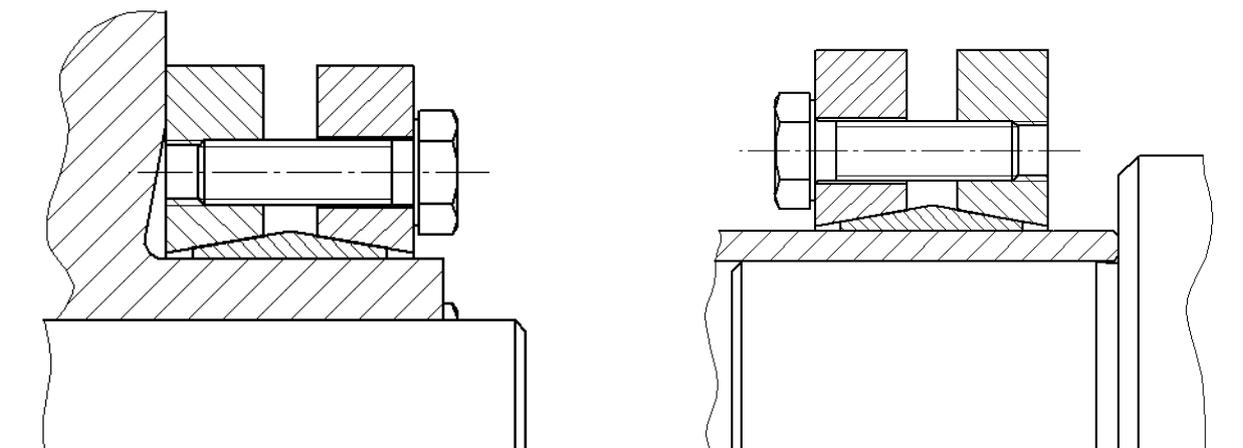
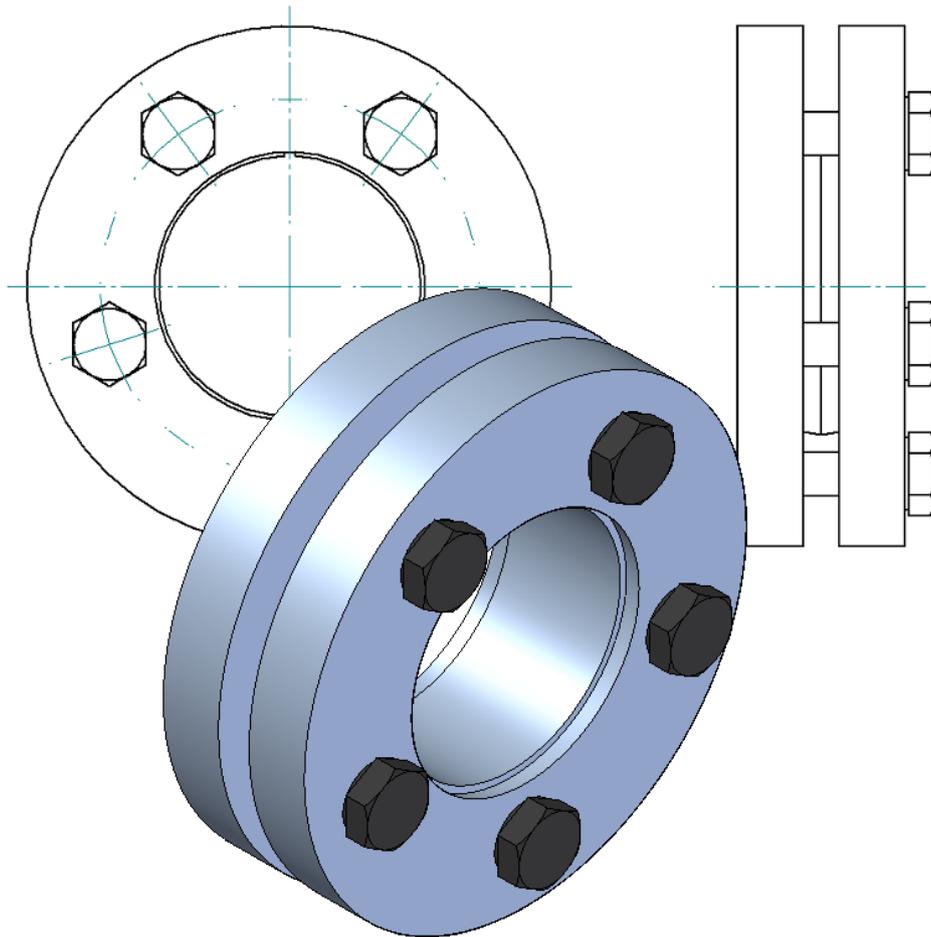




## Shrink Disk KBS 19



**KBS 19 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 = h9 for the hub (outer surface of hollow shaft)**

### Components of the external clamping set KBS 19

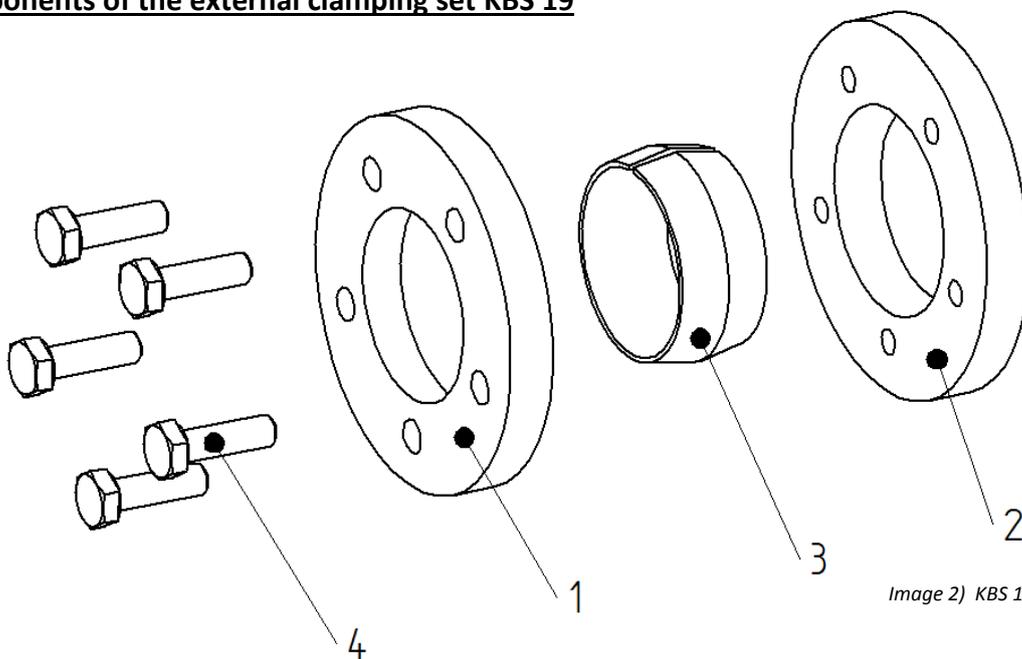


Image 2) KBS 19

Component	Quantity	Description
1	1	front outer ring (with through-hole)
2	1	rear outer ring (with threaded holes)
3	1	inner ring (slotted)
4	see catalogue	socket head screw ISO 4017



#### Information!

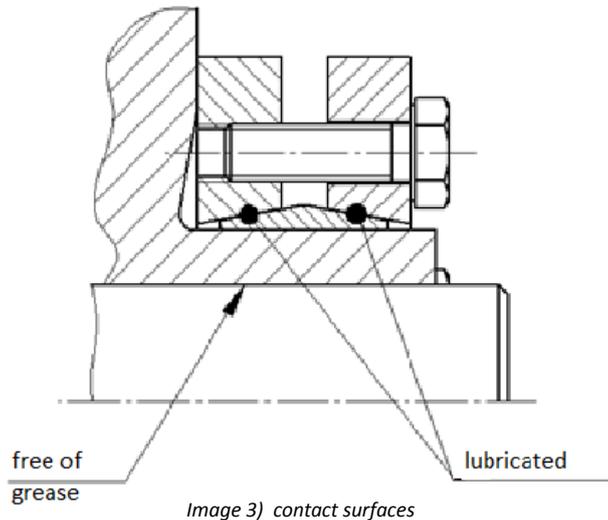
Contaminated or used external locking sets have to be detached and cleaned prior to installation. Then only the conical surfaces and the clamping screws are to be greased by Molykote MO S2 (see image 3). For re-grease please use multi-purpose grease like Molykote G Rapid plus.





**Assembly of the shrink disk**

- Check shaft and hub-position regarding the stipulated tolerance (see table 1).
- Contact surfaces of hub/hollow shaft inside must be cleaned and degreased.



 <b>ATTENTION!</b>	<p>Contact surfaces of shaft and hub bore (hollow shaft inside) must <b>neither</b> be greased <b>nor</b> oiled (see image 3)</p> <p><b>Shaft must be installed before tightening the clamping screws!</b></p>
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 <b>Information!</b>	<p>The external surface of the hub (outside hollow shaft) may be greased in the area of the position of the external clamping set.</p>
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- Slightly loosen the clamping screws. Then place the external clamping set KBS 19 on the outer part of the hub/hollow shaft.
- Slightly tighten the clamping screws manually and align the clamping set with the hub/hollow shaft.
- Check the outer rings of the external clamping set for plane parallelism.
- Then gradually tighten the clamping screws in sequence. Increase tightening torque gradually. This process has to be repeated until the tightening torque defined in table 2 has been reached by all clamping screws.

**Table 1:**

Clamping Set	KBS 19			
	18 to 30	31 to 50	51 to 80	81 to 500
Shaft- $\varnothing$ d <sub>w</sub> [mm]	18 to 30	31 to 50	51 to 80	81 to 500
Tolerance	H6 / j6	H6 / h6	H6 / g6	H7 / g6



**Table 2:**

Clamping Set	KBS 19						
Thread Size M	M5	M6	M8	M10	M12	M16	M20
Tightening Torque $T_A$ [Nm]	4	12	30	59	100	250	490

### Disassembly of the external clamping set



**DANGER!**

Loosened or falling drive components may result in personal injury or damages to the machine. Secure drive components prior to disassembly.

- Unscrew all clamping screws evenly one after the other. Do **not** completely unscrew the clamping screws.



**ATTENTION!**

Do **not** completely unscrew the clamping screws to reduce the tension forces!

- The external clamping sets are not self-locking. In case the outer and inner taper ring do not come loose, start the detachment process by a slight pressure onto several parts at the circumference of the outer and inner taper ring.
- Remove the shaft from the hub/hollow shaft.
- Remove clamping set KBS 19 from the hub/hollow shaft.



**ATTENTION!**

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

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