

# Complete Freewheel Clutch Unit FP

for press fit (IR and OR)



## Characteristics

### Width

27 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

### 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

The freewheel clutch includes ball and roller bearings. Additional external bearing support is not necessary.

### Press fit pressure

Press fit pressure must not be applied to the balls.

### Clamping direction

The arrow on the inner ring designates the inner ring's clamping direction.

## Components

### Freewheel clutch

insert element\* FE 400 M (meander spring)  
FE 400 Z (tension spring)

### + Raceways

inner ring

Bearing steel, hardened and ground

outer ring

Press fit

### + Ball bearing

Integrated

### + Roller bearing

Integrated

- Lubrication

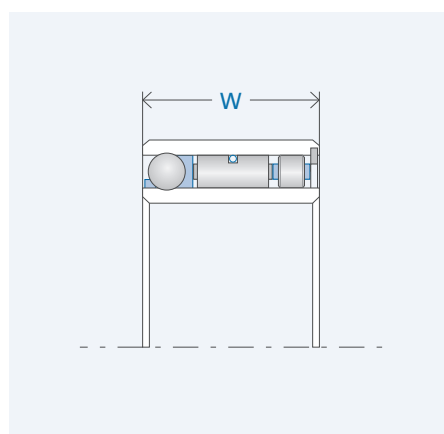
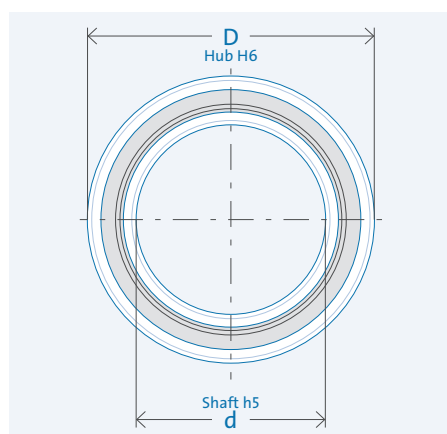
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- Seal

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

## Data



## Drawing legend

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

| Designation | d<br>[mm] | D<br>[mm] | W<br>[mm] | T <sub>nom</sub><br>[Nm] | n <sub>max</sub><br>[rpm] | C <sub>dyn.</sub><br>[N] | C <sub>stat.</sub><br>[N] | Weight<br>[kg] | Item no. |
|-------------|-----------|-----------|-----------|--------------------------|---------------------------|--------------------------|---------------------------|----------------|----------|
| FP 422 M    | 10        | 26        | 27        | 60                       | 10,100                    | 6,013                    | 4,380                     | 0.07           | 300655   |
| FP 422 Z    | 10        | 26        | 27        | 53                       | 10,100                    | 6,013                    | 4,380                     | 0.07           | 300656   |
| FP 427 M    | 15        | 31        | 27        | 94                       | 7,400                     | 7,679                    | 6,397                     | 0.08           | 300663   |
| FP 427 Z    | 15        | 31        | 27        | 84                       | 7,400                     | 7,679                    | 6,397                     | 0.08           | 300664   |
| FP 432 M    | 20        | 36        | 27        | 133                      | 5,900                     | 8,104                    | 7,241                     | 0.10           | 300669   |
| FP 432 Z    | 20        | 36        | 27        | 121                      | 5,900                     | 8,104                    | 7,241                     | 0.10           | 300670   |
| FP 437 M    | 25        | 41        | 27        | 176                      | 4,800                     | 9,201                    | 8,142                     | 0.12           | 300673   |
| FP 437 Z    | 25        | 41        | 27        | 160                      | 4,800                     | 9,201                    | 8,142                     | 0.12           | 300674   |
| FP 442 M    | 30        | 46        | 27        | 223                      | 4,200                     | 10,247                   | 10,708                    | 0.14           | 300679   |
| FP 442 Z    | 30        | 46        | 27        | 208                      | 4,200                     | 10,247                   | 10,708                    | 0.14           | 300680   |
| FP 448 M    | 35        | 53        | 27        | 286                      | 4,300                     | 11,642                   | 13,440                    | 0.19           | 306522   |
| FP 448 Z    | 35        | 53        | 27        | 262                      | 4,300                     | 11,642                   | 13,440                    | 0.19           | 306523   |
| FP 453 M    | 40        | 58        | 27        | 343                      | 3,400                     | 11,417                   | 13,577                    | 0.21           | 300683   |
| FP 453 Z    | 40        | 58        | 27        | 314                      | 3,400                     | 11,417                   | 13,577                    | 0.21           | 300684   |
| FP 463 M    | 50        | 68        | 27        | 461                      | 2,900                     | 13,070                   | 17,063                    | 0.25           | 300685   |
| FP 463 Z    | 50        | 68        | 27        | 428                      | 2,900                     | 13,070                   | 17,063                    | 0.25           | 300687   |
| FP 473 M    | 60        | 78        | 27        | 588                      | 2,500                     | 14,128                   | 19,896                    | 0.30           | 300691   |
| FP 473 Z    | 60        | 78        | 27        | 543                      | 2,500                     | 14,128                   | 19,896                    | 0.30           | 300693   |

The specified nominal torque is based on sufficient stiffness of mating parts (Pg. 22).

Rotation speed n = insert element's inherent speed (Pg. 57)