MOTION & CONTROL
NSK

Cylindrical Roller Bearings
EW Series

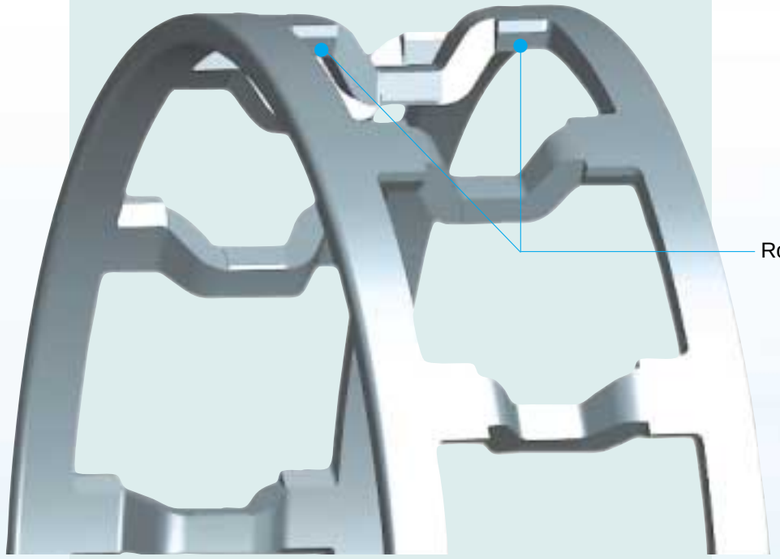
NSK has developed a higher load-carrying capacity pressed cage with low noise and superior cage strength. Our EW series is a standard cylindrical roller bearing that facilitates interchangeability across the globe, while offering better performance for every application.

New!

Cylindrical Roller Bearing

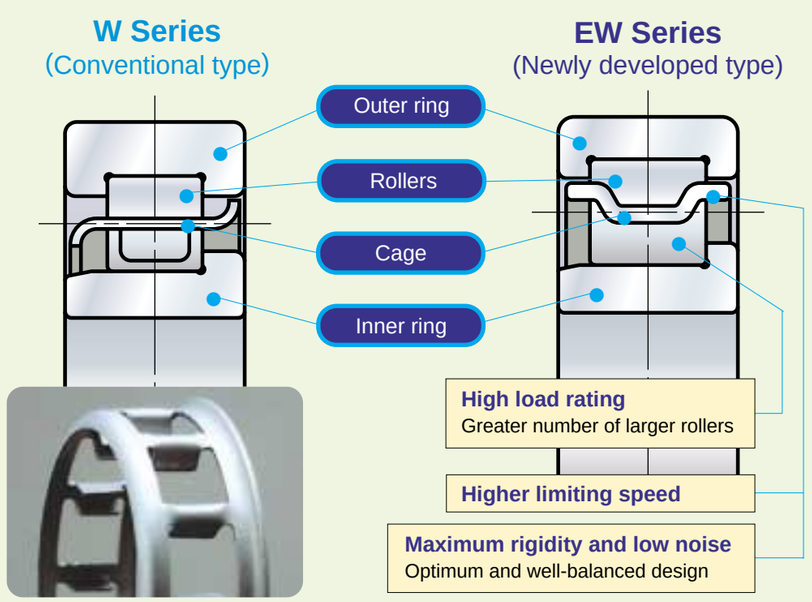
EW Series

A newly developed standard bearing



Design concept of our newly developed standard bearing—the EW series

Internal design comparison of the W series and EW series



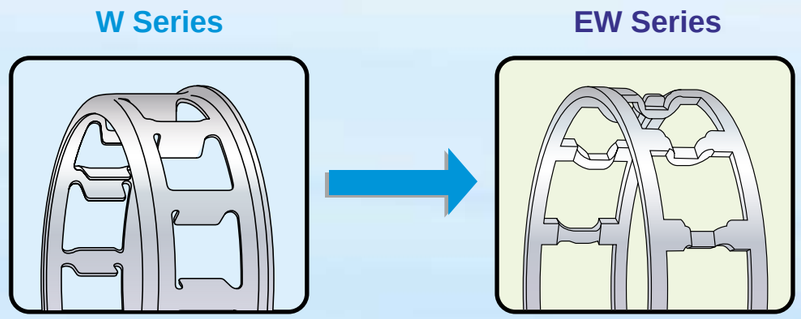
NSK has been supplying a standard cage for smaller-sized, single row cylindrical roller bearings as indicated here:

Standard bearings ———— W type (Pressed steel cage with flaps)
High load-carrying E type —— ET type (Polyamide resin cage)

In the 21st century, you can now take advantage of NSK's newly developed cylindrical roller bearing, the EW series, which combines the strengths and technologies of previous cages into a one-piece steel cage.

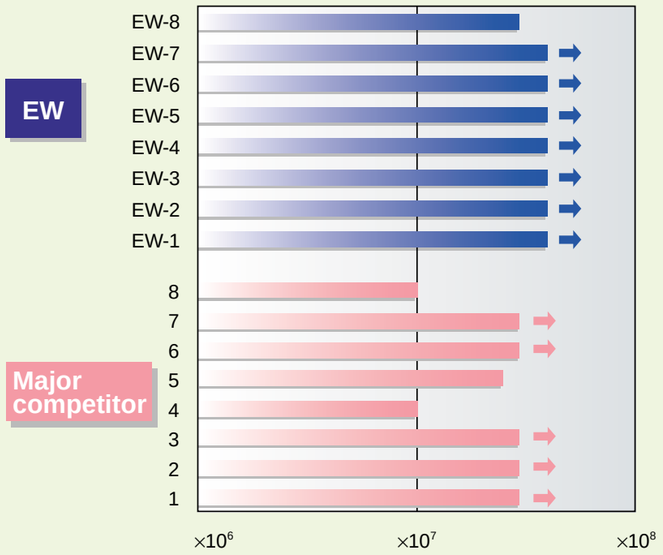
NSK has achieved a new design involving even newer concepts, while maintaining excellence in function and service life. Our EW series can meet your high load-carrying capacity needs for the new era.

EW Series Bearing Interchange Guide



High-Strength Cage

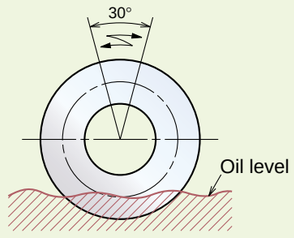
Cage strength test results



Number of oscillations until breakage

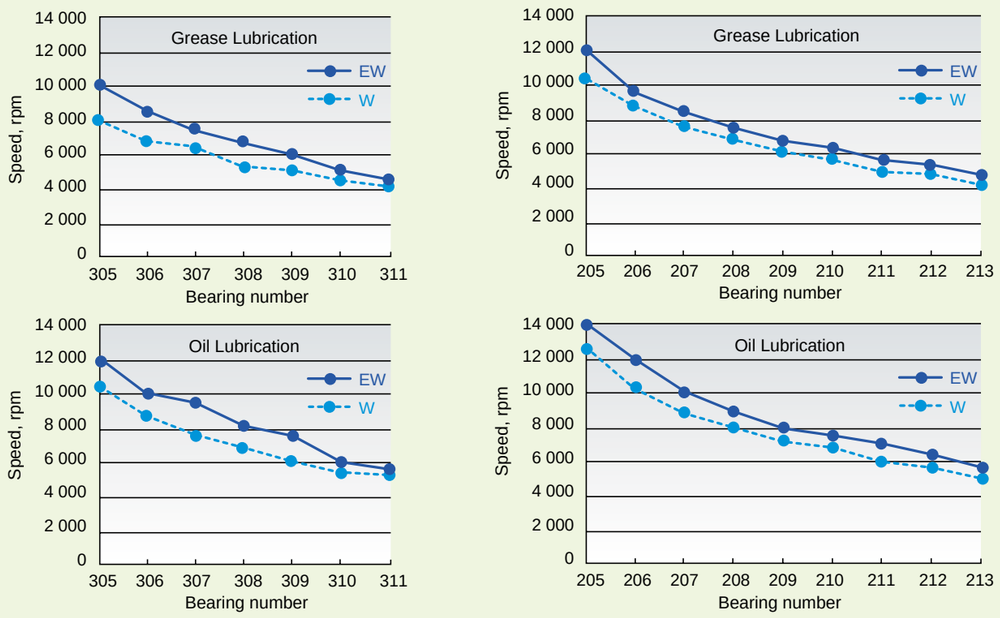
No breakage and test discontinued

Test conditions
Test bearing: NU308
Oscillating angle: 30°
Radial load: 7.4 kN
Lubrication method: oil bath



NSK's EW series showed greater cage strength performance than that of our major competitors.

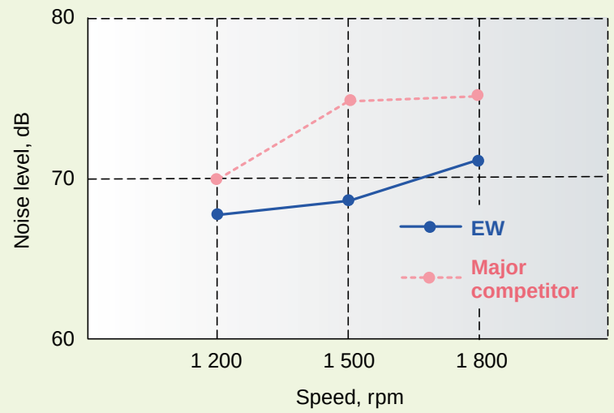
Limiting speed comparison of the W series and EW series



The EW series shows a 10 to 25 percent improvement in limiting speed compared to conventional W series.

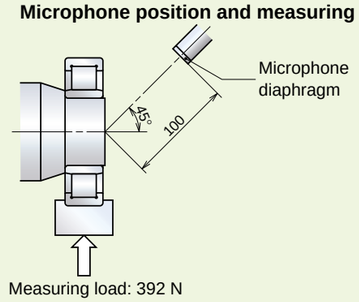
Low Noise

Noise measurement test results



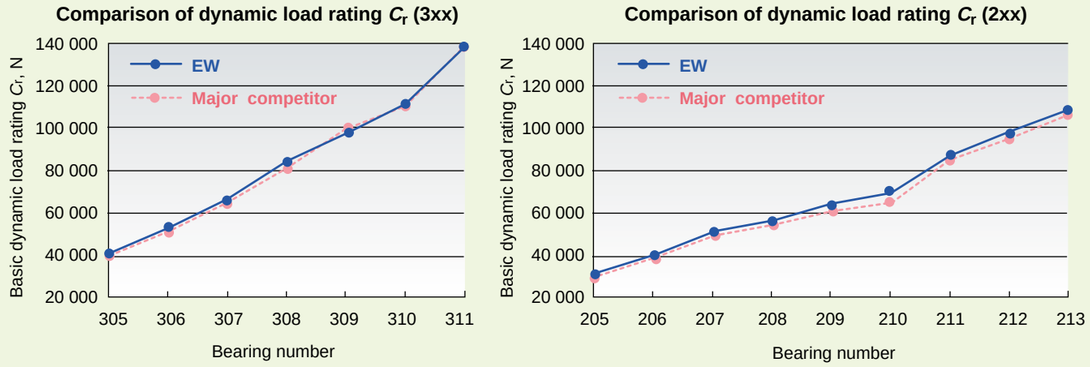
Measuring conditions
Bearing number: NU308
Method: JIS B1548
Radial load: 392 N
Speed: 1 200 to 1 800 rpm

Microphone position and measuring load



The EW series is 3 to 7 dB quieter than that of our major competitors.

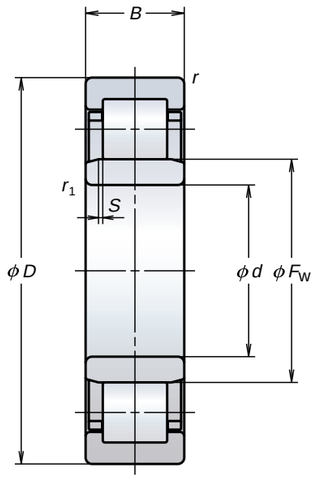
Higher Load Rating



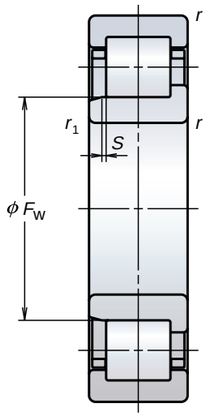
Load rating of the EW series is up to 4% higher than that of our major competitors.

EW Series Bearing Table

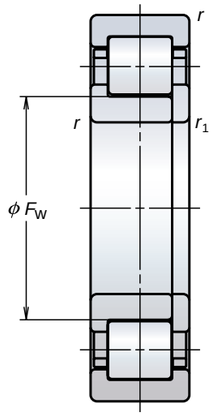
NU

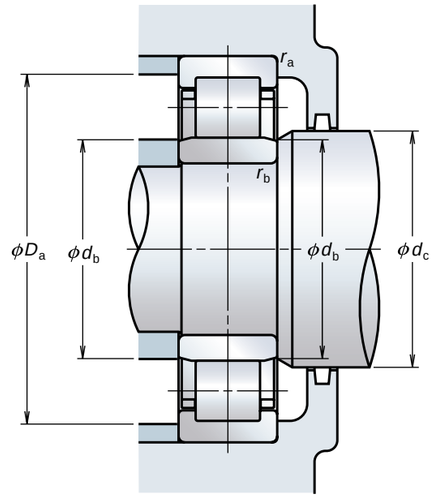


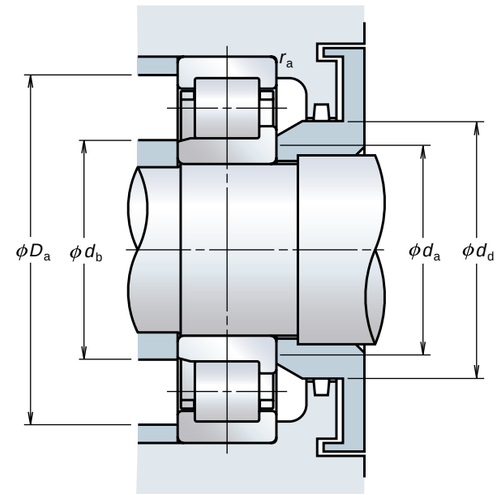
NJ



NUP







EW series 305-311 and 205-213 of NU, NJ, NUP.

Boundary Dimensions (mm)						Basic Load Ratings [N]		[kgf]		Limiting Speeds [rpm]		Bearing Numbers			Abutment and Fillet Dimensions (mm)								Permissible Axial Movement S (mm)
d	D	B	r min	r_1 min	F_w	C_r	C_{or}	C_r	C_{or}	Grease	Oil	NU	NJ	NUP	d_a min	d_b min	d_b max	d_c min	d_d min	D_a max	r_a max	r_b max	
25	52	15	1	0.6	31.5	29 300	27 700	2 990	2 830	12 000	14 000	NU205EW	NJ	NUP	30	29	30	34	37	47	1	0.6	1.2
	62	17	1.1	1.1	34	41 500	37 500	4 250	3 800	10 000	12 000	NU305EW	NJ	NUP	31.5	31.5	32	37	40	55.5	1	1	1.2
30	62	16	1	0.6	37.5	39 000	37 500	4 000	3 800	9 500	12 000	NU206EW	NJ	NUP	35	34	36	40	44	57	1	0.6	1.2
	72	19	1.1	1.1	40.5	53 000	50 000	5 400	5 100	8 500	10 000	NU306EW	NJ	NUP	36.5	36.5	39	44	48	65.5	1	1	1.2
35	72	17	1.1	0.6	44	50 500	50 000	5 150	5 100	8 500	10 000	NU207EW	NJ	NUP	41.5	39	42	46	50	65.5	1	0.6	1.2
	80	21	1.5	1.1	46.2	66 500	65 500	6 800	6 650	7 500	9 500	NU307EW	NJ	NUP	43	41.5	44	48	53	72	1.5	1	1.2
40	80	18	1.1	1.1	49.5	55 500	55 500	5 700	5 650	7 500	9 000	NU208EW	NJ	NUP	46.5	46.5	48	52	56	73.5	1	1	1.2
	90	23	1.5	1.5	52	83 000	81 500	8 500	8 300	6 700	8 000	NU308EW	NJ	NUP	48	48	50	55	60	82	1.5	1.5	1.2
45	85	19	1.1	1.1	54.5	63 000	66 500	6 450	6 800	6 700	8 000	NU209EW	NJ	NUP	51.5	51.5	52	57	61	78.5	1	1	1.2
	100	25	1.5	1.5	58.5	97 500	98 500	9 950	10 000	6 000	7 500	NU309EW	NJ	NUP	53	53	56	60	66	92	1.5	1.5	1.4
50	90	20	1.1	1.1	59.5	69 000	76 500	7 050	7 800	6 300	7 500	NU210EW	NJ	NUP	56.5	56.5	57	62	67	83.5	1	1	1.7
	110	27	2	2	65	110 000	113 000	11 200	11 500	5 000	6 000	NU310EW	NJ	NUP	59	59	63	67	73	101	2	2	1.4
55	100	21	1.5	1.1	66	86 500	98 500	8 800	10 100	5 600	7 100	NU211EW	NJ	NUP	63	61.5	64	68	73	92	1.5	1	1.2
	120	29	2	2	70.5	137 000	143 000	14 000	14 600	4 500	5 600	NU311EW	NJ	NUP	64	64	68	72	80	111	2	2	1.4
60	110	22	1.5	1.5	72	97 500	107 000	9 950	10 900	5 300	6 300	NU212EW	NJ	NUP	68	68	70	75	80	102	1.5	1.5	1.2
65	120	23	1.5	1.5	78.5	108 000	119 000	11 000	12 100	4 800	5 600	NU213EW	NJ	NUP	73	73	76	81	87	112	1.5	1.5	1.4