Cage Freewheels BWX

for assembly with inner and outer ring with sprags

100-1

Mounting

The lateral guidance of the Cage Freewheels can be effected either by a shoulder on the outer ring or by guard rings or guard discs which are fixed in the outer ring. There must be no undercuts, recesses, shoulders or chamfers, or any eccentricity whatsoever, over dimension „B". For ease of assembly we recommend that the inner and outer races be chamfered at an angle of 15 degrees for a leghts of 3 mm.

Please note the technical points on page 108 regarding the sprag tracks.

Application as

- ◆ Backstop
- ◆ Overrunning Clutch
- ◆ Indexing Freewheel

Features

Cage Freewheels BWX are sprag freewheels to be installed between customer-supplied inner and outer rings.

Nominal torques up to 4 900 Nm.

Disengaging

When the outer ring is rotating the centrifugal force causes the sprags to lift off from the inner race. This reduces wear during freewheeling operation.

Engaging

When the outer ring is rotating the centrifugal force presses the sprags against the inner ring. This enhances the ability of the sprags to engage immediately when torque is applied.

Drag strips

To reduce wear during freewheeling operation between sprags and the inner race, drag strips made from wear-resistant beryllium copper alloy are attached to the inner cage. This results in increased friction between inner cage and inner race. This counteracts individual sprag activation during freewheeling operation, thereby greatly reducing sprag pressure on the inner race.

Brake clips

Some freewheel sizes are available with brake clips fitted on the outer cage to prevent further automatic rotation of the Cage Freewheel during rapid acceleration and deceleration of the outer ring (e.g. in indexing freewheels).

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**When viewing in directon X
the outer ring freewheels clockwise**
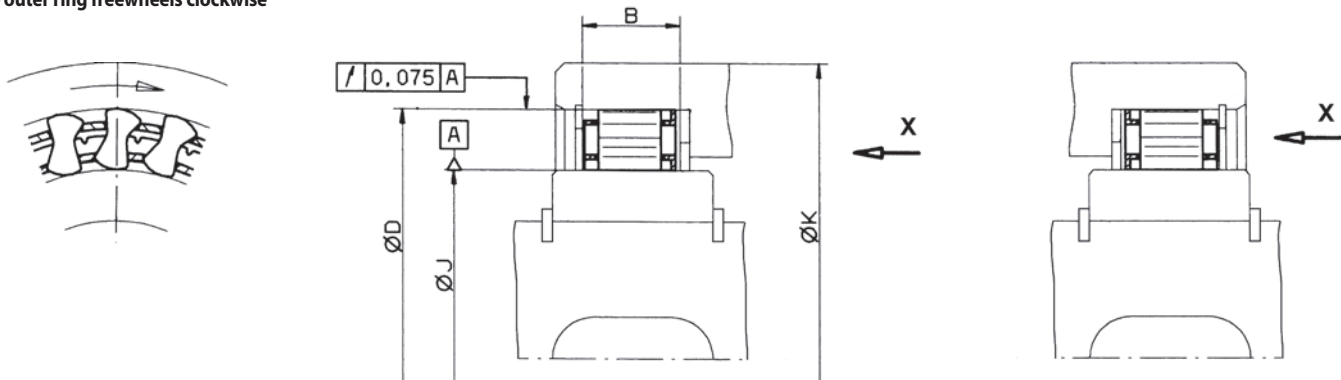
101-1

101-2

101-3

	Standard type For universal use	Dimensions							

Freewheel Size	Type	Nominal torque M_N Nm	J +0,008 -0,005 mm	D ±0,013 mm	B min. mm	K mm	Sprags Quantity	Drag strips Quantity	Brake clips Quantity	Design as ill.	Weight kg
BWX 133590A	Disengaging	63	22,225	38,887	10,0	44,0	12			101-2	0,03
BWX 13143A	Engaging	120	27,767	44,425	13,5	51,0	14			101-2	0,06
BWX 133392	Disengaging	280	38,092	54,750	16,0	71,0	18			101-3	0,09
BWX 1310145	Disengaging	180	41,275	57,937	13,5	74,2	14		3	101-2	0,07
BWX 132909A	Disengaging	360	44,450	61,112	16,0	78,5	20	2	3	101-2	0,10
BWX 133339	Disengaging	310	49,721	66,383	13,5	85,0	22	2	4	101-2	0,09
BWX 1310003	Disengaging	310	49,721	66,383	13,5	85,0	22		4	101-2	0,09
BWX 137222	Engaging	570	49,721	66,383	19,0	85,0	22			101-2	0,12
BWX 1310445	Disengaging	400	54,765	71,427	13,5	91,7	24			101-2	0,09
BWX 1310172	Engaging	540	54,765	71,427	16,0	91,7	24			101-2	0,12
BWX 1310226	Disengaging	520	54,765	71,427	16,0	91,7	24	2	4	101-2	0,12
BWX 136709	Engaging	770	54,765	71,427	21,0	91,7	24	3	10	101-2	0,16
BWX 1310147	Disengaging	1 000	54,765	71,427	25,4	91,7	24	3	8	101-2	0,20
BWX 136324	Engaging	600	57,760	74,427	19,0	95,0	26			101-3	0,14
BWX 1310080	Disengaging	670	72,217	88,882	13,5	115,0	30		4	101-2	0,12
BWX 13168	Engaging	1 300	72,217	88,882	21,0	115,0	30			101-3	0,20
BWX 134012	Engaging	1 300	72,217	88,882	21,0	115,0	30	4	10	101-3	0,20
BWX 137322	Disengaging	2 000	79,698[2]	96,363	25,4	124,0	34	5	12	101-2	0,28
BWX 138316	Disengaging	2 960	83,597[2]	102,596	25,4	131,6	34	5	12	101-2	0,30
BWX 13261A[1]	Disengaging	1 600	103,231[2]	119,893	16,0	154,0	40	6	10	101-3	0,19
BWX 13236	Disengaging	1 700	117,391[2]	136,391	16,0	175,3	30	5	6	101-3	0,25
BWX 133403B	Engaging	4 900	123,881[2]	142,880	25,4	188,0	44		11	101-2	0,46

Cage Freewheels BWX are available with short delivery times.
[1] With this Freewheel Size the centering flange of the inner cage is on the right hand side!
[2] Tolerance of the inner ring race diameter may be increased by ±0,013 mm!
The theoretical nominal torque applies only for ideal concentricity between the inner and outer ring.
The maximum transmissible torque is 2 times the specified nominal torque. See page 14 for determination of selection torque.

Example for ordering

Freewheel size BWX 13143A, standard type:

• BWX 13143A