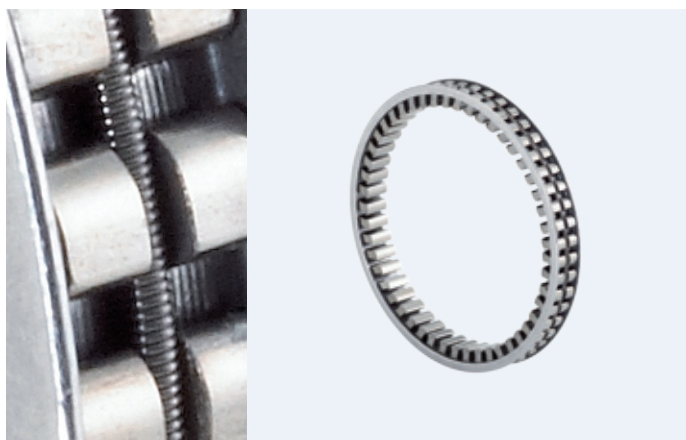


# Insert Element FE 400 Z2

in narrow design with tension spring



## Characteristics

**Installed width**  
7 mm

**Operating temperature**  
max. 140°C  
higher temperatures on request

**Indexing frequency**  
max. 10 Hz

## Lubrication

**Oil or grease lubrication (Pg. 60–61)**  
Delivered with corrosion protection.  
Pre-greased on request.

## Installation

**Installation tolerances**  
Shaft h5; hub H6

**Inner ring/shaft**  
steel, HRC 60<sup>+4</sup> (HV 700<sup>+100</sup>); Ehd ≥ 1.3 mm; Rz ≤ 2.5 μm

**Outer ring/housing**  
steel, HRC 60<sup>+4</sup> (HV 700<sup>+100</sup>); Ehd ≥ 1.3 mm; Rz ≤ 2.5 μm

## Constraints

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

## Mating parts

Hardening and grinding of the mating parts is necessary. Chamfered shafts and hubs ease installation (Pg. 58).

## Bearing

Freewheel clutch insert elements are not self-centering. External bearing support to define the gap between mating parts (Shaft and housing) is necessary.

## Components

### Freewheel

- Spring
- Cage
- Sprags

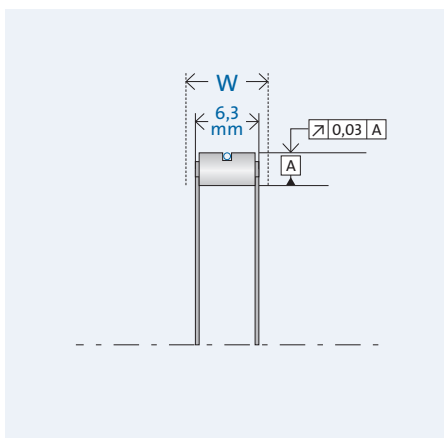
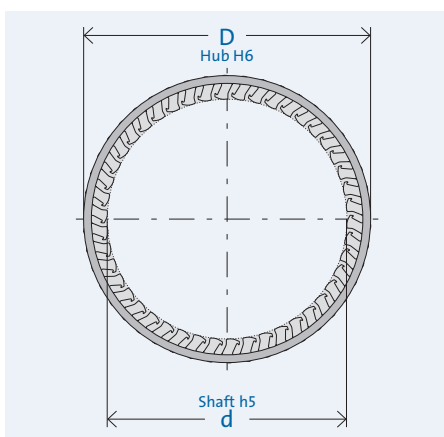
### Insert element FE 400 Z2

Tension spring (Z)  
Stamped steel / plastic (PA)  
Hardened bearing steel  
Start gap height  $h_0 = 4$  mm

- |                  |   |
|------------------|---|
| - Thrust rings   | - |
| - Ball bearing   | - |
| - Roller bearing | - |
| - Lubrication    | - |
| - Seal           | - |



## Data



Designation	d [mm]	D [mm]	W [mm]	T <sub>nom</sub> [Nm]	n <sub>max</sub> [rpm]	Weight [kg]	Item no.
FE 410 Z2	2	10	7	0,6	52,600	0.001	300390
FE 412 Z2	4	12	7	2,5	40,900	0.002	300394
FE 413 Z2	5	13	7	4	34,900	0.003	300395
FE 414 Z2	6	14	7	6	31,200	0.003	300396
FE 416 Z2	8	16	7	10	27,200	0.004	300399
FE 418 Z2	10	18	7	16	18,900	0.005	300401
FE 422 Z2	14	22	7	30	13,200	0.006	300406
FE 423 Z2	15	23	7	40	13,200	0.006	300410
FE 425 Z2	17	25	7	43	10,600	0.007	300416
FE 428 Z2	20	28	7	55	9,700	0.008	300431
FE 433 Z2	25	33	7	78	7,700	0.010	300446
FE 437 Z2	29	37	7	97	6,100	0.011	300457
FE 438 Z2	30	38	7	105	6,400	0.011	300461
FE 442 Z2	34	42	7	125	5,400	0.012	300465
FE 443 Z2	35	43	7	131	5,600	0.013	300472
FE 448 Z2	40	48	7	156	5,500	0.014	300477
FE 453 Z2	45	53	7	185	4,400	0.016	300484
FE 458 Z2	50	58	7	216	4,400	0.017	300490
FE 463 Z2	55	63	7	246	3,700	0.019	300498
FE 468 Z2	60	68	7	277	3,500	0.020	300502

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

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

### Drawing legend

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