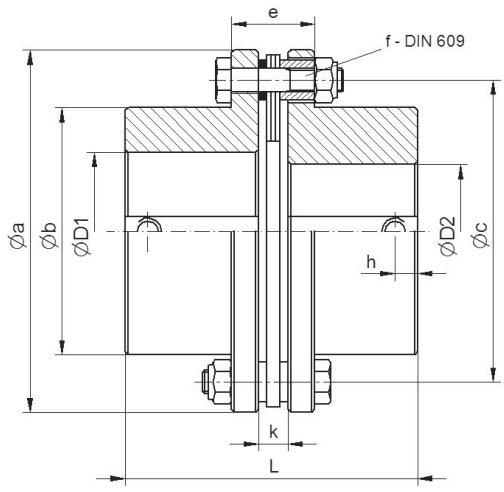
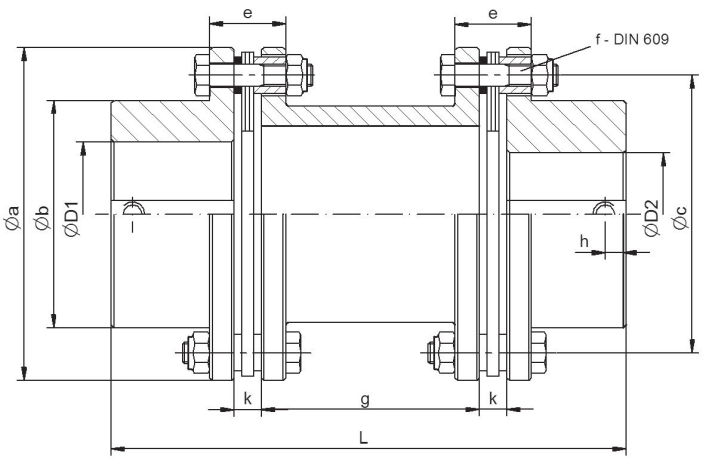
Operating Manual Disc Couplings
EWZK and EWZL

Inhalt

1. Assembly drawings



Disc coupling EWZK



Disc coupling EWZL

2. Construction and Function

2.1 Construction

The disc coupling consists of three principal components:
Two turned steel hubs (corrosion-resistant through phosphat covering) and disc packages made of stainless steel, joined by screws in property class 10.9.

2.2 Function

The function of types EWZK and EWZL is to transmit the rotary motion between two shafts on the same axis. Simultaneously a possible misalignment can be absorbed. This can only be reached by proper use.

3. Dimesioning of the coupling

3.1 Dimensioning of the torque

$$T_K\ (Nm) = \frac{9550 \times P \times K\ (kW)}{n\ (min^{-1})}$$

Explanations:

P = Motor power
n = Motor speed
K = Coefficient of impact
T_K = Torque of the coupling

3.2 Dimensioning of the bore sizes (D1 and D2)

The fitting between shaft and hub should be a snug fit, whereby the bore size of the hub has H7 fitting. Keyways acc. to DIN 6885/1.

4. Precautionary measures

Before installation, always have a look on the specifications and characteristica of the coupling, if they are adequate and suitable for the application.

There has to be enough space for installation and upcoming maintenance. Ensure that the coupling doesn‘t create any dangerous situations for people and / or properties and do work under the current safety regulations.

The disc coupling is beeing covered with phosphat for corrossion-ressistance. However, we recommend storing in a dry place.

Referring to the current EU machinery directive our product is NO MACHINE. Therefore, the operation is subject to compliance with all requirements of the machine, in which the device is installed. If the instructions are executed incorrectly, the liability goes from the manufacturer to the customer.

If you‘ve got any questions which can not be answered by this manual, or details to special applications, please contact always directly ENEMAC GmbH.

5. Use and installation

5.1 Preparations before installation

The size of the coupling has to be choosen correctly, referring to the technical informations given in the datasheet.

In case of change or adjustment on the coupling, which is not performed by ENEMAC GmbH, the guarantee of ENEMAC GmbH passes to the customer.

The customer has to ensure that tolerances and material of shaft and groove are suitable for the particular application.

The hubs and discs are supplied loose, unless otherwise discussed with the client. The disc packs are equipped with bearings, screws and self-locking nuts.

We recommend a surface roughness of the shafts of Ra = 0.8 µm.

5.2 Installation

1. Align both shafts to each other radially and axially as accurately as possible, for the maximum permissible shaft misalignment refer to the data sheet.

2. If necessary adapt the shaft distance to the coupling length L. Large distances can be bridged by type EWZL with variable pipe length „g“ (see datasheet). To decrease the natural axial frequency we recommend to enlarge the distance between the two hubs at 1,5 to 2 mm, or to choose „g“ to shorten around 1,5 to 2 mm. Thus, the disc pack is under tension and this reduces possible oscillations.

   For applications with large distances the pipe has to be supported separately.

   If mounted vertically, the intermediate pipe must be provided with an additional spacer, to avoid damages of the discs through the weight of the coupling.

3. Tighten the screws crosswise (similar to the assembly of car tires) with a torque wrench to the specified tightening torque which you can find in the datasheet.

4. Check whether the disc packages are perpendicular to the shaft axis. It is possible that some screws have to be resolved and re-tightened. The tightening torque of screws can be found on the datasheet or on the technical specifications of the used screws.

5. The hubs can also be mounted on the shafts by press fitting, in this case they have to be heated up to 433 K in an oil bath or an oven. By no means use more than 573 K, as otherwise distortions of the hub flanges can occur.

6. Maintenance

The couplings are maintenance-free, but it is recommended, to check the alignment and the tightening torque of the nuts and bolts after the first hours of operation and at regular intervals.

6.1 Warning:

In case of damage, the disc package has to be replaced completely.

7. Supplements

7.1 Warranty

The warranty period is 12 months starting with date of delivery when used in the intended one-shift operation. The warranty does not cover damage caused by improper operation. Any warranty claims are determined by repair or intervention, carried out by unauthorized persons and the use of utilities and spare parts, which aren‘t matching our disc couplings.

7.2 Safety regulations

Regardless of the instructions listed in this manual, the german statutory safety and accident prevention regulations are valid. Any person who is responsible for the operation, maintenance and repair of the disc coupling must have read and understood the operating instructions before commissioning. Repairer of the disc coupling are basically responsible for workplace safety. Following all valid safety and regulatory instructions is an requirement to prevent damages to persons and the product during maintenance and repair work. Proper repair of ENEMAC products assumes accordingly trained staff. The duty of training is up to the operator or repairer. It is to ensure that the operator and future repairer are properly trained for the product.

7.3 Copy right

7.4 Spare Parts

Only spare parts, which correspond to the requirements specified by ENEMAC GmbH or supplier are allowed. This is always guaranteed with original spare parts. Improper repairs, as well as incorrect spare parts lead to the exclusion of product liability or warranty. When ordering spare parts it is essential to specify type, size and order confirmation no. of the disc coupling to avoid incorrect deliveries.

7.5 Provisio

We reserve the right for technical changes. Changes, errors and misprints shall not justify any titles of indemnity.