

ATTENTION!

- Mounting and dismounting of a rigid flange coupling must be restricted to qualified personnel.
- Incorrect handling may cause injury to persons and damage to machines!
- At work, with heavy parts and equipment, observe all safety instructions and warnings.
- Read these instructions carefully and completely before first use. Familiarize yourself with the functioning and the notes on safety in detail. If you have any questions, please contact us at the above phone number or email.
- Place these instructions available to all employees who work with our rigid flange couplings and pay attention to compliance with the specifications!

General warning!

The general, accident prevention regulations (UVV), the trade association responsible for your company in Germany or for your company valid regulations and laws of the respective country. You will also receive the following safety instructions:

- Make sure before installing and removing the rigid flange coupling, the engine and drive train has been secured against accidental activation! This may done for example by using signs, or by removing the fuses on the power supply (decommissioning). Rotating parts may cause serious injury. Also follow the notes below under the aspect „Safety First“.
- Only use suitable, approved and tested sling means for transporting and installing the rigid flange coupling! Do not stay in the hazardous area!
- During transport of the rigid flange coupling, along with a gear or similar, you have to secure it on the shaft to prevent slipping, if the rigid flange coupling is not firmly mounted!!
- With an upright storage, you have to take care, that the rigid flange coupling can not fall over or roll.
- Never start the clamping procedure without inserted shaft! This can result in damage to the flange and the shrink disc!

Intended usage

You only allowed to mount, dismantle and use the rigid flange coupling if:

- you have carefully read and understood the installation instructions
- you had technical training
- your company authorized you to do that

You are only allowed to perform maintenance and repairs if you meet the above terms and are familiarized with the procedures used.

The rigid flange coupling must be used only in accordance with their technical data. Constructive modifications, without our approval, are not permitted. For any resulting damage we accept no liability. We reserve the right for technical changes, if these serve to development or improve safety. The rigid flange coupling described here represents the state of the art at the time of creation of this manual.

Rigid flange couplings of the type FK



The rigid flange coupling is supplied ready for installation.

The force is transmitted via a frictional connection between the functional surfaces of shaft and flange hub.

Pay attention on a proper tightening of the clamping screws and the condition of the contact surfaces.

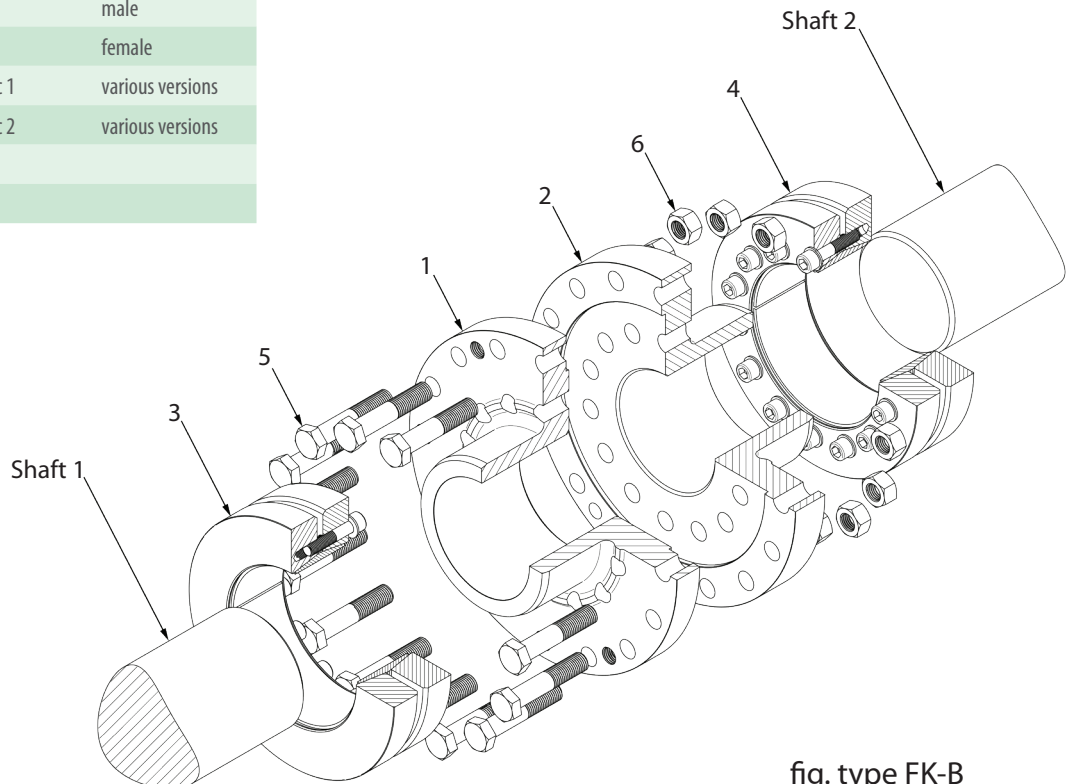
The tolerances for shaft and flange bore are observed (see table). From the recommendation deviating tolerances are to find on the order-related dimension sheet.

Preferred tolerances and surface roughness

>	≤	FS _{max} mm	Clearance Flange/Shaft	Rz µm
9	18	0,022	H6/h6	10
18	30	0,026	H6/h6	10
30	50	0,032	H6/h6	10
50	80	0,049	H7/h6	10
80	120	0,057	H7/h6	16
120	150	0,065	H7/h6	16
150	180	0,079	H7/g6	16
180	250	0,090	H7/g6	16
250	315	0,101	H7/g6	16
315	400	0,111	H7/g6	16
400	500	0,123	H7/g6	25
500	630	0,136	H7/g6	25
630	800	0,154	H7/g6	25
800	1000	0,172	H7/g6	25

Overview of Components

Part	Quantity	Designation	Comment
1	1	Flange 1	male
2	1	Flange 2	female
3	1	Shrink disc 1	various versions
4	1	Shrink disc 2	various versions
5	see catalog	Screw	
6	see catalog	Nut	



Lubrication

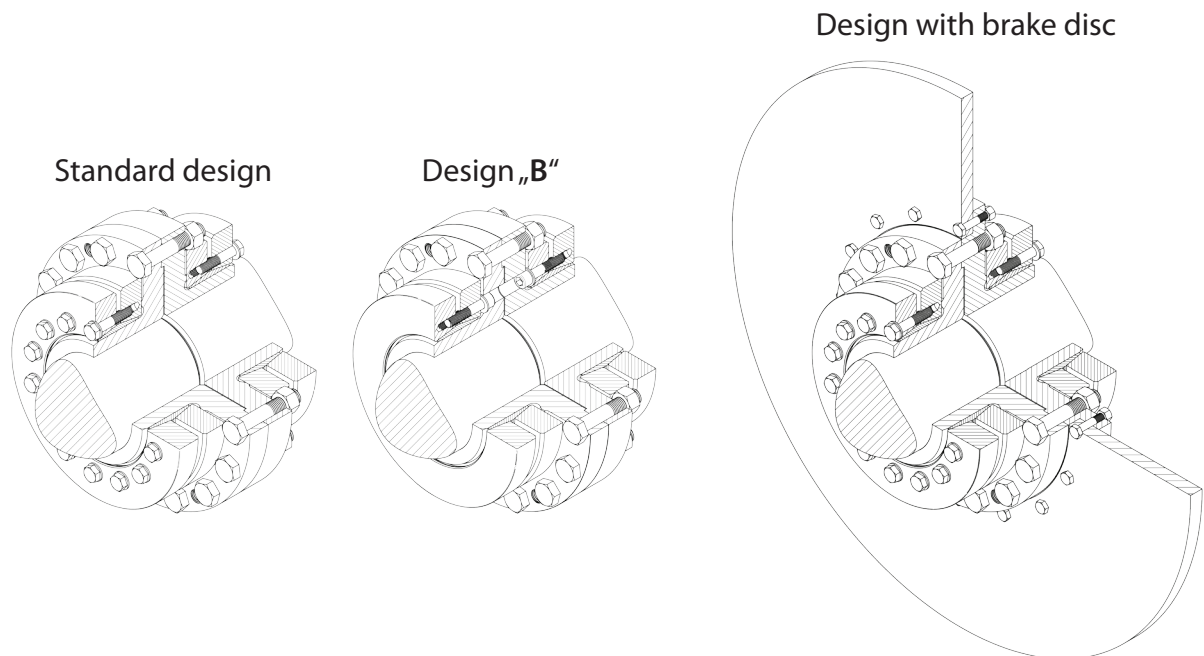
Lubricating the shrink discs, see „Installation Instruction - Shrink discs ...“

Preparation

- The contact surfaces between shaft and flange hub (flange bore) must be **grease-free, dry and clean** to ensure a sufficiently high coefficient of friction.
- The functional surfaces of the shrink disc, the screw thread and the head rests are lubricated at the factory.

For delivery without pre-installed shrink disc or after disassembly:

- The contact surfaces between the flange hub and shrink disc can also be greased or oiled prior to assembly. (*recommended*)
- For larger shrink discs the inner ring is optionally protected with oiled paper. This must be removed before assembly.



Installation

1. Positioning of the flange coupling half on the shaft as specified in the assembly drawing. To increase the clearance, the flange may be evenly heated up to 100° C. Remove the existing transport locks between the pressure rings. Make sure that the shrink disc is positioned entirely on the contact surfaces between the flange hub and shaft to avoid damaging of the components. To facilitate the assembly, large shrink disks can be disassembled.
2. Hand-tighten the screws of the shrink disc until the shrink disc sits free of clearance on the flange hub. Pay attention to the parallelism of the pressure rings!
3. During further clamping procedure a circumferentially uniform gap size between the pressure rings is to be observed. For this purpose check the gap size at several points around the circumference.

4. For the further tightening process, a torque wrench or other suitable tool/method is used. The screws are attracted in several cycles, step-by-step (25%, 50%, 75%, 100%). The standard tightening torque, see the shrink disc and the corresponding dimension sheet. In special cases, the tightening torque may be reduced, so the specification in the dimension sheet is mandatory! (*if any*)
5. Now tighten the screws in order. (*The first stage can also be performed crosswise.*) After each cycle increase to the next stage. Is the maximum tightening torque of the screws reached, perform another 2-3 rounds with the same torque. Is the proposed tightening torque achieved at all screws, the installation of the flange coupling half is completed.
6. If exists a brake disc, this is now installed as specified in the assembly drawing.
7. Now, the flanges are joined together. The contact surfaces have to be **grease-free, dry and clean**. The screws are attracted crosswise in several stages until the corresponding tightening torque is reached.

Dismantling

1. First, the flanges are separated from each other. The screws are loosened and removed. Following the flange halves are separated. The existing support threads can be used for forcing apart the flanges.

Loosening of the shrink disc:

1. Loosen the screws evenly one after the other. For this purpose several cycles are necessary to avoid an overload of the screw when loosening the pressure rings. **Never** remove screws before the shrink disc is completely relaxed. **Otherwise there is a high risk of accidents due to overloading of one individual screw!**
2. If the shrink disc completely relaxed, the shaft and flange hub can be separated from each other.
3. Pull off the shrink disc from flange hub.

Reuse of used rigid flange couplings

Before reuse, clean the rigid flange coupling and check the perfect condition of the components. The transition radius between the flange and the hub may have to be provided with corrosion protection. Clean the shrink discs and check the perfect condition of the components. All lubrication points must be provided with new lubricants in accordance with these manual (*see „Lubrication“*).

... *further information, see „Installation Instruction - Shrink discs ...“*

Repair / disposal

Defect flange couplings and shrink discs must be cleaned of grease and oil and be scrapped.

If you are unsure whether your rigid flange couplings or shrink discs are still usable, you can send it to us for review / repair. Please contact us in any case before sending!