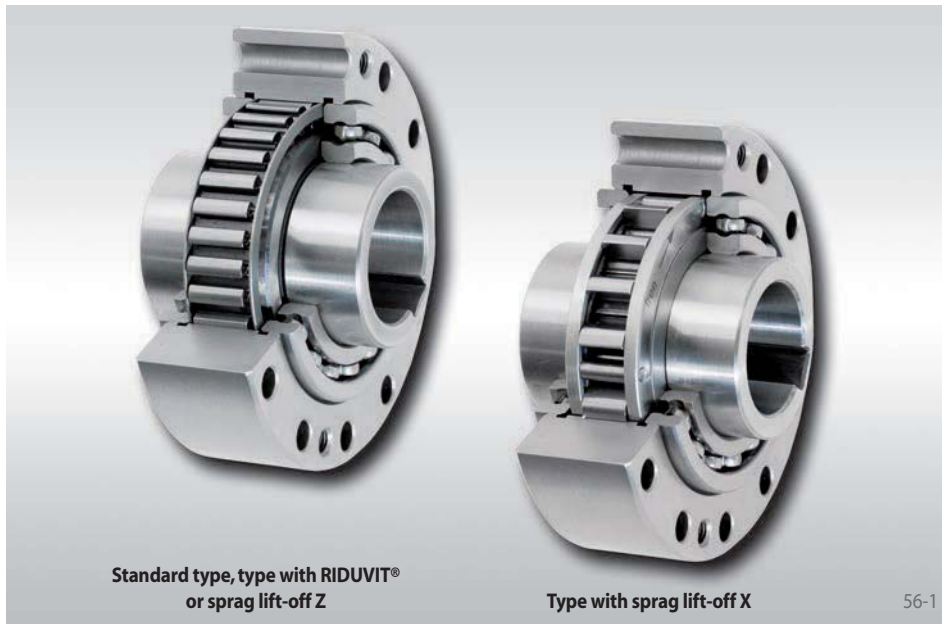


Basic Freewheels FBO

for assembly with connecting parts
with sprags, available in four types



Application as

- ▶ Backstop
- ▶ Overrunning Clutch
- ▶ Indexing Freewheel

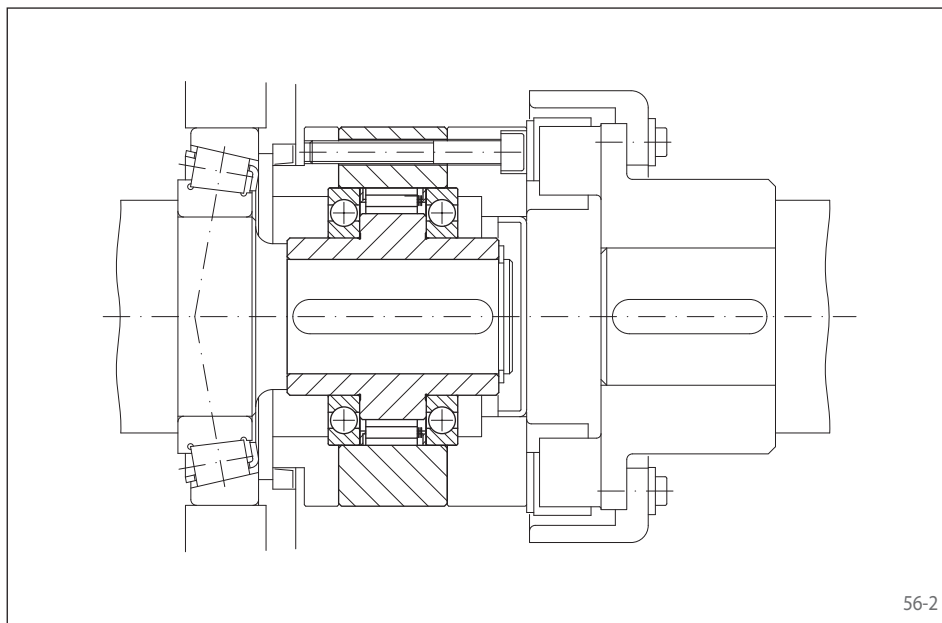
Features

Basic Freewheels FBO are sprag freewheels with ball bearings to be assembled with customer connecting parts. The freewheels are particularly suitable for installation in housings with oil lubrication and seals.

In addition to the standard type, three other types are available for extended service life.

Nominal torques up to 160 000 Nm.

Bores up to 300 mm. A multitude of standardized bore diameters are available with short delivery times.



Application example

Basic Freewheel FBO 127 SF as an overrunning clutch between the creep drive and the main drive of a cement mixer. In the case of creep operation, the outer ring is driven by the shaft coupling. The freewheel works in driving operation and drives the unit at a low speed via the main gearbox. In normal operation (freewheeling operation), the inner ring overruns and the creep drive is automatically disengaged. The freewheel is connected to the oil lubrication of the main gearbox and does not require any special maintenance. The arrangement of the seals between the freewheel and the main gearbox is advantageous. In normal operation (freewheeling operation), this is at a standstill and hence generates no additional friction-related temperature rise.

Mounting

The customer connecting parts are centered on the ball bearing external diameter F and assembled via the outer ring.

The tolerance of the shaft must be ISO $h6$ or $j6$ and the tolerance of the pilot diameter F of the connecting part must be ISO $H7$ or $J7$. The centering depth C must be observed.

Lubrication

An oil lubrication of the specified quality must be provided.

Example for ordering

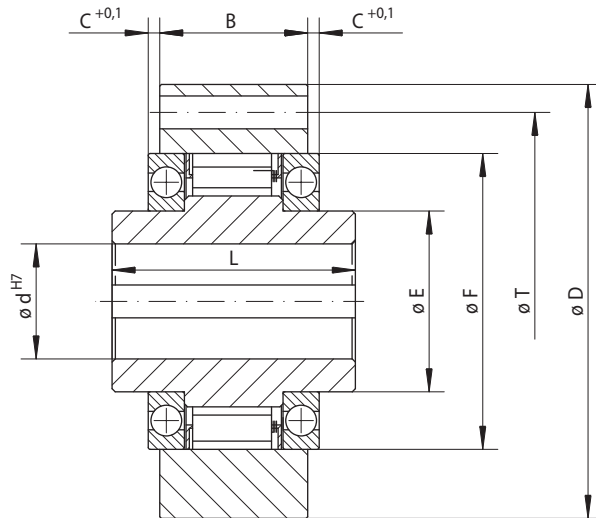
Freewheel size FBO 72, type with sprag lift-off X and 40 mm bore:

- FBO 72 DX, $d = 40$ mm



Basic Freewheels FBO

for assembly with connecting parts
with sprags, available in four types



57-1

Indexing Freewheel	Standard type For universal use	Type with RIDUVIT® For extended service life with coated sprags	Type with sprag lift-off X For extended service life using sprag lift-off at high speed rotating inner ring	Type with sprag lift-off Z For extended service life using sprag lift-off at high speed rotating outer ring
Overrunning Clutch				
Backstop				

Freewheel Size	Type	Nominal torque M _N Nm	Max. speed		Type	Nominal torque M _N Nm	Max. speed		Type	Nominal torque M _N Nm	Sprag lift-off at inner ring speed min ⁻¹	Max. speed		Type	Nominal torque M _N Nm	Outer ring freewheels/overruns min ⁻¹	Max. speed	
			Inner ring freewheels/overruns min ⁻¹	Outer ring freewheels/overruns min ⁻¹			Inner ring freewheels/overruns min ⁻¹	Outer ring drives min ⁻¹				Outer ring freewheels/overruns min ⁻¹	Inner ring drives min ⁻¹					
FBO 37	SF	200	2 500	2 600	SFT	200	2 500	2 600						CZ	110	850	3 000	340
FBO 44	SF	320	1 900	2 200	SFT	320	1 900	2 200	DX	130	860	1 900	344	CZ	180	800	2 600	320
FBO 57	SF	630	1 400	1 750	SFT	630	1 400	1 750	DX	460	750	1 400	300	LZ	430	1 400	2 100	560
FBO 72	SF	1 250	1 120	1 600	SFT	1 250	1 120	1 600	DX	720	700	1 150	280	LZ	760	1 220	1 800	488
FBO 82	SF	1 800	1 025	1 450	SFT	1 800	1 025	1 450	DX	1 000	670	1 050	268	SFZ	1 700	1 450	1 600	580
FBO 107	SF	2 500	880	1 250	SFT	2 500	880	1 250	DX	1 500	610	900	244	SFZ	2 500	1 300	1 350	520
FBO 127	SF	5 000	800	1 150	SFT	5 000	800	1 150	SX	3 400	380	800	152	SFZ	5 000	1 200	1 200	480
FBO 140	SF	10 000	750	1 100	SFT	10 000	750	1 100	SX	7 500	320	750	128	SFZ	10 000	950	1 150	380
FBO 200	SF	20 000	630	900	SFT	20 000	630	900	SX	23 000	240	630	96	SFZ	20 000	680	900	272
FBO 270	SF	40 000	510	750	SFT	40 000	510	750	SX	40 000	210	510	84	SFZ	37 500	600	750	240
FBO 340	SF	80 000	460	630	SFT	80 000	460	630										
FBO 440	SF	160 000	400	550	SFT	160 000	400	550										

The maximum transmissible torque is 2 times the specified nominal torque. See page 14 for determination of selection torque.
The specified maximum speeds apply for installation conditions as given with Complete Freewheels. Knowing the actual installation conditions higher speeds can be permitted under some circumstances.

Freewheel Size	Bore d		B mm	C1*** mm	C2*** mm	C3*** mm	D mm	E mm	F mm	G	L mm	T mm	Z**	Weight kg
	Standard mm	max. mm												
FBO 37	20	22*	25	3,7		4,3	85	30	55	M 6	48	70	6	0,9
FBO 44	25*	25*	25	3,7	4,7	4,4	95	35	62	M 6	50	80	8	1,3
FBO 57	30	32*	30	4,2	7,7	7,4	110	45	75	M 8	65	95	8	1,9
FBO 72	40	42*	38	3,7	4,9	4,4	132	55	90	M 8	74	115	12	3,5
FBO 82	50*	50*	40	6,6	6,6	6,6	145	65	100	M 10	75	125	12	4,0
FBO 107	60	65*	45	8,1	8,1	8,1	170	80	125	M 10	90	150	12	7,7
FBO 127	70	75*	68	6,9	7,9	6,9	200	95	145	M 12	112	180	12	13,3
FBO 140	90	95*	68	19,1	20,1	19,1	250	120	180	M 16	150	225	12	31,5
FBO 200	120	120	85	14,1	15,1	14,1	320	160	240	M 16	160	288	16	46,5
FBO 270	140	150	100	22,5	22,5	22,5	420	200	310	M 20	212	370	18	105,0
FBO 340	180	240	125	25,6			497	300	380	M 20	265	450	24	190,0
FBO 440	220	300	150	34,1			627	380	480	M 30	315	560	24	360,0

■ Freewheels with bore diameters highlighted blue in the table are available with short delivery times.

Keyway according to DIN 6885, page 1 • Tolerance of keyway width JS10.

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

** Z = Number of fastening holes for screws G (DIN EN ISO 4762) on pitch circle T.

*** C1 = Centering depth of connecting parts for standard type and type with RIDUVIT®.

C2 = Centering depth of connecting parts for type with sprag lift-off X.

C3 = Centering depth of connecting parts for type with sprag lift-off Z.

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