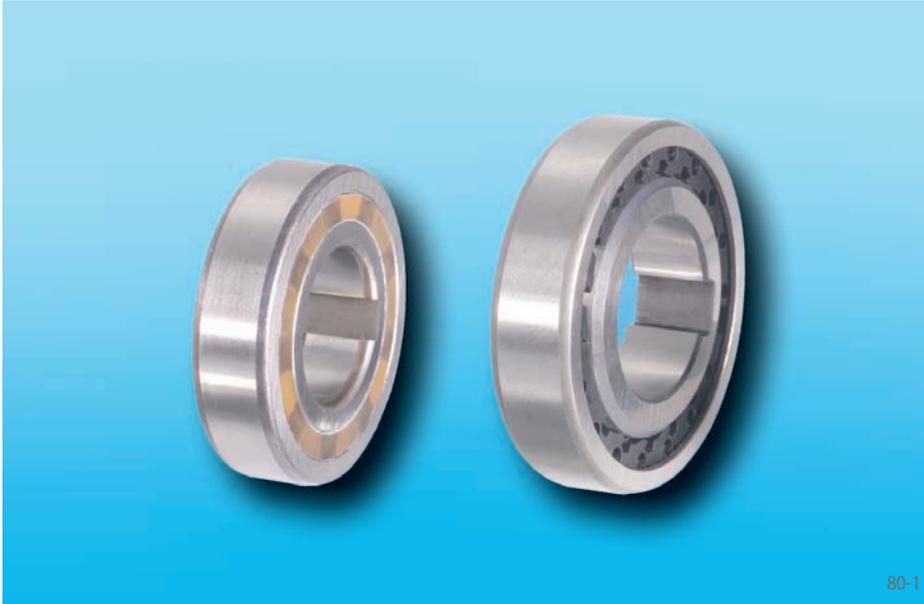


Internal Freewheels FCN ... K/CF

for press fit on the outer ring
with sprags



80-1

Features

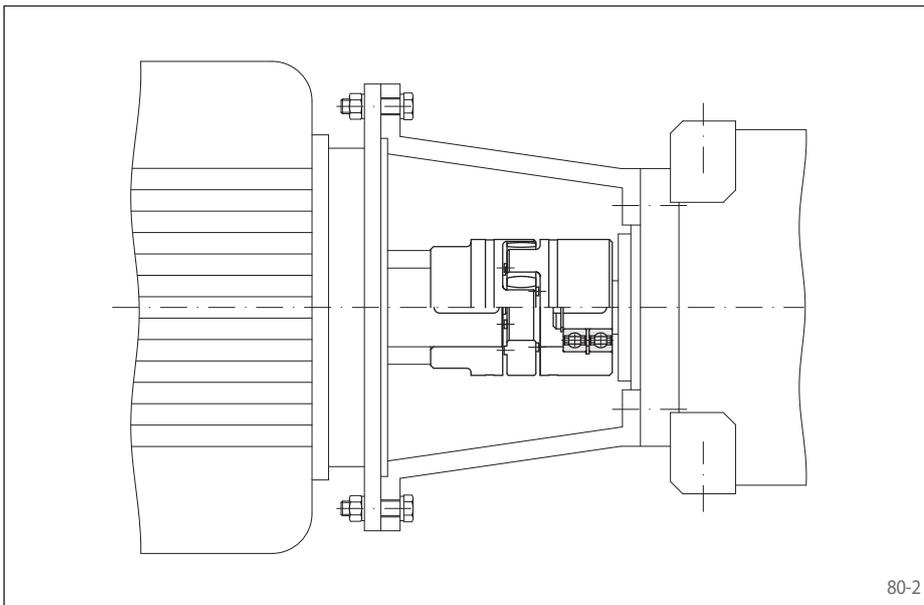
Internal Freewheels FCN ... K/CF are sprag freewheels with series 62 ball bearing dimensions. The freewheels FCN ... K (sizes 20 to 30) are also ball bearings and can accept radial and axial forces. They are supplied grease-filled for normal operating conditions and are maintenance-free. The freewheels FCN ... CF (sizes 35 to 60) have no bearing support.

The freewheels FCN ... K/CF are used as:

- ▶ Backstops
- ▶ Overrunning Clutches
- ▶ Indexing Freewheels

Nominal torques up to 500 Nm. The torque is transmitted on the outer ring by press fit.

Bores up to 60 mm.



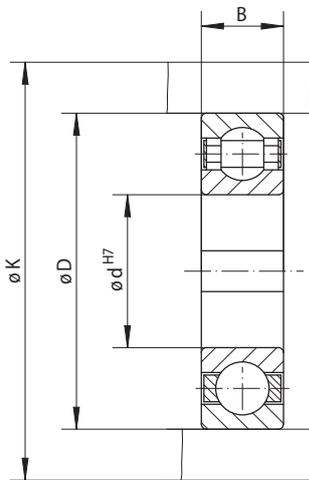
80-2

Application example

Two Internal Freewheels FCN 30 K in parallel arrangement as overrunning freewheels in the drive of the roof brush of an automatic car washing facility. The freewheels are arranged in the hub of a shaft coupling that connects the motor and the reduction gear. The freewheels prevent the drive from pushing the roof brush uncontrolled down onto the car roof in the event of a fault. The roof brush is raised by the freewheels that are working in driving operation. The direction of motor rotation changes in order to lower the brush. The downwards movement of the roof brush is performed by its own weight at the speed specified by the motor. In the case of an uncontrolled lowering of the roof brush on the car roof, the drive is automatically disengaged via the freewheel. The brush rests on the roof under its own weight, while the freewheel which is working in driving operation enables the drive to continue to turn in the lowering direction without causing any damage.

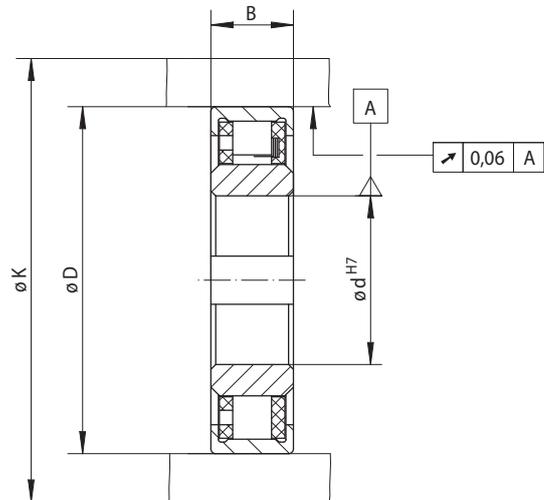
Internal Freewheels FCN ... K/CF

for press fit on the outer ring
with sprags



Size FCN 20 to FCN 30

81-1



Size FCN 35 to FCN 60

81-2

Indexing Freewheel Overrunning Clutch Backstop	Standard type For universal use	Dimensions

Freewheel Size	Type	Nominal torque Nm	Max. speed		Load rating of bearing support		Bore d mm	B mm	D mm	K mm	Weight kg
			Inner ring freewheels/overruns min ⁻¹	Outer ring freewheels/overruns min ⁻¹	dynamic C N	static C ₀ N					
FCN 20	K	65	3375	3450	10 000	6 200	20	14	47	54	0,12
FCN 25	K	80	2900	3050	11 000	7 000	25	15	52	60	0,14
FCN 30	K	110	2525	2675	15 000	10 000	30	16	62	70	0,22
FCN 35	CF	200	1 475	1 775	without bearing support		35	17	72	80	0,31
FCN 40	CF	260	1 250	1 600	without bearing support		40	18	80	90	0,39
FCN 45	CF	300	1 150	1 525	without bearing support		45	19	85	96	0,44
FCN 50	CF	330	1 100	1 475	without bearing support		50	20	90	100	0,49
FCN 55	CF	420	1 000	1 400	without bearing support		55	21	100	112	0,62
FCN 60	CF	500	950	1 350	without bearing support		60	22	110	122	0,81

The maximum transmissible torque is 2 times the specified nominal torque. See page 14 for determination of selection torque.

The maximum speed values listed above apply to installation conditions as they are given for Complete Freewheels. If the actual installation conditions are known, higher speeds may be permitted under certain circumstances.

Keyway according to DIN 6885, page 3 • Tolerance of keyway width JS10.

Mounting

The freewheels FCN ... CF (sizes 35 to 60) are without bearing support. Concentric alignment of inner and outer ring must be provided by the customer. The permissible run out (T.I.R.) must be observed.

The torque is transmitted on the outer ring by press fit. In order to transmit the torques specified in the table, the outer ring must be accommodated in a housing with an external diameter K. The housing is made of steel or grey cast iron in minimum quality GG-20. When using other housing materials or smaller external diameters, we urge you to contact us regarding the transmissible torque.

The tolerance of the housing bore D must be ISO H7 or J6 and the tolerance of the shaft must be ISO h6 or j6.

The permissible operating temperature of the freewheel is -40°C to 80°C.

Lubrication

The freewheels FCN ... K (sizes 20 to 30) are supplied grease-filled for normal operating conditions. However, the freewheels can also be connected to the customer's oil lubrication system; this is particularly recommended in the case of higher speeds.

In the case of the freewheels FCN ... CF (sizes 35 to 60), an oil lubrication of the specified quality must be provided.

Example for ordering

Freewheel size FCN 40, standard type:

- FCN 40 CF