

THE 4-POINT CLAMPING TECHNOLOGY FOR CONVENTIONAL COOLING

TECHNICAL INFORMATION AND ADVANTAGES

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



Advantages:

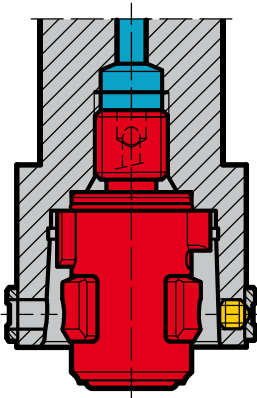
- simple and hence more economic spindle manufacture
- short, small diameter spindles with constricted spindle bearing spacing
- suitable for a pressure up to 80 bar

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

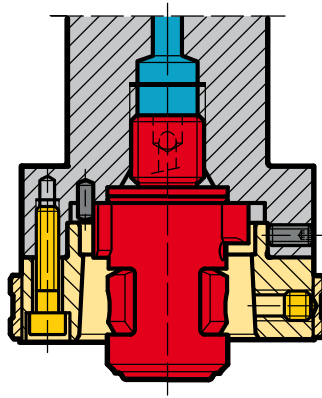
Application examples

Spindle interface

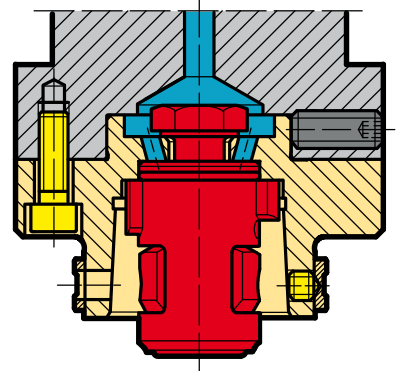
Direct installation in spindle



Spindle adaptor (integrated)

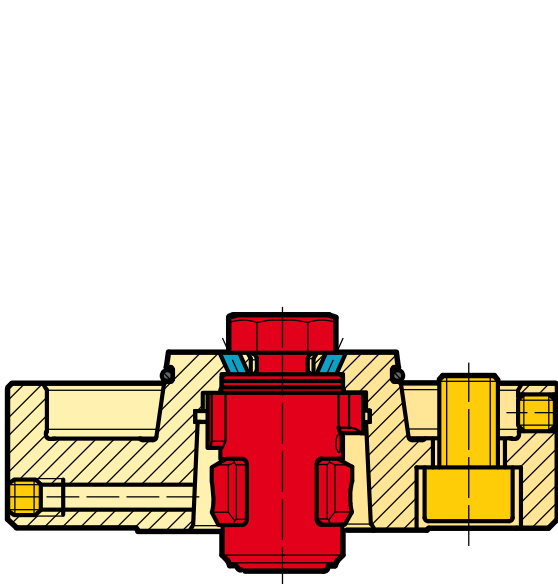


Spindle adaptor (in front)

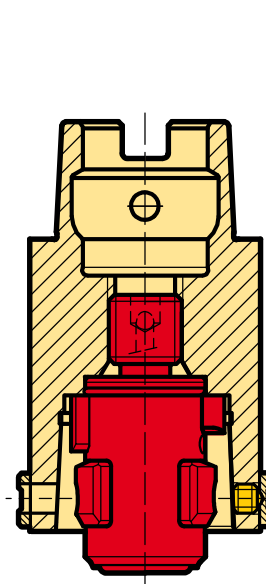


Adaptor

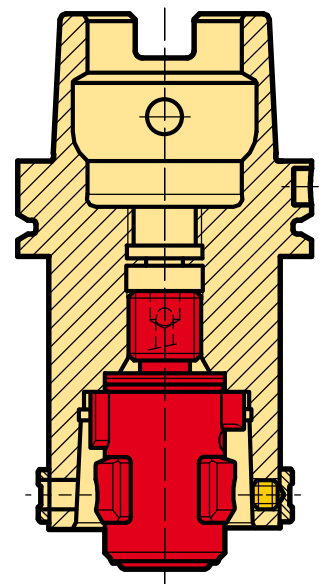
Basic adaptor for ISO taper spindles



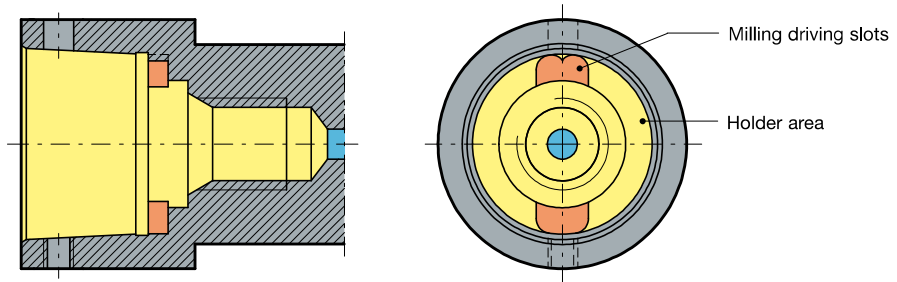
HSK-C extension



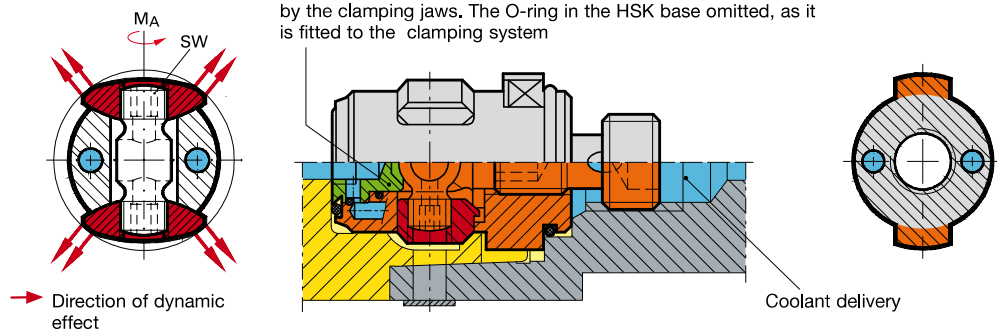
HSK-A reduction



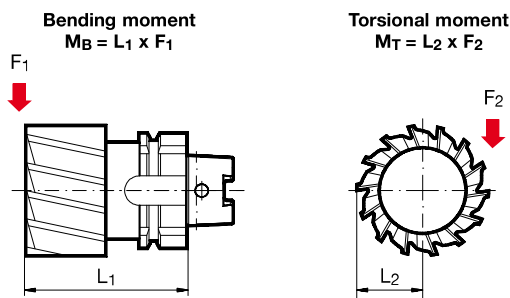
Internal contour of spindle



Installation and principle of operation



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



① We recommend M_A max. for rough machining and milling operations. For drilling and reaming operations a lower deviation of M_A max. up to 30% is permissible. Please check the torque with a torque wrench.

② Depending on temperature and lubricating conditions these values can be up to 15% lower.

③ Due to the screwed connection, M_T max. can be lower with adaptors.

HSK-C	max. torque M_A [Nm] ①	Key size	max. drawing force [kN] ②	max. linear bending moment M_B [Nm] ②	max. transferrable torsional moment M_T [Nm] ② ③
25	1.5	2.5	4.5	30	30
32	3.0	2.5	7.0	60	100
40	6.0	3.0	12.0	130	170
50	14.0	4.0	20.0	280	350
63	27.0	5.0	28.0	500	640
80	54.0	6.0	40.0	900	1330

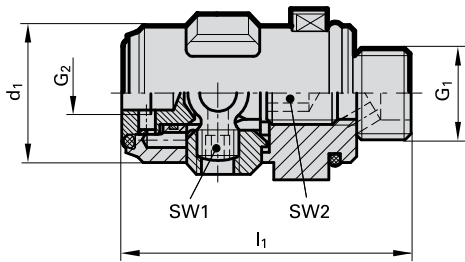
4-point clamping sets for conventional cooling

Product information

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

Scope of delivery

- including installation and operating instructions

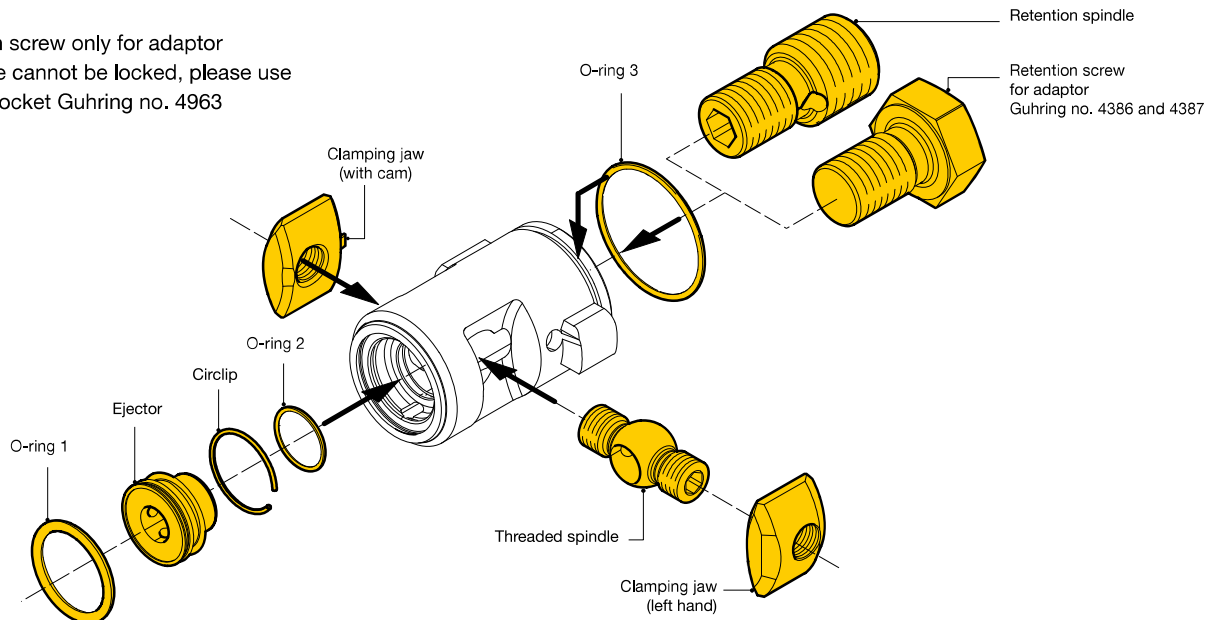


Guhring no. 4958
Discount group 114

for HSK-C	d ₁ mm	l ₁ mm	G1	G2	SW1	SW2	kg	Code no.	Availability
25	13.8	34	M 8	M 4	2.5	3	0.025	19,000	●
32	16.7	40	M10	M 5	2.5	4	0.050	24,000	●
40	20.6	49	M12	M 6	3.0	5	0.080	30,000	●
50	25.5	59	M16	M 8	4.0	6	0.150	38,000	●
63	33.0	72	M20	M10	5.0	8	0.310	48,000	●
80	41.0	97	M24	M12	6.0	10	0.640	60,000	●

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

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



Guhring no. 4957 on request

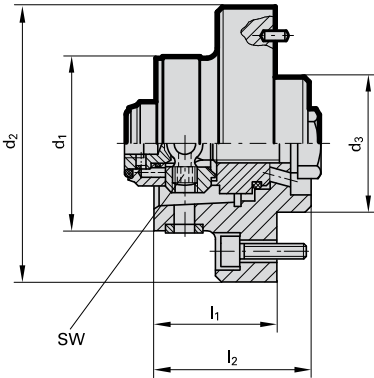
Guhring no. 4959

for HSK-C	O-rings 1 Viton 75	O-rings 2 NBR 70	O-rings 3 NBR 70	Clamping jaw set	Threaded spindle	Retention spindle	Ejector	Circlip	Retention screw	Set	Unit price €/Disc. gr. 114
25	9.0 × 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.



Scope of delivery

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



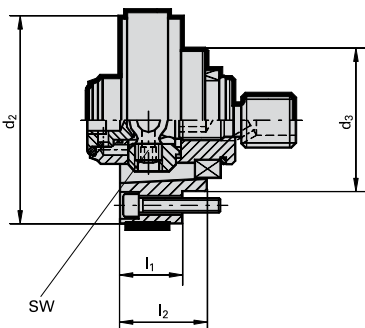
Guhring no. **4386**
Discount group **114**

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

Short HSK spindle adaptors (integrated)

Product information

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



Scope of delivery

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



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

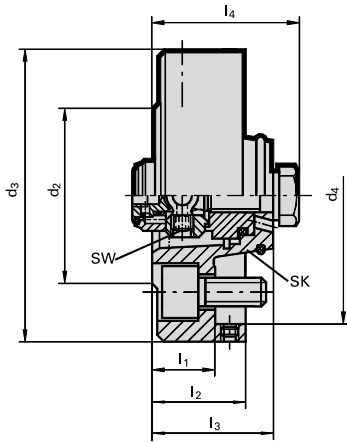
for HSK-C	d_2 mm	d_3 mm	l_1 mm	l_2 mm	SW	kg	Code no.	Availability	
	32	40	27.0	12.5	16	2.5	0.14	24,000	●
	40	50	33.5	15.0	20	3.0	0.26	30,000	●
	50	63	42.0	17.5	25	4.0	0.48	38,000	●
	63	80	55.0	22.5	32	5.0	0.99	48,000	●
	80	100	68.0	27.5	40	6.0	1.88	60,000	●

Product information

- for the conversion of SK to HSK interfaces

Scope of delivery

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



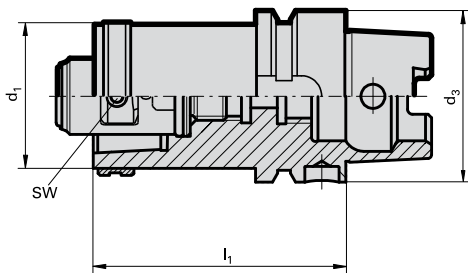
Guhring no. 4387
Discount group 114

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

HSK-A/HSK-C reductions

Scope of delivery

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



Guhring no. 4355
Discount group 114

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

HSK Clamping technology

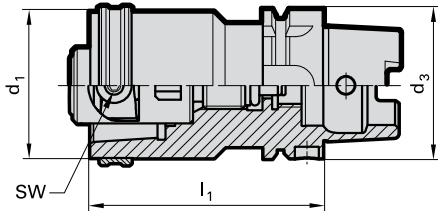
HSK-A/HSK-C extensions with MQL 4-point clamping sets

Product information

- suitable for MQL
- for single channel systems

Scope of delivery

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



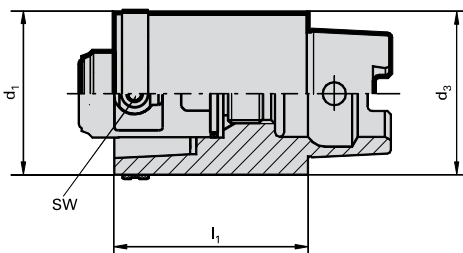
Guhring no.	4350
Discount group	114

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

HSK-C extensions

Product information

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



Guhring no.	4351
Discount group	114

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

