



Please read and observe

these operating instructions carefully! Non-observation of the information it contains may lead to coupling malfunction or failure and consequential damage.

Danger and information symbols



Caution! Danger of personal injury and machine damage.



Note! Important points to observe.

Loewe® GK

Loewe® GK: The axially fixed Loewe® GK couplings are designed to offer generous angular and radial misalignment compensation together with high axial stiffness. They are designed to resist axial motion and to provide precise transmission of linear push and pull loads.

These installation and operating instructions are an integral part of your Loewe® GK coupling. They provide important information about correctly installation, operating and maintenance of your coupling.



Please read these instructions carefully and observe all notes.



The coupling must be installed only by qualified and trained personnel.



Loewe® GK must be used only as outlined in the associated technical specifications.

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these operating instructions carefully! Non-observation of the information it contains may lead to coupling malfunction or failure and consequential damage.

Manufacturer's Declaration

This product is a component intended for installation in a plant or machine as defined by Machinery Safety Directive 98/37/EC. Commissioning must be performed only after the machine or plant in which this product is to be fitted has been confirmed as conforming to the requirements of the above EC Directive.

Safety instructions

These installation and operating instructions are an integral part of the Loewe® GK. Always keep these instructions in an easily accessible place near the coupling.

They contain important information about correctly, operating and maintaining your coupling. Please read these instructions carefully and observe all notes.

Loewe® GK must be used only as outlined in the associated technical specifications.



Danger! Rotating drive components can cause serious injury!

All persons working on or operating the machine or plant must observe the applicable safety regulations and instructions and take appropriate safety precautions. The machine's owner/operator is responsible for ensuring that all necessary safety precautions are in place and that the personnel has been appropriately instructed. The drive components must be used only for their intended purpose and within their specified technical operation limits.



Modifications

The product must not be reworked or otherwise modified.



The coupling must be installed only by qualified and trained personnel.



Carefully read these installation and operating instructions before fitting and commissioning the coupling.

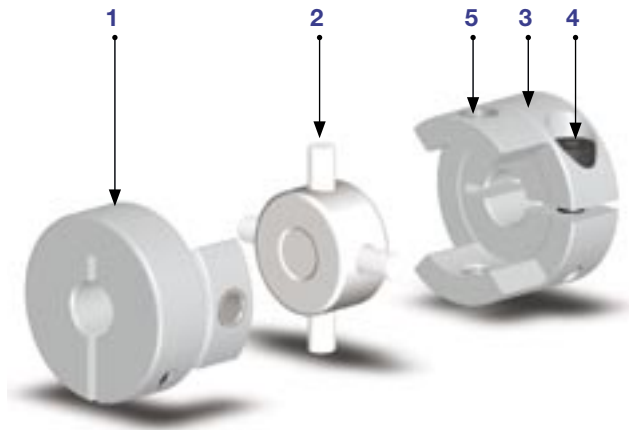


The notes on safety contained in these instructions do not represent completeness.

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Assembly of Loewe® GK



Parts list

- 1 Input hub
- 2 Center part with pressed-in pins
- 3 Output hub
- 4 Clamp screw
- 5 Plain bearing

Function

Loewe® GK are designed to compensate unavoidable radial and angular shaft misalignments, both permanent and occurring during machine operation. They consist of two anodized aluminum hubs. A center part contains the pins, which are arranged at an angle of 90° to each other. Similar in construction to a universal joint, the center element can pivot within the plain bearings. But in contrast to a universal joint, the center element's pins are free to slide within the plain bearings in the coupling halves, which allows a certain amount of radial movement of the two hubs relative to each other. The resulting pivot and linear play in the bearings provides a combined angular and radial misalignment capacity despite the unit's compact size.

During installation, misalignments should be minimized to increase the coupling's misalignment capacity, extend its service life and ensure quiet running. For the maximum misalignment ratings, see table 1 of dimensions for your

product. These ratings must not be exceeded during installation or operation (table 1).


Loewe® GK Torque has been designed for torque applications where the coupling also must

resist axial motion in addition to compensating radial and angular misalignment.

Loewe® GK Linear has been designed for the precise transmission of purely axial push-pull loads.

State of delivery

Loewe® GK are supplied ready to install. Although exceptionally rugged, they should be protected from external forces. After the goods-in inspection, keep the couplings in their original packaging until they are ready to be fitted at their installation site. The selected packaging is designed to prevent a loss of the pre-fitted clamp screws.


 The coupling must not be reworked or otherwise modified. SCHMIDT-KUPPLUNG GmbH does not accept liability for any loss or damage as a result of such modifications.

Temperature stability

The performance specifications of the Loewe® GK couplings apply at a continuous operating temperature of -20 °C to +60 °C. Higher temperatures reduce the couplings' performance. The maximum permissible temperature is 250 °C. Contact the manufacturer for exact figures.

Maximum bore diameter

Loewe® GK are supplied ready to install with the desired bore diameter.

 SCHMIDT-KUPPLUNG GmbH does not accept liability for any coupling with pre-bored hubs that have been reworked by the customer. The customer is solely responsible for any consequential loss, damage or injury in this case.


 Caution! The maximum bore diameter of Loewe® GK (table 1) must not be exceeded. Larger bores can result in destruction of the coupling. Coupling fragments hurled at high speed can cause serious or fatal injury.

Table 1: Maximum bore diameter (mm)

Model	Maximum bore diameter (mm)
Torque/Linear	
GK 27	11
GK 35	16
GK 56	30
GK 75	40
GK 100	50

Misalignment capacity ratings

The torsionally stiff Loewe® GK Torque compensate both radial and angular shaft misalignments (see table 2). They are axially fixed, so that they do not compensate axial misalignments. The technical specifications and table 2 list the greatest permissible ratings for each misalignment. The couplings reliably compensate misalignments during operation, caused, for example through settling of the plant's foundations. Where both misalignment types occur at the same time, the maximum misalignment figures must be reduced. The sum of the actually occurring misalignments must not exceed 100 percent of the maximum value.

The clutch's lifespan is determined by its operational loading and the occurring misalignments. The following paragraphs deal with the effects of torque and misalignment.

1. The peak torque TK_{max} must not be exceeded during operation. The coupling selection torque is determined from the torque rating at the coupling and the coupling's required misalignment capacity. The transferable torque becomes less as the speed or misalignment increases.
2. The maximum permissible radial misalignment K_r must not be exceeded under any circumstances. At a given torque, increasing misalignments lead to greater linear motion in the bearings and therefore to increased wear. If necessary, select a larger coupling with a higher torque rating.
3. The maximum permissible angular misalignment K_a must not be exceeded under any circumstances. At a given torque, increasing misalignments lead to greater pivoting motion in the bearings and therefore to increased wear. If necessary, select a larger coupling with a higher torque rating.

Table 2: Maximum permissible misalignment

Model	ΔK_r (mm)	ΔK_a (°)
Torque/Linear		
GK 27	1	3
GK 35	1,5	3
GK 56	2	3
GK 75	2	3
GK 100	2,5	3

Loewe® GK Linear couplings provide precise transmission of linear axial forces and compensate any parallel and angular misalignment. The specified maximum axial load F_a for each coupling size must not be exceeded during operation. The transmittable axial load decreases with an increasing stroke rate. .

Installation

The shaft ends to be joined and the bores of the hubs must be clean, dry and free from burrs. Check the connection dimensions and tolerances. The bores are supplied in tolerance F9. Tighten the clamp screws to the specified tightening torque (see table 3).

Table 3: Screw tightening torques

Model	Screw size	Tightening torque (Nm)
Torque/Linear		
GK 27	M4	3
GK 35	M5	5,7
GK 56	M6	8
GK 75	M8	24
GK 100	M12	80

Maintenance

Loewe® GK is maintenance-free.

 **General notes**

The failure, incorrect selection and incorrect use of these products can lead to a faulty operation or failure of associated plant sections. Conversely, the incorrect functioning of connected components can cause these products to fail. Our website, the technical brochures and other publications provide information to help you select the best suited product for your application. The suitability of the selected products should always be verified by a technical expert. Make sure that you have analyzed all aspects of your application and verified the product information provided in these publications. Because of the many possible applications for these products and the wide range of operating conditions, the user of the products is exclusively responsible for ensuring that the selected products are suitable for the intended application and fulfill all applicable safety requirements. Where necessary, tests should be performed to ensure correct product selection. The provided specifications are subject to change at any time without prior notification.

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