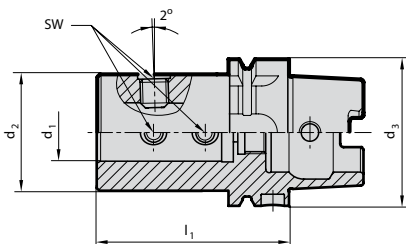
HSK-A adaptors for tapping chucks

Product information

- for quick change chucks and synchro tapping chucks with straight shank

Scope of delivery

- incl. clamping screws Guhring no. 4903, code no. 12,001
- order coolant delivery set Guhring no. 4949 separately



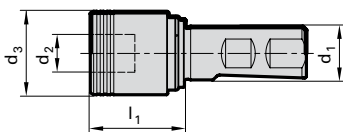
							Guhring no.	4343
							Discount group	114
HSK-A	d3	d1 mm	d2 mm	l1 mm	SW	kg	Code no.	Availability
	50	25	50	80	6	0.89	25,050	●
	63	25	50	82	6	1.26	25,063	●
	80	25	50	87	6	3.10	25,080	●
	100	25	50	89	6	4.08	25,100	●

Tapping chucks

Quick change tapping chucks without internal cooling

Product information

- quick change tapping chucks are provided with a ball guided length compensator that compensates any length difference between spindle feed and pitch of tap thread

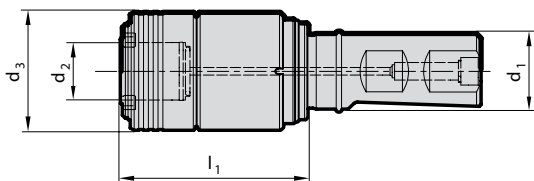


							Guhring no.	4340
							Discount group	114
for thread	d1 mm	d2 mm	d3 mm	l1 mm	tension/compression mm	kg	Code no.	Availability
M3-M12	25	19	36	39	± 7.5	0.4	19,025	●
M8-M20	25	31	53	63	±10.0	0.9	31,025	●

Quick change tapping chucks with internal cooling

Product information

- quick change tapping chucks are provided with a ball guided length compensator that compensates any length difference between spindle feed and pitch of tap thread
- provided with internal coolant supply feeding the coolant through the chuck and adaptor into the shank of the tap. All functional elements are sealed
- max. coolant pressure up to 50 bar



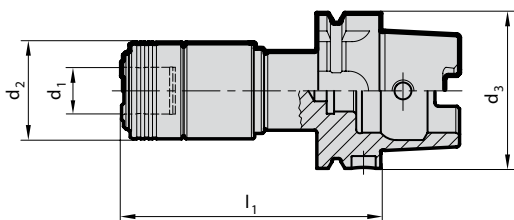
Guhring no.							4342	
Discount group							114	
for thread	d ₁ mm	d ₂ mm	d ₃ mm	l ₁ mm	tension/compression mm	kg	Code no.	Availability
M3-M12	25	19	39	62	7.5/7.5	0.6	19,025	●
M8-M20	25	31	60	88	10/10	1.0	31,025	●

Tapping chucks

HSK-A quick change tapping chucks with internal cooling

Product information

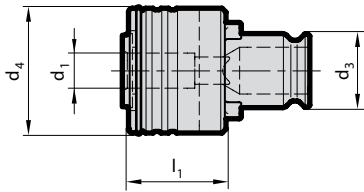
- quick change tapping chucks are provided with a ball guided length compensator that compensates any length difference between spindle feed and pitch of tap thread
- guarantee high thread quality and optimal tool life with conventional taps
- max. coolant pressure up to 50 bar.



Guhring no.							4328	
Discount group							114	
HSK-A d ₃ mm	for thread	d ₁ mm	d ₂ mm	l ₁ mm	tension/compression mm	kg	Code no.	Availability
63	M3-M12	19	39	105	± 7.5	0.9	19,063	●
63	M8-M20	31	60	140	±10.0	1.0	31,063	●

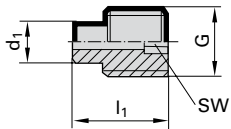
Product information

- with safety clutch
- suitable for HSS taps
- for solid carbide taps a clamping groove is required on the shank to provide additional drive.
- suitable for internal coolant supply max. 50 bar.



						Guhring no.	4206
						Discount group	114
for thread	shank \varnothing x sq. d_1 mm	d_3 mm	d_4 mm	l_1 mm		Code no.	Availability
M3-M12	2.2	19	32	25		19,022	5900
M3-M12	2.5 x 2.1	19	32	25		19,025	5900
M3-M12	2.8 x 2.1	19	32	25		19,028	5900
M3-M12	3.5 x 2.7	19	32	25		19,035	5900
M3-M12	4 x 3	19	32	25		19,040	5900
M3-M12	4.5 x 3.4	19	32	25		19,045	5900
M3-M12	5.5 x 4.5	19	32	25		19,055	5900
M3-M12	6 x 4.9	19	32	25		19,060	5900
M3-M12	7 x 5.5	19	32	25		19,070	5900
M3-M12	8 x 6.2	19	32	25		19,080	5900
M3-M12	9 x 7	19	32	25		19,090	5900
M3-M12	10 x 8	19	32	25		19,100	5900
M8-M20	6 x 4.9	31	50	34		31,060	8000
M8-M20	7 x 5.5	31	50	34		31,070	8000
M8-M20	8 x 6.2	31	50	34		31,080	8000
M8-M20	9 x 7	31	50	34		31,090	8000
M8-M20	10 x 8	31	50	34		31,100	8000
M8-M20	11 x 9	31	50	34		31,110	8000
M8-M20	12 x 9	31	50	34		31,120	8000
M8-M20	14 x 11	31	50	34		31,140	8000
M8-M20	16 x 12	31	50	34		31,160	8000

Tapping chucks



Tapping chucks

Guhring no. 4906
Discount group 114

for nom. size	for clamping range mm	G	d ₁ mm	l ₁ mm	SW	Code no.	Availability
ER16	4.5- 7.0	M10	4.5	22	3	45,022	●
ER20	4.5- 7.0	M10	4.5	22	3	45,022	●
ER20	8.0-10.0	M10	5.5	16	3	55,016	●
ER25	4.5- 7.0	M16	4.5	32	4	45,032	●
ER25	8.0- 9.0	M16	5.5	24	4	55,024	●
ER25	10.0-12.0	M16	6.5	20	4	65,020	●
ER32	4.5- 7.0	M16	4.5	36	4	45,036	●
ER32	8.0- 9.0	M16	5.5	30	4	55,030	●
ER32	10.0-12.0	M16	5.5	24	4	55,024	●
ER32	14.0-16.0	M16	6.5	20	4	65,020	●
ER40	7.0- 9.0	M16	4.5	36	4	45,036	●
ER40	10.0-12.0	M16	5.5	30	4	55,030	●
ER40	14.0-18.0	M16	9.5	26	4	95,026	●
ER40	20.0	M16	16.0	20	5	160,020	●

GUBROJET



TOOL HOLDERS

Tool holders

TOOL HOLDERS WITH PERIPHERAL COOLING

|GÜHROJET|



***OPTIMAL CHIP
EVACUATION***



***HIGH PROCESS
RELIABILITY***



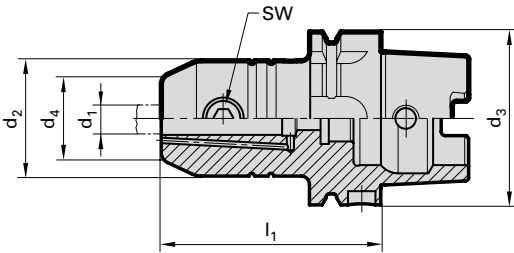
***IMPROVED COOLING
LUBRICATION***

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with bore to DIN 1835-2 form B "Weldon"
- dimensions to DIN 69882-4
- from bore d1 = 25 with two clamping screws
- with coolant ducts in the bore for peripheral cooling, improving process and tool life
- coolant ducts:
d = 6 - 14 with two coolant ducts
d = 16 - 40 with four coolant ducts

Scope of delivery

- incl. clamping screw Guhring no. 4903
- order coolant delivery set, Guhring no. 4949 separately
- HSK-A32, 40 & 80 on request



GÜHROJET

Guhring no. 4232
Discount group 114

HSK-A d3	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	SW	kg	Code no.	Availability
50	6	25	15	65	3	0.50	6,050	●
50	8	28	20	65	4	0.60	8,050	●
50	10	35	25	65	5	0.60	10,050	●
50	12	42	30	80	6	0.90	12,050	●
50	14	44	32	80	6	0.90	14,050	●
50	16	48	36	80	6	1.00	16,050	●
50	18	50	38	80	6	1.00	18,500	●
50	20	52	40	80	8	1.00	20,050	●
63	6	25	15	65	3	0.80	6,063	●
63	8	28	20	65	4	0.80	8,063	●
63	10	35	25	65	5	0.90	10,063	●
63	12	42	30	80	6	1.20	12,063	●
63	14	44	32	80	6	1.20	14,063	●
63	16	48	36	80	6	1.30	16,063	●
63	18	50	38	80	6	1.40	18,063	●
63	20	52	40	80	8	1.40	20,063	●
63	25	65	45	110	10	2.40	25,063	●
63	32	72	56	110	10	2.70	32,063	●
100	6	25	15	80	3	3.00	6,100	●
100	8	28	20	80	4	3.20	8,100	●
100	10	35	25	80	5	3.40	10,100	●
100	12	42	30	80	6	3.40	12,100	●
100	14	44	32	80	6	3.50	14,100	●
100	16	48	36	100	6	3.80	16,100	●
100	18	50	38	100	6	3.80	18,100	●
100	20	52	40	100	8	3.90	20,100	●
100	25	65	45	100	10	3.90	25,100	●
100	32	72	56	100	10	4.20	32,100	●
100	40	80	60	110	10	4.60	40,100	●

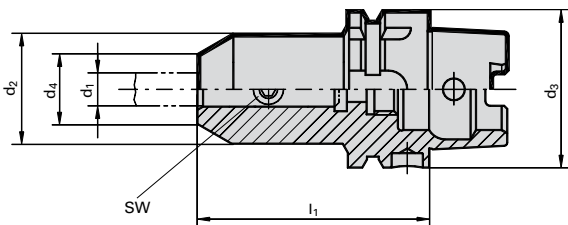
Tool holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- to DIN 69882-4
- with bore to DIN 1835-2 form B "Weldon"
- from bore d1 = 25 with two clamping screws

Scope of delivery

- incl. clamping screw Guhring no. 4903
- order coolant delivery set, Guhring no. 4949 separately



Guhring no. 4329
Discount group 114

HSK-A d3	clamping-Ø d1 mm	d2 mm	d4 mm	l1 mm	SW	kg	Code no.	Availability
32	6	25	15	60	3	0.24	6,032	●
32	8	28	20	60	4	0.27	8,032	●
32	10	35	25	65	5	0.31	10,032	●
32	12	42	30	65	6	0.41	12,032	●
40	6	25	15	60	3	0.33	6,040	●
40	8	28	20	60	4	0.35	8,040	●
40	10	35	25	60	5	0.47	10,040	●
40	12	42	30	70	6	0.58	12,040	●
40	14	44	32	75	6	0.59	14,040	●
40	16	48	36	75	6	0.64	16,040	●
50	6	25	15	65	3	0.52	6,050	●
50	8	28	20	65	4	0.55	8,050	●
50	10	35	25	65	5	0.62	10,050	●
50	12	42	30	80	6	0.87	12,050	●
50	14	44	32	80	6	0.90	14,050	●
50	16	48	36	80	6	0.94	16,050	●
50	18	50	38	80	6	0.96	18,050	●
50	20	52	40	80	8	0.97	20,050	●
63	6	25	15	65	3	0.81	6,063	●
63	8	28	20	65	4	0.83	8,063	●
63	10	35	25	65	5	0.89	10,063	●
63	12	42	30	80	6	1.20	12,063	●
63	14	44	32	80	6	1.20	14,063	●
63	16	48	36	80	6	1.30	16,063	●
63	18	50	38	80	6	1.35	18,063	●
63	20	52	40	80	8	1.40	20,063	●
63	25	65	45	110	10	2.40	25,063	●
63	32	72	56	110	10	2.70	32,063	●
80	6	25	15	80	3	1.75	6,080	●
80	8	28	20	80	4	1.90	8,080	●
80	10	35	25	80	5	2.10	10,080	●
80	12	42	30	80	6	2.10	12,080	●
80	14	44	32	80	6	2.30	14,080	●
80	16	48	36	100	6	2.50	16,080	●
80	18	50	38	100	6	2.50	18,080	●
80	20	52	40	100	8	2.70	20,080	●
80	25	65	45	100	10	2.80	25,080	●
80	32	72	56	110	10	2.85	32,080	●
80	40	80	60	120	10	2.98	40,080	●
100	6	25	15	80	3	3.00	6,100	●
100	8	28	20	80	4	3.20	8,100	●
100	10	35	25	80	5	3.40	10,100	●
100	12	42	30	80	6	3.40	12,100	●
100	14	44	32	80	6	3.50	14,100	●
100	16	48	36	100	6	3.80	16,100	●
100	18	50	38	100	6	3.80	18,100	●
100	20	52	40	100	8	3.90	20,100	●
100	25	65	45	100	10	3.90	25,100	●
100	32	72	56	100	10	4.20	32,100	●
100	40	80	60	110	10	4.60	40,100	●

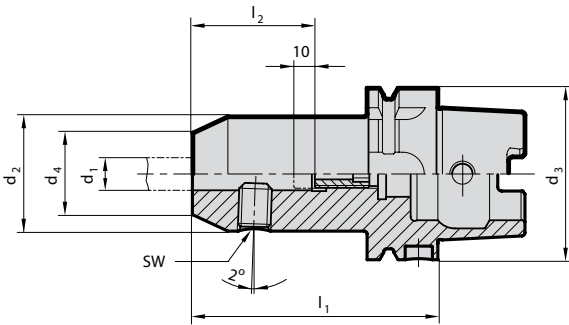
Tool holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- to DIN 69882-5
- with bore to DIN 1835-2 form E "Whistle Notch"
- from bore d1 = 25 with two clamping screws

Scope of delivery

- incl. clamping screw Guhring no. 4903 and adjustment screw Guhring no. 4904
- order coolant delivery set, Guhring no. 4949 separately



Guhring no. 4334
Discount group 114

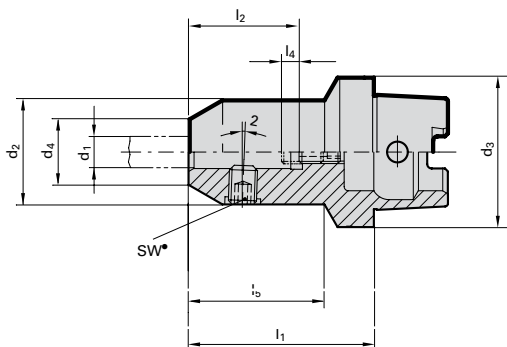
HSK-A d3	clamping-Ø d1 mm	d2 mm	d4 mm	l1 mm	l2 mm	incl. adjustment screw 4904 ...	SW	kg	Code no.	Availability
32	6	25	15	80	36	5.016	3	0.32	6,032	●
32	8	28	20	80	36	6.016	4	0.36	8,032	●
32	10	35	25	80	40	8.012	5	0.46	10,032	●
32	12	42	30	80	45	10.017	6	0.57	12,032	●
40	6	25	15	80	36	5.016	3	0.36	6,040	●
40	8	28	20	80	36	6.016	4	0.40	8,040	●
40	10	35	25	80	40	8.012	5	0.50	10,040	●
40	12	42	30	90	45	10.017	6	0.68	12,040	●
40	14	44	32	90	45	10.017	6	0.72	14,040	●
40	16	48	36	90	48	12.014	6	0.77	16,040	●
50	6	25	15	80	36	5.020	3	0.58	6,050	●
50	8	28	20	80	36	6.020	4	0.62	8,050	●
50	10	35	25	80	40	8.018	5	0.73	10,050	●
50	12	42	30	90	45	10.020	6	0.97	12,050	●
50	14	44	32	90	45	10.020	6	1.00	14,050	●
50	16	48	36	90	48	12.020	6	1.09	16,050	●
50	18	50	38	90	48	12.020	6	1.12	18,050	●
50	20	52	40	100	50	16.025	8	1.30	20,050	●
63	6	25	15	80	36	5.020	3	0.86	6,063	●
63	8	28	20	80	36	6.020	4	0.90	8,063	●
63	10	35	25	80	40	8.018	5	1.00	10,063	●
63	12	42	30	90	45	10.020	6	1.24	12,063	●
63	14	44	32	90	45	10.020	6	1.28	14,063	●
63	16	48	36	100	48	12.020	6	1.53	16,063	●
63	18	50	38	100	48	12.020	6	1.60	18,063	●
63	20	52	40	100	50	16.025	8	1.65	20,063	●
63	25	65	45	110	56	20.025	10	2.34	25,063	●
63	32	72	56	110	60	20.025	10	2.54	32,063	●
80	6	25	15	90	36	5.020	3	2.20	6,080	●
80	8	28	20	90	36	6.020	4	2.25	8,080	●
80	10	35	25	90	40	8.018	5	2.56	10,080	●
80	12	42	30	100	45	10.020	6	2.60	12,080	●
80	14	44	32	100	45	10.020	6	2.85	14,080	●
80	16	48	36	100	48	12.020	6	2.88	16,080	●
80	18	50	38	100	48	12.020	6	2.90	18,080	●
80	20	52	40	110	50	16.025	8	3.05	20,080	●
80	25	65	45	110	56	20.025	10	3.10	25,080	●
80	32	72	56	120	60	20.025	10	3.20	32,080	●
100	6	25	15	90	36	5.020	3	2.60	6,100	●
100	8	28	20	90	36	6.020	4	2.60	8,100	●
100	10	35	25	90	40	8.018	5	2.60	10,100	●
100	12	42	30	100	45	10.020	6	2.80	12,100	●
100	14	44	32	100	45	10.020	6	2.85	14,100	●
100	16	48	36	100	48	12.020	6	2.97	16,100	●
100	18	50	38	100	48	12.020	6	3.10	18,100	●
100	20	52	40	110	50	16.025	8	3.23	20,100	●
100	25	65	45	120	56	20.025	10	4.06	25,100	●
100	32	72	56	120	60	20.025	10	4.40	32,100	●

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- to DIN 69882-5
- with bore to DIN 1835-2 form E "Whistle Notch"
- from bore d1 = 25 with two clamping screws Guhring no. 4903

Scope of delivery

- incl. clamping screw Guhring no. 4903 and adjustment screw Guhring no. 4905



Guhring no. 4333
Discount group 114

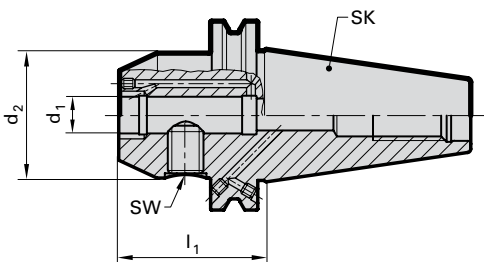
HSK-C d ₃	clamping-Ø d ₁ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	l ₄ mm	incl. adjustment screw 4905 ...	SW	kg	Code no.	Availability
32	6	25	15	60	36	10	5.016	3	0.23	6,032	●
32	8	28	20	60	36	10	6.016	4	0.28	8,032	●
32	10	35	25	65	40	10	8.017	5	0.43	10,032	●
40	6	25	15	60	36	10	5.016	3	0.29	6,040	●
40	8	28	20	60	36	10	6.016	4	0.33	8,040	●
40	10	35	25	65	40	10	8.017	5	0.47	10,040	●
40	12	42	30	70	45	8	10.017	6	0.67	12,040	●
40	14	44	32	70	45	8	10.017	6	0.73	14,040	●
40	16	48	36	75	48	8	12.019	6	0.92	16,040	●
40	20	52	40	80	50	8	16.020	8	1.11	20,040	●
50	6	25	15	60	36	8	5.014	3	0.42	6,050	●
50	8	28	20	60	36	8	6.014	4	0.46	8,050	●
50	10	35	25	65	40	8	8.015	5	0.57	10,050	●
50	12	42	30	75	45	10	10.020	6	0.80	12,050	●
50	14	44	32	75	45	10	10.020	6	0.87	14,050	●
50	16	48	36	80	48	10	12.022	6	1.02	16,050	●
50	18	50	38	80	48	10	12.022	6	1.09	18,050	●
50	20	52	40	80	50	8	16.020	8	1.15	20,050	●
50	25	65	45	95	56	8	20.026	10	2.14	25,050	●
63	6	25	15	60	36	8	5.014	3	0.64	6,063	●
63	8	28	20	60	36	8	6.014	4	0.66	8,063	●
63	10	35	25	65	40	8	8.015	5	0.78	10,063	●
63	12	42	30	75	45	10	10.020	6	0.99	12,063	●
63	14	44	32	75	45	10	10.020	6	1.03	14,063	●
63	16	48	36	80	48	10	12.022	6	1.21	16,063	●
63	18	50	38	80	48	10	12.022	6	1.26	18,063	●
63	20	52	40	80	50	8	16.020	8	1.31	20,063	●
63	25	65	45	95	56	8	20.026	10	2.23	25,063	●
63	32	72	56	100	60	8	20.026	10	2.75	32,063	●

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with bore to DIN 1835-2 form B "Weldon"
- ISO taper to DIN 69871 form AD/B
- form B supplied with threaded pins in bores
- with coolant ducts in the bore for peripheral cooling, improving process and tool life
- from bore d1 = 25 mm with two clamping screws Guhring no. 4903
- coolant supply form AD/B
(*: version AD without coolant supply over collar and without GÜHROJET)

Scope of delivery

- incl. clamping screw Guhring no. 4903
- order pull studs, Guhring no. 4925 or 4926 separately



GÜHROJET

Guhring no.	4317
Discount group	114

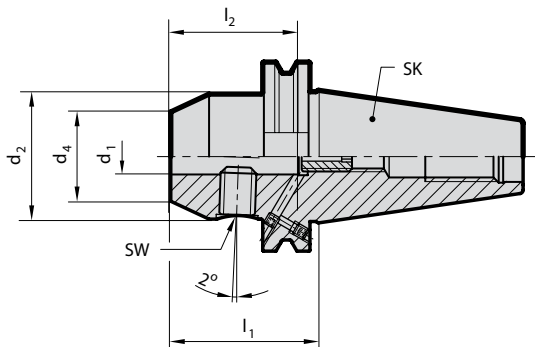
ISO taper	clamping-Ø d1 mm	d2 mm	l1 mm	SW	Code no.	Availability
40*	16	45	35	6	916,040	●
40*	20	45	35	8	920,040	●
40*	25	50	35	10	925,040	●
40	6	25	50	3	6,040	●
40	8	28	50	4	8,040	●
40	10	35	50	5	10,040	●
40	12	42	50	6	12,040	●
40	14	44	50	6	14,040	●
40	16	48	63	6	16,040	●
40	18	50	63	6	18,040	●
40	20	52	63	8	20,040	●
40	6	25	100	3	106,040	●
40	8	28	100	4	108,040	●
40	10	35	100	5	110,040	●
40	12	42	100	6	112,040	●
40	14	44	100	6	114,040	●
40	16	48	100	6	116,040	●
40	18	50	100	6	118,040	●
40	20	52	100	8	120,040	●
40	25	63	100	10	25,040	●
40	32	72	100	10	32,040	●
50	6	25	63	3	6,050	●
50	8	28	63	4	8,050	●
50	10	35	63	5	10,050	●
50	12	42	63	6	12,050	●
50	14	44	63	6	14,050	●
50	16	48	63	6	16,050	●
50	18	50	63	6	18,050	●
50	20	52	63	8	20,050	●
50	25	65	80	10	25,050	●
50	32	72	100	10	32,050	●

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with bore to DIN 1835-2 form E "Whistle Notch"
- ISO taper to DIN 69871 form AD/B
- from bore d1 = 25 mm with two clamping screws Guhring no. 4903

Scope of delivery

- incl. clamping screw Guhring no. 4903 and adjustment screw
- order pull studs, Guhring no. 4925 or 4926 separately



Guhring no. **4322**
Discount group **114**

ISO taper	clamping-Ø		d2 mm	d4 mm	l1 mm	l2 mm	SW	kg	Code no.	Availability
	d1 mm	d2 mm								
40	6	25	15	50	36	3	0.9	6,040	●	
40	8	28	20	50	36	4	0.9	8,040	●	
40	10	35	25	50	40	5	1.0	10,040	●	
40	12	42	30	50	45	6	1.2	12,040	●	
40	14	44	32	50	45	6	1.2	14,040	●	
40	16	48	36	63	48	6	1.2	16,040	●	
40	18	50	38	63	48	6	1.4	18,040	●	
40	20	52	40	63	50	8	1.5	20,040	●	
40	25	65	45	100	56	10	2.3	25,040	●	
40	32	72	56	100	60	10	2.5	32,040	●	
50	6	25	15	63	36	3	2.7	6,050	●	
50	8	28	20	63	36	4	2.7	8,050	●	
50	10	35	25	63	40	5	2.9	10,050	●	
50	12	42	30	63	45	6	3.0	12,050	●	
50	14	44	32	63	45	6	3.0	14,050	●	
50	16	48	36	63	48	6	3.0	16,050	●	
50	18	50	38	63	48	6	3.0	18,050	●	
50	20	52	40	63	50	8	3.1	20,050	●	
50	25	65	45	80	56	10	3.7	25,050	●	
50	32	72	56	100	60	10	4.5	32,050	●	

Tool holders

Product information

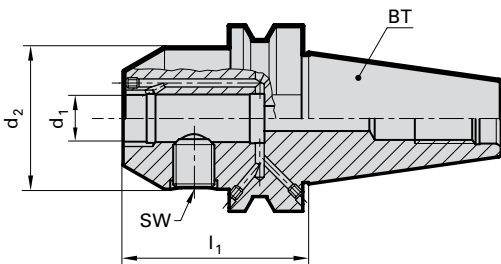
- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with bore to DIN 1835-2 form B "Weldon"
- MAS/BT to JIS B 6339 form AD/B
- from bore d1 = 25 with two clamping screws
- with coolant ducts in the bore for peripheral cooling, improving process and tool life
- coolant supply form AD/B
(*: version AD without coolant supply over collar and without GÜHROJET)

Scope of delivery

- incl. clamping screw Guhring no. 4903
- order pull studs, Guhring no. 4927 or 4928 separately
- BT-50 on request



GÜHROJET



Guhring no.	4234
Discount group	114

BT	clamping-Ø d1 mm	d2 mm	I1 mm	SW	Code no.	Availability
30*	6	25	50	3	6,030	●
30*	8	28	50	4	8,030	●
30*	10	35	50	5	10,030	●
30*	12	42	50	6	12,030	●
30*	14	44	50	6	14,030	●
30*	16	48	63	6	16,030	●
30*	18	50	63	6	18,030	●
30*	20	52	63	8	20,030	●
40*	16	45	35	6	916,040	●
40*	20	45	35	8	920,040	●
40*	25	45	35	10	925,040	●
40	6	25	50	3	6,040	●
40	8	28	50	4	8,040	●
40	10	35	63	5	10,040	●
40	12	42	63	6	12,040	●
40	14	44	63	6	14,040	●
40	16	48	63	6	16,040	●
40	18	50	63	6	18,040	●
40	20	52	63	8	20,040	●
40	25	63	90	10	25,040	●
40	32	72	100	10	32,040	●
40	6	25	100	3	106,040	●
40	8	28	100	4	108,040	●
40	10	35	100	5	110,040	●
40	12	42	100	6	112,040	●
40	14	44	100	6	114,040	●
40	16	48	100	6	116,040	●
40	18	50	100	6	118,040	●
40	20	52	100	8	120,040	●

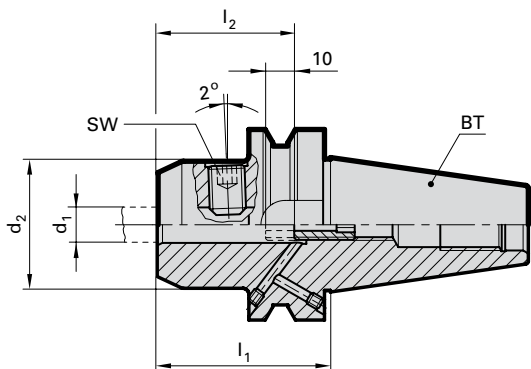
Tool holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- MAS/BT to JIS B 6339 form AD/B
- with bore to DIN 1835-2 form E „WhistleNotch“
- from bore d1 = 25 with two clamping screws
- coolant supply form AD/B (*: BT50 version AD without coolant supply over collar)

Scope of delivery

- incl. clamping screw Guhring no. 4903 and adjustment screw
- order pull studs, Guhring no. 4927 or 4928 separately



Guhring no.	4233
Discount group	114

BT	clamping-Ø d1 mm	d2 mm	l1 mm	l2 mm	SW	Code no.	Availability
40	6	25	50	36	3	6,040	●
40	8	28	50	36	4	8,040	●
40	10	35	63	40	5	10,040	●
40	12	42	63	45	6	12,040	●
40	14	44	63	45	6	14,040	●
40	16	48	63	48	6	16,040	●
40	18	50	63	48	6	18,040	●
40	20	52	63	50	8	20,040	●
40	25	63	90	56	10	25,040	●
40	32	72	100	60	10	32,040	●
50 *	6	25	63	36	3	6,050	●
50 *	8	28	63	36	4	8,050	●
50 *	10	35	63	40	5	10,050	●
50 *	12	42	80	45	6	12,050	●
50 *	14	44	80	45	6	14,050	●
50 *	16	48	80	48	6	16,050	●
50 *	18	50	80	48	6	18,050	●
50 *	20	52	80	50	8	20,050	●
50 *	25	65	100	56	10	25,050	●
50 *	32	72	105	60	10	32,050	●

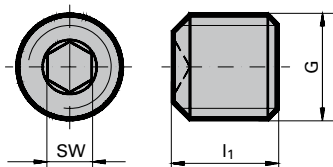
Tool holders

Product information

- for side lock holders with bore to DIN 1835-2, B and E, and HSK-A adaptors for tapping chucks, Guhring nos. 4317/4322/4329/4333/4334/4343
- Guhring no. 4903 12,001 (M12) only for Guhring no. 4343

Scope of delivery

- Minimum order quantity 5



Guhring no. **4903**
Discount group **114**

for holder- Ø	G	l ₁ mm	torque Nm	SW	Code no.	Availability
6	M6	10	5	3	6,000	●
8	M8	10	10	4	8,000	●
10	M10	12	15	5	10,000	●
12/14	M12	16	28	6	12,000	●
25	M12	12	28	6	12,001	●
16/18	M14	16	42	6	14,000	●
20	M16	16	50	8	16,000	●
25	M18x2	20	60	10	18,000	●
32/40	M20x2	20	72	10	20,000	●
40	M20x2	25	72	10	20,001	●

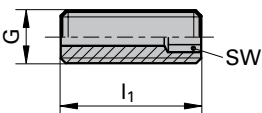
Adjustment screws

Product information

- for HSK-A Weldon side lock holders with bore to DIN 1835-2, form E, shrink fit chuck and shrink fit extensions

Scope of delivery

- Minimum order quantity 5



Guhring no. **4904**
Discount group **114**

G	l ₁ mm	SW	Code no.	Availability
M5	16	2.5	5,016	●
M5	20	2.5	5,020	●
M6	16	3.0	6,016	●
M6	20	3.0	6,020	●
M8	12	3.0	8,012	●
M8	18	4.0	8,018	●
M10	17	3.0	10,017	●
M10	20	5.0	10,020	●
M12	14	3.0	12,014	●
M12	20	5.0	12,020	●
M16	25	5.0	16,025	●
M20	25	6.0	20,025	●

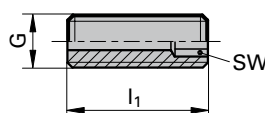
Adjustment screws

Product information

- for HSK-C side lock with bore to DIN 1835-2, form E, Guhring nos. 4333 / 4322

Scope of delivery

- Minimum order quantity 5



Guhring no. **4905**
Discount group **114**

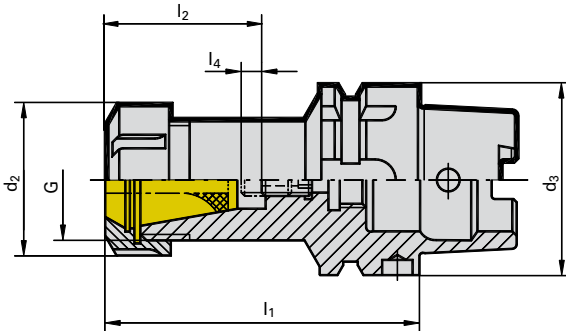
G	l ₁ mm	SW	Code no.	Availability
M5	14	2.5	5,014	●
M5	16	2.5	5,016	●
M6	14	3.0	6,014	●
M6	16	3.0	6,016	●
M8	15	4.0	8,015	●
M8	17	4.0	8,017	●
M10	17	5.0	10,017	●
M10	20	5.0	10,020	●
M12	19	6.0	12,019	●
M12	22	6.0	12,022	●
M16	20	6.0	16,020	●
M20	26	6.0	20,026	●

Product information

- balancing quality: G6.3 / 15,000 rev./min

Scope of delivery

- incl. retaining nut Guhring no. 4306 and adjustment screw Guhring no. 4902
- order collet, Guhring no. 4307, clamping key, Guhring no. 4913 and coolant delivery set, Guhring no. 4949 separately



Guhring no. **4304**

Discount group **114**

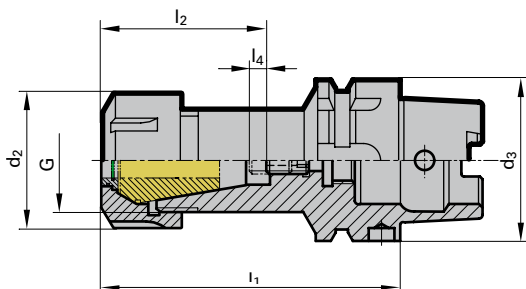
HSK-A d ₃	clamping range	d ₂ mm	G	l ₁ mm	l ₂ mm	l ₄ mm	incl. adjustment screw Guhr. no. 4902...	kg	Code no.	Availability
32	ER 11 Ø 1-7	19	M14 x 0.75	55	25	6	11.012	0.16	11,032	●
32	ER 16 Ø 1-10	28	M22 x 1.5	80	34	6	16.012	0.30	16,032	●
32	ER 20 Ø 3-13	34	M25 x 1.5	70	40	6	16.012	0.27	20,032	●
40	ER 16 Ø 1-10	28	M22 x 1.5	80	34	6	16.012	0.40	16,040	●
40	ER 25 Ø 2-16	42	M32 x 1.5	80	44	6	25.014	0.51	25,040	●
40	ER 32 Ø 3-20	50	M40 x 1.5	100	50	10	32.020	0.72	32,040	●
50	ER 16 Ø 1-10	28	M22 x 1.5	100	34	6	16.012	0.74	16,050	●
50	ER 25 Ø 2-16	42	M32 x 1.5	100	44	6	25.014	0.83	25,150	●
50	ER 25 Ø 2-16	42	M32 x 1.5	80	44	6	25.014	0.66	25,050	●
50	ER 32 Ø 3-20	50	M40 x 1.5	100	50	10	32.020	0.93	32,050	●
63	ER 16 Ø 1-10	28	M22 x 1.5	100	34	6	16.012	0.95	16,063	●
63	ER 16 Ø 1-10	28	M22 x 1.5	160	34	6	16.012	1.40	16,163	●
63	ER 25 Ø 2-16	42	M32 x 1.5	80	42	6	25.014	0.94	25,063	●
63	ER 25 Ø 2-16	42	M32 x 1.5	100	42	6	25.014	1.08	25,163	●
63	ER 32 Ø 3-20	50	M40 x 1.5	100	50	10	32.020	1.20	32,063	●
63	ER 40 Ø 3-26	63	M50 x 1.5	120	56	10	32.020	1.80	40,063	●
80	ER 32 Ø 3-20	50	M40 x 1.5	100	50	10	32.020	2.75	32,080	●
80	ER 32 Ø 3-20	50	M40 x 1.5	160	50	10	32.020	3.45	32,180	●
80	ER 40 Ø 3-26	63	M50 x 1.5	120	56	10	32.020	2.93	40,080	●
100	ER 32 Ø 3-20	50	M40 x 1.5	100	50	10	32.020	2.70	32,100	●
100	ER 32 Ø 3-20	50	M40 x 1.5	160	50	10	32.020	4.30	32,101	●
100	ER 40 Ø 3-26	63	M50 x 1.5	120	56	10	32.020	3.20	40,100	●

Product information

- sealed, suitable for coolant pressure up to 100 bar
- balancing quality: G6.3 / 15,000 rev./min

Scope of delivery

- incl. retaining nut Guhring no. 4306 and adjustment screw Guhring no. 4902
- order sealing washer, Guhring no. 4335, collet, Guhring no. 4307, clamping key, Guhring no. 4913 and coolant delivery set Guhring no. 4949 separately



Guhring no. 4324
Discount group 114

HSK-A d ₃	clamping range	d ₂ mm	G	l ₁ mm	l ₂ mm	l ₄ mm	incl. adjustment screw Guhr. no. 4902...	kg	Code no.	Availability
32	ER 16 Ø 1-10	28	M22 x 1.5	85	39	6	16.012	0.32	16,032	●
32	ER 20 Ø 3-13	34	M25 x 1.5	75	45	6	16.012	0.31	20,032	●
40	ER 16 Ø 1-10	28	M22 x 1.5	85	39	6	16.012	0.41	16,040	●
40	ER 25 Ø 2-16	42	M32 x 1.5	85	49	6	25.014	0.51	25,040	●
40	ER 32 Ø 3-20	50	M40 x 1.5	105	55	10	32.020	0.72	32,040	●
50	ER 16 Ø 1-10	28	M22 x 1.5	105	39	6	16.012	0.78	16,050	●
50	ER 25 Ø 2-16	42	M32 x 1.5	105	49	10	25.014	0.86	25,150	●
50	ER 25 Ø 2-16	42	M32 x 1.5	85	49	6	25.014	0.66	25,050	●
50	ER 32 Ø 3-20	50	M40 x 1.5	105	55	10	32.020	0.93	32,050	●
63	ER 16 Ø 1-10	28	M22 x 1.5	105	39	6	16.012	1.00	16,063	●
63	ER 16 Ø 1-10	28	M22 x 1.5	165	39	6	16.012	1.45	16,163	●
63	ER 25 Ø 2-16	42	M32 x 1.5	85	47	6	25.014	0.94	25,063	●
63	ER 25 Ø 2-16	42	M32 x 1.5	105	47	6	25.014	1.08	25,163	●
63	ER 32 Ø 3-20	50	M40 x 1.5	105	55	10	32.020	1.20	32,063	●
63	ER 40 Ø 3-26	63	M50 x 1.5	125	61	10	32.020	1.80	40,063	●
80	ER 32 Ø 3-20	50	M40 x 1.5	105	55	10	32.020	2.80	32,080	●
80	ER 32 Ø 3-20	50	M40 x 1.5	165	55	10	32.020	3.50	32,180	●
80	ER 40 Ø 3-26	63	M50 x 1.5	125	61	10	32.020	2.98	40,080	●
100	ER 32 Ø 3-20	50	M40 x 1.5	105	55	10	32.020	2.70	32,100	●
100	ER 32 Ø 3-20	50	M40 x 1.5	165	55	10	32.020	4.30	32,101	●
100	ER 40 Ø 3-26	63	M50 x 1.5	125	61	10	32.020	3.20	40,100	●

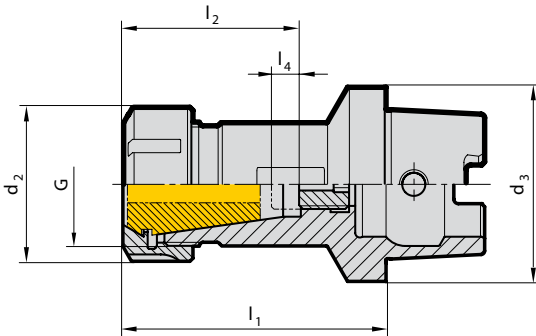
Tool holders

Product information

- balancing quality: G6.3 / 15,000 rev./min

Scope of delivery

- incl. retaining nut Guhring no. 4306 and adjustment screw Guhring no. 4901
- order collet, Guhring no. 4307, clamping key, Guhring no. 4913 separately



Guhring no. **4303**
Discount group **114**

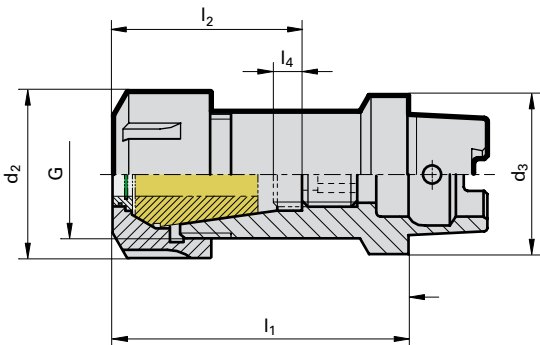
HSK-C d ₃	clamping range	d ₂ mm	G	l ₁ mm	l ₂ mm	l ₄ mm	incl. adjustment screw Guhr. no. 4901...	kg	Code no.	Availability
25	ER16 mini Ø 1-10	22	M19 x 1.0	50	30	4	16.012	0.10	16,025	●
32	ER 16 Ø 1-10	28	M22 x 1.5	55	32	4	16.012	0.19	16,032	●
32	ER 20 Ø 3-13	34	M25 x 1.5	60	38	5	16.012	0.23	20,032	●
32	ER 25 Ø 2-16	42	M32 x 1.5	70	44	6	25.014	0.36	25,032	●
40	ER 20 Ø 3-13	34	M25 x 1.5	60	38	5	16.012	0.28	20,040	●
40	ER 25 Ø 2-16	42	M32 x 1.5	70	44	6	25.014	0.41	25,040	●
40	ER 32 Ø 3-20	50	M40 x 1.5	75	49	6	25.014	0.59	32,040	●
50	ER 16 Ø 1-10	28	M22 x 1.5	60	34	6	16.012	0.45	16,050	●
50	ER 25 Ø 2-16	42	M32 x 1.5	70	44	6	25.014	0.54	25,050	●
50	ER 32 Ø 3-20	50	M40 x 1.5	75	49	6	25.014	0.68	32,050	●
50	ER 40 Ø 3-26	63	M50 x 1.5	80	54	6	25.014	0.98	40,050	●
63	ER 40 Ø 3-26	63	M50 x 1.5	80	54	6	25.014	1.17	40,063	●

Product information

- sealed, suitable for coolant pressure up to 100 bar
- balancing quality: G6.3 / 15,000 rev./min

Scope of delivery

- incl. retaining nut Guhring no. 4306 and adjustment screw Guhring no. 4901
- order sealing washer Guhring no. 4335, collet, Guhring no. 4307, clamping key, Guhring no. 4913 separately



Guhring no. 4323
Discount group 114

HSK-C d ₃	clamping range	d ₂ mm	G	l ₁ mm	l ₂ mm	l ₄ mm	incl. adjustment screw Guhr. no. 4901...	kg	Code no.	Availability
25	ER16 mini Ø 1-10	22	M19 x 1.0	55	37	4	16.012	0.10	16,025	●
32	ER 16 Ø 1-10	28	M22 x 1.5	60	37	4	16.012	0.20	16,032	●
32	ER 20 Ø 3-13	34	M25 x 1.5	65	43	5	16.012	0.26	20,032	●
32	ER 25 Ø 2-16	42	M32 x 1.5	75	49	6	25.014	0.42	25,032	●
40	ER 20 Ø 3-13	34	M25 x 1.5	65	43	5	16.012	0.30	20,040	●
40	ER 25 Ø 2-16	42	M32 x 1.5	75	49	6	25.014	0.47	25,040	●
40	ER 32 Ø 3-20	50	M40 x 1.5	80	54	6	25.014	0.64	32,040	●
50	ER 16 Ø 1-10	28	M22 x 1.5	65	39	6	16.012	0.46	16,050	●
50	ER 25 Ø 2-16	42	M32 x 1.5	75	49	6	25.014	0.59	25,050	●
50	ER 32 Ø 3-20	50	M40 x 1.5	80	54	6	25.014	0.74	32,050	●
50	ER 40 Ø 3-26	63	M50 x 1.5	85	61	6	25.014	1.12	40,050	●
63	ER 40 Ø 3-26	63	M50 x 1.5	85	61	6	25.014	1.30	40,063	●

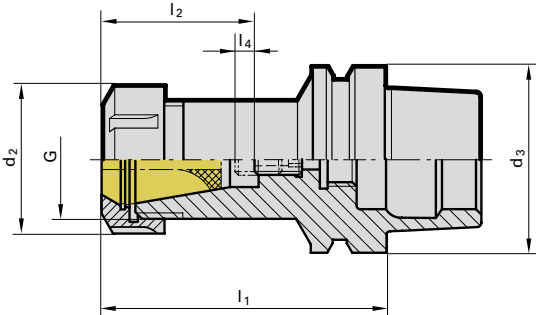
Tool holders

Product information

- balancing quality: G2.5 / 25,000 rev./min or < 1 gmm residual imbalance
- incl. spanner flat for locking during clamping
- Code no. 16,025 without length adjustment and central cooling

Scope of delivery

- incl. retaining nut Guhring no. 4306 and adjustment screw
- order collet, Guhring no. 4307, clamping key, Guhring no. 4913 and coolant supply set, Guhring no. 4949 separately



Guhring no. 4397
Discount group 114

HSK-E d ₃	clamping range	d ₂ mm	G	l ₁ mm	l ₂ mm	l ₄ mm	kg	Code no.	Availability
25	ER 16 mini Ø 1-10	22	M19 x 1.0	43	-	-	0.10	16,025	●
32	ER 16 mini Ø 1-10	22	M19 x 1.0	60	32	4	0.20	16,032	●
32	ER 20 mini Ø 1-13	28	M24 x 1.0	60	35	4	0.25	20,032	●
40	ER 16 Ø 1-10	28	M22 x 1.5	60	38	4	0.30	16,040	●
40	ER 20 mini Ø 1-13	28	M24 x 1.0	65	37	6	0.30	20,040	●
40	ER 25 mini Ø 2-16	35	M30 x 1.0	80	38	6	0.40	25,040	●
50	ER 16 Ø 1-10	28	M22 x 1.5	100	33	4	0.50	16,050	●
50	ER 20 Ø 1-13	34	M25 x 1.5	70	37.5	4	0.50	20,050	●
50	ER 25 Ø 2-16	42	M32 x 1.5	80	39	6	0.70	25,050	●
50	ER 32 Ø 3-20	50	M40 x 1.5	100	50	6	1.00	32,050	●
63	ER 32 Ø 3-20	50	M40 x 1.5	90	52	6	1.00	32,063	●
63	ER 40 Ø 4-26	63	M50 x 1.5	120	65	10	1.20	40,063	●

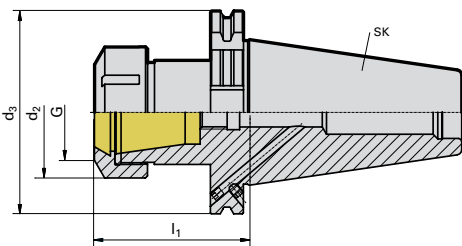
ISO taper collet holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- ISO taper to DIN 69871 form AD/B

Scope of delivery

- incl. retaining nut
- order collet, Guhring no. 4307, separately
- order clamping key, Guhring no. 4913 separately
- order pull studs, Guhring no. 4925 or 4926 separately



Guhring no.	4318
Discount group	114

ISO taper	clamping range	d ₂ mm	G	l ₁ mm	Code no.	Availability
40	ER16 Ø1-10	32	M22 x 1.5	63	16,040	●
40	ER25 Ø2-16	42	M32 x 1.5	60	25,040	●
40	ER32 Ø2-20	50	M40 x 1.5	70	32,040	●
40	ER16 Ø1-10	32	M22 x 1.5	160	16,140	●
40	ER25 Ø2-16	42	M32 x 1.5	160	25,140	●
40	ER32 Ø2-20	50	M40 x 1.5	160	32,140	●
50	ER25 Ø2-16	42	M32 x 1.5	60	25,050	●
50	ER32 Ø2-20	50	M40 x 1.5	70	32,050	●
50	ER40 Ø3-26	63	M50 x 1.5	80	40,050	●
50	ER25 Ø2-16	42	M32 x 1.5	160	25,150	●
50	ER40 Ø3-26	63	M50 x 1.5	160	40,150	●

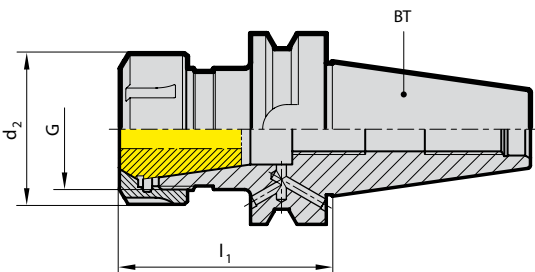
MAS/BT collet holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- MAS/BT to JIS B 6339 form AD/B
- coolant supply form AD/B
(*: version AD without coolant supply over collar)

Scope of delivery

- incl. retaining nut
- order collet, Guhring no. 4307, separately
- order clamping key, Guhring no. 4913 separately
- BT50 on request



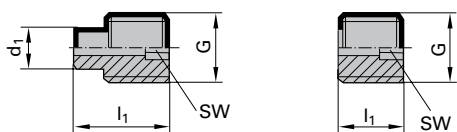
Guhring no.	4245
Discount group	114

BT	clamping range	d ₂ mm	G	l ₁ mm	Code no.	Availability
30*	ER16 1-10	32	M22x1.5	70	16,030	●
30*	ER25 1-16	42	M32x1.5	70	25,030	●
40	ER16 1-10	32	M22x1.5	63	16,040	●
40	ER25 1-16	42	M32x1.5	60	25,040	●
40	ER32 2-20	50	M40x1.5	70	32,040	●
40	ER16 1-10	32	M22x1.5	160	16,140	●
40	ER25 1-16	42	M32x1.5	160	25,140	●
40	ER32 2-20	50	M40x1.5	160	32,140	●

Adjustment screws for HSK-A/HSK-E collet holders

Product information

- with code nos. 16,012, 25,014 and 32,020 screws for the largest clamping diameter are without dog point



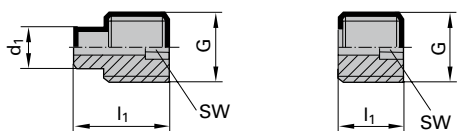
Guhring no.	4902
Discount group	114

for nom. size	for clamping range	G	d ₁ mm	l ₁ mm	SW	Code no.	Availability
ER11	1- 7	M6	–	12	3	11,012	●
ER16	1.2- 6	M10	3.5	18	3	16,018	●
ER16	6-10	M10	–	12	3	16,012	●
ER20	3- 6	M10	4.5	24	3	20,024	●
ER20	6-10	M10	5.5	18	3	20,018	●
ER20	10-13	M10	–	12	3	16,012	●
ER25	3- 7	M16	4.5	26	4	25,026	●
ER25	7-10	M16	6.5	20	4	25,020	●
ER25	10-16	M16	–	14	4	25,014	●
ER32	3-10	M16	6.5	36	5	32,036	●
ER32	10-16	M16	9.5	28	5	32,028	●
ER32	16-20	M16	–	20	5	32,020	●
ER40	3- 8	M16	6.5	44	5	40,044	●
ER40	8-10	M16	6.5	36	5	32,036	●
ER40	10-16	M16	9.5	28	5	32,028	●
ER40	16-26	M16	–	20	5	32,020	●

Adjustment screws for HSK-C collet holders

Product information

- with code nos. 16,012 and 32,020 screws for the largest clamping diameter are without dog point



Guhring no.	4901
Discount group	114

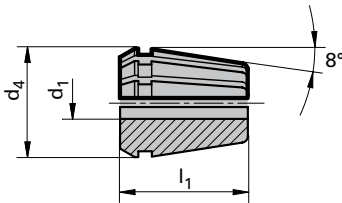
for nom. size	for clamping range	G	d ₁ mm	l ₁ mm	SW	Code no.	Availability
ER16	1.2- 6	M10	3.5	16	3	16,016	●
ER16	6-10	M10	–	12	3	16,012	●
ER20	3- 6	M10	4.5	20	3	20,020	●
ER20	6-10	M10	5.5	16	3	20,016	●
ER20	10-13	M10	–	12	3	16,012	●
ER25	3- 7	M16	4.5	26	4	25,026	●
ER25	7-10	M16	6.5	20	4	25,020	●
ER25	10-16	M16	–	14	4	25,014	●
ER32	3- 7	M16	6.5	32	5	32,032	●
ER32	7-10	M16	6.5	26	5	32,026	●
ER32	10-16	M16	9.5	20	5	32,020	●
ER32	16-20	M16	–	14	4	25,014	●
ER40	3- 6	M16	6.5	38	5	40,038	●
ER40	6- 8	M16	6.5	32	5	32,032	●
ER40	8-10	M16	6.5	26	5	32,026	●
ER40	10-16	M16	9.5	20	5	32,020	●
ER40	16-26	M16	–	14	4	25,014	●

Product information

- the application range of collet, Guhring no. 4307, is from nom.- \varnothing d1 to the next dimension below, i.e. for \varnothing 6.3 mm (nom. size ER20) order collet d1 = 7.0 mm (code no. 07,020).

Ordering example:

\varnothing d1 = 2.5
 nom. size = ER 20
 Guhring no./Code no. = 4307 02,520



				Guhring no.	4307	
				Discount group	114	
nom. size d_2	d_1 mm	l_1 mm		Code no.	Availability	
ER11 (4008E)	1.0	18.0		1,011	●	
ER11 (4008E)	1.5	18.0		1,511	●	
ER11 (4008E)	2.0	18.0		2,011	●	
ER11 (4008E)	2.5	18.0		2,511	●	
ER11 (4008E)	3.0	18.0		3,011	●	
ER11 (4008E)	4.0	18.0		4,011	●	
ER11 (4008E)	5.0	18.0		5,011	●	
ER11 (4008E)	6.0	18.0		6,011	●	
ER11 (4008E)	7.0	18.0		7,011	●	
ER16 (426E)	1.0	27.5		1,016	●	
ER16 (426E)	1.5	27.5		1,516	●	
ER16 (426E)	2.0	27.5		2,016	●	
ER16 (426E)	2.5	27.5		2,516	●	
ER16 (426E)	3.0	27.5		3,016	●	
ER16 (426E)	4.0	27.5		4,016	●	
ER16 (426E)	5.0	27.5		5,016	●	
ER16 (426E)	6.0	27.5		6,016	●	
ER16 (426E)	7.0	27.5		7,016	●	
ER16 (426E)	8.0	27.5		8,016	●	
ER16 (426E)	9.0	27.5		9,016	●	
ER16 (426E)	10.0	27.5		10,016	●	
ER20 (428E)	1.0	31.5		1,020	●	
ER20 (428E)	1.5	31.5		1,520	●	
ER20 (428E)	2.0	31.5		2,020	●	
ER20 (428E)	2.5	31.5		2,520	●	
ER20 (428E)	3.0	31.5		3,020	●	
ER20 (428E)	4.0	31.5		4,020	●	
ER20 (428E)	5.0	31.5		5,020	●	
ER20 (428E)	6.0	31.5		6,020	●	
ER20 (428E)	7.0	31.5		7,020	●	
ER20 (428E)	8.0	31.5		8,020	●	
ER20 (428E)	9.0	31.5		9,020	●	
ER20 (428E)	10.0	31.5		10,020	●	
ER20 (428E)	11.0	31.5		11,020	●	
ER20 (428E)	12.0	31.5		12,020	●	
ER20 (428E)	13.0	31.5		13,020	●	
ER25 (430E)	1.0	34.0		1,025	●	
ER25 (430E)	1.5	34.0		1,525	●	
ER25 (430E)	2.0	34.0		2,025	●	
ER25 (430E)	2.5	34.0		2,525	●	
ER25 (430E)	3.0	34.0		3,025	●	
ER25 (430E)	4.0	34.0		4,025	●	
ER25 (430E)	5.0	34.0		5,025	●	
ER25 (430E)	6.0	34.0		6,025	●	
ER25 (430E)	7.0	34.0		7,025	●	
ER25 (430E)	8.0	34.0		8,025	●	

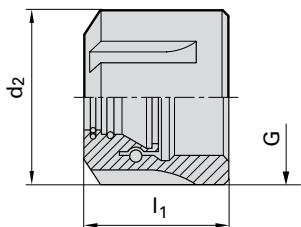
					Guhring no.	4307
					Discount group	114
nom. size d ₂	d ₁ mm	l ₂ mm	Code no.	Availability		
ER25 (430E)	9.0	34.0	9,025	●	●	
ER25 (430E)	10.0	34.0	10,025	●	●	
ER25 (430E)	11.0	34.0	11,025	●	●	
ER25 (430E)	12.0	34.0	12,025	●	●	
ER25 (430E)	13.0	34.0	13,025	●	●	
ER25 (430E)	14.0	34.0	14,025	●	●	
ER25 (430E)	15.0	34.0	15,025	●	●	
ER25 (430E)	16.0	34.0	16,025	●	●	
ER32 (470E)	2.0	40.0	2,032	●	●	
ER32 (470E)	2.5	40.0	2,532	●	●	
ER32 (470E)	3.0	40.0	3,032	●	●	
ER32 (470E)	4.0	40.0	4,032	●	●	
ER32 (470E)	5.0	40.0	5,032	●	●	
ER32 (470E)	6.0	40.0	6,032	●	●	
ER32 (470E)	7.0	40.0	7,032	●	●	
ER32 (470E)	8.0	40.0	8,032	●	●	
ER32 (470E)	9.0	40.0	9,032	●	●	
ER32 (470E)	10.0	40.0	10,032	●	●	
ER32 (470E)	11.0	40.0	11,032	●	●	
ER32 (470E)	12.0	40.0	12,032	●	●	
ER32 (470E)	13.0	40.0	13,032	●	●	
ER32 (470E)	14.0	40.0	14,032	●	●	
ER32 (470E)	15.0	40.0	15,032	●	●	
ER32 (470E)	16.0	40.0	16,032	●	●	
ER32 (470E)	17.0	40.0	17,032	●	●	
ER32 (470E)	18.0	40.0	18,032	●	●	
ER32 (470E)	19.0	40.0	19,032	●	●	
ER32 (470E)	20.0	40.0	20,032	●	●	
ER40 (472E)	4.0	46.0	4,040	●	●	
ER40 (472E)	5.0	46.0	5,040	●	●	
ER40 (472E)	6.0	46.0	6,040	●	●	
ER40 (472E)	7.0	46.0	7,040	●	●	
ER40 (472E)	8.0	46.0	8,040	●	●	
ER40 (472E)	9.0	46.0	9,040	●	●	
ER40 (472E)	10.0	46.0	10,040	●	●	
ER40 (472E)	11.0	46.0	11,040	●	●	
ER40 (472E)	12.0	46.0	12,040	●	●	
ER40 (472E)	13.0	46.0	13,040	●	●	
ER40 (472E)	14.0	46.0	14,040	●	●	
ER40 (472E)	15.0	46.0	15,040	●	●	
ER40 (472E)	16.0	46.0	16,040	●	●	
ER40 (472E)	17.0	46.0	17,040	●	●	
ER40 (472E)	18.0	46.0	18,040	●	●	
ER40 (472E)	19.0	46.0	19,040	●	●	
ER40 (472E)	20.0	46.0	20,040	●	●	
ER40 (472E)	21.0	46.0	21,040	●	●	
ER40 (472E)	22.0	46.0	22,040	●	●	
ER40 (472E)	23.0	46.0	23,040	●	●	
ER40 (472E)	24.0	46.0	24,040	●	●	
ER40 (472E)	25.0	46.0	25,040	●	●	
ER40 (472E)	26.0	46.0	26,040	●	●	

Product information

- for collets DIN ISO 15488
- for increased clamping version IC/ER for glide ring
- for application with internal cooling with sealing washer Guhring no. 4335

Scope of delivery

- increased clamping force version: incl. glide ring
- version for internal cooling IC/ER: order sealing washer Guhring no. 4335 separately



Guhring no. 4306
Discount group 114

for sealing washer no. 4335	with glide ring	nom. size	d ₂ mm	l ₁ mm	G	max. torque	Code no.	Availability
-	-	ER16 mini	22	18.0	M19x1.0	55	16,200	●
-	-	ER20 mini	28	19.0	M24x1.0	75	20,200	●
-	-	ER25 mini	35	20.0	M30x1.0	100	25,200	●
-	-	ER11 (4008E)	19	11.3	M14x0.75	25	11,000	●
-	-	ER16 (426E)	28	17.5	M22x1.5	55	16,000	●
-	-	ER20 (428E)	34	19.0	M25x1.5	75	20,000	●
-	-	ER25 (430E)	42	20.0	M32x1.5	100	25,000	●
-	-	ER32 (470E)	50	22.5	M40x1.5	140	32,000	●
-	-	ER40 (472E)	63	25.5	M50x1.5	200	40,000	●
x	-	IC/ER16 mini	22	22.0	M19x1.0	55	16,300	●
x	-	IC/ER20 mini	28	24.0	M24x1.0	75	20,300	●
x	-	IC/ER25 mini	35	25.0	M30x1.0	100	25,300	●
x	-	IC/ER16	28	22.5	M22x1.5	55	16,600	●
x	-	IC/ER20	34	24.0	M25x1.5	75	20,600	●
x	-	IC/ER25	42	25.0	M32x1.5	100	25,600	●
x	-	IC/ER32	50	27.5	M40x1.5	140	32,600	●
x	-	IC/ER40	63	30.5	M50x1.5	200	40,600	●
-	x	ER16	28	20.3	M22x1.5	55	16,400	●
-	x	ER20	34	21.8	M25x1.5	75	20,400	●
-	x	ER25	42	22.4	M32x1.5	100	25,400	●
-	x	ER32	50	25.0	M40x1.5	140	32,400	●
-	x	ER40	63	28.3	M50x1.5	200	40,400	●
x	x	IC/ER16	28	22.7	M22x1.5	55	16,500	●
x	x	IC/ER20	34	24.2	M25x1.5	75	20,500	●
x	x	IC/ER25	42	25.2	M32x1.5	100	25,500	●
x	x	IC/ER32	50	27.4	M40x1.5	140	32,500	●
x	x	IC/ER40	63	30.7	M50x1.5	200	40,500	●

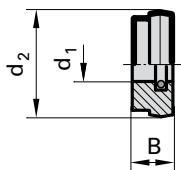
Tool holders

Product information

- the application range of sealing washer, Guhring no. 4325, is from nom.-Ø d1 to the next dimension below, i.e. for Ø 6.3 mm (nom. size ER20) order sealing washer d1 = 6.5 mm (code no. 06,520).

Ordering example

Ø d1 = 3.5
 nom. size = ER 20
 Guhring no./Code no. = 4335 03,520



Guhring no.	4335
Discount group	114

nom. size	d1 mm	d2 mm	B mm	Code no.	Availability
ER16	3.0...10 um 0.5 mm stg.	13	4	3,016 - 10,016	●
ER20	3.0...13 um 0.5 mm stg.	16	4	3,020 - 13,020	●
ER25	3.0...16 um 0.5 mm stg.	21	4	3,025 - 16,025	●
ER32	3.0...20 um 0.5 mm stg.	27	4	3,032 - 20,032	●
ER40	3.5...26 um 0.5 mm stg.	33.5	4	3,540 - 26,040	●

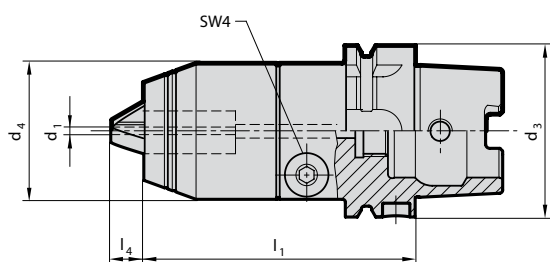
HSK-A drilling chucks with internal cooling

Product information

- for clamping all straight shank tools
- HSK-A to DIN 69893
- continuous Ø-range
- high clamping force thanks to robust worm gear
- max. coolant pressure up to 50 bar
- die NC-Bohrfutter sind für Drehzahlen bis 7.000 rev./min geeignet. Bei optionaler Feinwuchtung bis max. 18.000 rev./min

Scope of delivery

- incl. clamping key
- order coolant delivery set, Guhring no. 4949 separately



GÜHROJET

Guhring no.	4346
Discount group	114

HSK-A d3	clamping range d1 mm	d4 mm	l1 mm	l4 mm	kg	Code no.	Availability
50	1-16	50	107	12	1.60	16,050	●
63	1-16	50	98	12	1.90	16,063	●
80	1-16	50	101	12	2.70	16,080	●
100	1-16	50	104	12	3.30	16,100	●

ISO taper drilling chucks with internal cooling

Product information

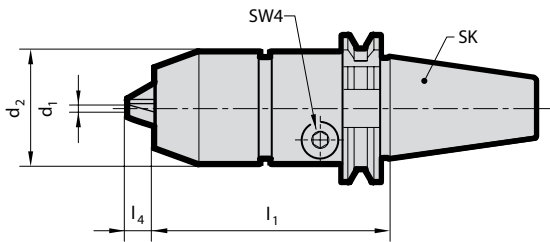
- for clamping all straight shank tools
- ISO taper to DIN 69871 form AD
- continuous Ø-range
- high clamping force thanks to robust worm gear
- max. coolant pressure up to 50 bar
- NC drilling chucks are suitable for speeds up to 7,000 rev./min. With optional fine balancing up to max. 18,000 rev./min

Scope of delivery

- incl. clamping key
- order pull studs Guhring no. 4925 or 4926 separately



GÜHROJET



Guhring no.	4242
Discount group	114

ISO taper	clamping range d ₁ mm	d ₂ mm	l ₁ mm	l ₄ mm	Code no.	Availability
40	1.00 - 16.00	50	80	12	16,040	●
50	1.00 - 16.00	50	80	12	16,050	●

MAS/BT drilling chucks with internal cooling

Product information

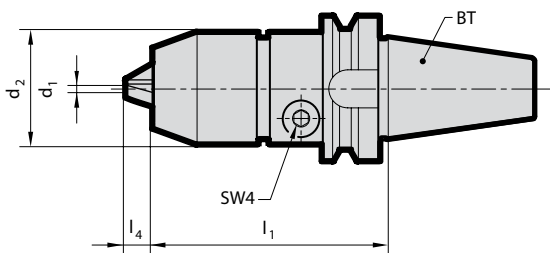
- for clamping all straight shank tools
- MAS/BT to JIS B 6339 form AD
- continuous Ø-range
- high clamping force thanks to robust worm gear
- max. coolant pressure up to 50 bar
- NC drilling chucks are suitable for speeds up to 7,000 rev./min. With optional fine balancing up to max. 18,000 rev./min

Scope of delivery

- incl. clamping key
- order pull studs Guhring no. 4927 or 4928 separately



GÜHROJET



Guhring no.	4240
Discount group	114

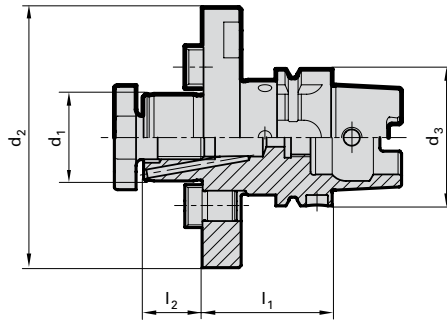
MAS/BT	clamping range d ₁ mm	d ₂ mm	l ₁ mm	l ₄ mm	Code no.	Availability
30	0.5 - 10	45	72	9	10,030	●
40	1 - 16	50	88	12	16,040	●
50	1 - 16	50	99	12	16,050	●

Product information

- to hold face milling cutters
- balancing quality: G6.3 / 15,000 rev./min
- to DIN 69882-3
- for centralised or decentralised internal cooling, therefore process and tool life improvement
- bore-Ø 40 mm has four additional holes with internal thread for milling heads with tool attachment DIN 2079 and increased tight fitting diameter D2

Scope of delivery

- incl. milling retainer screw Guhring no. 4908 and driving keys



GÜHROJET

Guhring no.	4362
Discount group	114

HSK-A d ₃	arbor-Ø d ₁ mm	d ₂ mm	l ₁ mm	l ₂ mm	kg	Code no.	Availability
63	22	50	50	19	1.1	22,063	●
63	27	60	60	21	1.3	27,063	●
63	32	78	60	24	1.5	32,063	●
63	40	120	60	27	2.7	40,063	●
63	40	89	60	27	2.7	140,063	●
80	27	60	50	21	1.8	27,080	●
80	32	78	50	24	2.1	32,080	●
80	40	120	60	27	3.3	40,080	●
80	40	89	60	27	3.3	140,080	●
80	60	160	70	40	6.3	60,080	●
100	27	60	50	21	2.9	27,100	●
100	32	78	50	24	3.3	32,100	●
100	40	120	60	27	4.2	40,100	●
100	40	89	60	27	4.2	140,100	●
100	60	160	70	40	7.2	60,100	●

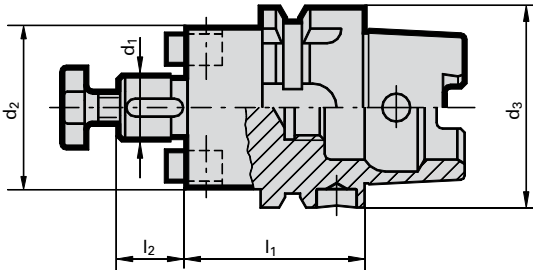
Tool holders

Product information

- to hold shell mills DIN 841, arbor-type single angle cutters DIN 842 with keyway, shell mills DIN 1880 with keyway an milling cutters with inserts DIN 1830
- bore-Ø 40 and 50 mm has four additional holes with internal thread for milling heads with tool attachment DIN 2079

Scope of delivery

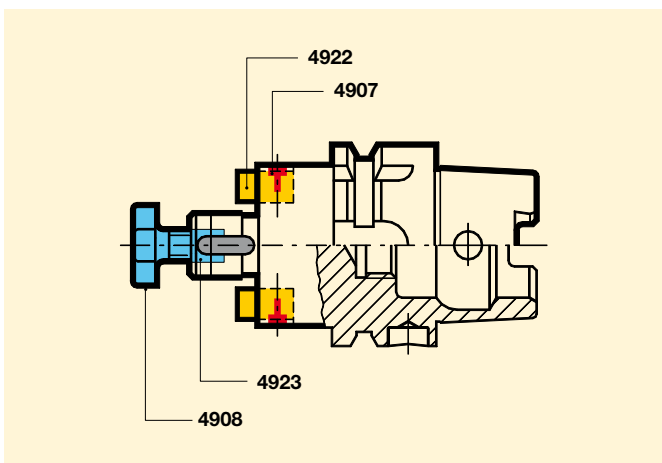
- completely assembled with milling cutter retaining screw, Guhring no. 4908, drive dogs, Guhring no. 4922 and feather key Guhring no. 4923



Guhring no. 4361
Discount group 114

HSK-A d ₃	arbor-Ø d ₁ mm	d ₂ mm	l ₁ mm	l ₂ mm	kg	Code no.	Availability
32	16	40	45	17	0.27	16,032	●
32	22	50	50	19	0.40	22,032	●
40	16	40	45	17	0.40	16,040	●
40	22	50	50	19	0.50	22,040	●
50	16	40	45	17	0.60	16,050	●
50	22	50	50	19	0.80	22,050	●
50	27	60	55	21	1.00	27,050	●
63	16	40	45	17	0.90	16,063	●
63	22	50	50	19	1.00	22,063	●
63	27	60	55	21	1.30	27,063	●
63	32	78	55	24	1.60	32,063	●
63	40	89	60	27	2.10	40,063	●
80	16	40	45	17	2.10	16,080	●
80	22	50	50	19	2.30	22,080	●
80	27	60	55	21	2.50	27,080	●
80	32	78	55	24	2.60	32,080	●
80	40	89	60	27	3.40	40,080	●
100	22	50	50	19	2.50	22,100	●
100	27	60	55	21	2.80	27,100	●
100	32	78	55	24	3.10	32,100	●
100	40	89	60	27	3.70	40,100	●
100	50	120	70	30	5.60	50,100	●

Positioning of accessories



Feather keys DIN 6885 A

Scope of delivery

- minimum order quantity 10

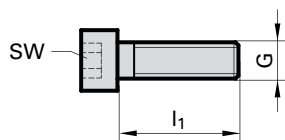
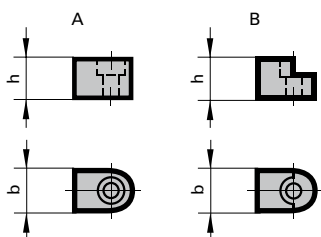


Guhring no. 4923
Discount group 114

for arbor-Ø mm	l ₁ mm	b mm	Code no.	Availability
16	14	4	4,016	●
22	16	6	6,022	●
27	19	7	7,027	●
32	22	8	8,032	●
40	25	10	10,040	●
50	28	12	12,050	●

Scope of delivery

- minimum order quantity 10



		Guhring no. 4922		Discount group 114	
for arbor-Ø mm	Form	h mm	b mm	Code no.	Availability
16	B	9.25	8	16,000	●
22	B	11.00	10	22,000	●
27	A	12.75	12	27,000	●
32	A	16.50	14	32,000	●
40	A	20.00	16	40,000	●
50	A	27.50	18	50,000	●

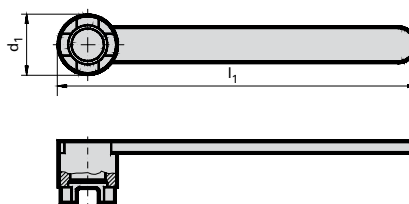
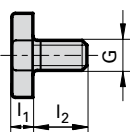
		Guhring no. 4907		Discount group 114	
for arbor-Ø mm	G	l2 mm	Festigkeit	Code no.	Availability
16	M4	10	8.8	4,100	●
22/27	M5	12	8.8	5,120	●
32	M6	16	8.8	6,160	●
40	M6	20	8.8	6,200	●
50	M8	25	8.8	8,250	●
40	M12	65	10.9	12,650	●

Milling cutter retaining screws

Socket wrenches for retaining screws

Product information

- to DIN 6367
- on request with internal cooling

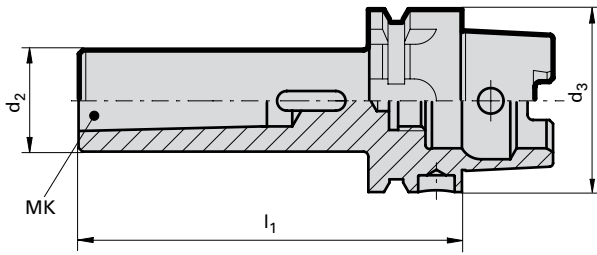


		Guhring no. 4908		Discount group 114	
for arbor-Ø mm	G	l1 mm	l2 mm	Code no.	Availability
16	M8	6	16	16,000	●
22	M10	7	18	22,000	●
27	M12	8	22	27,000	●
32	M16	9	26	32,000	●
40	M20	10	30	40,000	●
50	M24	12	36	50,000	●
60	M30	14	45	60,000	●

		Guhring no. 4909		Discount group 114	
for arbor-Ø mm	d1 mm	l1 mm	Code no.	Availability	
16	22	180	16,000	●	
22	28	200	22,000	●	
27	35	225	27,000	●	
32	42	250	32,000	●	
40	52	280	40,000	●	
50	63	315	50,000	●	
60	76	355	60,000	●	

Product information

- for holding Morse tapers with tang to DIN 6383,
- to DIN 69893 HSK-A



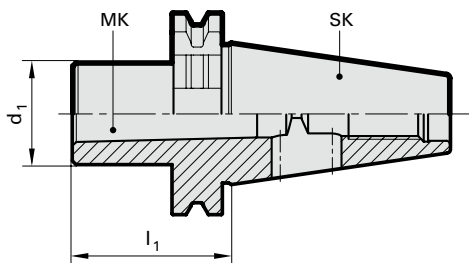
Guhring no. 4320
Discount group 114

HSK-A d3 mm	MK	d2 mm	l1 mm	kg	Code no.	Availability
50	1	25	100	0.8	1,050	●
50	2	32	120	0.8	2,050	●
50	3	40	140	1.2	3,050	●
63	1	25	100	0.9	1,063	●
63	2	32	120	1.1	2,063	●
63	3	40	140	1.5	3,063	●
63	4	48	160	1.9	4,063	●
80	1	25	110	1.5	1,080	●
80	2	32	120	1.7	2,080	●
80	3	40	150	2.0	3,080	●
80	4	48	170	2.6	4,080	●
100	1	25	110	2.3	1,100	●
100	2	32	120	2.5	2,100	●
100	3	40	150	2.8	3,100	●
100	4	48	170	4.2	4,100	●
100	5	63	200	4.5	5,100	●

ISO taper morse taper holders

Product information

- for holding Morse tapers with tang to DIN 6383
- ISO taper to DIN 69871 form AD



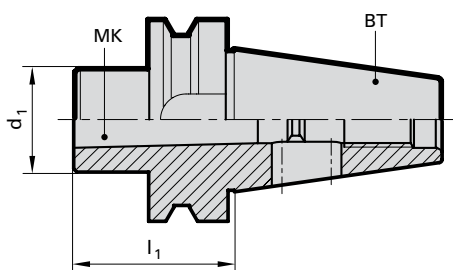
Guhring no.	4238
Discount group	114

ISO taper	MK	d ₁ mm	l ₁ mm	Code no.	Availability
40	1	25	50	1,040	●
40	2	32	50	2,040	●
40	3	40	70	3,040	●
40	4	48	95	4,040	●
50	1	25	45	1,050	●
50	2	32	60	2,050	●
50	3	40	65	3,050	●
50	4	48	95	4,050	●
50	5	63	105	5,050	●

BT morse taper holders

Product information

- for holding Morse tapers with tang to DIN 6383
- MAS/BT to JIS B 6339 form AD



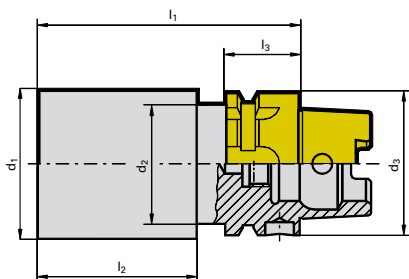
Guhring no.	4239
Discount group	114

BT	MK	d ₁ mm	l ₁ mm	Code no.	Availability
30	1	25	45	1,030	●
30	2	32	60	2,030	●
30	3	40	75	3,030	●
40	1	25	50	1,040	●
40	2	32	50	2,040	●
40	3	40	70	3,040	●
40	4	48	95	4,040	●
50	1	25	45	1,050	●
50	2	32	60	2,050	●
50	3	40	65	3,050	●
50	4	48	95	4,050	●
50	5	63	105	5,050	●

HSK-A blanks

Product information

- material: nitrided steel, hardened and ground taper (yellow in scale drawing), blank unhardened for further machining



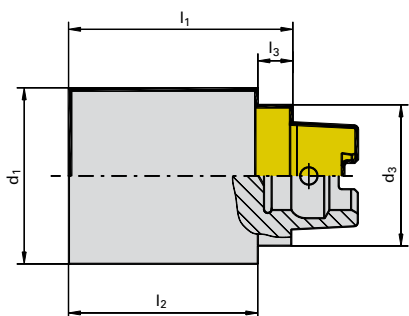
Guhring no. **4983**
Discount group **114**

HSK-A d ₃	d ₁ mm	d ₂ mm	l ₁ mm	l ₂ mm	l ₃ mm	kg	Code no.	Availability
32	41	26	175	140	20	1.62	175,032	●
40	51	34	205	170	20	3.02	205,040	●
50	64	42	235	193	26	5.42	235,050	●
63	63	53	150	108	26	3.55	150,063	●
63	81	53	235	193	26	8.71	235,063	●
80	101	67	235	193	26	13.63	235,080	●
100	126	85	250	205	29	22.71	250,100	●

HSK-C blanks

Product information

- material: nitrided steel, hardened and ground taper (yellow in scale drawing), blank unhardened for further machining
- machining not permitted in l₃ area



Guhring no. **4982**
Discount group **114**

HSK-C d ₃	d ₁ mm	l ₁ mm	l ₂ mm	l ₃ mm	kg	Code no.	Availability
32	41	150	139	11	1.50	50,032	●
40	51	180	169	11	2.81	63,040	●
50	64	200	186	14	4.92	80,050	●
50	64	90	76	14	2.15	100,050	●
63	81	200	186	14	7.90	112,063	●
63	81	100	86	14	3.89	125,063	●
80	101	210	193	17	12.90	120,080	●
100	124	225	208	17	21.70	145,100	●

MODULE 6x6
PCD

HIGHEST PRECISION

Module 6x6 and
PCD tools



- ⇒ perfect concentricity
- ⇒ axial and radial μ -accurate setting
- ⇒ targeted balancing
- ⇒ quick tool pre-setting

Please request our
"Module 6x6" and "PCD"
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HOLDERS FOR FINE MACHINING



Holders for
fine machining

Holders for fine machining

PRECISION IS A MATTER OF SETTING!

Holders for
fine machining





**QUICK + SIMPLE
ADJUSTMENT**



**AXIAL + RADIAL
 μ -ACCURATE SETTING**



**CONCENTRICITY AND
ALIGNMENT ERROR
COMPENSATION**



MQL SUITABLE



MODULE TECHNOLOGY AND ADVANTAGES

Pinpoint accurate tool setting. Thanks to closely arranged setting screws for radial and axial adjustment corrections can be made in close proximity to the measuring point. With a wide choice of chucks (hydraulic, shrink fit or HPC) and interfaces such as HSK and SK your module can be perfectly set without a problem.



Advantages:

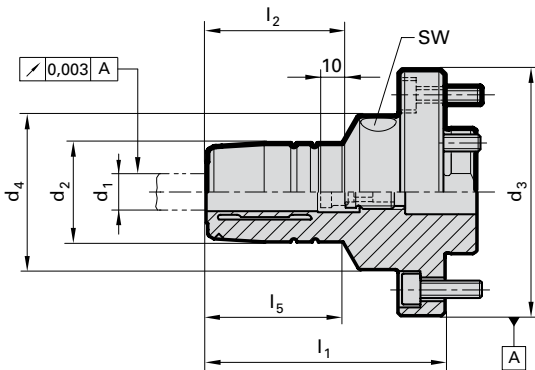
- wobble-free tool setting
- quick μ -accurate setting
- optimal setting results for multi-flute PCD/CBN fine machining tools or Guhring's HR 500 6-fluted high-performance reamer
- reduced settlement properties provides highest accuracy over a long period
- suitable for use in combination with monolythic special tools

Product information

- for the highly accurate radial and axial alignment on alignment adaptors or machine spindles
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6

Scope of delivery

- incl. adjustment screw Guhring no. 4941 for conventional cooling
- incl. angular alignment set Guhring no. 4715
- incl. 6 clamping screws
- incl. hexagon chuck key Guhring no. 4912
- order intermediate tube Guhring no. 4716 separately
- for other clamping \varnothing apply reduction bushes Guhring no. 4368 or 4369
- MQL version on request



Guhring no. 4722

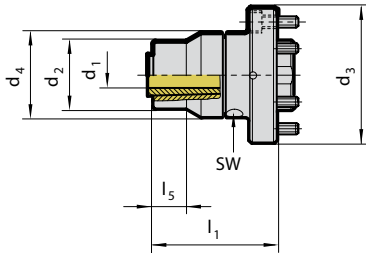
Discount group 114

Module- $\varnothing d_3$ mm	for shank $\varnothing d_1$ h6 mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	incl. setting screw Guh. no. 4941	intermediate sleeve tube Guhring no. 4716	SW	Code no.	Availability
70	12	32	40	75.0	45	45.0	12.100	14.020	4	12,070	●
80	12	32	50	77.5	45	44.0	12.100	14.050	5	12,080	●
80	20	42	50	82.5	50	51.5	20.100	14.040	5	20,080	●
100	32	64	64	103.0	60	84.0	32.100	14.020	6	32,100	●

Modul 6x6 HPC clamping chuck flange

Product information

- for the highly accurate radial and axial alignment on alignment adaptors or machine spindles
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- highest concentricity, clamping force and rigidity thanks to mech. tension gearing
- suitable for internal cooling up to 80 bar
- positive damping characteristics
- for tool shank tolerance h6



Scope of delivery

- incl. hexagon chuck key Guhring no. 4912
- incl. 6 angular alignment sets Guhring no. 4715
- incl. 6 clamping screws
- order intermediate tube Guhring no. 4716 separately
- order clamping sleeves Guhring nos. 4302, 4235, 4236, 4237 separately



Guhring no. **4714**

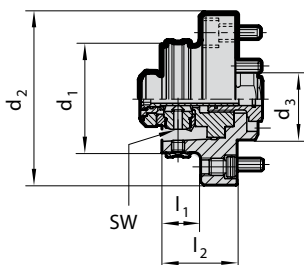
Discount group **114**

Module-Ø d3 mm	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l5 mm	intermediate sleeve tube Guhring no. 4716	SW	Code no.	Availability
70	3 - 20	40	50	87	20	20.030	4	20,070	●
80	3 - 20	40	50	73	20	20.030	4	20,080	●
100	20 - 32	70	70	121	23	20.030	4	32,100	●

Modul 6x6 HSK adaptor flange

Product information

- for the highly accurate radial and axial alignment on alignment adaptors or machine spindles
- suitable for MQL and conventional cooling
- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration



Scope of delivery

- incl. MQL 4-point clamping set Guhring no. 4930
- incl. brass lock ring Guhring no. 4953
- incl. 6 angular alignment sets Guhring no. 4715
- incl. 6 clamping screws
- incl. intermediate tube



Guhring no. **4363**

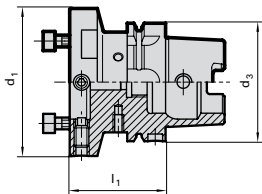
Discount group **114**

HSK-C d1 mm	Module-Ø d2 mm	d3 mm	l1 mm	l2 mm	SW	Code no.	Availability
32	60	30	26	36	2.5	24,060	●
40	70	35	30	40	3.0	30,070	●
50	80	40	35	45	4.0	38,080	●
63	100	50	43	55	5.0	48,100	●
80	117	60	50	62	6.0	60,117	●
100	140	80	70	82	8.0	75,140	●

Modul 4x4 HSK-A alignment adaptor

Product information

- for the highly accurate alignment of all modular flanges 4x4
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- suitable for MQL and conventional cooling
- balancing quality G6.3 / 15,000 rev./min
- 6 balancing threads M6



Scope of delivery

- incl. 4 screws for radial adjustment
- incl. 4 clamping screws
- order coolant delivery set Guhring no. 4949, MQL coolant delivery set Guhring no. 4939 or 4940 separately
- order intermediate tube Guhring no. 4716 separately
- further dimensions on request



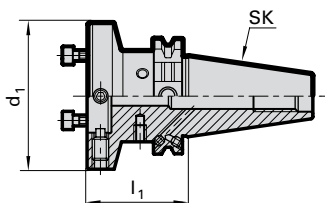
Guhring no. 4297
Discount group 114

HSK-A	d ₃ mm	d ₁ mm	l ₁ mm	Code no.	Availability
	63	60	60	60,063	●
	63	70	60	70,063	●
	63	80	60	80,063	●
	63	100	65	100,063	●
	63	117	65	117,063	●
	80	70	60	70,080	●
	80	80	60	80,080	●
	80	100	65	100,080	●
	80	117	65	117,080	●
	80	140	75	140,080	●
	100	70	55	70,100	●
	100	80	55	80,100	●
	100	100	65	100,100	●
	100	117	65	117,100	●
	100	140	75	140,100	●

Modul 4x4 ISO taper alignment adaptor

Product information

- ISO taper to DIN 69871 form AD/B
- for the highly accurate alignment of all modular flanges 4x4
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- suitable for MQL and conventional cooling
- balancing quality G6.3 / 15,000 rev./min
- 6 balancing threads M6



Scope of delivery

- incl. 4 screws for radial adjustment
- incl. 4 clamping screws
- order intermediate tube Guhring no. 4716 separately
- order pull studs separately
- SK50/BT holder on request



Guhring no. 4724
Discount group 114

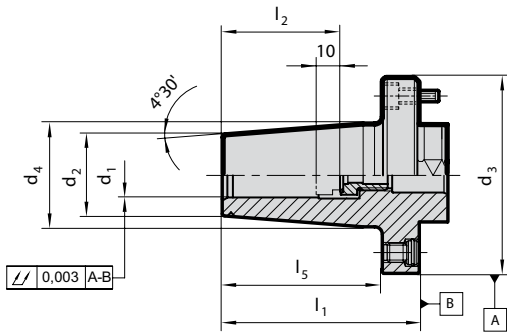
ISO taper	d ₁ mm	l ₁ mm	Code no.	Availability
40	60	50	60,040	●
40	70	50	70,040	●
40	80	55	80,040	●
40	100	60	100,040	●

Product information

- for the highly accurate radial and axial alignment on alignment adaptors or machine spindles
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with axial damping screw for optimal concentricity

Scope of delivery

- incl. adjustment screw with axial force
- damping Guh. no. 4941
- incl. angular alignment seten Guhring no. 4715
- incl. 4 clamping screws
- order intermediate tube Guhring no. 4716 separately
- further dimensions on request



Module-Ø d ₃ mm	for shank Ø d ₁ h6 mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	l ₅ mm	incl. setting screw Guh. no. 4941	intermediate sleeve tube Guhring no. 4716	Guhring no. 4760	
									Discount group 114	
									Code no.	Availability
60	6	21	27	70	36	56	6.100	14.010	6,060	●
60	8	21	27	70	36	56	8.100	14.010	8,060	●
60	10	24	32	70	40	56	10.100	14.020	10,060	●
60	12	24	32	70	45	56	12.100	14.030	12,060	●
70	12	24	32	75	45	60	12.100	14.020	12,070	●
70	14	27	34	75	45	60	14.100	14.020	14,070	●
70	16	27	34	75	48	60	16.100	14.040	16,070	●
80	18	33	42	80	48	65	18.100	14.050	18,080	●
80	20	33	42	80	50	65	20.100	14.040	20,080	●
100	25	44	52	80	56	61	25.100	20.010	25,100	●
100	32	44	52	80	60	61	32.100	20.020	32,100	●

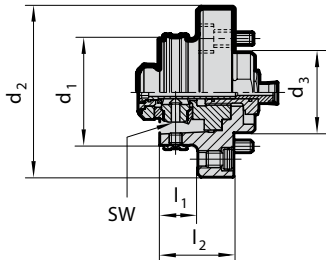
Holders for fine machining

Product information

- for the highly accurate radial and axial alignment on alignment adaptors or machine spindles
- suitable for MQL and conventional cooling
- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration

Scope of delivery

- incl. MQL 4-point clamping set Guhring no. 4930
- incl. brass lock ring Guhring no. 4953
- incl. 4 angular alignment sets Guhring no. 4715
- incl. 4 clamping screws
- incl. intermediate tube



Guhring no.	4713
Discount group	114

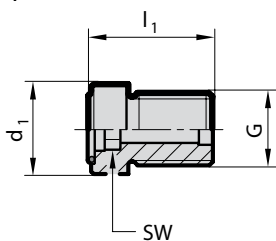
HSK-C d1 mm	Module-Ø d2 mm	d3 mm	l1 mm	l2 mm	SW	Code no.	Availability
32	60	30	26	36	2.5	24,060	●
40	70	35	30	40	3.0	30,070	●
50	80	40	35	45	4.0	38,080	●
63	100	50	43	55	5.0	48,100	●
80	117	60	50	62	6.0	60,117	●
100	140	80	70	82	8.0	75,140	●

Length adjustment screw for conventional cooling

Product information

- To adapt MQL tool holders to meet the requirements of conventional wet machining. For plain end shanks. The height of screw head compensates the height of MQL taper

- for MQL HSK-A shrink fit and hydraulic chucks
- for use with shank according to DIN 6535 with plain shank end for conventional cooling
- with the patented face orientated O ring axial force damping is provided which prevents concentricity errors.



Guhring no.	4941
Discount group	114

for HSK-A	clamping-Ø	G	d1 mm	l1 mm	SW	Code no.	Availability
40	6	M5	6	15	2.5	6,041	●
40	6	M7x1	6	15	2.5	6,040	●
40	8	M7x1	6	18	3	8,040	●
50	6	M8x1	8	14	2.5	6,050	●
50	8	M8x1	7	18	3	8,050	●
40 / 50	10	M8x1	10	17.7	4	10,050	●
63/ 80/ 100	6	M10x1	9	22	2.5	6,100	●
63/ 80/ 100	8	M10x1	9	22	3	8,100	●
63/ 80/ 100	10	M10x1	10	16.2	4	10,100	●
40/ 50/ 63/ 80/ 100	12	M10x1	10	16.2	5	12,100	●
40/ 50/ 63/ 80/ 100	14	M10x1	10	17.2	5	14,100	●
50/ 63/ 80/ 100	16	M12x1	16	18.2	6	16,100	●
50/ 63/ 80/ 100	18	M12x1	16	19.2	6	18,100	●
50/ 63/ 80/ 100	20	M16x1	16	19.2	8	20,100	●
63/ 80/ 100	25	M16x1	16	22.7	8	25,100	●
63/ 80/ 100	32	M16x1	16	26.7	8	32,100	●

Holders for fine machining

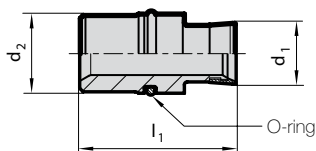
Intermediate sleeves for module flange and alignment adapter 6x6 and 4x4

Product information

- for sealing when machining with either coolant or MQL

Scope of delivery

- with O-ring and sealing lip



Guhring no.	4716
Discount group	114

d ₁ mm	d ₂ mm	l ₁ mm	O-ring	Code no.	Availability
10,7	14	47,5	10x1,5	14,010	●
10,7	14	32,0	10x1,5	14,020	●
10,7	14	37,5	10x1,5	14,030	●
10,7	14	27,4	10x1,5	14,040	●
10,7	14	32,4	10x1,5	14,050	●
10,7	20	28,0	17x1,5	20,010	●
10,7	20	25,5	17x1,5	20,020	●
10,7	20	16,5	17x1,5	20,030	●

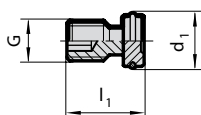
Angle alignment units for module flange and alignment adapter 6x6 and 4x4

Product information

- consisting of pressure disc and threaded pin for accurate angle alignment of module flanges

Scope of delivery

- pressure disc, threaded pin and snap ring



Guhring no.	4715
Discount group	114

for module	G	d ₁ mm	l ₁ mm	Code no.	Availability
60 / 70 / 80	M8x1	11.5	13	8,010	●
100 / 117 / 140	M10x1	13.6	19	10,010	●

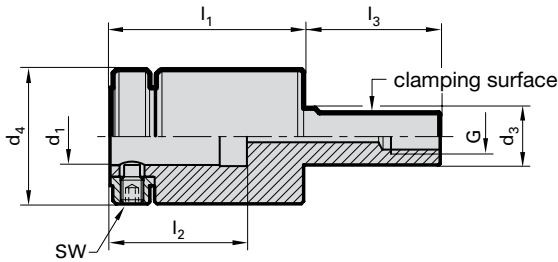
Floating holders with side lock holder

Product information

- straight shank d₃ with whistle notch flat
- suitable for conventional and high performance multi-fluted reamers, because of no angle compensation
- central coolant supply max. 80 bar
- drive flat on tool shank necessary
- for tool shank tolerance h6

Scope of delivery

- for other shank Ø order reduction sleeves Guhring no. 4095 separately
- order hexagon chuck key Guhring no. 4912 separately
- further sizes with differing radial play are available on request



Guhring no.	4167										
Discount group	Net price										
d₃ g6 mm	for holder d₁ h6 mm	recommended tool-Ø	d₄ mm	l₁ mm	l₂ mm	l₃ mm	G	SW	radial play	Code no.	Availability
20	20	up to Ø 28	49	75	50	50	1/8	4	0.12	20,020	●
25	25	Ø 10 - Ø 36	59	85	60	60	1/4	5	0.12	25,025	●
32	32	Ø 16 - Ø 60	80	92	63	80	3/8	6	0.12	32,032	●

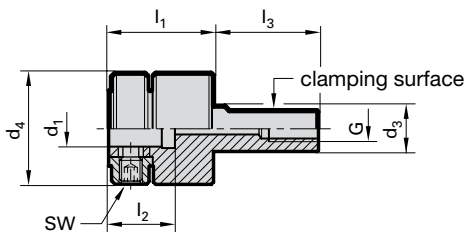
Short floating holders with side lock holder

Product information

- straight shank d₃ with whistle notch flat
- suitable for conventional and high performance multi-fluted reamers, because of no angle compensation
- central coolant supply max. 80 bar
- drive flat on tool shank necessary
- for tool shank tolerance h6

Scope of delivery

- for other shank Ø order reduction sleeves Guhring no. 4095 separately
- order hexagon chuck key Guhring no. 4912 separately
- further sizes with differing radial play are available on request



Guhring no.	4169										
Discount group	Net price										
d₃ g6 mm	for holder d₁ h6 mm	recommended tool-Ø	d₄ mm	l₁ mm	l₂ mm	l₃ mm	G	SW	radial play	Code no.	Availability
20	10	up to Ø 14	38.5	46	25	40	1/8	3	0.08	10,020	●
20	16	up to Ø 22	49	46	29	46	1/8	4	0.10	16,020	●
20	20	up to Ø 28	49	46	29	46	1/8	4	0.12	20,020	●

Holders for fine machining

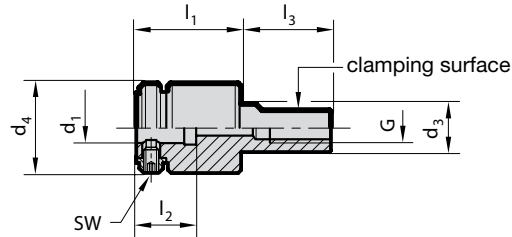
Mini floating holders with side lock holder

Product information

- holder shank with lateral clamping surface
- suitable for conventional and high performance multi-fluted reamers, because of no angle compensation
- very compact design for restricted space
- central coolant supply max. 80 bar
- drive flat on tool shank necessary
- for tool shank tolerance h6

Scope of delivery

- for other shank \varnothing order reduction sleeves Guhring no. 4097 separately
- order hexagon chuck key Guhring no. 4912 separately
- further sizes with differing radial play are available on request



										Guhring no. 4174	
										Discount group	
										Net price	
d3 g6 mm	for holder d1 h6 mm	recommen- ded tool- \varnothing	d4 mm	l1 mm	l2 mm	l3 mm	G	SW	radial play	Code no.	Availability
16	10	to \varnothing 14	30	35	20	30	1/8	2.5	0.12	10,016	●



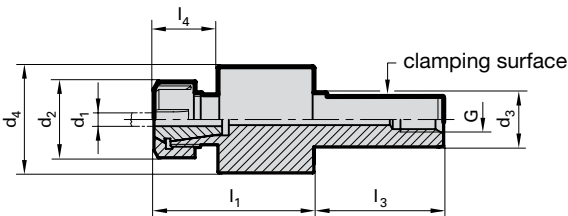
Floating holder with ER collet holder

Product information

- straight shank d3 with whistle notch flat
- suitable for conventional and high performance multi-fluted reamers, because of no angle compensation
- for the application of internally cooled reamers use metallic sealed collets type DM Guhring no. 4175
- central coolant supply max. 80 bar

Scope of delivery

- incl. retaining nut
- order collet Guhring no. 4175 or 4307 as well as clamping key Guhring no. 4913 separately
- further sizes with differing radial play are available on request



										Guhring no. 4098	
										Discount group	
										Net price	
d3 g6 mm	recommended tool- \varnothing d1 mm	clamping range	d2 mm	d4 mm	l1 mm	l3 mm	l4 mm	G	radial play	Code no.	Availability
16	bis \varnothing 16	ER20 \varnothing 1-13	34	49.5	74	40	29.5	1/8	0.06	20,016	●
20	\varnothing 4- \varnothing 24	ER25 \varnothing 2-16	42	59	84	50	35	1/8	0.06	25,020	●
25	bis \varnothing 16	ER20 \varnothing 1-13	34	49.5	74	60	29.5	1/4	0.08	20,025	●
25	\varnothing 4- \varnothing 24	ER25 \varnothing 2-16	42	59	84	60	35	1/4	0.08	25,025	●
32	\varnothing 6- \varnothing 30	ER32 \varnothing 3-20	50	64	91	80	35.5	3/8	0.10	32,032	●
40	\varnothing 6- \varnothing 30	ER32 \varnothing 3-20	50	64	91	80	35.5	1/2	0.12	32,040	●



Holders for fine machining

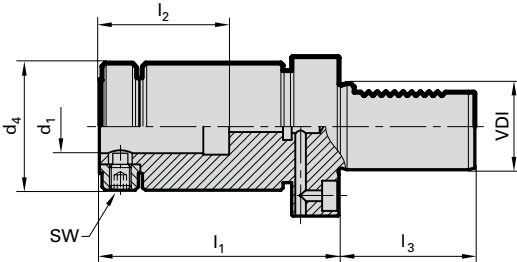
Floating side lock holder VDI DIN 69880-1

Product information

- VDI holder shank with teeth
- suitable for conventional and high performance multi-fluted reamers, because of no angle compensation
- central coolant supply max. 80 bar
- tool shank with special whistle notch flat necessary
- drive flat on tool shank necessary
- for tool shank tolerance h6

Scope of delivery

- for other shank \varnothing order reduction sleeves Guhring no. 4095 separately
- order hexagon chuck key Guhring no. 4912 separately
- further dimensions available on request



Guhring no. **4117**

Discount group **Net price**

VDI	holder d ₁ h ₆ mm	clamping range	d ₄ mm	l ₁ mm	l ₂ mm	l ₃ mm	SW	radial play	Code no.	Availability
30	25	Ø 16-25	59	111	59	55	5	0.12	25,030	●
40	25	Ø 16-25	59	111	59	63	5	0.12	25,040	●
40	32	Ø 20-32	80	117	63	63	6	0.12	32,040	●
50	25	Ø 16-25	59	111	59	78	5	0.12	25,050	●
50	32	Ø 20-32	80	117	63	78	6	0.12	32,050	●

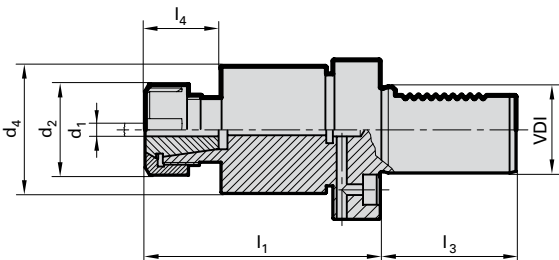
Floating ER Collet holder VDI DIN 69880-1

Product information

- VDI holder shank with teeth
- suitable for conventional and high performance multi-fluted reamers, because of no angle compensation
- for the application of internally cooled reamers use metallic sealed collets type DM Guhring no. 4175
- with coolant supply max. 80 bar

Scope of delivery

- incl. retaining nut
- order collet Guhring no. 4175 or 4307 as well as clamping key Guhring no. 4913 separately
- further sizes with differing radial play are available on request



Guhring no. **4116**

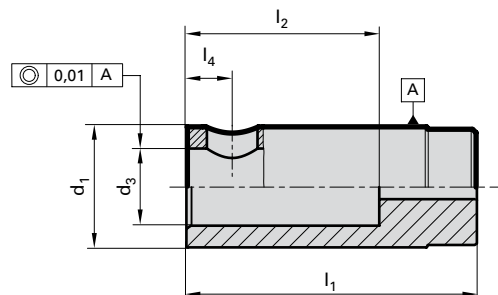
Discount group **Net price**

VDI	recommended tool-Ø	clamping range	d ₂ mm	d ₄ mm	l ₁ mm	l ₃ mm	l ₄ mm	radial play	Code no.	Availability
30	bis Ø 20	ER25 Ø 2-16	42	59	109	55	35	0.08	25,030	●
40	bis Ø 20	ER25 Ø 2-16	42	59	109	63	35	0.10	25,040	●
40	Ø 6- Ø 32	ER32 Ø 3-20	50	64	116	63	35.5	0.10	32,040	●
50	bis Ø 20	ER25 Ø 2-16	42	59	109	78	35	0.12	25,050	●
50	Ø 6- Ø 32	ER32 Ø 3-20	50	64	116	78	35.5	0.12	32,050	●

Reduction sleeves for floating holder

Product information

- for reducing the clamping diameter in floating holders
- central coolant supply
- drive flat on tool shank necessary
- applicable in floating holders Guhring no. 4167 and 4117



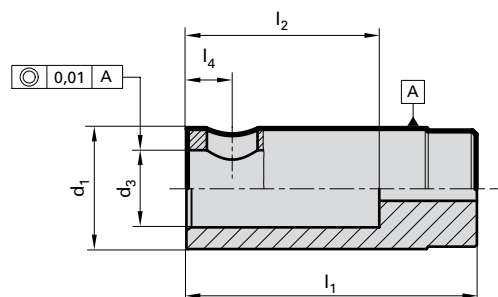
Guhring no.	4095
Discount group	Net price

d1 mm	for shank Ø d3 h6 mm	l1 mm	l2 mm	l4 mm	Code no.	Availability
20	14	50	40	9.5	14,020	●
20	16	50	40	9.5	16,020	●
25	16	60	40	9.5	16,025	●
25	18	60	40	9.5	18,025	●
25	20	60	50	9.5	20,025	●
32	20	63	50	12.5	20,032	●
32	25	63	60	12.5	25,032	●

Reduction sleeves for short floating holder

Product information

- for reducing the clamping diameter in floating holders
- central coolant supply
- drive flat on tool shank necessary
- applicable in short floating holders Guhring no. 4169



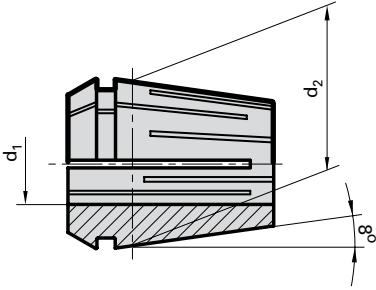
Guhring no.	4096
Discount group	Net price

d1 mm	for shank Ø d3 h6 mm	l1 mm	l2 mm	l4 mm	Code no.	Availability
10	4	25	20	6.0	4,010	●
10	6	25	20	6.0	6,010	●
10	8	25	20	6.0	8,010	●
16	10	29	25	7.0	10,016	●
16	12	29	25	7.0	12,016	●
20	12	29	25	7.0	12,020	●
20	14	29	25	7.0	14,020	●
20	16	29	25	7.0	16,020	●

Product information

- DIN 15488
- for application without sealing washer
- concentricity error max. 6 µm
- for high-performance tools with internal cooling e.g. HR 500 reamers

- ER-DM collets with restricted clamping range



Guhring no. 4175

Discount group 114

nom. size d ₂	clamping range d ₁ h ₉	Code no.	Availability
ER20	3.00	3,020	●
ER20	4.00	4,020	●
ER20	5.00	5,020	●
ER20	6.00	6,020	●
ER20	7.00 - 6.50	7,020	●
ER20	8.00 - 7.50	8,020	●
ER20	9.00 - 8.50	9,020	●
ER20	10.00 - 9.50	10,020	●
ER20	11.00 - 10.50	11,020	●
ER20	12.00 - 11.50	12,020	●
ER20	13.00 - 12.50	13,020	●
ER25	6.00	6,025	●
ER25	8.00 - 7.50	8,025	●
ER25	10.00 - 9.50	10,025	●
ER25	12.00 - 11.50	12,025	●
ER25	14.00 - 13.50	14,025	●
ER25	16.00 - 15.50	16,025	●
ER32	6.00	6,032	●
ER32	8.00 - 7.50	8,032	●
ER32	10.00 - 9.50	10,032	●
ER32	12.00 - 11.50	12,032	●
ER32	14.00 - 13.50	14,032	●
ER32	16.00 - 15.50	16,032	●
ER32	18.00 - 17.50	18,032	●
ER32	20.00 - 19.50	20,032	●

Holders for fine machining

HSK



HSK CLAMPING TECHNOLOGY

ONE CLAMPING MANY NEW POSSIBILITIES!



**SUITABLE FOR DIFFERENT
SPINDLE CONTOURS**



MAXIMUM CLAMPING



**OPTIMAL COOLING
SUPPLY – MQL &
CONVENTIONAL**



**STRAIGHT-
LINE COOLANT
THROUGHFLOW**



4-POINT CLAMPING TECHNOLOGY FOR MQL TECHNICAL INFORMATION AND ADVANTAGES

GÜHROCLAMP



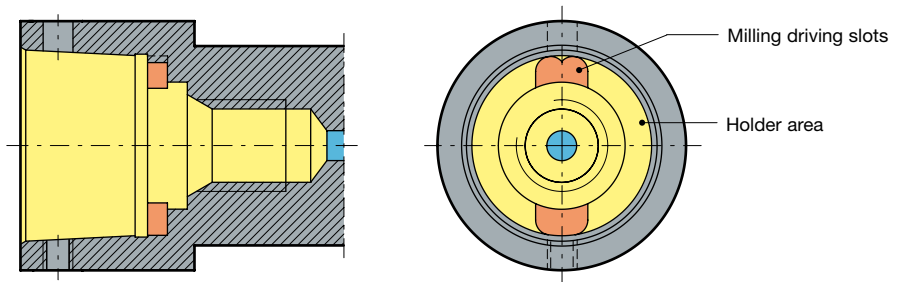
Our 4-point clamping system is suitable for radial manual clamping. Primarily designed for installation in spindles (short drilling spindles, multiple-spindle drilling heads).



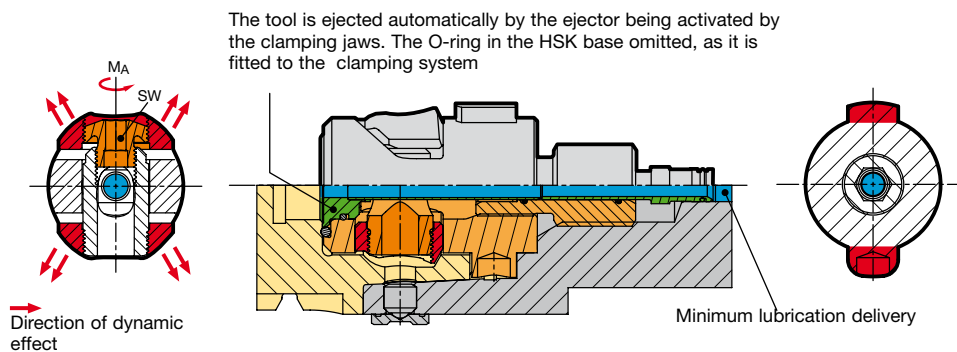
Advantages:

- simple and hence more economic spindle manufacture
- short, small diameter spindles with constricted spindle bearing spacing
- suitable for a pressure up to 160 bar (for conventional internal cooling)
- fast response time thanks to uninterrupted MQL delivery
- compatible installation contour and application of our 4-point clamping set for conventional cooling

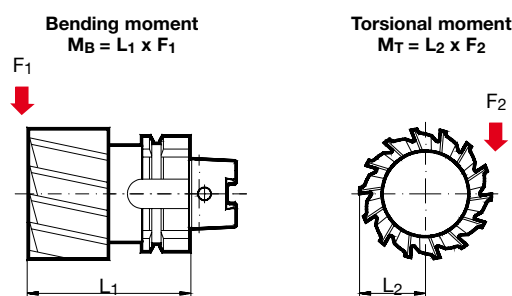
Internal contour of spindle



Installation and principle of operation



Bending, torsional and tightening moment for 4-point clamping sets for MQL



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.

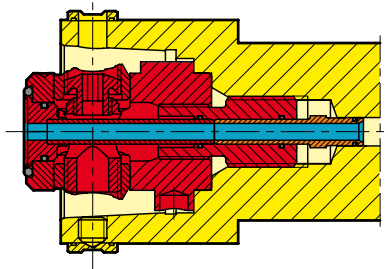
HSK-C	max. torque M_A [Nm] ①	Key size	max. drawing force [kN] ②	max. linear bending moment M_B [Nm] ②	max. transferrable torsional moment M_T [Nm] ② ③
32	3.0	2.5	8.5	72	105
40	6.0	3.0	12.5	135	180
50	12.0	4.0	24.0	330	390
63	24.0	5.0	32.0	570	680
80	40.0	6.0	45.0	1000	1570
100	60.0	8.0	53.0	1620	4200

General notes: Our manual clamping sets must not be operated with motor-driven tools (impulse screwdriver or similar). The hexagonal key should not exceed the key size over its entire length, this largely prevents excessive torque being transferred. We recommend the T-handle hexagonal key, Guhring no. 4912. For accurate setting of the maximum torque and achieving the maximum interface rigidity, we recommend the application of a torque wrench, Guhring no. 4915 with hexagonal sockets, Guhring no. 4916. Production drawings of the spindle contour to suit direct installation are available on request, including .dxf.

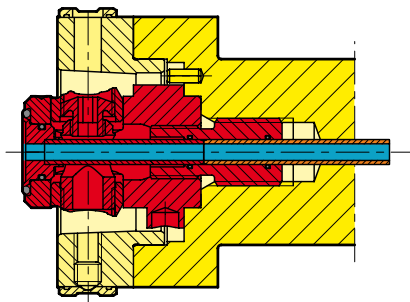


MQL 4-point clamping set connection dimensions for new designs

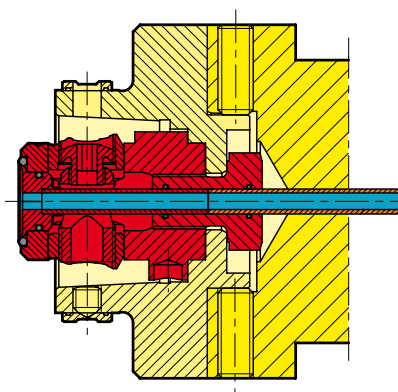
Direct installation in spindle with MQL adaptor



Short spindle adaptor with MQL delivery pipe



Adaptor (in front) with MQL delivery pipe



GÜHROCLAMP MQL 4-point clamping sets for MQL and IC

Product information

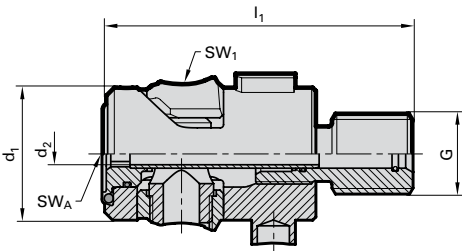
- for radial manual HSK tool clamping
- universal application for MQL and high-pressure IC
- the central and coaxial MQL supply with constant internal diameter prevents coolant from consolidating to DIN 69090-2
- For a coolant pressure up to 160 bar

Scope of delivery

- complete as shown in illustration
- Installation and operating instructions



GÜHROCLAMP

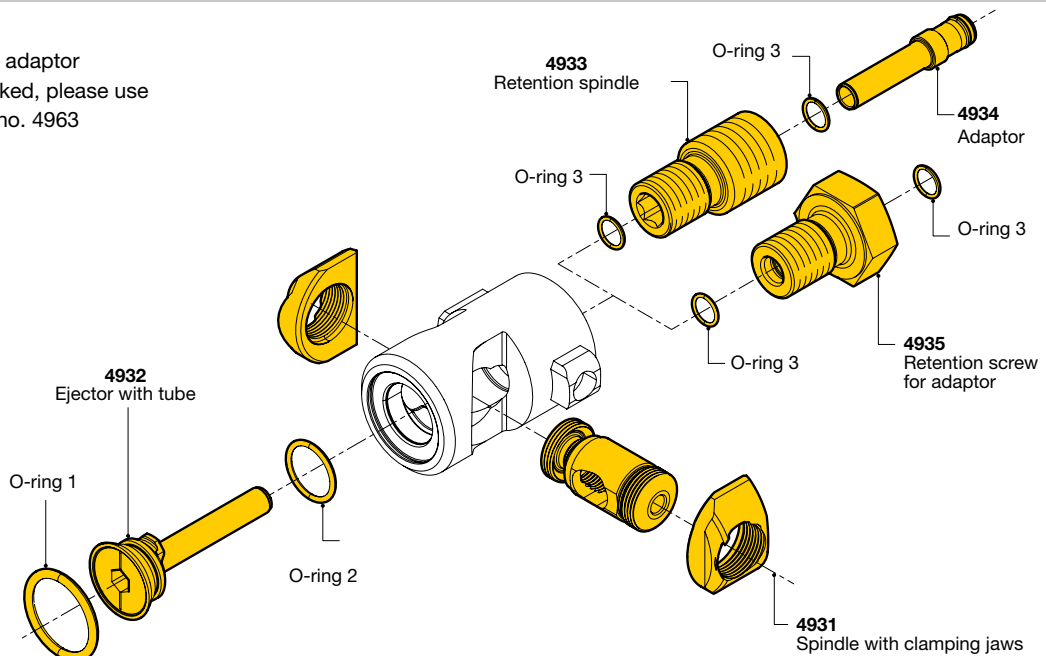


Guhring no. 4930
Discount group 114

for HSK-C	d1 mm	d2 mm	l1 mm	G	SW1	SWA	kg	Code no.	Availability
32	16.7	3	39.5	M10	2.5	3	0.05	24,100	●
40	20.6	4	49.5	M12	3	4	0.09	30,100	●
50	25.5	5	59.0	M16	4	5	0.18	38,100	●
63	33.0	6	76.0	M20	5	6	0.37	48,100	●
80	41.0	8	98.0	M24	6	8	0.70	60,100	●
100	52.0	10	117.5	M24	8	10	1.30	75,100	●

GÜHROCLAMP component parts for MQL 4-point clamping sets Guhring no. 4930

- retention screw only for adaptor
- If spindle cannot be locked, please use torque socket Guhring no. 4963



GÜHROCLAMP

HSK Clamping technology

for HSK-C	4931			4932			
	O-ring 1 NBR 70	O-ring 2 NBR 70	O-ring 3 NBR 70	Spindle with clamping jaws	Availability Discount group 114	Ejector with tube	Availability Discount group 114
32	10.82x1.78	6.0x1.5	-	24.000	●	24,100	●
40	13.0x2.0	7.0x1.5	4.5x1.0/5.0x1.0	30.000	●	30,100	●
50	16.0x2.0	10.0x1.5	5.5x1.0/7x1.0	38.000	●	38,100	●
63	20.3x2.4	14.0x1.5	7.0x1.0	48.000	●	48,100	●
80	24.0x3.0	16.0x2.0	10.0x1.5	60.000	●	60,100	●
100	31.34x3.53	22.0x2.0	12.0x1.70	75.000	●	75,100	●

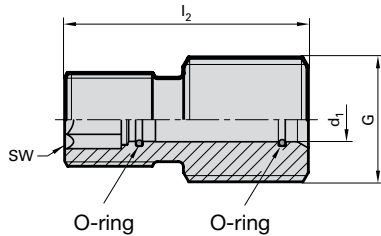
Retention spindles for GÜHROCLAMP MQL 4-point clamping sets

Product information

- retention spindle for direct installation in spindle

Scope of delivery

- complete as shown in illustration



Guhring no. 4933

Discount group 114

for HSK-C	d_1 mm	l_1 mm	G	SW	O-ring 1	O-ring 2	Code no.	Availability
32	M7x0.5	17.0	M10	4	-	-	24,100	●
40	5.1	23.0	M 12	5	4.5x1.0	5x1	30,100	●
50	7.1	27.0	M 16	6	5.5x1.0	7x1.0	38,100	●
63	7.1	39.0	M 20	8	7.0x1.0	7.0x1.0	48,100	●
80	10.1	50.0	M 24	10	10.0x1.5	10.0x1.5	60,100	●
100	12.1	60.0	M 24	12	12.0x1.70	12.0x1.70	75,100	●

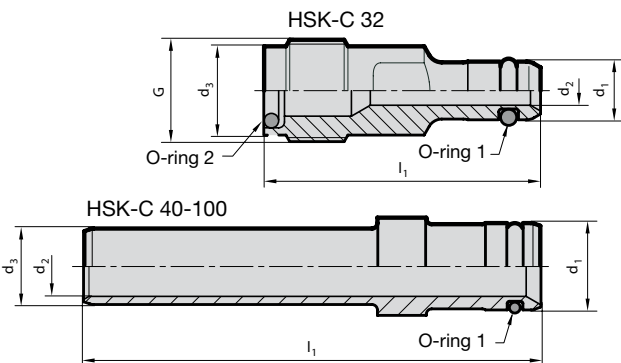
Adaptor for GÜHROCLAMP MQL 4-point clamping sets

Product information

- Adaptor for direct installation in spindle and spindle adaptor (integrated) for coolant delivery and sealing

Scope of delivery

- complete as shown in illustration



Guhring no. 4934

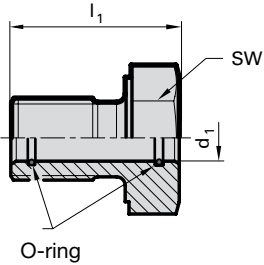
Discount group 114

for HSK-C	d_1 mm	d_2 mm	d_3 mm	l_1 mm	O-ring 12xNBR70	O-ring 2NBR70	Code no.	Availability
32	4.0	2.0	6.1	19	2.0 x 1.0	3.5 x 1.0	24,100	●
40	5.0	3.0	5.0	28	3.0 x 1.0	-	30,100	●
50	6.0	4.0	7.0	28	4.0 x 1.0	-	38,100	●
63	8.0	5.5	7.0	42	6.0 x 1.0	-	48,100	●
80	10.2	7.5	10.0	56	8.0 x 1.0	-	60,100	●
100	12.0	9.5	11.8	60	10.0 x 1.0	-	75,100	●

Retention screw for GÜHROCLAMP MQL 4-point clamping sets

Product information

- necessary for installation of MQL 4-point clamping set in spindle adaptors Guhring no. 4386 and 4387
- change against standard retention bolt



Scope of delivery

- complete as shown in illustration



Guhring no. 4935

Discount group 114

for HSK-C	d_1 mm	l_1 mm	SW	O-ring 2 x NBR 70	Code no.	Availability
32	4.0	21.5	13	-	24,000	●
40	5.0	21	16	5x1.0	30,000	●
50	6.0	25	18	6x1.0	38,000	●
63	8.0	31	24	8x1.0	48,000	●
80	10.0	36	24	10x1.5	60,000	●
100	12.0	40	32	12x1.7	75,000	●

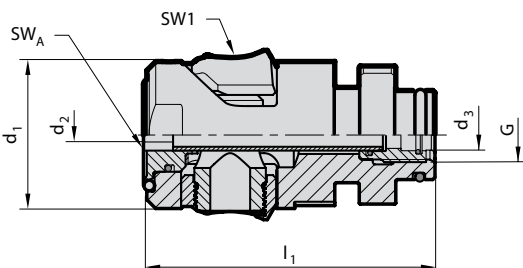
M contour clamping sets for MQL and IC

Product information

- HSK clamping sets compatible with M contour spindles and adaptors
- universal application for MQL and high-pressure IC
- the central, coaxial MQL supply with constant internal diameter ensures a uninterrupted coolant delivery to DIN 69090-2
- for a coolant pressure up to 160 bar
- for radial manual HSK tool clamping

Scope of delivery

- incl. adaptor with through hole for uninterrupted coolant delivery
- including installation and operating instructions
- order adaptor with spigot connection Guhring no. 4616 separately
- spindle connection dimensions on request



Guhring no. 4615

Discount group 114

for HSK-C	d_1 mm	d_2 mm	d_3 mm	l_1 mm	G	SW1	SWA	Code no.	Availability
32	16.7	3.0	4.1	43.4	M8x1	2.5	3	24,000	●
40	20.6	4.0	5.1	48.3	M10x1	3	4	30,000	●
50	22.5	5.0	7.1	55.3	M12x1	4	5	38,000	●
63	33.0	6.0	7.1	64.7	M12x1	5	6	48,000	●
80	41.0	8.0	10.1	75.3	M16x1	6	8	60,000	●
100	52.0	10.0	12.1	94.5	M18x1	8	10	75,000	●

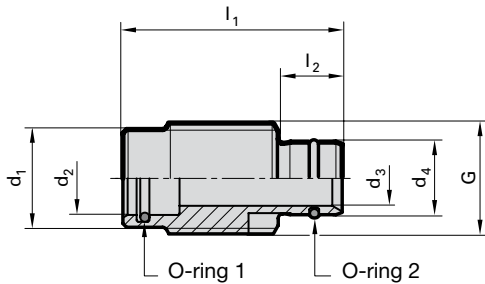


HSK Clamping
technology

Adaptor with spigot transition for M contour clamping set

Product information

- application on M contour clamping sets Guhring no. 4615 instead of adaptor with coolant transfer hole
- universal application for MQL and high-pressure IC
- for a coolant pressure up to 160 bar
- adaptor for spindles without coolant tube for uninterrupted coolant delivery
- spindle connection dimensions on request



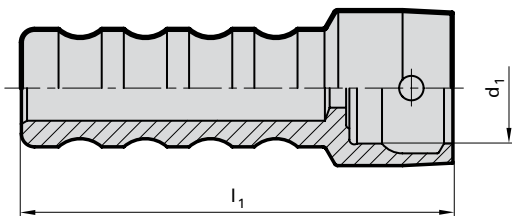
Guhring no. 4616
Discount group 114

for HSK-C	d ₁ mm	d ₂ mm	d ₃ mm	d ₄ mm	l ₁ mm	l ₂ mm	O-ring 1 NBR 70	O-ring 2 NBR 70	G	Code no.	Availability
32	-	4	3	5.00	14.4	5.4	4x1	3x1	M8x1	24,000	●
40	7.7	5	4	6.00	22.0	6.5	5x1	4x1	M10x1	30,000	●
50	8.5	6	5	8.00	23.0	7.5	5x1	6x1	M12x1	38,000	●
63	10.7	8	6	8.00	24.0	7.0	8x1	6x1	M12x1	48,000	●
80	-	10	8	11.30	23.3	8.3	10x1.5	8x1.5	M12x1	60,000	●
100	-	12	10	13.80	30.6	9.6	12x1.5	12x1.5	M18x1	75,000	●

Tool for the assembly / disassembly of M contour clamping sets

Product information

- for the assembly and disassembly of M contour clamping sets Guhring no. 4615



Guhring no. 4624
Discount group 114

for HSK	d ₁ mm	l ₁ mm	Code no.	Availability
32	17	119	32,000	●
40	21	121.5	40,000	●
50	26	127.5	50,000	●
63	34	132	63,000	●
80	42	143	80,000	●
100	53	152	100,000	●

THE 4-POINT CLAMPING TECHNOLOGY FOR CONVENTIONAL COOLING

TECHNICAL INFORMATION AND ADVANTAGES

Conventional 4-point clamping sets offer enormous clamping force and optimal cooling lubricant delivery. They are suitable for radial manual HSK tool clamping.



Advantages:

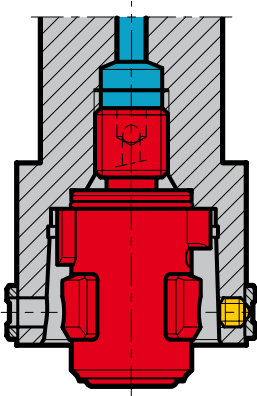
- simple and hence more economic spindle manufacture
- short, small diameter spindles with constricted spindle bearing spacing
- suitable for a pressure up to 80 bar

General notes: Our manual clamping sets must not be operated with motor-driven tools (impulse screwdriver or similar). The hexagonal key should not exceed the key size over its entire length, this largely prevents excessive torque being transferred. We recommend the T-handle hexagonal key, Guhring no. 4912. For accurate setting of the maximum torque and achieving the maximum interface rigidity, we recommend the application of a torque wrench, Guhring no. 4915 with hexagonal sockets, Guhring no. 4916. Removal of the locking ring is made by releasing the pressure ball screw. This is achieved with the use of an Allen key inserted through the opposite access hole and through the hollow threaded spindle and turned anticlockwise. Once released, the locking ring will slide axially off. Production drawings of the spindle contour to suit direct installation are available on request, including .dxf.

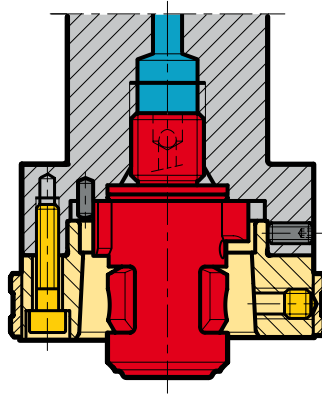
Application examples

Spindle interface

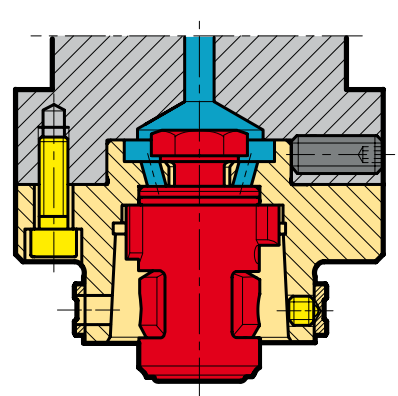
Direct installation in spindle



Spindle adaptor (integrated)

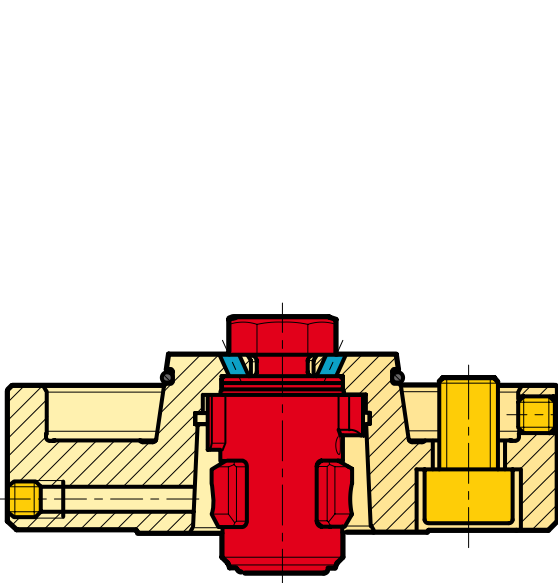


Spindle adaptor (in front)

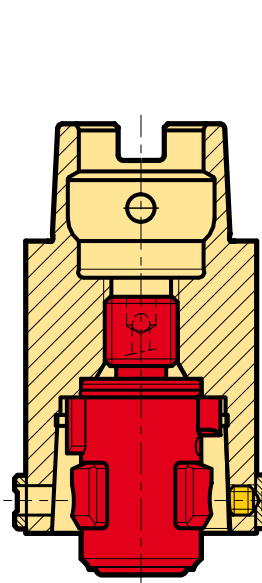


Adaptor

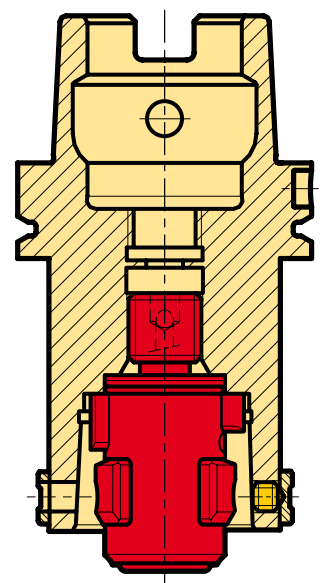
Basic adaptor for ISO taper spindles



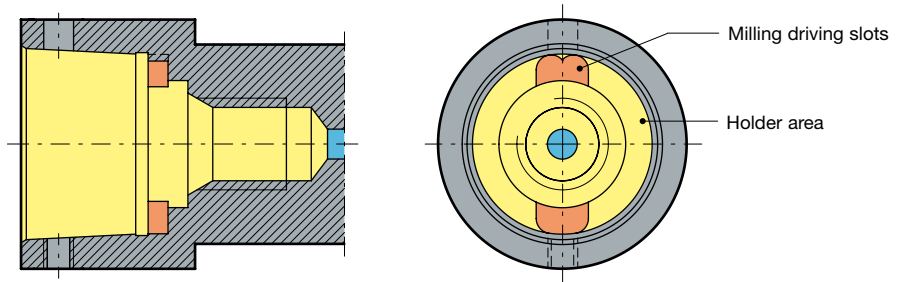
HSK-C extension



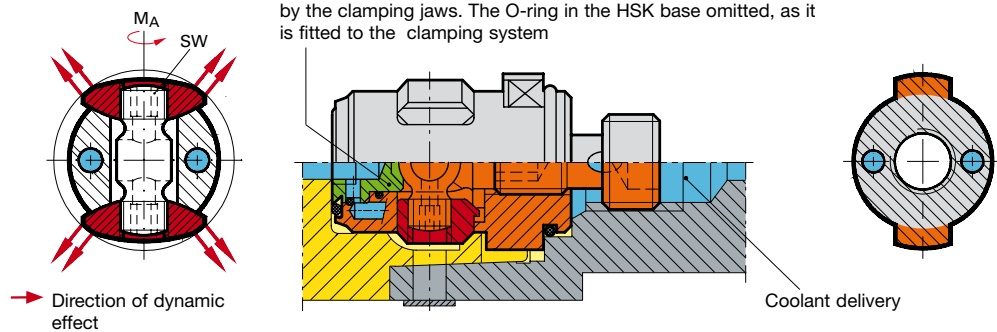
HSK-A reduction



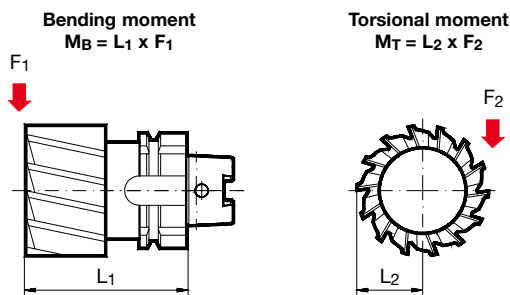
Internal contour of spindle



Installation and principle of operation



Bending, torsional and tightening moment for 4-point clamping sets for conventional cooling



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. transferrable 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

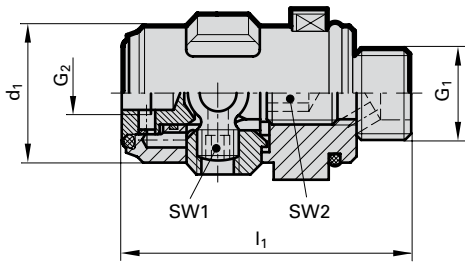
4-point clamping sets for conventional cooling

Product information

- for a coolant pressure up to 80 bar
- for radial manual HSK tool clamping

Scope of delivery

- including installation and operating instructions

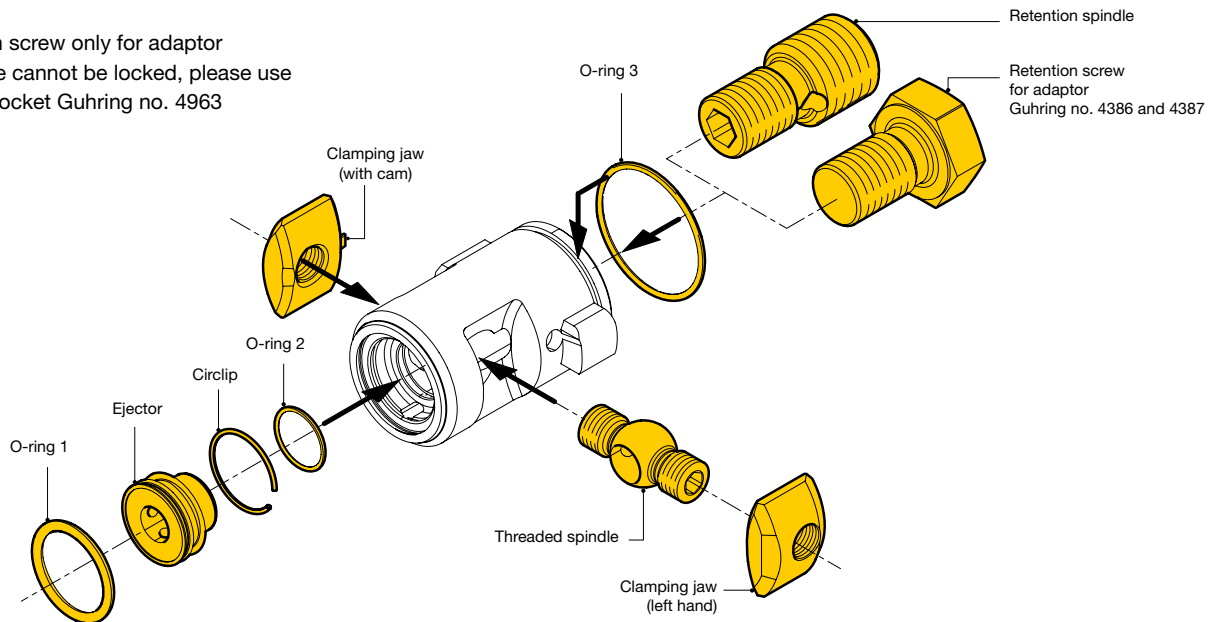


Guhring no. 4958
Discount group 114

for HSK-C	d1 mm	l1 mm	G1	G2	SW1	SW2	kg	Code no.	Availability
25	13.8	34	M 8	M 4	2.5	3	0.025	19,000	●
32	16.7	40	M10	M 5	2.5	4	0.050	24,000	●
40	20.6	49	M12	M 6	3.0	5	0.080	30,000	●
50	25.5	59	M16	M 8	4.0	6	0.150	38,000	●
63	33.0	72	M20	M10	5.0	8	0.310	48,000	●
80	41.0	97	M24	M12	6.0	10	0.640	60,000	●

Component parts for 4-point clamping set Guhring no. 4958, separate or set

- retention screw only for adaptor
- If spindle cannot be locked, please use torque socket Guhring no. 4963



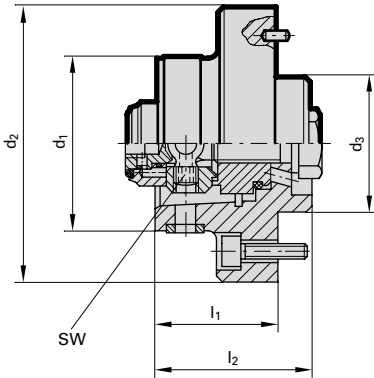
Guhring no. 4957 on request | **Guhring no. 4959**

for HSK-C	O-rings 1 Viton 75	O-rings 2 NBR 70	O-rings 3 NBR 70	Clamping jaw set	Threaded spindle	Retention spindle	Ejector	Circlip	Retention screw	Set	Unit price €/Disc. gr. 114
25	9.0 x 1.2	6.0 x 0.75	11.0 x 1.0	1,019	2,019	3,019	4,019	5,019	7,019	19,000	●
32	11.0 x 1.5	7.0 x 1.0	14.0 x 1.0	1,024	2,024	3,024	4,024	5,024	7,024	24,000	●
40	13.0 x 1.5	9.0 x 1.0	17.0 x 1.0	1,030	2,030	3,030	4,030	5,030	7,030	30,000	●
50	16.0 x 2.0	11.0 x 1.0	22.0 x 1.5	1,038	2,038	3,038	4,038	5,038	7,038	38,000	●
63	20.3 x 2.4	14.0 x 1.0	28.0 x 1.5	1,048	2,048	3,048	4,048	5,048	7,048	48,000	●
80	24.0 x 3.0	17.0 x 1.0	35.0 x 1.5	1,060	2,060	3,060	4,060	5,060	7,060	60,000	●

HSK spindle adaptors (in front)

Product information

- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration.



Scope of delivery

- incl. clamping set Guhring no. 4958 for conventional cooling
- incl. brass lock ring Guhring no. 4953
- incl. indexing pin and retention screws
- for MQL application, order as special adaptor with MQL clamping set Guhring no. 4930 and MQL retention nut, Guhring no. 4935



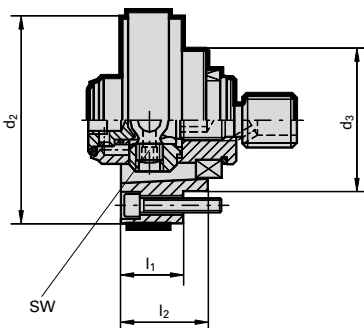
Guhring no. **4386**
Discount group **114**

HSK-C	d_1	d_2 mm	d_3 mm	l_1 mm	l_2 mm	SW	kg	Code no.	Availability
25		45	23	20	28	2.5	0.22	19,000	●
32		60	30	26	36	2.5	0.38	24,000	●
40		70	35	30	40	3.0	0.60	30,000	●
50		80	40	35	45	4.0	0.92	38,000	●
63		100	50	43	55	5.0	1.75	48,000	●
80		117	60	50	62	6.0	2.79	60,000	●

Short HSK spindle adaptors (integrated)

Product information

- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration.



Scope of delivery

- incl. clamping set Guhring no. 4958 for conventional cooling
- incl. brass lock ring Guhring no. 4953
- incl. indexing pin and retention screws
- for MQL application, order as special adaptor with MQL clamping set Guhring no. 4930



Guhring no. **4385**
Discount group **114**

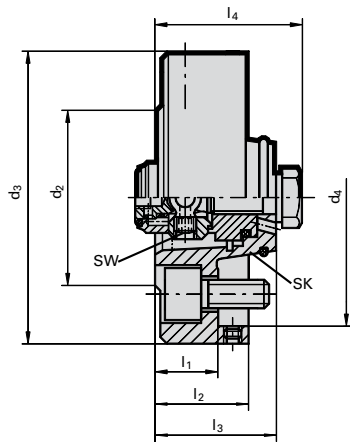
for HSK-C	d_2 mm	d_3 mm	l_1 mm	l_2 mm	SW	kg	Code no.	Availability
32	40	27.0	12.5	16	2.5	0.14	24,000	●
40	50	33.5	15.0	20	3.0	0.26	30,000	●
50	63	42.0	17.5	25	4.0	0.48	38,000	●
63	80	55.0	22.5	32	5.0	0.99	48,000	●
80	100	68.0	27.5	40	6.0	1.88	60,000	●

Product information

- for the conversion of SK to HSK interfaces

Scope of delivery

- incl. clamping set Guhring no. 4958 for conventional cooling
- incl. retention screws



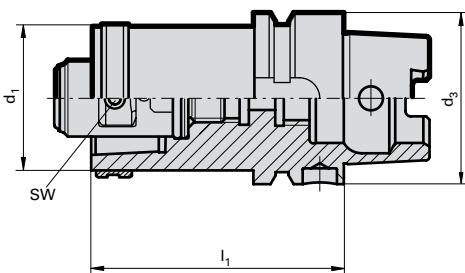
Guhring no. 4387
Discount group 114

for ISO taper	for HSK-C	d ₂ mm	d ₃ mm	d ₄ mm	l ₁ mm	l ₂ mm	l ₃ mm	l ₄ mm	SW	kg	Code no.	Availability
30	40	50	85	69.83	25	35	37.0	39.0	3	1.08	30,030	●
40	50	63	100	88.88	20	30	39.5	46.5	4	1.40	40,038	●
50	63	80	150	128.57	25	40	48.5	58.5	5	1.96	50,048	●
50	80	100	150	128.57	40	55	61.1	71.1	6	2.20	50,060	●

HSK-A/HSK-C reductions

Scope of delivery

- incl. clamping set Guhring no. 4958 for conventional cooling
- incl. retention screws



Guhring no. 4355
Discount group 114

HSK-A d ₃	HSK-C d ₁	l ₁ mm	SW	kg	Code no.	Availability
40	32	60	2.5	0.42	32,040	●
50	32	60	2.5	0.54	32,050	●
50	40	70	3.0	0.69	40,050	●
63	32	60	2.5	1.08	32,063	●
63	40	70	3.0	1.15	40,063	●
63	50	80	4.0	1.23	50,063	●
80	50	90	4.0	2.00	50,080	●
80	63	100	5.0	2.69	63,080	●
100	50	90	4.0	2.80	50,100	●
100	63	100	5.0	3.31	63,100	●
100	80	120	6.0	5.20	80,100	●

HSK Clamping technology

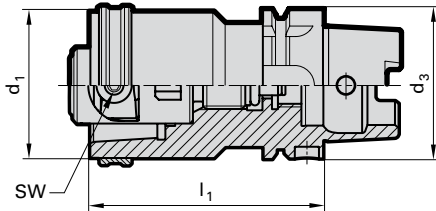
HSK-A/HSK-C extensions with MQL 4-point clamping sets

Product information

- suitable for MQL
- for single channel systems

Scope of delivery

- incl. MQL 4-point clamping set Guhring no. 4930 and adaptor for extensions
- incl. brass lock ring Guhring no. 4953
- order coolant supply set separately:
 - for automatic tool change
Guhring no. 4939
 - for manual tool change
Guhring no. 4940



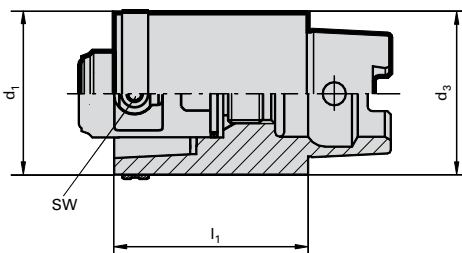
Guhring no.	4350
Discount group	114

HSK-A/HSK-C d ₁ / d ₃	l ₁ mm	SW	kg	Code no.	Availability
32	60	2.5	0.30	60,032	●
40	80	3.0	0.70	80,040	●
50	80	4.0	0.90	80,050	●
50	100	4.0	1.10	100,050	●
63	100	5.0	1.80	100,063	●
63	140	5.0	2.30	140,063	●
80	120	6.0	4.20	120,080	●
80	160	6.0	5.80	160,080	●
100	140	8.0	8.00	140,100	●

HSK-C extensions

Product information

- incl. clamping set Guhring no. 4958 for conventional cooling
- incl. brass lock ring Guhring no. 4953



Guhring no.	4351
Discount group	114

HSK-C d ₁ / d ₃	l ₁ mm	SW	kg	Code no.	Availability
25	40	2.5	0.14	40,025	●
32	40	2.5	0.22	40,032	●
40	50	3.0	0.44	50,040	●
50	60	4.0	0.81	60,050	●
63	80	5.0	1.74	80,063	●

PROCESS RELIABILITY RATHER THAN NERVE TINGLING

Guhring inspection and measuring instruments



- ⇒ simple, quick and accurate measuring of the clamping force of your chucks
- ⇒ direct measuring of the coolant flow pressure and volume
- ⇒ wireless determination of the MQL response times

Please request our "GM 300 inspection and measuring instruments" brochure.

POWERCLAMP

TECHNICAL INFORMATION AND ADVANTAGES

Guhring's PowerClamp system is designed for universal applications in transfer lines, machining centres, turning centres and setting equipment,

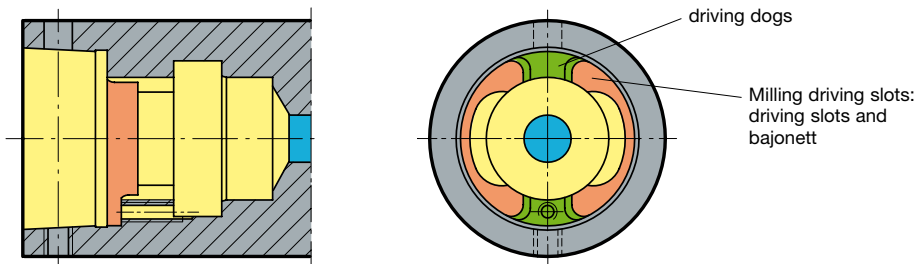
Thanks to the centrifugal forces of the clamping jaws the PowerClamp tool clamping set is suitable for high-speed applications. The high clamping force generated by the clamping jaws enables the application for heavy machining.



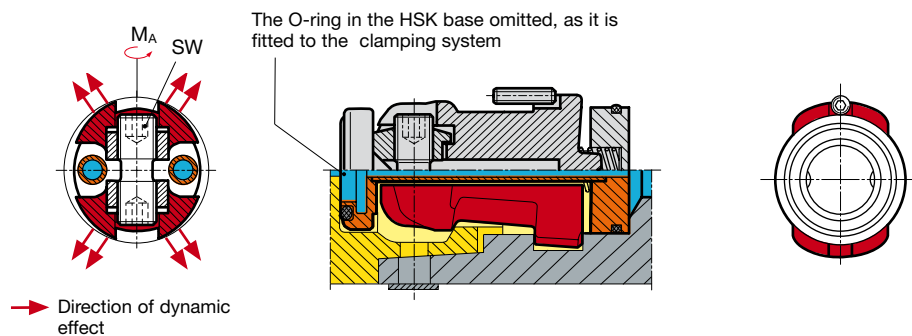
Advantages:

- simple assembly thanks to uncomplicated spindle contour
- few moving components, therefore optimal force transmission
- high clamping force, therefore excellent bending resistance
- good rotation symmetry, therefore high-speed capability
- internal coolant delivery
- secure ejector function
- coolant sealing from $p > 6$ bar to max. 80 bar

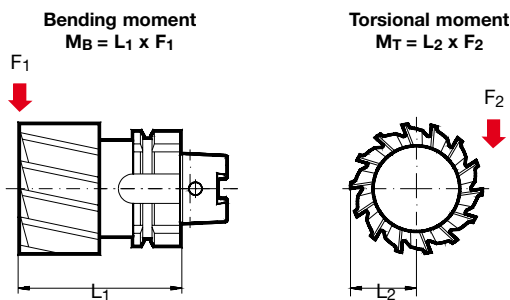
Internal contour of spindle



Installation and principle of operation



Bending, torsional and tightening moment for PowerClamp



- ① We recommend MA max. for rough machining and milling operations. For drilling and reaming operations a lower deviation of MA 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, MT max. can be lower with adaptors.

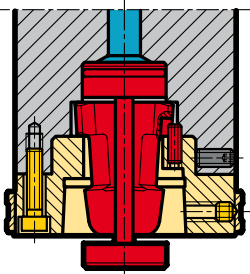
HSK-C	max. torque MA [Nm] ①	Key size	max. drawing force [kN] ②	max. linear bending moment MB [Nm] ②	max. transferrable torsional moment MT [Nm] ② ③
25	1.5	2.0	5	45	50
32	2.5	2.5	8	74	120
40	6.0	3.0	18	213	360
50	10.0	4.0	27	431	1000
63	15.0	5.0	35	703	1300
80	25.0	6.0	50	1100	2800
100	50.0	8.0	60	1620	4800

General notes: Our manual clamping sets must not be operated with motor-driven tools (impulse screwdriver or similar). The hexagonal key should not exceed the key size over its entire length, this largely prevents excessive torque being transferred. We recommend the T-handle hexagonal key, Guhring no. 4912. For accurate setting of the maximum torque and achieving the maximum interface rigidity, we recommend the application of a torque wrench, Guhring no. 4915 with hexagonal sockets, Guhring no. 4916. Production drawings of the spindle contour to suit direct installation are available on request, including .dxf.

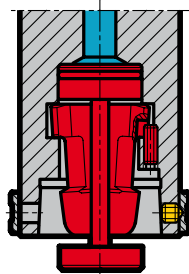
Application examples

Spindle interface

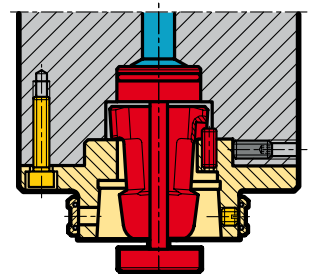
integrated spindle adaptor



Direct installation in spindle

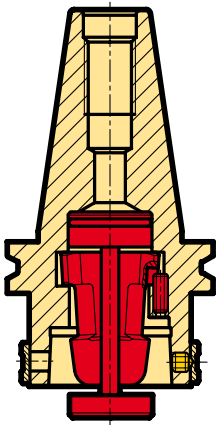


Spindle adaptor (in front)

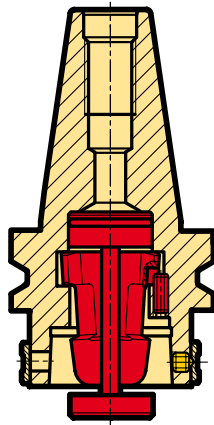


Adaptor

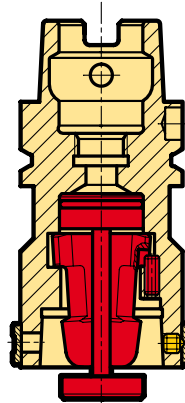
DIN 69871 AD



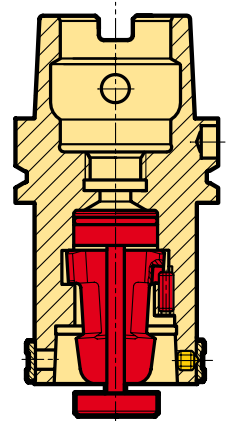
MAS/BT



HSK-A extension

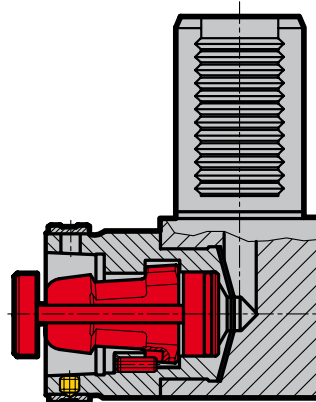


HSK-A reduction

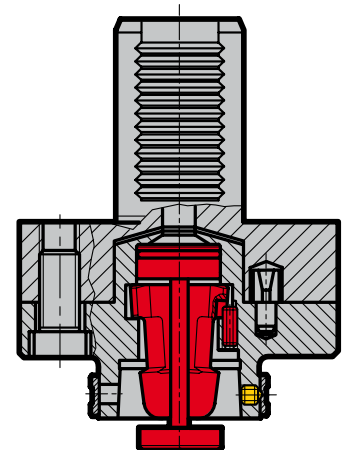


Tool holder for turning centers

adaptor (in front) on VDI angle holder



adaptor (in front) on VDI vertical holder

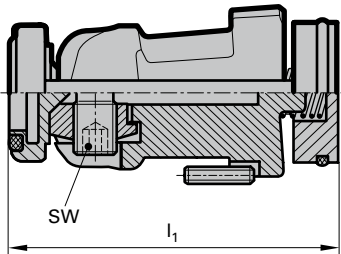


Product information

- the internal coolant delivery is via the cage. It is floating mounted and ensures a coolant seal above 6 bar pressure.
- for a coolant pressure up to 80 bar
- the coolant sets are not suitable for MQL

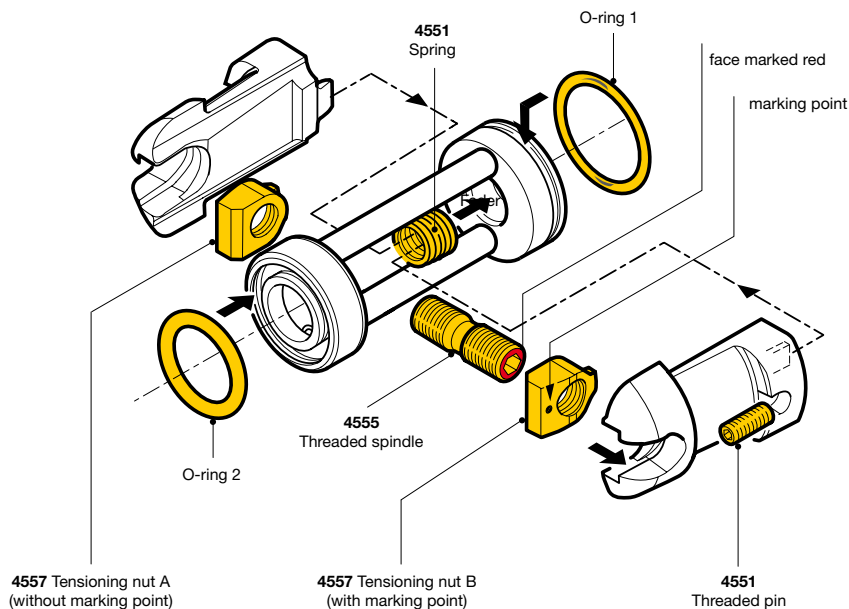
Scope of delivery

- including installation and operating instructions
- incl. threaded pin Guhring no. 4551



					Guhring no.	4554
					Discount group	114
for HSK-C	l ₁ mm	SW	kg		Code no.	Availability
25	32.1	2.0	0.02		19,000	●
32	41.6	2.5	0.05		24,000	●
40	49.7	3.0	0.09		30,000	●
50	62.2	4.0	0.18		38,000	●
63	74.1	5.0	0.37		48,000	●
80	96.1	6.0	0.73		60,000	●
100	117.0	8.0	1.36		75,000	●

Component parts for PowerClamp sets Guhring no. 4554

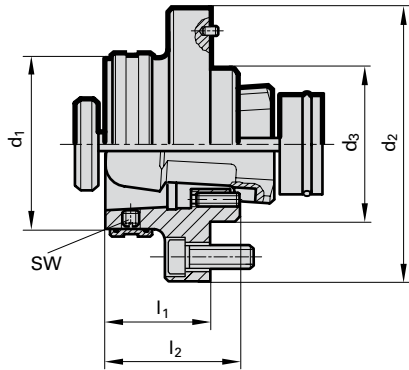


			4557	4555		4551		
for HSK-C	O-rings 1 Ø/thickness	O-rings 2 Ø/thickness	Tensioning nut set	Availability/ discount group 114	Threaded spindle	Availability/ discount group 114	Spring and threaded pin	Availability/ discount group 114
25	11.5 × 1.0	7.0 × 2.0	1,019	●	2,019	●	3,019	●
32	14.0 × 1.5	10.0 × 2.5	1,024	●	2,024	●	3,024	●
40	18.0 × 1.5	12.5 × 2.5	1,030	●	2,030	●	3,030	●
50	22.0 × 1.5	16.0 × 3.0	1,038	●	2,038	●	3,038	●
63	28.0 × 2.0	21.0 × 3.0	1,048	●	2,048	●	3,048	●
80	36.0 × 3.0	25.0 × 4.0	1,060	●	2,060	●	3,060	●
100	45.0 × 3.0	32.0 × 5.0	1,075	●	2,075	●	3,075	●

HSK adaptors (in front)

Product information

- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration.
- for conventional cooling from 6 to max. 80 bar



Scope of delivery

- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953
- incl. indexing pin and retention screws



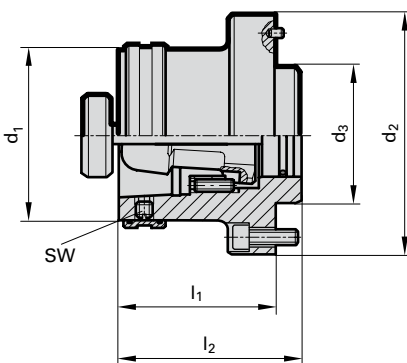
Guhring no. **4581**
Discount group **114**

HSK-C	d_2 mm	d_3 mm	l_1 mm	l_2 mm	SW	kg	Code no.	Availability
25	45	23	20.0	26.5	2.0	0.17	19,000	●
32	55	28	17.5	23.0	2.5	0.22	24,000	●
40	63	36	22.5	29.0	3.0	0.40	30,000	●
50	80	46	27.5	36.0	4.0	0.74	38,000	●
63	100	56	35.0	46.0	5.0	1.50	48,000	●
80	125	66	45.0	58.0	6.0	2.94	60,000	●
100	160	86	57.0	72.0	8.0	5.90	75,000	●

HSK spindle adaptors (in front)

Product information

- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration.
- for conventional cooling from 6 to max. 80 bar



Scope of delivery

- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953
- incl. indexing pin and retention screws



Guhring no. **4586**
Discount group **114**

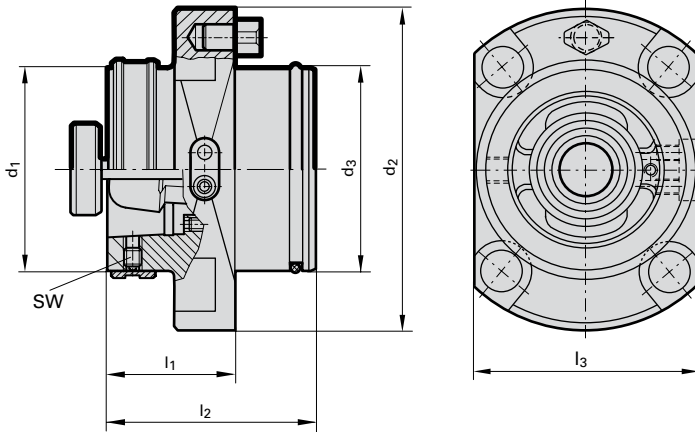
HSK-C	d_2 mm	d_3 mm	l_1 mm	l_2 mm	SW	kg	Code no.	Availability
40	70	35	32.5	42.5	3	0.55	30,000	●
50	80	40	43.0	53.0	4	1.00	38,000	●
63	100	50	53.0	65.0	5	1.90	48,000	●
80	117	60	73.0	85.0	6	3.60	60,000	●
100	140	80	94.0	106.0	8	7.20	75,000	●

Product information

- for fixed tools
- incl. setting element to eliminate drive play with vertical tools
- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration.
- for conventional cooling from 6 to max. 80 bar

Scope of delivery

- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953
- incl. indexing pin and retention screws



HSK-C										Guhring no.	4582
d1	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	SW	kg	Version	Code no.	Availability	
50	84	50	35	55.0	55	4	0.98	l-h	38,100	●	
50	84	50	35	55.0	55	4	0.98	r-h	38,200	●	
63	100	63	40	64.5	70	5	1.74	l-h	48,100	●	
63	100	63	40	64.5	70	5	1.74	r-h	48,200	●	

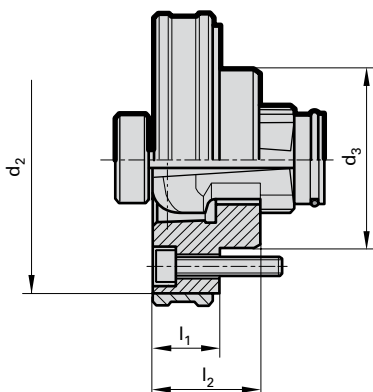
Short HSK spindle adaptors (integrated)

Product information

- with larger axial plane
- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration.
- for conventional cooling from 6 to max. 80 bar

Scope of delivery

- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953
- incl. threaded pin Guhring no. 4551 and tensioning screws



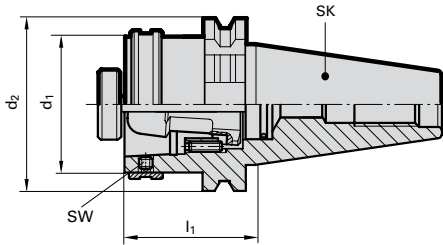
for HSK-C								Guhring no.	4584
d2 mm	d3 mm	l1 mm	l2 mm	SW	kg	Code no.	Availability		
32	40	27.0	12.5	21.10	2.5	24,000	●		
40	50	33.5	15.0	25.70	3.0	30,000	●		
50	63	42.0	17.5	32.10	4.0	38,000	●		
63	80	55.0	22.5	40.05	5.0	48,000	●		
80	100	68.0	27.5	51.40	6.0	60,000	●		
100	125	88.0	30.0	64.00	8.0	75,000	●		

Product information

- ISO taper to DIN 69871 form AD
- Form B on request
- Code no. 50,100 only applies to presetting unit
- for conventional cooling from 6 to max. 80 bar

Scope of delivery

- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953
- order clamping key and pull studs separately



Guhring no. 4512
Discount group 114

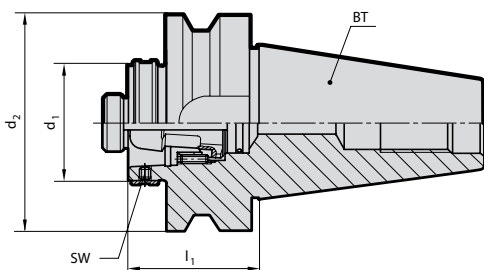
ISO taper	HSK-C d ₁	d ₂ mm	l ₁ mm	SW	kg	Code no.	Availability
40	32	63.5	40	2.5	0.89	40,032	●
40	40	63.5	40	3.0	0.90	40,040	●
40	50	63.5	40	4.0	0.91	40,050	●
40	63	63.5	70	5.0	1.38	40,063	●
50	32	97.5	40	2.5	2.65	50,032	●
50	40	97.5	40	3.0	2.67	50,040	●
50	50	97.5	40	4.0	2.71	50,050	●
50	63	97.5	40	5.0	2.73	50,063	●
50	80	97.5	70	6.0	3.70	50,080	●
50	100	97.5	100	8.0	4.87	50,100	●

Product information

- MAS/BT to JIS 3 6339, form AD
- for conventional cooling from 6 to max. 80 bar

Scope of delivery

- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953
- order clamping key and pull studs separately



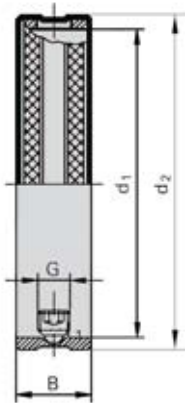
Guhring no. 4514
Discount group 114

BT	HSK-C d ₁	d ₂ mm	l ₁ mm	SW	kg	Code no.	Availability
40	40	63	40	3	0.92	40,040	●
40	50	63	40	4	0.95	40,050	●
50	40	100	50	3	2.90	50,040	●
50	50	100	60	4	3.15	50,050	●
50	63	100	60	5	3.69	50,063	●

Brass locking rings

Product information

- the pressure ball screw must be secured with Loctite 222



Scope of delivery

- incl. pressure ball screw, Guhring no. 4961



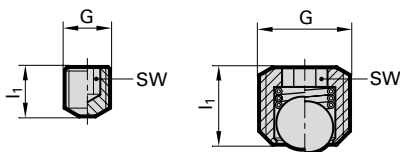
Guhring no. **4953**
Discount group **114**

HSK-form	for HSK-size	d ₁ mm	d ₂ mm	B mm	G	Code no.	Availability
C	25	25	28.0	7	M3.5	25,000	●
C	32	32	35.0	7	M4	32,000	●
C	40	40	43.5	9	M5	40,000	●
C	50	50	54.0	11	M6	50,000	●
C	63	63	68.0	14	M8	63,000	●
C	80	80	85.0	17	M10	80,000	●
C	100	100	105.0	23	M12	100,000	●
D	32	32	35.0	7	M3.5	32,019	●
D	40	40	43.5	9	M4	40,024	●
D	50	50	54.0	11	M5	50,030	●
D	63	63	68.0	14	M6	63,038	●
D	80	80	85.0	17	M8	80,048	●
D	100	100	105.0	23	M10	100,060	●
D	125	125	130.0	23	M12	125,075	●

Pressure ball screws

Product information

- Minimum order quantity 5



HSK 25/32

HSK 40 -100

Guhring no. **4961**
Discount group **114**

for HSK	l ₁ mm	G	SW	Code no.	Availability
25	3.4	M3.5	2.0	3,500	●
32	4.3	M4	2.0	4,000	●
32	4.0	M4	2.0	4,001	●
40	4.6	M5	2.5	5,000	●
50	5.4	M6	3.0	6,000	●
63	7.0	M8	4.0	8,000	●
80	9.2	M10	5.0	10,000	●
100	11.4	M12	6.0	12,000	●

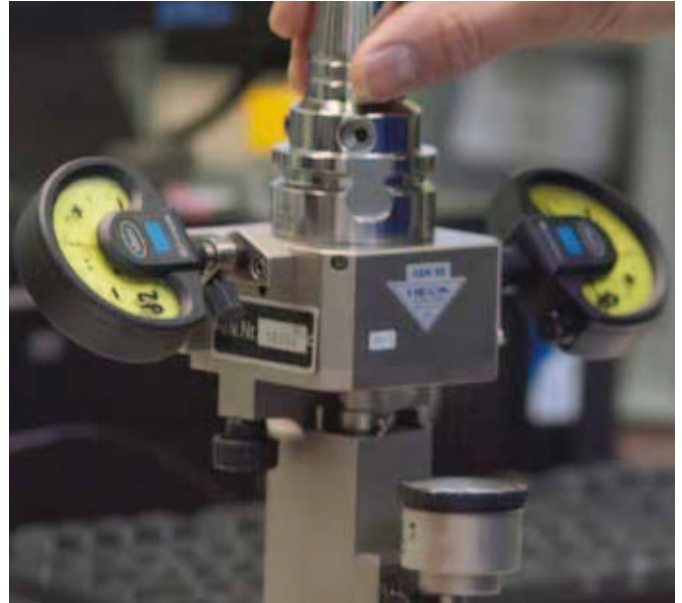


MEASURING INSTRUMENTS AND GENERAL ACCESSORIES



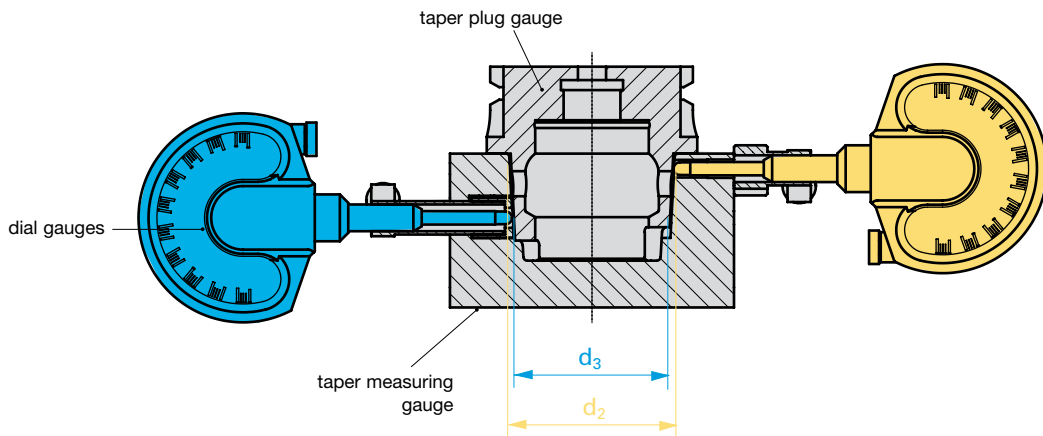
Measuring gauges for HSK tool shanks

To ensure sustained accuracy at HSK interfaces, we recommend comparison measuring of the geometry of HSK tool shanks and spindles at regular intervals. These checks should become more frequent with an increased change rate at the interface.



Measuring gauges for HSK tool shanks

for nominal taper diameter d_2 and d_3



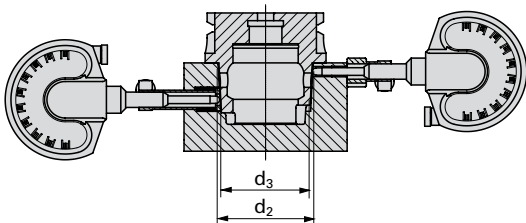
Taper measuring gauge for HSK tool shanks

Product information

- calibration on request

Scope of delivery

- incl. calibrated taper plug gauge and measuring instructions
- supplied in wooden case with inspection protocol

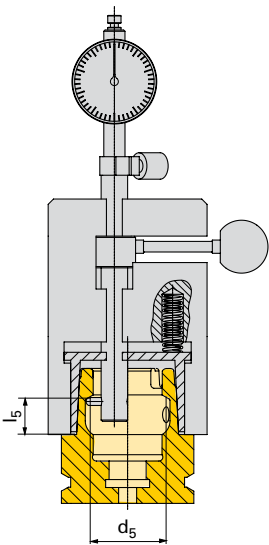


				Guhring no.	4968	
				Discount group	Net price	
for HSK	d_2 mm	HSK	d_3 mm	Code no.	Availability	
25	19		18.4	19,100	●	
32	24		23.2	24,100	●	
40	30		29.0	30,100	●	
50	38		36.9	38,100	●	
63	48		46.5	48,100	●	
80	60		58.1	60,100	●	
100	75		72.6	75,100	●	

Measuring gauges for HSK clamping shoulders

Product information

- calibration on request



Scope of delivery

- incl. calibrated setting gauge and measuring instructions
- supplied in plastic case with inspection protocol



Guhring no. 4978

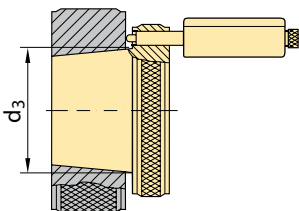
Discount group Net price

for HSK A/C/E	l ₅ mm	d ₅ mm	Code no.	Availability
25	7.21	15	19,000	●
32	8.92	19	24,000	●
40	11.42	23	30,000	●
50	14.13	29	38,000	●
63	18.13	37	48,000	●
80	22.85	46	60,000	●
100	28.56	58	75,000	●

Measuring gauges for HSK spindles

Product information

- calibration on request



Scope of delivery

- incl. calibrated setting gauge and measuring instructions
- supplied in wooden case with inspection protocol



Guhring no. 4969

Discount group Net price

for HSK	d ₃ mm	Code no.	Availability
25	0.60	19,000	●
32	0.91	24,000	●
40	1.13	30,000	●
50	1.60	38,000	●
63	3.02	48,000	●
80	4.94	60,000	●
100	8.10	75,000	●

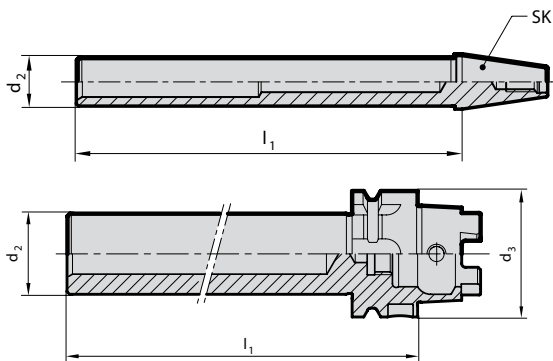
Taper proofing bars HSK/ISO

Product information

- to proof concentricity at machine spindles
- for HSK and ISO taper to DIN 69871
- calibration on request
- Guhring no. 4971 125,025 only in form E

Scope of delivery

- supplied in wooden case for vertical storage with inspection protocol



		Guhring no. 4970		Guhring no. 4971			
		Discount group 114		Discount group 114			
HSK d1	ISO taper	d2 mm	l1 mm	Code no.	Availability	Code no.	Availability
-	40	40	320	300,040	●		
-	50	40	320	300,050	●		
25	-	20	140			125,025	●
32	-	24	180			150,032	●
40	-	24	180			150,040	●
50	-	32	236			200,050	●
63	-	40	346			300,063	●
80	-	40	346			300,080	●
100	-	40	349			300,100	●

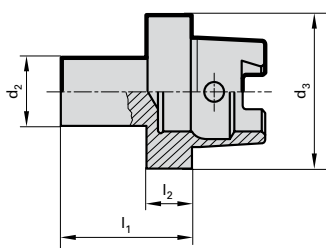
Balancing masters for HSK spindles

Product information

- for balancing HSK spindles clamping systems: holds the clamping elements in the clamped position
- balancing quality: G2.5 / 30,000 rev./min or U < 0.5 gmm
- calibration on request

Scope of delivery

- supplied in wooden case with inspection protocol



		Guhring no. 4975			
		Discount group 114			
HSK-C d3	d2 mm	l1 mm	l2 mm	Code no.	Availability
25	12	23	8	25,000	●
32	12	25	10	32,000	●
40	12	25	10	40,000	●
50	20	37.50	12.5	50,000	●
63	20	37.50	12.5	63,000	●
80	20	46	16	80,000	●
100	20	46	16	100,000	●

Clamping force measuring instrument for HSK / SK clamping systems

The accuracy of the HSK connection does not only depend on the geometry but also on the drawing force of the HSK clamping system which plays an important part in ensuring a powerful and dimensionally accurate connection.

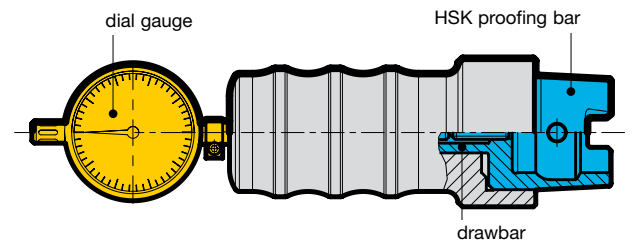
To ensure operational safety, a regular clamping force check of the HSK interface is recommended. An entirely mechanical clamping force measuring instrument is now available from Guhring. Its operation is based on components, which are linear adjustable in length and positioned proportional to the force. A force is associated with the alteration in length which is displayed via an analogue dial gauge.

Specifications::

- few components, therefore cost-efficient
- robust design
- battery or mains connection not required
- patented operating principle which is also adaptable to other spindle designs

Min. required pull forces for clamping systems

taper size HSK25	2.8 kN
taper size HSK32	5 kN
taper size HSK40	6.8 kN
taper size HSK50	11 kN
taper size HSK63	18 kN
taper size HSK80	28 kN
taper size HSK100	45 kN
taper size SK/BT30	6 kN
taper size SK/BT40	12 kN
taper size SK/BT50	25 kN



Clamping force measuring instrument

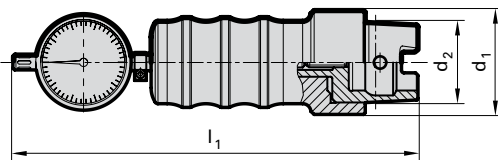
Product information

- mechanical clamping force inspection instrument for HSK / SK / BT* clamping systems in machine tool spindles

- calibration on request

Scope of delivery

- supplied in wooden case with inspection protocol, calibrated, with measuring instructions
- for SK order pull studs Guhring no. 4925, 4926 separately
- for BT* order shortened special pull studs separately



Guhring no.		4973		4974			
Discount group		114		114			
HSK-A/C/E d1	ISO taper/ BT*	d2 mm	l1 mm	Code no.	Availability	Code no.	Availability
	30	32	216	30,000	●		
	40	44	248	40,000	●		
	50	69	285	50,000	●		
25	-	19	187			19,000	●
32	-	24	192			24,000	●
40	-	30	196			30,000	●
50	-	38	203			38,000	●
63	-	48	235			48,000	●
80	-	60	250			60,000	●
100	-	75	260			75,000	●

Clamping force proofing instrument Senso 3000

The hydraulic clamping technology is a well-known, proven and reliable method for the clamping of tools. Thanks to its completely closed design the system is sealed and impervious, requires extremely 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 result can be a poor tool life and a diminished surface quality including expensive tool breakages during machining operations.

Determining the loss of clamping force was until now extremely costly and inaccurate. It involved either determining the number of clamping screw rotations or the torque with the assistance of a proofing bar and a torque key or the expansion rate applying an accurate internal measuring instrument.

The new Guhring SENSO 3000 measuring instrument offers a precise, 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. This way, SENSO 3000 can be adapted to customer specific application conditions and requirements.

The clamping force measuring instrument is supplied with a plug gauge for the respective clamping diameter as well as a carbide proofing bar for calibration purposes and a CR 2430 type battery – all in a sturdy and handy case.



Senso 3000

Scope of delivery

- supplied respectively with measuring arbor, carbide proofing arbor, battery and case



		Guhring no.	4038
		Discount group	Net price
clamping diameter mm		Code no.	Availability
	6.0	6,000	●
	8.0	8,000	●
	10.0	10,000	●
	12.0	12,000	●
	14.0	14,000	●
	16.0	16,000	●
	18.0	18,000	●
	20.0	20,000	●
	25.0	25,000	●
	32.0	32,000	●

Flow rate measuring instrument PQ 3000

Guhring's PQ 3000 enables quick and simple measuring of pressure and volume of coolant flow directly in the machine using the actual tool applied.

Guhring has developed the PQ 3000 instrument for quick, simple and direct measuring of the existing coolant pressure and rate of flow for tools with internal cooling.

PQ 3000 enables the measuring of pressure and rate of flow of coolant when the actual tool is clamped directly in the stationary tool spindle. This way, it is possible to



establish the real conditions of the relevant machine and tool configuration and measure the resulting actual rate of flow.

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 as 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.

to identify and rectify possible weak points in the overall system, this way, the tool life of the applied tool can be optimised preventing tool breakage as well as chip congestion and jamming!

PQ 3000 provides data of sensors and indicates the measuring results on the display fixture. A data interface enables an evaluation via software on your PC (interface and software are available on request).

PQ 3000

Product information

- pressure checking range: 1 to 120 bar
- rate of flow checking range: 2 to 40 l/min
- diameter holder shank: 16 mm
- diameter range tool holder: ER 32 / 6 to 20 mm
- display for existing pressure P in bar also rate of flow volume Q in l/min

Scope of delivery

- clamping fixture and checking instrument
- display fixture with grip and connection socket
- checking data cable with connector plug, length 3 m
- ER 32 collet holder and sealing washer set for standard shanks with collets from 6 to 20 mm diameter
- clamping key for tensioning nut



	Guhring no.	4068	
	Discount group	Net price	
		Code no.	Availability
case complete		10,000	●
interface and PC-Software			on request

Coolant supply measuring instrument CC 3000

With Guhring's CC 3000 you can quickly and simply check the filtering efficiency of the coolant system.

Guhring has developed the inspection instrument CC 3000 for quick, simple and direct check of the coolant filtering efficiency.

Thanks to replaceable stainless steel filters, the user can adapt the instrument specifically to the filtering of the coolant system.

CC 3000 establishes the present condition of the individual system and displays the actual filter efficiency.

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!



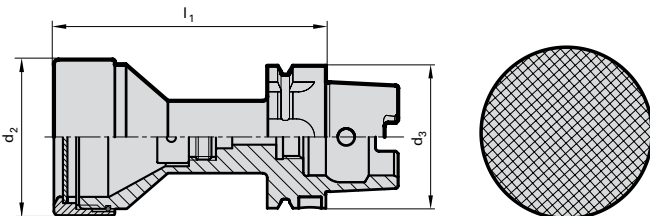
CC 3000

Product information

- range of application 50 - 500 min⁻¹
- suitable for coolant pressure up to 80 bar

Scope of delivery

- inspection instrument with HSK 63-A interface
- high-grade steel filter sizes 100, 200 and 300 µm
- refractometer including accessories
- magnifying glass, 8-fold magnification
- coolant delivery set guhring no. 4949 code 18,063
- order high-grade steel filter size 60 µm separately



Guhring no.	4076		4077	
	Net price		Net price	
Discount group	Code no.	Availability	Code no.	Availability
case complete	10,063	●		
high-grade steel filter size 60, Guhring no. 4077			60,000	●
high-grade steel filter size 100, Guhring no. 4077			100,000	●
high-grade steel filter size 200, Guhring no. 4077			200,000	●
high-grade steel filter size 300, Guhring no. 4077			300,000	●

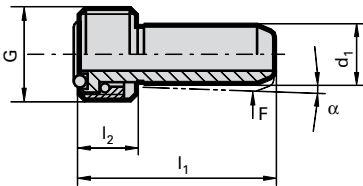
HSK-A coolant delivery sets for conventional cooling

Product information

- leak-proof screwed connection tested to 80 bar
- to DIN 69895

Scope of delivery

- incl. union nut and O-rings



Guhring no.	4949
Discount group	114

for HSK-A	d1 mm	α °	F	G	l1 mm	l2 mm	Code no.	Availability
32	6	1.2	5N	M10x1	26.0	5.5	10,032	●
40	8	1.4	5N	M12x1	29.5	7.5	12,040	●
50	10	1.3	6N	M16x1	33.0	9.5	16,050	●
63	12	1.3	6N	M18x1	36.5	11.5	18,063	●
80	14	1.4	7N	M20x1.5	40.0	13.5	20,080	●
100	16	1.4	7N	M24x1.5	44.0	15.5	24,100	●

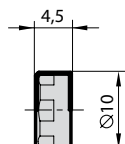
Data coding chip

Product information

- Identification systems BIS C
- for installation space to DIN 69 873
- data carrier read/write
- 511 bytes
- operating temperature 0...+70
- protection class to IEC
- product data exchange acc. to DIN 4000
- glued in bore $\varnothing 10$ H11

Scope of delivery

- data coding chip
- installation in chuck and additional balancing can be ordered separately

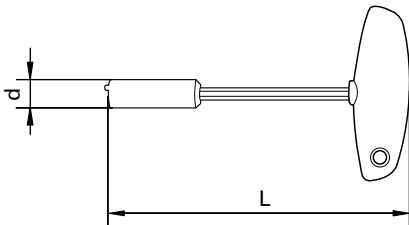


Guhring no.	4955
Discount group	114

coding chip BIS C	Code no.	Availability
10 x 4.5	10,000	●

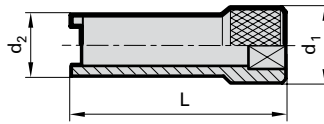
Product information

- with T-handle
- for coolant delivery sets for conventional cooling and MQL coolant delivery unit



Product information

- suitable for torque wrench Guhring no. 4915, drive 3/8"
- for coolant delivery sets



Guhring no. **4911**
Discount group **114**

for HSK	d mm	L mm	Code no.	Availability
32	11.0	115	24,000	●
40	13.0	163	30,000	●
50	15.0	163	38,000	●
63	17.0	175	48,000	●
80	20.0	179	60,000	●
100	22.5	179	75,000	●

Guhring no. **4910**
Discount group **114**

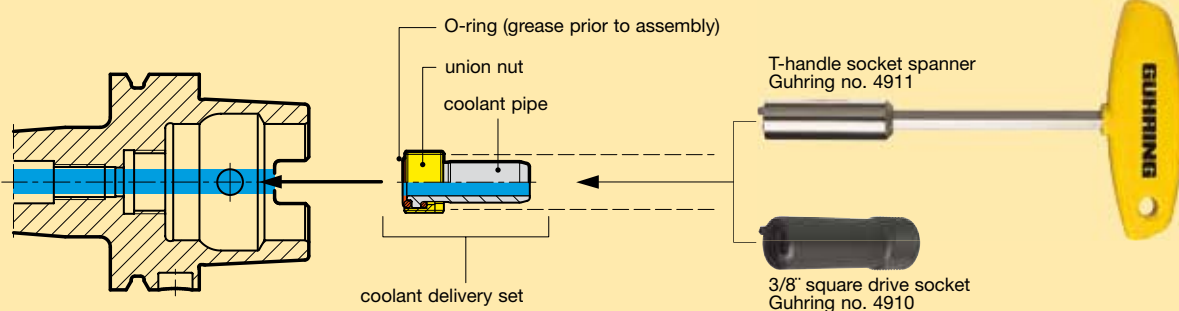
for HSK	MA Nm	d1 mm	d2 mm	L mm	Code no.	Availability
32	7	20	14	60	24,000	●
40	11	20	16	60	30,000	●
50	15	20	18	60	38,000	●
63	20	20	18	60	48,000	●
80	25	20	20	75	60,000	●
100	30	22	22	80	75,000	●

Installation of coolant delivery set 4949

1. The HSK holder must be clean, free of swarf and undamaged.
2. Grease the O-rings prior to assembly.
3. Centrally insert the complete coolant delivery set (coolant pipe, union nut and 2 O-rings) in the HSK with the assistance of the socket spanner.
4. Screw in the coolant delivery set/coolant delivery unit and tighten (see table for torque figures)
5. Check coolant pipe for radial mobility.

Torque figures

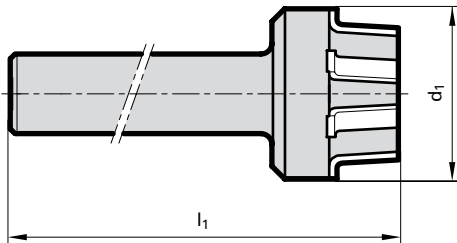
for HSK	MA Nm
32	7
40	11
50	15
63	20
80	25
100	30



HSK cleaning mandrels

Product information

- for cleaning internal tapers and the end faces on HSK
- by cleaning the contact surfaces accuracy, clamping torque and tool life of interfaces are improved
- the taper wipers are available in 3 designs, suitable for HSK and SK spindles and HPC precision chucks



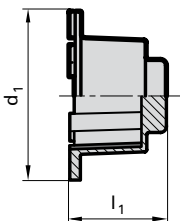
Guhring no.	4914
Discount group	114

taper type	d ₁ mm	l ₁ mm	Code no.	Availability
HSK-25	32	125	19,000	●
HSK-32	46	140	24,000	●
HSK-40	46	145	30,000	●
HSK-50	55	155	38,000	●
HSK-63	67	170	48,000	●
HSK-80	85	180	60,000	●
HSK-100	105	200	75,000	●
HPC 14 mm	24	160	14,000	●
HPC 20 mm	24	156	20,000	●
HPC 32 mm	42	170	32,000	●
ISO taper/BT30	35	168	30,030	●
ISO taper/BT40	48	188	40,000	●
ISO taper/BT50	75	240	50,000	●

HSK cleaning cap

Product information

- for cleaning the external taper and face



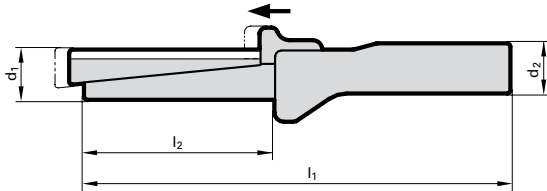
Guhring no.	4947
Discount group	114

for HSK-A/C/E	d ₁ mm	l ₁ mm	Code no.	Availability
40	53	36	1,040	●
50	66	42	1,050	●
63	83	53	1,063	●
80	103	58	1,080	●
100	125	77	1,100	●

Cylindrical cleaning mandrels

Product information

- for cleaning the bore of the tool holder
- e.g. hydraulic chucks and shrink fit chucks



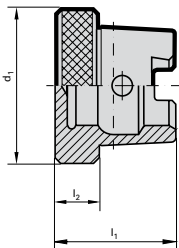
Guhring no.	4918
Discount group	114

d ₁ mm	d ₂ mm	l ₂ mm	l ₁ mm	Code no.	Availability
6	24	37	158	6,000	●
8	24	37	158	8,000	●
10	24	47	168	10,000	●
12	24	47	168	12,000	●
14	24	47	168	14,000	●
16	24	70	176	16,000	●
18	24	70	176	18,000	●
20	24	70	176	20,000	●
25	24	80	186	25,000	●
32	30	100	221	32,000	●
40	30	105	226	40,000	●

HSK-C sealing plugs

Product information

- with high coolant pressure applications, it is imperative to seal the spindle with the sealing plug for safety reasons when the machine spindle is not fitted with a tool. The sealing plug protects the spindle from contamination.



Guhring no.	4985
Discount group	114

HSK-C	d ₁ mm	l ₁ mm	l ₂ mm	kg	Code no.	Availability
32	34	26.0	10.0	0.07	32,000	●
40	42	30.0	10.0	0.11	40,000	●
50	52	37.5	12.5	0.23	50,000	●
63	65	44.5	12.5	0.39	63,000	●
80	82	56.0	16.0	0.81	80,000	●
100	102	66.0	16.0	1.36	100,000	●

Tool setting fixture

Product information

- for HSK shanks HSK 32, 40, 50 and 63, form A, C, E and F
- the HSK shanks are clamped vertically and horizontally at the collar. Therefore, all tapers with the same diameter of the collar can be clamped with one fixture.

Scope of delivery

- incl. holder adaptors



					Guhring no.	4946	
					Discount group	114	
for HSK-A/C	length mm	width mm	height mm	kg	Code no.	Availability	
32	260	130	160	9	450,032	●	
40	260	130	160	9	450,040	●	
50	260	130	160	9	450,050	●	
63	260	130	160	9	450,063	●	

Tool setting fixture

Scope of delivery

- incl. interchangeable discs Guhring no. 4991



Interchangeable discs

Product information

- for tool setting fixture, Guhring no. 4990

Scope of delivery

- 1 pair



							Guhring no.	4990	
							Discount group	114	
for HSK-A/C	for ISO taper	length mm	width mm	height mm	kg	Code no.	Availability		
-	40	260	130	160	9	400,040	●		
-	50	260	130	160	9	400,050	●		
63	-	260	130	160	9	450,063	●		
80	-	260	130	160	9	450,080	●		
100	-	260	130	160	9	450,100	●		

				Guhring no.	4991	
				Discount group	114	
for HSK-A/C	for ISO taper	kg	Code no.	Availability		
-	40	1.50	400,100	●		
-	50	1.50	400,200	●		
32	-	0.82	450,100	●		
40	-	0.85	450,200	●		
50	-	0.09	450,300	●		
63	-	0.12	450,400	●		
80	-	0.27	450,500	●		
100	-	0.46	450,600	●		

Torque wrenches

Product information

- with ratchet
- torque range 1...200 Nm; with automatic short distance release; can be heard, seen and felt when the set value is reached. Release accuracy $\pm 4\%$ of the scale value.
- type "D" is pre-set to 12 Nm suitable for our HPC chucks Guhring no. 4300, 4301, 4243, 4244



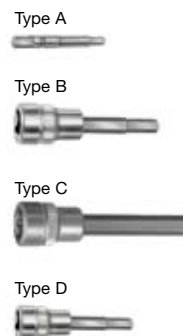
Guhring no.	4915
Discount group	114

type	drive	L mm	torque Nm	Code no.	Availability
A	1/4"	160	1-5	5,001	●
B	3/8"	390	5-50	50,000	●
C	1/2"	480	20-200	200,000	●
D	1/4"	100	12	12,000	●

Socket/attachments

Product information

- for hexagon socket screws



- Type A: 1/4"-hexagon drive
- Type B: 3/8"-square drive
- Type C: 1/2"-square drive
- Type D: 1/4"-square drive

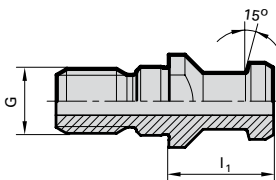
Guhring no.	4916
Discount group	114

SW	drive	L mm	torque wrenches type	Code no.	Availability
2	1/4"	50	A	2,019	●
2.5	1/4"	50	A	2,524	●
3	1/4"	50	A	3,030	●
3	3/8"	50	B	3,038	●
4	1/4"	55	D	4,000	●
4	3/8"	100	B	4,038	●
5	3/8"	100	B	5,048	●
6	3/8"	100	B	6,060	●
8	3/8"	100	B	8,075	●
6	1/2"	120	C	6,038	●
8	1/2"	120	C	8,048	●
10	1/2"	140	C	10,060	●

Pull studs DIN 69872, form A

Product information

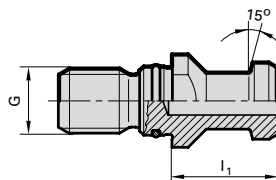
- for ISO taper tool holders to DIN 69871 form AD
- through hole for central coolant delivery



Pull studs DIN 69872, form B

Product information

- for ISO taper tool holders to DIN 69871 form B
- sealed for coolant delivery above the collar



Guhring no. **4925**

Discount group **114**

for ISO taper	G	l ₁ mm	Code no.	Availability
40	M16	26	40,000	●
50	M24	34	50,000	●

Guhring no. **4926**

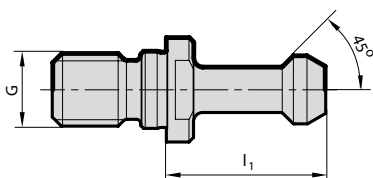
Discount group **114**

for ISO taper	G	l ₁ mm	Code no.	Availability
40	M16	26	40,000	●
50	M24	34	50,000	●

Pull studs

Product information

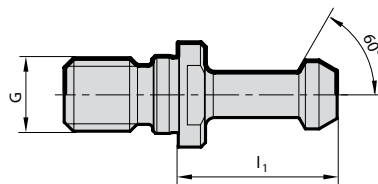
- for tool holders to JIS B 6339 (MAS 403 BT)
- 45° clamping shoulder angle
- design with through hole on request



Pull studs

Product information

- for tool holders to JIS B 6339 (MAS 403 BT)
- 60° clamping shoulder angle
- design with through hole on request



Guhring no. **4927**

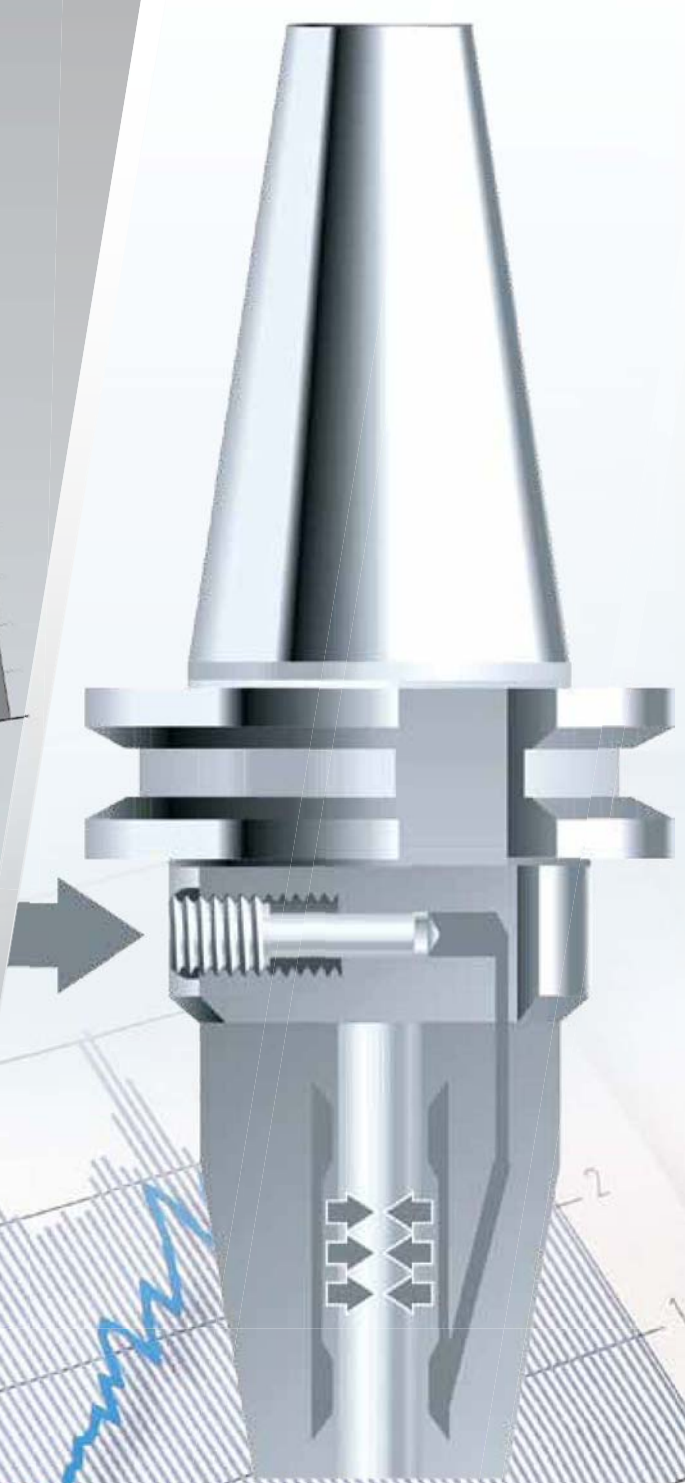
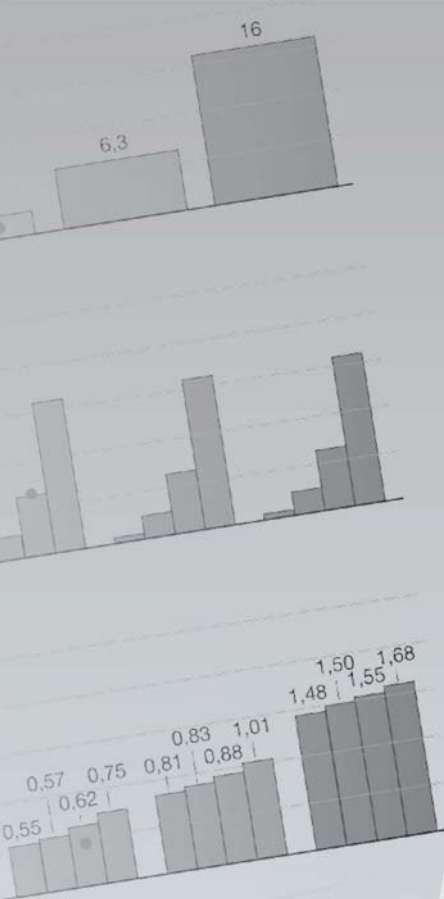
Discount group **114**

for MAS/BT	G	l ₁ mm	Code no.	Availability
30	M12	23	30,000	●
40	M16	35	40,000	●
50	M24	45	50,000	●

Guhring no. **4928**

Discount group **114**

for MAS/BT	G	l ₁ mm	Code no.	Availability
30	M12	23	30,000	●
40	M16	35	40,000	●
50	M24	45	50,000	●



TECHNICAL INFORMATION



Comparison of tool holder characteristics

Clamping chucks / tool holders for straight tool shanks	TSG 3000 / shrink fit chucks / shrink fit extensions	Hydraulic chucks / HMC 3000 / reduction bushes
		
Characteristics	maximum concentricity; very slender non-interference; good rigidity; high clamping force; modular lengthening; patented dampening screw ensures concentricity	high dampening with maximum concentricity; simple handling; flexible application thanks to reduction bushes also with GÜHROJET
Main application	drilling, countersinking, milling, reaming, universal and HSC applicatio	reaming, drilling, countersinking, HSC application, light milling
Main feature	accurate and universal; slender; high clamping force	simple handling
Concentricity	$< 3\mu\text{m}$	$< 3\mu\text{m}$
with 5xD	$< 5\mu\text{m}$	$< 5\mu\text{m}$
Clamping force	very high	very high
Rigidity	very high	high
Dampening	low	very high
Interference contour	small / minimal	medium
Handling	good	very good / very flexible
Actuation	shrink fit device	hexagon key

HPC precision power chucks / clamping sleeves	Straight shank holders “Weldon” / “Whistle-Notch”	Collet chucks ER
		
<p>maximum clamping force and rigidity thanks to mechanical clamping transmission; high accuracy and balancing quality; flexible application thanks to clamping sleeves also with GÜHROJET</p>	<p>robust, cost-efficient clamping chuck for heavy machining in the lower speed and accuracy range</p>	<p>very flexible clamping chuck for various shank dimensions and tolerances; for lower level machining tasks</p>
<p>heavy HPC and fast accurate HSC milling, drilling, universal application</p>	<p>roughing, milling, drilling</p>	<p>light machining, centering, chamfering, drilling, threading; intermediate shank dimensions</p>
<p>highest clamping force and rigidity</p>	<p>simple operation; secure clamping</p>	<p>highly flexible</p>
<p>< 3µm</p>	<p>< 10µm</p>	<p>< 10µm</p>
<p>< 8µm</p>	<p>< 25µm</p>	<p>< 20µm</p>
<p>extremely high</p>	<p>very safe</p>	<p>medium</p>
<p>extremely high</p>	<p>very high</p>	<p>low</p>
<p>high</p>	<p>low</p>	<p>high</p>
<p>medium</p>	<p>large</p>	<p>large (mini = small)</p>
<p>very good / flexible</p>	<p>good</p>	<p>good</p>
<p>hexagon key / torque wrench</p>	<p>hexagon key</p>	<p>hook spanner</p>

The HSK interface

TECHNICAL INFORMATION AND ADVANTAGES



Fig. 1:
HSK-A 63 interface,
automatic tool change

Our modular tooling system GM 300 has been developed for the application of rotating and stationary tools. 1987 we developed the GM 300 coupling. Standardization for this interface (DIN 69893) was obtained in 1991. 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 (fig. 1) 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 (fig. 2). Recommended values for the GM-300 module for manual clamping.

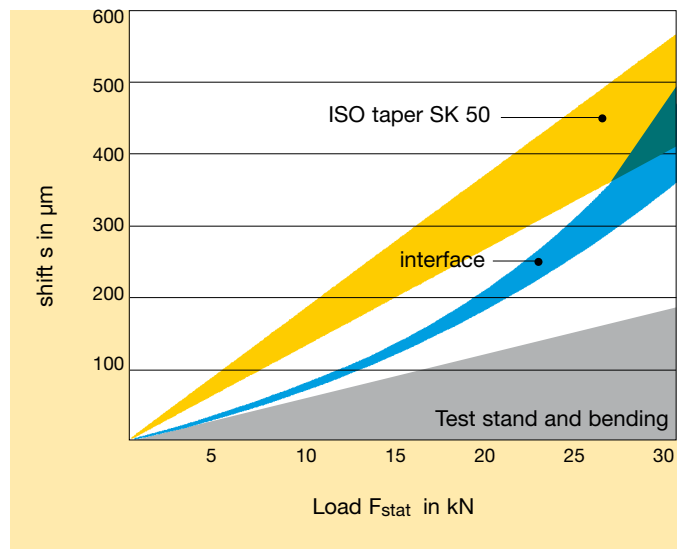
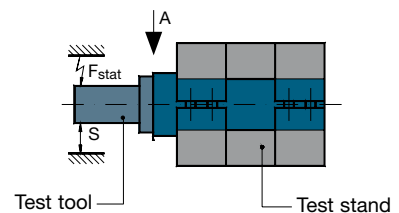


Fig. 2
Static deflection: Comparison between ISO taper 50 and automatic interface HSK-A 100 (A)

ISO taper DIN 2080 DIN 69871	HSK form A/C/(E) DIN 69893 part 1	HSK form B/D/(F) DIN 69893 part 2
–	HSK 40	HSK 50
SK30	HSK 50	HSK 63
SK40	HSK 63	HSK 80
SK45	HSK 80	HSK 100
SK50	HSK 100	HSK 125

Association between ISO taper - hollow taper shank

- **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 (fig. 3). Two keys engage with the shank end of the tool holder and provide form-closed, radial positioning, thereby excluding any possible setting errors.

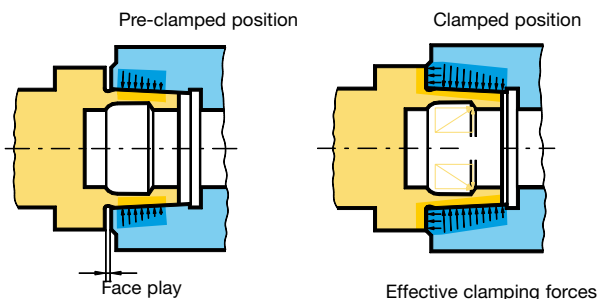
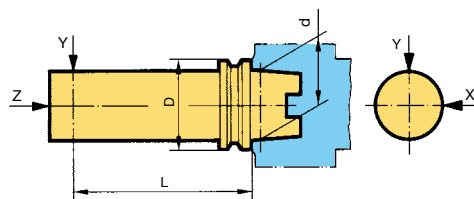


Fig. 3
Prestressing and frictional forces of hollow taper shank at the interface.

- **High tool change accuracy and repeatability**

The circular form engagement of the clamping claws within the hollow tool shank provides a totally tight connection between the shank and spindle or holder respectively (fig. 3 and 4).



HSK-size D	d mm	L mm	X mm	Y mm	Z mm
32	24	50	0.002	0.002	0.002
40	30	60	0.002	0.002	0.002
50	38	75	0.002	0.002	0.002
63	48	100	0.002	0.002	0.002
100	75	150	0.002	0.002	0.002

Fig. 4
Radial and axial repeatability of interface for manual and automatic clamping

- **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 (fig. 3). The plane clamping position prevents any slipping in the axial direction.

- **Short tool changing time**

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 (fig. 5).

- **Coolant feed**

The tools for automatic clamping, HSK-A and E, are designed for a central coolant feed by means of a duct. 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.

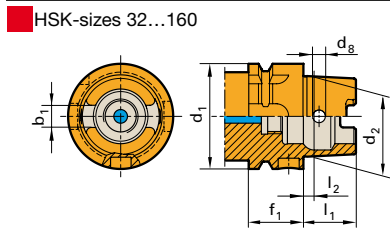
- **Installation of the coolant supply set**

Coolant supply sets are to be ordered separately for all GM 300 modules. The installation of the coolant duct must be carried out by the user.

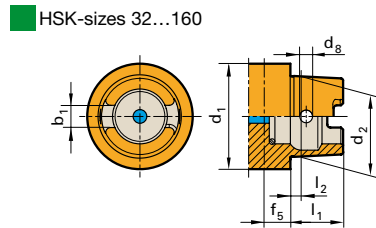
The HSK interface

GENERAL OVERVIEW OF HSK SHANKS ISO 12164-1/DIN 69893

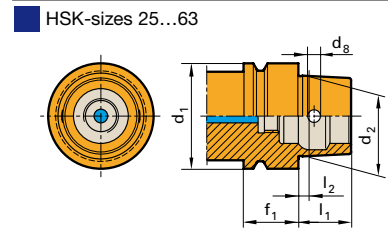
Form A DIN 69893 part 1



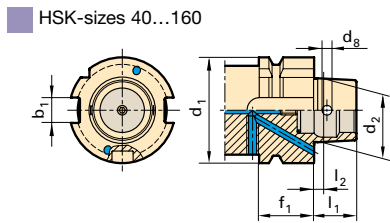
Form C DIN 69893 part 1



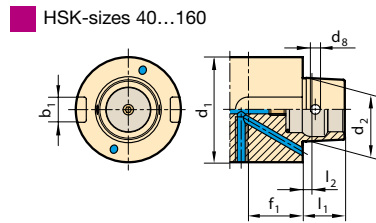
Form E DIN 69893 part 5



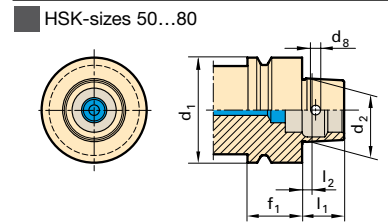
Form B DIN 69893 part 2



Form D DIN 69893 part 2



Form F DIN 69893 part 6



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 connection.

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 connection.

HSK for automatic tool change. Torque is transmitted through highly accurate connection. Version with access hole acc. to DIN 69893-1 by arrangement.

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 25	to 60.000 rev./min
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

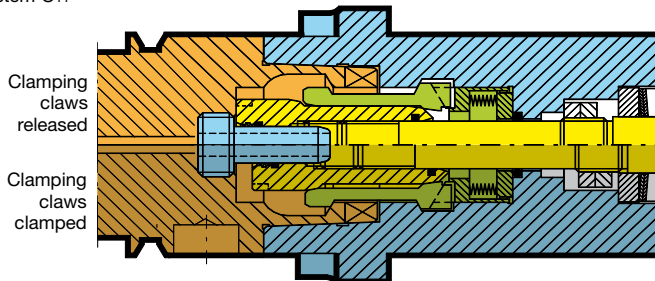
The HSK interface

THE AUTOMATIC TOOL CLAMPING

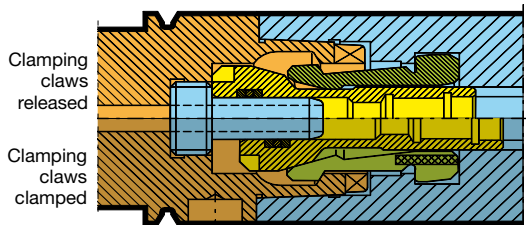
For the automatic interface the forces are introduced axially via a draw bar. A clamping taper simultaneously causes a radial movement of the clamping segments which, in turn, engage with the clamping shoulder of the tool shank and lock the coupling absolutely play-free. The clamping mechanism increases the draw-in force on the plane face by a factor of 3.5. General application in machining centers and turning centres using an automatic tool changing method. Such clamping systems are currently being offered by Messrs. Ott, Ortlieb, Berg and Röhm (fig. 6).

Fig. 6
Spindle interfaces with clamping devices

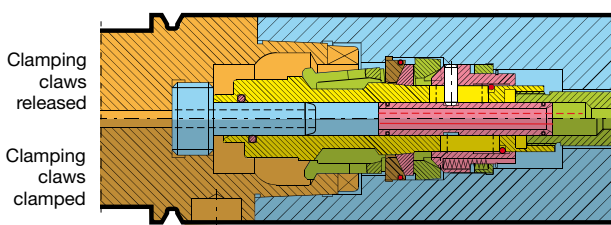
System OTT



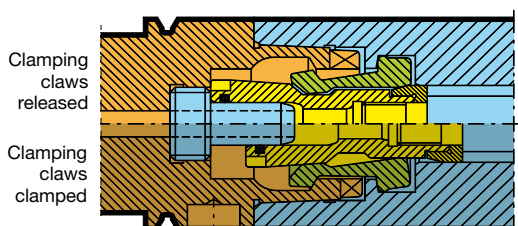
System ORTLIEB (licence Fa. Guhring)



System BERG (licence Fa. Guhring)

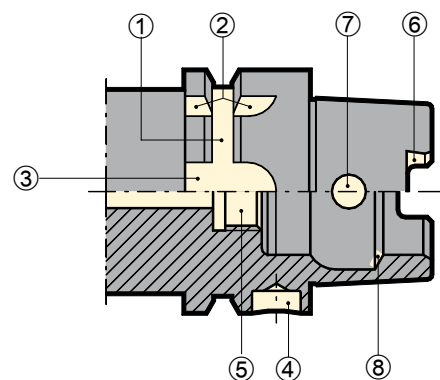
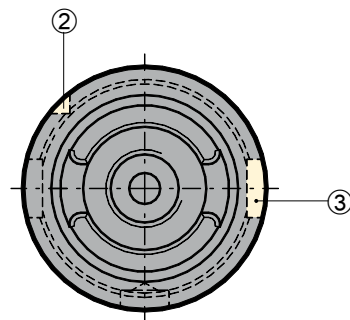


System RÖHM (licence Fa. Guhring)



Term definitions of HSK-A interface for automatic tooling systems

- ① Gripper groove: circular groove
- ② Index notch: sickle-shaped notch across gripper groove
- ③ Keyway on collar: index notch or for attachment in tool magazine or grippers. With HSK-B/D also provides form closed torque transmission to spindle.
- ④ Coding/identification: bore in collar for attachment of identification system (coding chip)
- ⑤ Thread for coolant: for attachment of coolant supply set
- ⑥ Keyway on taper shank: form closed torque transmission to spindle
- ⑦ Radial bore in taper shank: necessary for manual clamping systems
- ⑧ Clamping shoulder: circular chamfer for drawing in the tool



Note:

We like to point out, that HSK-A can be used alternatively to HSK-C with manual clamping systems e.g. 4-point clamping set or PowerClamp. The only difference is the overall length, which is slightly longer. That is why we have decided to have certain tool holders only as form C as standard.

The HSK interface

THE MANUAL TOOL CLAMPING

Operating instructions for manual tool clamping

- Do not exceed the maximum torque figures for the clamping screw of the 4-point clamping set and the PowerClamp system.
- The thread of the clamping screw of the manual clamping set is supplied pre-greased. Following pro-longed operating periods it may be necessary grease otherwise the require clamping force cannot be obtained.
- At tool changing the plane surface and spindle has to be cleaned. Dirt will restrain the perfect function of the tool system. The inner taper of the spindle can be cleaned with cleaning unit, Guhring no. 4914.
- The spindle should be sealed with a plug, Guhring no. 4985, when running without tool to prevent the ingress of foreign matter into the clamping sets and HSK tool systems.

Exemplary interface design



Spindle connection dimensions see page 208/209

Detailed drawings of the spindle connection contours are available on request for the following:

Guhring no. 4385 Short HSK adaptor		Guhring no. 4554 PowerClamp clamping set	
Guhring no. 4386 HSK adaptor (in front)		Guhring no. 4958 4-point clamping set	
Guhring no. 4582 HSK adaptor (in front) for turning centres		Guhring no. 4930 MQL 4-point clamping set	
Guhring no. 4584 HSK adaptors (integrated axial plane)		Guhring no. 4553 Al collar for adjustmen	
Guhring no. 4586 HSK adaptor (in front)h		Guhring no. 4953 Brass collar	

ISO taper DIN 69871 and MAS-BT JIS B 6339 tool holders

TECHNICAL INFORMATION AND ADVANTAGES

Guhring has considerably expanded its ISO taper and MAS-BT tool holder program. Naturally, the tool holders are of the usual high Guhring quality. This means: ISO taper and MAS-BT tool holders are produced in a special, alloyed case hardened steel with a minimum tensile strength at the core of 900 N/mm², hardened in a low distortion hardening process to HRC 58 at a case hardening depth of 0.8 to 1.0 mm. For reasons of longevity, the surface of the tool holder is subjected to an abrasive blasting process and protected against corrosion.

Quality through precision

Guhring's demand for highest precision also applies to tool holders. Therefore, ISO taper and MAS-BT chucks are precision ground: in the vicinity of the ISO taper to Ra ≤ 0.2, at the holder face to Ra ≤ 0.4. The taper tolerance is better than AT 3 with a measuring accuracy of ≤ 1 μm. Detailed information regarding the form and positional tolerances can be found for the individual tool holders on the respective pages in the catalogue. The tolerances of the holder bore and the spigot are approximately 2/3 of the DIN tolerance.

Balancing

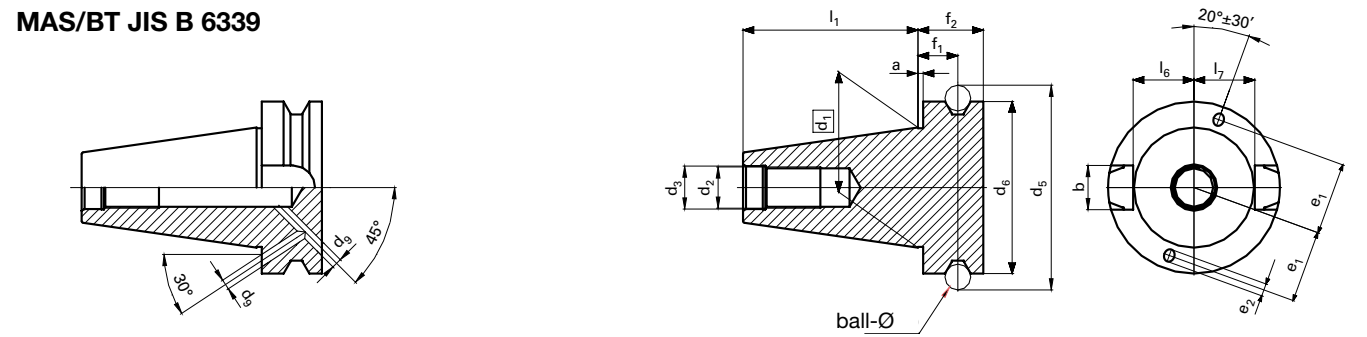
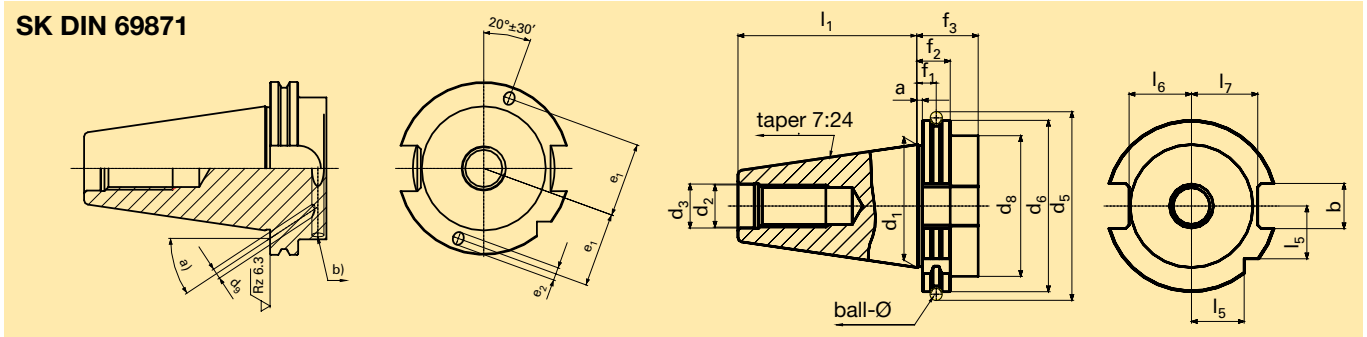
Tool holders suitable for increased speeds are generally pre-balanced. For this purpose, we have determined the imbalance and entered the balancing areas as well as balancing bores on the drawings. This levels out the imbalance to a large extent and up to approximately 8000 rev./min precision balancing is unnecessary. For higher revolutions, the pre-balanced tool holders must be precision balanced to G 6.3 or G 2.5 respectively.

Type AD/B

ISO taper tool holders generally produced are type AD/B. Supplied is type AD, the coolant bores at the collar are sealed with screws.

General dimensions and tolerances

The following dimensions apply to our ISO taper and MAS-BT tool holders:

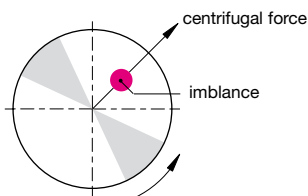


ISO taper	a mm	ball-Ø mm	b mm	d ₁ mm	d ₂ mm	d ₃ mm	d ₅ mm	d ₆ mm	d ₈ mm	d ₉ mm	e ₁ mm	f ₁ mm	f ₂ mm	f ₃ mm	l ₁ mm	l ₅ mm	l ₆ mm	l ₇ mm
SK30	3.2	7	16.1	31.75	M12	13	59.3	50.00	45	4	21	11.1	19.1	35	47.80	15.00	16.4	19.0
SK40	3.2	7	16.1	44.45	M16	17	72.3	63.55	50	4	27	11.1	19.1	35	68.40	18.5	22.8	25.0
SK50	3.2	7	25.7	69.85	M24	25	107.25	97.50	80	6	42	11.1	19.1	35	101.75	30.0	35.5	37.7
BT30	2.0	8	16.1	31.75	M12	12.5	56.144	46.00	-	-	-	13.6	22.0	-	48.40	-	16.3	16.3
BT40	2.0	10	16.1	44.45	M16	17	75.679	63.00	-	4	27	16.6	27.0	-	65.35	-	22.6	22.6
BT50	3.0	15	25.7	69.85	M24	25	119.019	100.00	-	5.4	42	23.2	38.0	-	101.75	-	35.4	35.4

Imbalance

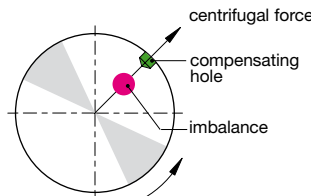
An imbalance produces a centrifugal force during the rotation of the spindle impeding the smooth running of the tool. This imbalance influences the working process and the life span of the spindle bearings. The centrifugal force F increases linear with the imbalance U and squared with the number of revolutions according to the formula below.

$$F = U \cdot \omega$$



Counter balancing

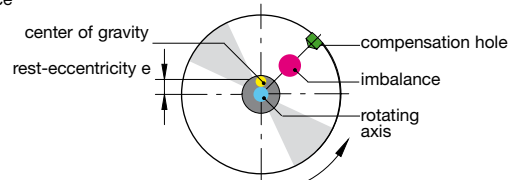
To compensate for unwanted centrifugal forces, the symmetrical distribution of mass must be restored with the aim of eliminating any centrifugal forces influencing the spindle bearing. Tool holders generally have compensation holes or areas which assist in directing the total amount of all centrifugal forces influencing the axis towards zero (see DIN ISO 1940).



Eccentricity of center of gravity

The imbalance of a spindle causes its center of gravity to deviate a certain distance from the rotating axis in direction of the imbalance. This distance is called rest-eccentricity e or eccentricity of center of gravity. The heavier the weight of the balance body mass m , the greater the rest-imbalance U permissible.

$$e = \frac{U}{m}$$



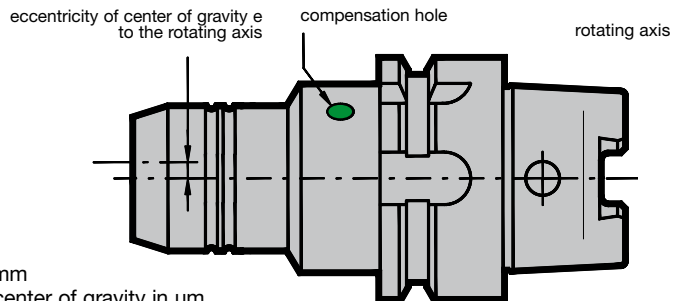
Calculation imbalance

Imbalance is a measure, specifying how much unsymmetrical distributed mass deviates radially from the rotating axis.

Imbalance is measured in gmm. The measure of distance e determines the distance of the center of gravity of an element to the rotating axis. Imbalance is calculated as follows:

$$U = m \cdot e$$

U = imbalance in gmm
 e = eccentricity of center of gravity in μm
 m = mass in kg



Balancing limits

In accordance with DIN ISO 1940 the balance grade is denoted with G as well as the units gmm/kg or μm respectively and is relative to the number of revolutions. At a speed of 15.000 rev./min and a weight of 1 kg, G6.3 corresponds with a permissible center deviation between rotational axis and center of gravity axis of the spindle of 4 μm .

At twice the speed of 30,000 rev./min it would be 2 μm . If the tool holder was only half the weight, i.e. 0.5 kg, the permissible counter balancing tolerance is also halved.

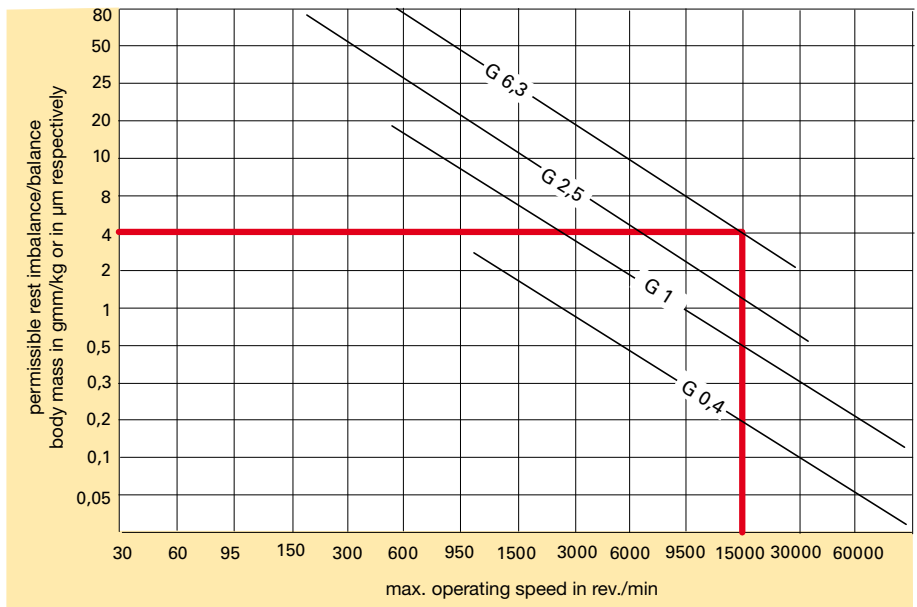
Aim of counter balancing is to find a compromise between the technically feasible and the economically efficient. Because the radial interchange accuracy for a brand-new HSK holder can be 2 to 3 μm and for an ISO taper shank holder

can be 5 to 10 μm , it means an initial quality limit of G2.5 or G6.3 respectively at 10,000 rev./min.

The following diagram shows the quality grades to DIN ISO 1940-1, i.e. the permissible rest imbalance in relation to the balance body mass for different counter balance qualities G relative to the maximum operating speed.



Balancing machine



Guhring tool holders are balanced to G6.3/15,000 rev./min. As an option, i.e. when specified by the machine tool manufacturer, it is possible to precision balance including balancing protocol to a rest imbalance of 0.3 gmm.

Calculation the balancing grade total of the assembled system:

Spindle - tool holder - tool

Illustration of balancing grade total

$$IB_{total} = IB_{Spindle} + IB_{tool\ holder} + IB_{tool}$$

Example:

$$IB_{total} = IB_{Spindle} (G\ 0.4) + IB_{tool\ holder} (G2.5) + IB_{tool} (G6.3)$$

Calculation of rest imbalance

$$U = \frac{G \cdot 60}{2 \cdot \pi \cdot n} \cdot m$$

m in g U in gmm

$IB_{Spindle} = \frac{0.4 \cdot 60}{2 \cdot \pi \cdot 30.000} \cdot 15.000 = 1.910$

$IB_{tool\ holder} = \frac{2.5 \cdot 60}{2 \cdot \pi \cdot 30.000} \cdot 1125 = 0.895$

$IB_{tool} = \frac{6.3 \cdot 60}{2 \cdot \pi \cdot 30.000} \cdot 215 = 0.431$

m total in g: 16.340

IB_{total} in gmm: 3.236

Balancing grade conversion of the total system

$$G = IB_{total} \cdot 2 \cdot \pi \cdot \frac{n}{60 \cdot m_{ges}}$$

Example:

$$G = 3.236 \text{ gmm} \cdot 2 \cdot \pi \cdot \frac{30.000 \frac{U}{min}}{60 \text{ s} \cdot 16340 \text{ g}} = 0,62$$

Spindle with 4-point clamping set
Guhring no. 4958,
code no. 48,000

2.25 gmm
2 μm

Spindle Balancing grade of rotating components

Hydraulic chuck
Guhring no. 4699
code no. 12,063

0.65 gmm
3 μm

Die sinking cutter
Guhring no. 1942
code no. 12,000

Sum of total system

Tool holder eccentricity 2 μm

Tool eccentricity 3 μm

Balancing grade total
n = 30,000 rev./min

Shrink fit chucks and shrink fit systems

TECHNICAL INFORMATION 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.

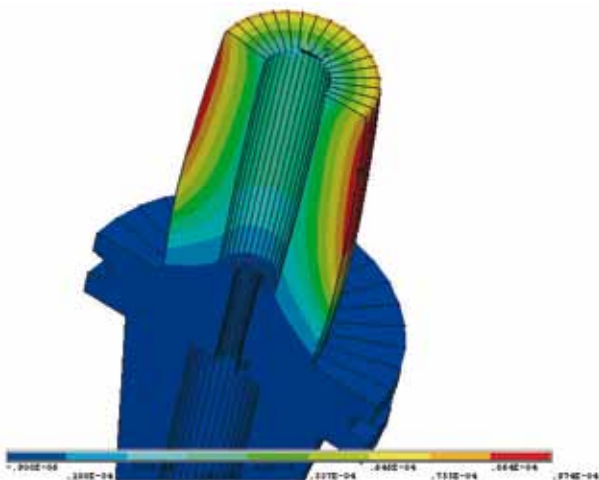
Convincing characteristics:

- excellent concentricity
- extreme clamping force and rigidity
- improved tool life
- insignificant imbalance through rotation symmetry
- economic efficiency

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.

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 multi-faceted GSS 2000 with various equipment options:

- GSS 5000
- GSS 3000
- HSV 2000
- GSS 2500
- GSS 2000

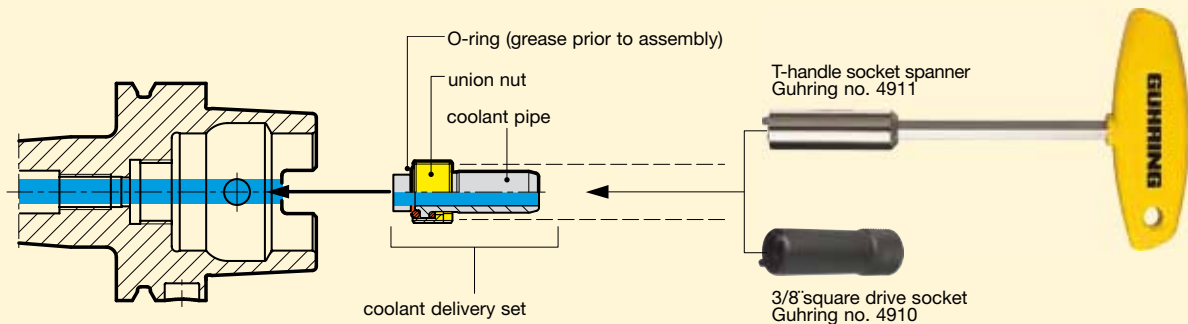


1. The HSK holder must be clean, free of swarf and undamaged.
2. Grease the O-rings prior to assembly.
3. Centrally insert the complete coolant delivery set (coolant pipe, union nut and 2 O-rings) in the HSK with the assistance of the socket spanner. When inserting the MQL coolant delivery unit, it is paramount to ensure that the MQL pipe is inserted centrally and undamaged into the MQL length setting screw (do not kink).
4. Screw in the coolant delivery set/coolant delivery unit and tighten (see table for torque figures)
5. Check coolant pipe for radial mobility.

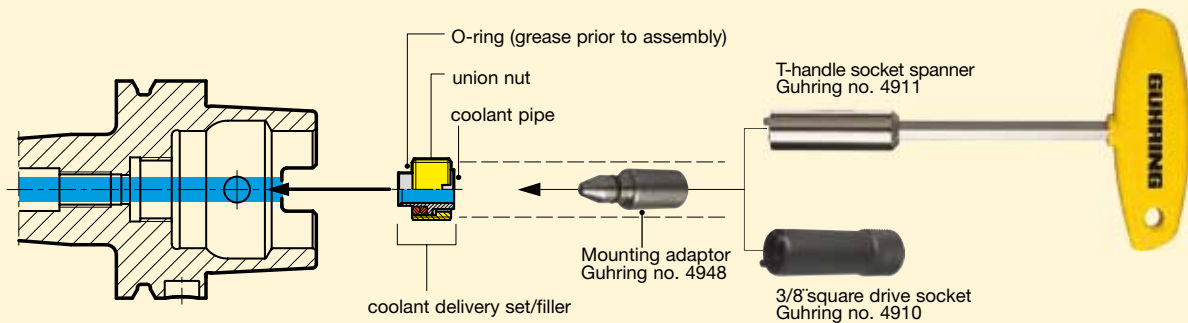
Torque figures

for HSK	MA Nm
32	7
40	11
50	15
63	20
80	25
100	30

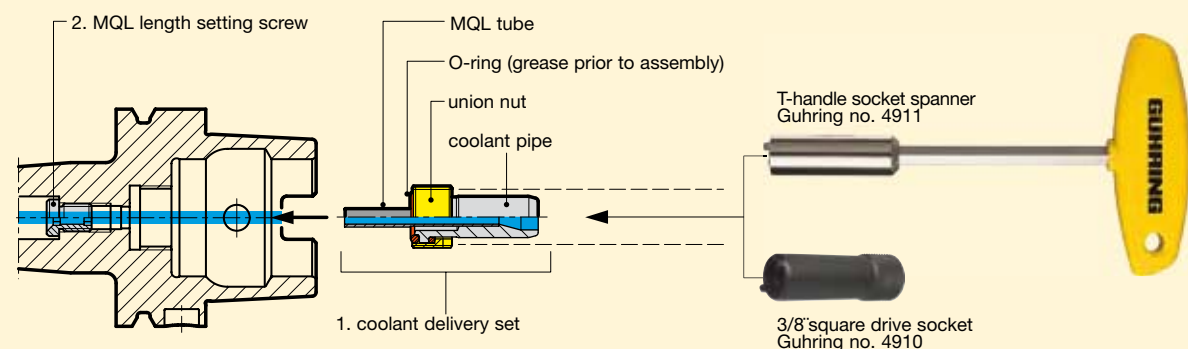
Installation of MQL coolant delivery set 4939



Installation of MQL coolant delivery set filler 4940



Installation of MQL coolant delivery unit 4623/4924



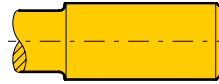
Clamping standard tool shanks to DIN 6535 in hydraulic chucks

Direct clamping
of tool preferred
run-out ≤ 0.003 mm

Form HA $\varnothing 6 \dots 20$ mm



Form HA $\varnothing 25 \dots 32$ mm



Form HB $\varnothing 6 \dots 20$ mm



Clamping of tool shank
only with reduction bushes
run-out ≤ 0.005 mm

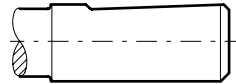
Form HB $\varnothing 25 \dots 32$ mm



Form HE $\varnothing 6 \dots 20$ mm



Form HE $\varnothing 25 \dots 32$ mm



General notes:

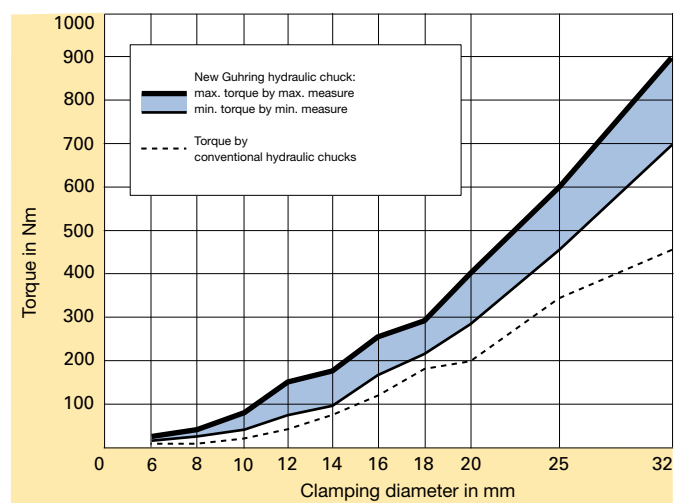
Our hydraulic chucks must not be operated with motor-driven tools (impulse screwdrivers or similar). The hexagonal key should not exceed the key size over its entire length, this largely prevents excessive torque being transferred. We recommend the hexagon clamping key, Guhring no. Art. 4912. A tightening moment of 10 Nm must not be exceeded.

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 $\varnothing 32$ mm, but also shanks according to DIN 6535 form HA and HB up to $\varnothing 20$ 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!

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 μ m 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.

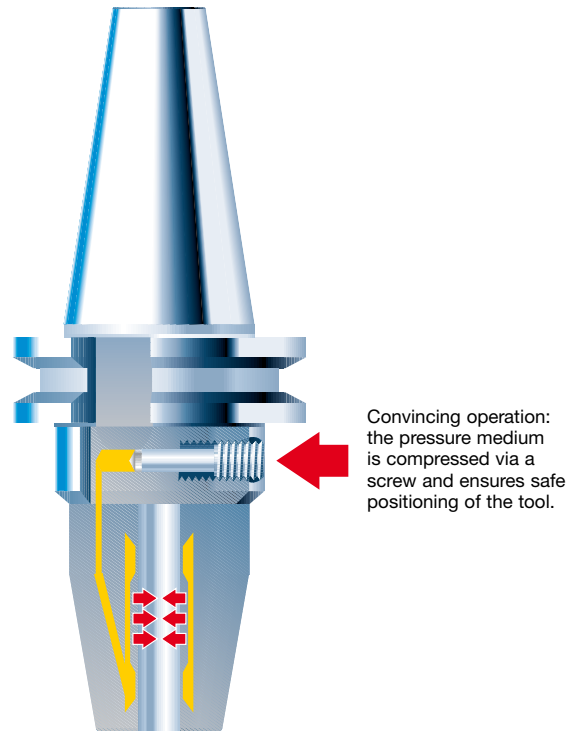
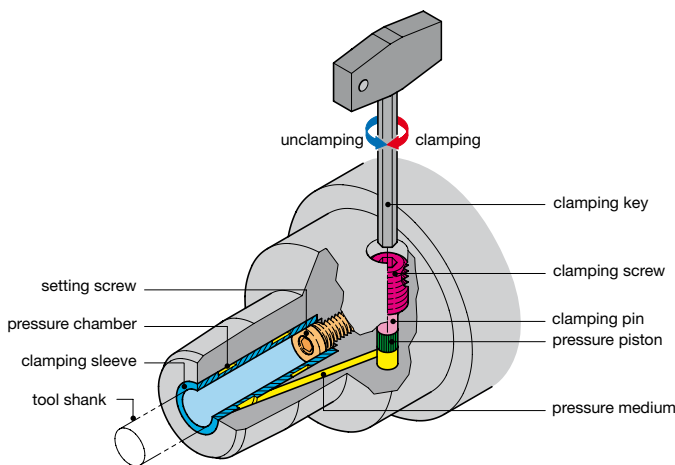


Considerably higher:
The clamping force of Guhring's new HSK-A hydraulic chuck in comparison to conventional chucks.

Modern machining processes place heavy demands on tool holding. Hydraulic chucks provide 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

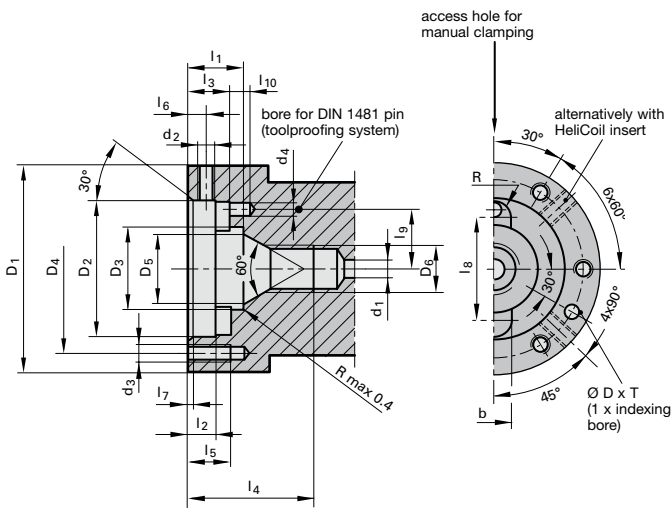


for shank-Ø in mm	max. r.p.m. in 1/min	max. transferable torque in Nm	min. insertion depth in mm	max. adjust- ment l ₃ mm	max. rad. force F on chuck with 50 mm from the nose in N	operating temperature in °C	max. coolant pressure in bar
6 h6	50 000	16	27	10	225	20 - 50	80
8 h6	50 000	26	27	10	370	20 - 50	80
10 h6	50 000	50	31	10	540	20 - 50	80
12 h6	50 000	82	36	10	650	20 - 50	80
14 h6	50 000	125	36	10	900	20 - 50	80
16 h6	50 000	190	39	10	1410	20 - 50	80
18 h6	50 000	275	39	10	1580	20 - 50	80
20 h6	50 000	310	41	10	1860	20 - 50	80
25 h6	25 000	520	47	10	4400	20 - 50	80
32 h6	25 000	770	51	10	6500	20 - 50	80

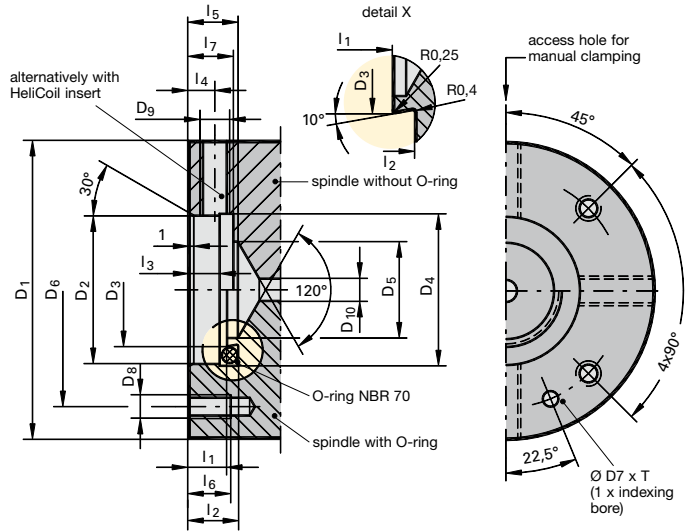
INSTALLATION DIMENSIONS FOR HSK ADAPTOR

Detailed production drawing on request

Short spindle adaptor (integr.) Guh. no. 4385



HSK adaptor (in front) Guh. no. 4386/4586



Short spindle adaptor (integr.) Guh. no. 4385

for HSK/Code no.	D1	D2	D3	D4	D5	D6	d1	d2	d3	d4
32 24,000	40	27.0	16.7	32.0	12.5	M 10	4.0	M 3	M 3	2
40 30,000	50	33.5	20.6	40.5	16.0	M 12	5.0	M 4	M 4	3
50 38,000	63	42.0	25.5	52.0	20.0	M 16	6.0	M 5	M 5	4
63 48,000	80	55.0	33.0	66.0	25.0	M 20	8.0	M 6	M 6	4
80 60,000	100	68.0	41.0	82.0	32.0	M 24	10.2	M 8	M 8	5

Short spindle adaptor (integr.) Guh. no. 4385 continuation

for HSK/Code no.	clamping depth l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	l ₁₀	b	R	D	T	locating pin DIN 1481
32 24,000	9.0	4.0	6.5	22	10	2.5	0.6	20.5	11.5	3.5	7.0	3.0	3.5	3.0	2 x 6
40 30,000	12.0	5.5	8.7	30	11	3.5	0.6	25.0	14.5	5.0	8.0	4.0	4.0	3.5	3 x 8
50 38,000	16.0	8.0	12.0	36	12	5.0	0.8	31.5	18.3	6.0	10.5	5.0	4.0	3.5	4 x 10
63 48,000	20.0	10.0	15.0	48	15	6.0	1.0	41.0	22.5	5.0	12.5	6.0	4.0	3.5	4 x 10
80 60,000	25.6	13.0	19.3	60	14	7.5	1.0	50.0	28.0	6.0	16.0	7.5	5.0	4.5	5 x 12

HSK adaptor (in front) Guh. no. 4386

for HSK/Code no.	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	T	O-ring
25 19,000	45	23	16.5	24	-	35	-	M5	M5	3.2	8.2	9.5	6.2	4.5	-	14	9	-	16x2
32 24,000	60	30	23.5	31	-	44	5	M5	M8x1	4.0	10.3	12.4	8.3	7.0	-	11	12	3.5	23x3
40 30,000	70	35	28.5	36	22	53	5	M6	M8x1	5.0	10.3	12.4	8.3	7.0	12	14	12	3.5	28x3
50 38,000	80	40	30.5	41	26	63	5	M6	M8x1	6.0	10.3	13.3	8.3	7.0	12	14	12	3.5	30x4
63 48,000	100	50	38.5	51	34	79	5	M8	M10x1	8.0	12.3	16.1	10.3	8.0	15	15	14	3.5	38x5
80 60,000	117	60	47.5	61	38	96	6	M8	M10x1	10.2	12.3	16.1	10.3	8.0	20	15	14	4.5	47x5
100 75,000	140	80	65	81	53	119	6	M10	M10x1	12.0	12.3	16.1	10.3	8.0	20	20	14	4.5	45x5

HSK adaptor (in front) Guh. no. 4586

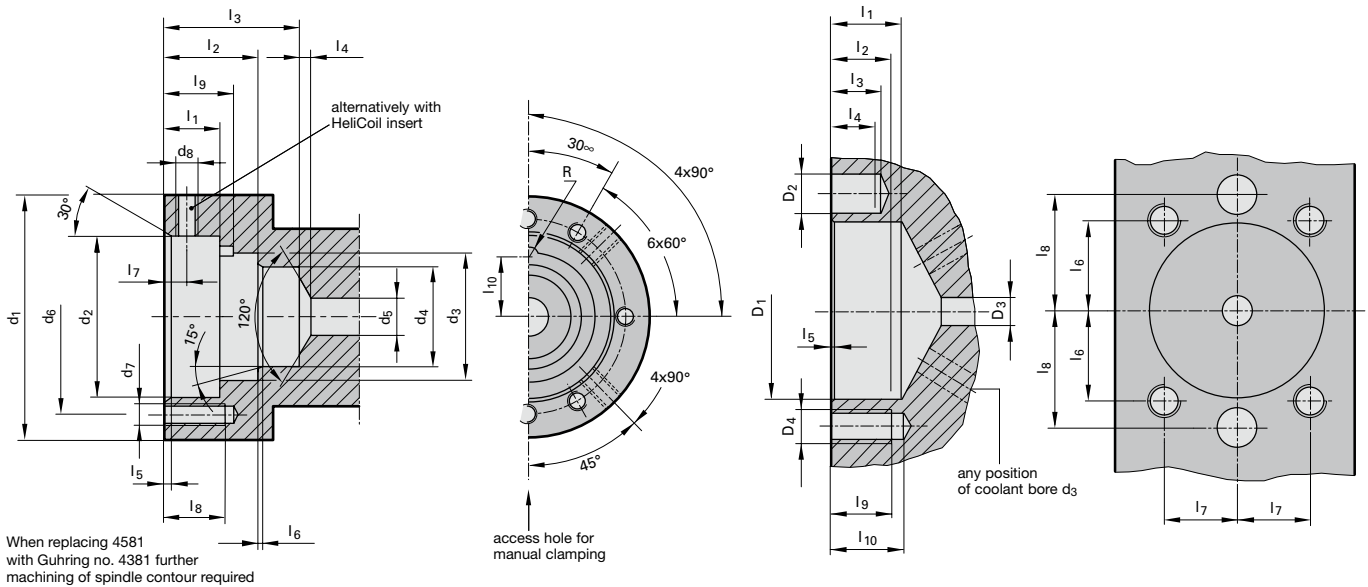
for HSK/Code no.	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	T	O-ring
40 30,000	70	35	28.5	36	22	53	5	M6	M8x1	5.0	10.3	12.4	8.3	7.0	12	14	12	3.5	28x3
50 38,000	80	40	30.5	41	26	63	5	M6	M8x1	6.0	10.3	13.3	8.3	7.0	12	14	12	3.5	30x4
63 48,000	100	50	38.5	51	34	79	5	M8	M10x1	8.0	12.3	16.1	10.3	8.0	15	15	14	3.5	38x5
80 60,000	117	60	47.5	61	38	96	6	M8	M10x1	10.2	12.3	16.1	10.3	8.0	20	15	14	4.5	47x5
100 75,000	140	80	65.0	81	53	119	6	M10	M10x1	12.0	12.3	16.1	10.3	8.0	20	18	14	4.5	45x5

INSTALLATION DIMENSIONS FOR HSK ADAPTOR

Detailed production drawing on request

HSK adaptor (in front) Guh. no. 4581/4584

HSK adaptor (in front) Guh. no. 4582



HSK adaptor (in front) Guh. no. 4581

for HSK/Code no.	d ₁	d ₂	d ₃	d ₄	d ₅	d ₆	d ₇	d ₈	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈
25 19,000	45	23	-	-	5	35	M5	M4	6.8	-	-	1.5	1	-	3.5	min.8
32 24,000	55	28	21.12	17	6.4	43.5	M6	M4	6	9.75	16.75	2	1	0.6	3.5	11
40 30,000	63	36	26.4	21	8	51.5	M6	M4	7	11.3	19.9	2.5	1	1	4	12
50 38,000	80	46	33	26	10	65	M8	M5	9	14.7	25.5	3	1.5	1	5	12
63 48,000	100	56	42.5	34	16	81.5	M10	M6	12	17.8	30	3.5	1.5	1	6	16
80 60,000	125	66	52.8	42	16	103	M12	M8	14	22.7	39.8	4	2	1.5	8	16
100 75,000	160	86	66	53	20	130	M16	M10	16	27.4	49	4.5	2	2	10	16

HSK adaptor (in front) Guh. no. 4584

for HSK/Code no.	d ₁	d ₂	d ₃	d ₄	d ₅	d ₆	d ₇	d ₈	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	l ₁₀	R
32 24,000	40	27.0	21.12	17	6.4	32.0	M 3	M 4	8.8	14.80	21.75	2.0	1.0	0.6	3.5	10.0	11.9	10.10	2.0
40 30,000	50	33.5	26.40	21	8.0	40.5	M 4	M 4	11.0	18.85	27.40	2.5	1.0	1.0	4.0	12.0	13.9	12.40	2.0
50 38,000	63	42.0	33.00	26	10.0	52.0	M 5	M 5	15.0	24.75	35.50	3.0	1.5	1.0	5.0	12.0	18.4	15.50	2.5
63 48,000	80	55.0	42.50	34	16.0	66.0	M 6	M 6	17.9	30.35	42.50	3.5	1.5	1.0	6.0	16.0	23.9	20.00	3.0
80 60,000	100	68.0	52.80	42	16.0	82.0	M 8	M 8	24.3	40.25	57.30	4.0	2.0	1.5	8.0	16.0	32.9	24.80	3.5
100 75,000	125	88.0	66.00	53	20.0	106.0	M10	M10	34.4	54.45	76.00	4.5	1.5	2.0	10.0	16.0	42.4	31.40	4.5

HSK adaptor (in front) Guh. no. 4582

for HSK/Code no.	d ₁	d ₂	d ₃	d ₄	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	l ₁₀
50 38,000	50	7.95	10	M10	20.55	20	15	11	1	27.44	19.22	33.5	20	25
63 48,000	63	14.00	10	M12	25.00	21	18	16	1	31.70	26.00	41.0	22	26

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