

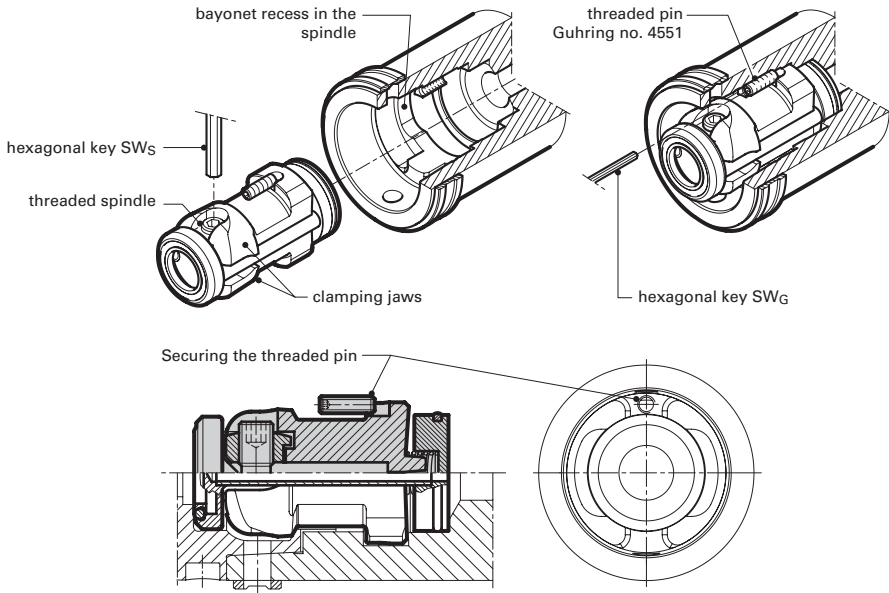
GM 300 POWERCLAMP ASSEMBLY INSTRUCTIONS

GM 300 PowerClamp Guhring no. 4554

Installation instruction

- Turn back clamping jaws via threaded spindle with hexagonal key SW_S until the noticeable stop (release position).
- Insert PowerClamp – clamping set in the bayonet recess in the spindle and rotate 90°.
- The actuation side can then be brought into the required position: The side of the threaded spindle marked red indicates left-hand thread! Do not use this side as the standard actuation side.
- With hexagonal key SW_G (Guhring no. 4921/4912) screw-in threaded pin (Guhring no. 4551) until the stop, then turn back by one rotation. Secure and safeguard the threaded pin from becoming loose (recommended: Loctite no. 222).

Fig. 1



⚠ Note: When clamping the HSK interface, ensure there isn't an O-ring at the bottom of the HSK shank.

Disassembly instruction

- Turn back clamping jaws via threaded spindle with hexagonal key SW_S until stop position reached (release position).
- Unscrew threaded pin with hexagonal key SW_G (Guhring no. 4921/4912).
- Rotate PowerClamp – clamping set by 90° and withdraw from the spindle

⚠ Note: A special tool is not required to disassemble the clamping set.

GM 300 POWERCLAMP OPERATING INSTRUCTIONS

Operating instructions

Clamping the HSK interface:

- Prior to connecting the HSK shank ensure the joining surfaces of the holder and the spindle are clean, apply conical wiper, Guhring no. 4947/4914
- Turn the locking ring, Guhring no. 4953, until the access bore to the clamping screw is open.
- Turn back the clamping jaws via the threaded spindle with hexagon key SW_S (Guhring no. 4912) until the limit stop is reached.
- Install HSK shank (connecting position see fig. 2).
- With the hexagon key (Guhring no. 4912) or the torque wrench (Guhring no. 4915) tighten the clamping screw SW_S clockwise to the specified torque M_A (see table 1).
- Withdraw the clamping key, close the access bore with the lock ring to protect against contamination.

⚠ Note: The clamping sets must only be rotationally operated or supplied with coolant with a fully clamped HSK shank. When not in use, machine spindles should be fitted with a HSK sealing plug HSK-C (Guhring no. 4985).

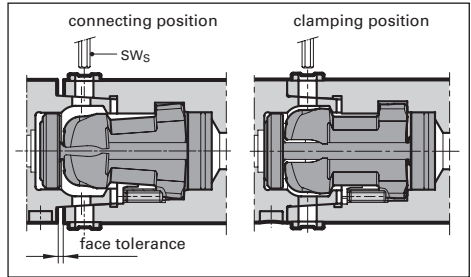


Fig. 2

PowerClamp torque figures

HSK size	SW _S	max. permissible torquet M _A [Nm]	min. permissible torquet M _A [Nm]	max. draw-in force Guhring [kN]	min. draw-in force to DIN [kN]	Threaded pin Guhring no. 4551	
						Thread	SW _G
25	2	1.5	1.1	5	2.8	2	0.9
32	2.5	2.5	1.8	8	5	2.5	1.3
40	3	6	4.2	18	6.8	3	1.5
50	4	10	7.0	27	11	4	2
63	5	15	10.5	35	18	5	2.5
80	6	25	17.5	50	28	6	3
100	8	50	45.0	60	45	8	4

Table 1

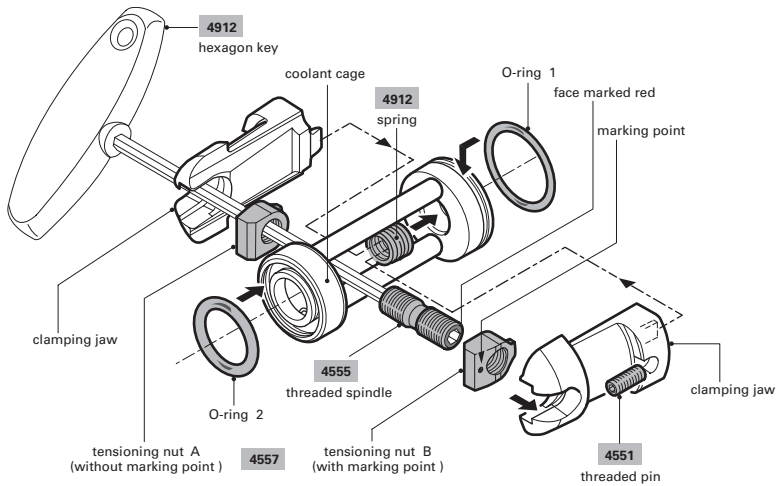
Maintenance

Guhring's manual clamping sets are designed for optimal accuracy, clamping force and tool life. However, care and maintenance is required in order to preserve these attributes.

A criterion for a perfect function is the draw-in force in kN. Guhring's clamping force instrument, Guhring no. 4974, is used to measure and determine this value.

If the draw-in force falls below the minimum value according to DIN 69063-1, appendix A1 or higher minimum values are required due to increased load, it is paramount to replace the clamping set or to service it to regain its functionality. In this case, the threaded spindle and the clamping jaws must be lubricated with MoS₂ paste (Guhring material no.: 400 118 396). We recommend applying the maximum torque permissible. For less load the torque may be reduced by up to 30%. As a rule, a torque wrench must be applied with the clamping sets. The draw-in force may be approximately 15% lower dependent on temperature and lubrication.

GM 300 POWERCLAMP ASSEMBLY INSTRUCTIONS



for HSK-C	Ø-ring 1 Ø/thickness	Ø-ring 2 Ø/thickness	Guhring no. 4555 Threaded spindle	Guhring no. 4557 Tensioning nut set	Guhring no. 4551 Spring/threaded pin
25	11.5 x 1.0	7.0 x 2.0	2.019	1.019	3.019
32	14.0 x 1.5	10.0 x 2.5	2.024	1.024	3.024
40	18.0 x 1.5	12.5 x 2.5	2.030	1.030	3.030
50	22.0 x 1.5	16.0 x 3.0	2.038	1.038	3.038
63	28.0 x 2.0	21.0 x 3.0	2.048	1.048	3.048
80	36.0 x 3.0	25.0 x 4.0	2.060	1.060	3.060
100	45.0 x 3.0	32.0 x 6.0	2.075	1.075	3.075

Procedure

1. Fit the O-ring seal to the coolant cage.
2. Lubricate the tensioning nut and threaded spindle with MoS₂ assembly paste (Guhring material no.: 400 118 396).
3. Insert the spring into the bore of the coolant cage.
4. Insert the tensioning nut A with the marking point in one of the clamping jaws so that the longer side with the collar faces outwards.
5. Insert this clamping jaw into the coolant cage – hereby, the foot of the clamping jaw must engage into the coil spring.
6. Insert the hexagon key through the clamping jaw and tensioning nut A assembly. Place the threaded spindle onto the key with the unmarked side and screw back into the inserted clamping jaw with approximately two anti-clockwise turns.
7. Offer the second tensioning nut B and turn clockwise onto the threaded spindle by the same number of rotations without allowing the spindle to turn.
8. Position the foot of the second clamping jaw into the coil spring and press against the tensioning nut. Turn the still inserted hexagon key anti-clockwise until the clamping jaws line-up.
9. The spindle must now protrude the same distance on both sides. If this is not the case, the clamping set must be disassembled and the procedure repeated correctly.

Functionality check

It must be possible to accommodate the tool shank via the clamping set without applying force.