

Complete Freewheels BM

for keyway connection on the outer ring
with rollers or with sprag lift-off X



Application as

- ▶ Backstop
- ▶ Overrunning Clutch
- ▶ Indexing Freewheel

Features

Complete Freewheels BM are sealed freewheels with ball bearings. They are supplied oil-filled and ready for installation, on customer request with biodegradable oil.

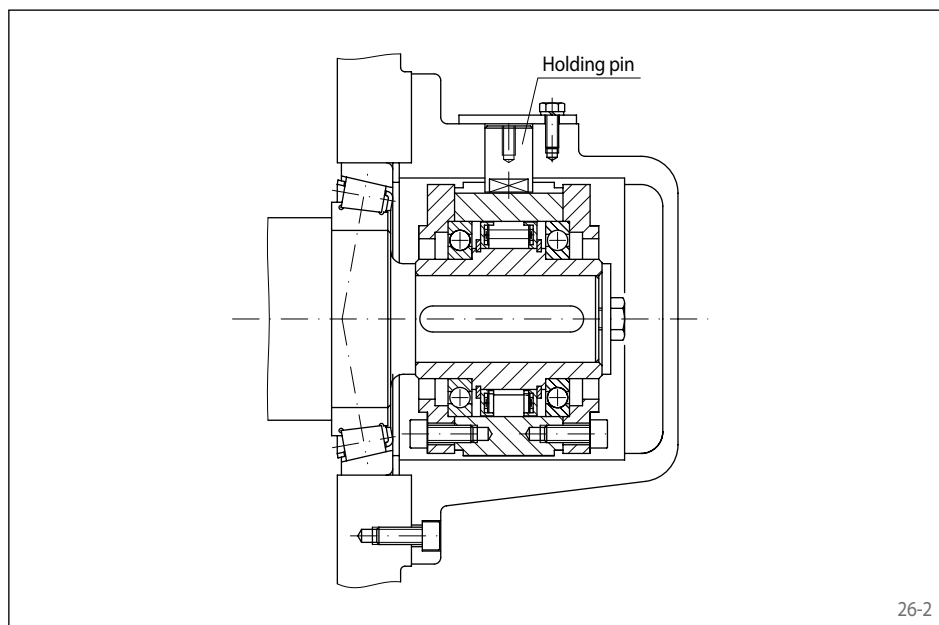
Besides the standard type, the type with sprag lift-off X is available for wearfree freewheeling operation at high speed rotating inner ring.

Nominal torques up to 57 500 Nm.

Bores up to 150 mm. A multitude of standardized bore diameters are available with short delivery times.

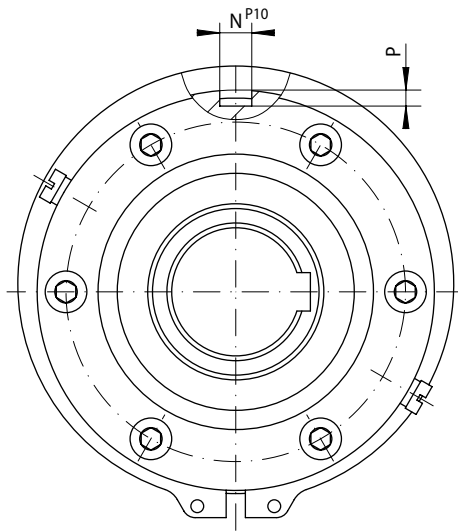
Application example

Complete Freewheel BM 60 SX as a backstop, arranged at the end of the intermediate shaft of a spur gearbox. The freewheel is used without the radial seal rings on each side, and is lubricated by the gearbox oil. A radial holding pin engages in the keyway of the outer ring. The backdriving torque is supported by the holding pin in the stationary housing. By removing the radial holding pin, the installation can be turned in both directions in order to carry out maintenance work. With the high shaft speed in normal operation (freewheeling operation), the type with sprag lift-off X is used; the sprags work in freewheeling operation without contact and hence are wear-free.

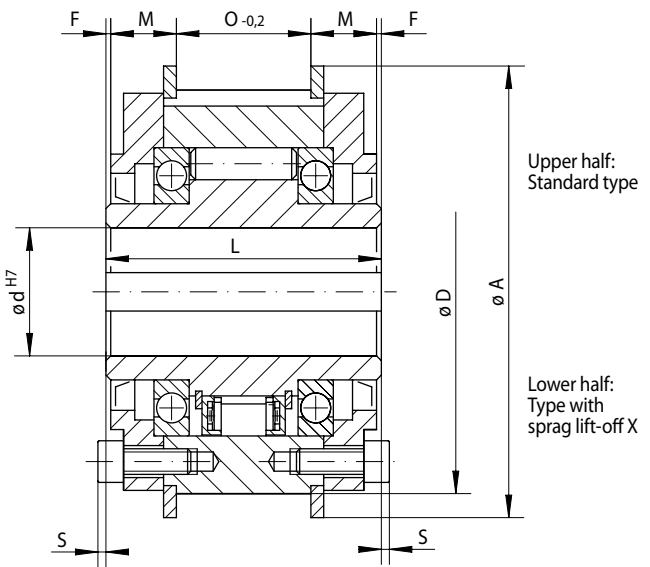


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27-1



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Indexing Freewheel Overrunning Clutch Backstop	Standard type For universal use	Type with sprag lift-off X For extended service life using sprag lift-off at high speed rotating inner ring	Dimensions	

Freewheel Size	Type	Nominal torque Mn Nm	Max. speed		Type	Nominal torque Mn Nm	Sprag lift-off at inner ring speed min ⁻¹	Max. speed		Bore d		A	D	F	L	M	N	O	P	S	Weight kg
			Inner ring freewheels/ overruns min ⁻¹	Outer ring freewheels/ overruns min ⁻¹				Inner ring freewheels/ overruns min ⁻¹	Outer ring drives min ⁻¹	Standard mm	max. mm										
BM 12	R	150	1750	3500						15	15	84	70	0,75	68	15,75	5	35	3,0	3,0	1,5
BM 15	R	230	1650	3300						20	20	94	80	0,75	70	15,75	5	37	3,0	3,0	2,0
BM 18	R	340	1550	3100						25	25	111	95	0,75	70	16,25	8	36	4,0	3,0	2,9
BM 20	R	420	1450	2900	DX	420	750	1700	300	30	30	121	105	0,75	77	20,25	8	35	4,0	2,5	3,8
BM 25	R	800	1250	2500	DX	700	700	1600	280	40	40	144	125	0,75	93	22,25	10	47	5,0	2,5	6,6
BM 28	R	1200	1100	2200						45	45	155	135	0,75	95	23,25	12	47	5,0	4,0	7,8
BM 30	R	1600	1000	2000	DX	1250	630	1600	252	50	50	171	150	0,75	102	24,25	12	52	5,0	4,0	10,3
BM 35	R	1800	900	1800						55	55	182	160	0,75	110	24,25	14	60	5,5	4,0	12,5
BM 40	R	3500	800	1600	SX	1900	430	1500	172	60	60	202	180	0,75	116	25,25	16	64	6,0	6,5	17,4
BM 45	R	7100	750	1500	SX	2300	400	1500	160	70	70	218	195	1,25	130	24,75	20	78	7,5	8,5	22,4
BM 50	R	7500	700	1400						75	75	227	205	1,25	132	26,75	20	76	7,5	8,5	24,2
BM 52	R	9300	650	1300	SX	5600	320	1500	128	80	80	237	215	1,75	150	33,75	25	79	9,0	8,5	31,1
BM 55	R	12500	550	1100	SX	7700	320	1250	128	90	90	267	245	1,75	170	35,25	25	96	9,0	6,5	45,6
BM 60	R	14500	500	1000	SX	14500	250	1100	100	100	105	314	290	1,75	206	40,25	28	122	10,0	6,5	78,2
BM 70	R	22500	425	850	SX	21000	240	1000	96	120	120	350	320	1,25	215	44,75	28	123	10,0	9,0	93,4
BM 80	R	25000	375	750						130	130	380	350	1,75	224	46,25	32	128	11,0	8,5	116,8
BM 90	R	33500	350	700						140	140	400	370	2,75	236	49,25	32	132	11,0	7,5	136,7
BM 95	R	35000	300	600						150	150	420	390	2,75	249	53,25	36	137	12,0	6,5	159,3
BM 100	R	57500	250	500	UX	42500	210	750	84	150	150	450	410	3,75	276	56,25	36	156	12,0	11,5	198,4

The maximum transmissible torque is 2 times the specified nominal torque. See page 14 for determination of selection torque.
Keyway according to DIN 6885, page 1 • Tolerance of keyway width JS10.

Mounting

The customer attachment part is connected via a keyway connection with the outer ring. The customer must provide the key required for assembling the attachment part.

The tolerance of the shaft must be ISO h6 or j6 and the tolerance of the pilot diameter D of the attachment part must be ISO H7 or J7.

Example for ordering

Freewheel size BM 20, standard type and 30 mm bore:

- BM 20 R, d = 30 mm