

GUHRING

GM 300

TOOLHOLDERS AND CLAMPING DEVICES



EDITION 2015

GM 300

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. 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 h6 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 AND CLAMPING DEVICES

PRICELIST NO. 63

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GUHRING

GM 300



GÜHRING



WE SET
THE STANDARDS
FOR THE FUTURE



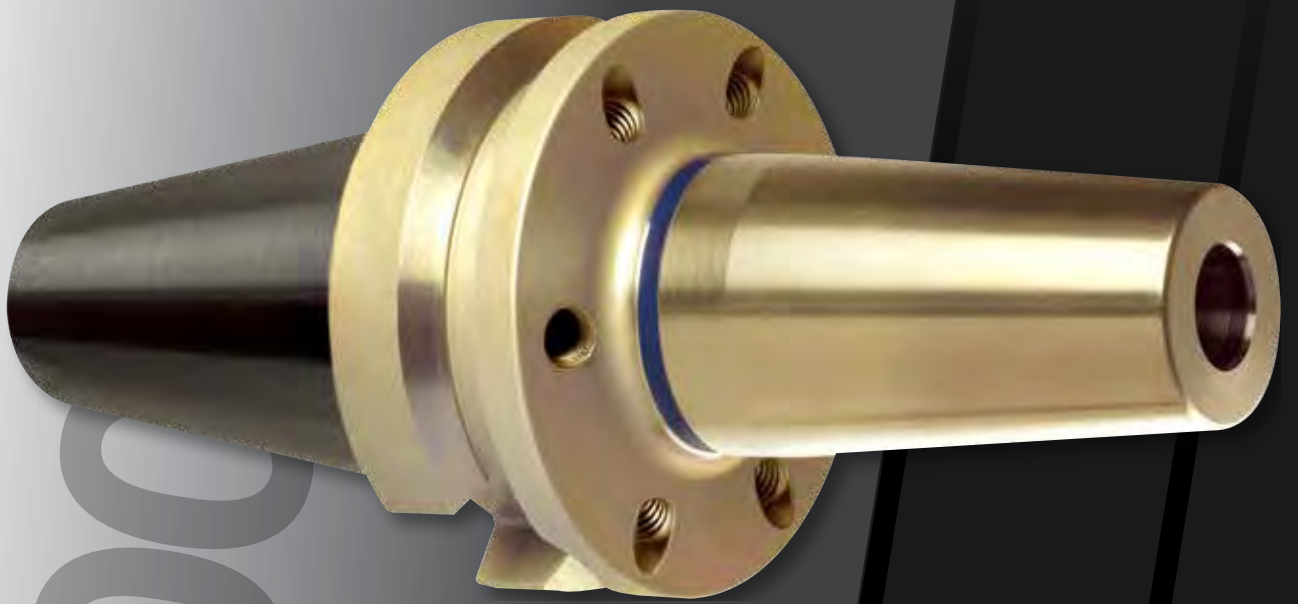
*DEVELOPMENT OF THE
HSK INTERFACE, PIONEER
OF FINE MACHINING*



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

HSK

GUHRING



*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



THE ADVANTAGES OF
HYDRAULIC CHUCK &
SYNCHRO CHUCK IN
ONE TOOL HOLDER



GUHRO-SYNCH
GUHRING

MQL

GUHRING MQL SYSTEMS

DELIVERING
ONLY THE
REQUIRED AMOUNT



GUHRING

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.

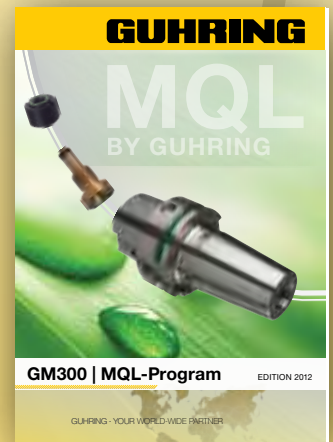
Visual feature of the 1-channel system is the gold coloured MQL length setting screw.



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.

GÜHRING

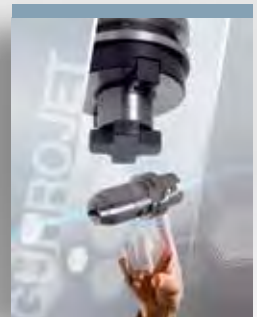
HYDRAULIC CHUCKS

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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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 $10 \times D1$***



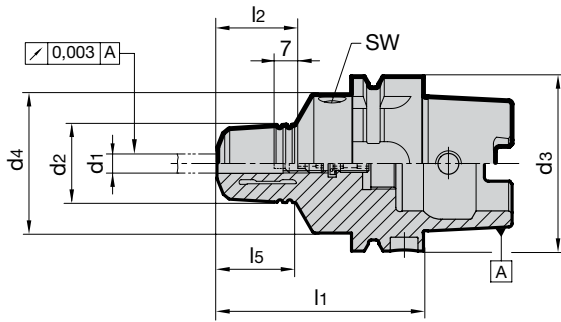
HSK-A hydraulic chucks HMC 3000 for clamping small diameters

Product information

- perfect concentricity: < 3 µm at 10xd1
- balancing quality: G2.5 / 25,000 rev./min or U< 1gmm
- HSK-A to ISO 12164-1/DIN 69893-1
- 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 separatel
- sealed version available as special option



GÜHROJET

Guhring no. 4618

Discount group 114

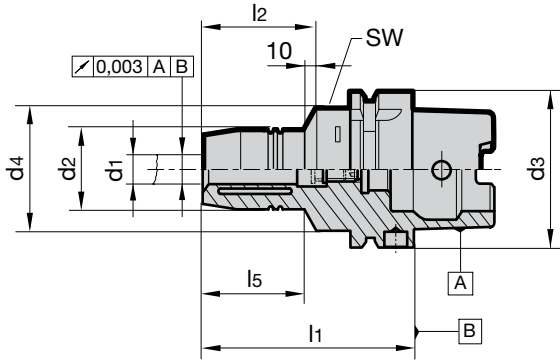
HSK-A d3	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	l5 mm	SW	Code no.	Availability
32	3	28	40.0	84.0	34	33	4	3,032	●
32	4	28	40.0	84.0	34	33	4	4,032	●
32	5	28	40.0	84.0	34	33	4	5,032	●
40	3	28	33.5	74	34	40	4	3,040	●
40	4	28	33.5	74	34	40	4	4,040	●
40	5	28	33.5	74	34	40	4	5,040	●
50	3	28	40	74	34	32	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	29.5	5	3,063	●
63	4	28	50	74	34	29.5	5	4,063	●
63	5	28	50	74	34	29.5	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: G2.5 / 25,000 rev./min or U< 1gmm
- 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 (concentricity 5 µm) and 200 mm (concentricity 7 µm)
- HSK-A to ISO 12164-1/DIN 69893-1

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	4	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	20.114	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

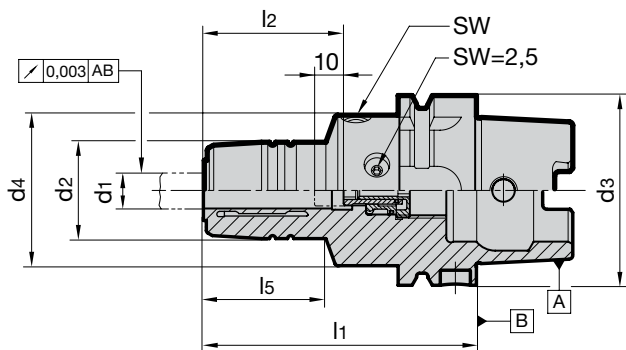
										Guhring no. 4299	
										Discount group 147	
HSK-A d ₃	for shank Ø d ₁ h ₆ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	l ₅ mm	incl. setting screw 4900 ...	SW	kg	Code no.	Availability
63	18	40	50.0	200	49	157	16.014	5	2.30	18,263	●
63	20	42	50.0	200	51	158	20.114	5	2.50	20,263	●
80	6	26	50.0	70	37	24	6.014	5	1.50	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	26	50.0	160	37	104	6.014	5	2.80	106,100	●
100	8	28	50.0	160	37	104	8.014	5	2.80	108,100	●
100	10	30	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	38	50.0	160	49	107	16.014	5	3.20	116,100	●
100	18	40	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	57	63.0	160	57	110	20.114	6	3.70	125,100	●
100	32	64	75.0	160	61	110	20.114	6	4.20	132,100	●
100	6	26	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	30	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	38	50.0	200	49	147	16.014	5	3.40	216,100	●
100	18	40	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	57	63.0	200	57	150	20.114	6	3.90	225,100	●
100	32	64	75.0	200	61	150	20.114	6	4.40	232,100	●

Product information

- balancing quality: G2.5 / 25,000 rev./min or U< 1gmm
- robust, radially operated length setting
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- to DIN 69882-7
- HSK-A to ISO 12164-1/DIN 69893-1

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 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	kg	Code no.	Availability
50	6	26	40	80	37	35	4	0.80	6,050	●
50	8	28	40	80	37	36	4	0.80	8,050	●
50	10	30	40	85	41	38	4	0.90	10,050	●
50	12	32	40	90	46	43	4	0.90	12,050	●
50	14	34	40	90	46	46	4	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	49	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	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	46	5	1.60	12,080	●
80	14	34	50	95	46	47	5	1.60	14,080	●
80	16	38	50	100	49	53	5	1.60	16,080	●
80	18	40	50	100	49	54	5	1.80	18,080	●
80	20	42	50	105	51	58	5	1.80	20,080	●
80	25	57	63	115	57	66	6	2.60	25,080	●
80	32	64	75	125	61	63	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	●

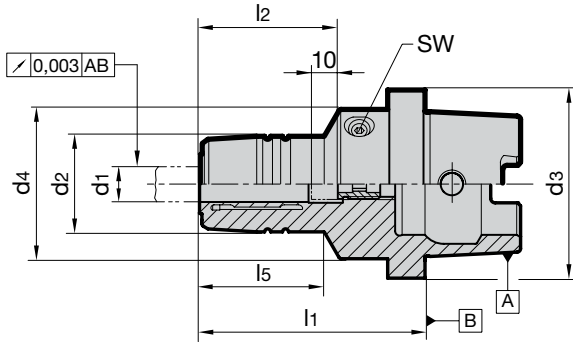
HSK-C hydraulic chucks with increased clamping force

Product information

- balancing quality: G2.5 / 25,000 rev./min or U< 1gmm
- axial length setting
- for tool shank tolerance h6
- HSK-C to ISO 12164-1/DIN 69893-1
- HSK-C32: With gripper groove, tapped hole for coolant delivery set and bore for data chip

Scope of delivery

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



Guhring no. 4267
Discount group 147

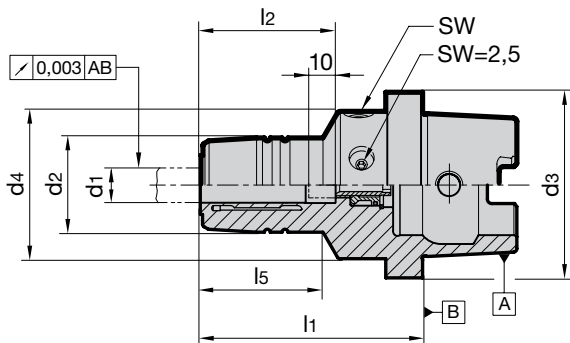
HSK-C d ₃	for shank Ø d ₁ h6 mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	l ₅ mm	incl. setting screw 4900 ...	SW	kg	Code no.	Availability
32	6	26	-	65	37.5	33	6.014	4	0.4	6,032	●
32	8	28	-	67	37.5	34	8.014	4	0.4	8,032	●
32	10	30	-	72.7	42.5	39	8.014	4	0.4	10,032	●
32	12	31.5	-	76	46	45	8.014	4	0.4	12,032	●
40	6	26	-	60	37	35	6.014	4	0.4	6,040	●
40	8	28	-	60	37	36	8.014	4	0.4	8,040	●
40	10	30	-	65	41	41	10.014	4	0.5	10,040	●
40	12	32	-	70	46	47	12.014	4	0.6	12,040	●
50	6	26	-	60	37	30	6.014	5	0.7	6,050	●
50	8	28	-	60	37	30	8.014	5	0.7	8,050	●
50	10	30	-	65	41	35	10.014	5	0.7	10,050	●
50	12	32	-	75	46	44	12.014	5	0.8	12,050	●
50	14	34	-	75	46	46	12.014	5	0.7	14,050	●
50	16	38	-	80	49	51	16.014	5	0.8	16,050	●
50	18	40	-	80	49	51	16.014	5	1.5	18,050	●
50	20	42	-	80	51	52	20.114	5	1.2	20,050	●
63	6	26	50	60	37	25	6.014	5	1.0	6,063	●
63	8	28	50	60	37	26	8.014	5	1.0	8,063	●
63	10	30	50	65	41	31	10.014	5	1.0	10,063	●
63	12	32	50	75	46	41	12.014	5	1.1	12,063	●
63	14	34	50	75	46	42	12.014	5	1.0	14,063	●
63	16	38	50	80	49	48	16.014	5	1.1	16,063	●
63	18	40	50	80	49	48	16.014	5	1.2	18,063	●
63	20	42	50	80	51	49	20.114	5	1.2	20,063	●
63	25	57	63	95	57	63	20.114	6	2.0	25,063	●
63	32	62.5	75	100	61	60.3	20.114	6	2.0	32,063	●

Product information

- balancing quality: G2.5 / 25,000 rev./min or U< 1gmm
- robust, radially operated length setting
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- to DIN 69882-7
- HSK-C to ISO 12164-1/DIN 69893-1

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 d ₃	for shank Ø d ₁ h6 mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	l ₅ mm	SW	kg	Code no.	Availability
40	6	26	40	60	37	30	4	0.5	6,040	●
40	8	28	40	60	37	30	4	0.5	8,040	●
40	10	30	40	65	41	35	4	0.5	10,040	●
40	12	32	40	70	46	40	4	0.6	12,040	●
50	6	26	50	60	37	30	4	0.6	6,050	●
50	8	28	50	60	37	30	5	0.6	8,050	●
50	10	30	50	65	41	35.5	5	0.6	10,050	●
50	12	32	50	75	46	45	5	0.8	12,050	●
50	14	34	50	75	46	45	5	0.9	14,050	●
50	16	38	50	80	49	50	5	0.9	16,050	●
50	18	40	50	80	49	50	5	1.0	18,050	●
50	20	42	50	80	51	50	5	1.0	20,050	●
63	6	26	50	60	37	26.0	5	1.0	6,063	●
63	8	28	50	60	37	26.0	5	1.1	8,063	●
63	10	30	50	65	41	32.0	5	1.1	10,063	●
63	12	32	50	75	46	42.5	5	1.1	12,063	●
63	14	34	50	75	46	43.0	5	1.1	14,063	●
63	16	38	50	80	49	49.0	5	1.2	16,063	●
63	18	40	50	80	49	50.0	5	1.2	18,063	●
63	20	42	50	80	51	50.5	5	1.2	20,063	●
63	25	50	63	57	57	59.5	6	1.8	25,063	●
63	32	60	63	62.5	61	60.0	6	2.3	32,063	●

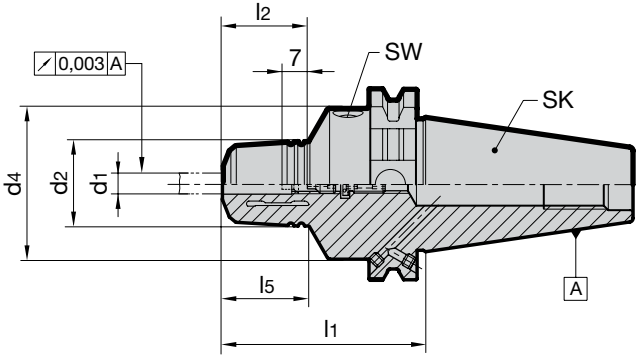
ISO taper hydraulic chucks HMC 3000 for clamping small diameters

Product information

- perfect concentricity: <math>< 3 \mu\text{m}</math> at $10 \times d_1$
- balancing quality: G2.5 / 25,000 rev./min or $U < 1\text{mm}$
- ISO taper to DIN ISO 7388-1 form AD/AF
- 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
- sealed version available as special option



GÜHROJET

Guhring no.	4619
Discount group	114

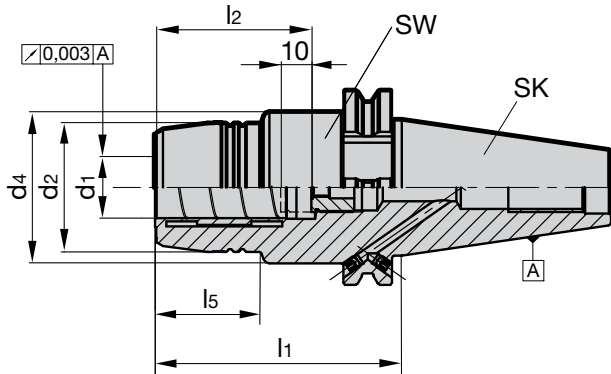
ISO taper	for shank \varnothing d_1 h6 mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	SW	Code no.	Availability
40	3	28.0	49.5	84.5	34.0	34.0	5	3,040	●
40	4	28.0	49.5	84.5	34.0	34.0	5	4,040	●
40	5	28.0	49.5	84.5	34.0	34.0	5	5,040	●

Product information

- ISO taper to DIN ISO 7388-1 form AD/AF
- form B supplied with threaded pins in bores
- balancing quality: G2.5 / 25,000 rev./min or U< 1gmm
- 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 d ₁ h6 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
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	42.0	49.5	80.5	51	34.0	20.114	5	1.5	20,040	●
40	20	42.0	49.5	80.5	51	34.0	20.114	5	1.5	20,140	●
40	20	42.0	49.5	110.0	51	34.0	20.114	5	2.0	20,240	●
40	25	49.5	49.5	80.5	57	-	20.114	6	2.0	25,040	●
40	32	63.0	80.0	80.5	61	25.5	20.114	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	5	4.0	20,050	●
50	20	42.0	49.5	110.0	51	34.0	20.114	5	4.0	20,150	●
50	32	72.0	72.0	81.0	61	-	20.114	6	4.0	32,050	●

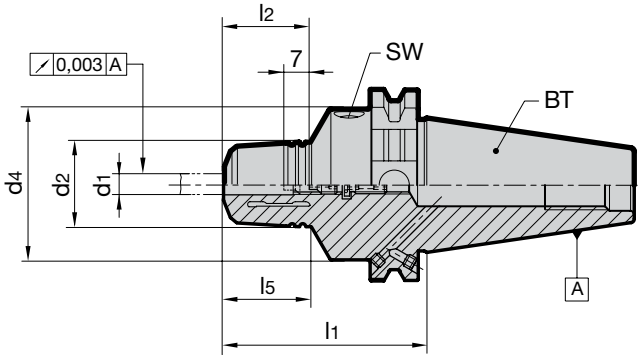
MAS/BT hydraulic chucks HMC 3000 for clamping small diameters

Product information

- perfect concentricity: < 3 µm at 10xd1
- balancing quality: G2.5 / 25,000 rev./min or U< 1gmm
- MAS/BT to DIN ISO 7388-2 form JD/JF (form AD/B)
- BT30 design JD without coolant delivery via 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
- sealed version available as special option



GÜHROJET

Guhring no. **4620**
Discount group **114**

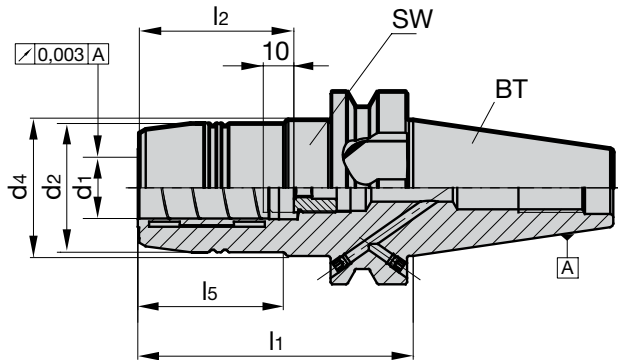
BT	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	l5 mm	SW	Code no.	Availability
30	3	28.0	-	55.0	34	-	4	3,030	●
30	4	28.0	-	55.0	34	-	4	4,030	●
30	5	28.0	-	55.0	34	-	4	5,030	●
40	3	28.0	44.5	94.0	34	48.5	5	3,040	●
40	4	28.0	44.5	94.0	34	48.5	5	4,040	●
40	5	28.0	44.5	94.0	34	48.5	5	5,040	●

Product information

- balancing quality: G2.5 / 25,000 rev./min or U< 1gmm
- axial length setting
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- MAS/BT to JIS B 6339-2 form JD/JF (*: version JD 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	26.0	51.0	37	-	6.014	4	0.6	6,030	●
30	8	28.0	28.0	51.0	37	-	8.014	4	0.6	8,030	●
30	10	30.0	30.0	51.0	41	-	10.014	4	0.6	10,030	●
30	12	32.0	32.0	51.0	46	19.5	12.014	4	0.6	12,030	●
30	16	38.0	38.0	90.0	49	50	16.014	4	1.0	16,030	●
30	20	42.0	42.0	90.0	51	50	8.014	5	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	44.5	90.0	49	47.5	16.014	5	1.5	18,040	●
40	20	49.5	49.5	72.5	51	-	20.114	5	1.5	20,040	●
40	20	42.0	44.5	90.0	51	47.5	20.114	5	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	5	4.0	20,050	●
50	32	72.0	72.0	90.0	61	-	20.114	6	4.0	32,050	●

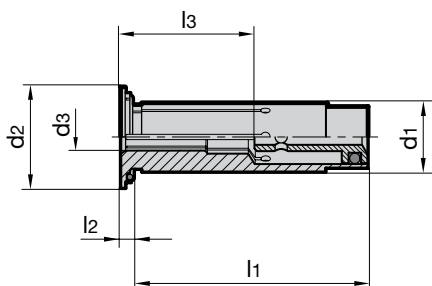
Reduction bushes, sealed, for hydraulic chucks

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

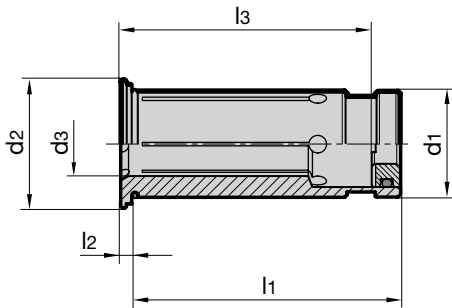
d ₁ mm	for shank Ø d ₃ h6 mm	d ₂ mm	l ₁ mm	l ₂ mm	l ₃ mm	Code no.	Availability
12	3	16.5	45	2	25.5	3,012	●
12	4	16.5	45	2	25.5	4,012	●
12	5	16.5	45	2	25.5	5,012	●
12	6	16.5	45	2	33.5	6,012	●
12	8	16.5	45	2	33.5	8,012	●
20	3	24.1	50.5	2	28.5	3,020	●
20	4	24.1	50.5	2	28.5	4,020	●
20	5	24.1	50.5	2	28.5	5,020	●
20	6	24.1	50.5	2	37.5	6,020	●
20	7	24.1	50.5	2	37.5	7,020	●
20	8	24.1	50.5	2	37.5	8,020	●
20	9	24.1	50.5	2	42.5	9,020	●
20	10	24.1	50.5	2	42.5	10,020	●
20	11	24.1	50.5	2	42.5	11,020	●
20	12	24.1	50.5	2	47.5	12,020	●
20	13	24.1	50.5	2	47.5	13,020	●
20	14	24.1	50.5	2	47.5	14,020	●
20	15	24.1	50.5	2	47.5	15,020	●
20	16	24.1	50.5	2	47.5	16,020	●
32	6	35.5	60.5	3	34.5	6,032	●
32	8	35.5	60.5	3	34.5	8,032	●
32	10	35.5	60.5	3	39.5	10,032	●
32	12	35.5	60.5	3	41.5	12,032	●
32	14	35.5	60.5	3	41.5	14,032	●
32	16	35.5	60.5	3	49.5	16,032	●
32	18	35.5	60.5	3	49.5	18,032	●
32	20	35.5	60.5	3	49.5	20,032	●
32	25	35.5	60.5	3	57.5	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	25.5	3,012	●
12	4	16.5	45	2	25.5	4,012	●
12	5	16.5	45	2	25.5	5,012	●
12	6	16.5	45	2	33.5	6,012	●
12	8	16.5	45	2	33.5	8,012	●
20	3	24.1	50.5	2	28.5	3,020	●
20	4	24.1	50.5	2	28.5	4,020	●
20	5	24.1	50.5	2	28.5	5,020	●
20	6	24.1	50.5	2	37.5	6,020	●
20	7	24.1	50.5	2	37.5	7,020	●
20	8	24.1	50.5	2	37.5	8,020	●
20	9	24.1	50.5	2	42.5	9,020	●
20	10	24.1	50.5	2	42.5	10,020	●
20	11	24.1	50.5	2	42.5	11,020	●
20	12	24.1	50.5	2	47.5	12,020	●
20	13	24.1	50.5	2	47.5	13,020	●
20	14	24.1	50.5	2	47.5	14,020	●
20	15	24.1	50.5	2	47.5	15,020	●
20	16	24.1	50.5	2	47.5	16,020	●
32	6	35.5	60.5	3	34.5	6,032	●
32	8	35.5	60.5	3	34.5	8,032	●
32	10	35.5	60.5	3	39.5	10,032	●
32	12	35.5	60.5	3	41.5	12,032	●
32	14	35.5	60.5	3	41.5	14,032	●
32	16	35.5	60.5	3	49.5	16,032	●
32	18	35.5	60.5	3	49.5	18,032	●
32	20	35.5	60.5	3	49.5	20,032	●
32	25	35.5	60.5	3	57.5	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



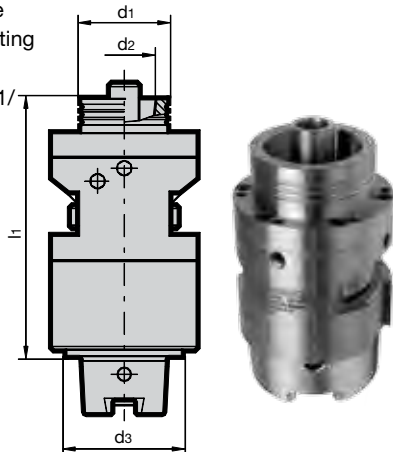
	Guhring no.	4038	
	Discount group	Net price	
clamping diameter mm	kg	Code no.	Availability
6.0	1.1	6,000	●
8.0	1.1	8,000	●
10.0	1.3	10,000	●
12.0	1.3	12,000	●
14.0	1.3	14,000	●
16.0	1.3	16,000	●
18.0	1.5	18,000	●
20.0	1.5	20,000	●
25.0	2.0	25,000	●
32.0	2.5	32,000	●

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.
- HSK-A to ISO 12164-1/ DIN 69893-1

Scope of delivery

- order plug insert, Guhring no. 4993, separately



Guhring no. **4316**

Discount group **Net price**

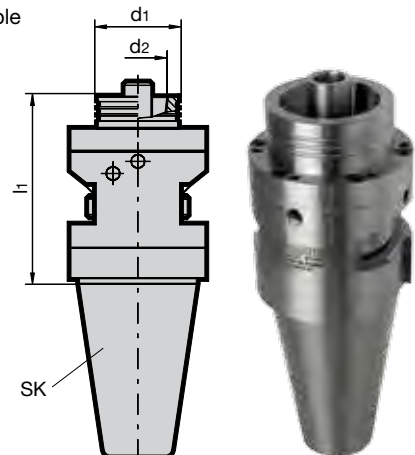
HSK-C d ₃	for HSK-A/C/E d ₁	d ₂ mm	l ₁ mm	Code no.	Availability
63	50	38	104.6	63,050	●
63	63	48	111.6	63,063	●

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**

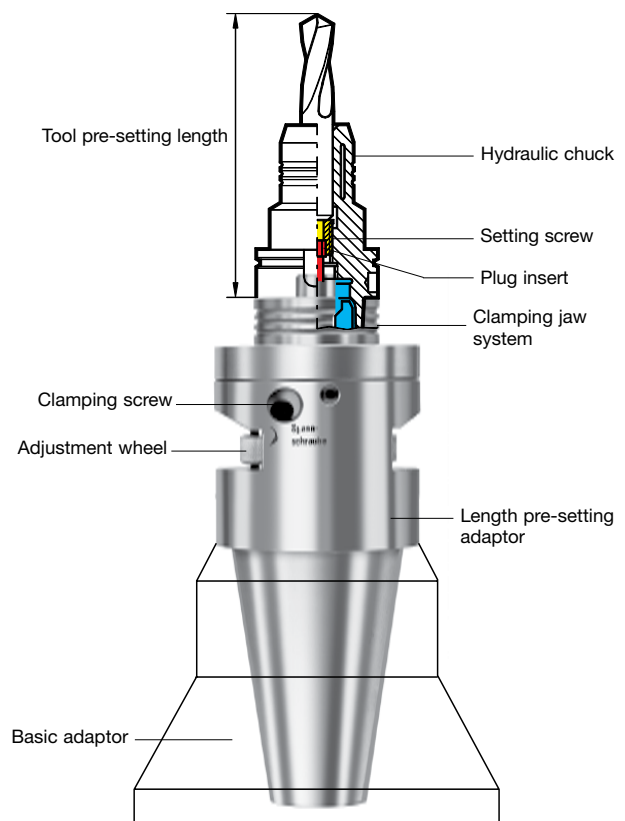
Discount group **Net price**

SK	for HSK-A/C/E d ₁	d ₂ mm	l ₁ 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.



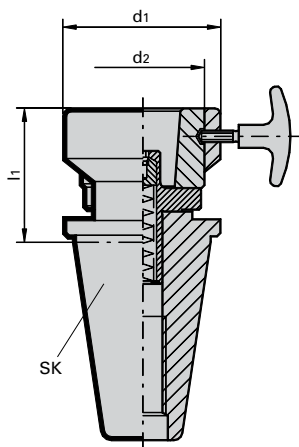
ISO taper length pre-setting adaptor

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

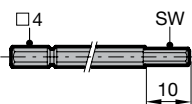


					Guhring no.	4315	
					Discount group	114	
ISO taper	for HSK-A/C/E	d ₁ mm	d ₂ mm	l ₁ mm	Code no.	Availability	
40	32	80	63	68.2	40,032	●	
40	40	80	63	68.2	40,040	●	
40	50	80	63	68.2	40,050	●	
40	63	80	63	68.2	40,063	●	
50	25	80	63	68.2	50,025	●	
50	32	80	63	68.2	50,032	●	
50	40	80	63	68.2	50,040	●	
50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

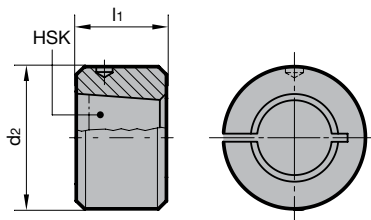
- for length pre-setting adaptors, Guhring nos. 4316, 4319 and 4315



Taper inserts

Product information

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

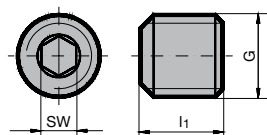


		Guhring no.	4993	
		Discount group	114	
for HSK	Set with key sizes	Code no.	Availability	
C	2.5/3/4/5/6	100,000	●	
A/E	2.5/3/4/5/6	200,000	●	
A (for MQL)	3/4/5	300,000	●	

			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

- Replacement screws for the clamping activation of hydraulic chucks
- Activation screw spec. for hydraulic chucks to suit hex.key size



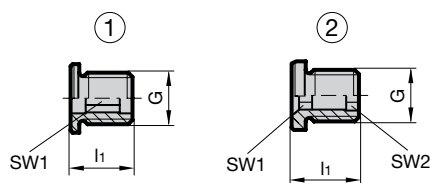
Guhring no.	4241
Discount group	114

G	l ₁ mm	SW	Code no.	Availability
M8	10.0	4.0	8,000	●
M10	10.5	5.0	10,001	●
M10	12.0	5.0	10,002	●
M12	12.0	6.0	12,000	●

Adjustment screws

Product information

- for hydraulic chucks
- for conentional 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



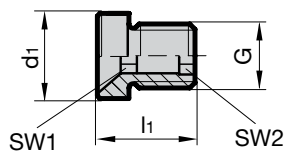
Guhring no.	4900
Discount group	114

for clamping-Ø	l ₁ mm	G	SW1	SW2	figure	Code no.	Availability
6	14	M5	2.5	-	1	6,014	●
8	14	M6	3.0	-	1	8,014	●
10	14	M8x1	4.0	-	1	10,014	●
12/14	14	M10x1	5.0	-	1	12,014	●
16/18	14	M12x1	6.0	-	1	16,014	●
20/25/32	14	M16x1	6.0	-	1	20,014	●
20/25/32	14	M16x1	8.0	6.0	2	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	●

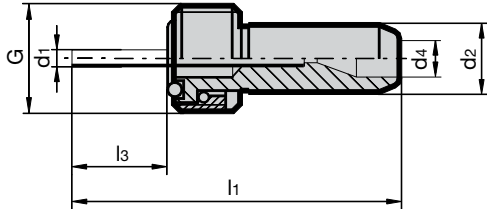
MQL coolant delivery sets HSK-A for the conversion

Product information

- replace conventional coolant delivery sets, Guhring no. 4949, when applying MQL
- for hydraulic chucks to DIN 69882-7
- Attention: Not suitable for application on machines with delivery collar to DIN 69090-2

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**

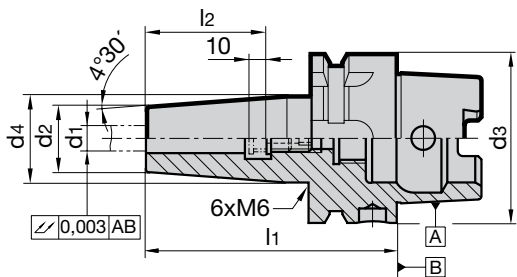


Product information

- 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: G2.5 / 25,000 rev./min or U< 1gmm
- designed with 6xM6 balancing screws for the highest accuracy
- HSK-A to ISO 12164-1/DIN 69893-1

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

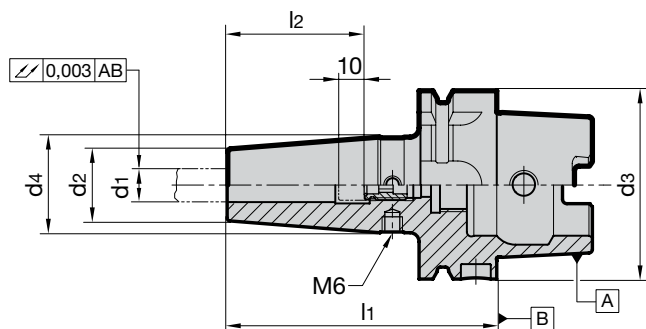
HSK-A d3	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	incl. setting screw Guh. no. 4941 ...	kg	Code no.	Availability
63	6	21	27	80	36	6.100	1.00	6,063	●
63	8	21	27	80	36	8.100	1.00	8,063	●
63	10	24	32	85	41	10.100	1.00	10,063	●
63	12	24	32	90	46	12.100	1.00	12,063	●
63	14	27	34	90	46	14.100	1.00	14,063	●
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: G2.5 / 25,000 rev./min or U< 1gmm
- incl. balancing thread 4xM6/6xM6
- to DIN 69882-8
- for tool shank tolerance h6
- also available in the lengths
l1 = 120 mm, 160 mm (concentricity 5 µm) and 200 mm (concentricity 7 µm)
- HSK-A to ISO12164-1 / DIN 69893-1

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. 4736
Discount group 148

HSK-A d3	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 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 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. Code no.		kg	Code no.	Availability	
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 Guh. no. Code no.	kg	Code no.	Availability	
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

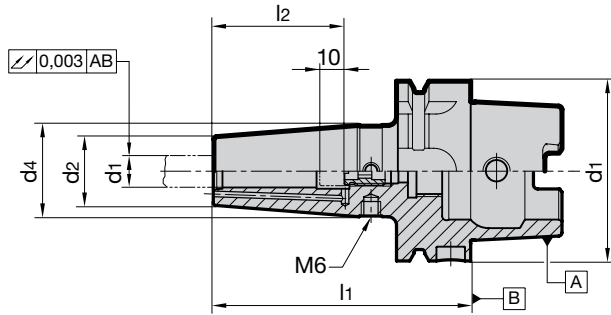
The perfect combination from one reliable supplier: High performance milling cutters and GÜHROJET shrink fit chucks made by Guhring

Product information

- balancing quality: G2.5 / 25,000 rev./min or U< 1gmm
- 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
- Coolant ducts:
d₁ = 6 - 10 mm with two coolant ducts
d₁ = 12 - 32 mm with four coolant ducts
- HSK-A to ISO 12164-1/DIN 69893-1

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

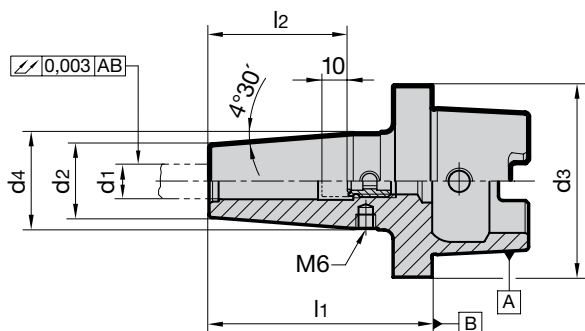
- balancing quality: G2.5 / 25,000 rev./min or U< 1gmm
- incl. balancing thread 4xM6/6xM6
- for tool shank tolerance h6
- to DIN 69882-8
- HSK-C to ISO 12164-1/DIN 69893-1

Scope of delivery

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



Shrink fit technology



Guhring no. 4758

Discount group 148

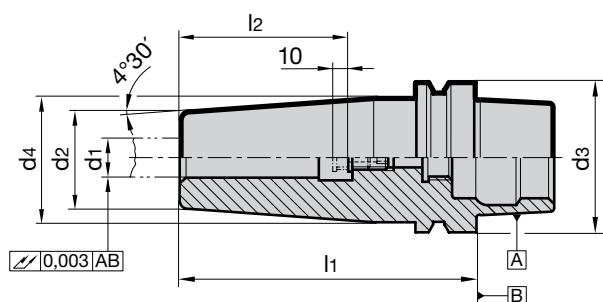
HSK-C d ₃	for clamping-Ø d ₁ h ₆ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	incl. setting screw Guhring no. 4977 ...	kg	Code no.	Availability
32	6	21	26.0	65	36	6.014	0.30	6,032	●
32	8	21	26.0	65	36	8.014	0.30	8,032	●
32	10	24	30.0	65	41	10.014	0.30	10,032	●
32	12	24	32.0	75	46	12.014	0.40	12,032	●
40	6	21	30.0	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
- HSK-E to ISO 12164-1 / DIN 69893-5

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 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. 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

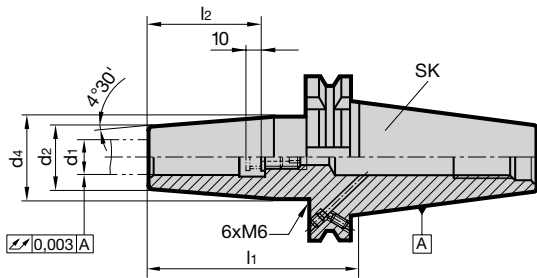
- coating for protection against oxidation, cleanliness and longevity
- safety colour ring for maximum operator safety
- with axial damping screw for optimal concentricity
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- ISO taper to DIN ISO 7388-1 form AD/AF
- balancing quality: G2.5 / 25,000 rev./min or U< 1gmm
- 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

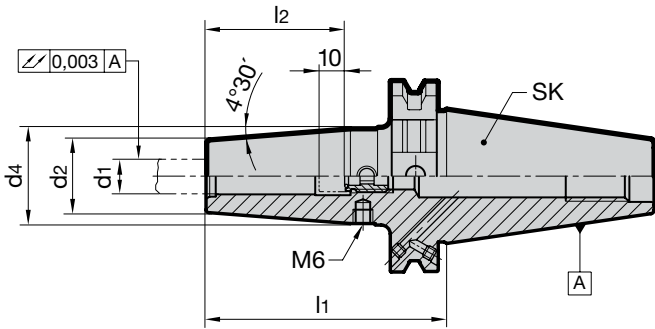
ISO taper	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	incl. setting screw Guh. no. 4941 ...	kg	Code no.	Availability
40	6	21	27	80	36	6.041	1.00	6,040	●
40	8	21	27	80	36	8.040	1.00	8,040	●
40	10	24	32	80	41	10.050	1.00	10,040	●
40	12	24	32	80	46	12.100	1.00	12,040	●
40	14	27	34	80	46	14.100	1.00	14,040	●
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 G2.5 / 25,000 rev./min or U < 1 gmm
- incl. balancing thread 4xM6/6xM6
- ISO taper to DIN ISO 7388-1 form AD/AF
- 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	●

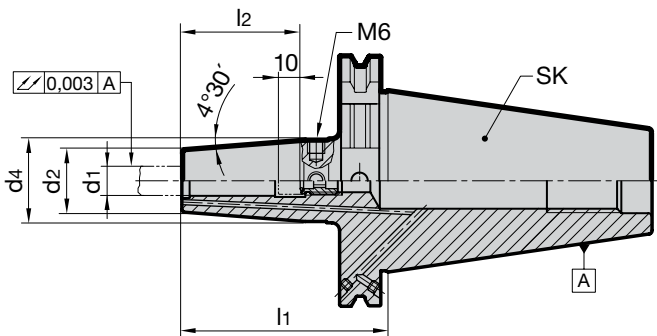
ISO taper shrink fit chucks GÜHROJET

Product information

- balancing quality G2.5 / 25,000 rev./min or U < 1 gmm
- incl. balancing thread 4xM6/6xM6
- ISO taper to DIN ISO 7388-1 form AD/AF
- for tool shank tolerance h6
- optimised cooling for tools without internal coolant ducts
- good chip evacuation and increased process reliability
- Coolant ducts:
d₁ = 6 - 10 mm with two coolant ducts
d₁ = 12 - 32 mm with four coolant ducts

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

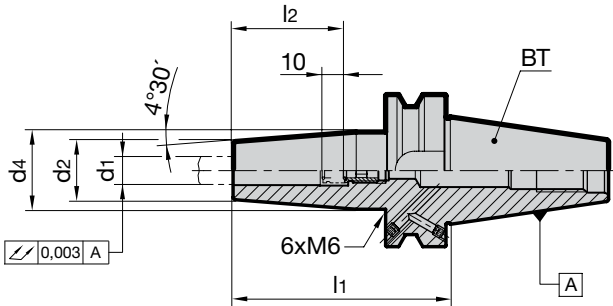
ISO taper	for shank Ø d ₁ h ₆ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	incl. setting screw Guh. no. Code no.		kg	Code no.	Availability
40	6	21	27	80	36	4977	6.014	1.00	6,040	●
40	8	21	27	80	36	4977	8.014	1.00	8,040	●
40	10	24	32	80	41	4977	10.014	1.10	10,040	●
40	12	24	32	80	46	4977	12.014	1.00	12,040	●
40	14	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

- balancing quality: G2.5 / 25,000 rev./min or U< 1gmm
- Design for 6xM6 balancing screws for maximum accuracy
- Coating for oxidation protection, cleanliness and longevity
- Safety colour ring for maximum operator safety
- with axial dampening screw for optimal concentricity
- max. 3 µm deviation from concentricity
- for tool shank tolerance h6
- MAS/BT to DIN ISO 7388-2 form JD/JF (AD/B)

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

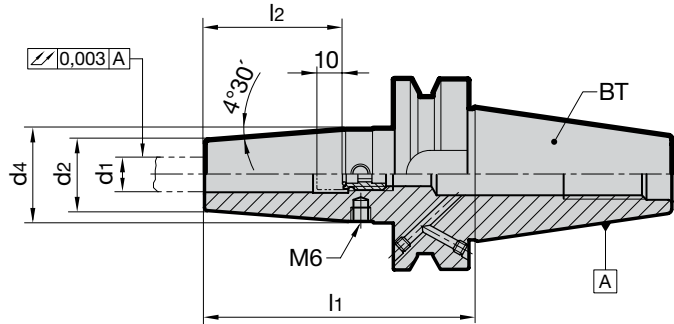
The perfect combination from one reliable supplier: High performance milling cutters and GÜHROJET shrink fit chucks made by Guhring

Product information

- balancing quality G2.5 / 25,000 rev./min or U < 1 gmm
- incl. balancing thread 4xM6/6xM6
- MAS/BT to DIN ISO 7388-2 form JD/JF (AD/B)
- BT30 design JD without coolant delivery via 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**

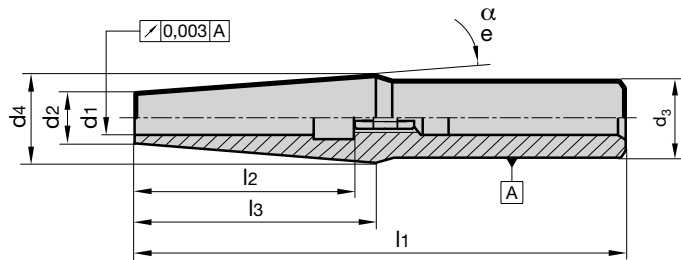
MAS/BT	for shank Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	incl. setting screw Guh. no. Code no.		kg	Code no.	Availability
30	3	10	18	80	30	4904	5.016	0.60	3,030	●
30	4	10	18	80	35	4904	6.016	0.60	4,030	●
30	5	10	18	80	40	4904	8.018	0.60	5,030	●
30	6	21	27	80	36	4977	6.014	0.70	6,030	●
30	8	21	27	80	36	4977	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	21	27	130	41	4977	8.014	1.30	8,140	●
40	10	24	32	130	46	4977	10.014	1.40	10,140	●
40	12	24	32	130	46	4977	12.014	1.40	12,140	●
40	14	27	34	130	49	4977	12.014	1.40	14,140	●
40	16	27	34	130	49	4977	16.014	1.50	16,140	●
40	18	33	42	130	51	4977	16.014	1.50	18,140	●
40	20	33	42	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

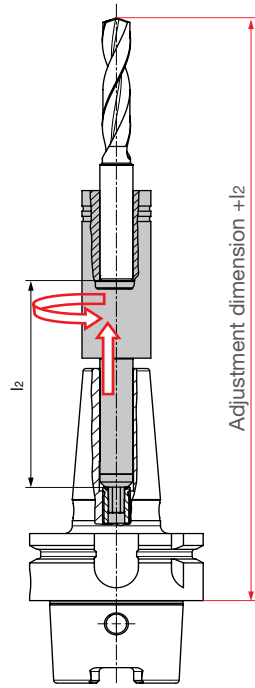
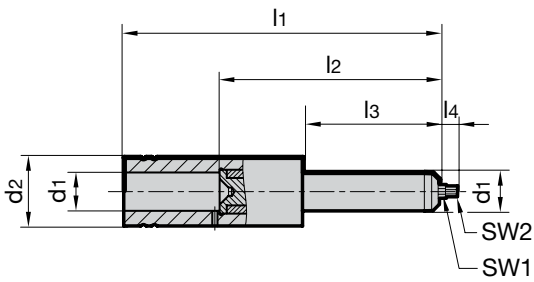


Guhring no. 4719
Discount group 148

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.		α e	Code no.	Availability
3	7	16	16	115	30	64.4	4904	5.016	4	3,016	●
4	7	16	16	115	35	64.4	4904	6.016	4	4,016	●
5	8	16	16	115	40	57	4904	8.018	4	5,016	●
6	10	16	16	115	36	43	4977	6.014	4	6,016	●
8	12	16	16	115	36	29	4977	8.014	4	8,016	●
10	14	16	16	115	41	14	4977	10.014	4	10,016	●
12	16	16	23	115	46	51.5	4977	12.014	4	12,016	●
3	7	20	16	115	30	65	4904	5.016	4	3,020	●
4	8	20	17	115	35	65	4904	6.016	4	4,020	●
5	9	20	18	115	40	65	4904	8.018	4	5,020	●
6	10	20	19	115	36	65	4977	6.014	4	6,020	●
8	12	20	20	115	36	57	4977	8.014	4	8,020	●
10	14	20	20	115	41	43	4977	10.014	4	10,020	●
12	16	20	20	115	46	29	4977	12.014	4	12,020	●
14	20	20	29	150	46	63	4977	12.014	4	14,020	●
3	10	20	20	160	30	71.5	4904	5.016	4	3,120	●
4	10	20	20	160	35	71.6	4904	6.016	4	4,120	●
5	10	20	20	160	40	71.5	4904	8.018	4	5,120	●
6	14	20	20	160	36	43	4977	6.014	4	6,120	●
8	14	20	20	160	36	43	4977	8.014	4	8,120	●
10	20	25	25	160	41	35.8	4977	10.014	4	10,125	●
12	20	25	25	160	46	35.8	4977	12.014	4	12,125	●
14	20	25	29	160	46	62.9	4977	16.014	4	14,125	●
16	22	25	33	160	49	78.7	4977	16.014	4	16,125	●
18	27	32	32	160	49	35.8	4977	16.014	4	18,132	●
20	27	32	32	160	51	35.8	4977	20.114	4	20,132	●
3	10	20	20	200	30	71.5	4904	5.016	4	3,220	●
4	10	20	20	200	35	71.5	4904	6.016	4	4,220	●
5	10	20	20	200	40	71.5	4904	8.018	4	5,220	●
6	14	20	20	200	36	42.9	4977	6.014	4	6,220	●
8	14	20	20	200	36	42.9	4977	8.014	4	8,220	●
10	20	25	25	200	41	35.8	4977	10.014	4	10,225	●
12	20	25	25	200	46	35.8	4977	12.014	4	12,225	●
14	20	32	32	200	46	85.8	4977	16.014	4	14,232	●
16	24	32	32	200	49	57.2	4977	16.014	4	16,232	●
18	27	32	32	200	49	35.8	4977	20.014	4	18,232	●
20	27	32	32	200	51	35.8	4977	20.114	4	20,232	●
6	10	12	12	125	38	19.1	-	-	3	6,012	●
8	12	14	14	125	38	19.1	-	-	3	8,014	●
10	14	16	16	160	42	19.1	-	-	3	10,116	●
12	16	20	20	160	47	38.2	-	-	3	12,120	●
16	22	25	25	160	50	28.6	-	-	3	16,225	●
20	27	32	32	160	52	47.7	-	-	3	20,332	●

Product information

- for shrink fit and hydraulic chucks
- for length pre-setting of the setting screw 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



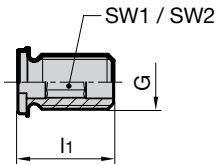
Guhring no. **4718**
Discount group **114**

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

Setting screws for GÜHROJET shrink fit chucks

Product information

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



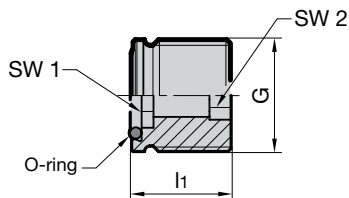
Guhring no.	4938
Discount group	114

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 conentional 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

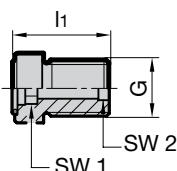


Guhring no.	4977
Discount group	114

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	●
20/27	14	M16x1	8.0	6.0	12x1.5	20,014	●

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	per clamping- Ø	G	l ₁ mm	SW1	SW2	Code no.	Availability
40	6	M5	14.9	2.5	2.5	6,041	●
40	6	M7x1	15.0	2.5	2.5	6,040	●
40	8	M7x1	18.0	3	3	8,040	●
50	6	M8x1	14.0	2.5	2.5	6,050	●
50	8	M8x1	18.0	3	3	8,050	●
40 / 50	10	M8x1	17.7	4	4	10,050	●
63/ 80/ 100	6	M10x1	17.0	2.5	2.5	6,100	●
63/ 80/ 100	8	M10x1	17.0	3	3	8,100	●
63/ 80/ 100	10	M10x1	16.2	4	4	10,100	●
40/ 50/ 63/ 80/ 100	12	M10x1	16.0	5	5	12,100	●
40/ 50/ 63/ 80/ 100	14	M10x1	17.2	5	5	14,100	●
50/ 63/ 80/ 100	16	M12x1	18.2	6	6	16,100	●
50/ 63/ 80/ 100	18	M12x1	19.2	6	6	18,100	●
50/ 63/ 80/ 100	20	M16x1	19.2	6	8	20,100	●
63/ 80/ 100	25	M16x1	22.7	6	8	25,100	●
63/ 80/ 100	32	M16x1	26.7	6	8	32,100	●

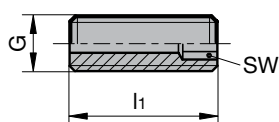
Setting screws

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	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	●

TSG 3000
RF 100

MILLING AT THE HIGHEST LEVEL

TSG 3000 shrink fit chucks and
Ratio end mills RF 100



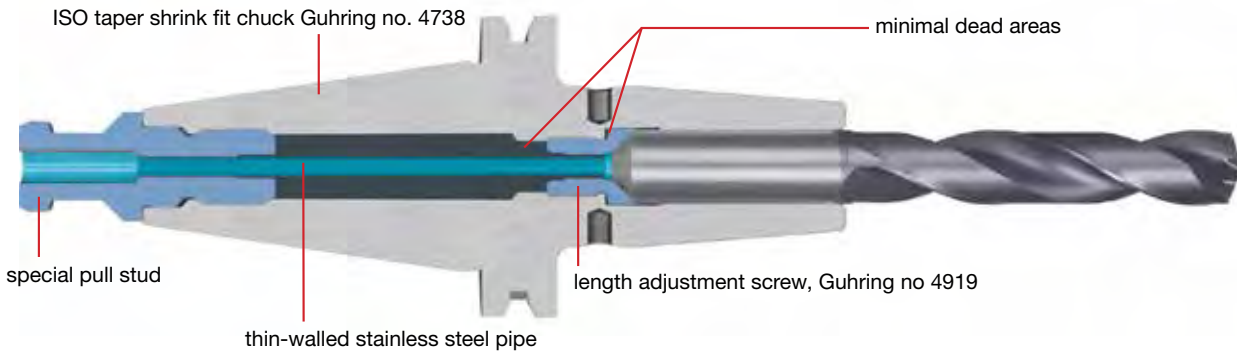
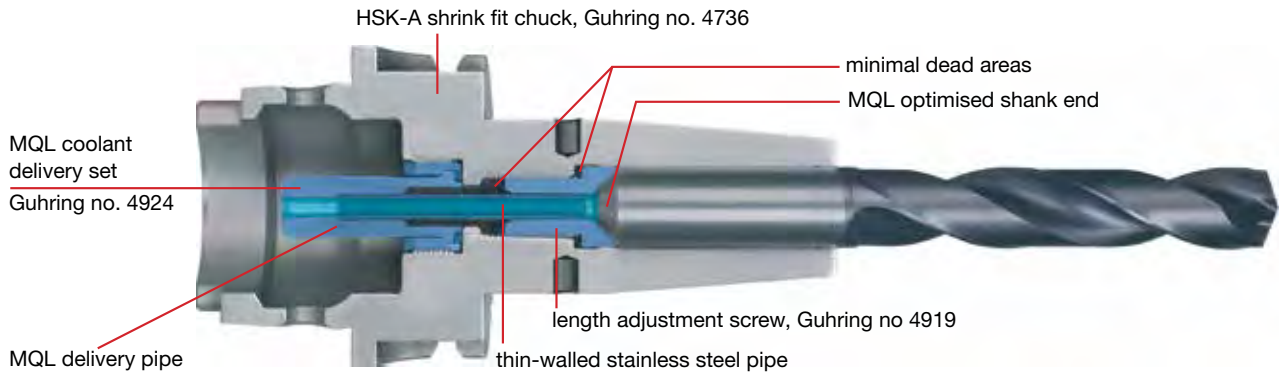
- ⇒ secure tool clamping
- ⇒ perfect concentricity
- ⇒ vibration free operation
- ⇒ optimal surface finish
- ⇒ long tool life

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.

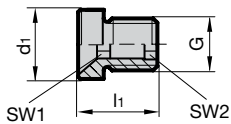
Shrink fit technology



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



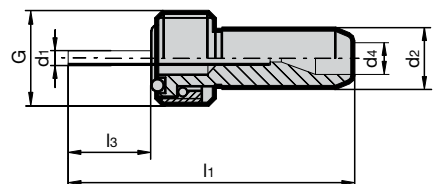
						Guhring no.	4919
						Discount group	114
d ₁ mm	l ₁ mm	G	SW1	SW2		Code no.	Availability
6	14.8	M5	2.5	2.5		6,000	●
8	15.6	M6	3.0	3.0		8,000	●
10	16.1	M8x1	4.0	4.0		10,000	●
10	16.6	M8x1	3.0	3.0		10,040	●
10	16.6	M6	3.0	3.0		10,032	●
12	16.6	M10x1	5.0	5.0		12,000	●
12	17.6	M6	3.0	3.0		12,032	●
14	17.6	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	●

Product information

- replace conventional coolant delivery sets, Guhring no. 4949, when applying MQL
- for shrink fit chucks to DIN 69882-8
- Attention: Not suitable for application on machines with delivery collar to DIN 69090-2

Scope of delivery

- complete MQL coolant delivery sets



Shrink fit technology

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	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	●	

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	●

Guhring shrink fit and pre-setting equipment - high quality and accuracy



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

3001

Work easily, quickly and efficiently ...

The advantages of shrink fit technology:

- **Perfect 360° tool clamping provides extreme clamping force and rigidity**
- **High repeatability**
- **Minimal imbalance thanks to rotational symmetry**
- **Excellent concentricity for symmetrical cutting edge loading – therefore longer tool life**
- **Reduced components, therefore lower costs for purchasing, storage and administration**

You benefit from:

- **High economic efficiency thanks to effective mode of operation**
- **Full transparency due to process analysis**
- **Absolutely user-friendly**

User-friendly software

Intuitive menu navigation similar to the well-established Guhring TM-Software GTMS via touch-screen monitor (for details see page 67).

... with each application!



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.

Fume extraction

Vapours produced during the shrink fit process are **removed and filtered under controlled conditions** by the fume extraction system.

Length setting

During the shrink fit process the tool is pre-set to the **required length** with the assistance of an adjustment rod.

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.

Tool identification Balluff chip

The read and write function of the Balluff chip simplifies **tool identification**. Tool life can be managed.

Label printer

Print data such as Guhring no., current setting dimension, date, operator etc. on an **adhesive label** for your pre-set tool.



Important features:

- > Setting, shrink fitting and measuring with one system
- > Operating system WIN 7
- > Stable Beckhoff control system with touch-screen and foil keyboard
- > Compact, workshop suited and robust design
- > Ergonomic arrangement of all operating elements for comfortable handling
- > Label printer for providing pre-set tools with information such as Guhring no., setting dimension, Barcode, and much more...
- > Setting and measuring accuracy 0.02 mm

GSS
3001

“Everything has its place”

Stop plates for every diameter are accessibly stored directly on the guide column.

“Good accessibility”

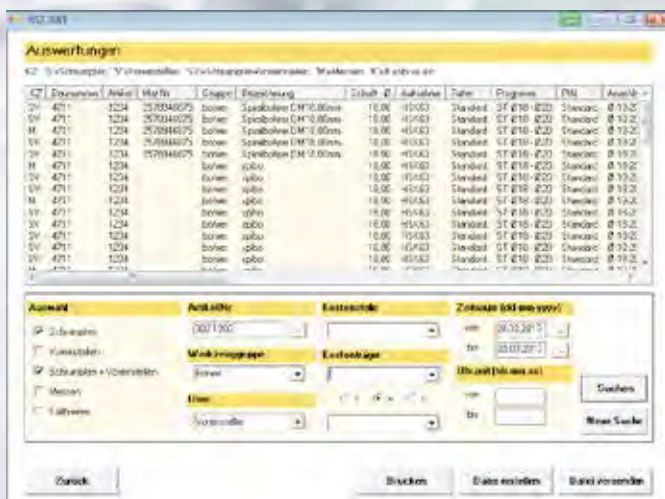
Good accessibility to all machine components provides excellent conditions for cleaning and maintenance purposes, i.e. re-filling coolant by simple opening of drawer.

Economic: The Speedcooler switches off automatically when not in use for a longer period of time.



GSS Software performance features:

- > Intuitive and user-friendly operation thanks to 12" touch-screen and Barcode scanner
- > Comprehensive management possibilities for your tool, holder and shrink fit data as well as the associated parameters
- > Analysis of all processes carried out by system (component, cost centre or user related; setting up to 5 cost centres possible) to optimise your production and for maximum transparency possible
- > Software available in different languages



GSS 5000

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 can be adapted to customer requirements.

GSS
5000



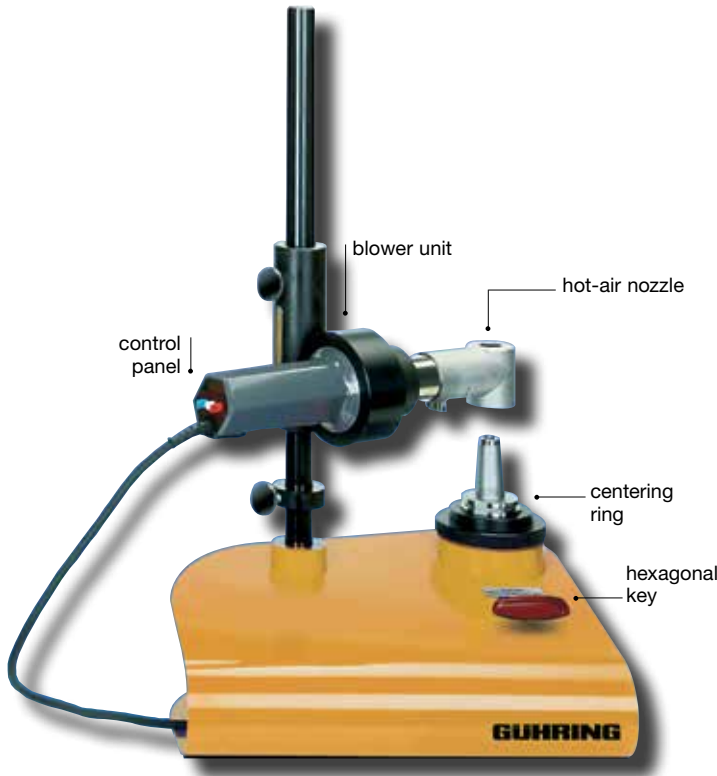


Guhring no 4721 Code 2,000
 Technical data:
 230V/50Hz/16A
 Control panel: temperature and air-flow regulator
 Output: 3400 Watt
 Display: LED temperature display
 Air vol.: max. 800 l/min (fan blower)
 Dimensions: 450 x 320 x 770 mm
 Temperature: 25...600° C
 Weight: 17,5 kg

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



AT FULL SPEED

A FIRM GRASP
ON EVERYTHING!





HIGH CLAMPING FORCE



*IDEAL CLAMPING
FORCE TRANSFER
TO THE TOOL*



IMMENSE SPEEDS



MAXIMUM RIGIDITY



*OPTIMAL FOR **i**machining[®]*



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.

New: Now available with PinLock drawout protection!



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 μm with 2,5 x D
- balancing quality: G2.5 / 20.000 rev./min or U < 1.2gmm

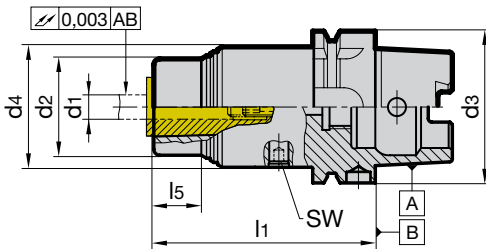
HSK-A precision clamping chucks

Product information

- for heavy-duty cutting as well as HSC and HPC
- HSK-A to ISO 12164-1/DIN 69893-1
- balancing quality: G2.5 / 20,000 rev./min or U < 1.2gmm
- 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 4,600
- 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 12,000 and sockets Guhring no. 4916 4,000 separately



Guhring no. 4300
Discount group 114

HSK-A d3	nom. size	for clamping-Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l5 mm	SW	Code no.	Availability
63	20	3-20	40	53	92	20	4	20,063	●
100	20	3-20	40	70	100	18	4	20,100	●
100	25	16-32	70	70	139	-	4	25,100	●

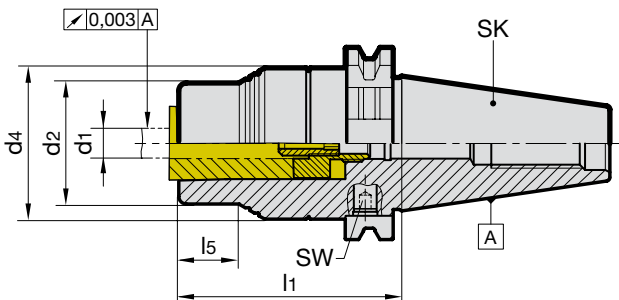
ISO taper precision clamping chucks

Product information

- for heavy-duty cutting as well as HSC and HPC
- ISO taper to DIN ISO 7388-1 form AD
- balancing quality: G2.5 / 20,000 rev./min or U < 1.2gmm
- 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 4,600
- 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 12,000 and sockets Guhring no. 4916 4,000 separately
- form AD/B on request



Guhring no. 4301
Discount group 114

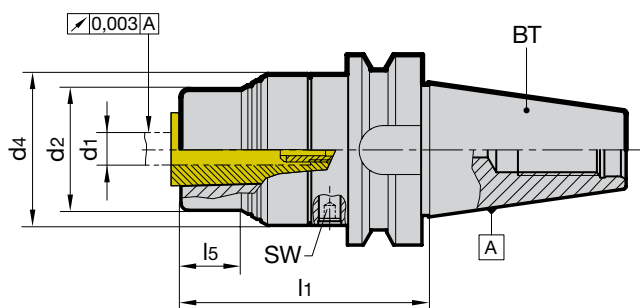
SK	nom. size	for clamping-Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l5 mm	SW	Code no.	Availability
40	20	3-20	40	50	63	20	4	20,040	●
50	20	3-20	40	63	62	18	4	20,050	●
50	25	16-32	70	70	102	-	4	25,050	●

Product information

- for heavy-duty cutting as well as HSC and HPC
- MAS/BT to DIN ISO7388-2 form JD
- balancing quality: G2.5 / 20,000 rev./min or U < 1.2gmm
- 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 4,600
- 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 12,000 and sockets Guhring no. 4916 4,000 separately
- form AD/B on request



Guhring no.	4244
Discount group	114

MAS/BT	nom. size	for clamping-Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l5 mm	SW	Code no.	Availability
30	20	3-20	40	53	82	20	4	20,030	●
40	20	3-20	40	63	70	18	4	20,040	●
40	20	3-20	40	63	120	48	4	120,040	●
50	20	3-20	40	63	81	18	4	20,050	●
50	20	3-20	40	63	167	84	4	120,050	●
40	25	16-32	63	63	110	-	4	25,040	●
50	25	16-32	70	70	121	-	4	25,050	●

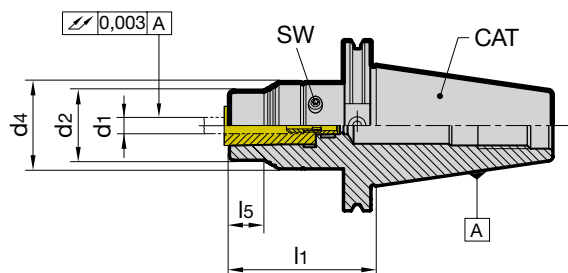
CAT precision clamping chucks

Product information

- for heavy-duty cutting as well as HSC and HPC
- CAT to ASME B5.50
- balancing quality: G2.5 / 20,000 rev./min or U < 1.2gmm
- 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 ASME B5.50

Scope of delivery

- hexagon clamping key Guhring no. 4912 4,600
- 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 12,000 and sockets Guhring no. 4916 4,000 separately



Guhring no.	4243
Discount group	114

CAT	nom. size	for clamping-Ø d1 h6 mm	d2 mm	d4 mm	l1 mm	l5 mm	SW	Code no.	Availability
40	20	3-20	40	50	62,5	20	4	20,040	●
50	20	3-20	40	63	62	18	4	20,050	●
50	25	16-32	70	70	102	-	4	25,050	●

GÜHROJET

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



Power milling with PinLock

Drawout secure volume machining – with Guhrojet cooling
Perfect combination - HPC clamping chuck with PinLock drawout safety

- process reliable (no tool drawout, no component damage)
- long tool life and optimal surface finish
- simple handling
- standard milling tools therefore no licenses required

Thanks to the application of a PinLock clamping sleeve with securing pin any drawout of the applied standard milling tools with HB shank to DIN 6535 is safely prevented. The combination of HPC clamping technology with perfect concentricity and the efficient Guhrojet peripheral cooling achieves, until now, unachieved metal removal rates, tool life and surface quality. All this with standard tools and absolute protection against unwanted drawout effects.

|GÜHROJET|

|PINLOCK|

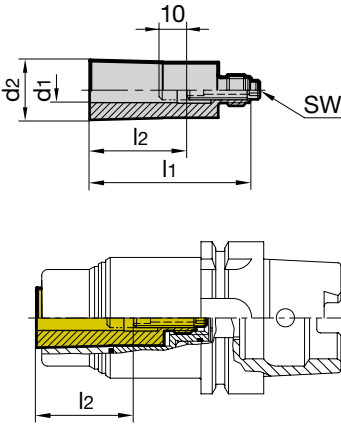


Product information

- PinLock-clamping sleeve (Type P) with drawout safety for HPC clamping chucks

Scope of delivery

- PinLock clamping sleeve (Guhring no. 4302 Type P), locking pins and assembly tool (supplied without milling tool)



GÜHROJET
PINLOCK

Guhring no. **4211**

Discount group

Net price

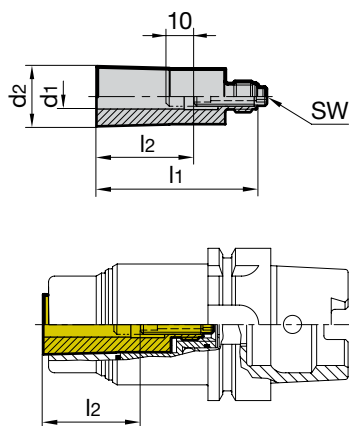
nom. size	for clamping-Ø d1 h6 inch	d2 mm	l1 mm	l2 mm	Type	SW	Code no.	Availability
20	6	24.6	66	36	P	4	6,120	●
20	8	24.6	66	36	P	4	8,120	●
20	10	24.6	66	40	P	4	10,120	●
20	12	24.6	66	45	P	4	12,120	●
20	14	24.6	66	45	P	4	14,120	●
20	16	24.6	66	48	P	4	16,120	●
25	16	39	87.5	48	P	4	16,125	●
25	20	39	87.5	50	P	4	20,125	●
25	22	39	87.5	50	P	4	22,125	●
25	25	39	87.5	56	P	4	25,125	●

Product information

- for clamping tools with straight shank
- for maximum holding torque
- design with peripheral cooling thanks to long slots
- for tool shank tolerance h6
- Type P: PinLock design with drawout safety

Scope of delivery

- incl. length setting screw



GÜHROJET
PINLOCK

Guhring no. **4302**
Discount group **114**

nom. size	for shank Ø d1 h6 mm	d2 mm	l1 mm	l2 mm	Type	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	●
25	16	39	87.5	48		4	16,025	●
25	20	39	87.5	50		4	20,025	●
25	22	39	87.5	50		4	22,025	●
25	25	39	87.5	56		4	25,025	●
25	32	39	87.5	60		4	32,025	●
20	6	24.6	66	36	P	4	6,120	●
20	8	24.6	66	36	P	4	8,120	●
20	10	24.6	66	40	P	4	10,120	●
20	12	24.6	66	45	P	4	12,120	●
20	14	24.6	66	45	P	4	14,120	●
20	16	24.6	66	48	P	4	16,120	●
25	16	39	87.5	48	P	4	16,125	●
25	20	39	87.5	50	P	4	20,125	●
25	22	39	87.5	50	P	4	22,125	●
25	25	39	87.5	56	P	4	25,125	●

Product information

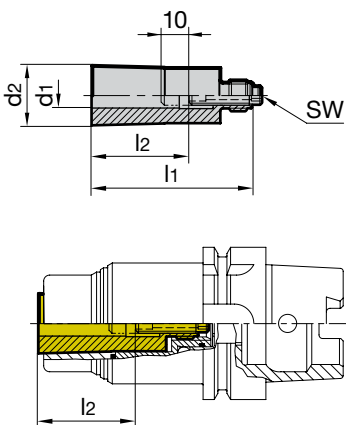
- PinLock-clamping sleeve (Type P) with drawout safety for HPC clamping chucks

Scope of delivery

- PinLock clamping sleeve (Guhring no. 4236 Type P), locking pins and assembly tool (supplied without milling tool)



GÜHROJET
PINLOCK



Guhring no. 4212
Discount group Net price

nom. size	for shank Ø d1 h6 inch	d2 mm	l1 mm	l2 mm	Type	SW	Code no.	Availability
20	1/2"	24,6	66	45	P	4	1,120	●
20	5/8"	24,6	66	48	P	4	2,120	●
25	3/4"	39	87,5	50	P	4	1,125	●
25	1"	39	87,5	56	P	4	2,125	●

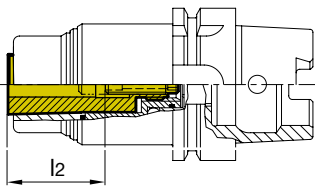
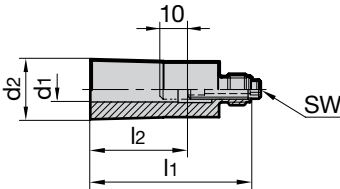
HPC clamping chucks

Product information

- for clamping imperial tool shanks
- for maximum holding torque
- design with peripheral cooling thanks to long slots
- for tool shank tolerance h6
- Type P: PinLock design with drawout safety

Scope of delivery

- incl. length setting screw



GÜHROJET
PINLOCK

HPC clamping chucks

Guhring no. 4236

Discount group 114

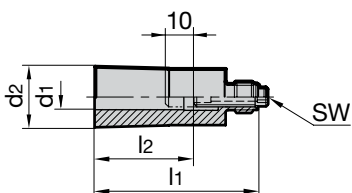
nom. size	for shank Ø d1 h6 inch	d2 mm	l1 mm	l2 mm	Type	SW	Code no.	Availability
20	1/8"	24,6	66	28		4	1,020	●
20	3/16"	24,6	66	28		4	2,020	●
20	1/4"	24,6	66	36		4	3,020	●
20	5/16"	24,6	66	36		4	4,020	●
20	3/8"	24,6	66	40		4	5,020	●
20	7/16"	24,6	66	45		4	6,020	●
20	1/2"	24,6	66	45		4	7,020	●
20	9/16"	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	●
25	3/4"	39	87,5	50		4	1,025	●
25	1"	39	87,5	56		4	2,025	●
20	1/2"	24,6	66	45	P	4	1,120	●
20	5/8"	24,6	66	48	P	4	2,120	●
25	3/4"	39	87,5	50	P	4	1,125	●
25	1"	39	87,5	56	P	4	2,125	●

Product information

- for clamping imperial tool shanks
- high holding torque
- sealed design with short slots
- 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 \varnothing 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	●
25	3/4"	39	87.5	50	4	1,025	●
25	1"	39	87.5	56	4	2,025	●
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	●

GÜHRO Sync

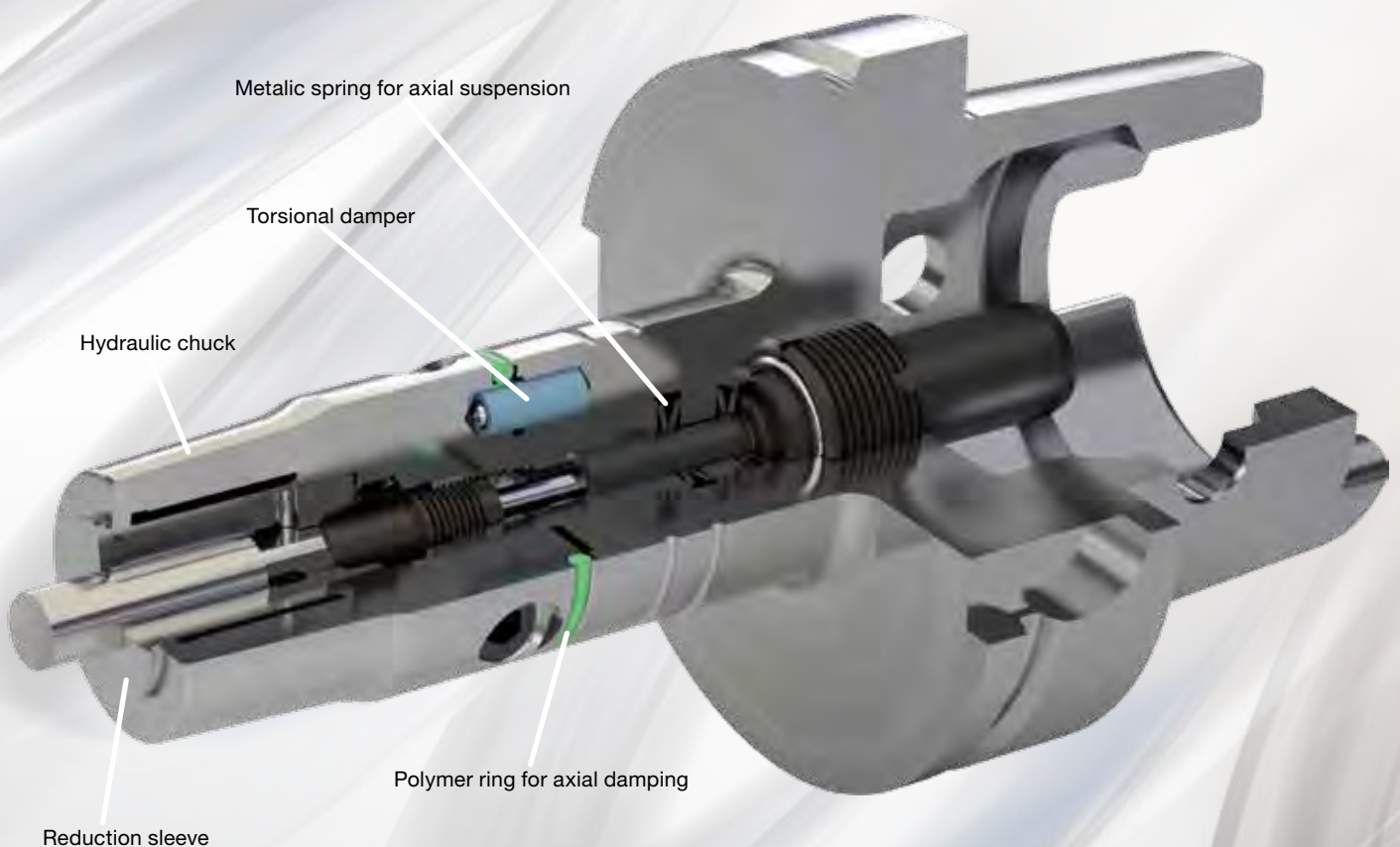


TAPPING CHUCKS

GUHROSYN

THE EASY WAY
TO THE PERFECT THREAD

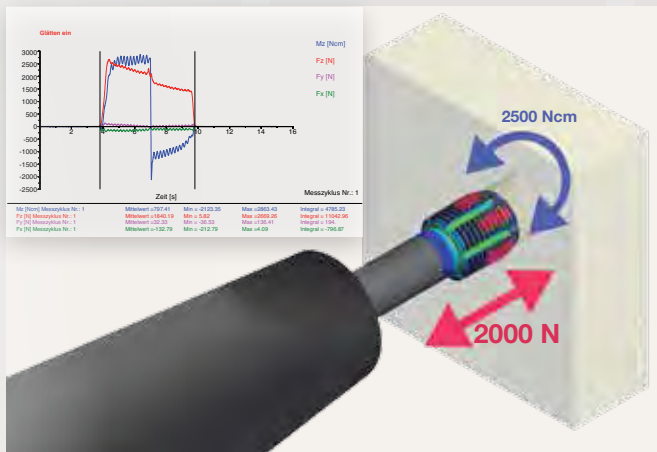
Tapping chucks



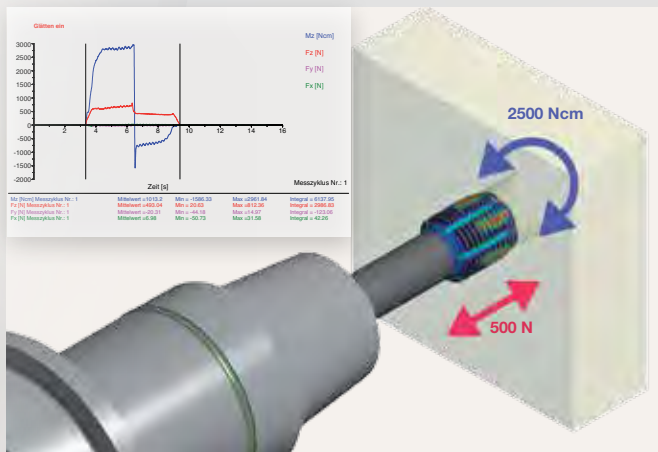
Intelligent design:

As well as the suspension and damping elements in the slender GUHROSyn chucks (for the reduction of axial and radial forces during the tapping process) there is also room for the delivery set for MQL or conventional cooling lubrication and the length setting screw.

The optimal combination of long-life metal spring and polymer damping elements considerably reduces axial and radial forces



Rigid chuck



GUHROSyc

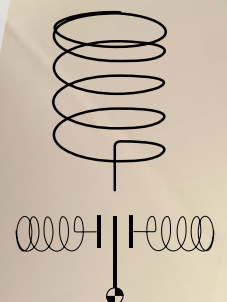
➔ **IMPROVED
TOOL LIFE**

➔ **IMPROVED THREAD
QUALITY**

➔ **GREATER PROCESS
RELIABILITY**

Tapping chucks

GUHRING



Made visible:
The spring symbol on the GUHROSyc displays the effect of axial and radial force.

Shrink fit chucks

4736 HSK-A

4726 TSG 3000 HSK-A

4758 HSK-C

4738 ISO taper

Hydraulic synchro tapping chucks with increased clamping force

4221 MAS-BT

4299 HSK-A

4267 HSK-C

4213 ISO taper

4949 Coolant delivery set HSK-A for conventional cooling



4925 Pull studs for SK
4926



4927 Pull studs for MAS/BT
4928



Hydraulic synchro tapping chucks

4601 HSK-A

Hydraulic synchro tapping chucks

4576 ISO taper

Hydraulic synchro tapping chucks

4577 MAS-BT



4525

Hydro-Ø 12 / Ø 20
Cylindrical hydraulic synchro tapping chucks Ø 20 with internal cooling

4364

Setting screws "face" synchro tapping chucks, with conventional int. cooling



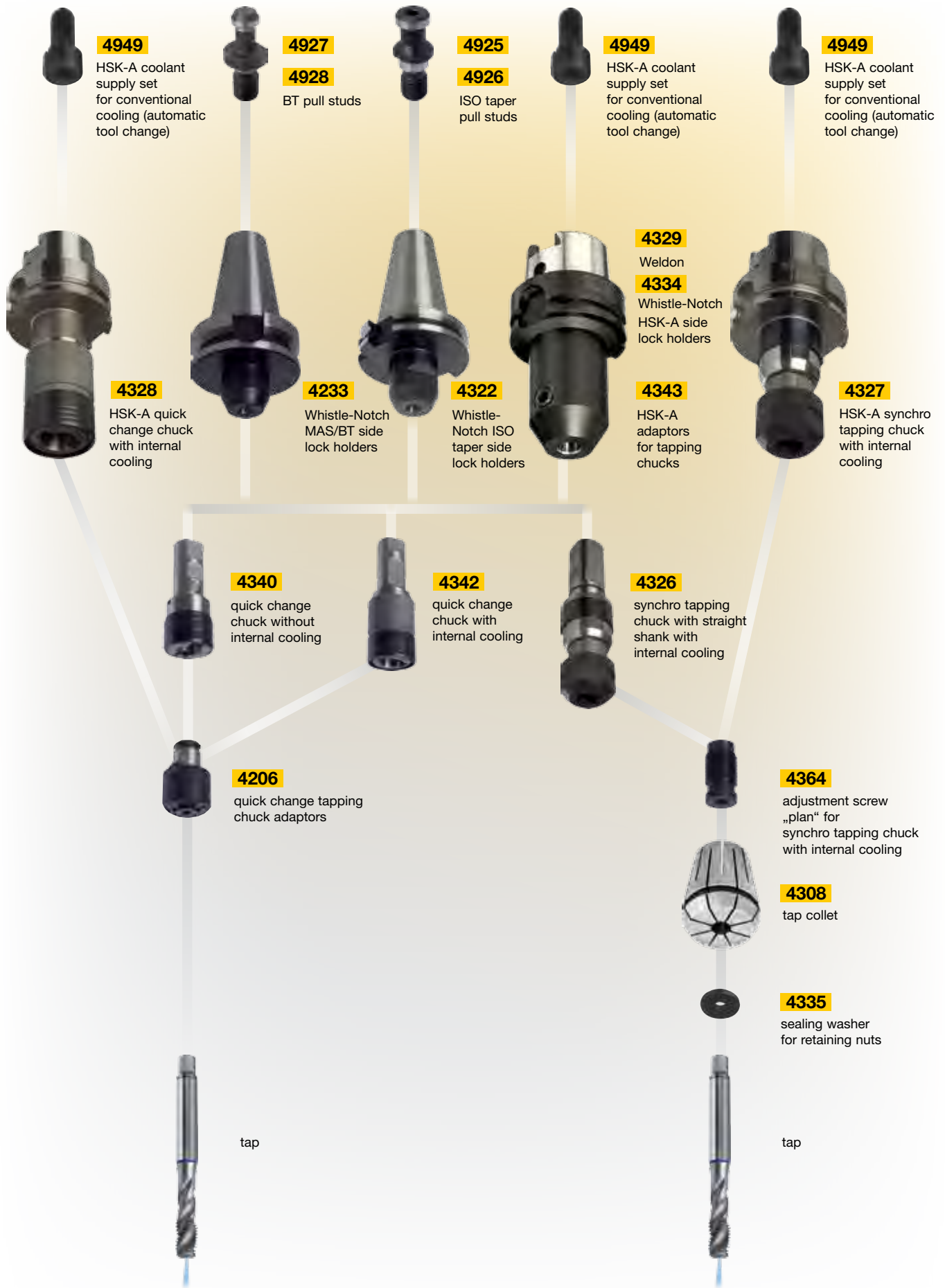
4605 Reduction bush sealed

4606 GUHROJET reduction bush



Threading tool:
shank diameter x square

Configuration of synchro tapping chucks for conventional cooling



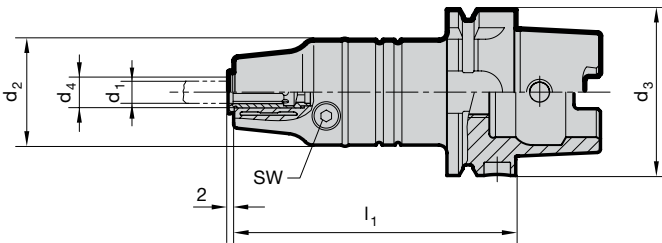
Tapping chucks

Product information

- HSK-A to ISO 12164-1/DIN 69893-1
- compensates synchronisation errors
- guarantees high thread quality and optimal tool life
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap
- reduces an increase in axial forces during the cutting cycle to a minimum
- convenient hydraulic clamping using reduction bushes with active drive
- length-setting screw allows 3 mm readjustment
- suitable for internal cooling identifiable by black coloured ring
- coolant pressure up to max. 80 bar

Scope of delivery

- incl. hexagon clamping key
Guhring no. 4912
- incl. adjustment key for adjustment screws
- order setting screw "face"
Guhring no. 4364 separately
- order reduction bushes
Guhring no. 4605 or 4606 separately
- for conventional cooling order coolant delivery set Guhring no. 4949 separately



GÜHROSync

Guhring no. **4601**
Discount group **114**

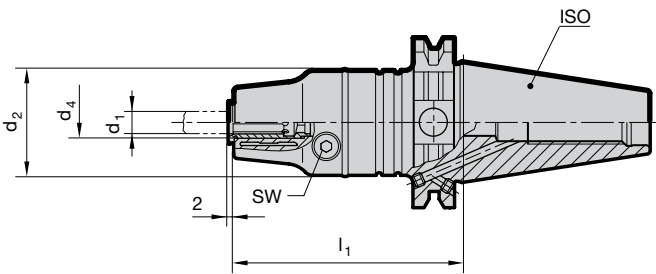
HSK-A d ₃	d ₄ mm	for shank Ø d ₁ x VKT	for thread	d ₂ mm	l ₁ mm	tension/ compr. ± mm	SW	kg	Code no.	Availability
63	12.00	2.8-10	M3-M12	40	106.5	0.3	4	1.5	12.063	●
63	20.00	6-16	M8-M20	40	120.5	0.3	5	1.6	20.063	●
100	12.00	2.8-10	M3-M12	40	113.0	0.3	4	2.8	12.100	●
100	20.00	6-16	M8-M20	40	127.0	0.3	5	2.9	20.100	●

Product information

- SK30 to DIN ISO 7388-1 form AD without coolant supply over collar
- SK40 to DIN ISO 7388-1 form AD/AF (AD/B)
- form B supplied with threaded pins in bores
- compensates synchronisation errors
- guarantees high thread quality and optimal tool life
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap
- reduces an increase in axial forces during the cutting cycle to a minimum
- convenient hydraulic clamping using reduction bushes with active drive
- length-setting screw allows 3 mm readjustment
- suitable for internal cooling identifiable by black coloured ring
- coolant pressure up to max. 80 bar

Scope of delivery

- incl. hexagon clamping key
Guhring no. 4912
- incl. adjustment key for adjustment screws
- order setting screw "face"
Guhring no. 4364 separately
- order reduction bushes
Guhring no. 4605 or 4606 separately
- order pull studs, Guhring no. 4925 or 4926 separately



Guhring no.	4576
Discount group	114

SK	d4 mm	for shank Ø d1	for thread	d2 mm	l1 mm	tension/compr. ± mm	SW	kg	Code no.	Availability
30	12,00	2,8-10	M3-M12	40	81	0,3	4	0,8	12,030	●
30	20,00	6-16	M8-M20	40	95	0,3	5	0,9	20,030	●
40	12,00	2,8-10	M3-M12	40	85	0,3	4	1,3	12,040	●
40	20,00	6-16	M8-M20	40	99	0,3	5	1,4	20,040	●

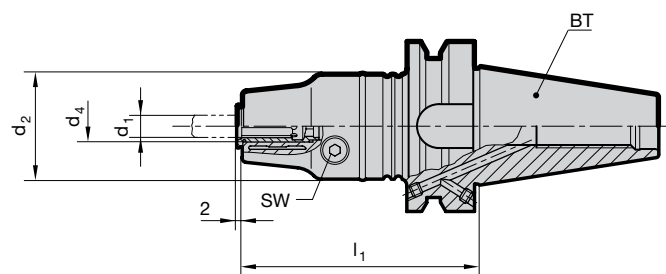
Tapping chucks

Product information

- MAS/BT30 to DIN ISO 7388-2 form JD without coolant supply over collar
- MAS/BT40 to DIN ISO 7388-2 form JD/JF (form AD/B)
- MAS/BT40 to JIS B 6339-2 form JD/JF (form AD/B)
- form B supplied with threaded pins in bores
- compensates synchronisation errors
- guarantees high thread quality and optimal tool life
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap
- reduces an increase in axial forces during the cutting cycle to a minimum
- convenient hydraulic clamping using reduction bushes with active drive
- length-setting screw allows 3 mm readjustment
- suitable for internal cooling identifiable by black coloured ring
- coolant pressure up to max. 80 bar

Scope of delivery

- incl. hexagon clamping key
Guhring no. 4912
- incl. adjustment key for adjustment screws
- order setting screw “face”
Guhring no. 4364 separately
- order reduction bushes
Guhring no. 4605 or 4606 separately
- order pull studs, Guhring no. 4927 or 4928 separately



GÜHROSync

Guhring no.	4577
Discount group	114

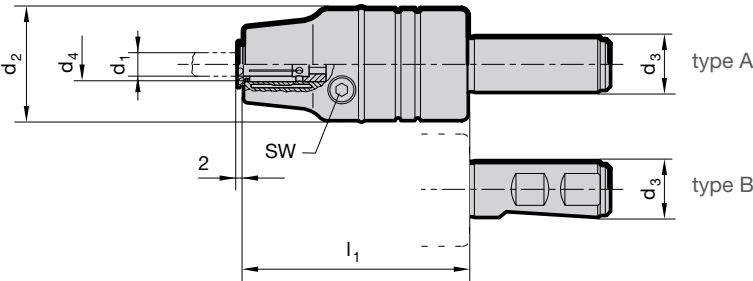
BT	d ₄ mm	for shank Ø d ₁	for thread	d ₂ mm	l ₁ mm	tension/compr. ± mm	SW	kg	Code no.	Availability
30	12.00	2.8-10	M3-M12	40	81	0.3	4	0.8	12,030	●
30	20.00	6-16	M8-M20	40	95	0.3	5	0.9	20,030	●
40	12.00	2.8-10	M3-M12	40	85	0.3	4	1.3	12,040	●
40	20.00	6-16	M8-M20	40	99	0.3	5	1.4	20,040	●

Product information

- compensates synchronisation errors
- guarantees best thread quality and optimal life
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap
- reduces an increase in axial forces during the cutting cycle to a minimum
- convenient hydraulic clamping using reduction bushes with active drive
- length-setting screw allows 3 mm readjustment
- holder shank similar DIN 1835 or holding in precision chucks (hydraulic, shrink fit or power clamping chucks)
- suitable for internal cooling identifiable by black coloured ring
- coolant pressure up to max. 80 bar

Scope of delivery

- incl. hexagon clamping key
Guhring no. 4912
- incl. adjustment key for adjustment screws
- order setting screw "face"
Guhring no. 4364 separately
- order reduction bushes
Guhring no. 4605 or 4606 separately



GÜHROSync

Guhring no.	4525
Discount group	114

d3 h6 mm	d4 mm	type	for shank Ø d1	for thread	d2 mm	l1 mm	tension/compr. ± mm	SW	kg	Code no.	Availability
20	12.00	A	2.8-10	M3-M12	40	80	0.3	4	0.7	12,020	●
20	20.00	A	6-16	M8-M20	40	94	0.3	5	0.8	20,020	●
25	12.00	B	2.8-10	M3-M12	40	80	0.3	4	0.7	12,025	●
25	20.00	B	6-16	M8-M20	40	94	0.3	5	0.8	20,025	●

Tapping chucks

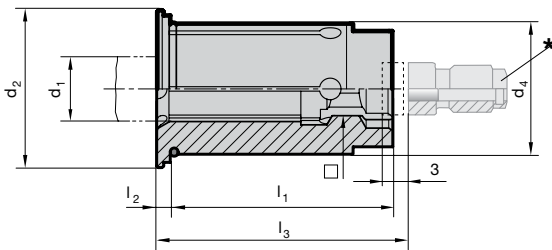
Product information

- for clamping taps with square shank in GUHROSync synchro tapping chucks
- clamping-Ø for tool shank tolerance h6-h9
- face side closed, therefore coolant leak-proof for threading tools with IC
- positive drive
- position setting screw on tap shank
- length-setting screw allows 3 mm readjustment

Scope of delivery

- order setting screw "face" Guhring no. 4364 separately
- order MQL setting screws Guhring no. 4305 separately

Tapping chucks



Guhring no. 4605

Discount group 114

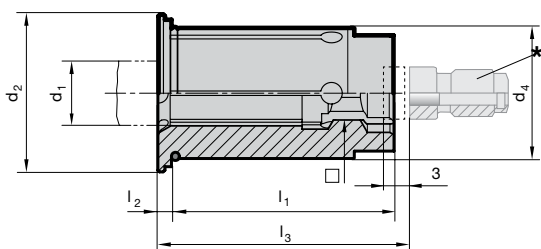
d4 mm	d1 mm	□ mm	Standard	d1 inch	□ inch	d2 mm	l1 mm	l2 mm	l3 mm	* for adjustment screw	for thread	Code no.	Availability
12.00	2.800	2.100	DIN	-	-	16.50	29.00	2.00	-	-	M2 / M4	2,812	●
12.00	3.500	2.700	DIN	-	-	16.50	29.00	2.00	-	-	M3 / M4.5 / M5	3,512	●
12.00	4.000	3.200	JIS	-	-	16.50	29.00	2.00	-	-	M3	4,012	●
12.00	4.500	3.400	DIN	-	-	16.50	29.00	2.00	26.00	4364 5.020	M4 / M6	4,512	●
12.00	4.928	3.861	ANSI	0.194	0.152	16.50	29.00	2.00	26.00	4364 5.020	10-24 & 10-32	4,912	●
12.00	5.000	4.000	JIS	-	-	16.50	29.00	2.00	26.00	4364 5.020	M4	5,012	●
12.00	5.500	4.500	JIS	-	-	16.50	29.00	2.00	26.00	4364 5.020	M5	5,512	●
12.00	5.588	4.191	ANSI	0.220	0.165	16.50	29.00	2.00	26.00	4364 5.020	12-24 & 12-28	15,512	●
12.00	6.000	4.500	JIS	-	-	16.50	29.00	2.00	26.00	4364 5.020	M6	16,012	●
12.00	6.000	4.900	DIN	-	-	16.50	29.00	2.00	26.00	4364 6.020	M4.5/M5/M6/M8	6,012	●
12.00	6.200	5.000	JIS	-	-	16.50	29.00	2.00	26.00	4364 6.020	M7 / M8	6,212	●
12.00	6.477	4.851	ANSI	0.255	0.191	16.50	29.00	2.00	26.00	4364 6.020	1/4-20 & 1/4-28	6,412	●
12.00	7.000	5.500	DIN / JIS	-	-	16.50	29.00	2.00	26.00	4364 7.020	M7 / M9 / M10	7,012	●
12.00	7.938	5.944	ANSI	0.3125	0.234	16.50	29.00	2.00	31.00	4364 7.020	1/16-27	7,912	●
12.00	8.000	6.200	DIN	-	-	16.50	29.00	2.00	31.00	4364 8.020	M8 / M11	8,012	●
12.00	8.000	6.500	JIS	-	-	16.50	29.00	2.00	31.00	4364 8.020	M11	18,012	●
12.00	8.077	6.045	ANSI	0.318	0.238	16.50	29.00	2.00	31.00	4364 7.020	5/16-18 & 5/16-24	28,012	●
12.00	8.204	6.147	ANSI	0.323	0.242	16.50	29.00	2.00	31.00	4364 7.020	7/16-14 & 7/16-20	8,212	●
12.00	8.500	6.500	JIS	-	-	16.50	29.00	2.00	31.00	4364 8.020	M12	8,512	●
12.00	9.000	7.000	DIN	-	-	16.50	29.00	2.00	32.00	4364 9.020	M9 / M12	9,012	●
12.00	9.322	6.985	ANSI	0.367	0.275	16.50	29.00	2.00	32.00	4364 9.020	1/2-13 & 1/2-20	9,312	●
12.00	9.677	7.264	ANSI	0.381	0.286	16.50	29.00	2.00	33.00	4364 9.020	3/8-16 & 3/8-24	9,612	●
12.00	10.000	8.000	DIN	-	-	16.50	29.00	2.00	36.00	4364 10.020	M10	10,012	●

Product information

- for clamping taps with square shank in GUHROSync synchro tapping chucks
- clamping-Ø for tool shank tolerance h6-h9
- face side closed, therefore coolant leak-proof for threading tools with IC
- positive drive
- position setting screw on tap shank
- length-setting screw allows 3 mm readjustment

Scope of delivery

- order setting screw "face" Guhring no. 4364 separately
- order MQL setting screws Guhring no. 4305 separately



Tapping chucks

Guhring no.	4605
Discount group	114

d4 mm	d1 mm	□ mm	Standard	d1 inch	□ inch	d2 mm	l1 mm	l2 mm	l3 mm	* for adjustment screw	for thread	Code no.	Availability
20.00	6.000	4.500	JIS	-	-	24.10	34.00	2.00	26.00	4364 6.032	M6	26,020	●
20.00	6.000	4.900	DIN	-	-	24.10	34.00	2.00	26.00	4364 6.032	M4.5/M5/M6/M8	6,020	●
20.00	6.200	5.000	JIS	-	-	24.10	34.00	2.00	26.00	4364 6.032	M7 / M8	6,220	●
20.00	6.477	4.851	ANSI	0.255	0.191	24.10	34.00	2.00	26.00	4364 6.032	1/4-20 & 1/4-28	6,420	●
20.00	7.000	5.500	DIN / JIS	-	-	24.10	34.00	2.00	26.00	4364 7.032	M7 / M9 / M10	7,020	●
20.00	7.938	5.944	ANSI	0.3125	0.234	24.10	34.00	2.00	31.00	4364 7.032	1/16-27	7,920	●
20.00	8.000	6.200	DIN	-	-	24.10	34.00	2.00	31.00	4364 8.032	M8 / M11	8,020	●
20.00	8.000	6.500	JIS	-	-	24.10	34.00	2.00	31.00	4364 8.032	M11	18,020	●
20.00	8.077	6.045	ANSI	0.318	0.238	24.10	34.00	2.00	31.00	4364 8.032	5/16-18 & 5/16-24	28,020	●
20.00	8.204	6.147	ANSI	0.323	0.242	24.10	34.00	2.00	31.00	4364 8.032	7/16-14 & 7/16-20	8,220	●
20.00	8.500	6.500	JIS	-	-	24.10	34.00	2.00	31.00	4364 8.032	M12	8,520	●
20.00	9.000	7.000	DIN	-	-	24.10	34.00	2.00	32.00	4364 9.032	M9 / M12	9,020	●
20.00	9.322	6.985	ANSI	0.367	0.275	24.10	34.00	2.00	32.00	4364 8.032	1/2-13 & 1/2-20	9,320	●
20.00	9.677	7.264	ANSI	0.381	0.286	24.10	34.00	2.00	33.00	4364 9.032	3/8-16 & 3/8-24	9,620	●
20.00	10.000	8.000	DIN	-	-	24.10	34.00	2.00	36.00	4364 10.032	M10	10,020	●
20.00	10.500	8.000	JIS	-	-	24.10	34.00	2.00	36.00	4364 10.032	M14	10,520	●
20.00	10.897	8.179	ANSI	0.4290	0.3220	24.10	34.00	2.00	35.00	4364 10.032	9/16-12 & 9/16-18	10,820	●
20.00	11.000	9.000	DIN	-	-	24.10	34.00	2.00	37.00	4364 11.032	M14	11,020	●
20.00	12.000	9.000	DIN	-	-	24.10	34.00	2.00	37.00	4364 11.032	M12 / M16	12,020	●
20.00	12.192	9.144	ANSI	0.480	0.36	24.10	34.00	2.00	36.00	4364 11.032	5/8-11 & 5/8-18	12,120	●
20.00	12.500	10.000	JIS	-	-	24.10	34.00	2.00	38.00	4364 11.032	M16	12,520	●
20.00	13.000	10.000	JIS	-	-	24.10	34.00	2.00	38.00	4364 11.032	M17	13,020	●
20.00	14.000	11.000	DIN / JIS	-	-	24.10	34.00	2.00	39.00	4364 11.032	M18	14,020	●
20.00	14.288	10.693	ANSI	0.5625	0.421	24.10	34.00	2.00	38.00	4364 11.032	1/4-18	14,220	●
20.00	14.986	11.227	ANSI	0.590	0.442	24.10	34.00	2.00	39.00	4364 11.032	3/4-10 & 3/4-16	14,920	●
20.00	15.000	12.000	JIS	-	-	24.10	34.00	2.00	40.00	4364 16.032	M20	15,020	●
20.00	16.000	12.000	DIN	-	-	24.10	34.00	2.00	41.00	4364 16.032	M20	16,020	●

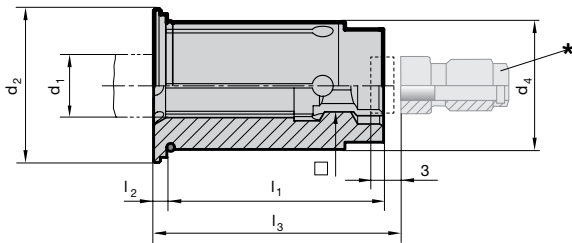
Product information

- for clamping taps with square shank in GUHROSync synchro tapping chucks
- clamping-Ø for tool shank tolerance h6-h9
- positive drive of reduction bush in Guhrosync synchro chuck
- with coolant slots for peripheral cooling, therefore process and tool life improvement
- coiled swarf is consistently washed away
- position setting screw on tap shank
- length-setting screw allows 3 mm readjustment

Scope of delivery

- order MQL setting screws Guhring no. 4305 separately
- order setting screw "face" Guhring no. 4364 separately

Tapping chucks



GUHROJET

Guhring no. **4606**
Discount group **114**

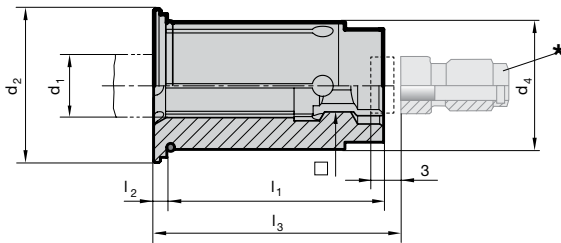
d4 mm	d1 mm	□ mm	Standard	d1 inch	□ inch	d2 mm	l1 mm	l2 mm	l3 mm	* for adjustment screw	for thread	Code no.	Availability
12.00	2.800	2.100	DIN	-	-	16.50	29.00	2.00	-	-	M2 / M4	2.812	●
12.00	3.500	2.700	DIN	-	-	16.50	29.00	2.00	-	-	M3 / M4.5 / M5	3.512	●
12.00	4.000	3.200	JIS	-	-	16.50	29.00	2.00	-	-	M3	4.012	●
12.00	4.500	3.400	DIN	-	-	16.50	29.00	2.00	-	-	M4 / M6	4.512	●
12.00	4.928	3.861	ANSI	0.194	0.152	16.50	29.00	2.00	-	-	10-24 & 10-32	4.912	●
12.00	5.000	4.000	JIS	-	-	16.50	29.00	2.00	-	-	M4	5.012	●
12.00	5.500	4.500	JIS	-	-	16.50	29.00	2.00	-	-	M5	5.512	●
12.00	5.588	4.191	ANSI	0.220	0.165	16.50	29.00	2.00	-	-	12-24 & 12-28	15.512	●
12.00	6.000	4.500	JIS	-	-	16.50	29.00	2.00	26.00	6.020	M6	16.012	●
12.00	6.000	4.900	DIN	-	-	16.50	29.00	2.00	26.00	6.020	M4.5 / M5 / M6 / M8	6.012	●
12.00	6.200	5.000	JIS	-	-	16.50	29.00	2.00	26.00	6.020	M7 / M8	6.212	●
12.00	6.477	4.851	ANSI	0.255	0.191	16.50	29.00	2.00	26.00	6.020	1/4-20 & 1/4-28	6.412	●
12.00	7.000	5.500	DIN / JIS	-	-	16.50	29.00	2.00	26.00	7.020	M7 / M9 / M10	7.012	●
12.00	7.938	5.944	ANSI	0.3125	0.234	16.50	29.00	2.00	31.00	7.020	1/16-27	7.912	●
12.00	8.000	6.200	DIN	-	-	16.50	29.00	2.00	31.00	8.020	M8 / M11	8.012	●
12.00	8.000	6.500	JIS	-	-	16.50	29.00	2.00	31.00	8.020	M11	18.012	●
12.00	8.077	6.045	ANSI	0.318	0.238	16.50	29.00	2.00	31.00	7.020	5/16-18 & 5/16-24	28.012	●
12.00	8.204	6.147	ANSI	0.323	0.242	16.50	29.00	2.00	31.00	8.020	7/16-14 & 7/16-20	8.212	●
12.00	8.500	6.500	JIS	-	-	16.50	29.00	2.00	31.00	8.020	M12	8.512	●
12.00	9.000	7.000	DIN	-	-	16.50	29.00	2.00	32.00	9.020	M9 / M12	9.012	●
12.00	9.322	6.985	ANSI	0.367	0.275	16.50	29.00	2.00	32.00	9.020	1/2-13 & 1/2-20	9.312	●
12.00	9.677	7.264	ANSI	0.381	0.286	16.50	29.00	2.00	33.00	9.020	3/8-16 & 3/8-24	9.612	●
12.00	10.000	8.000	DIN	-	-	16.50	29.00	2.00	36.00	10.020	M10	10.012	●

Product information

- for clamping taps with square shank in GUHROSynch synchro tapping chucks
- clamping-Ø for tool shank tolerance h6-h9
- positive drive of reduction bush in Guhrosynch synchro chuck
- with coolant slots for peripheral cooling, therefore process and tool life improvement
- coiled swarf is consistently washed away
- position setting screw on tap shank
- length-setting screw allows 3 mm readjustment

Scope of delivery

- order MQL setting screws
Guhring no. 4305 separately
- order setting screw "face"
Guhring no. 4364 separately



GÜHROJET

Guhring no. **4606**
Discount group **114**

d4 mm	d1 mm	□ mm	Standard	d1 inch	□ inch	d2 mm	l1 mm	l2 mm	l3 mm	* for adjustment screw	for thread	Code no.	Availability
20.00	6.000	4.500	JIS	-	-	24.10	34.00	2.00	26.00	6.032	M6	26,020	●
20.00	6.000	4.900	DIN	-	-	24.10	34.00	2.00	26.00	6.032	M4.5/M5/M6/M8	6,020	●
20.00	6.200	5.000	JIS	-	-	24.10	34.00	2.00	26.00	6.032	M7 / M8	6,220	●
20.00	6.477	4.851	ANSI	0.255	0.191	24.10	34.00	2.00	26.00	6.032	1/4-20 & 1/4-28	6,420	●
20.00	7.000	5.500	DIN / JIS	-	-	24.10	34.00	2.00	26.00	7.032	M7 / M9 / M10	7,020	●
20.00	7.938	5.944	ANSI	0.3125	0.234	24.10	34.00	2.00	31.00	7.032	1/16-27	7,920	●
20.00	8.000	6.200	DIN	-	-	24.10	34.00	2.00	31.00	8.032	M8 / M11	8,020	●
20.00	8.000	6.500	JIS	-	-	24.10	34.00	2.00	31.00	8.032	M11	18,020	●
20.00	8.077	6.045	ANSI	0.318	0.238	24.10	34.00	2.00	31.00	8.032	5/16-18 & 5/16-24	28,020	●
20.00	8.204	6.147	ANSI	0.323	0.242	24.10	34.00	2.00	31.00	8.032	7/16-14 & 7/16-20	8,220	●
20.00	8.500	6.500	JIS	-	-	24.10	34.00	2.00	31.00	8.032	M12	8,520	●
20.00	9.000	7.000	DIN	-	-	24.10	34.00	2.00	32.00	9.032	M9 / M12	9,020	●
20.00	9.322	6.985	ANSI	0.367	0.275	24.10	34.00	2.00	32.00	9.032	1/2-13 & 1/2-20	9,320	●
20.00	9.677	7.264	ANSI	0.381	0.286	24.10	34.00	2.00	33.00	9.032	3/8-16 & 3/8-24	9,620	●
20.00	10.000	8.000	DIN	-	-	24.10	34.00	2.00	36.00	10.032	M10	10,020	●
20.00	10.500	8.000	JIS	-	-	24.10	34.00	2.00	36.00	10.032	M14	10,520	●
20.00	10.897	8.179	ANSI	0.4290	0.3220	24.10	34.00	2.00	35.00	10.032	9/16-12 & 9/16-18	10,820	●
20.00	11.000	9.000	DIN	-	-	24.10	34.00	2.00	37.00	11.032	M14	11,020	●
20.00	12.000	9.000	DIN	-	-	24.10	34.00	2.00	37.00	11.032	M12 / M16	12,020	●
20.00	12.192	9.144	ANSI	0.480	0.36	24.10	34.00	2.00	36.00	11.032	5/8-11 & 5/8-18	12,120	●
20.00	12.500	10.000	JIS	-	-	24.10	34.00	2.00	38.00	11.032	M16	12,520	●
20.00	13.000	10.000	JIS	-	-	24.10	34.00	2.00	38.00	11.032	M17	13,020	●
20.00	14.000	11.000	DIN / JIS	-	-	24.10	34.00	2.00	39.00	14.032	M18	14,020	●
20.00	14.288	10.693	ANSI	0.5625	0.421	24.10	34.00	2.00	38.00	11.032	1/4-18	14,220	●
20.00	14.986	11.227	ANSI	0.590	0.442	24.10	34.00	2.00	39.00	11.032	3/4-10 & 3/4-16	14,920	●
20.00	15.000	12.000	JIS	-	-	24.10	34.00	2.00	40.00	16.032	M20	15,020	●
20.00	16.000	12.000	DIN	-	-	24.10	34.00	2.00	41.00	16.032	M20	16,020	●

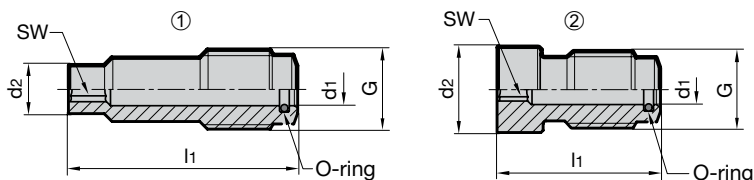
Product information

- for hydro-synchro tapping chucks
Guhring no. 4601, 4576, 4577 and 4525
- for synchro tapping chucks
Guhring no. 4326 and 4327
- for conventional internal cooling
- with facing stop for standard shank ends
- position setting screw on tap shank
- length-setting screw allows 3 mm readjustment

Scope of delivery

- with O-ring for secure seal

Tapping chucks



Guhring no. 4364
Discount group 114

for nominal size	for tap shank-Ø x □	G	d1 mm	d2 mm	l1 mm	SW	O-ring	image	Code no.	Availability
ER20 / Hydro12	< Ø6	M8x1	3.6	3.3	28.0	2.0	3.5x1	1	5,020	●
ER20 / Hydro12	6x4.9	M8x1	3.6	4.8	26.0	2.5	3.5x1	1	6,020	●
ER20 / Hydro12	7x5.5	M8x1	3.6	5.4	25.8	2.5	3.5x1	1	7,020	●
ER20 / Hydro12	8x6.2	M8x1	3.6	6.1	20.9	2.5	3.5x1	1	8,020	●
ER20 / Hydro12	9x7	M8x1	3.6	6.9	20.3	2.5	3.5x1	1	9,020	●
ER20 / Hydro12	10x8	M8x1	3.6	7.8	15.8	2.5	3.5x1	2	10,020	●
ER20 / Hydro12	11x9	M8x1	3.6	8.8	14.8	2.5	3.5x1	2	11,020	●
ER32 / Hydro20	< Ø6	M10x1	4.1	3.3	33.0	2.0	4x1	1	5,032	●
ER32 / Hydro20	6x4.9	M10x1	4.1	4.8	34.0	3.0	4x1	1	6,032	●
ER32 / Hydro20	7x5.5	M10x1	4.1	5.4	33.8	3.0	4x1	1	7,032	●
ER32 / Hydro20	8x6.2	M10x1	4.1	6.1	28.8	3.0	4x1	1	8,032	●
ER32 / Hydro20	9x7	M10x1	4.1	6.9	28.3	3.0	4x1	1	9,032	●
ER32 / Hydro20	10x8	M10x1	4.1	7.8	23.8	3.0	4x1	1	10,032	●
ER32 / Hydro20	11x9 & 12x9	M10x1	4.1	8.8	22.9	3.0	4x1	1	11,032	●
ER32 / Hydro20	14x11	M10x1	4.1	10.8	20.7	3.0	4x1	2	14,032	●
ER32 / Hydro20	16x12	M10x1	4.1	11.8	19.7	3.0	4x1	2	16,032	●
ER32 / Hydro20	18x14.5 & 20x16	M10x1	4.1	14.3	18.0	3.0	4x1	2	18,032	●

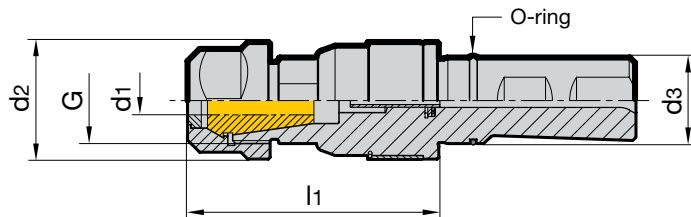
Synchro tapping chucks with straight shank

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. 4335 and clamping key, Guhring no. 4913 separately



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	Guhring no.	Discount group	Code no.	Availability
25	ER20	M3.5-M14	4-11.0	34	73	0.15	40	M25x1.5	0.50	4326	114	20,025	●
25	ER32	M3.5-M28	4-20.0	50	88	0.15	170	M40x1.5	1.30			32,025	●

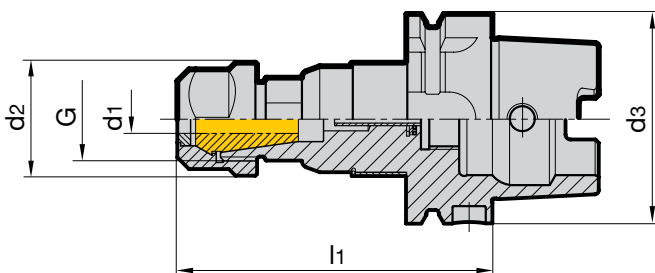
HSK-A synchro tapping chucks

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
- HSK-A to ISO 12164-1/DIN 69893-1

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

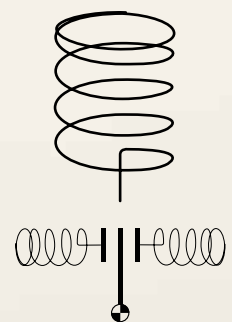


HSK-A d_3 mm	nom. size	for thread	d_1 mm	d_2 mm	l_1 mm	tension/ compr. mm	torque* Nm	G	kg	Guhring no.	Discount group	Code no.	Availability
63	ER20	M3.5-M14	4-11.0	34	95.5	0.15	40	M25x1.5	1.00	4327	114	20,063	●
63	ER20	M3.5-M14	4-11.0	34	160.0	0.15	40	M25x1.5	1.50			20,163	●
63	ER32	M3.5-M28	4-20.0	50	109.0	0.15	170	M40x1.5	1.70			32,063	●
100	ER20	M3.5-M14	4-11.0	34	102.0	0.15	40	M25x1.5	2.50			20,100	●
100	ER32	M3.5-M28	4-20.0	50	115.5	0.15	170	M40x1.5	2.70			32,100	●

GUHROSync tapping chucks + VA taps

The easy way to the perfect thread

GUHROSync tapping chucks provide excellent chip evacuation and longer tool life thanks to optimal tool clamping in combination with VA taps.

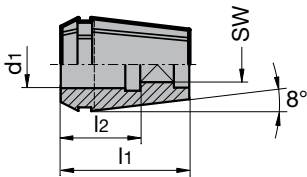


Made visible:
The spring symbol on the GUHROSync displays the effect of axial and radial force.

GUHROSync

Product information

- for clamping taps with square shank in synchro tapping chucks or collet holders
- smaller Ø4mm are clamped with collet, Guh. no. 4307 without sq. drive
- Tightening torque see clamping nuts Guhring no. 4306



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

nom. size	for shank Ø d ₁ mm	square SW	l 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	●

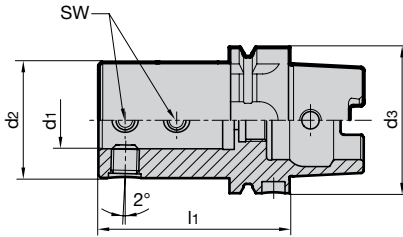
HSK-A adaptors for tapping chucks

Product information

- for quick change chucks and synchro tapping chucks with straight shank (except Guhring no. 4342)
- HSK-A to ISO 12164-1/DIN 69893-1

Scope of delivery

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



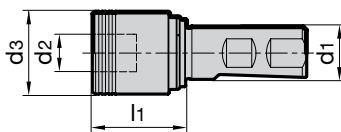
Guhring no.	4343
Discount group	114

HSK-A d ₃	d ₁ mm	d ₂ mm	l ₁ 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	●

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



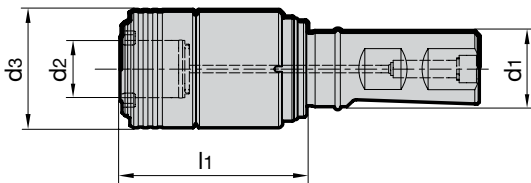
Guhring no.	4340
Discount group	114

for thread	d ₁ mm	d ₂ mm	d ₃ mm	l ₁ 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**

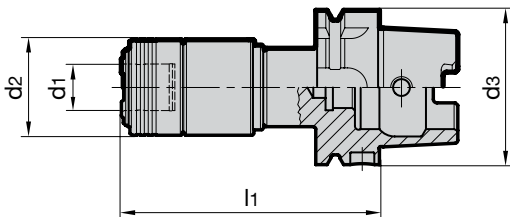
for thread	d ₁ mm	d ₂ mm	d ₃ mm	l ₁ mm	tension/compression mm	kg	Code no.	Availability
M3-M12	25	19	39	62	7.5/7.5	0.6	19,025	●
M8-M20	25	31	60	88	10/10	1.0	31,025	●

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.
- HSK-A to ISO 12164-1/DIN 69893-1



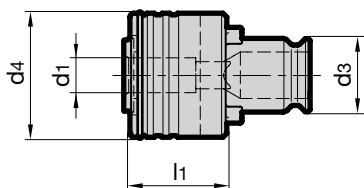
Guhring no. **4328**

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	1.13	19,063	●
63	M8-M20	31	60	140	10.0	2.28	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.



Tapping chucks

					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	●	
M3-M12	2.5 x 2.1	19	32	25	19,025	●	
M3-M12	2.8 x 2.1	19	32	25	19,028	●	
M3-M12	3.5 x 2.7	19	32	25	19,035	●	
M3-M12	4 x 3	19	32	25	19,040	●	
M3-M12	4.5 x 3.4	19	32	25	19,045	●	
M3-M12	5.5 x 4.5	19	32	25	19,055	●	
M3-M12	6 x 4.9	19	32	25	19,060	●	
M3-M12	7 x 5.5	19	32	25	19,070	●	
M3-M12	8 x 6.2	19	32	25	19,080	●	
M3-M12	9 x 7	19	32	25	19,090	●	
M3-M12	10 x 8	19	32	25	19,100	●	
M8-M20	6 x 4.9	31	50	34	31,060	●	
M8-M20	7 x 5.5	31	50	34	31,070	●	
M8-M20	8 x 6.2	31	50	34	31,080	●	
M8-M20	9 x 7	31	50	34	31,090	●	
M8-M20	10 x 8	31	50	34	31,100	●	
M8-M20	11 x 9	31	50	34	31,110	●	
M8-M20	12 x 9	31	50	34	31,120	●	
M8-M20	14 x 11	31	50	34	31,140	●	
M8-M20	16 x 12	31	50	34	31,160	●	

GÜHRROJET



TOOL HOLDERS

TOOL HOLDERS WITH
PERIPHERAL
COOLING

|GÜHROJET|



***OPTIMAL CHIP
EVACUATION***



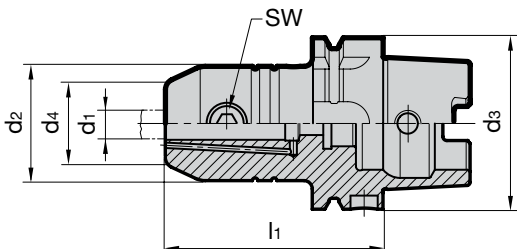
***HIGH PROCESS
RELIABILITY***



***IMPROVED COOLING
LUBRICATION***

Product information

- balancing quality: G6.3 / 15,000 rev./min
- 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
- HSK-A to ISO 12164-1 / DIN 69893-1



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**

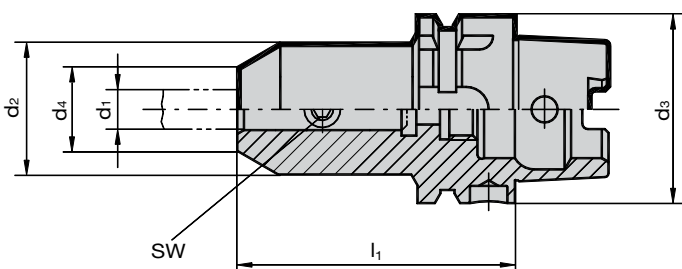
HSK-A d ₃	for shank Ø d ₁ h6 mm	d ₂ mm	d ₄ mm	l ₁ mm	SW	kg	Code no.	Availability
32	6	25	15	60	3	0,24	6,032	●
32	8	28	20	60	4	0,27	8,032	●
32	10	35	25	65	5	0,31	10,032	●
32	12	42	30	65	6	0,41	12,032	●
40	6	25	15	60	3	0,33	6,040	●
40	8	28	20	60	4	0,35	8,040	●
40	10	35	25	60	5	0,47	10,040	●
40	12	42	30	70	5	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	0,50	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	●
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	●

Product information

- balancing quality: G6.3 / 15,000 rev./min
- dimensions to DIN 69882-4
- with bore to DIN 1835-2 form B "Weldon"
- from bore d1 = 25 with two clamping screws
- HSK-A to ISO 12164-1 / DIN 69893-1

Scope of delivery

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



Guhring no.	4329
Discount group	114

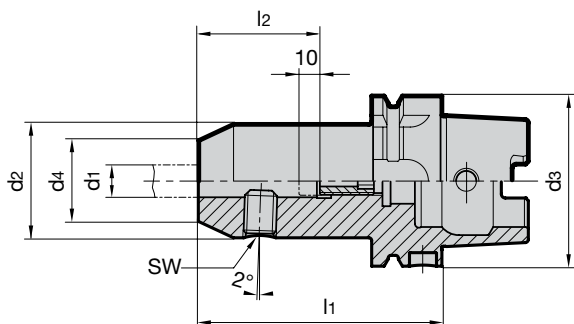
HSK-A d ₃	clamping-Ø d ₁ h6 mm	d ₂ mm	d ₄ mm	l ₁ mm	SW	kg	Code no.	Availability
32	6	25	15	60	3	0.24	6,032	●
32	8	28	20	60	4	0.27	8,032	●
32	10	35	25	65	5	0.31	10,032	●
32	12	42	30	65	6	0.41	12,032	●
40	6	25	15	60	3	0.33	6,040	●
40	8	28	20	60	4	0.35	8,040	●
40	10	35	25	60	5	0.47	10,040	●
40	12	42	30	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	●

Product information

- balancing quality: G6.3 / 15,000 rev./min
- dimensions to DIN 69882-5
- with bore to DIN 1835-2 form E "Whistle Notch" with groove on face side for identification
- from bore d1 = 25 with two clamping screws
- HSK-A to ISO 12164-1 / DIN 69893-1

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

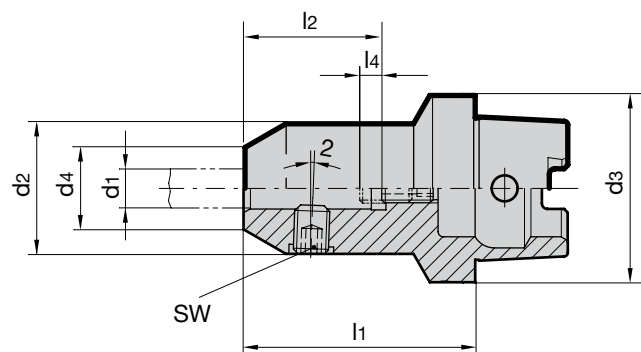
HSK-A d ₃	clamping-Ø d ₁ mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	incl. adjustment screw 4904 ...	SW	kg	Code no.	Availability
32	6	25	15	80	36	6,014	3	0.32	6,032	●
32	8	28	20	80	36	8,014	4	0.36	8,032	●
32	10	35	25	80	40	10,014	5	0.46	10,032	●
32	12	42	30	80	45	12,014	6	0.57	12,032	●
40	6	25	15	80	36	6,014	3	0.36	6,040	●
40	8	28	20	80	36	8,014	4	0.40	8,040	●
40	10	35	25	80	40	10,014	5	0.50	10,040	●
40	12	42	30	90	45	12,014	6	0.68	12,040	●
40	14	44	32	90	45	12,014	6	0.72	14,040	●
40	16	48	36	90	48	16,014	6	0.77	16,040	●
50	6	25	15	80	36	6,014	3	0.58	6,050	●
50	8	28	20	80	36	8,014	4	0.62	8,050	●
50	10	35	25	80	40	10,014	5	0.73	10,050	●
50	12	42	30	90	45	12,014	6	0.97	12,050	●
50	14	44	32	90	45	12,014	6	1.00	14,050	●
50	16	48	36	90	48	16,014	6	1.09	16,050	●
50	18	50	38	90	48	16,014	6	1.12	18,050	●
50	20	52	40	100	50	20,114	8	1.30	20,050	●
63	6	25	15	80	36	6,014	3	0.86	6,063	●
63	8	28	20	80	36	8,014	4	0.90	8,063	●
63	10	35	25	80	40	10,014	5	1.00	10,063	●
63	12	42	30	90	45	12,014	6	1.24	12,063	●
63	14	44	32	90	45	12,014	6	1.28	14,063	●
63	16	48	36	100	48	16,014	6	1.53	16,063	●
63	18	50	38	100	48	16,014	6	1.60	18,063	●
63	20	52	40	100	50	20,114	8	1.65	20,063	●
63	25	65	45	110	56	20,114	10	2.34	25,063	●
63	32	72	56	110	60	20,114	10	2.54	32,063	●
80	6	25	15	90	36	6,014	3	2.20	6,080	●
80	8	28	20	90	36	8,014	4	2.25	8,080	●
80	10	35	25	90	40	10,014	5	2.56	10,080	●
80	12	42	30	100	45	12,014	6	2.60	12,080	●
80	14	44	32	100	45	12,014	6	2.85	14,080	●
80	16	48	36	100	48	16,014	6	2.88	16,080	●
80	18	50	38	100	48	16,014	6	2.90	18,080	●
80	20	52	40	110	50	20,114	8	3.05	20,080	●
80	25	65	45	110	56	20,114	10	3.10	25,080	●
80	32	72	56	120	60	20,114	10	3.20	32,080	●
100	6	25	15	90	36	6,014	3	2.60	6,100	●
100	8	28	20	90	36	8,014	4	2.60	8,100	●
100	10	35	25	90	40	10,014	5	2.60	10,100	●
100	12	42	30	100	45	12,014	6	2.80	12,100	●
100	14	44	32	100	45	12,014	6	2.85	14,100	●
100	16	48	36	100	48	16,014	6	2.97	16,100	●
100	18	50	38	100	48	16,014	6	3.10	18,100	●
100	20	52	40	110	50	20,114	8	3.23	20,100	●
100	25	65	45	120	56	20,114	10	4.06	25,100	●
100	32	72	56	120	60	20,114	10	4.40	32,100	●

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- dimensions to DIN 69882-5
- with bore to DIN 1835-2 form E "Whistle Notch" with groove on face side for identification
- from bore d1 = 25 with two clamping screws Guhring no. 4903
- HSK-C to ISO 12164-1/DIN 69893-1

Scope of delivery

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



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	Guhring no. 4333		
										Code no.	Availability	
Discount group											114	
32	6	25	15	60	36	10	6,014	3	0.23	6,032	●	
32	8	28	20	60	36	10	8,014	4	0.28	8,032	●	
32	10	35	25	65	40	10	10,014	5	0.43	10,032	●	
40	6	25	15	60	36	10	6,014	3	0.29	6,040	●	
40	8	28	20	60	36	10	8,014	4	0.33	8,040	●	
40	10	35	25	65	40	10	10,014	5	0.47	10,040	●	
40	12	42	30	70	45	8	12,014	6	0.67	12,040	●	
40	14	44	32	70	45	8	12,014	6	0.73	14,040	●	
40	16	48	36	75	48	8	16,014	6	0.92	16,040	●	
40	20	52	40	80	50	8	20,114	8	1.11	20,040	●	
50	6	25	15	60	36	8	6,014	3	0.42	6,050	●	
50	8	28	20	60	36	8	8,014	4	0.46	8,050	●	
50	10	35	25	65	40	8	10,014	5	0.57	10,050	●	
50	12	42	30	75	45	10	12,014	6	0.80	12,050	●	
50	14	44	32	75	45	10	12,014	6	0.87	14,050	●	
50	16	48	36	80	48	10	16,014	6	1.02	16,050	●	
50	18	50	38	80	48	10	16,014	6	1.09	18,050	●	
50	20	52	40	80	50	8	20,114	8	1.15	20,050	●	
50	25	65	45	95	56	8	20,114	10	2.14	25,050	●	
63	6	25	15	60	36	8	6,014	3	0.64	6,063	●	
63	8	28	20	60	36	8	8,014	4	0.66	8,063	●	
63	10	35	25	65	40	8	10,014	5	0.78	10,063	●	
63	12	42	30	75	45	10	12,014	6	0.99	12,063	●	
63	14	44	32	75	45	10	12,014	6	1.03	14,063	●	
63	16	48	36	80	48	10	16,014	6	1.21	16,063	●	
63	18	50	38	80	48	10	16,014	6	1.26	18,063	●	
63	20	52	40	80	50	8	20,114	8	1.31	20,063	●	
63	25	65	45	95	56	8	20,114	10	2.23	25,063	●	
63	32	72	56	100	60	8	20,114	10	2.75	32,063	●	

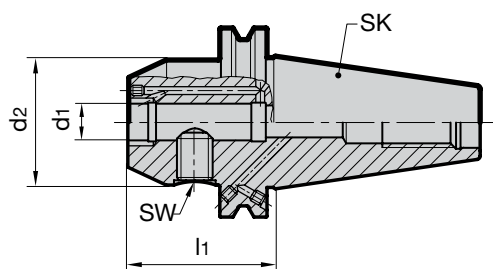
Tool holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- with bore to DIN 1835-2 form B "Weldon"
- ISO taper to DIN ISO 7388-1 form AD/AF
- form B supplied with threaded pins in bores
- with coolant ducts in the bore for peripheral cooling, improving process and tool life
- from bore $d_1 = 25$ mm with two clamping screws Guhring no. 4903
- coolant supply form AD/B (* version AD without coolant supply over collar and without GÜHROJET)
- Coolant ducts:
 $d_1 = 6 - 18$ mm with two coolant ducts
 $d_1 = 20 - 32$ mm with four coolant ducts

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

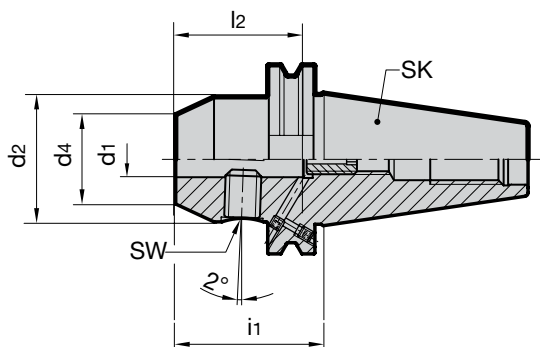
ISO taper	clamping-Ø d_1 h6 mm	d_2 mm	l_1 mm	SW	Code no.	Availability
40*	16	45	35	6	916,040	●
40*	20	45	35	8	920,040	●
40*	25	50	35	10	925,040	●
40	6	25	50	3	6,040	●
40	8	28	50	4	8,040	●
40	10	35	50	5	10,040	●
40	12	42	50	6	12,040	●
40	14	44	50	6	14,040	●
40	16	48	63	6	16,040	●
40	18	50	63	6	18,040	●
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
- with bore to DIN 1835-2 form E "Whistle Notch"
- ISO taper to DIN ISO 7388-1 form AD/AF
- 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 d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	SW	kg	Code no.	Availability
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	●

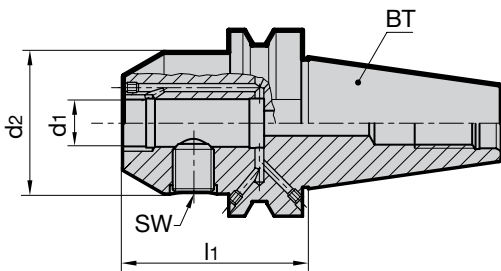
Tool holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- with bore to DIN 1835-2 form B "Weldon"
- MAS/BT to DIN ISO 7388-2 form JD/JF
- 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 JD/JF (* version JD without coolant supply over collar and without GÜHROJET)
- Coolant ducts:
d1 = 6 - 18 mm with two coolant ducts
d1 = 20 - 32 mm with four coolant ducts

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 h6 mm	d2 mm	l1 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	●

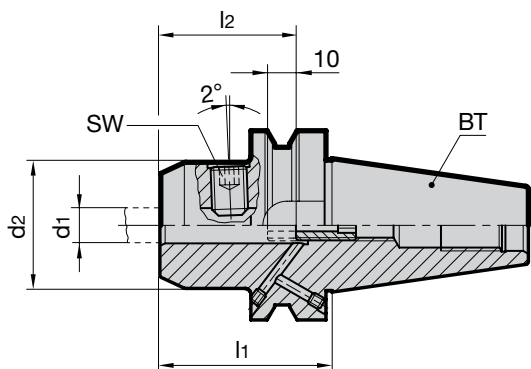
Tool holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- MAS/BT to DIN ISO 7388-2 form JD/JF
- with bore to DIN 1835-2 form E „WhistleNotch“
- from bore d1 = 25 with two clamping screws
- coolant supply form JD/JF (* BT50 version JD 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 h6 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	●

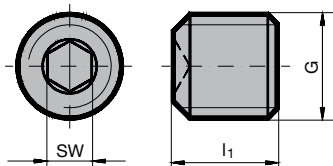
Tool holders

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	14	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	●
25	M14	11,5	42	6	14,001	●
25	M16	12	50	8	16,001	●

Adjustment screws

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

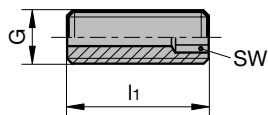


Product information

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

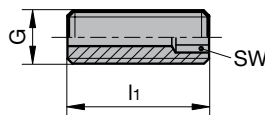
Scope of delivery

- Minimum order quantity 5



Guhring no.	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	●



Guhring no.	4905
Discount group	114

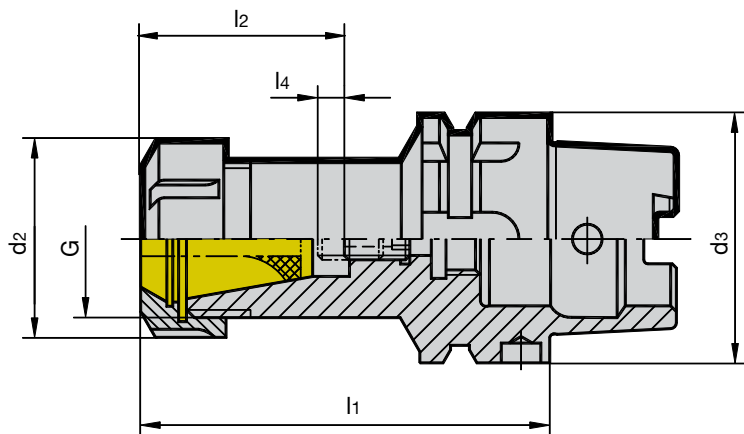
G	l ₁ mm	SW	Code no.	Availability
M5	14	2.5	5,014	●
M5	16	2.5	5,016	●
M6	14	3.0	6,014	●
M6	16	3.0	6,016	●
M8	15	4.0	8,015	●
M8	17	4.0	8,017	●
M10	17	5.0	10,017	●
M10	20	5.0	10,020	●
M12	19	6.0	12,019	●
M12	22	6.0	12,022	●
M16	20	6.0	16,020	●
M20	26	6.0	20,026	●

Product information

- balancing quality: G2.5 / 25.000 rev./min or U< 1gmm
- HSK-A to ISO 12164-1/DIN 69893-1

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**

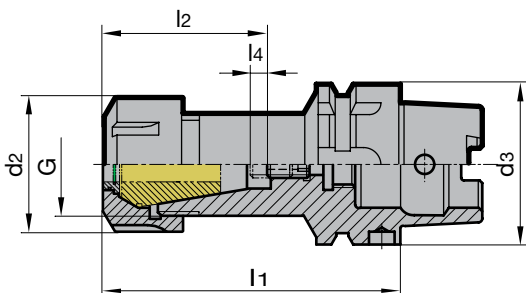
HSK-A d ₃	clamping range	d ₂ mm	G	l ₁ mm	l ₂ mm	l ₄ mm	incl. adjustment screw Guhr. no. 4902...	kg	Code no.	Availability
32	ER 11 Ø 1-7	19	M14 x 0.75	55	25	6	11.012	0.20	11,032	●
32	ER 16 Ø 1-10	28	M22 x 1.5	80	34	6	16.012	0.30	16,032	●
32	ER 20 Ø 3-13	34	M25 x 1.5	70	40	8	16.012	0.30	20,032	●
40	ER 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	8	25.014	0.50	25,040	●
40	ER 32 Ø 3-20	50	M40 x 1.5	100	50	10	32.020	0.80	32,040	●
50	ER 16 Ø 1-10	28	M22 x 1.5	100	34	6	16.012	0.70	16,050	●
50	ER 25 Ø 2-16	42	M32 x 1.5	100	44	8	25.014	1.00	25,150	●
50	ER 25 Ø 2-16	42	M32 x 1.5	80	44	8	25.014	0.80	25,050	●
50	ER 32 Ø 3-20	50	M40 x 1.5	100	50	10	32.020	1.00	32,050	●
63	ER 16 Ø 1-10	28	M22 x 1.5	100	34	6	16.012	0.90	16,063	●
63	ER 16 Ø 1-10	28	M22 x 1.5	160	34	6	16.012	1.20	16,163	●
63	ER 25 Ø 2-16	42	M32 x 1.5	80	42	6	25.014	1.00	25,063	●
63	ER 25 Ø 2-16	42	M32 x 1.5	100	42	6	25.014	1.20	25,163	●
63	ER 32 Ø 3-20	50	M40 x 1.5	100	50	10	32.020	1.40	32,063	●
63	ER 40 Ø 3-26	63	M50 x 1.5	120	56	10	32.020	1.90	40,063	●
80	ER 32 Ø 3-20	50	M40 x 1.5	100	50	10	32.020	1.90	32,080	●
80	ER 32 Ø 3-20	50	M40 x 1.5	160	50	10	32.020	2.80	32,180	●
80	ER 40 Ø 3-26	63	M50 x 1.5	120	56	10	32.020	2.80	40,080	●
100	ER 32 Ø 3-20	50	M40 x 1.5	100	50	10	32.020	2.80	32,100	●
100	ER 32 Ø 3-20	50	M40 x 1.5	160	50	10	32.020	3.60	32,101	●
100	ER 40 Ø 3-26	63	M50 x 1.5	120	56	10	32.020	3.60	40,100	●

Product information

- sealed, suitable for coolant pressure up to 100 bar thanks to the application of IC clamping nuts and suitable sealing disks
- balancing quality: G2.5 / 25.000 rev./min or U< 1gmm
- HSK-A to ISO 12164-1/DIN 69893-1

Scope of delivery

- incl. IC 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**

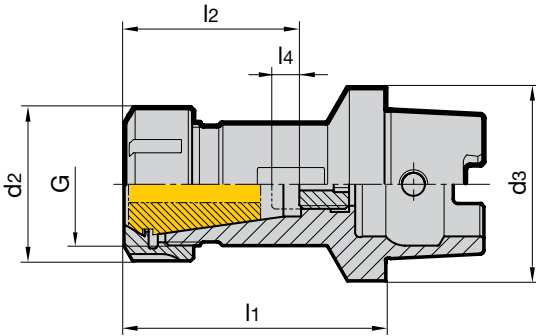
HSK-A d ₃	clamping range	d ₂ mm	G	l ₁ mm	l ₂ mm	l ₄ mm	incl. adjustment screw Guhr. no. 4902...	kg	Code no.	Availability
32	ER 16 Ø 1-10	28	M22 x 1.5	85	39	6	16.012	0.30	16,032	●
32	ER 20 Ø 3-13	34	M25 x 1.5	75	45	8	16.012	0.30	20,032	●
40	ER 16 Ø 1-10	28	M22 x 1.5	85	39	6	16.012	0.40	16,040	●
40	ER 25 Ø 2-16	42	M32 x 1.5	85	49	8	25.014	0.50	25,040	●
40	ER 32 Ø 3-20	50	M40 x 1.5	105	55	10	32.020	0.80	32,040	●
50	ER 16 Ø 1-10	28	M22 x 1.5	105	39	6	16.012	0.70	16,050	●
50	ER 25 Ø 2-16	42	M32 x 1.5	105	49	8	25.014	0.90	25,150	●
50	ER 25 Ø 2-16	42	M32 x 1.5	85	49	8	25.014	1.00	25,050	●
50	ER 32 Ø 3-20	50	M40 x 1.5	105	55	10	32.020	1.00	32,050	●
63	ER 16 Ø 1-10	28	M22 x 1.5	105	39	6	16.012	0.90	16,063	●
63	ER 16 Ø 1-10	28	M22 x 1.5	165	39	6	16.012	1.20	16,163	●
63	ER 25 Ø 2-16	42	M32 x 1.5	85	47	6	25.014	1.00	25,063	●
63	ER 25 Ø 2-16	42	M32 x 1.5	105	47	6	25.014	1.20	25,163	●
63	ER 32 Ø 3-20	50	M40 x 1.5	105	55	10	32.020	1.40	32,063	●
63	ER 40 Ø 3-26	63	M50 x 1.5	125	61	10	32.020	1.90	40,063	●
80	ER 32 Ø 3-20	50	M40 x 1.5	105	55	10	32.020	1.90	32,080	●
80	ER 32 Ø 3-20	50	M40 x 1.5	165	55	10	32.020	2.80	32,180	●
80	ER 40 Ø 3-26	63	M50 x 1.5	125	61	10	32.020	2.80	40,080	●
100	ER 32 Ø 3-20	50	M40 x 1.5	105	55	10	32.020	2.80	32,100	●
100	ER 32 Ø 3-20	50	M40 x 1.5	165	55	10	32.020	3.70	32,101	●
100	ER 40 Ø 3-26	63	M50 x 1.5	125	61	10	32.020	3.70	40,100	●

Product information

- balancing quality: G2.5 / 25.000 rev./min or U< 1gmm
- HSK-C to ISO 12164-1/DIN 69893-1

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

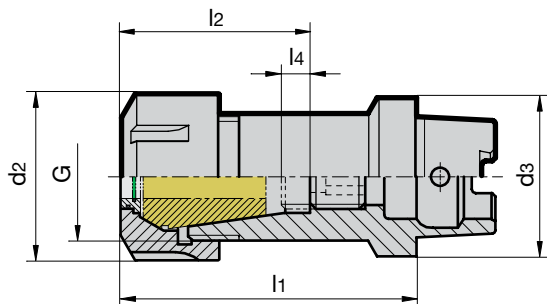
HSK-C d ₃	clamping range	d ₂ mm	G	l ₁ mm	l ₂ mm	l ₄ mm	incl. adjustment screw Guhr. no. 4901...	kg	Code no.	Availability
25	ER16 mini Ø 1-10	22	M19 x 1.0	50	30	3	16.012	0.10	16,025	●
32	ER 16 Ø 1-10	28	M22 x 1.5	55	32	4	16.012	0.20	16,032	●
32	ER 20 Ø 3-13	34	M25 x 1.5	60	38	6	16.012	0.30	20,032	●
32	ER 25 Ø 2-16	42	M32 x 1.5	70	44	6	25.014	0.40	25,032	●
40	ER 20 Ø 3-13	34	M25 x 1.5	60	38	6	16.012	0.40	20,040	●
40	ER 25 Ø 2-16	42	M32 x 1.5	70	44	8	25.014	0.50	25,040	●
40	ER 32 Ø 3-20	50	M40 x 1.5	75	49	8	25.014	0.60	32,040	●
50	ER 16 Ø 1-10	28	M22 x 1.5	60	34	6	16.012	0.40	16,050	●
50	ER 25 Ø 2-16	42	M32 x 1.5	70	44	8	25.014	0.70	25,050	●
50	ER 32 Ø 3-20	50	M40 x 1.5	75	49	8	25.014	0.90	32,050	●
50	ER 40 Ø 3-26	63	M50 x 1.5	80	54	8	25.014	1.00	40,050	●
63	ER 40 Ø 3-26	63	M50 x 1.5	80	54	8	25.014	1.50	40,063	●

Product information

- sealed, suitable for coolant pressure up to 100 bar thanks to the application of IC clamping nuts and suitable sealing disks
- balancing quality: G2.5 / 25.000 rev./min or U< 1gmm
- HSK-C to ISO 12164-1/DIN 69893-1

Scope of delivery

- incl. IC 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

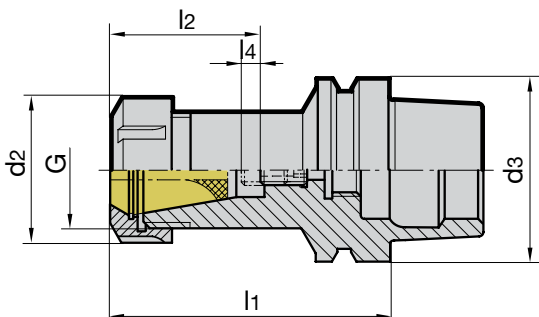
HSK-C d ₃	clamping range	d ₂ mm	G	l ₁ mm	l ₂ mm	l ₄ mm	incl. adjustment screw Guhr. no. 4901...	kg	Code no.	Availability
25	ER16 mini Ø 1-10	22	M19 x 1,0	55	35	3	16,012	0,10	16,025	●
32	ER 16 Ø 1-10	28	M22 x 1,5	60	37	4	16,012	0,20	16,032	●
32	ER 20 Ø 3-13	34	M25 x 1,5	65	43	6	16,012	0,30	20,032	●
32	ER 25 Ø 2-16	42	M32 x 1,5	75	49	8	25,014	0,40	25,032	●
40	ER 20 Ø 3-13	34	M25 x 1,5	65	43	6	16,012	0,40	20,040	●
40	ER 25 Ø 2-16	42	M32 x 1,5	75	49	8	25,014	0,60	25,040	●
40	ER 32 Ø 3-20	50	M40 x 1,5	80	54	8	25,014	0,60	32,040	●
50	ER 16 Ø 1-10	28	M22 x 1,5	65	39	6	16,012	0,40	16,050	●
50	ER 25 Ø 2-16	42	M32 x 1,5	75	49	8	25,014	0,70	25,050	●
50	ER 32 Ø 3-20	50	M40 x 1,5	80	54	8	25,014	0,90	32,050	●
50	ER 40 Ø 3-26	63	M50 x 1,5	85	59	8	25,014	1,10	40,050	●
63	ER 40 Ø 3-26	63	M50 x 1,5	85	59	8	25,014	1,50	40,063	●

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
- HSK-E to ISO 12164-1/DIN 69893-5

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 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	incl. adjustment screw Guhr. no. 4902...	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	34	4	16,010	0.20	16,032	●
32	ER 20 mini Ø 1-13	28	M24 x 1.0	60	34	6	16,010	0.30	20,032	●
40	ER 16 Ø 1-10	28	M22 x 1.5	60	32	4	16,010	0.30	16,040	●
40	ER 20 mini Ø 1-13	28	M24 x 1.0	65	37	6	16,010	0.30	20,040	●
40	ER 25 mini Ø 2-16	35	M30 x 1.0	80	44	8	25,014	0.50	25,040	●
50	ER 16 Ø 1-10	28	M22 x 1.5	100	34	6	16,012	0.80	16,050	●
50	ER 20 Ø 1-13	34	M25 x 1.5	70	38	6	16,010	0.60	20,050	●
50	ER 25 Ø 2-16	42	M32 x 1.5	80	44	8	25,014	0.80	25,050	●
50	ER 32 Ø 3-20	50	M40 x 1.5	100	50	10	32,020	1.00	32,050	●
63	ER 32 Ø 3-20	50	M40 x 1.5	90	50	10	25,014	1.30	32,063	●
63	ER 40 Ø 4-26	63	M50 x 1.5	120	56	10	32,020	1.80	40,063	●

Tool holders

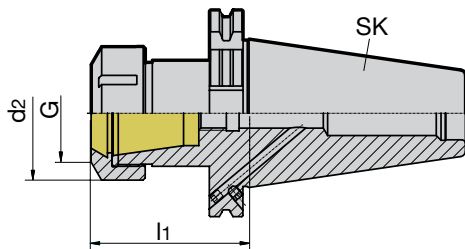
ISO taper collet holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- ISO taper to DIN ISO 7388-1 form AD/AF

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	●

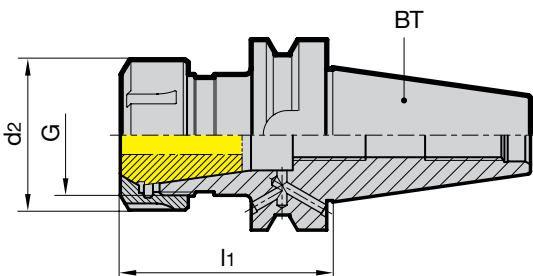
MAS/BT collet holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- MAS/BT to DIN ISO 7388-2 form JD/JF
- coolant supply form JD/JF
(* BT30 version JD 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



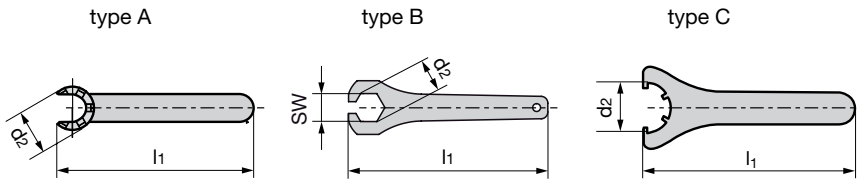
Guhring no.	4245
Discount group	114

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	●

Clamping key

Product information

- for clamping nuts
- Type A with special hook key for clamping nuts
System DIN 6499 mini design
- Type B for clamping nuts with hexagonal design
- Type C for clamping nuts for external slots



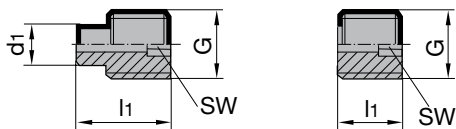
						Guhring no.	4913
						Discount group	114
nom. size mm	type	l ₁ mm	for ER d ₂ mm	SW	Code no.	Availability	
ER16 mini	A	122	22	-	16,200	●	
ER20 mini	A	139	28	-	20,200	●	
ER25 mini	A	143	35	-	25,200	●	
ER11	B	141	19	17	11,000	●	
ER16	B	178	28	25	16,000	●	
ER16	C	161	32	-	16,032	●	
ER20	B	200	34	30	20,000	●	
ER20	C	183	35	-	20,100	●	
ER25	C	210	42	-	25,000	●	
ER32	C	250	50	-	32,000	●	
ER40	C	290	63	-	40,000	●	

Tool holders

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

Product information

- For dimensions without d1 the screw is designed without spigot



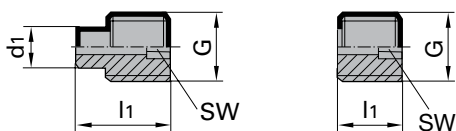
Guhring no.	4902
Discount group	114

for nom. size	for clamping range	G	d1 mm	l1 mm	SW	Code no.	Availability
ER11	2- 7	M6	-	12	3	11,012	●
ER16	2- 6	M10	3.5	18	3	16,018	●
ER16	6-10	M10	-	12	3	16,012	●
ER16	6- 10	M10	-	10	3	16,010	●
ER20	2.5- 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	2.5- 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	3.5-10	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

- For dimensions without d1 the screw is designed without spigot



Guhring no.	4901
Discount group	114

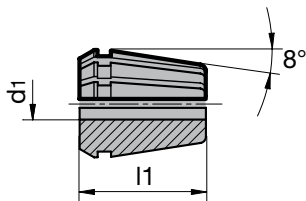
for nom. size	for clamping range	G	d1 mm	l1 mm	SW	Code no.	Availability
ER16	2- 6	M10	3.5	16	3	16.016	●
ER16	6-10	M10	-	12	3	16.012	●
ER20	2.5- 6	M10	4.5	20	3	20.020	●
ER20	6-10	M10	5.5	16	3	20.016	●
ER20	10-13	M10	-	12	3	16.012	●
ER25	2.5- 7	M16	4.5	26	4	25.026	●
ER25	7-10	M16	6.5	20	4	25.020	●
ER25	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 clamping range of collet, Guhring no. 4307, is to be applied as indicated. For intermediate sizes as i.e. for $\varnothing 6.3$ mm (nom. size ER20) order collet $d_1 = 7.0$ mm - 6.0 mm (code no. 07,020).

Ordering example:

$\varnothing d_1$ = 2.5
 nom. size = ER 20
 Guhring no./Code no. = 4307 02,520
 ($d_1 = 7,0$ mm - 6,0 mm)



			Guhring no.	4307	
			Discount group	114	
nom. size	for clamping range d_1 mm	l_1 mm	Code no.	Availability	
ER11 (4008E)	1.0-0.5	18.0	1,011	●	
ER11 (4008E)	1.5-1.0	18.0	1,511	●	
ER11 (4008E)	2.0-1.5	18.0	2,011	●	
ER11 (4008E)	2.5-2.0	18.0	2,511	●	
ER11 (4008E)	3.0-2.5	18.0	3,011	●	
ER11 (4008E)	4.0-3.5	18.0	4,011	●	
ER11 (4008E)	5.0-4.5	18.0	5,011	●	
ER11 (4008E)	6.0-5.5	18.0	6,011	●	
ER11 (4008E)	7.0-6.5	18.0	7,011	●	
ER16 (426E)	1.0-0.5	27.5	1,016	●	
ER16 (426E)	1.5-1.0	27.5	1,516	●	
ER16 (426E)	2.0-1.0	27.5	2,016	●	
ER16 (426E)	2.5-1.5	27.5	2,516	●	
ER16 (426E)	3.0-2.0	27.5	3,016	●	
ER16 (426E)	4.0-3.0	27.5	4,016	●	
ER16 (426E)	5.0-4.0	27.5	5,016	●	
ER16 (426E)	6.0-5.0	27.5	6,016	●	
ER16 (426E)	7.0-6.0	27.5	7,016	●	
ER16 (426E)	8.0-7.0	27.5	8,016	●	
ER16 (426E)	9.0-8.0	27.5	9,016	●	
ER16 (426E)	10.0-9.0	27.5	10,016	●	
ER20 (428E)	1.0-0.5	31.5	1,020	●	
ER20 (428E)	1.5-1.0	31.5	1,520	●	
ER20 (428E)	2.0-1.0	31.5	2,020	●	
ER20 (428E)	2.5-1.5	31.5	2,520	●	
ER20 (428E)	3.0-2.0	31.5	3,020	●	
ER20 (428E)	4.0-3.0	31.5	4,020	●	
ER20 (428E)	5.0-4.0	31.5	5,020	●	
ER20 (428E)	6.0-5.0	31.5	6,020	●	
ER20 (428E)	7.0-6.0	31.5	7,020	●	
ER20 (428E)	8.0-7.0	31.5	8,020	●	
ER20 (428E)	9.0-8.0	31.5	9,020	●	
ER20 (428E)	10.0-9.0	31.5	10,020	●	
ER20 (428E)	11.0-10.0	31.5	11,020	●	
ER20 (428E)	12.0-11.0	31.5	12,020	●	
ER20 (428E)	13.0-12.0	31.5	13,020	●	
ER25 (430E)	1.0-0.5	34.0	1,025	●	
ER25 (430E)	1.5-1.0	34.0	1,525	●	
ER25 (430E)	2.0-1.0	34.0	2,025	●	
ER25 (430E)	2.5-1.5	34.0	2,525	●	
ER25 (430E)	3.0-2.0	34.0	3,025	●	
ER25 (430E)	4.0-3.0	34.0	4,025	●	
ER25 (430E)	5.0-4.0	34.0	5,025	●	
ER25 (430E)	6.0-5.0	34.0	6,025	●	
ER25 (430E)	7.0-6.0	34.0	7,025	●	
ER25 (430E)	8.0-7.0	34.0	8,025	●	

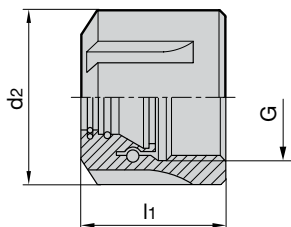
			Guhring no.	4307	
			Discount group	114	
nom. size	for clamping range d1 mm	l1 mm	Code no.	Availability	
ER25 (430E)	9.0-8.0	34.0	9,025	●	
ER25 (430E)	10.0-9.0	34.0	10,025	●	
ER25 (430E)	11.0-10.0	34.0	11,025	●	
ER25 (430E)	12.0-11.0	34.0	12,025	●	
ER25 (430E)	13.0-12.0	34.0	13,025	●	
ER25 (430E)	14.0-13.0	34.0	14,025	●	
ER25 (430E)	15.0-14.0	34.0	15,025	●	
ER25 (430E)	16.0-15.0	34.0	16,025	●	
ER32 (470E)	2.0-1.0	40.0	2,032	●	
ER32 (470E)	2.5-1.5	40.0	2,532	●	
ER32 (470E)	3.0-2.0	40.0	3,032	●	
ER32 (470E)	4.0-3.0	40.0	4,032	●	
ER32 (470E)	5.0-4.0	40.0	5,032	●	
ER32 (470E)	6.0-5.0	40.0	6,032	●	
ER32 (470E)	7.0-6.0	40.0	7,032	●	
ER32 (470E)	8.0-7.0	40.0	8,032	●	
ER32 (470E)	9.0-8.0	40.0	9,032	●	
ER32 (470E)	10.0-9.0	40.0	10,032	●	
ER32 (470E)	11.0-10.0	40.0	11,032	●	
ER32 (470E)	12.0-11.0	40.0	12,032	●	
ER32 (470E)	13.0-12.0	40.0	13,032	●	
ER32 (470E)	14.0-13.0	40.0	14,032	●	
ER32 (470E)	15.0-14.0	40.0	15,032	●	
ER32 (470E)	16.0-15.0	40.0	16,032	●	
ER32 (470E)	17.0-16.0	40.0	17,032	●	
ER32 (470E)	18.0-17.0	40.0	18,032	●	
ER32 (470E)	19.0-18.0	40.0	19,032	●	
ER32 (470E)	20.0-19.0	40.0	20,032	●	
ER40 (472E)	4.0-3.0	46.0	4,040	●	
ER40 (472E)	5.0-4.0	46.0	5,040	●	
ER40 (472E)	6.0-5.0	46.0	6,040	●	
ER40 (472E)	7.0-6.0	46.0	7,040	●	
ER40 (472E)	8.0-7.0	46.0	8,040	●	
ER40 (472E)	9.0-8.0	46.0	9,040	●	
ER40 (472E)	10.0-9.0	46.0	10,040	●	
ER40 (472E)	11.0-10.0	46.0	11,040	●	
ER40 (472E)	12.0-11.0	46.0	12,040	●	
ER40 (472E)	13.0-12.0	46.0	13,040	●	
ER40 (472E)	14.0-13.0	46.0	14,040	●	
ER40 (472E)	15.0-14.0	46.0	15,040	●	
ER40 (472E)	16.0-15.0	46.0	16,040	●	
ER40 (472E)	17.0-16.0	46.0	17,040	●	
ER40 (472E)	18.0-17.0	46.0	18,040	●	
ER40 (472E)	19.0-18.0	46.0	19,040	●	
ER40 (472E)	20.0-19.0	46.0	20,040	●	
ER40 (472E)	21.0-20.0	46.0	21,040	●	
ER40 (472E)	22.0-21.0	46.0	22,040	●	
ER40 (472E)	23.0-22.0	46.0	23,040	●	
ER40 (472E)	24.0-23.0	46.0	24,040	●	
ER40 (472E)	25.0-24.0	46.0	25,040	●	
ER40 (472E)	26.0-25.0	46.0	26,040	●	

Product information

- for collets DIN ISO 15488
- for application with internal cooling IC/ER for sealing washer
- for increased clamping version ER or IC/ER with glide ring

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	18.4	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	●

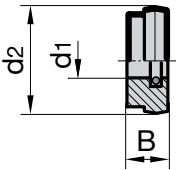
Tool holders

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	●

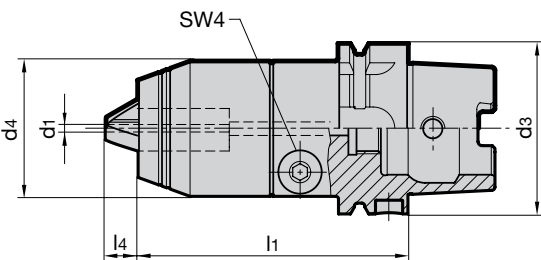
HSK-A drilling chucks with internal cooling

Product information

- for clamping all straight shank tools
- HSK-A to ISO 12164-1/DIN 69893-1
- 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 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	●

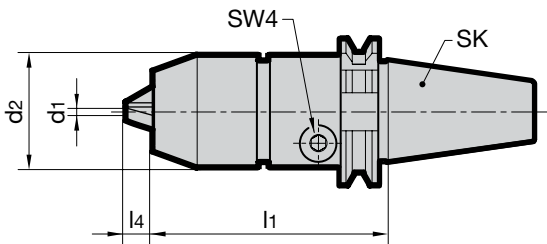
ISO taper drilling chucks with internal cooling

Product information

- for clamping all straight shank tools
- ISO taper to DIN ISO 7388-1 form AD
- continuous \varnothing -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	●

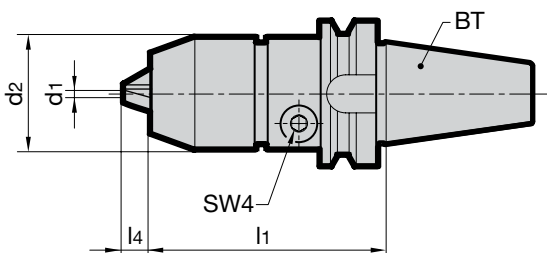
MAS/BT drilling chucks with internal cooling

Product information

- for clamping all straight shank tools
- MAS/BT to DIN ISO 7388-2 form JD
- continuous \varnothing -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

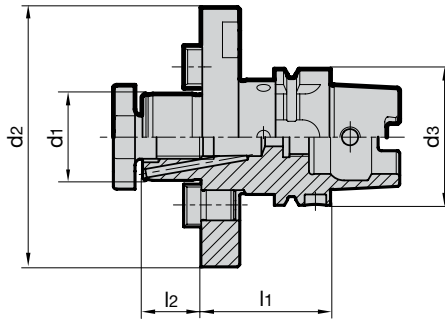
MAS/BT	clamping range d_1 mm	d_2 mm	l_1 mm	l_4 mm	Code no.	Availability
30	0.5 - 10	45	72	9	10,030	●
40	1 - 16	50	88	12	16,040	●
50	1 - 16	50	99	12	16,050	●

Product information

- HSK-A to ISO 12164-1/DIN 69893-1
- 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	●

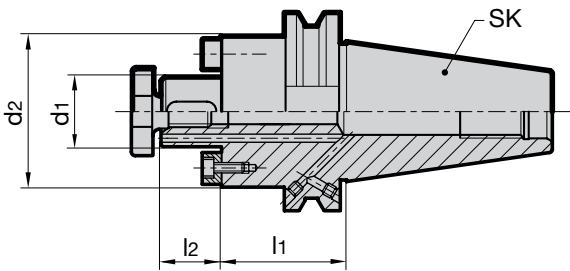
Tool holders

Product information

- to hold face milling cutters
- balancing quality: G6.3 / 15,000 rev./min
- ISO taper to DIN ISO 7388-1 form AD/AF
- for centralised or decentralised internal cooling, therefore process and tool life improvement
- coolant supply form AD/AF
- 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.	4231
Discount group	114

ISO taper	arbor-Ø d_1 mm	d_2 mm	l_1 mm	l_2 mm	Code no.	Availability
40	16	38	35	17	16,040	●
40	22	48	35	19	22,040	●
40	27	58	40	21	27,040	●
40	32	78	50	24	32,040	●
40	40	88	50	27	40,040	●
50	22	48	35	19	22,050	●
50	27	58	40	21	27,050	●
50	32	78	50	24	32,050	●
50	40	88	50	27	40,050	●

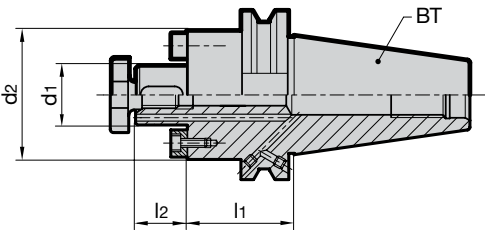
Tool holders

Product information

- to hold face milling cutters
- balancing quality: G6.3 / 15,000 rev./min
- MAS/BT to DIN ISO 7388-2 form JD/JF
- for centralised or decentralised internal cooling, therefore process and tool life improvement
- coolant supply form JD/JF (* BT30 version JD without coolant supply over collar and without GÜHROJET)
- clamping- \varnothing 40 with 4 additional tapped holes to hold milling heads with tool attachment DIN 2079 and larger contact- \varnothing d2

Scope of delivery

- incl. milling retainer screw Guhring no. 4908 and driving keys
- BT-50 on request



GÜHROJET

Guhring no. **4230**
Discount group **114**

BT	arbor- \varnothing d1 mm	d2 mm	l1 mm	l2 mm	Code no.	Availability
30*	16	38	40	17	16,030	●
30*	22	48	40	19	22,030	●
30*	27	58	40	21	27,030	●
30*	32	78	50	24	32,030	●
40	16	38	40	17	16,040	●
40	22	48	40	19	22,040	●
40	27	58	40	21	27,040	●
40	32	78	50	24	32,040	●
40	40	88	50	27	40,040	●

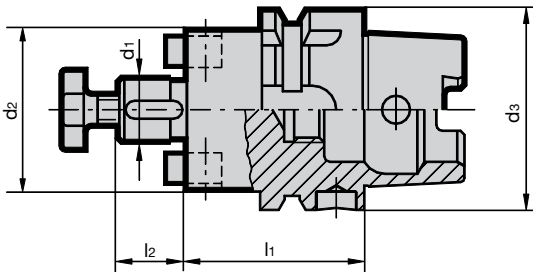
Tool holders

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
- HSK-A to ISO 12164-1/DIN 69893-1

Scope of delivery

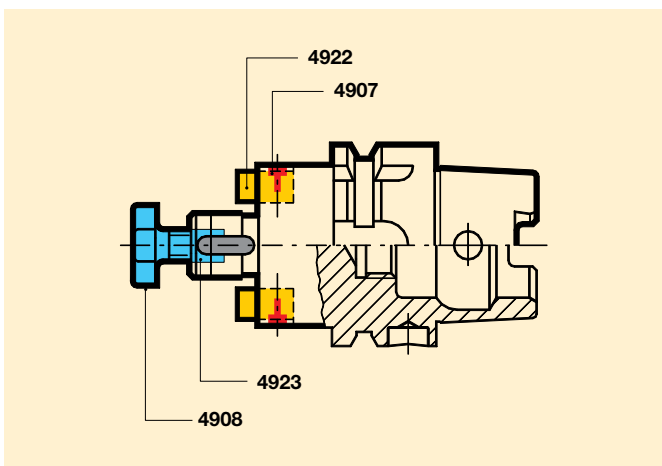
- completely assembled with milling cutter retaining screw, Guhring no. 4908, drive dogs, Guhring no. 4922 and feather key Guhring no. 4923



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

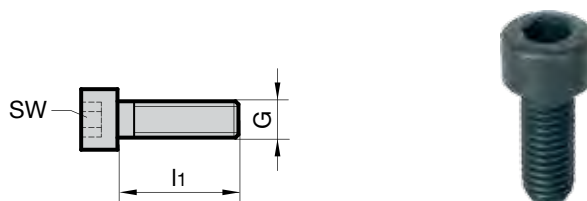
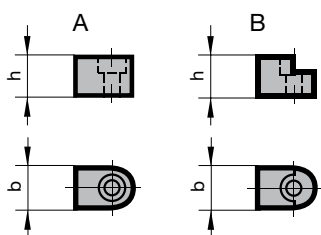


Guhring no. 4923
Discount group 114

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	●

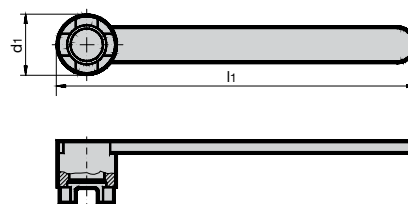
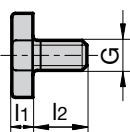
				Guhring no. 4907	
				Discount group 114	
for arbor-Ø mm	G	l ₁ mm	strength	Code no.	Availability
16	M4	10	8.8	4,100	●
22/27	M5	12	8.8	5,120	●
32	M6	16	8.8	6,160	●
40	M6	20	8.8	6,200	●
50	M8	25	8.8	8,250	●
40	M12	65	10.9	12,650	●

Milling cutter retaining screws

Socket wrenches for retaining screws

Product information

- to DIN 6367
- on request with internal cooling

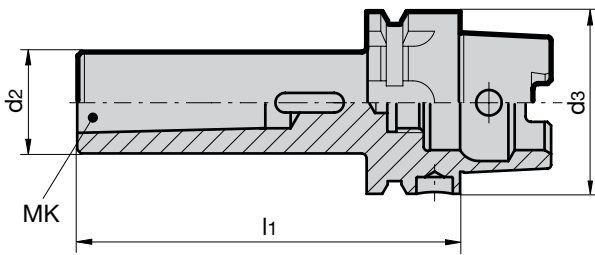


					Guhring no. 4908	
					Discount group 114	
for arbor-Ø mm	G	l ₁ mm	l ₂ mm	torque Nm	Code no.	Availability
16	M8	6	16	40	16,000	●
22	M10	7	18	60	22,000	●
27	M12	8	22	80	27,000	●
32	M16	9	26	95	32,000	●
40	M20	10	30	100	40,000	●
50	M24	12	36	135	50,000	●
60	M30	14	45	160	60,000	●

			Guhring no. 4909	
			Discount group 114	
for arbor-Ø mm	d ₁ mm	l ₁ 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 228-1 form B,
- HSK-A to ISO 12164-1/DIN 69893-1



Guhring no. 4320
Discount group 114

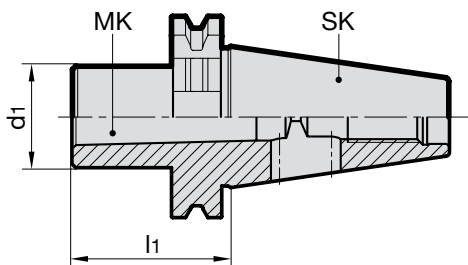
HSK-A d ₃ mm	MK	d ₂ mm	l ₁ mm	kg	Code no.	Availability
50	1	25	100	0.8	1,050	●
50	2	32	120	0.8	2,050	●
50	3	40	140	1.2	3,050	●
63	1	25	100	0.9	1,063	●
63	2	32	120	1.1	2,063	●
63	3	40	140	1.5	3,063	●
63	4	48	160	1.9	4,063	●
80	1	25	110	1.5	1,080	●
80	2	32	120	1.7	2,080	●
80	3	40	140	2.0	3,080	●
80	4	48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

Tool holders

ISO taper morse taper holders

Product information

- for holding Morse tapers with tang to DIN 228-1 form B
- ISO taper to DIN ISO 7388-1 form AD



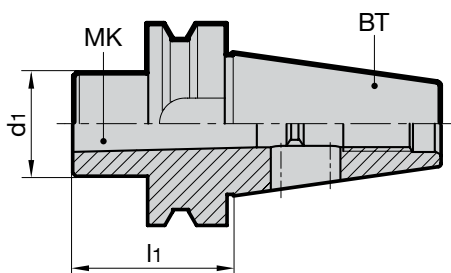
Guhring no. 4238
Discount group 114

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 228-1 form B
- MAS/BT to DIN ISO 7388-2 form JD



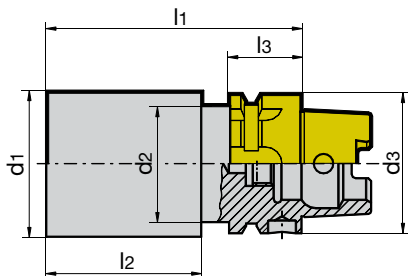
Guhring no. 4239
Discount group 114

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
- HSK-A to ISO 12164-1/DIN 69893-1



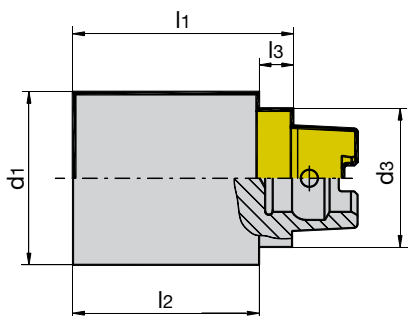
Guhring no. **4983**
Discount group **114**

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
- HSK-C to ISO 12164-1/DIN 69893-1



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
25	30	100	90	10	0.54	87,025	●
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"
brochures.



HOLDERS FOR FINE MACHINING

Holders for
fine machining

Holder for fine machining

PRECISION IS A MATTER OF SETTING!

Holder 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, SK and BT your module can be perfectly set without a problem.



Advantages:

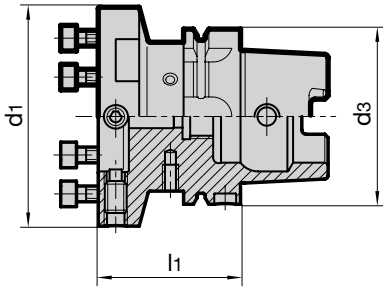
- wobble-free tool setting
- quick μ -accurate setting
- optimal setting results for multi-flute PCD/CBN fine machining tools or Guhring's HR 500 6-fluted high-performance reamer
- reduced settlement properties provides highest accuracy over a long period
- suitable for use in combination with monolythic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

Product information

- for the highly accurate alignment of all modular flanges 6x6
- 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
- HSK-A to ISO 12164-1/DIN 69893-1

Scope of delivery

- incl. 6 screws for radial adjustment
- incl. 6 clamping screws
- order intermediate tube Guhring no. 4716 separately
- order coolant delivery set Guhring no. 4949, MQL coolant delivery set Guhring no. 4939 oder 4940 separately
- further dimensions on request



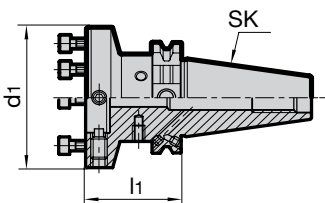
				Guhring no.	4723	
				Discount group	114	
HSK-A	d ₃ mm	d ₁ mm	l ₁ mm	Code no.	Availability	
	63	60	60	60,063	●	
	63	70	60	70,063	●	
	63	80	60	80,063	●	
	63	100	65	100,063	●	
	63	117	65	117,063	●	
	80	70	60	70,080	●	
	80	80	60	80,080	●	
	80	100	65	100,080	●	
	80	117	65	117,080	●	
	80	140	75	140,080	●	
	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	●	

Holders for
fine machining

Modul 6x6 ISO taper alignment adapter

Product information

- ISO taper to DIN ISO 7388-1 form AD/AF
- for the highly accurate alignment of all modular flanges 6x6
- 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. 6 screws for radial adjustment
- incl. 6 clamping screws
- incl. threaded pins
- order pull studs separately
- SK50/BT holder on request



Guhring no. **4725**

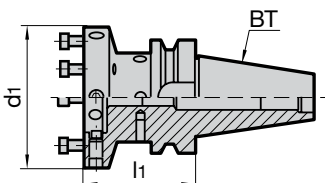
Discount group **114**

SK	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	●
50	60	50	60,050	●
50	70	50	70,050	●
50	80	50	80,050	●
50	100	60	100,050	●
50	117	60	117,050	●
50	140	60	140,050	●

Modul 6x6 taper alignment adapter BT

Product information

- MAS/BT to DIN ISO 7388-2 form JD
- for the highly accurate alignment of all modular flanges 6x6
- 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. 6 screws for radial adjustment
- incl. 6 clamping screws
- incl. threaded pins
- order pull studs separately



Guhring no. **4712**

Discount group **114**

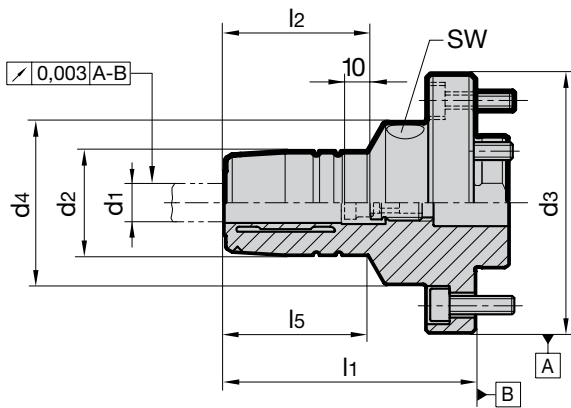
BT	d ₁ mm	l ₁ mm	Code no.	Availability
30	60	40	60,030	●
30	70	40	70,030	●
40	60	55	60,040	●
40	70	55	70,040	●
40	80	65	80,040	●
40	100	70	100,040	●
50	60	70	60,050	●
50	70	70	70,050	●
50	80	70	80,050	●
50	100	70	100,050	●
50	117	80	117,050	●
50	140	80	140,050	●

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 d3 mm	for shank \varnothing d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	l5 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	●

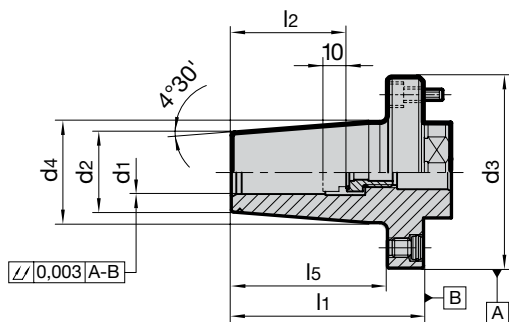
Holders for fine machining

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. 6 angular alignment sets Guhring no. 4715
- incl. 6 clamping screws
- order intermediate tube Guhring no. 4716 separately
- further dimensions on request



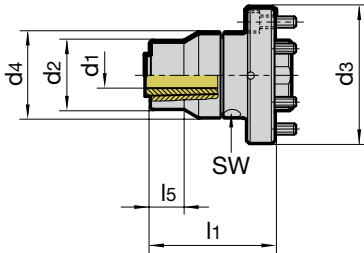
Module-Ø		for shank Ø		incl. setting screw			intermediate sleeve tube		Guhring no. 4717	
d3 mm	d1 h6 mm	d2 mm	d4 mm	l1 mm	l2 mm	l5 mm	Guh. no. 4941	Guhring no. 4716	Discount group 114	
									Code no.	Availability
60	6	21	27	70	36	56	6.100	14.010	6,060	●
60	8	21	27	70	36	56	8.100	14.010	8,060	●
60	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

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**

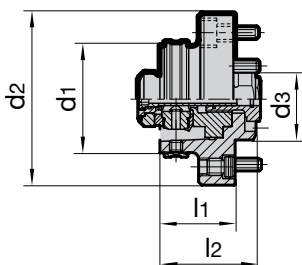
Discount group **114**

Module-Ø d3 mm	nom. size	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	20	3 - 20	40	50	87	20	20,030	4	20,070	●
80	20	3 - 20	40	50	73	20	20,030	4	20,080	●
100	25	16-32	63	63	118	-	20,030	4	25,100	●

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
- for holding HSK-A/C shanks to ISO 12164-1/DIN 69893



Scope of delivery

- incl. MQL 4-point clamping set Guhring no. 4930
- incl. clamping screw Guhring no. 4935
- 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**

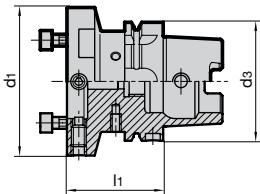
HSK-C d1 mm	Module-Ø d2 mm	d3 mm	l1 mm	l2 mm	Code no.	Availability
32	60	30	26	36	24,060	●
40	70	35	30	40	30,070	●
50	80	40	35	45	38,080	●
63	100	50	43	55	48,100	●
80	117	60	50	62	60,117	●
100	140	80	70	82	75,140	●

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
- HSK-A to ISO 12164-1/DIN 69893-1

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	●

Holders for fine machining

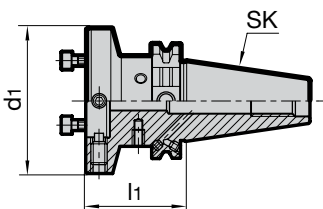
Modul 4x4 ISO taper alignment adaptor

Product information

- ISO taper to DIN ISO 7388-1 form AD/AF
- 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	●
50	60	50	60,050	●
50	70	50	70,050	●
50	80	50	80,050	●
50	100	60	100,050	●
50	117	60	117,050	●
50	140	60	140,050	●

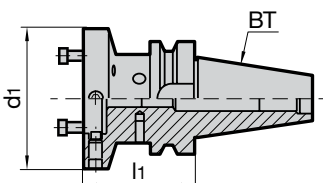
Modul 4x4 taper alignment adaptor BT

Product information

- MAS/BT to DIN ISO 7388-2 form JD
- 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
- incl. threaded pins
- order pull studs separately



Guhring no. **4709**

Discount group **114**

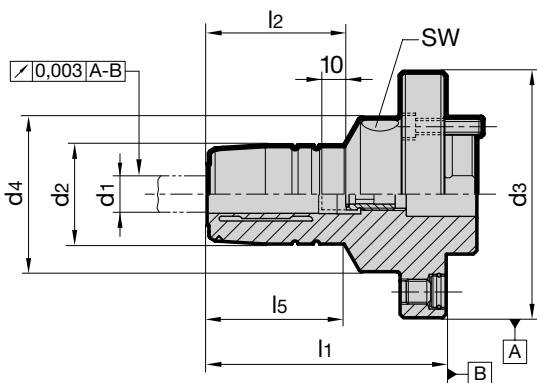
BT	d ₁ mm	l ₁ mm	Code no.	Availability
30	60	40	60,030	●
30	70	40	70,030	●
40	60	55	60,040	●
40	80	55	70,040	●
40	100	65	80,040	●
40	60	70	100,040	●
50	70	70	60,050	●
50	60	70	70,050	●
50	80	70	80,050	●
50	100	70	100,050	●
50	117	80	117,050	●
50	140	80	140,050	●

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. 4 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



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	44.3	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	●



Guhring no. **4360**

Discount group **114**

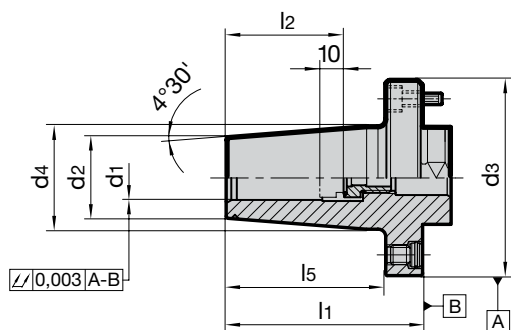
Modul 4x4 shrink fit chuck flange

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
- 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



Guhring no. **4760**

Discount group **114**

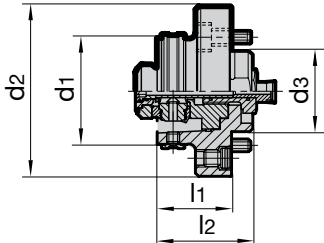
Module- \varnothing d ₃ mm	for shank \varnothing d ₁ h6 mm	d ₂ mm	d ₄ mm	l ₁ mm	l ₂ mm	l ₅ mm	incl. setting screw Guh. no. 4941	intermediate sleeve tube Guhring no. 4716	Code no.	Availability
60	6	21	27	70	36	56	6,100	14,010	6,060	●
60	8	21	27	70	36	56	8,100	14,010	8,060	●
60	10	24	32	70	40	56	10,100	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	●

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
- for holding HSK-A/C shanks to ISO 12164-1/DIN 69893

Scope of delivery

- incl. MQL 4-point clamping set
Guhring no. 4930
- incl. clamping screw Guhring no. 4935
- incl. brass lock ring Guhring no. 4953
- incl. 6 angular alignment sets
Guhring no. 4715
- incl. 6 clamping screws
- incl. intermediate tube



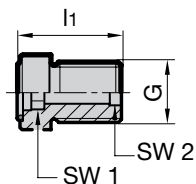
Guhring no.		4713				
Discount group		114				
HSK-C	Module-Ø	d ₃	l ₁	l ₂	Code no.	Availability
d ₁ mm	d ₂ mm	mm	mm	mm		
32	60	30	26	36	24,060	●
40	70	35	30	40	30,070	●
50	80	40	35	45	38,080	●
63	100	50	43	55	48,100	●
80	117	60	50	62	60,117	●
100	140	80	70	82	75,140	●

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	d ₁	l ₁	SW1	SW2	Code no.	Availability
			mm	mm				
40	6	M5	6.0	14.9	2.5	-	6,041	●
40	6	M7x1	5.8	15.0	2.5	-	6,040	●
40	8	M7x1	5.8	18.0	3	-	8,040	●
50	6	M8x1	5.8	14.0	2.5	-	6,050	●
50	8	M8x1	6.8	18.0	3	-	8,050	●
40 / 50	10	M8x1	9.8	17.7	4	-	10,050	●
63/ 80/ 100	6	M10x1	5.8	17.0	2.5	-	6,100	●
63/ 80/ 100	8	M10x1	7.8	17.0	3	-	8,100	●
63/ 80/ 100	10	M10x1	9.8	16.2	4	-	10,100	●
40/ 50/ 63/ 80/ 100	12	M10x1	9.8	16.0	5	-	12,100	●
40/ 50/ 63/ 80/ 100	14	M10x1	9.8	17.2	5	-	14,100	●
50/ 63/ 80/ 100	16	M12x1	15.8	18.2	6	-	16,100	●
50/ 63/ 80/ 100	18	M12x1	15.8	19.2	6	-	18,100	●
50/ 63/ 80/ 100	20	M16x1	15.8	19.2	6	8	20,100	●
63/ 80/ 100	25	M16x1	15.8	22.7	6	8	25,100	●
63/ 80/ 100	32	M16x1	15.8	26.7	6	8	32,100	●

Holders for fine machining

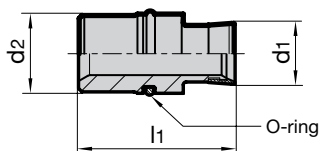
Intermediate sleeves for module flange and alignment adapter 6x6 and 4x4

Product information

- for sealing when machining with either coolant or MQL
- Design without O-ring for HSK module adapter flange Guhring no. 4363 and Guhring no. 4713

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	●
10.7	4	26.1	-	24,060	●
10.7	5	21.9	-	30,070	●
10.7	6	21.9	-	238,080	●
10.7	7	31.7	-	48,100	●
10.7	10	28.6	-	60,117	●
10.7	12	27.9	-	75,140	●

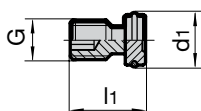
Angle alignment units for module flange and alignment adapter 6x6 and 4x4

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	●

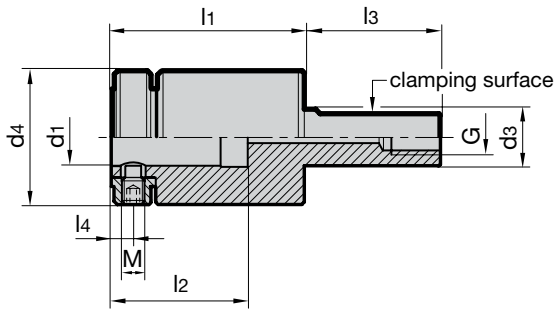
Floating holders with side lock holder

Product information

- straight shank d_3 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 \varnothing 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**

d_3 g6 mm	for holder d_1 h6 mm	recommen- ded tool- \varnothing	d_4 mm	l_1 mm	l_2 mm	l_3 mm	l_4 mm	M	G	radial play	Code no.	Availability
20	20	up to \varnothing 28	49	75	50	50	9.5	M8	1/8	0.12	20,020	●
25	25	\varnothing 10 - \varnothing 36	59	85	60	60	9.5	M10	1/4	0.12	25,025	●
32	32	\varnothing 16 - \varnothing 60	80	92	63	80	12.5	M12	3/8	0.12	32,032	●

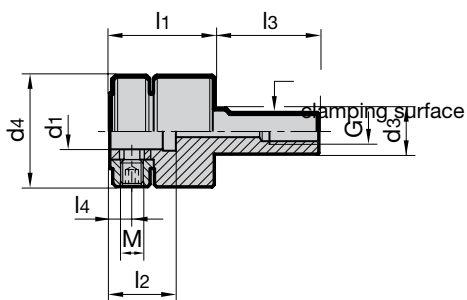
Short floating holders with side lock holder

Product information

- straight shank d_3 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 \varnothing 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**

d_3 g6 mm	for holder d_1 h6 mm	recommen- ded tool- \varnothing	d_4 mm	l_1 mm	l_2 mm	l_3 mm	l_4 mm	M	G	radial play	Code no.	Availability
20	10	up to \varnothing 14	38.5	46	25	40	6	M6	1/8	0.08	10,020	●
20	16	up to \varnothing 22	49	46	29	46	7	M6	1/8	0.10	16,020	●
20	20	up to \varnothing 28	49	46	29	46	7	M6	1/8	0.12	20,020	●

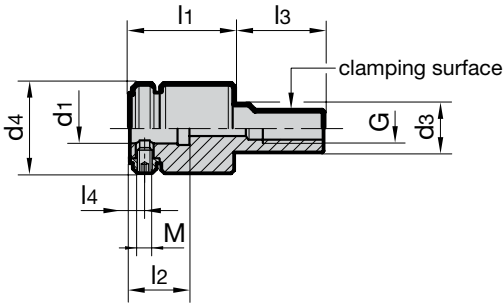
Mini floating holders with side lock holder

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**

d ₃ g6 mm	for holder d ₁ h6 mm	recommen- ded tool- \varnothing	d ₄ mm	l ₁ mm	l ₂ mm	l ₃ mm	l ₄ mm	M	G	radial play	Code no.	Availability
16	10	up to \varnothing 14	30	35	20	30	5	M5	1/8	0.12	10,016	●

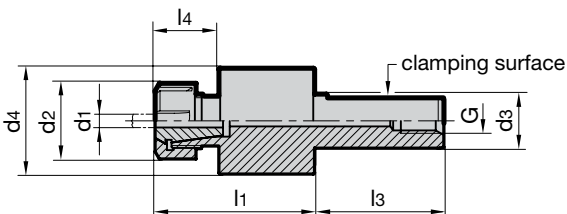
Floating holder with ER collet holder

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**

d ₃ g6 mm	recommended tool- \varnothing d1 mm	clamping range	d ₂ mm	d ₄ mm	l ₁ mm	l ₃ mm	l ₄ mm	G	radial play	Code no.	Availability
16	up to \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	up to \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	●

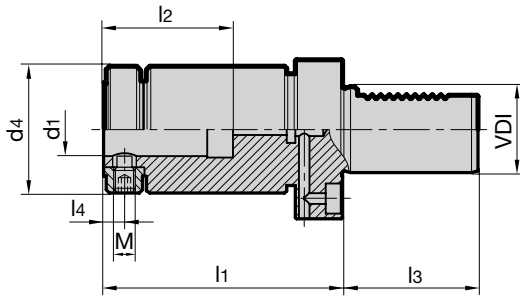
Floating side lock holder VDI DIN 69880-1

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.
Discount group

4117

Net price

VDI	holder d ₁ h6 mm	clamping range	d ₄ mm	l ₁ mm	l ₂ mm	l ₃ mm	l ₄ mm	M	radial play	Code no.	Availability
30	25	Ø 16-25	59	111	59	55	9.5	M10	0.12	25,030	●
40	25	Ø 16-25	59	111	59	63	9.5	M10	0.12	25,040	●
40	32	Ø 20-32	80	117	63	63	12.5	M12	0.12	32,040	●
50	25	Ø 16-25	59	111	59	78	9.5	M10	0.12	25,050	●
50	32	Ø 20-32	80	117	63	78	12.5	M12	0.12	32,050	●

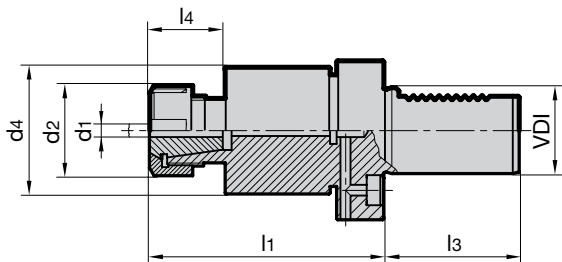
Floating ER Collet holder VDI DIN 69880-1

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.
Discount group

4116

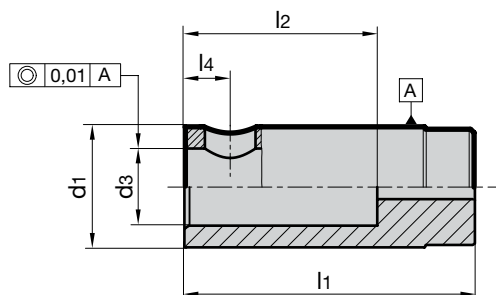
Net price

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	up to Ø 20	ER25 Ø 2-16	42	59	109	55	35	0.08	25,030	●
40	up to 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	up to 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



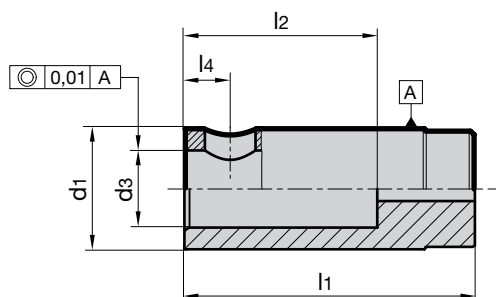
Guhring no.	4095
Discount group	Net price

d ₁ mm	for shank Ø d ₃ h6 mm	l ₁ mm	l ₂ mm	l ₄ 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



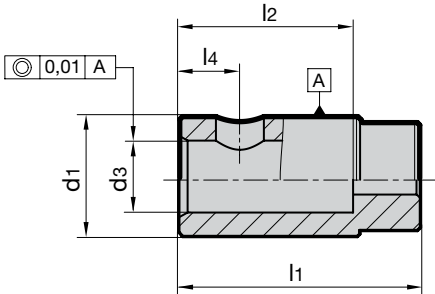
Guhring no.	4096
Discount group	Net price

d ₁ mm	for shank Ø d ₃ h6 mm	l ₁ mm	l ₂ mm	l ₄ mm	Code no.	Availability
10	4	25	10	6.0	4,010	●
10	6	25	-	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	●

Reduction sleeves for mini floating holder

Product information

- for reducing the clamping diameter in floating holders
 - central coolant supply
 - drive flat on tool shank necessary
 - applicable in mini floating holders
- Guhring no. 4174



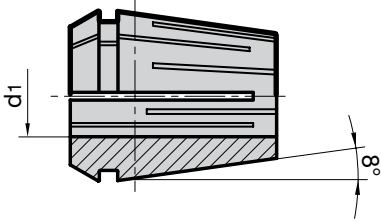
Guhring no.	4097
Discount group	Net price

d ₁ mm	d ₃ mm	l ₁ mm	l ₂ mm	l ₄ mm	Code no.	Availability
10	4	20	15	5	4,010	●
10	6	20	15	5	6,010	●
10	8	20	15	5	8,010	●

HOLDERS FOR FINE MACHINING

Product information

- DIN ISO 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



Gühring no. **4175**
 Discount group **114**

nom. size	clamping range d1 h9	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 SET
MANY NEW
POSSIBILITIES!



**SUITABLE FOR DIFFERENT
SPINDLE CONTOURS**



**MAXIMUM
CLAMPING FORCE**



**OPTIMAL COOLING
SUPPLY – MQL &
CONVENTIONAL**



**STRAIGHT-
LINE COOLANT
THROUGHFLOW**



4-POINT CLAMPING TECHNOLOGY FOR MQL TECHNICAL INFORMATION AND ADVANTAGES

GÜHROCLAMP



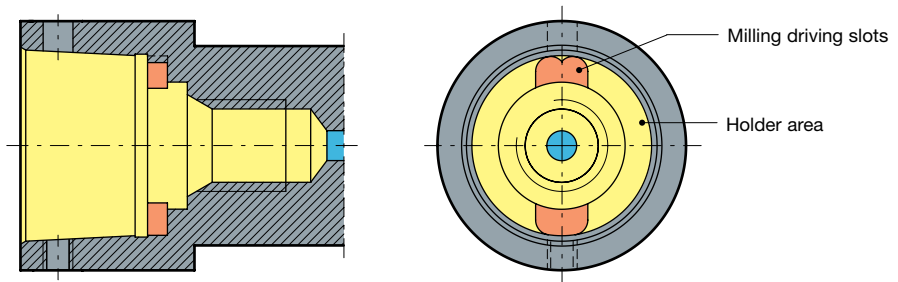
Our 4-point clamping system is suitable for radial manual clamping. Primarily designed for installation in spindles (short drilling spindles, multiple-spindle drilling heads).



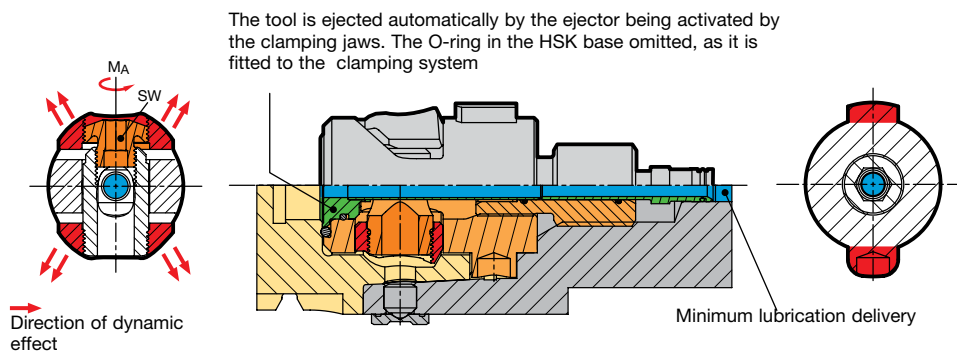
Advantages:

- 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

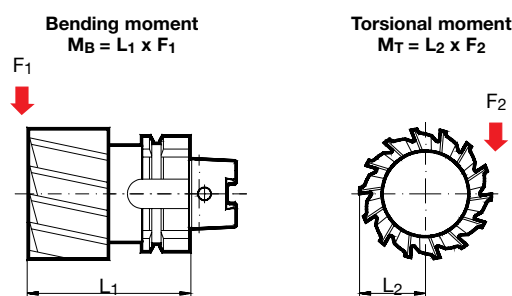
Internal contour of spindle



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.

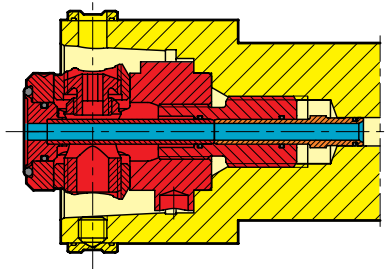
HSK-C	max. torque M_A [Nm] ①	Key size	max. drawing force [kN] ②	max. linear bending moment M_B [Nm] ②	max. transferrable torsional moment M_T [Nm] ② ③
32	3.0	2.5	8.5	72	105
40	6.0	3.0	12.5	135	180
50	12.0	4.0	24.0	330	390
63	24.0	5.0	32.0	570	680
80	40.0	6.0	45.0	1000	1570
100	60.0	8.0	53.0	1620	4200

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.

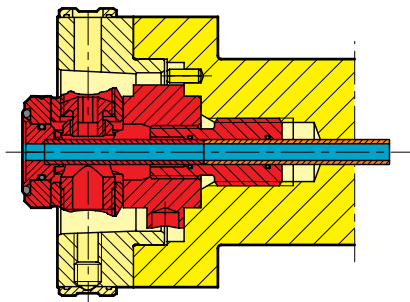


MQL 4-point clamping set connection dimensions for new designs

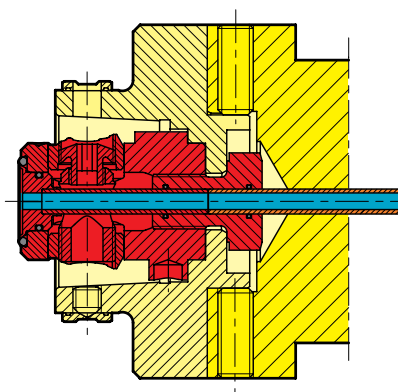
Direct installation in spindle with MQL adaptor



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

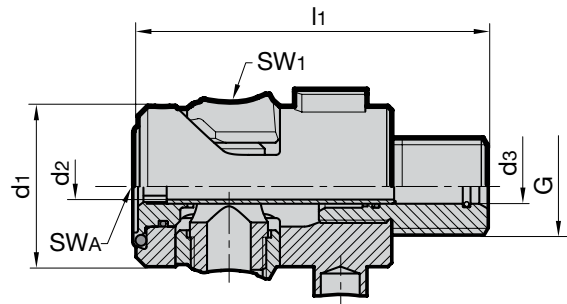
- for radial manual HSK tool clamping
- universal application for MQL and high-pressure IC
- the central and coaxial MQL supply with constant internal diameter prevents coolant from consolidating to DIN 69090-2
- For a coolant pressure up to 160 bar
- for clamping HSK-A/C shanks to ISO 12164-1/DIN 69893

Scope of delivery

- complete as shown in illustration
- Installation and operating instructions



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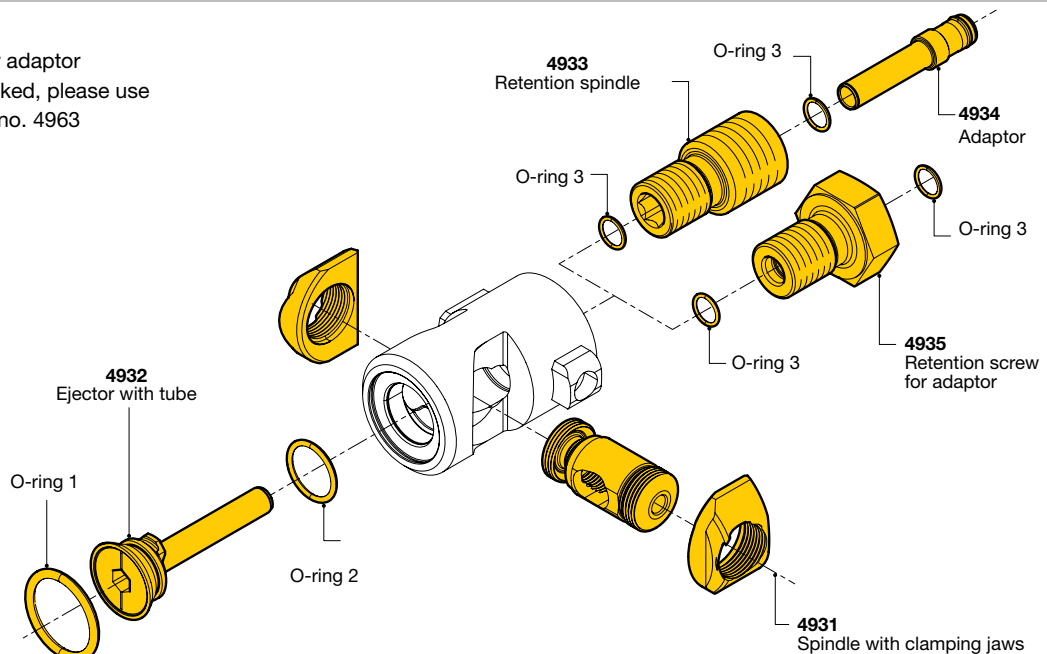
Guhring no.	4930
Discount group	114

HSK-C	d1 mm	d2 mm	d3 mm	l1 mm	G	SW1	SWA	kg	Code no.	Availability
32	16.7	3	4.1	41.75	M10	2.5	3	0.05	24,100	●
40	20.6	4	5.1	43.90	M12	3	4	0.09	30,100	●
50	25.5	5	7.1	54.20	M16	4	5	0.18	38,100	●
50	25.5	5	6.1	54.20	M16	4	5	0.18	38,200	●
63	33.0	6	7.1	72.20	M20	5	6	0.37	48,100	●
80	41.0	8	10.1	90.20	M24	6	8	0.70	60,100	●
100	52.0	10	12.1	107.10	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

HSK-C	O-ring 1 mm	O-ring 2 mm	O-ring 3 mm	4931		4932	
				Spindle with clamping jaws	Unit price in € Discount group 114	Ejector with tube	Unit price in € Discount group 114
32	10,5x2,0	6,0x1,5	3,5x1/4x1	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	23,4x3,53	16,0x2,0	10,0x1,5	60,000	●	60,100	●
100	28,17x3,53	22,0x2,0	12,0x1,70	75,000	●	75,100	●

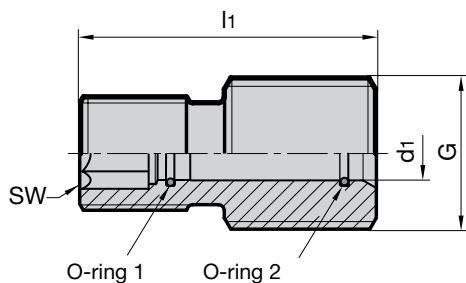
Retention spindles for GÜHROCLAMP MQL 4-point clamping sets

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	4.1	22.5	M10	4	3.5x1.0	4.0x1.0	24,100	●
40	5.1	23.2	M 12	5	4.5x1.0	5.0x1.0	30,100	●
50	7.1	27.0	M 16	6	5.5x1.0	7.0x1.0	38,100	●
50	6.1	27.0	M 16	6	5.5x1.0	5.5x1.0	38,200	●
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	●

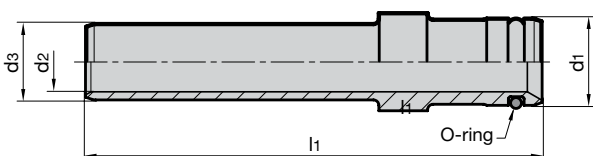
Adaptor for GÜHROCLAMP MQL 4-point clamping sets

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	Code no.	Availability
32	4.0	2.0	4.0	14	2.0 x 1.0	24,100	●
40	5.0	3.0	5.0	28	3.0 x 1.0	30,100	●
50	6.0	5.0	6.0	28	4.0 x 1.0	38,200	●
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	12.0	60	10.0 x 1.0	75,100	●

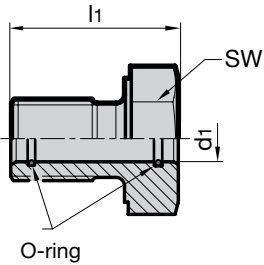
Retention screw for GÜHROCLAMP MQL 4-point clamping sets

Product information

- necessary for installation of MQL 4-point clamping set in spindle adaptors and module adaptor flange Guhring no. 4363, 4386, 4387 and 4713
- 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 1	O-ring 2	torque Nm	Code no.	Availability
32	4.1	23.5	13	4x1.0	4x1.0	14	24,100	●
40	5.1	21	16	4.5x1.0	5x1.0	30	30,100	●
50	6.1	25	18	5.5x1.0	6x1.0	60	38,200	●
50	7.1	25	18	5.5x1.0	7x1.0	60	38,100	●
63	7.1	29	24	7x1.0	7x1.0	110	48,100	●
80	10.1	36	24	10x1.5	10x1.5	180	60,100	●
100	12.1	40	32	12x1.7	12x1.7	200	75,100	●

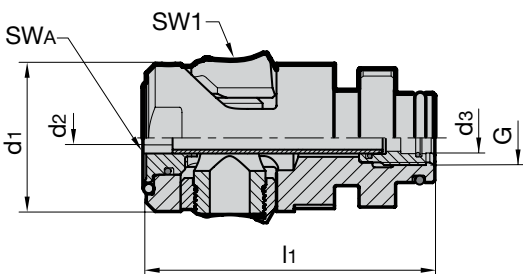
M contour clamping sets for MQL and IC

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
- for clamping HSK-A/C shanks to ISO 12164-1/DIN 69893

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**

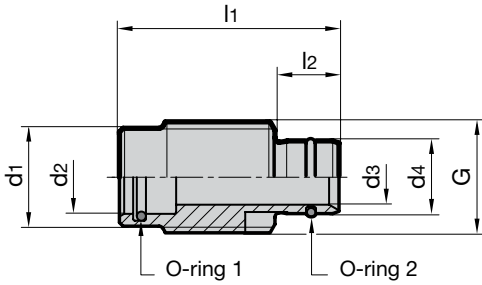
Discount group **114**

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	6.1	55.3	M12x1	4	5	38,100	●
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	●

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



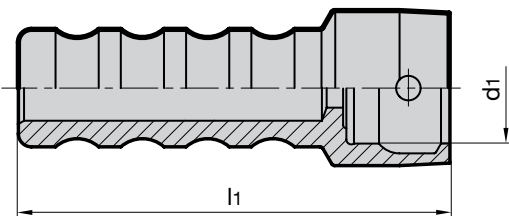
Guhring no. 4616
Discount group 114

for HSK-C	d ₁ mm	d ₂ mm	d ₃ mm	d ₄ mm	l ₁ mm	l ₂ mm	O-ring 1	O-ring 2	G	Code no.	Availability
32	-	3.5	3	5.00	14.4	5.4	3.5x1	3x1	M8x1	24,000	●
40	7.7	4.5	4	6.00	22.0	6.5	4.0x1	4x1	M10x1	30,000	●
50	8.5	5.5	5	8.00	23.0	7.5	5.5x1	6x1	M12x1	38,000	●
63	10.6	7.0	6	8.00	24.0	7.0	7.0x1	6x1	M12x1	48,000	●
80	-	10.0	8	11.30	23.3	8.3	10x1.5	8x1.5	M12x1	60,000	●
100	-	12.0	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:

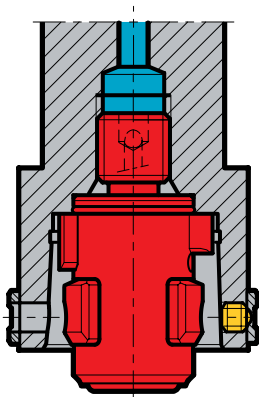
- simple and hence more economic spindle manufacture
- short, small diameter spindles with constricted spindle bearing spacing
- suitable for a pressure up to 80 bar

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.

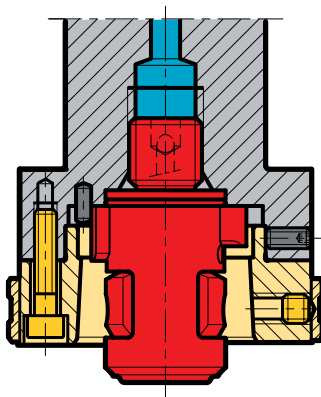
Application examples

Spindle interface

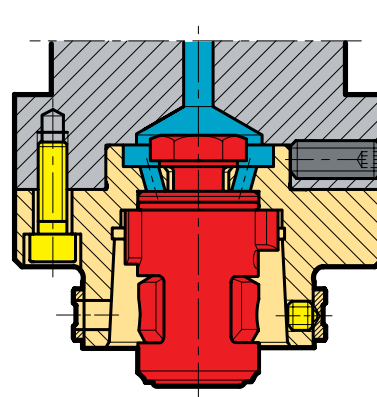
Direct installation in spindle



Spindle adaptor (integrated)

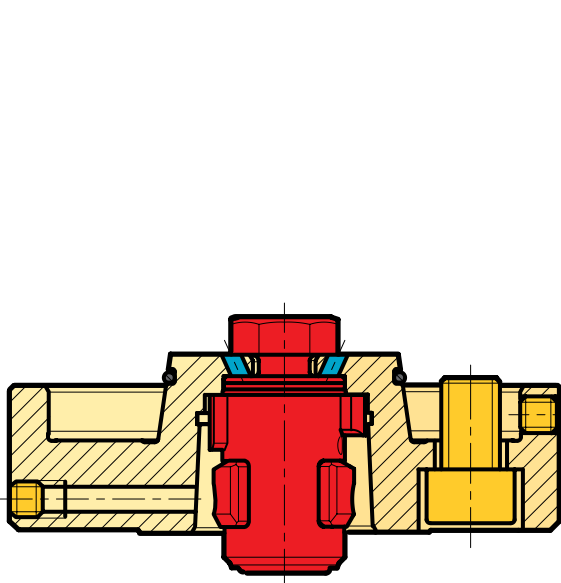


Spindle adaptor (in front)

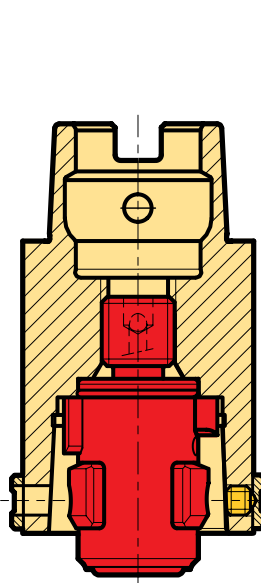


Adaptor

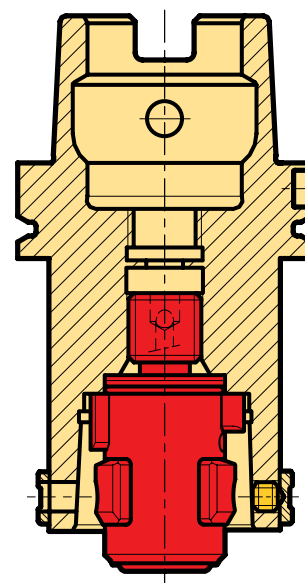
Basic adaptor for ISO taper spindles



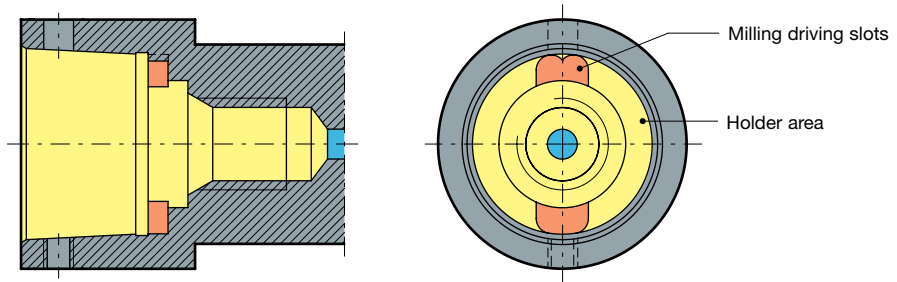
HSK-C extension



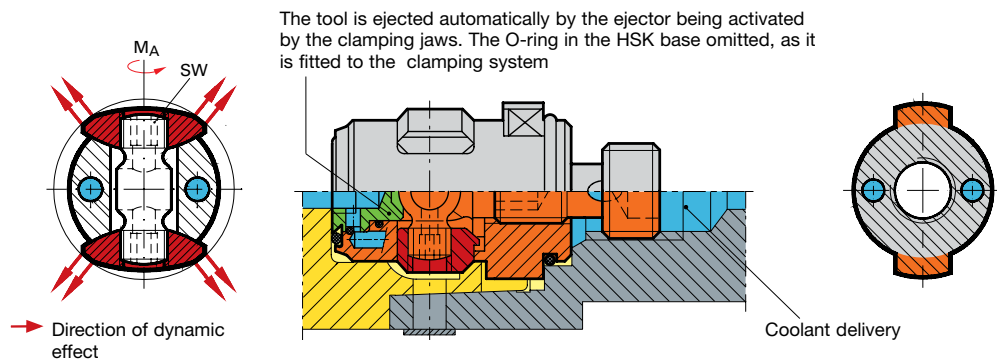
HSK-A reduction



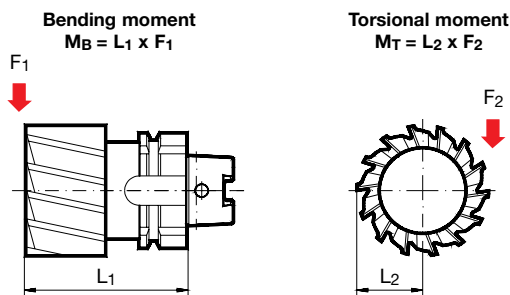
Internal contour of spindle



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

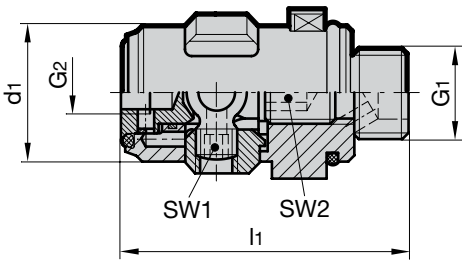
4-point clamping sets for conventional cooling

Product information

- for a coolant pressure up to 80 bar
- for radial manual HSK tool clamping
- for clamping HSK-A/C shanks to ISO 12164-1/DIN 69893

Scope of delivery

- including installation and operating instructions

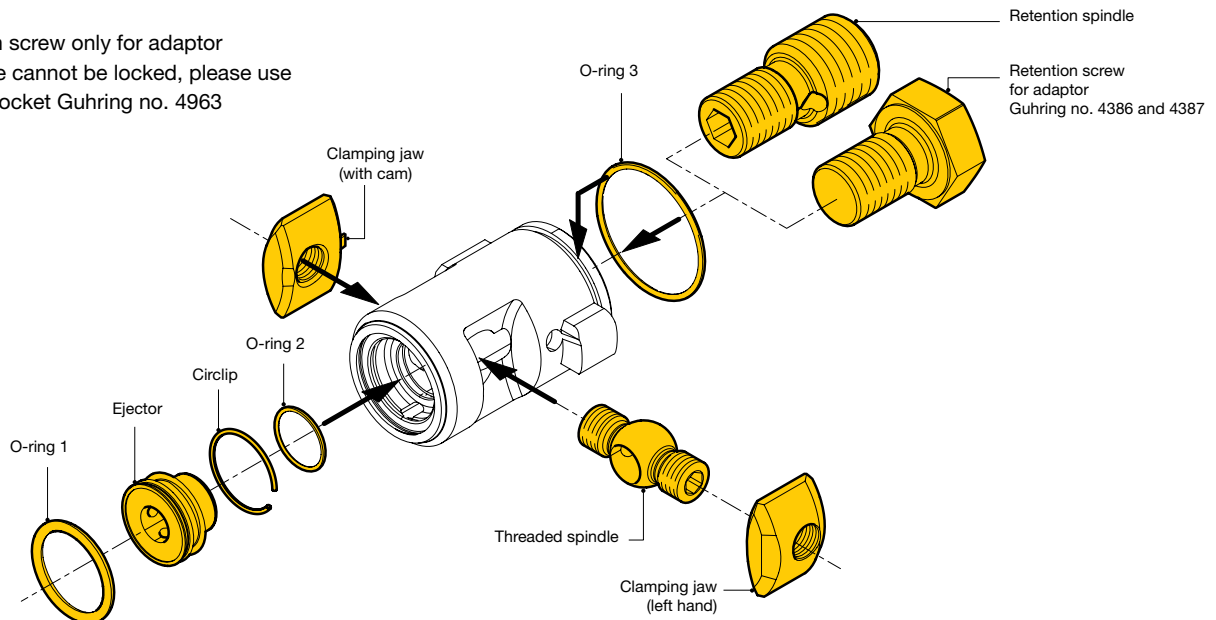


Guhring no. 4958
Discount group 114

HSK-C	d ₁ mm	l ₁ mm	G1	G2	SW1	SW2	kg	Code no.	Availability
25	13.8	30.30	M 8	M 4	2.5	3	0.025	19,000	●
32	16.7	35.75	M10	M 5	2.5	4	0.050	24,000	●
40	20.6	43.70	M12	M 6	3.0	5	0.080	30,000	●
50	25.5	53.70	M16	M 8	4.0	6	0.150	38,000	●
63	33.0	71.20	M20	M10	5.0	8	0.310	48,000	●
80	41.0	90.10	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



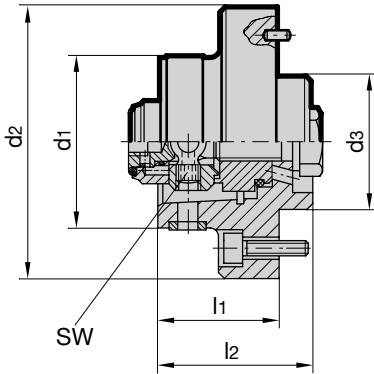
Guhring no. 4957 on request | **Guhring no. 4959**

HSK-C	O-ring 1	O-ring 2	O-ring 3	Clamping jaw set	Threaded spindle	Retention spindle	Ejector	Circlip	Retention screw	Set	Availability Disc. gr. 114
25	9.0 × 1.2	6.0 × 0.75	11.0 × 1.0	1,019	2,019	3,019	4,019	5,019	7,019	19,000	●
32	11.0 × 1.5	7.0 × 1.0	14.0 × 1.0	1,024	2,024	3,024	4,024	5,024	7,024	24,000	●
40	13.0 × 1.5	9.0 × 1.0	17.0 × 1.0	1,030	2,030	3,030	4,030	5,030	7,030	30,000	●
50	16.0 × 2.0	11.0 × 1.0	22.0 × 1.5	1,038	2,038	3,038	4,038	5,038	7,038	38,000	●
63	20.3 × 2.4	14.0 × 1.0	28.0 × 1.5	1,048	2,048	3,048	4,048	5,048	7,048	48,000	●
80	24.0 × 3.0	17.0 × 1.0	35.0 × 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
- for clamping HSK-A/C shanks to ISO 12164-1/DIN 69893



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, as special adaptor with MQL clamping set Guhring no. 4930, please order retention nut, Guhring no. 4935 and intermediate sleeves



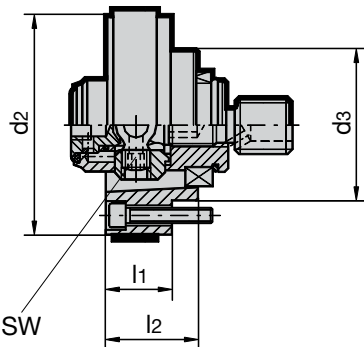
Guhring no. **4386**
Discount group **114**

HSK-C d1	d2 mm	d3 mm	l1 mm	l2 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
- for clamping HSK-A/C shanks to ISO 12164-1/DIN 69893



Scope of delivery

- incl. clamping set Guhring no. 4958 for conventional cooling (nom. Size 100 Guhring no. 4930)
- 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**

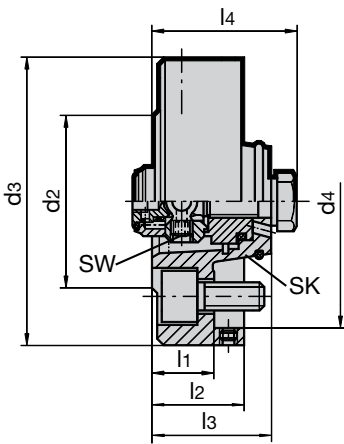
for HSK-C	d2 mm	d3 mm	l1 mm	l2 mm	SW	kg	Code no.	Availability
32	40	27.0	12.5	16	2.5	0.14	24,000	●
40	50	33.5	15.0	20	3.0	0.26	30,000	●
50	63	42.0	17.5	25	4.0	0.48	38,000	●
63	80	55.0	22.5	32	5.0	0.99	48,000	●
80	100	68.0	27.5	40	6.0	1.88	60,000	●
100	125	88.0	30.0	50.5	8.0	3.50	75,000	●

Product information

- for the conversion of SK to HSK-A/C interfaces to ISO 12163-1/DIN 69893-1

Scope of delivery

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



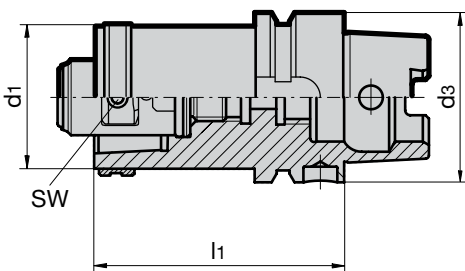
Guhring no.	4387
Discount group	114

for ISO taper	HSK-C	d2 mm	d3 mm	d4 mm	l1 mm	l2 mm	l3 mm	l4 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
- for holding HSK-A/C shanks to ISO 12164-1/DIN 69893-1



Guhring no.	4355
Discount group	114

HSK-A d3	HSK-C d1	l1 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	●

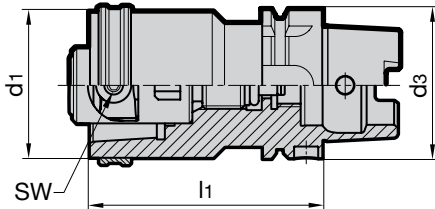
HSK-A/HSK-C extensions with MQL 4-point clamping sets

Product information

- suitable for MQL
- for single channel systems
- for holding HSK-A/C shanks to ISO 12164-1/DIN 69893-1

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 Guhring no. 4949 separately:
- order MQL coolant supply set separately:
 - for automatic tool change Guhring no. 4939 (HSK32 Guhring no. 4508)
 - for manual tool change Guhring no. 4940 (HSK32 Guhring no. 4513)



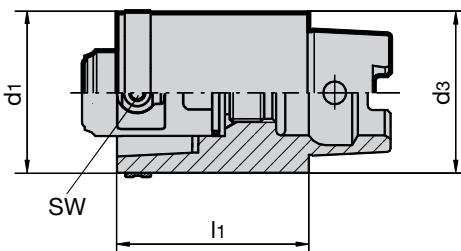
Guhring no.	4350
Discount group	114

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	1.00	80,050	●
50	100	4.0	1.30	100,050	●
63	100	5.0	2.10	100,063	●
63	140	5.0	3.10	140,063	●
80	120	6.0	4.20	120,080	●
80	160	6.0	5.70	160,080	●
100	140	8.0	7.70	140,100	●

HSK-C extensions

Product information

- incl. clamping set Guhring no. 4958 for conventional cooling
- incl. brass lock ring Guhring no. 4953
- for holding HSK-A/C shanks to ISO 12164-1/DIN 69893-1

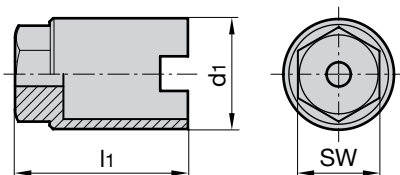


Guhring no.	4351
Discount group	114

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	●

Product information

- for the installation of 4-point clamping sets, if there are difficulties locking the spindle



Guhring no.	4963
Discount group	114

for HSK-C	d ₁ mm	l ₁ mm	SW	Code no.	Availability
25	17.5	25	15	19,000	●
32	22.5	32	17	24,000	●
40	28.0	40	19	30,000	●
50	36.0	50	24	38,000	●
63	45.0	60	30	48,000	●
80	56.0	80	36	60,000	●
100	70.0	95	36	75,000	●

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,

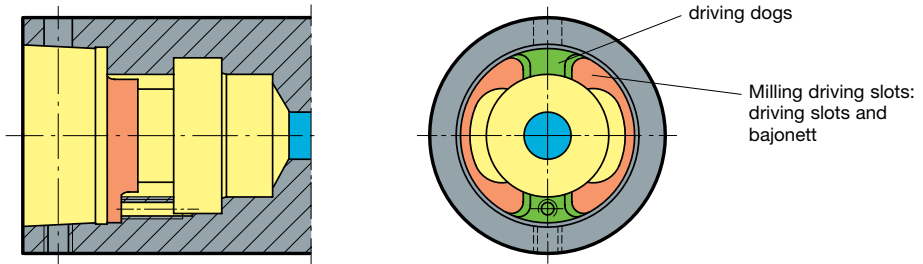
Thanks to the centrifugal forces of the clamping jaws the PowerClamp tool clamping set is suitable for high-speed applications. The high clamping force generated by the clamping jaws enables the application for heavy machining.



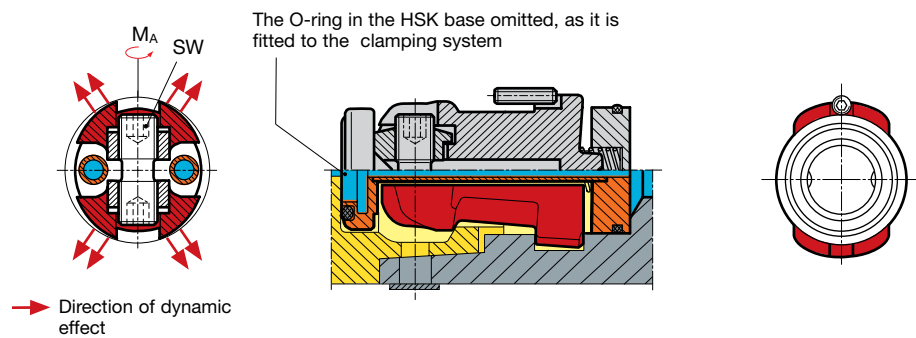
Advantages:

- 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

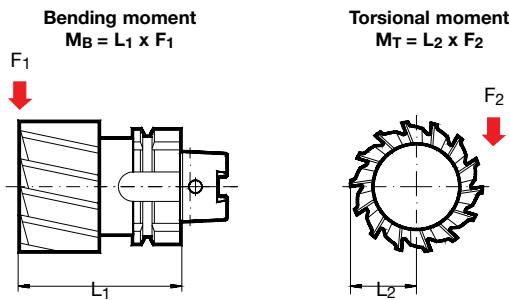
Internal contour of spindle



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.

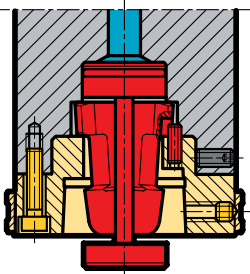
HSK-C	max. torque MA [Nm] ①	Key size	max. drawing force [kN] ②	max. linear bending moment MB [Nm] ②	max. transferrable torsional moment MT [Nm] ② ③
25	1.5	2.0	5	45	50
32	2.5	2.5	8	74	120
40	6.0	3.0	18	213	360
50	10.0	4.0	27	431	1000
63	15.0	5.0	35	703	1300
80	25.0	6.0	50	1100	2800
100	50.0	8.0	60	1620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

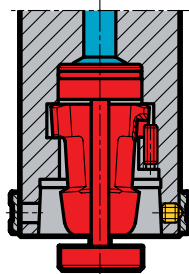
Application examples

Spindle interface

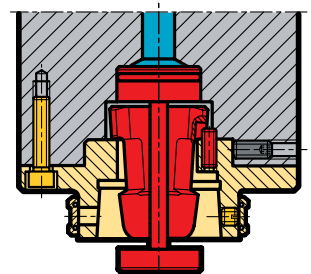
integrated spindle adaptor



Direct installation in spindle

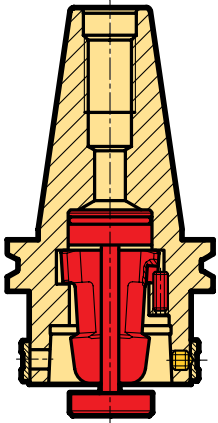


Spindle adaptor (in front)

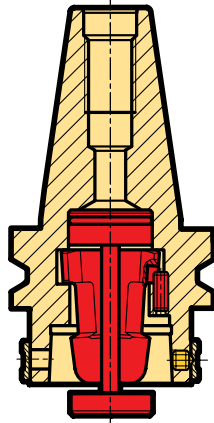


Adaptor

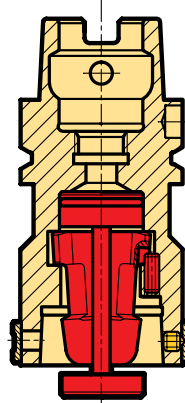
DIN ISO 7388-1 form AD



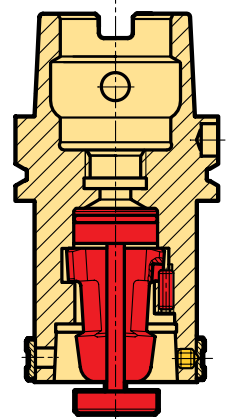
MAS/BT



HSK-A extension

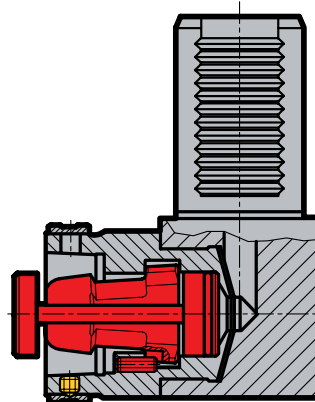


HSK-A reduction

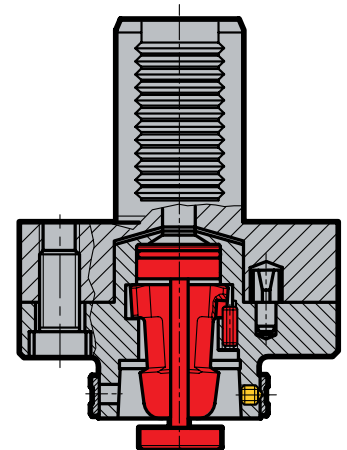


Tool holder for turning centers

adaptor (in front) on VDI angle holder



adaptor (in front) on VDI vertical holder

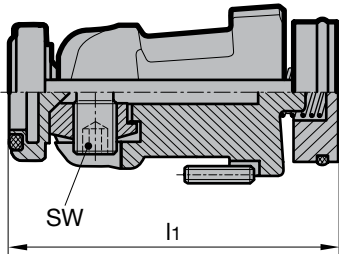


Product information

- 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
- for clamping HSK-A/C shanks to ISO 12164-1/DIN 69893

Scope of delivery

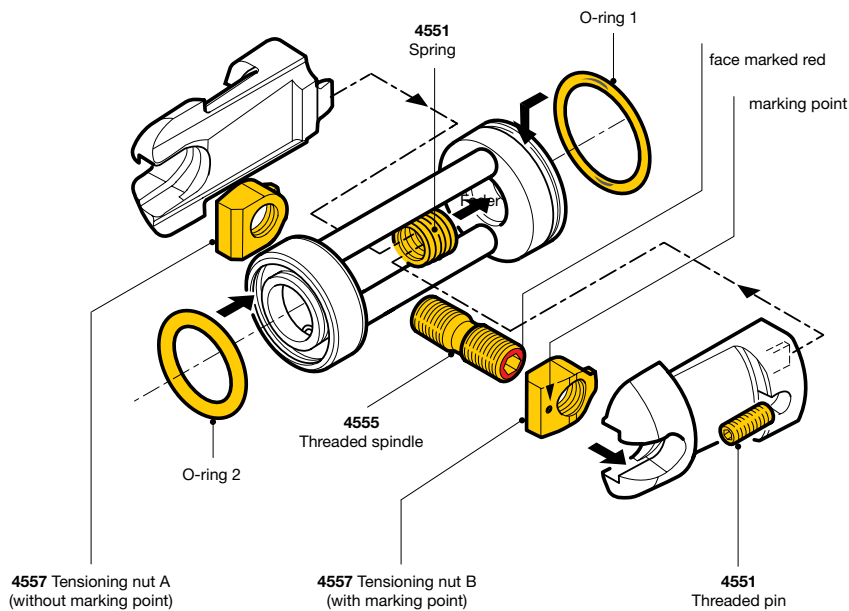
- including installation and operating instructions
- incl. threaded pin Guhring no. 4551



Guhring no.	4554
Discount group	114

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

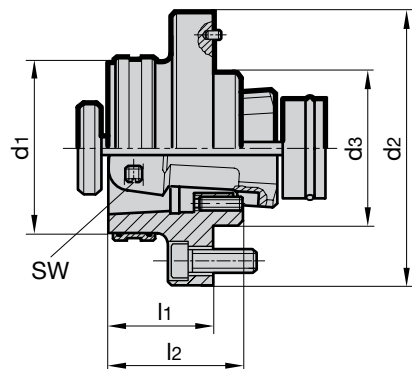


HSK-C	O-ring 1 mm	O-ring 2 mm	4557		4555		4551	
			Tensioning nut set	Availability/ discount group 114	Threaded spindle	Availability/ discount group 114	Spring and threaded pin	Availability/ discount group 114
25	11.5 × 1.0	7.0 × 2.0	1,019	●	2,019	●	3,019	●
32	14.0 × 1.5	10.0 × 2.5	1,024	●	2,024	●	3,024	●
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
- for holding HSK-A/C shanks to ISO 12164-1/DIN 69893



Scope of delivery

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



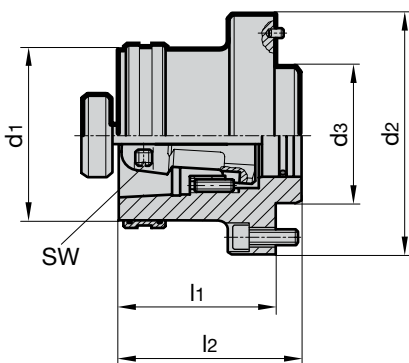
Guhring no. **4581**
Discount group **114**

HSK-C d ₁	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
- for holding HSK-A/C shanks to ISO 12164-1/DIN 69893



Scope of delivery

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

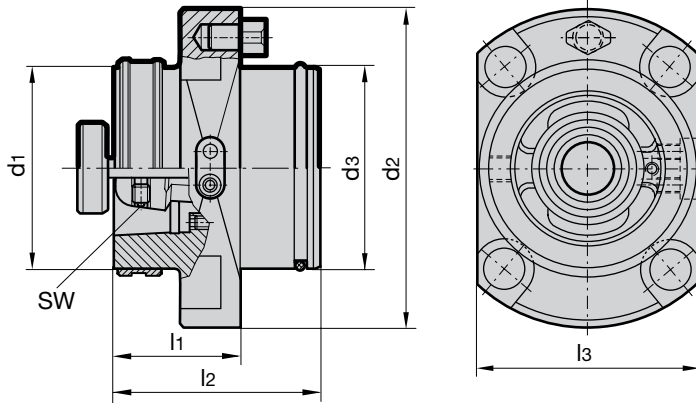


Guhring no. **4586**
Discount group **114**

HSK-C d ₁	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
- for holding HSK-A/C shanks to ISO 12164-1/DIN 69893-1



Scope of delivery

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



Guhring no. **4582**

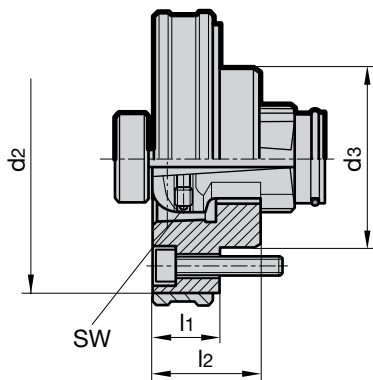
Discount group **114**

HSK-C d ₁	d ₂ mm	d ₃ mm	l ₁ mm	l ₂ mm	l ₃ 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
- for holding HSK-A/C shanks to ISO 12164-1/DIN 69893-1



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



Guhring no. **4584**

Discount group **114**

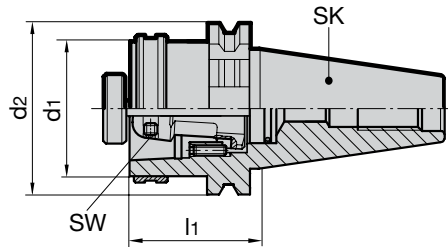
for HSK-C	d ₂ mm	d ₃ mm	l ₁ mm	l ₂ mm	SW	kg	Code no.	Availability
32	40	27.0	12.5	21.10	2.5	0.16	24,000	●
40	50	33.5	15.0	25.70	3.0	0.28	30,000	●
50	63	42.0	17.5	32.10	4.0	0.55	38,000	●
63	80	55.0	22.5	40.05	5.0	1.14	48,000	●
80	100	68.0	27.5	51.40	6.0	2.20	60,000	●
100	125	88.0	30.0	64.00	8.0	4.00	75,000	●

Product information

- ISO taper to DIN 69871 form AD
- Form AF on request
- Code no. 50,100 only applies to presetting unit
- for conventional cooling from 6 to max. 80 bar
- for holding HSK-A/C shanks to ISO 12164-1/DIN 69893-1

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

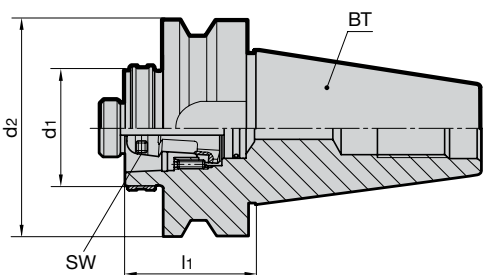
ISO taper	HSK-C d ₁	d ₂ mm	l ₁ mm	SW	kg	Code no.	Availability
40	32	63.5	40	2.5	0.89	40,032	●
40	40	63.5	40	3.0	0.90	40,040	●
40	50	63.5	40	4.0	0.91	40,050	●
40	63	63.5	70	5.0	1.38	40,063	●
50	32	97.5	40	2.5	2.65	50,032	●
50	40	97.5	40	3.0	2.67	50,040	●
50	50	97.5	40	4.0	2.71	50,050	●
50	63	97.5	40	5.0	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 DIN ISO 7388-2 form JD
- for conventional cooling from 6 to max. 80 bar
- for holding HSK-A/C shanks to ISO 12164-1/DIN 69893-1

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

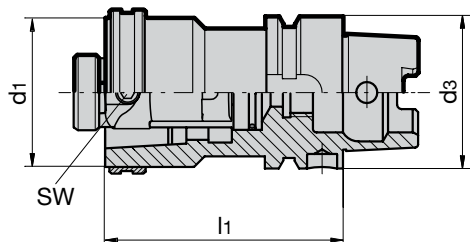
BT	HSK-C d ₁	d ₂ mm	l ₁ mm	SW	kg	Code no.	Availability
40	40	63	40	3	0.92	40,040	●
40	50	63	40	4	0.95	40,050	●
40	63	63	80	5	2.00	40,063	●
50	40	100	50	3	2.90	50,040	●
50	50	100	60	4	3.15	50,050	●
50	63	100	60	5	3.69	50,063	●

Product information

- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953
- for conventional cooling from 6 to max. 80 bar
- HSK-A to ISO 12164-1/DIN 69893
- for holding HSK-A/C shanks to ISO 12164-1/DIN 69893

Scope of delivery

- order coolant delivery set, Guhring no. 4949 separately



Guhring no.	4549
Discount group	114

HSK-A/ HSK-C d ₁ / d ₃	l ₁ mm	SW	kg	Code-Nr.	Availability
32	60	2.5	0.26	60,032	●
40	80	3.0	0.65	80,040	●
50	80	4.0	0.90	80,050	●
50	100	4.0	1.13	100,050	●
63	100	5.0	1.84	100,063	●
63	140	5.0	2.30	140,063	●
80	120	6.0	3.90	120,080	●
80	160	6.0	5.40	160,080	●
100	140	8.0	7.80	140,100	●
100	200	8.0	10.54	200,100	●

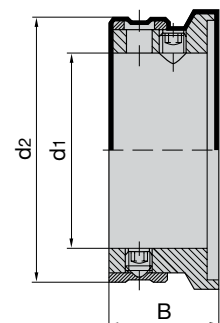
Skid rings for short spindles to DIN 69002-3

Product information

- for short spindles to DIN 69002-3

Scope of delivery

- incl. clamping screws and brass locking ring



Guhring no.	4976
Discount group	114

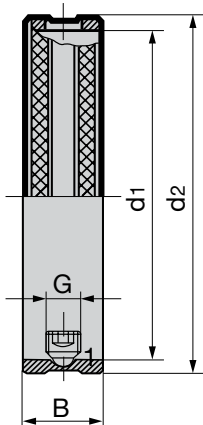
nom. size	d ₁ mm	d ₂ mm	B	Code no.	Availability
25x20	25	35,0	15,7	20,015	●
32x25	32	42,5	19,7	25,019	●
32x30	32	43,5	19,7	30,019	●
40x35	40	54,0	21,7	35,021	●
50x45	50	68,0	24,7	45,024	●
63x55	63	82,0	31,7	55,031	●

Product information

- the pressure ball screw must be secured with Loctite 222

Scope of delivery

- incl. pressure ball screw, Guhring no. 4961



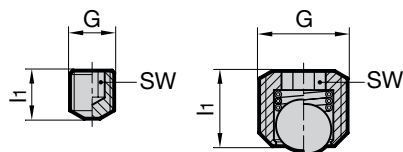
Guhring no.	4953
Discount group	114

HSK-form	for HSK-size	d1 mm	d2 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	l1 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	●

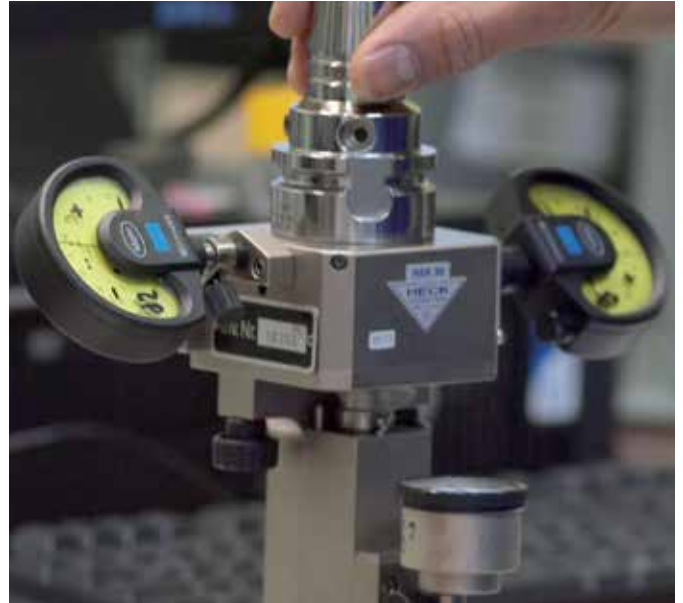


MEASURING INSTRUMENTS AND GENERAL ACCESSORIES



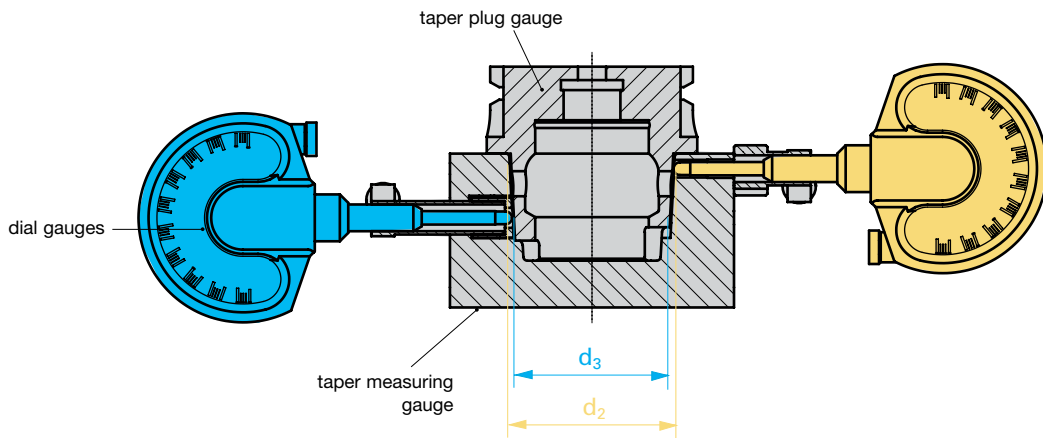
Measuring gauges for HSK tool shanks

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



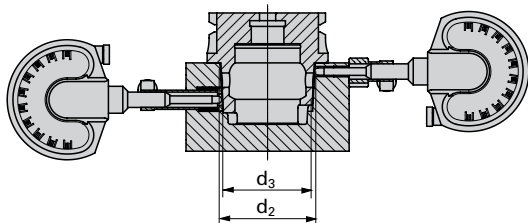
Taper measuring gauges for HSK tool shanks

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**

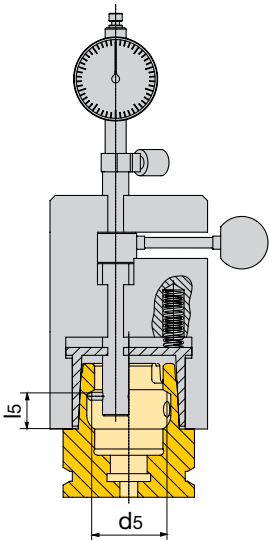
Discount group **Net price**

for HSK	d_2 mm	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

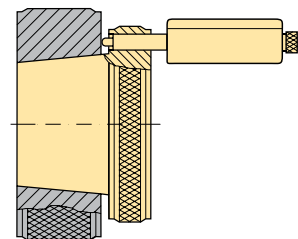


			Guhring no.	4978	
			Discount group	Net price	
for HSK A/C/E	l5 mm	d5 mm	Code no.	Availability	
25	7.21	15	19,000	●	
32	8.92	19	24,000	●	
40	11.42	23	30,000	●	
50	14.13	29	38,000	●	
63	18.13	37	48,000	●	
80	22.85	46	60,000	●	
100	28.56	58	75,000	●	

Measuring gauges for HSK spindles

Product information

- calibration on request



Scope of delivery

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



			Guhring no.	4969	
			Discount group	Net price	
for HSK	kg		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	●	

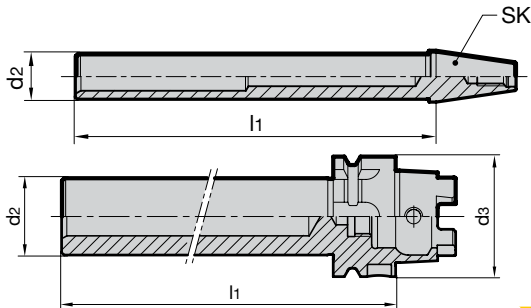
Taper proofing bars HSK/ISO

Product information

- to proof concentricity at machine spindles
- calibration on request
- Guhring no. 4971 125,025 only in form E
- HSK-A shank similar to ISO 12164-1/DIN 69893
- SK shank similar to DIN ISO 7388-1

Scope of delivery

- supplied in wooden case for vertical storage with inspection protocol
- for SK order pull studs Guhring no. 4925, 4926 separately
- for BT order shortened special pull studs separately Guhring no. 4927, 4928



				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	●

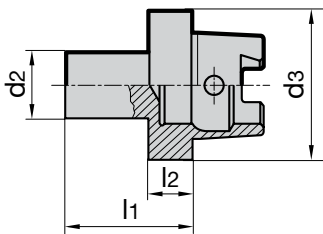
Balancing masters for HSK spindles

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
- HSK-C to ISO 12164-1/DIN 69893-1
- 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.

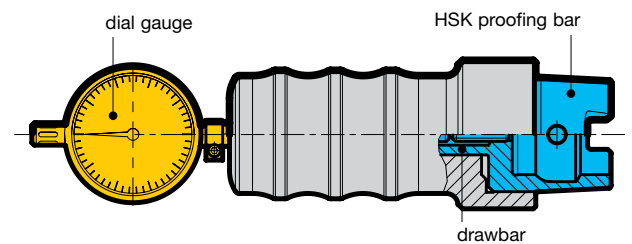
To ensure operational safety, a regular clamping force check of the HSK interface is recommended. An entirely mechanical clamping force measuring instrument is now available from Guhring. Its operation is based on components, which are linear adjustable in length and positioned proportional to the force. 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/BT/CAT30	6 kN
taper size SK/BT/CAT40	12 kN
taper size SK/BT/CAT50	25 kN



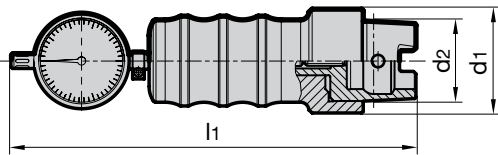
Clamping force measuring instrument

Product information

- mechanical clamping force inspection instrument for HSK/SK/BT/CAT 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. 4927, 4928



					Guhring no. 4973		Guhring no. 4974	
					Discount group 114		Discount group 114	
HSK-A/C/E d1	HSK-B/D/F d1	ISO taper/ BT/CAT	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	40	-	24	192			24,000	●
40	50	-	30	196			30,000	●
50	63	-	38	203			38,000	●
63	80	-	48	235			48,000	●
80	100	-	60	250			60,000	●
100	125	-	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!



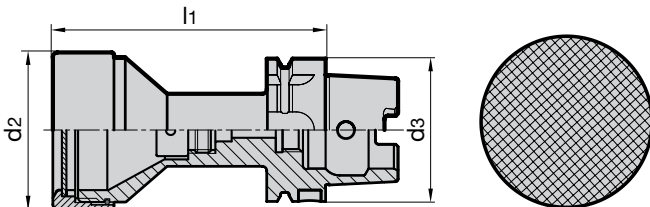
CC 3000

Product information

- range of application 50 - 500 min-1
- suitable for coolant pressure up to 80 bar
- HSK-A to ISO 12164-1/DIN 69893

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
- In addition to the HSK holder we can also offer a tool holder with a 16mm shank as a special

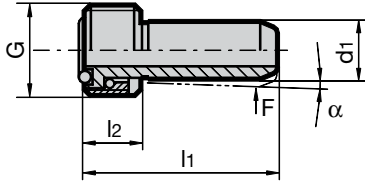


Guhring no.	4076		4077	
	Net price		Net price	
Discount group	Code no.	Availability	Code no.	Availability
case complete	10,063	●		
high-grade steel filter size 60, Guhring no. 4077			60,000	●
high-grade steel filter size 100, Guhring no. 4077			100,000	●
high-grade steel filter size 200, Guhring no.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

Coolant delivery sets for conventional cooling

Product information

- leak-proof screwed connection tested to 80 bar
- to DIN 69895
- F = angle movability $\pm 1^\circ$
- for HSK-A and HSK-E shanks



Scope of delivery

- incl. union nut and O-rings



Guhring no. 4949

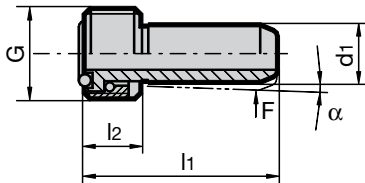
Discount group 114

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	●

Coolant delivery sets for conventional cooling with filter

Product information

- leak-proof screwed connection tested to 80 bar
- similar DIN 69895
- with filter for contamination-free cooling
- protects against tool breakage and eases error analysis
- F = angle movability $\pm 1^\circ$
- for HSK-A and HSK-E shanks



Scope of delivery

- incl. union nut and O-rings
- 100 μ stainless steel fabric filter



Guhring no. 4979

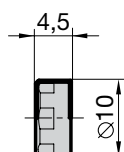
Discount group 114

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



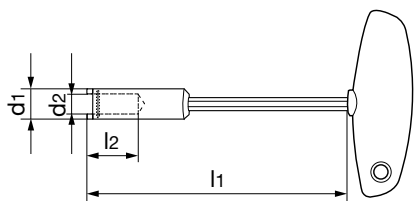
Guhring no. 4955

Discount group 114

coding chip BIS C	Code no.	Availability
10 x 4,5	10,000	●

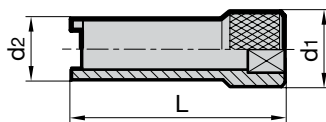
Product information

- 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	d1 mm	d2 mm	l1 mm	l2 mm	Code no.	Availability
32	11,0	6,1	128	23,0	24,000	●
40	13,0	8,1	134	26,0	30,000	●
50	15,0	10,1	134	28,0	38,000	●
63	17,0	12,1	135	31,5	48,000	●
80	20,0	14,1	138	32,0	60,000	●
100	22,5	16,1	138	35,0	75,000	●

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

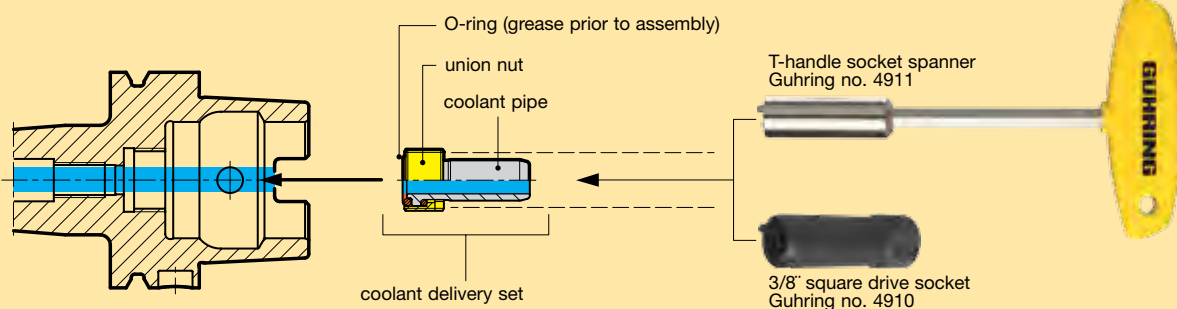
for HSK	MA Nm	d1 mm	d2 mm	L mm	Code no.	Availability
32	7	20	14	60	24,000	●
40	11	20	16	60	30,000	●
50	15	20	18	60	38,000	●
63	20	20	18	60	48,000	●
80	25	20	20	75	60,000	●
100	30	22	22	80	75,000	●

Installation of coolant delivery sets 4949/4979

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

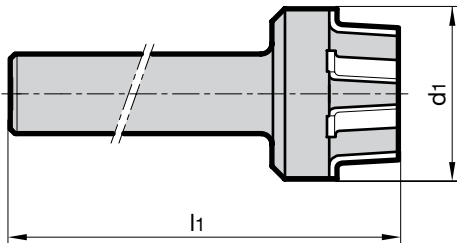
for HSK	MA Nm
32	7
40	11
50	15
63	20
80	25
100	30



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



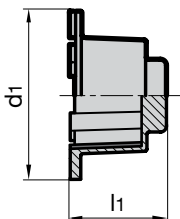
Guhring no.	4914
Discount group	114

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	24	160	14,000	●
HPC 20	24	156	20,000	●
HPC 25	40	195	25,000	●
HPC 32	42	170	32,000	●
SK/BT30	35	168	30,030	●
SK/BT40	48	188	40,000	●
SK/BT50	75	240	50,000	●

HSK cleaning caps

Product information

- for cleaning the external taper and face



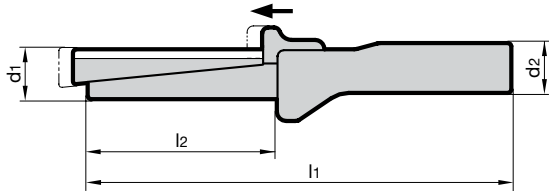
Guhring no.	4947
Discount group	114

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
- i.e. hydraulic, shrink fit and HPC clamping chucks



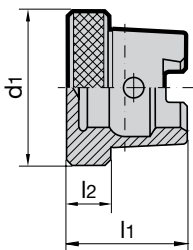
Guhring no.	4918
Discount group	114

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



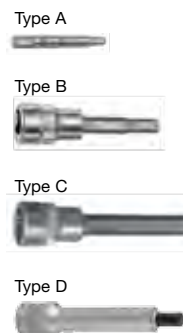
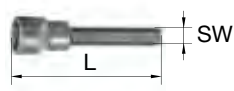
Guhring no. **4915**
Discount group **114**

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"	514	40-200	200,000	●
D	1/4"	100	12	12,000	●

Socket/attachments

Product information

- for hexagon socket screws
- Type D for HPC clamping chuck



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

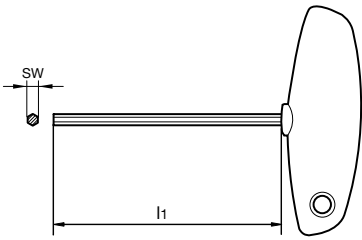
Guhring no. **4916**
Discount group **114**

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"	52	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	●

Hexagon clamping keys

Product information

- for hexagon socket screws
- with ergonomic handle for the safe handling of our clamping devices
- Code no. 4,600/4,010 special key for HPC chucks



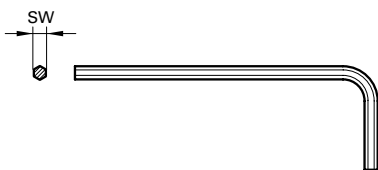
Guhring no.	4912
Discount group	114

SW	Hexagon length mm	Type	Code no.	Availability
2.0	100	A	2,000	●
2.5	100	A	2,500	●
3.0	100	A	3,000	●
3/4/5/6	100	A	3,456	●
4.0	100	A	4,000	●
4.0	100	A	4,010	●
4/6	100	A	4,600	●
5.0	100	A	5,000	●
6.0	100	A	6,000	●
8.0	100	A	8,000	●
10.0	100	A	10,000	●
12.0	100	A	12,000	●
2.5	200	A	2,501	●
3.0	200	A	3,001	●
4.0	200	A	4,001	●
5.0	200	A	5,001	●
6.0	200	A	6,001	●
7.0	200	A	7,001	●
8.0	200	A	8,001	●
1.5	3.0	B	1,500	●
2.0	3.5	B	2,001	●
2.5	3.5	B	2,502	●
3.0	3.5	B	3,003	●
3.0	4.3	B	3,002	●
4.0	4.5	B	4,002	●

Hexagon clamping key

Product information

- for hexagon socket screws



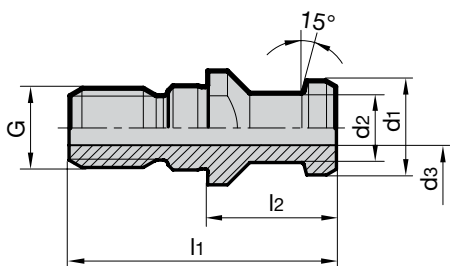
Guhring no.	4921
Discount group	114

for threaded pin Guhring no. 4551	SW	Code no.	Availability
HSK 25	0,9	0,900	●
HSK 32	1,3	1,300	●
HSK 40	1,5	1,500	●

Pull studs ISO taper DIN ISO 7388-3 form AD

Product information

- for ISO taper tool holders to DIN ISO 7388-3 form AD
- through hole for central coolant delivery



Guhring no. **4925**

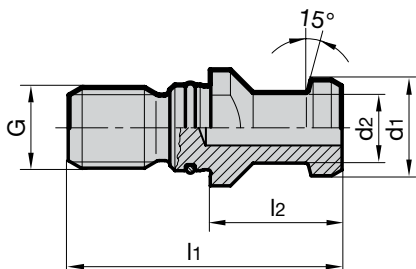
Discount group **114**

for ISO taper	d ₁ mm	d ₂ mm	d ₃ mm	l ₁ mm	l ₂ mm	G	Code no.	Availability
30	13.0	9.0	-	44.0	24	M12	30,000	●
40	19.0	14.0	7.0	54.0	26	M16	40,000	●
50	28.0	21.0	11.5	74.0	34	M24	50,000	●

Pull studs ISO taper DIN ISO 7388-3 form AF

Product information

- for ISO taper tool holders to DIN ISO 7388-3 form AF
- sealed for coolant delivery above the collar



Guhring no. **4926**

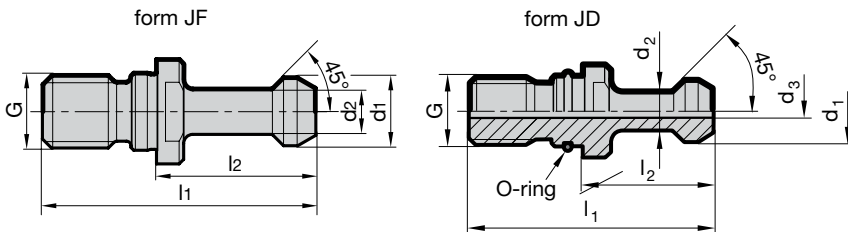
Discount group **114**

for ISO taper	d ₁ mm	d ₂ mm	l ₁ mm	l ₂ mm	G	Code no.	Availability
30	13.0	9.0	44.0	24	M12	30.000	●
40	19.0	14.0	54.0	26	M16	40.000	●
50	28.0	21.0	74.0	34	M24	50.000	●

Pull studs BT DIN ISO 7388-3

Product information

- for tool holders to DIN ISO 7388-2 (MAS 403 BT)
- 45° clamping shoulder angle
- Design JD sealed with through hole
- Design JF without through hole
- 40,100 shortened and sealed, for draw-in clamping force test equipment Guhring no. 4973



Guhring no. **4927**

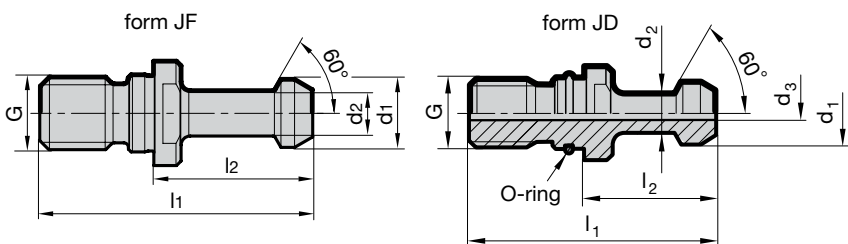
Discount group **114**

for BT	d ₁ mm	d ₂ mm	d ₃ mm	l ₁ mm	l ₂ mm	G	form	Code no.	Availability
30	11.0	7.0	-	43.0	23	M12	JF	30,000	●
40	15.0	10.0	-	57.0	32	M16	JF	40,100	●
40	15.0	10.0	-	60.0	35	M16	JF	40,000	●
50	23.0	17.0	-	65.0	45	M24	JF	50,000	●
30	11.0	7.0	2.5	43.0	23	M12	JD	30,001	●
40	15.0	10.0	3.0	60.0	35	M16	JD	40,001	●
50	23.0	17.0	8.5	85.0	45	M24	JD	50,001	●

Pull studs BT DIN ISO 7388-3

Product information

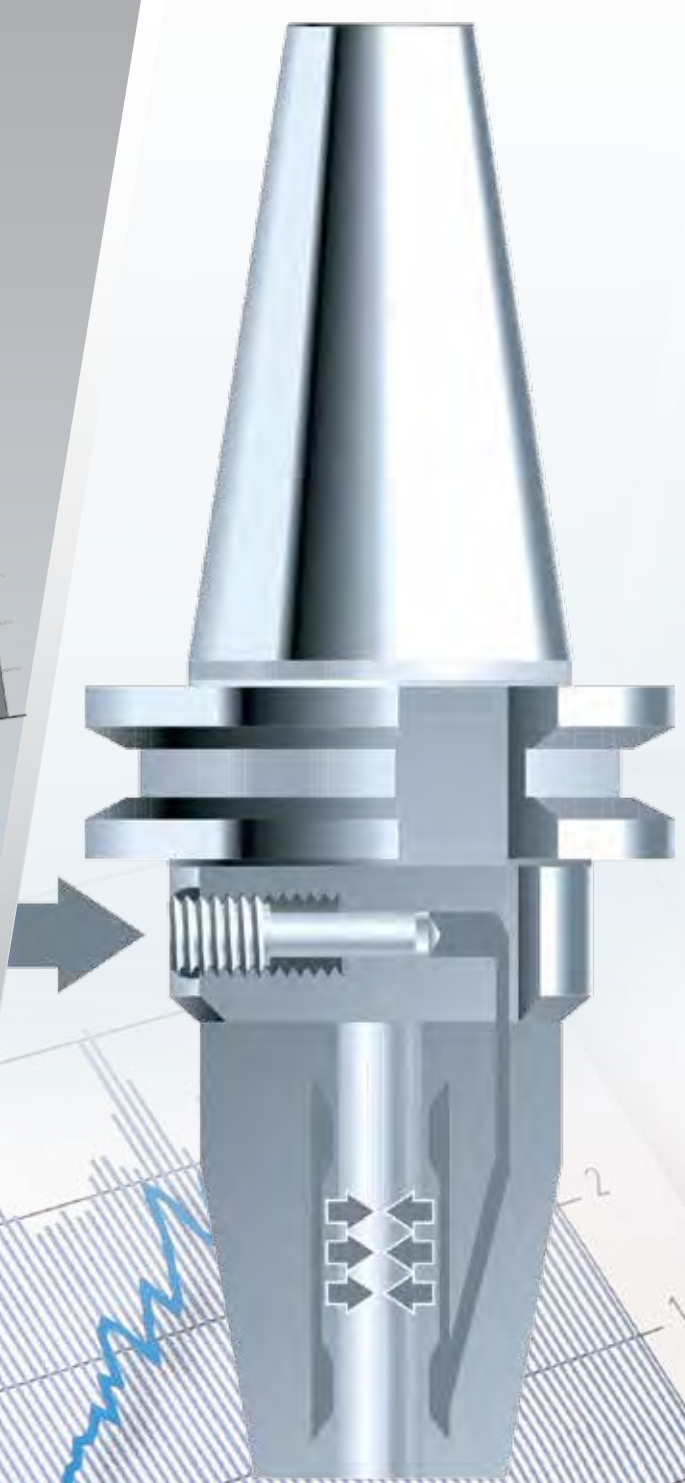
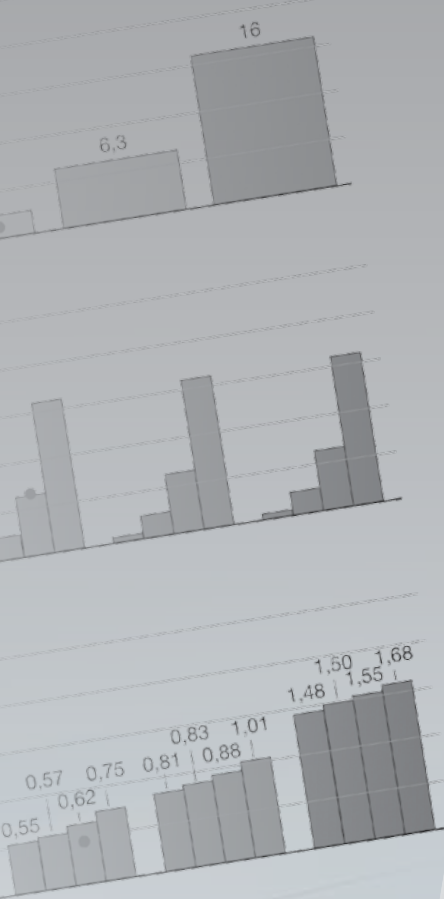
- for tool holders to DIN ISO 7388-2 (MAS 403 BT)
- 60° clamping shoulder angle
- Design JD sealed with through hole
- Design JF without through hole
- 40,100 shortened and sealed, for draw-in clamping force test equipment Guhring no. 4973



Guhring no. **4928**

Discount group **114**

for BT	d ₁ mm	d ₂ mm	d ₃ mm	l ₁ mm	l ₂ mm	G	form	Code no.	Availability
30	11.0	7.0	-	43.0	23	M12	JF	30,000	●
40	15.0	10.0	-	57.0	32	M16	JF	40,100	●
40	15.0	10.0	-	60.0	35	M16	JF	40,000	●
50	23.0	17.0	-	85.0	45	M24	JF	50,000	●
40	15.0	10.0	3.0	60.0	35	M16	JD	40,001	●
50	23.0	17.0	8.5	85.0	45	M24	JD	50,001	●



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
<p>Characteristics</p>	<p>maximum concentricity; very slender non-interference; good rigidity; high clamping force; modular lengthening; patented dampening screw ensures concentricity</p>	<p>high dampening with maximum concentricity; simple handling; flexible application thanks to reduction bushes also with GÜHROJET</p>
<p>Main application</p>	<p>drilling, countersinking, milling, reaming, universal and HSC applicatio</p>	<p>reaming, drilling, countersinking, HSC application, light milling</p>
<p>Main feature</p>	<p>accurate and universal; slender; high clamping force</p>	<p>simple handling</p>
<p>Concentricity</p>	<p>< 3µm</p>	<p>< 3µm</p>
<p>with 5xD</p>	<p>< 5µm</p>	<p>< 5µm</p>
<p>Clamping force</p>	<p>very high</p>	<p>very high</p>
<p>Rigidity</p>	<p>very high</p>	<p>high</p>
<p>Dampening</p>	<p>low</p>	<p>very high</p>
<p>Interference contour</p>	<p>small / minimal</p>	<p>medium</p>
<p>Handling</p>	<p>good</p>	<p>very good / very flexible</p>
<p>Actuation</p>	<p>shrink fit device</p>	<p>hexagon key</p>

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.

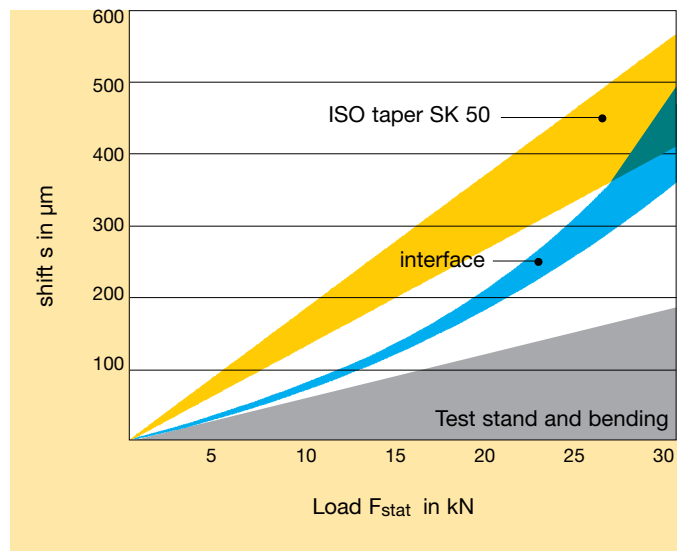
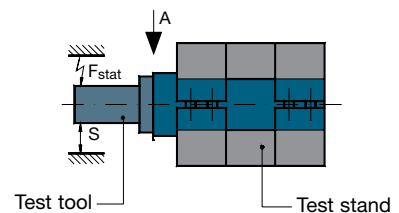


Fig. 2
Static deflection: Comparison between ISO taper 50 and automatic interface HSK-A 100 (A)

ISO taper DIN 2080 DIN ISO 7388-1	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.

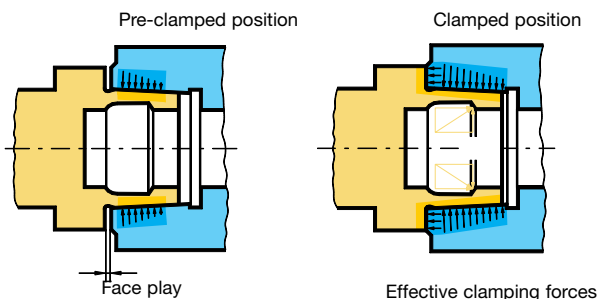
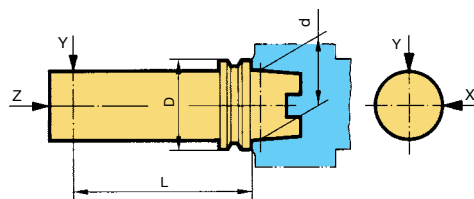


Fig. 3
Prestressing and frictional forces of hollow taper shank at the interface.

- **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

- **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**

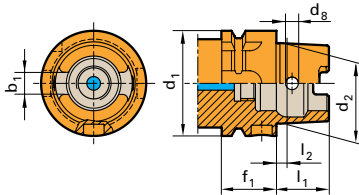
Coolant supply sets are to be ordered separately for all GM 300 modules. The installation of the coolant duct must be carried out by the user.

The HSK interface

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

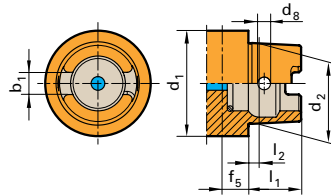
Form A ISO 12164-1/DIN 69893-1

HSK-sizes 32...160



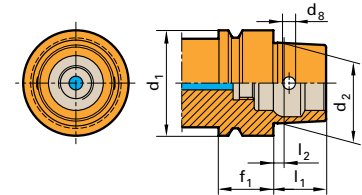
Form C ISO 12164-1/DIN 69893-1

HSK-sizes 32...160



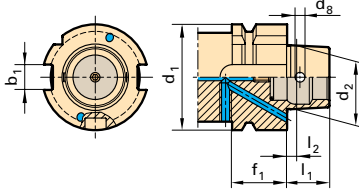
Form E DIN 69893-5

HSK-sizes 25...63



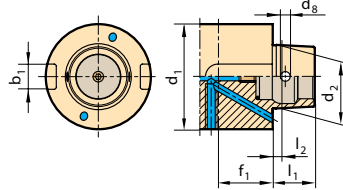
Form B DIN 69893-2

HSK-sizes 40...160



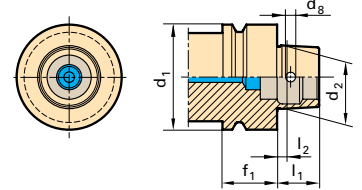
Form D DIN 69893-2

HSK-sizes 40...160



Form F DIN 69893-6

HSK-sizes 50...80



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
20	15,203	10	2,0	8	-	-	-
25	19,006	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

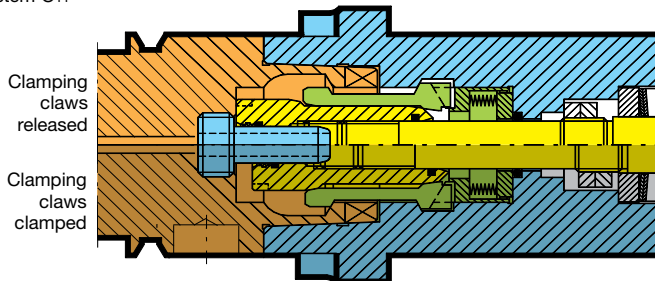
The HSK interface

THE AUTOMATIC TOOL CLAMPING

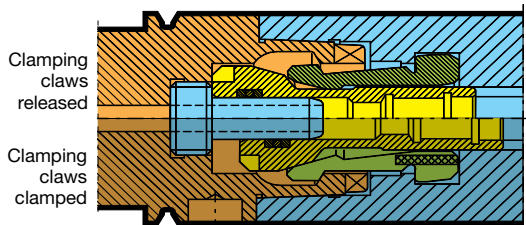
For the automatic interface the forces are introduced axially via a draw bar. A clamping taper simultaneously causes a radial movement of the clamping segments which, in turn, engage with the clamping shoulder of the tool shank and lock the coupling absolutely play-free. The clamping mechanism increases 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

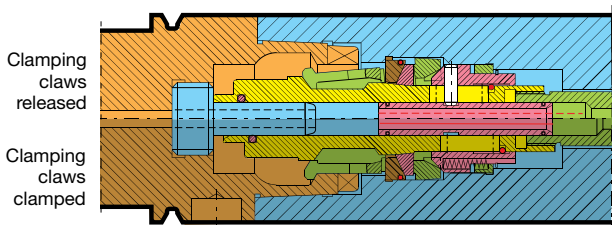
System OTT



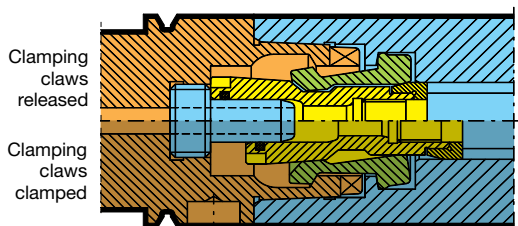
System ORTLIEB (licence Fa. Guhring)



System BERG (licence Fa. Guhring)

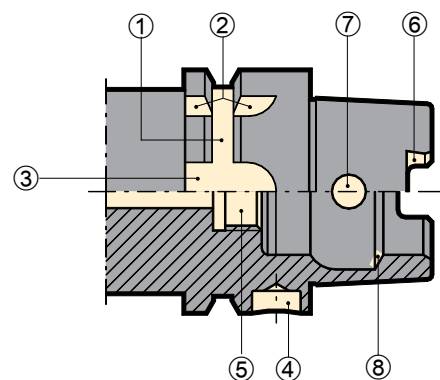
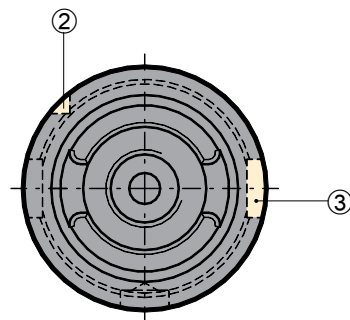


System RÖHM (licence Fa. Guhring)



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 ISO 7388-1 and MAS/BT DIN ISO 7388-2

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/AF

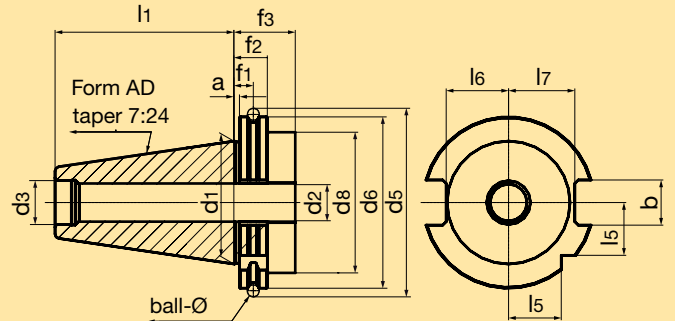
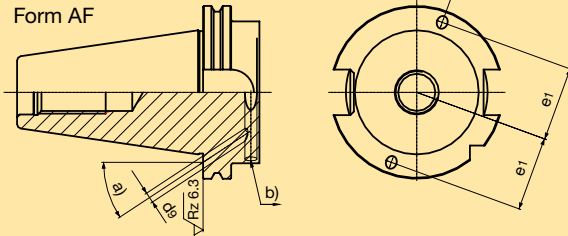
ISO taper tool holders generally produced are type AD/AF. Supplied is type AD, the coolant bores at the collar are sealed with screws.

General dimensions and tolerances

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

SK DIN ISO 7388-1 (old SK DIN 69871)

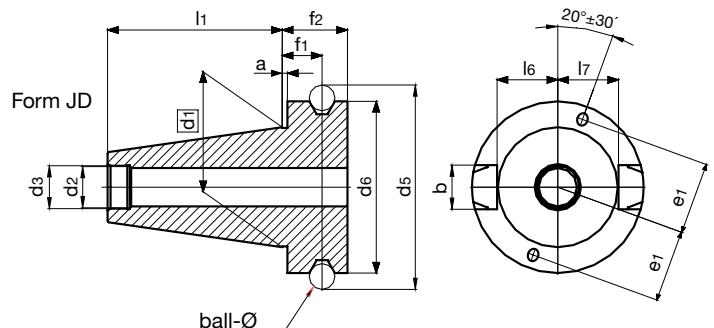
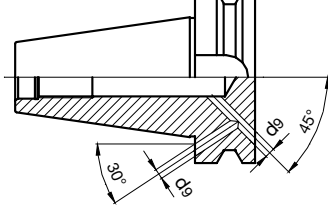
Form AF



MAS/BT DIN ISO 7388-2

(corresponds MAS/BT JIS B 6339)

Form JD/JF

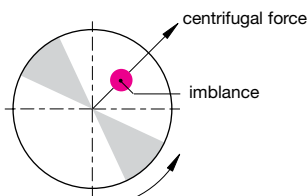


ISO taper	a mm	ball-Ø mm	b mm	d ₁ mm	d ₂ mm	d ₃ mm	d ₅ mm	d ₆ mm	d ₈ mm	d ₉ mm	e ₁ mm	f ₁ mm	f ₂ mm	f ₃ mm	l ₁ mm	l ₅ mm	l ₆ mm	l ₇ mm
SK30	3.2	7	16.1	31.75	M12	13	59.3	50.00	45	4	21	11.1	19.1	35	47.80	15.00	16.4	19.0
SK40	3.2	7	16.1	44.45	M16	17	72.3	63.55	50	4	27	11.1	19.1	35	68.40	18.5	22.8	25.0
SK50	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	56.03	46.00	-	-	-	13.6	22.0	-	48.40	-	16.3	16.3
BT40	2.0	10	16.1	44.45	M16	17	75.56	63.00	-	4	27	16.6	27.0	-	65.4	-	22.6	22.6
BT50	3.0	15	25.7	69.85	M24	25	118.89	100.00	-	5.4	42	23.2	38.0	-	101.8	-	35.4	35.4

Imbalance

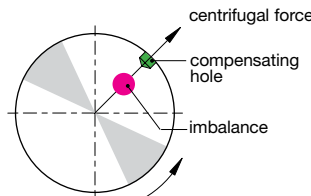
An imbalance produces a centrifugal force during the rotation of the spindle impeding the smooth running of the tool. This imbalance influences the working process and the life span of the spindle bearings. The centrifugal force F increases linear with the imbalance U and squared with the number of revolutions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

$$c = U \cdot \omega$$



Counter balancing

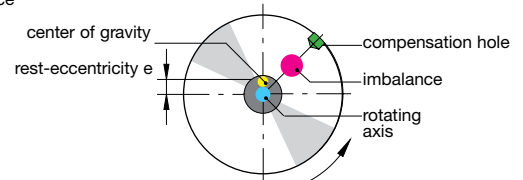
To compensate for unwanted centrifugal forces, the symmetrical distribution of mass must be restored with the aim of eliminating any centrifugal forces influencing the spindle bearing. Tool holders generally have compensation holes or areas which assist in directing the total amount of all centrifugal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

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



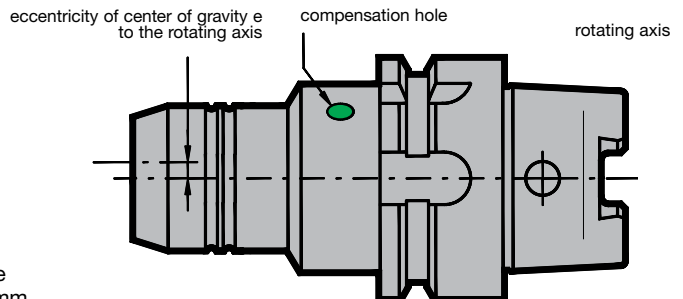
Calculation imbalance

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:

$$U = m \cdot e$$

- c = centrifugal force
- U = imbalance in gmm
- e = eccentricity of center of gravity in μm
- m = mass in kg
- s = speed min^{-1}
- ω = angular velocity ($\omega = 2 \cdot \pi \cdot n$)



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.

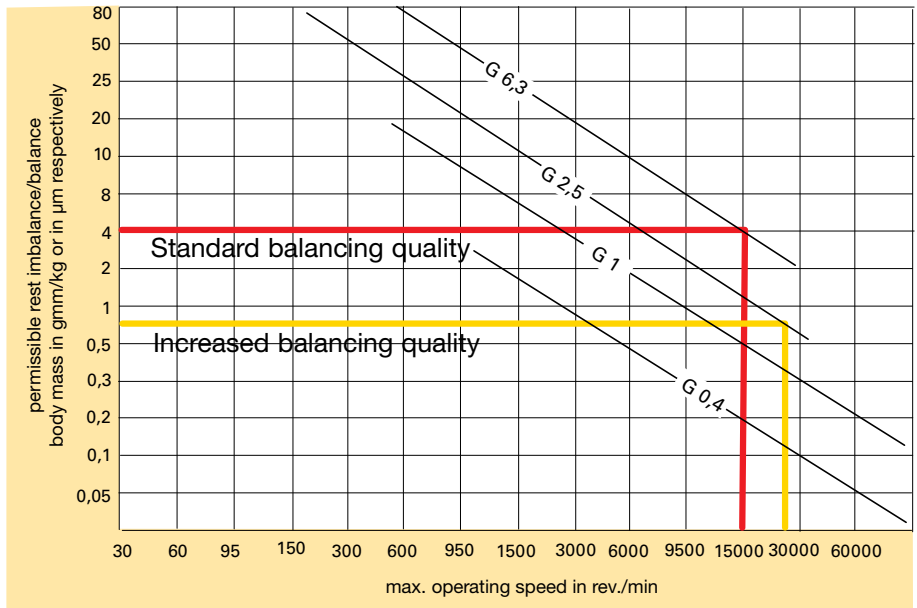
Aim of counter balancing is to find a compromise between the technically feasible and the economically efficient. Because the radial interchange accuracy for a brand-new HSK holder can be 2 to 3 μm and for an ISO taper shank holder

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:

$$IB_{total} = IB_{Spindle} (G\ 0.4) + IB_{tool\ holder} (G\ 2.5) + IB_{tool} (G\ 6.3)$$

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

$$IB_{total} \text{ in gmm: } 3.236$$

Balancing grade conversion of the total system

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

Example:

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

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

Tool holder eccentricity 2 µm

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

Tool eccentricity 3 µm

Sum of total system

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.

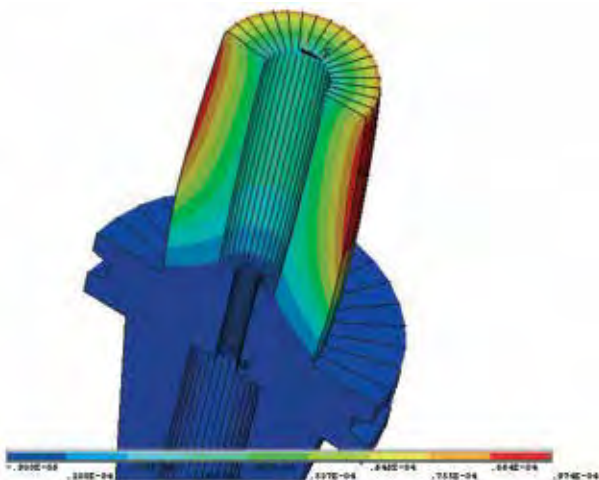
Convincing characteristics:

- 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 3001
- HSV 2000
- GSS 2000

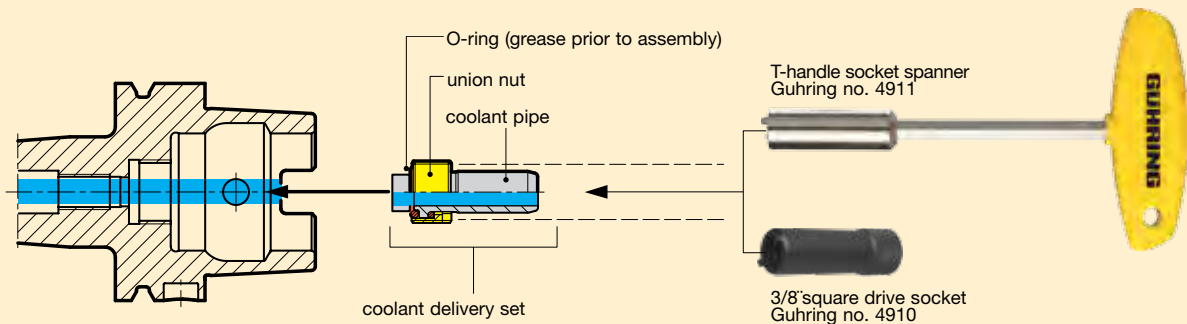


1. The HSK holder must be clean, free of swarf and undamaged.
2. Grease the O-rings prior to assembly.
3. Centrally insert the complete coolant delivery set (coolant pipe, union nut and 2 O-rings) in the HSK with the assistance of the socket spanner. When inserting the MQL coolant delivery unit, it is 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.

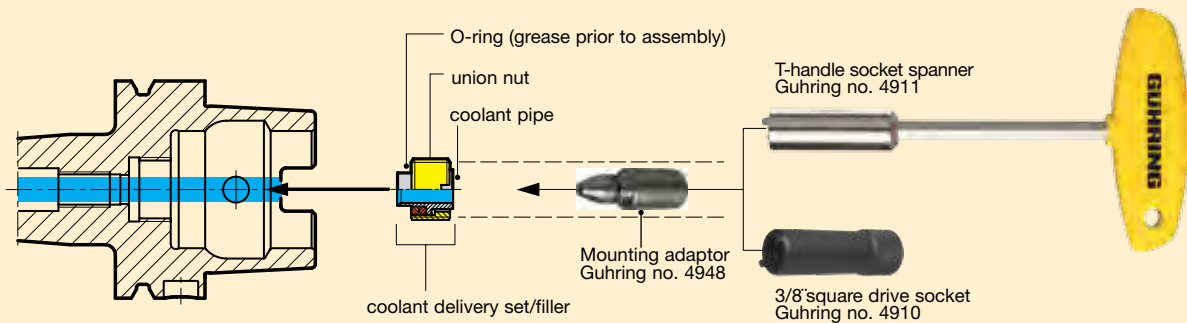
Torque figures

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

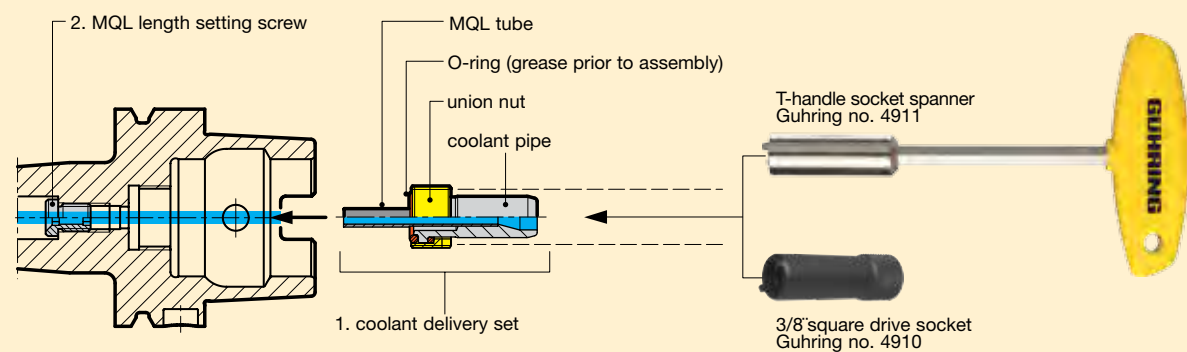
Installation of MQL coolant delivery set 4939



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

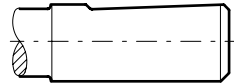
Form HB $\varnothing 25 \dots 32$ mm



Form HE $\varnothing 6 \dots 20$ mm



Form HE $\varnothing 25 \dots 32$ mm



General notes:

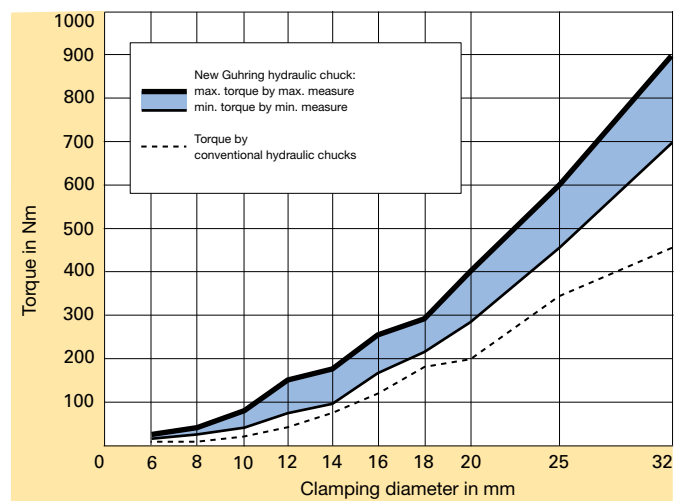
Our hydraulic chucks must not be operated with motor-driven tools (impulse screwdrivers or similar). The hexagonal key should not exceed the key size over its entire length, this largely prevents excessive torque being transferred. We recommend the hexagon clamping key, Guhring no. Art. 4912. A tightening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

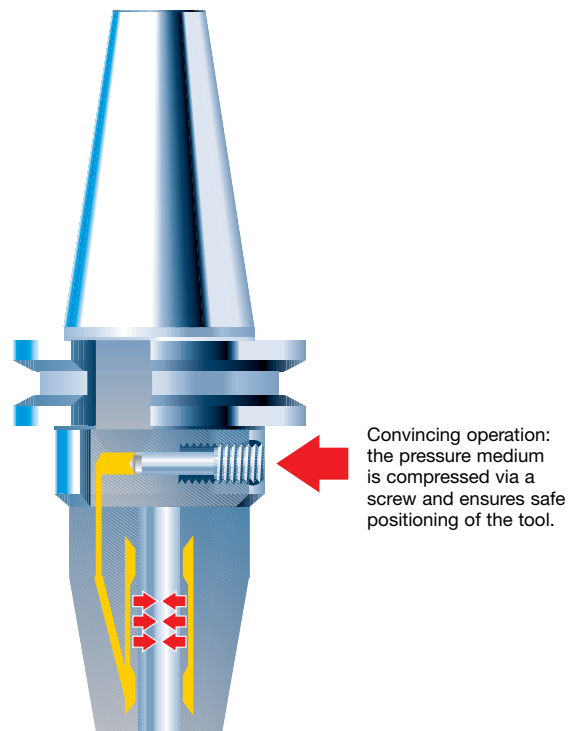
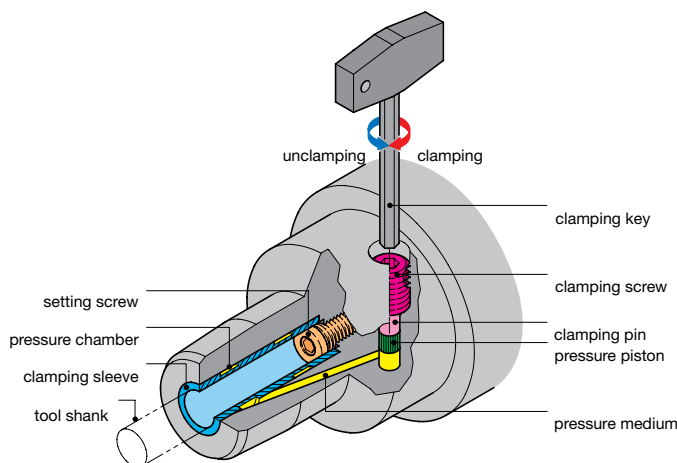


Considerably higher:
The clamping force of Guhring's new HSK-A hydraulic chuck in comparison to conventional chucks.

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

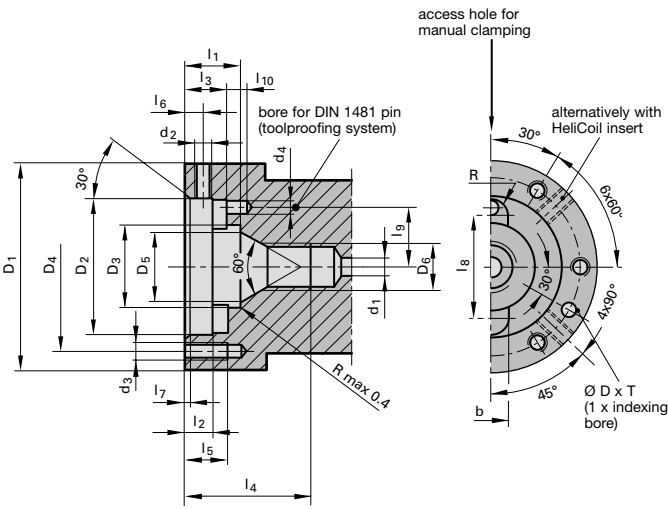


for shank-Ø in mm	max. r.p.m. in 1/min	max. transferable torque in Nm	min. insertion depth in mm	max. adjustment l ₃ mm	max. rad. force F on chuck with 50 mm from the nose in N	operating temperature in °C	max. coolant pressure in bar
3 h ⁶	50 000	2.5	27	7	25	20 - 50	80
4 h ⁶	50 000	6	27	7	40	20 - 50	80
5 h ⁶	50 000	10	27	7	65	20 - 50	80
6 h ⁶	50 000	16	27	10	225	20 - 50	80
8 h ⁶	50 000	26	27	10	370	20 - 50	80
10 h ⁶	50 000	50	31	10	540	20 - 50	80
12 h ⁶	50 000	82	36	10	650	20 - 50	80
14 h ⁶	50 000	125	36	10	900	20 - 50	80
16 h ⁶	50 000	190	39	10	1410	20 - 50	80
18 h ⁶	50 000	275	39	10	1580	20 - 50	80
20 h ⁶	50 000	310	41	10	1860	20 - 50	80
25 h ⁶	25 000	520	47	10	4400	20 - 50	80
32 h ⁶	25 000	770	51	10	6500	20 - 50	80

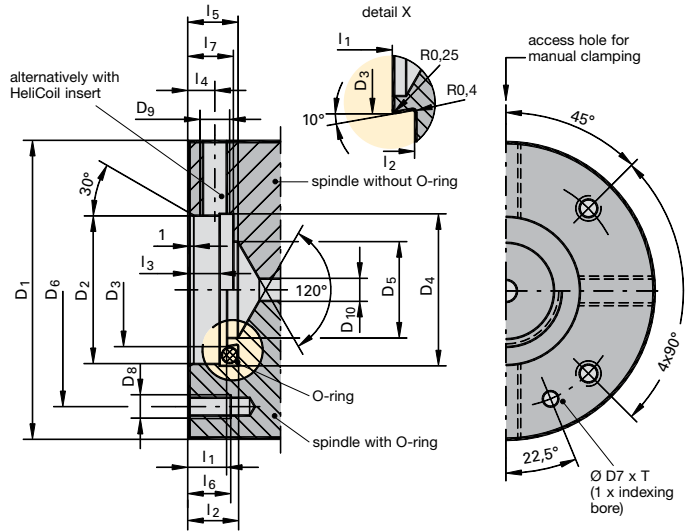
INSTALLATION DIMENSIONS FOR HSK ADAPTOR

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

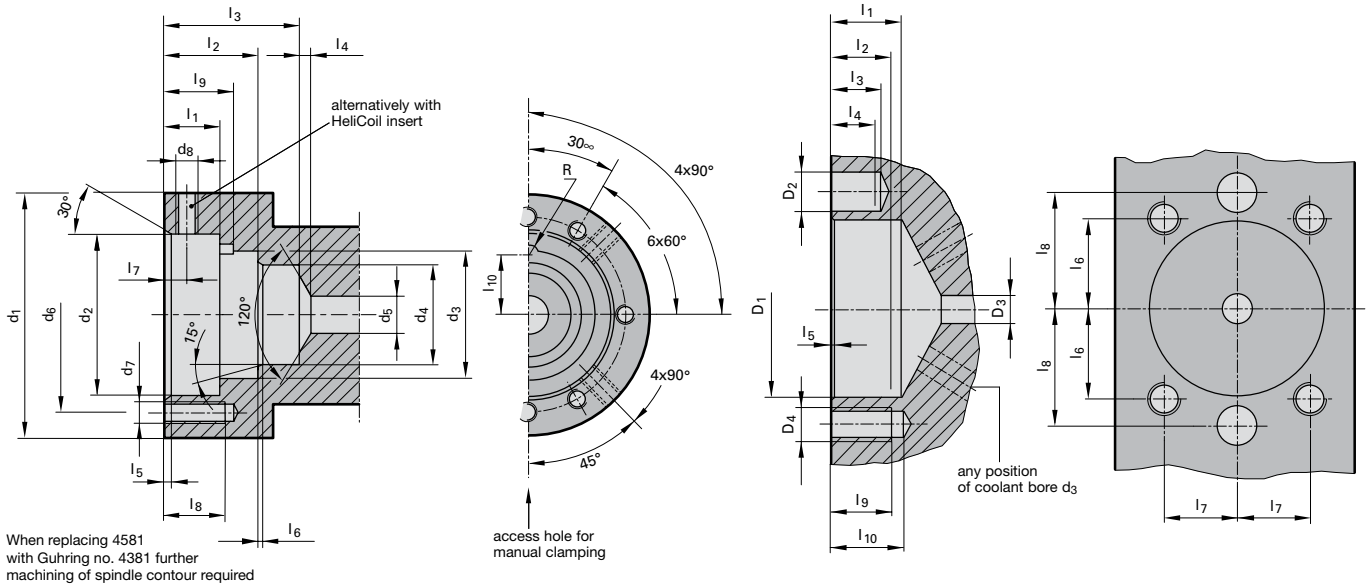
for HSK/Code no.	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	T	O-ring
40 30,000	70	35	28.5	36	22	53	5	M6	M8x1	5.0	10.3	12.4	8.3	7.0	12	14	12	3.5	28x3
50 38,000	80	40	30.5	41	26	63	5	M6	M8x1	6.0	10.3	13.3	8.3	7.0	12	14	12	3.5	30x4
63 48,000	100	50	38.5	51	34	79	5	M8	M10x1	8.0	12.3	16.1	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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GUHRING



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