

Installation and Operational Instructions for EAS[®]-Compact[®] sealed design

Type 490. _ _ _ .C/D Sizes 01 – 3

(B.490.C.GB)

Please read these Operational Instructions carefully and follow them accordingly!

Ignoring these Instructions may lead to malfunctions or to clutch failure, resulting in damage to other parts.

Safety Regulations

These Installation and Operational Instructions (I + O) are part of the clutch delivery.
Please keep them handy and near to the clutch at all times.



It is forbidden to start use of the product until you have ensured that all applicable EU directives and directives for the machine or system into which the product has been installed have been fulfilled.
At the time these Installation and Operational Instructions go to print, the EAS[®]-clutches accord with the known technical specifications and are operationally safe at the time of delivery.
Without a conformity evaluation, this product is not suitable for use in areas where there is a high danger of explosion. This statement is based on the ATEX directive.



Danger!

This warning applies if:

- the EAS[®]-clutches are modified.
- the relevant standards for safety and / or installation conditions are ignored.

User-implemented Protective Measures

- Cover all moving parts to protect against seizure, dust or foreign body impact.
- The clutch may not be put into operation without a limit switch unless *mayr*[®] has been contacted and has agreed otherwise.

To prevent injury or damage, only professionals and specialists should work on the devices, following the relevant standards and directives. Please read the Installation and Operational Instructions carefully before installation and initial operation of the device.

These Safety Regulations are user hints only and may not be complete!

Parts List

- 3 Sealing ring
- 4 Graduation scale lid
- 5 Adjusting nut
- 9 Cup springs
- 11 Locking screw

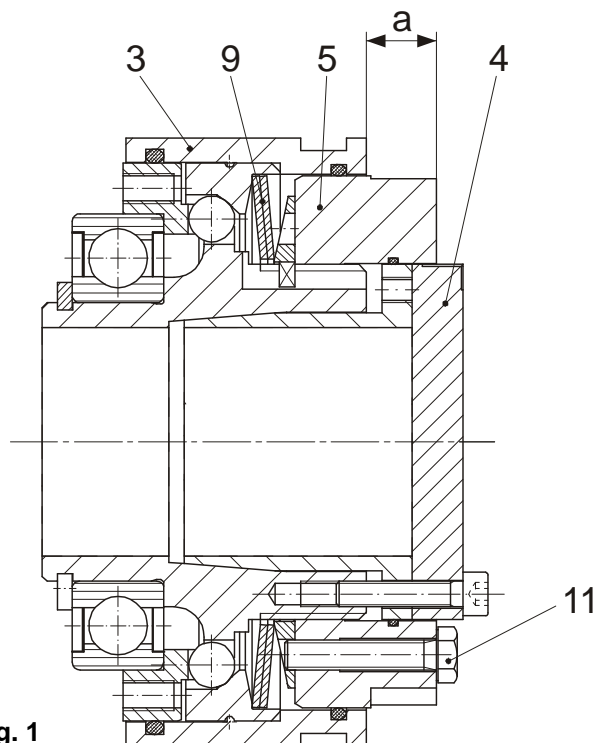


Fig. 1

Installation and Operational Instructions for EAS[®]-Compact[®] sealed design

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These Instructions are a complete description of the torque adjustment or torque changes for sealed EAS[®]-Compact[®] clutches. For everything else (technical data, technical descriptions, installation etc.), you will require the attached Installation and Operational Instructions B.4.14.GB.

Please Observe!

Turning the adjusting nut (5) clockwise causes a reduction in torque.
Turning it anti-clockwise causes an increase in torque.
You should be facing the adjusting nut (5) as in Fig. 2.

Torque Adjustment

Torque adjustment is carried out by turning the adjusting nut (5). The installed cup springs (9) are operated in the negative range of the characteristic curve (see Fig. 3). This means that tightening the adjusting nut (5) causes the spring force to decrease, and loosening the adjusting nut (5) causes the spring force to increase.

If no particular torque adjustment is requested customer-side, the EAS[®]-Compact[®] Sizes 01 – 3 will always be pre-set and marked (calibrated) to approx. 70 % of the respective maximum torque.

It is possible to check the "Spring operation in the operating range" (Fig. 3) using the dimension "a" (distance from the adjusting nut, facing side (5) to the sealing ring facing side (3) (Fig. 1)). Please see Table 1 for the respective values.

Even if the customer does not intend to change the preset torque, the locking screw (11) must still be screwed out by the customer, painted using Loctite 243 and screwed back into the adjusting nut (5)

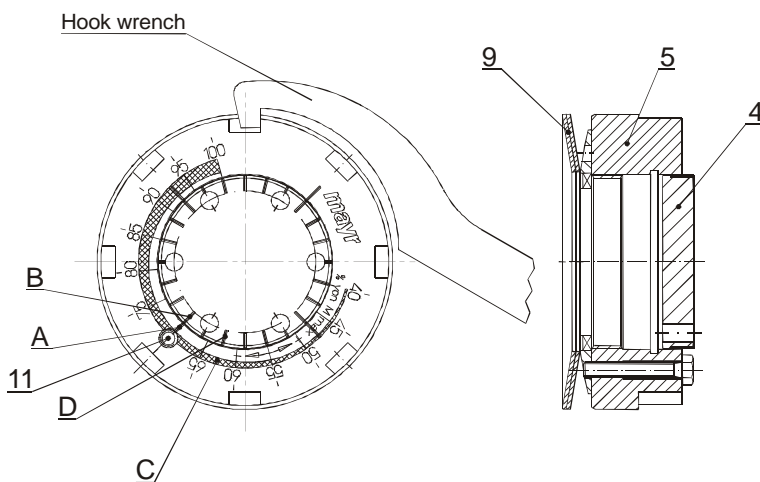


Fig. 2

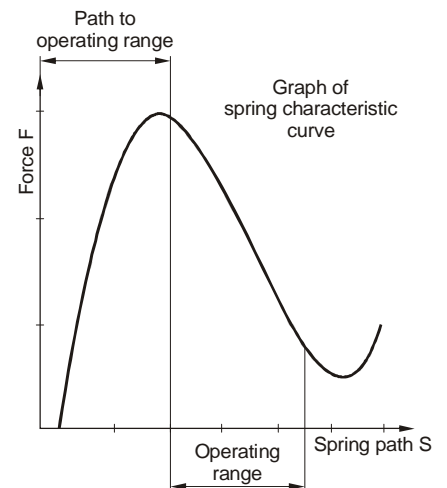


Fig. 3 (The diagram serves only as an example)

Changing the Torque (Sizes 01 - 3)

- ❑ Please convert the required torque using the formula below into percent of the maximum adjustment value (see Table 3).

$$\frac{\text{Required torque adjustment}}{\text{Max. torque adjustment (see Table 1)}} \times 100 = \text{adjustment in \%}$$

- ❑ Remove the locking screw (11) from the adjusting nut (5).
- ❑ Turn the adjusting nut (5) using the engraved adjustment scale (Fig. 2) clockwise or anti-clockwise using a hook wrench until the required torque is reached.
- ❑ The required torque results from the marking overlap (D) on the graduation scale ring (4) and the percent value (C) on the adjusting nut (5) (Fig 2).
- ❑ Paint the locking screw (11) using Loctite 243 and screw it into the adjusting nut (5); here the 4 notches (A) in the adjusting nut (5) and the notches (B) in the graduation scale ring (4) must be in the same position (Fig. 2). Slight corrections may be necessary.



Please Observe!
The graduation scale ring (4) must not be turned, as otherwise the calibration will no longer be correct.

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Examples:

Example 1: EAS[®]-Compact[®] Size 3, Type 490.610.C:

Torque pre-adjustment = 70 % of the $M_{G \max} = 245 \text{ Nm}$.

The adjustment should be increased from 245 Nm to 280. Determine the torque adjustment in % of $M_{G \max}$ using the formula below.

$$\frac{280\text{Nm}}{350\text{Nm}} \times 100 = 80\%$$

Screw open the adjusting nut (5) acc. the facing side graduation scale (Fig. 2) using a hook wrench from 70 % to 80 % **anti-clockwise**.

Example 2: EAS[®]-Compact[®] Size 2, Type 490.525.D:

The setting should be reduced from 75 Nm to 60 Nm. Determine the torque adjustment in % of $M_{G \max}$.

$$\frac{60\text{Nm}}{100\text{Nm}} \times 100 = 60\%$$

Screw the adjusting nut (5) closed acc. the facing side graduation scale (Fig. 2) using a hook wrench from 75 % to 60 % **clockwise**.

Table 1

Size	Type 49 .5 . . .C/D		Type 49 .6 . . .C/D		Type 49 .7 . . .C/D	
	$M_G \max.$ [Nm]	Inspection dimension "a" * at c. 70 % M_G [mm]	$M_G \max.$ [Nm]	Inspection dimension "a" * at c. 70 % M_G [mm]	$M_G \max.$ [Nm]	Inspection dimension "a" * at c. 70 % M_G [mm]
01	12,5	11,7	25	12,5	50	14,1
0	25	9,4	50	10,4	100	12,4
1	50	11,8	100	13,0	200	15,4
2	100	10,9	200	12,3	400	15,1
3	175	16,5	350	18,3	700	22,0

*** Please Observe!**

The inspection dimension "a" can show deviations due to construction tolerances or to clutch wear.



Important! Please Observe!

Adjusting the adjusting nut (5) or distorting the cup springs (9) out of the cup spring characteristic curve (see Fig. 3) stops the clutch functioning.

After de-installing the clutch (e.g. due to cup spring replacement or changes to the cup spring layering), the clutch must be readjusted and calibrated using dimension "a" (see Table 1 and Fig. 1).