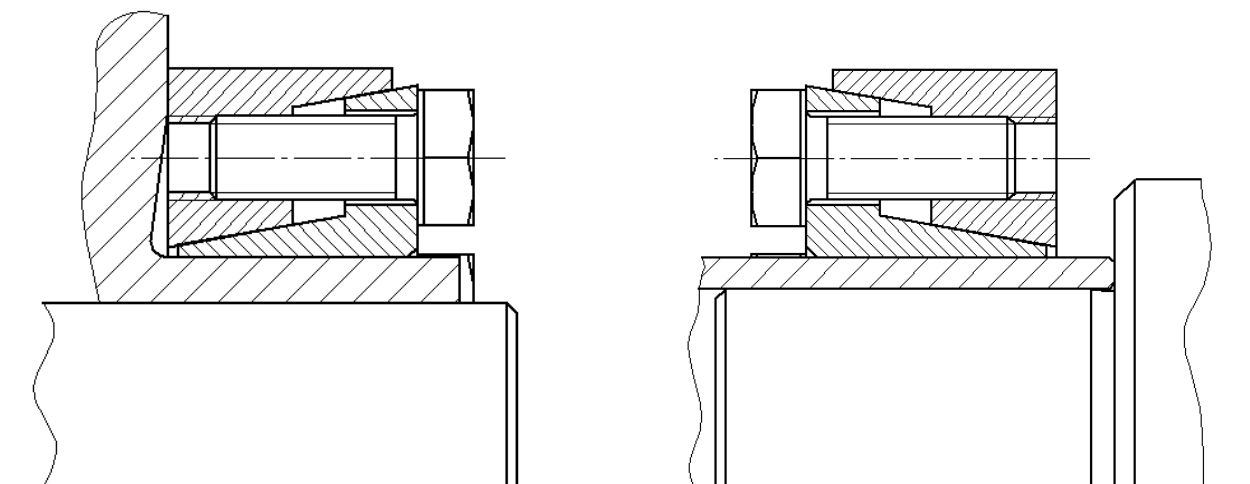
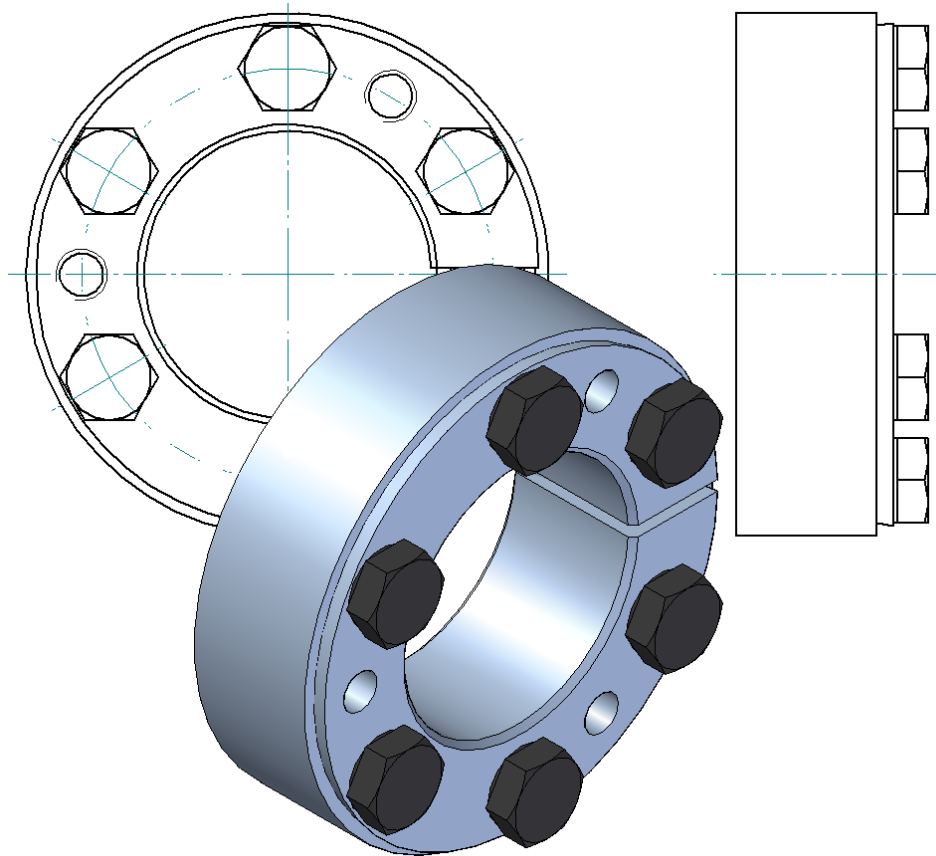




## Shrink Disk KBS 19/1



**KBS 19/1 External Clamping Set** is a friction detachable shaft-hub connection for cylindrical shafts and bores without keyway.



### Features

- delivered in mounted condition
- self-centering
- concentricity **0,02 – 0,04 mm**

### **Tolerances, Surfaces**

- a good turning process is sufficient: **Rz ≤ 16 µm**
- maximum tolerance: **d = f8 for the hub** (outer surface of hollow shaft)

$$d_w = h6/H7$$

$$d_w > \varnothing 160 - g6/H7$$

### Components of the external clamping device KBS 19/1

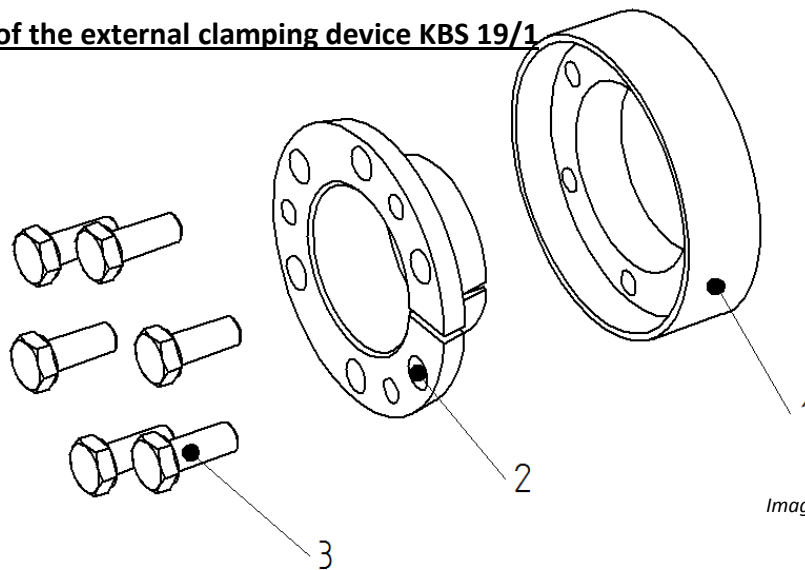


Image 2) KBS 19/1

Component	Quantity	Description
1	1	outer ring
2	1	inner ring
3	see catalogue	socket head screw DIN EN ISO 4017



### Information

Contaminated or used external clamping devices have to be detached and cleaned prior to installation. Then the conical surfaces and threads are to be greased by Molykote Mo S2 (see image 3). For re-grease please use multi-purpose grease like Molykote G Rapid plus.

**Assembly of the external clamping device**



**ATTENTION!**

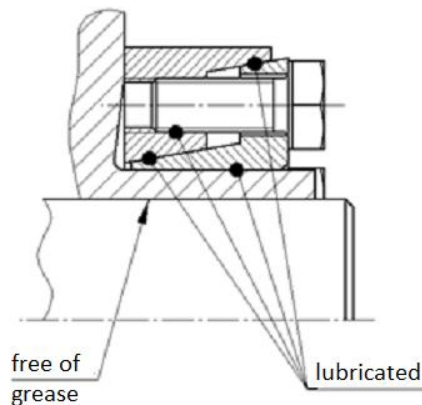
Check conical surfaces of the external locking device for the indicated lubrication.

- Check shaft and hub position regarding the mandatory tolerance (h6/H7 bzw.  $> \varnothing 160 - g6/H7$ ).
- Contact surfaces of hub/hollow shaft inside must be cleaned and degreased.



**ATTENTION!**

- ✓ Contact surfaces of shaft and hub bore (hollow shaft inside) must **neither** be greased **nor** oiled (see fig. 3).
- ✓ Assembling the conical parts of the outer ring without grease may result in different values shown in the table and the values calculated.



*Image 3) contact surfaces*

- Slightly loosen the clamping bolts and place the external locking device KBS 19/1 on the outer part of the hub/hollow shaft (see image 4 und 5).



**Information!**

The external surface of the hub (outside hollow shaft) can be greased in the area of the position of the external clamping set.



**ATTENTION!**

Install the shaft before tightening the clamping screws!

- Slightly tighten the clamping screws manually and align the external clamping set with the hollow shaft.
- Then gradually tighten the clamping screws within several rotations in sequence (see image 6) until the front sides with the screw head of the outer and inner ring are aligned. The maximum torque must not be exceeded while tightening the clamping screws (see table 2).

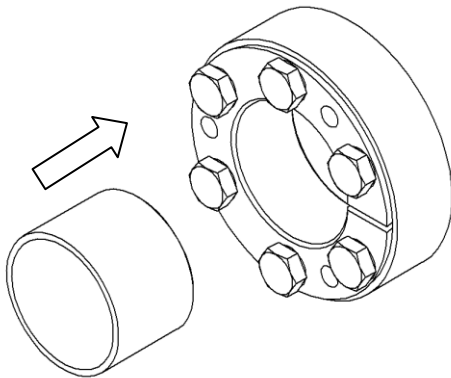


Image 4) pushing the clamping set onto the hollow shaft

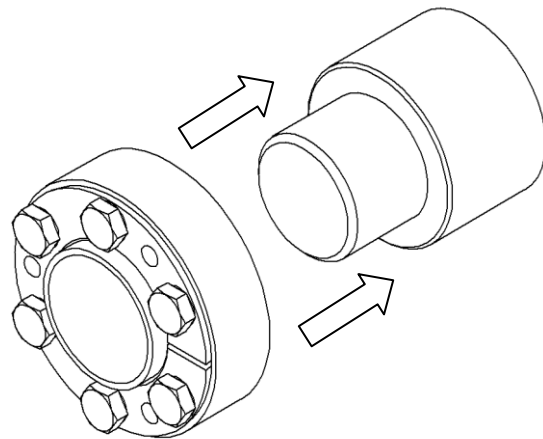


Image 5) pushing the clamping set onto the shaft

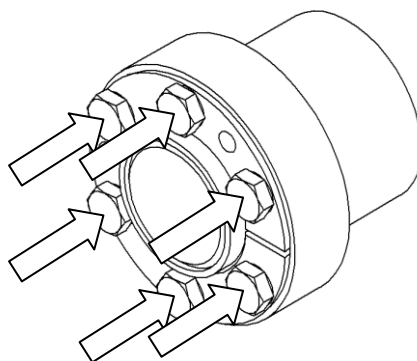


Image 6) tightening the clamping screws



**Table 1:**

Clamping Set	KBS 19/1				
Thread Size M	M6	M8	M10	M12	M16
Tightening Torque $T_A$ [Nm]	12	30	59	100	250



**Information!**

During the assembly of KBS 19/1 there is **no** axial movement between hub and shaft.

**Disassembly of the external clamping set**



**DANGER!**

Loosened or falling drive components may result in personal injuries or damage to machines. Please protect drive components prior to disassembly.

- Loosen the clamping screws evenly one by one. Do **not** completely unscrew the clamping screws!



**ATTENTION!**

Do not completely remove the clamping screws to reduce the tension forces!

- Screw in separate screws into the draw-off thread of the inner ring (component 2 / see image 8). Select the number of screws  $z_1$  and thread size  $M_1$  according to table 1.
- Tighten the screws evenly in sequence with a one-fourth turn. Increase loosening torque gradually, until the outer ring (component 1) and the inner ring (component 2) are separated.
- Remove shaft from the hub / hollow shaft.
- Remove the loosened external clamping set KBS 19/1 from the hub/hollow shaft.

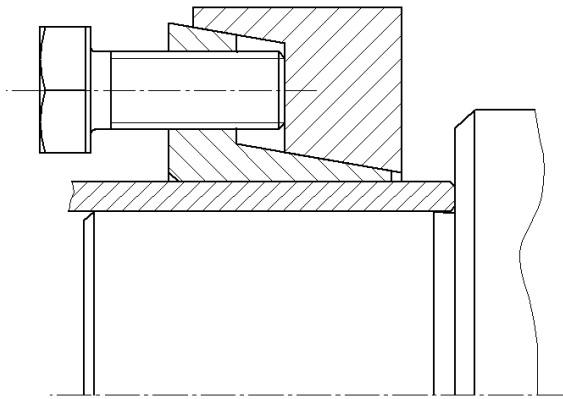


Image 8) loosening the clamping set



**ATTENTION!**

Non-observance of these instructions or non-consideration of operating conditions regarding the construction of the external clamping set may impair the function.

**Disposal:** *Defective external clamping sets must be cleaned and scrapped.*

