

Technical information and advantages

Our 4-point clamping system is suitable for radial manual HSK tool clamping. Primarily designed for the installation in spindles (short drilling spindles, multiple spindle drilling heads). The most prominent features:

- simple and hence more economic spindle manufacture
- short, small diameter spindles with constricted spindle bearing spacing.

Two clamping segments displaced by 180° with 2 clamping planes each are uniformly moved outwards with a differential threaded spindle, thereby generating the necessary clamping force. For conventional cooling our 4-point clamping sets are suitable for a pressure up to 80 bar.

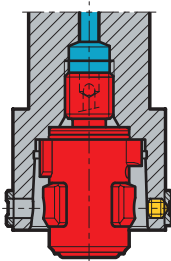


4-point clamping sets

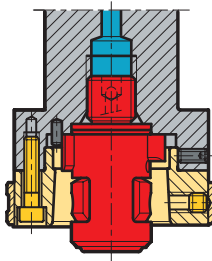
Application examples

Spindle interface

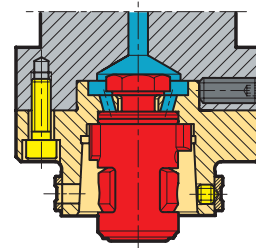
Direct installation in spindle



Spindle adaptor (integrated)

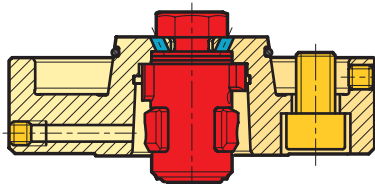


Spindle adaptor (in front)

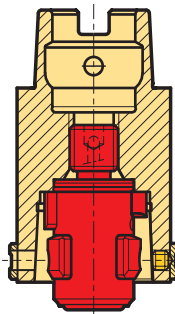


Adaptors

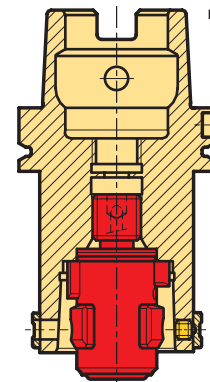
Basic adaptor for ISO taper spindles



HSK-C extension



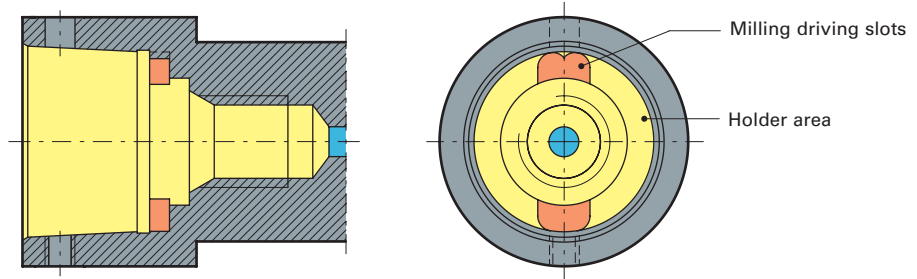
HSK-A reduction



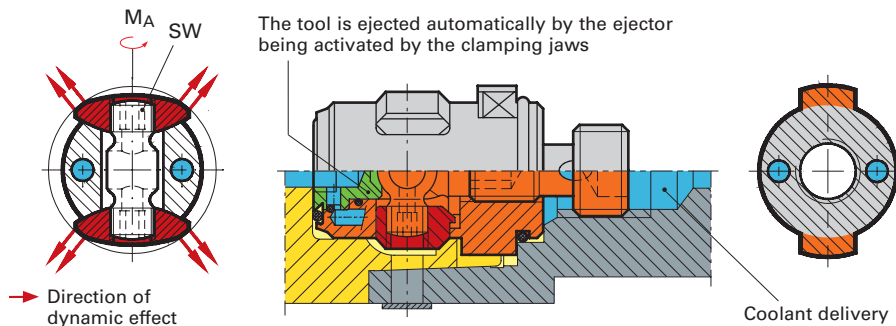
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General notes: Our manual clamping sets must **not** be operated with motor-driven tools (impulse screwdriver or similar). The hexagonal key should not exceed the key size over its entire length, this largely prevents excessive torque being transferred. 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 anti-clockwise. 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.

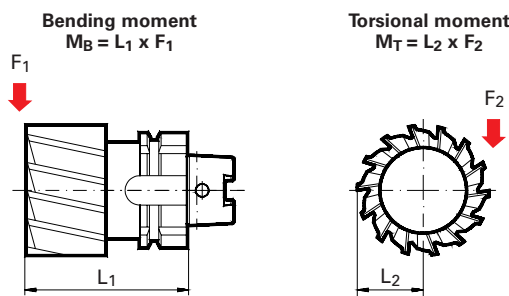
Internal contour of spindle



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. transferable torsional moment M_T [Nm] ② ③
25	1.5	2.5	4.5	30	30
32	3.0	2.5	7.0	60	100
40	6.0	3.0	12.0	130	170
50	14.0	4.0	20.0	280	350
63	27.0	5.0	28.0	500	640
80	54.0	6.0	40.0	900	1330

4-point clamping sets