

Freewheel Clutch Insert Element FR

with rings



Components

Freewheel clutch insert element*

FE 400 M (meander spring)
FE 400 Z (tension spring)

+ Raceways Bearing steel, hardened and ground
inner ring Press fit
outer ring Press fit

- Ball bearing -

- Roller bearing -

- Lubrication -

- Seal -

* available with either freewheel clutch insert element FE 400 M (meander spring) or FE 400 Z (tension spring).

Characteristics

Width

12 mm

Operating temperature

max. 140°C

Higher temperatures on request

Lubrication

Oil or grease lubrication (Pg. 60–61)

Delivered with corrosion protection.

Operative grease filling on request.

Installation

Installation tolerances

Shaft h5; hub H6

Constraints

The freewheel clutch insert element requires axial constraints on both sides.

Mating parts

Hardening and grinding of the mating parts is not necessary.

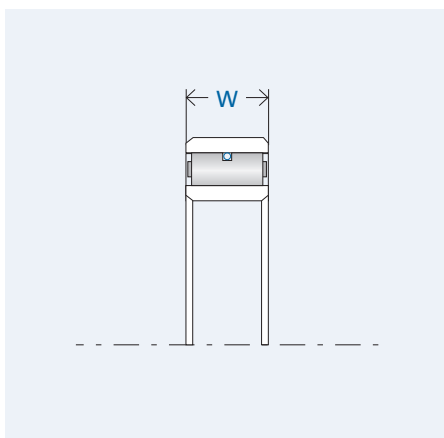
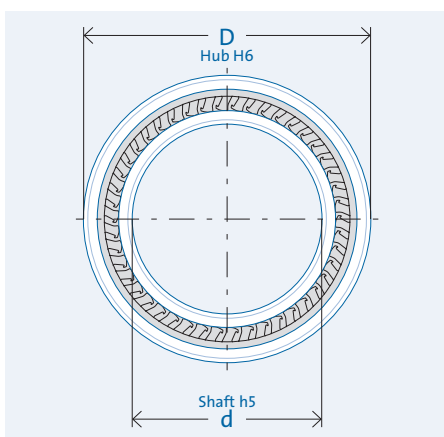
Thoroughly clean (grease free) the mating parts in the vicinity of the freewheel clutch as well as the freewheel clutch's rings before making the press fit.

Bearing

Freewheel clutch insert elements are not self-centering.

External bearing support to define the gap between mating parts (inner and outer rings) is necessary.

Data



Drawing legend

- d = inner diameter
- D = outer diameter
- W = width
- T = torque
- n = rotation speed

| Designation | d [mm] | D [mm] | W [mm] | T _{nom} [Nm] | n _{max} [rpm] | Weight [kg] | Item no. |
|-------------|--------|--------|--------|-----------------------|------------------------|-------------|----------|
| FR 422 M | 10 | 26 | 12 | 60 | 10,100 | 0.03 | 300587 |
| FR 422 Z | 10 | 26 | 12 | 53 | 10,100 | 0.03 | 300588 |
| FR 427 M | 15 | 31 | 12 | 92 | 7,400 | 0.04 | 300591 |
| FR 427 Z | 15 | 31 | 12 | 83 | 7,400 | 0.04 | 300592 |
| FR 432 M | 20 | 36 | 12 | 128 | 5,900 | 0.05 | 300593 |
| FR 432 Z | 20 | 36 | 12 | 117 | 5,900 | 0.05 | 300594 |
| FR 437 M | 25 | 41 | 12 | 169 | 4,800 | 0.06 | 300595 |
| FR 437 Z | 25 | 41 | 12 | 154 | 4,800 | 0.06 | 300598 |
| FR 442 M | 30 | 46 | 12 | 212 | 4,200 | 0.07 | 300599 |
| FR 442 Z | 30 | 46 | 12 | 198 | 4,200 | 0.07 | 300600 |
| FR 448 M | 35 | 53 | 12 | 272 | 4,300 | 0.09 | 300602 |
| FR 448 Z | 35 | 53 | 12 | 248 | 4,300 | 0.09 | 300603 |
| FR 453 M | 40 | 58 | 12 | 321 | 3,400 | 0.10 | 300605 |
| FR 453 Z | 40 | 58 | 12 | 294 | 3,400 | 0.10 | 300606 |
| FR 463 M | 50 | 68 | 12 | 427 | 2,900 | 0.12 | 300608 |
| FR 463 Z | 50 | 68 | 12 | 394 | 2,900 | 0.12 | 300610 |
| FR 473 M | 60 | 78 | 12 | 539 | 2,500 | 0.14 | 300611 |
| FR 473 Z | 60 | 78 | 12 | 496 | 2,500 | 0.14 | 300613 |

The specified nominal torque is based on sufficient stiffness of mating parts (Pg. 22).
Rotation speed n = insert element's inherent speed (Pg. 57)