

ATTENTION!

- Mounting and dismantling of a rigid flange coupling must be restricted to qualified personnel.
- Incorrect handling may cause injury to persons and damage to machines!
- Observe all safety instructions and warnings when working with heavy parts and equipment.
- Read these instructions carefully and thoroughly before first use. Familiarise 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.
- Make these instructions available to all employees who work with our rigid flange couplings and to ensure compliance with the specifications!

General warning!

Ensure compliance to accident prevention regulations (UVV), the trade association responsible in Germany or the valid regulations and laws of your respective country. Additionally, observe the following safety instructions:

- Make sure before installing and removing the rigid flange coupling, the motor and drive train has been secured against accidental activation! This may be done for example by using signage, or by removing the fuses on the power supply (decommissioning). Rotating parts may cause serious injury. Tag out procedures should be followed. Generally, safety principles should be observed.
- Only use suitable, approved and tested sling means for transporting and installing the rigid flange couplings! Do not stay in any hazardous area!
- You must secure the rigid flange coupling on the shaft to prevent slipping, if the rigid flange coupling is not firmly mounted to another component during transport!!
- Take care, that the rigid flange coupling can not fall over or roll during storage or Transport.
- Never start the clamping procedure without the shaft inserted! This can result in damage to the flange and the shrink disc!

Intended usage

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

- you have carefully read and understood the installation instructions
- you had technical training
- you have received authorisation from your company.

You are only allowed to perform maintenance and repairs if you meet the above terms and are familiarised with the procedures used. The rigid flange coupling must be used only in accordance with the technical data provided. Constructive modifications, are not permitted without our approval. We accept no liability for any consequential damage. We reserve the right for technical changes, if these serve to further develop the product or to improve safety. The rigid flange coupling described here represents the state-of-the-art product at the time of creation of this manual.

Flange Coupling Type FKE



The rigid flange coupling is supplied ready for installation.

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

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

The tolerances for shaft and flange bore must be observed (see table). Please consult us in case the existing shaft tolerances deviate from these.

Preferred tolerances and surface roughness

>	≤	FS _{max} mm	Clearance Hub/shaft	Rz μm
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

Overview of Components

Part	Quantity	Designation
1	1	Flange
2	1	Pressure ring
3	1	Clamping screw
4	1	Seal
5	2	Plug
6	2	plug
7	1	O-Ring
8	see catalog	Connecting screw
9	see catalog	Nut

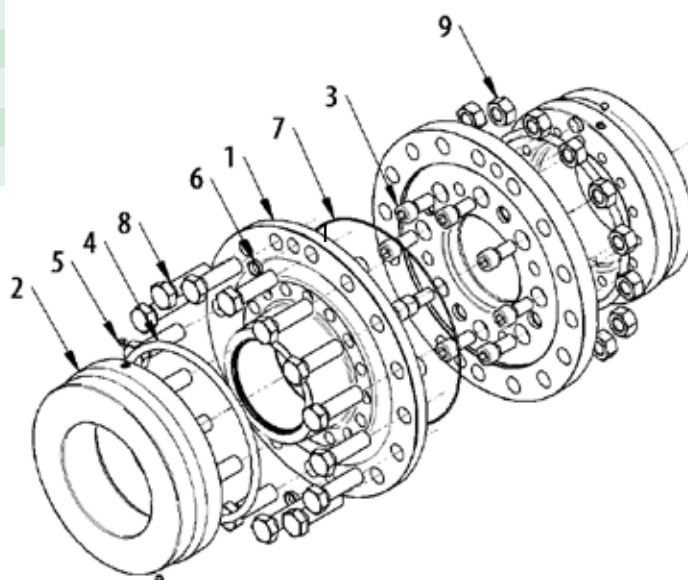


fig. Typ FKE

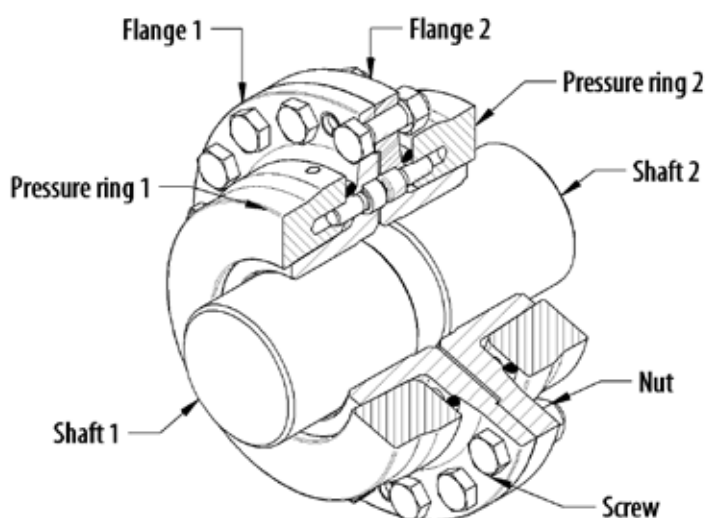
Lubrication

The conical surfaces and screws have a thin layer of the lubricant Molykote G-Rapid Plus Paste applied.

Preparation

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

Standard design



If using our optional hydraulic clamping tool, then please use the separate installation instructions provided for this method!

Installation

1. Position the flange coupling half on the shaft as specified in the assembly drawing. The flange may be evenly heated up to 100° C to increase the clearance. Remove the existing transport locks. Make sure that the pressure ring is positioned completely over the contact surfaces between the flange hub and shaft to avoid damaging of the components.
2. Hand-tighten the screws of the coupling until they sit clearance free on the flange hub. Take care that the pressure ring face is parallel to the flange!
3. As clamping progresses a circumferentially uniform gap between the pressure ring face and the flange is to be maintained. Check the gap size at several points around the circumference to ensure that it is even.
4. A torque wrench or other suitable tool/method is used for the next part of the tensioning process. The screws are to be progressively tensioned in steps e.g. (25%, 50%, 75%, 100%) or in smaller steps. See the corresponding dimension sheet for the standard tightening torque. In special cases, the tightening torque may have been reduced, so the specification given in the specific drawings is mandatory!

5. Now tighten the screws sequentially in order. (Only *the first hand tightening stage can also be performed crosswise manner.*) After each cycle increase to the next stage. Repeat another 2-3 rounds with the same torque once the maximum tightening torque of the screws is reached. The installation of the flange coupling half is complete once the specified tightening torque on all screws, is achieved.
6. A brake disc, can now be installed as specified in the assembly drawing if it exists.
7. The flanges are joined together once both coupling halves have been mounted. The contact surfaces have to be **grease-free, dry** and **clean**. If required, an O-ring seal is fitted between the flanges. The flange screws are tensioned crosswise in several steps until the corresponding tightening torque is reached.

Dismantling

1. The flanges are first separated from each other. The flange screws are loosened and removed. The flange halves are then separated. The existing support threads in the flange can be used to force apart the flanges.

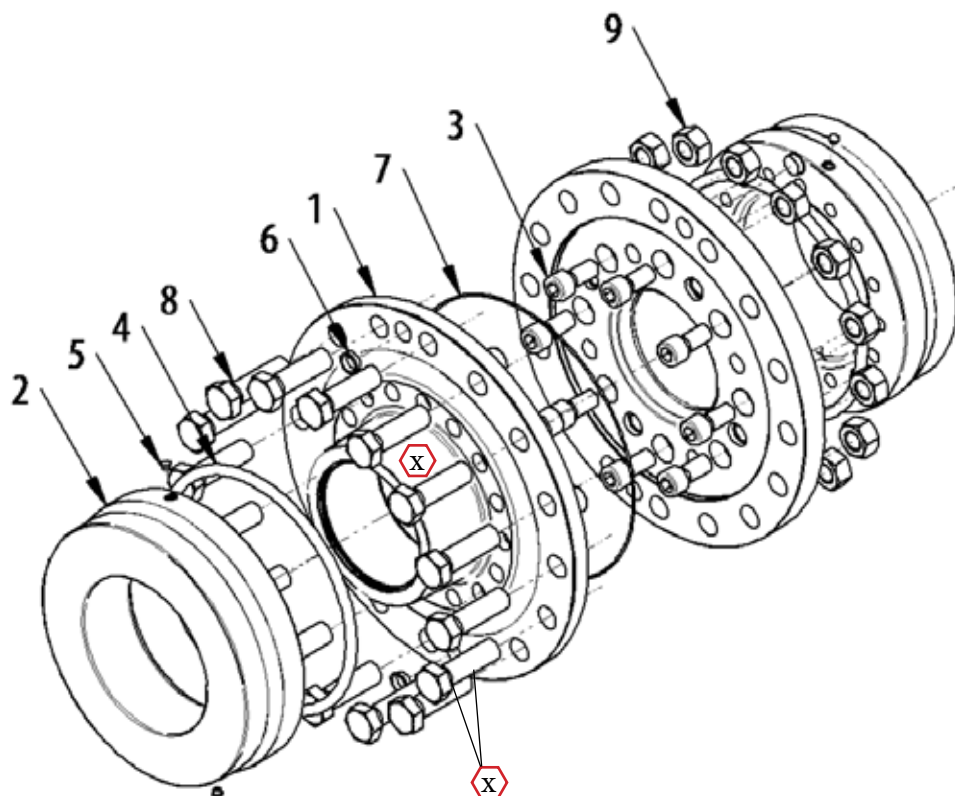
Loosening of the connection:

1. Progressively loosen the pressure ring screws evenly one after the other. For this purpose several cycles are necessary to avoid an overload of the screws when loosening the pressure ring. **Never** remove screws before the pressure ring is completely relaxed. **Otherwise there is a high risk of accidents due to overloading of one individual screw!**
2. If the pressure ring does not move, use the additional jacking screw locations.
3. The shaft and flange hub can be separated from each other If the pressure ring is completely relaxed,

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 require an application of corrosion protection. Clean the pressure ring and check the perfect condition of the components. All lubrication surfaces must be provided with new lubricants in accordance with these manual.

Apply Molykote G-Rapid Plus Paste to cones , threads  and head rest .



Repair / disposal

Defective flanges, pressure rings and screws must be cleaned of grease and oil and be scrapped.

We can inspect and possibly repair couplings if you are unsure whether your components are still reusable. Please contact us before returning any product!