

CYLINDRICAL ROLLER BEARINGS E SERIES



As one of the world's leading manufacturers of rolling bearings, linear technology components and steering systems, we can be found on almost every continent – with production facilities, sales offices and technology centres – because our customers appreciate short decision-making channels, prompt deliveries and local service.



The NSK company

NSK commenced operations as the first Japanese manufacturer of rolling bearings back in 1916. Ever since, we have been continuously expanding and improving not only our product portfolio but also our range of services for various industrial sectors. In this context, we develop technologies in the fields of rolling bearings, linear systems, components for the automotive industry and mechatronic systems. Our research and production facilities in Europe, Americas and Asia are linked together in a global technology network. Here

we concentrate not only on the development of new technologies, but also on the continuous optimisation of quality – at every process stage.

Among other things, our research activities include product design, simulation applications using a variety of analytical systems and the development of different steels and lubricants for rolling bearings.

Partnership based on trust – and trust based on quality

Total Quality by NSK: The synergies of our global network of NSK Technology Centres. Just one example of how we meet our requirements for high quality.

NSK is one of the leading companies with a long tradition in patent applications for machine parts. In our worldwide research centres, we not only concentrate on the development of new technologies, but also on the continual improvement of quality based on the integrated technology platform of

tribology, material technology, analysis and mechatronics.
More about NSK at www.nsk-europe.com or call us on +44 (0)1636 605123



Cylindrical Roller Bearings



NSK cylindrical roller bearings can be used in all applications requiring a high radial load as well as easy assembly. Both bearing rings can, if necessary, be fitted tightly. Cylindrical roller bearings have a high radial load capacity and are suitable for high speeds.

The modified design of the rolling contacts helps to avoid harmful edge stresses. Cylindrical roller bearings are produced in a number of designs depending on the various demands on the bearings during use.

The NU-type bearings have two fixed ribs on the outer ring and an inner ring without a rib. Construction type N has two fixed ribs on the inner ring and none on the outer ring. Both types allow trouble-free axial movement between the rings and can therefore be used as free end bearing bearings only. The most commonly used single-row cylindrical roller bearing is the NU model.

The outer ring of construction type NJ has two fixed ribs and the inner ring one fixed rib. This enables a shaft guidance in an axial direction.

Cylindrical roller bearings of the construction type NUP have two fixed ribs on the outer ring, one fixed rib on the inner ring and one loose rib. This type is installed as a fixed bearing as it takes over the axial shaft guidance in both directions. Bearings of the NJ type featuring HJ thrust collars can also be used as fixed bearings.

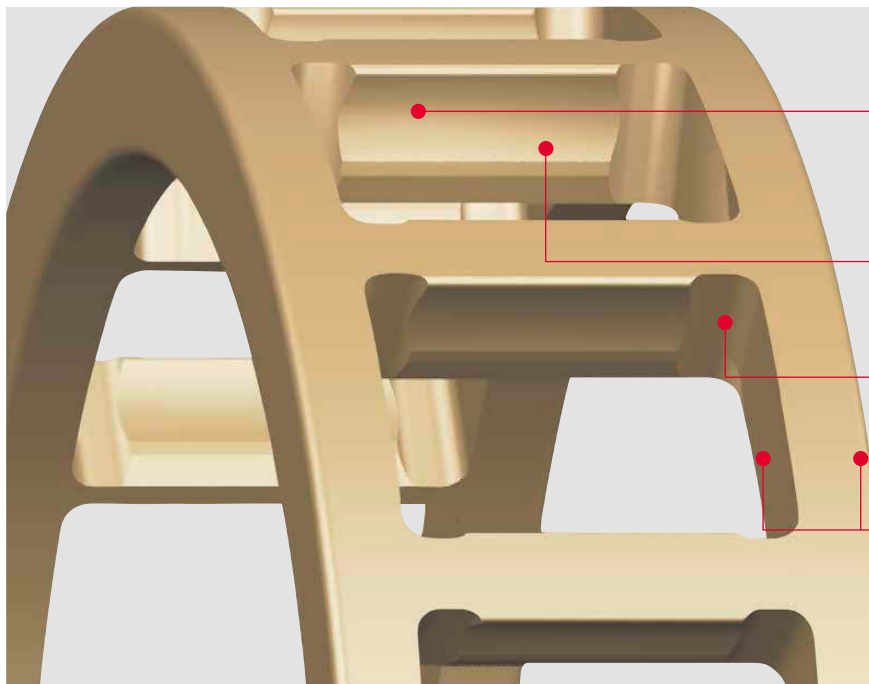
EM + EW Series – Design Concept of our latest developed Standard Bearing

EM Series

You can now take advantage of NSK's latest developed cylindrical roller bearing, the EM Series, which combines the strengths and technologies of previous cage designs into a one-piece brass roller-guided cage.

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

The latest developed Standard Bearing



Greater accuracy of the roller guidance achieved through special pocket profiling
optimised oil film

Improved oil flow

Large pocket corner radii relieve stress concentrations on the cage

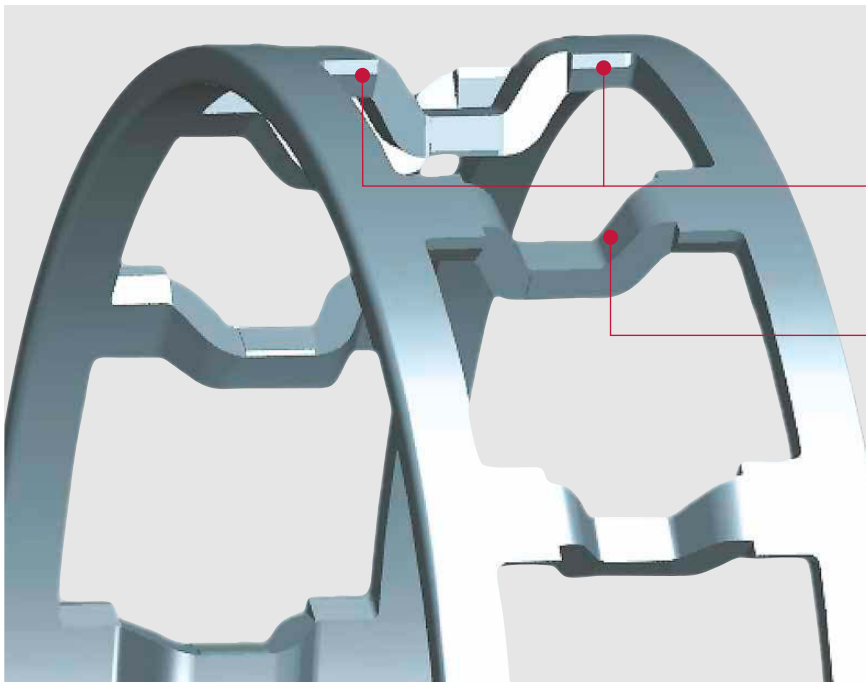
- › Trouble-free packing of grease
- › Quieter operation

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.

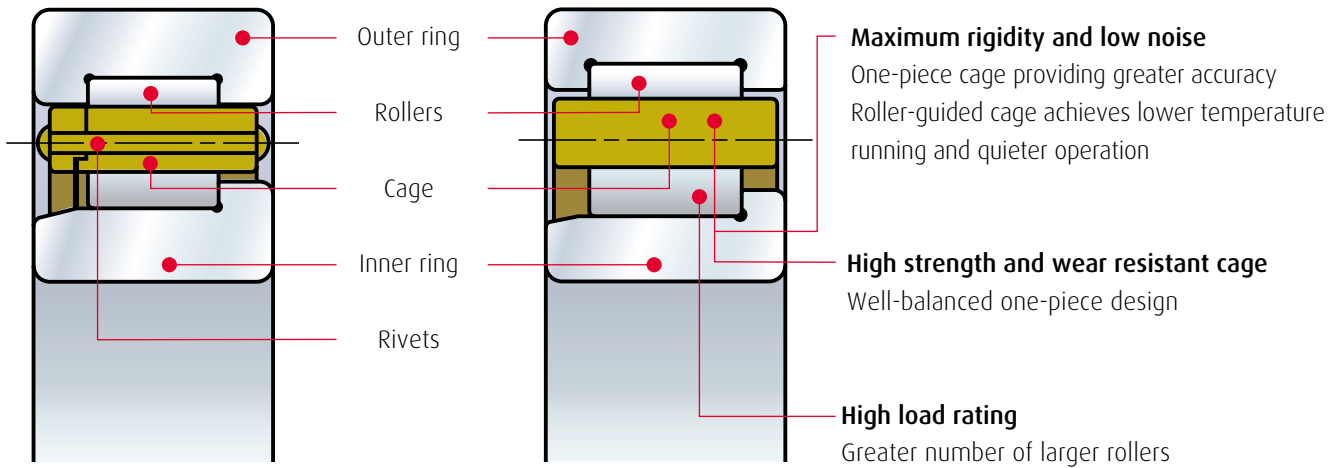
The latest developed Standard Bearing



Roller guide face

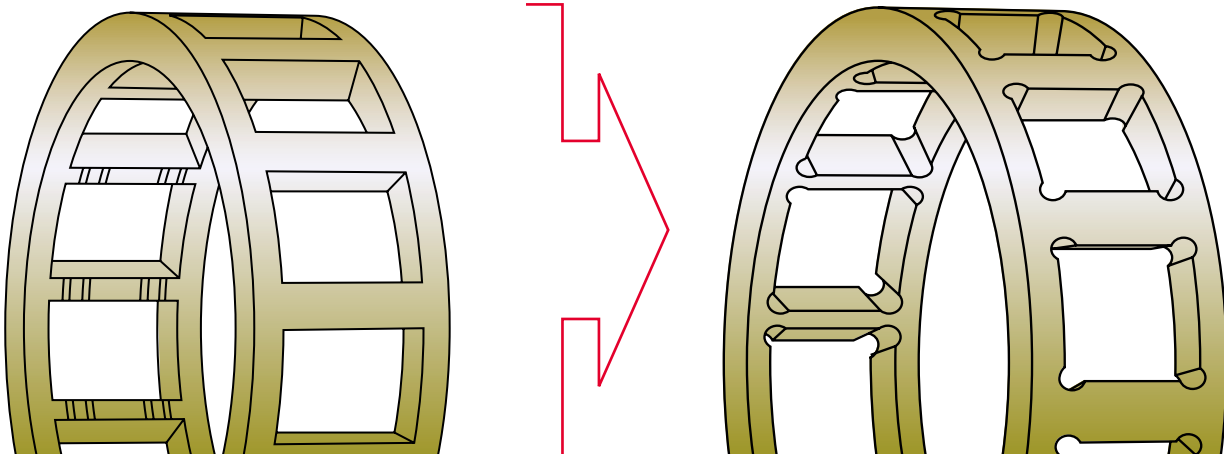
- › Higher limiting speed
- › Maximum rigidity
- › Low noise

Internal Design Guide



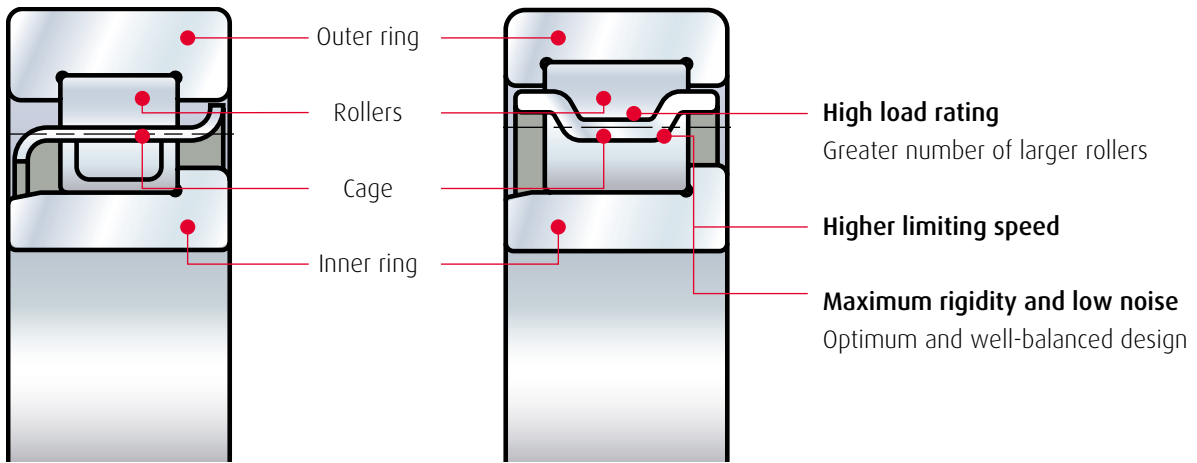
M Series

EM Series



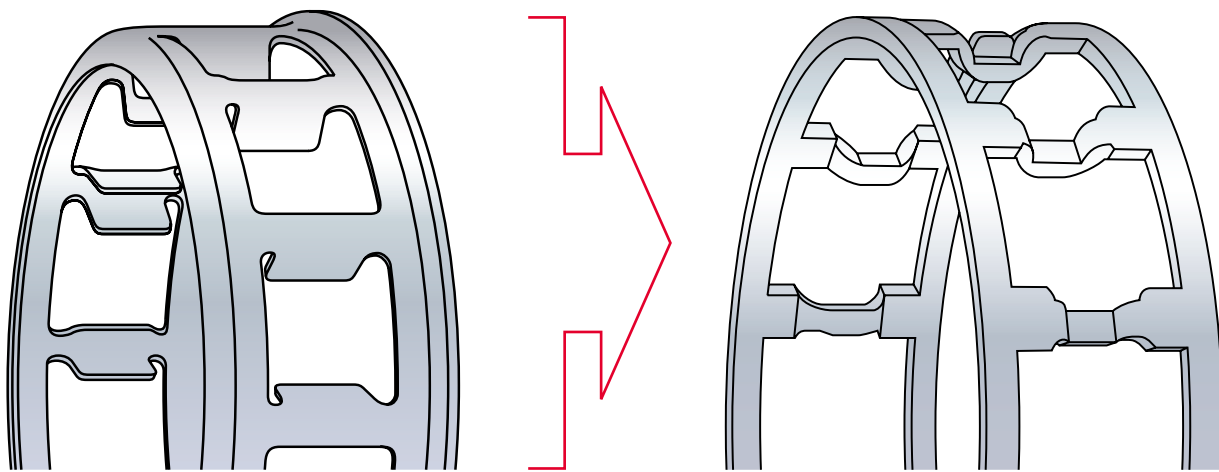
M Series

EM Series



W Series

EW Series



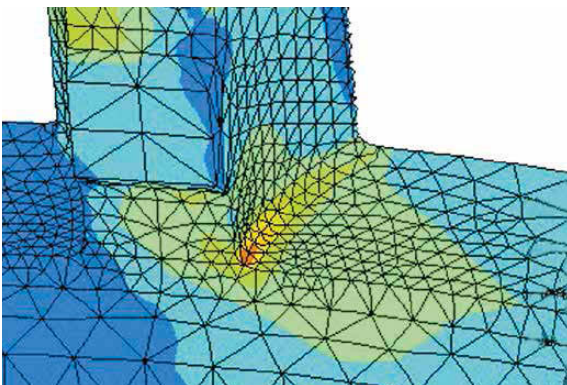
W Series

EW Series

EM Series – Results of FEM Analysis

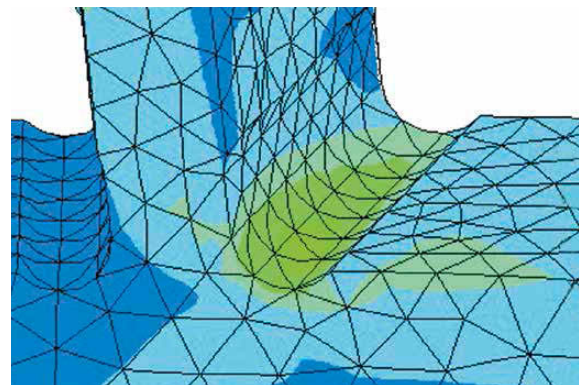
Tests confirm that the stress levels of EM series cages are 50% lower than M Series.

M Series



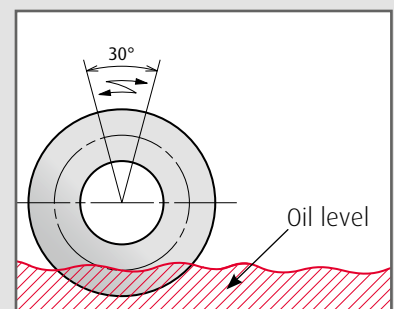
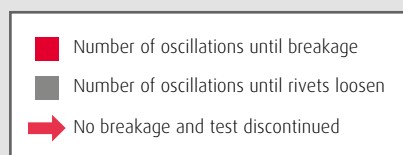
Maximum stress: 210 MPa

EM Series



Maximum stress: 110 MPa

Cage strength test results

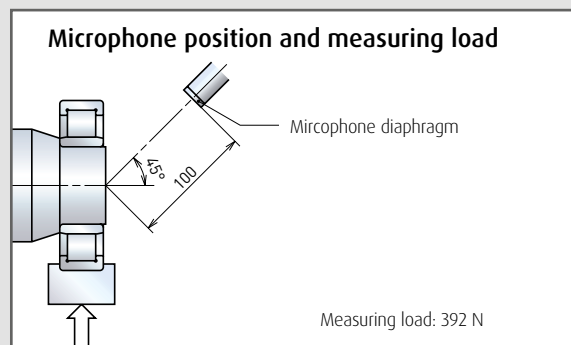
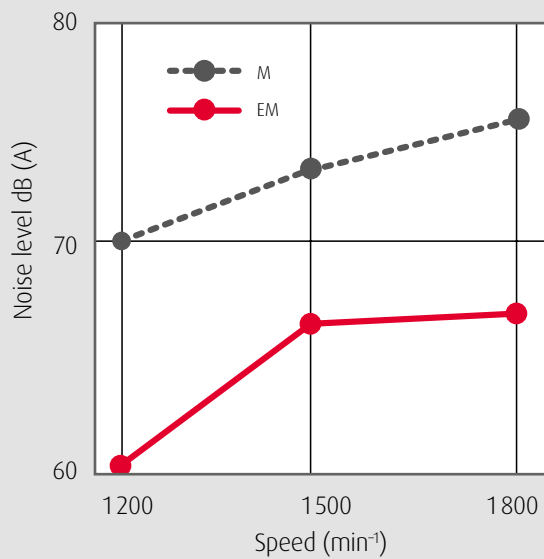


Test conditions

Test bearing: NU308
 Oscillation angle: 30°
 Radial load: 7,4 kN
 Lubrication method: Oil bath

The tests confirm the EM series cages performance and strength.

Noise measurement test results



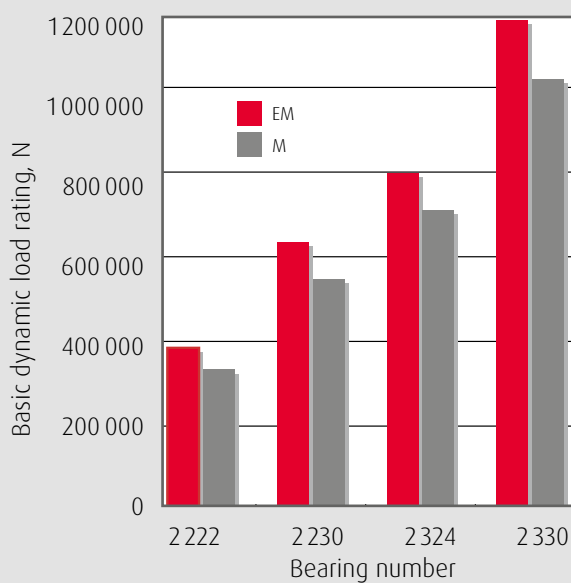
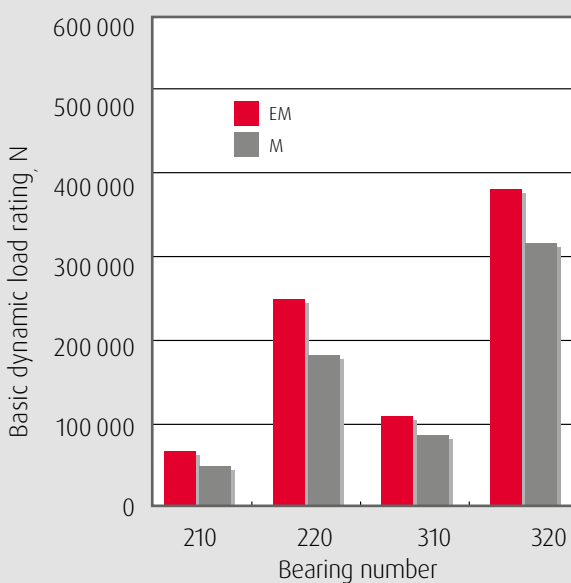
Measuring conditions

Bearing number: NU308
 Method: JIS B1 548
 Radial load: 392 N
 Speed: 1200 to 1800 min⁻¹

The EM series exhibited noise levels 5 dB lower than two-piece cage designs.

Higher Load Rating

Comparison of dynamic load rating C_r

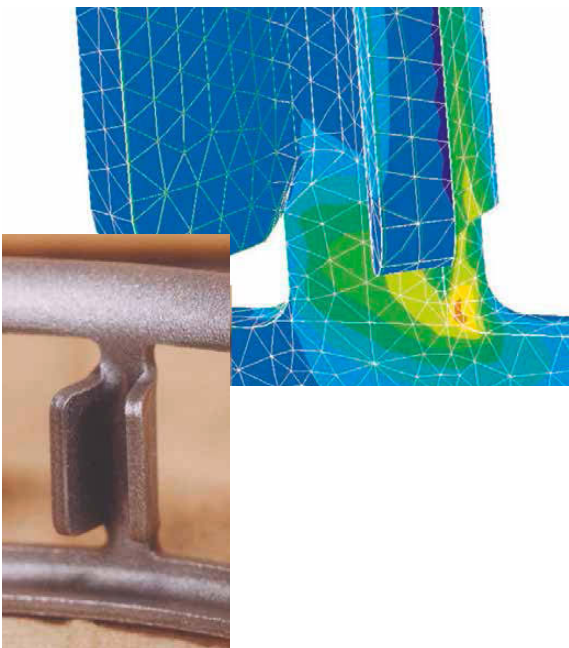


The EM series benefits from a 30% higher load-carrying capacity than the conventional M series.

EW Series – Results of FEM Analysis

Tests confirm that the stress levels of NSK's EW series cages are 40% lower than that of cages in conventional W Series.

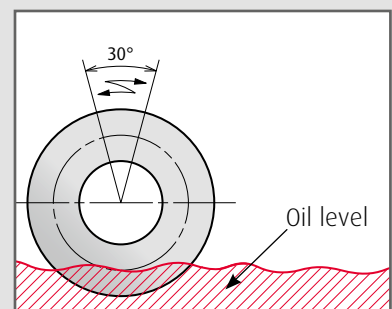
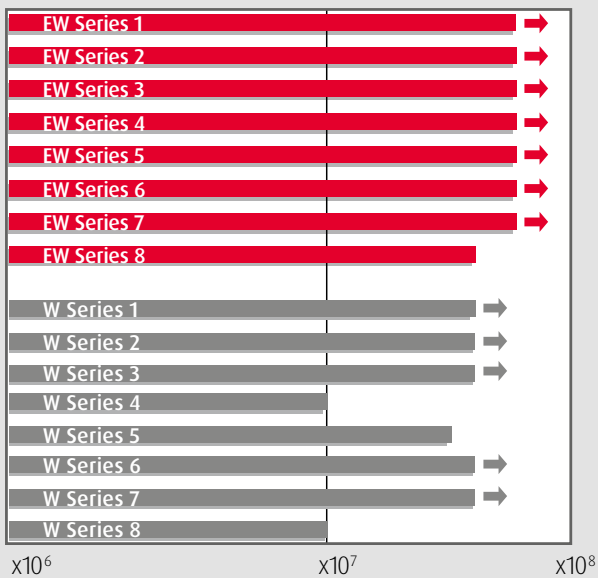
W Series



EW Series



Cage strength test results



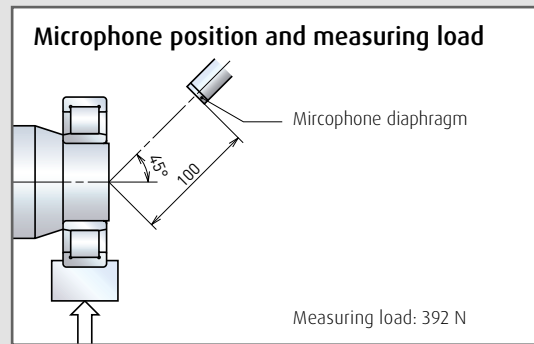
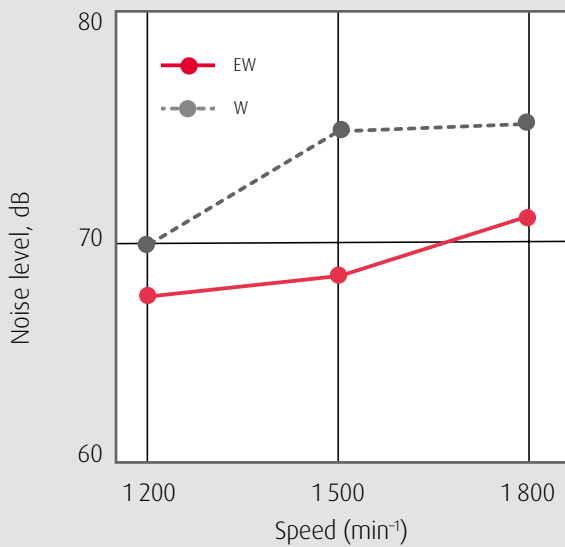
■ Number of oscillations until breakages
■ No breakage and Test discontinued
➔ No breakage and Test discontinued
➔ No breakage and Test discontinued

Test conditions

Test bearing: NU308
 Oscillating angle: 30°
 Radial load: 7,4 kN
 Lubrication method: oil bath

The tests confirm the EW series cage performance and strength.

Noise measurements test results



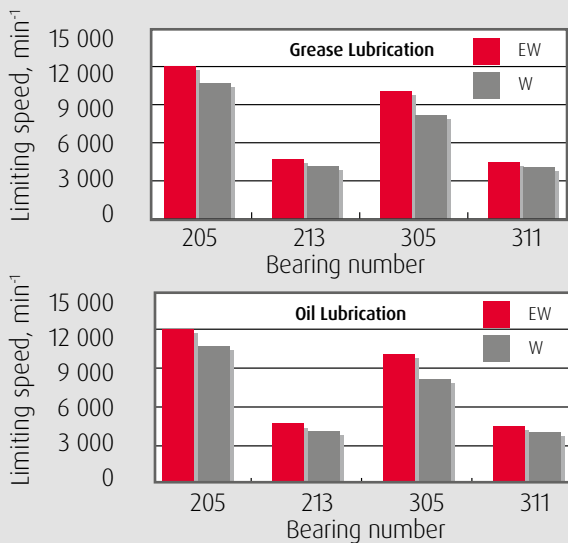
Measuring conditions

Bearing number: NU308
 Method: JIS B1548
 Radial load: 392 N
 Speed: 1200-1800 min⁻¹

The EW Series is 3 to 7 dB quieter than W series.

Higher Limiting Speed

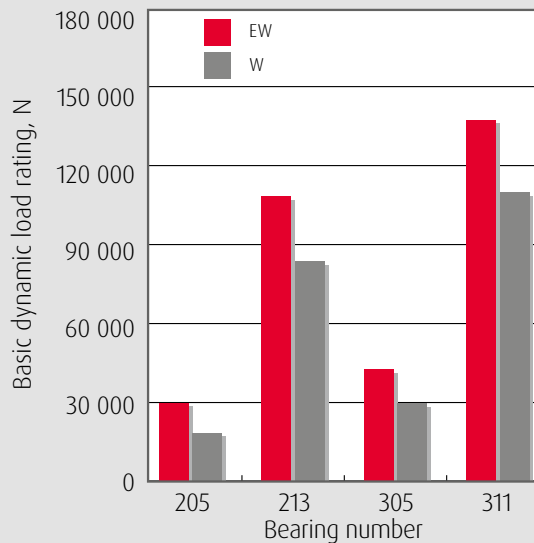
Comparison of limiting speed



The limiting speed of the EW Series is 10 - 25% higher than that of conventional W Series.

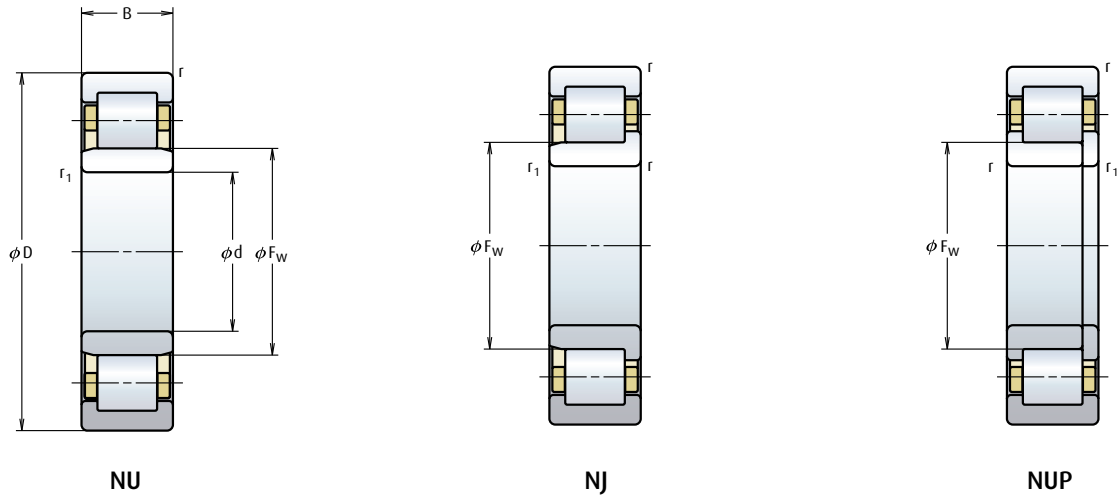
Higher Load Rating

Comparison of dynamic load rating C_r

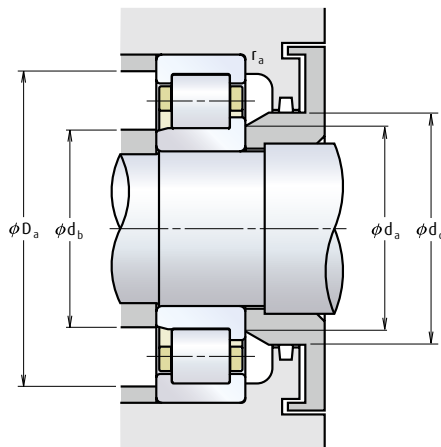
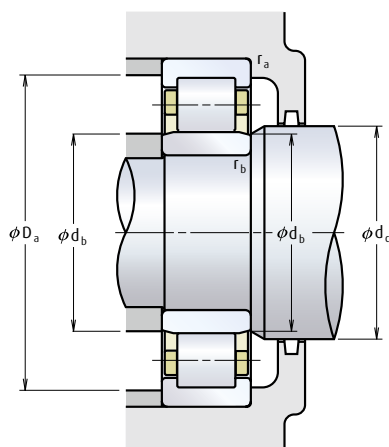


The load rating of the EW Series is 10 - 60% higher than that of conventional W Series.

EM Series – Bearing Tables

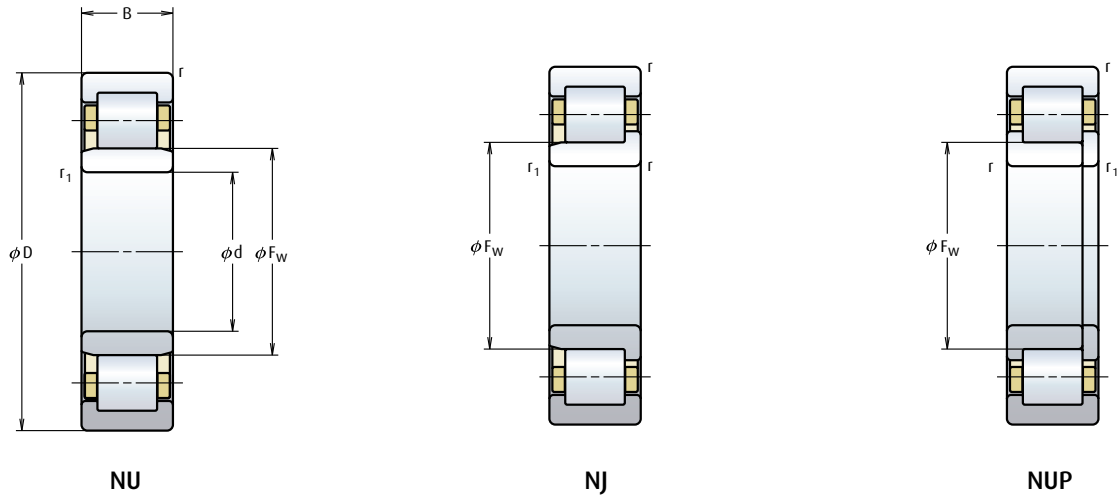


Boundary Dimensions (mm)					Basic Load Ratings (N)		Limiting Speeds (min ⁻¹)		
d	D	B	r min	r ₁ min	F _w	C _r	C _{or}	Grease	Oil
25	52	15	1.0	0.6	31.5	29,300	27,700	13,000	16,000
	62	17	1.1	1.1	34.0	41,500	37,500	10,500	13,000
30	62	16	1.0	0.6	37.5	39,000	37,500	11,000	13,000
	72	19	1.1	1.1	40.5	53,000	50,000	8,500	11,000
35	72	17	1.1	0.6	44.0	50,500	50,000	9,500	11,000
	80	21	1.5	1.1	46.2	66,500	65,500	8,000	9,500
40	80	18	1.1	1.1	49.5	55,500	55,500	8,500	10,000
	90	23	1.5	1.5	52.0	83,000	81,500	6,700	8,500
45	85	19	1.1	1.1	54.5	63,000	66,500	7,500	9,000
	100	25	1.5	1.5	58.5	97,500	98,500	6,300	7,500
50	90	20	1.1	1.1	59.5	69,000	76,500	7,100	8,500
	110	27	2.0	2.0	65.0	110,000	113,000	5,600	6,700
55	100	21	1.5	1.1	66.0	86,500	98,500	6,300	7,500
	120	29	2.0	2.0	70.5	137,000	143,000	5,000	6,300
60	110	22	1.5	1.5	72.0	97,500	107,000	6,000	7,100
	130	31	2.1	2.1	77.0	150,000	157,000	4,800	5,600
65	120	23	1.5	1.5	78.5	108,000	119,000	5,300	6,300
	140	33	2.1	2.1	82.5	181,000	191,000	4,300	5,300
70	125	24	1.5	1.5	83.5	119,000	137,000	5,000	6,300
	150	35	2.1	2.1	89.0	205,000	222,000	4,000	5,000
75	130	25	1.5	1.5	88.5	130,000	156,000	4,800	6,000
	160	37	2.1	2.1	95.0	240,000	263,000	3,800	4,800
80	140	26	2.0	2.0	95.3	139,000	167,000	4,500	5,300
	170	39	2.1	2.1	101.0	256,000	282,000	3,600	4,300
85	150	28	2.0	2.0	100.5	167,000	199,000	4,300	5,000
	180	41	3.0	3.0	108.0	291,000	330,000	3,400	4,000

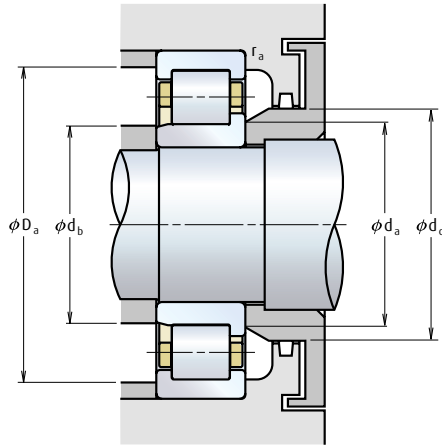
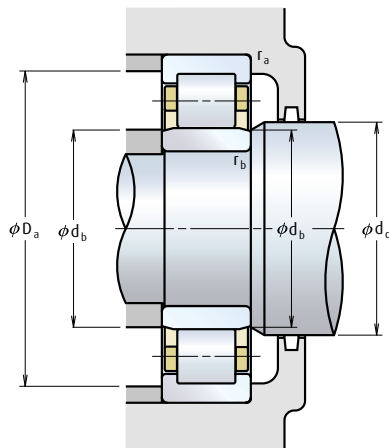


Bearing Number			Abutment and Fillet Dimensions (mm)								Permissible Axial Movement (mm)	Mass (kg) approx
NU	NJ	NUP	d_a	d_b		d_c	d_d	D_a	r_a	r_b		
			min	min	max	min	min	max	max	max		
NU205EM	NJ	NUP	30.0	29.0	30	34	37	47.0	1.0	0.6	1.2	0.155
NU305EM	NJ	NUP	31.5	31.5	32	37	40	55.5	1.0	1.0	1.2	0.279
NU206EM	NJ	NUP	35.0	34.0	36	40	44	57.0	1.0	0.6	1.2	0.236
NU306EM	NJ	NUP	36.5	36.5	39	44	48	65.5	1.0	1.0	1.2	0.410
NU207EM	NJ	NUP	41.5	39.0	42	46	50	65.5	1.0	0.6	1.2	0.341
NU307EM	NJ	NUP	43.0	41.5	44	48	53	72.0	1.5	1.0	1.2	0.547
NU208EM	NJ	NUP	46.5	46.5	48	52	56	73.5	1.0	1.0	1.2	0.430
NU308EM	NJ	NUP	48.0	48.0	50	55	60	82.0	1.5	1.5	1.2	0.751
NU209EM	NJ	NUP	51.5	51.5	52	57	61	78.5	1.0	1.0	1.2	0.492
NU309EM	NJ	NUP	53.0	53.0	56	60	66	92.0	1.5	1.5	1.4	1.010
NU210EM	NJ	NUP	56.5	56.5	57	62	67	83.5	1.0	1.0	1.7	0.564
NU310EM	NJ	NUP	59.0	59.0	63	67	73	101.0	2.0	2.0	1.4	1.320
NU211EM	NJ	NUP	63.0	61.5	64	68	73	92.0	1.5	1.0	1.2	0.736
NU311EM	NJ	NUP	64.0	64.0	68	72	80	111.0	2.0	2.0	1.4	1.670
NU212EM	NJ	NUP	68.0	68.0	70	75	80	102.0	1.5	1.5	1.2	0.930
NU312EM	NJ	NUP	71.0	71.0	75	79	86	119.0	2.0	2.0	1.5	2.060
NU213EM	NJ	NUP	73.0	73.0	76	81	87	112.0	1.5	1.5	1.4	1.170
NU313EM	NJ	NUP	76.0	76.0	80	85	93	129.0	2.0	2.0	1.5	2.560
NU214EM	NJ	NUP	78.0	78.0	81	86	92	117.0	1.5	1.5	1.4	1.290
NU314EM	NJ	NUP	81.0	81.0	86	92	100	139.0	2.0	2.0	1.5	3.090
NU215EM	NJ	NUP	83.0	83.0	86	90	96	122.0	1.5	1.5	1.4	1.440
NU315EM	NJ	NUP	86.0	86.0	92	97	106	149.0	2.0	2.0	1.4	3.730
NU216EM	NJ	NUP	89.0	89.0	92	97	104	131.0	2.0	2.0	1.4	1.700
NU316EM	NJ	NUP	91.0	91.0	98	105	114	159.0	2.0	2.0	1.5	4.450
NU217EM	NJ	NUP	94.0	94.0	98	104	110	141.0	2.0	2.0	1.3	2.110
NU317EM	NJ	NUP	98.0	98.0	105	110	119	167.0	2.5	2.5	2.0	5.260

EM Series – Bearing Tables

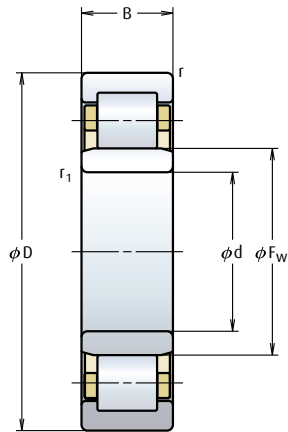


Boundary Dimensions (mm)						Basic Load Ratings (N)		Limiting Speeds (min ⁻¹)	
d	D	B	r min	r ₁ min	F _w	C _r	C _{or}	Grease	Oil
90	160	30	2.0	2.0	107.0	182,000	217,000	4,000	4,800
	190	43	3.0	3.0	113.5	315,000	355,000	3,200	3,800
95	170	32	2.1	2.1	112.5	220,000	265,000	3,800	4,500
	200	45	3.0	3.0	121.5	335,000	385,000	3,000	3,600
100	180	34	2.1	2.1	119.0	249,000	305,000	3,600	4,300
	215	47	3.0	3.0	127.5	380,000	425,000	2,800	3,400
105	190	36	2.1	2.1	125.0	262,000	310,000	3,400	4,000
	225	49	3.0	3.0	133.0	425,000	480,000	2,600	3,200
110	200	38	2.1	2.1	132.5	293,000	365,000	3,200	3,800
	200	53	2.1	2.1	132.5	385,000	515,000	2,800	3,400
	240	50	3.0	3.0	143.0	450,000	525,000	2,600	3,000
120	215	40	2.1	2.1	143.5	335,000	420,000	3,000	3,400
	215	58	2.1	2.1	143.5	450,000	620,000	2,600	3,200
	260	55	3.0	3.0	154.0	530,000	610,000	2,200	2,800
	260	86	3.0	3.0	154.0	795,000	1,030,000	2,000	2,600
130	230	40	3.0	3.0	153.5	365,000	455,000	2,600	3,200
	230	64	3.0	3.0	153.5	530,000	735,000	2,400	3,000
	280	58	4.0	4.0	167.0	615,000	735,000	2,200	2,600
	280	93	4.0	4.0	167.0	920,000	1,230,000	1,900	2,400
140	250	42	3.0	3.0	169.0	395,000	515,000	2,400	3,000
	250	68	3.0	3.0	169.0	550,000	790,000	2,200	2,800
	300	62	4.0	4.0	180.0	665,000	795,000	2,000	2,400
	300	102	4.0	4.0	180.0	1,020,000	1,380,000	1,700	2,200
150	270	45	3.0	3.0	182.0	450,000	595,000	2,200	2,800
	270	73	3.0	3.0	182.0	635,000	930,000	2,000	2,600
	320	65	4.0	4.0	193.0	760,000	920,000	1,800	2,200
	320	108	4.0	4.0	193.0	1,160,000	1,600,000	1,600	2,000

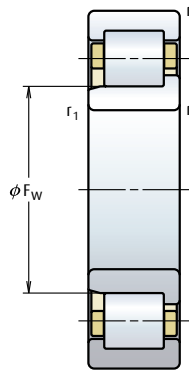


Bearing Number			Abutment and Fillet Dimensions (mm)								Permissible Axial Movement (mm)	Mass (kg) approx
NU	NJ	NUP	d _a min	d _b min max		d _c min	d _d min	D _a max	r _a max	r _b max		
NU218EM	NJ	NUP	99	99	104	109	116	151	2.0	2.0	1.4	2.60
NU318EM	NJ	NUP	103	103	111	117	127	177	2.5	2.5	1.5	6.10
NU219EM	NJ	NUP	106	106	110	116	123	159	2.0	2.0	1.4	3.17
NU319EM	NJ	NUP	108	108	118	124	134	187	2.5	2.5	1.5	7.13
NU220EM	NJ	NUP	111	111	116	122	130	169	2.0	2.0	1.4	3.81
NU320EM	NJ	NUP	113	113	124	132	143	202	2.5	2.5	1.8	8.63
NU221EM	NJ	NUP	116	116	121	129	137	179	2.0	2.0	1.4	4.58
NU321EM	NJ	NUP	118	118	131	137	149	212	2.5	2.5	1.8	9.84
NU222EM	NJ	NUP	121	121	129	135	144	189	2.0	2.0	1.4	5.37
NU222EM	NJ	NUP	121	121	129	135	144	189	2.0	2.0	1.4	7.65
NU322EM	NJ	NUP	123	123	139	145	158	227	2.5	2.5	3.8	11.80
NU224EM	NJ	NUP	131	131	140	146	156	204	2.0	2.0	1.5	6.43
NU224EM	NJ	NUP	131	131	140	146	156	204	2.0	2.0	2.0	9.51
NU324EM	NJ	NUP	133	133	150	156	171	247	2.5	2.5	1.8	15.00
NU2324EM	NJ	NUP	133	133	150	156	171	247	2.5	2.5	2.8	25.00
NU226EM	NJ	NUP	143	143	150	158	168	217	2.5	2.5	1.5	8.03
NU226EM	NJ	NUP	143	143	150	158	168	217	2.5	2.5	3.0	9.44
NU326EM	NJ	NUP	146	146	163	169	184	264	3.0	3.0	2.3	18.70
NU2326EM	NJ	NUP	146	146	163	169	184	264	3.0	3.0	2.3	30.00
NU228EM	NJ	NUP	153	153	165	171	182	237	2.5	2.5	1.5	9.38
NU228EM	NJ	NUP	153	153	165	171	182	237	2.5	2.5	2.5	15.20
NU328EM	NJ	NUP	156	156	176	182	198	284	3.0	3.0	3.3	22.80
NU2328EM	NJ	NUP	156	156	176	182	198	284	3.0	3.0	2.8	37.70
NU230EM	NJ	NUP	163	163	177	184	196	257	2.5	2.5	1.5	11.90
NU230EM	NJ	NUP	163	163	177	184	196	257	2.5	2.5	3.0	19.30
NU330EM	NJ	NUP	166	166	188	195	213	304	3.0	3.0	3.2	27.10
NU2330EM	NJ	NUP	166	166	188	195	213	304	3.0	3.0	3.2	45.10

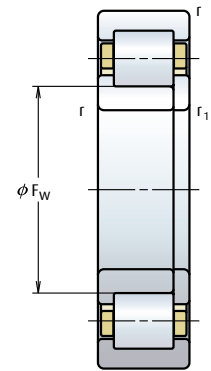
EM Series – Bearing Tables



NU

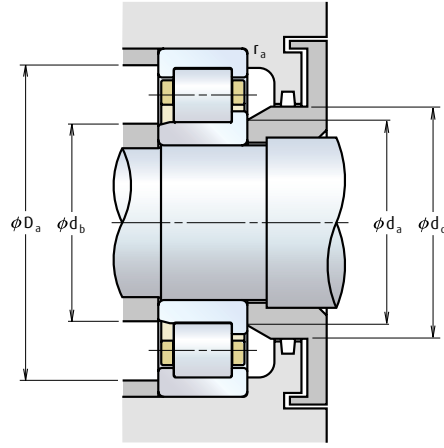
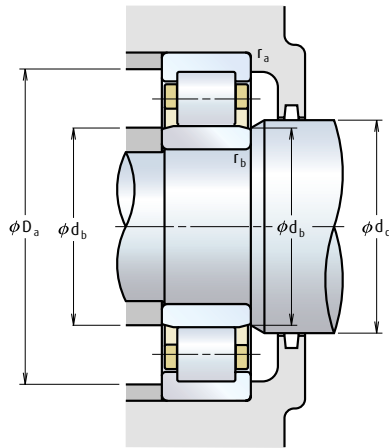


NJ



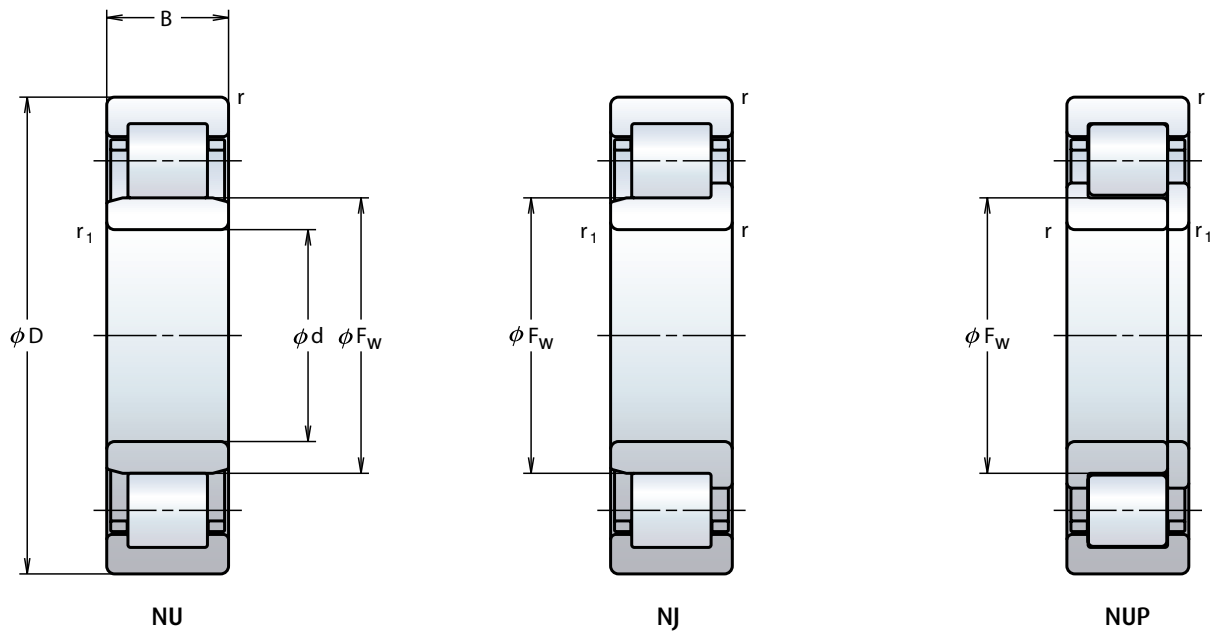
NUP

d	Boundary Dimensions (mm)					Basic Load Ratings (N)		Limiting Speeds (min ⁻¹)	
	D	B	r min	r ₁ min	F _W	C _r	C _{or}	Grease	Oil
160	290	48	3	3	195	500,000	665,000	2,200	2,600
	290	80	3	3	193	810,000	1,190,000	1,900	2,400
	340	68	4	4	204	860,000	1,050,000	1,700	2,000
	340	114	4	4	204	1,310,000	1,820,000	1,500	1,900
170	310	52	4	4	207	605,000	800,000	2,000	2,400
	310	86	4	4	205	925,000	1,330,000	1,800	2,200
	360	72	4	4	218	930,000	1,150,000	1,600	2,000
	360	120	4	4	216	1,490,000	2,070,000	1,400	1,800
180	320	52	4	4	217	625,000	850,000	1,900	2,200
	320	86	4	4	215	1,010,000	1,510,000	1,700	2,000
	380	75	4	4	231	985,000	1,230,000	1,500	1,800
	380	126	4	4	227	1,560,000	2,220,000	1,300	1,700
190	340	55	4	4	230	695,000	955,000	1,800	2,200
	340	92	4	4	228	1,100,000	1,670,000	1,600	2,000
	400	78	5	5	245	1,060,000	1,340,000	1,400	1,700
	400	132	5	5	240	1,770,000	2,520,000	1,300	1,600
200	360	58	4	4	243	765,000	1,060,000	1,700	2,000
	360	98	4	4	241	1,220,000	1,870,000	1,500	1,800
	420	80	5	5	258	1,140,000	1,450,000	1,300	1,600
	420	138	5	5	253	1,910,000	2,760,000	1,200	1,500



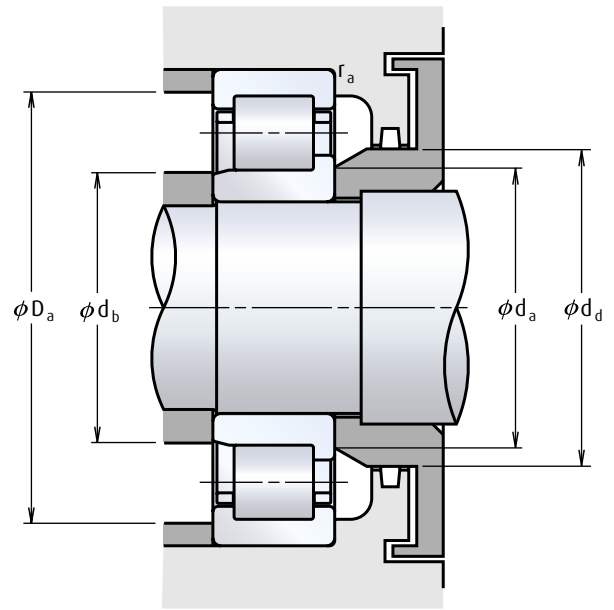
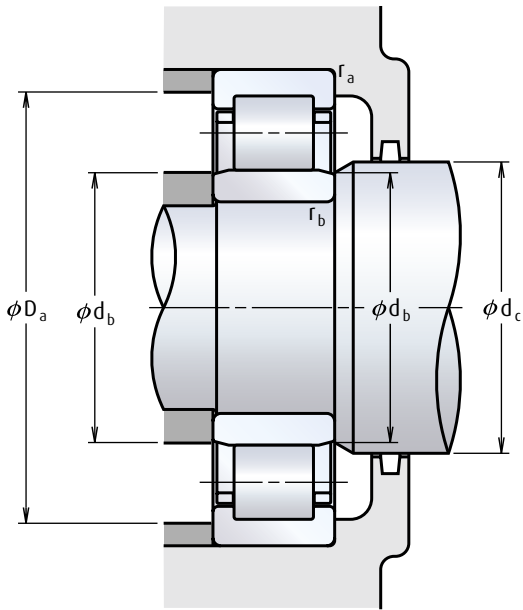
Bearing Number			Abutment and Fillet Dimensions (mm)								Permissible Axial Movement (mm)	Mass (kg) approx
NU	NJ	NUP	d _a min	d _b min max		d _c min	d _d min	D _a max	r _a max	r _b max		
NU232EM	NJ	NUP	173	173	190	197	210	277	2.5	2.5	1.8	14.7
NU2232EM	NJ	NUP	173	173	188	197	210	277	2.5	2.5	3.3	24.5
NU332EM	NJ	NUP	176	176	199	211	228	324	3.0	3.0	3.2	32.1
NU2332EM	NJ	NUP	176	176	199	211	228	324	3.0	3.0	2.7	53.9
NU234EM	NJ	NUP	186	186	202	211	223	294	3.0	3.0	3.8	18.3
NU2234EM	NJ	NUP	186	186	200	211	223	294	3.0	3.0	2.8	29.9
NU334EM	NJ	NUP	186	186	213	223	241	344	3.0	3.0	1.7	37.9
NU2334EM	NJ	NUP	186	186	210	223	241	344	3.0	3.0	6.2	63.4
NU236EM	NJ	NUP	196	196	212	221	233	304	3.0	3.0	2.2	19.0
NU2236EM	NJ	NUP	196	196	210	221	233	304	3.0	3.0	2.7	31.4
NU336EM	NJ	NUP	196	196	226	235	255	364	3.0	3.0	2.2	44.0
NU2336EM	NJ	NUP	196	196	222	235	255	364	3.0	3.0	6.2	74.6
NU238EM	NJ	NUP	206	206	225	234	247	324	3.0	3.0	1.7	23.0
NU2238EM	NJ	NUP	206	206	223	234	247	324	3.0	3.0	1.7	38.3
NU338EM	NJ	NUP	210	210	240	248	268	380	4.0	4.0	1.7	50.6
NU2338EM	NJ	NUP	210	210	235	248	268	380	4.0	4.0	6.2	86.2
NU240EM	NJ	NUP	216	216	238	247	261	344	3.0	3.0	2.2	27.4
NU2240EM	NJ	NUP	216	216	235	247	261	344	3.0	3.0	2.2	46.1
NU340EM	NJ	NUP	220	220	252	263	283	400	4.0	4.0	1.2	57.1
NU2340EM	NJ	NUP	220	220	247	263	283	400	4.0	4.0	7.7	99.3

EW Series



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

d	Boundary Dimensions (mm)					Basic Load Ratings				Limiting Speeds (min ⁻¹)	
	D	B	r (min)	r ₁ (min)	F _w	(N)		(kgf)		Grease	Oil
						C _r	C _{or}	C _r	C _{or}		
25	52	15	1.0	0.6	31.5	29,300	27,700	2,990	2,830	12,000	14,000
	62	17	1.1	1.1	34.0	41,500	37,500	4,250	3,800	10,000	12,000
30	62	16	1.0	0.6	37.5	39,000	37,500	4,000	3,800	9,500	12,000
	72	19	1.1	1.1	40.5	53,000	50,000	5,400	5,100	8,500	10,000
35	72	17	1.1	0.6	44.0	50,500	50,000	5,150	5,100	8,500	10,000
	80	21	1.5	1.1	46.2	66,500	65,500	6,800	6,650	7,500	9,500
40	80	18	1.1	1.1	49.5	55,500	55,500	5,700	5,650	7,500	9,000
	90	23	1.5	1.5	52.0	83,000	81,500	8,500	8,300	6,700	8,000
45	85	19	1.1	1.1	54.5	63,000	66,500	6,450	6,800	6,700	8,000
	100	25	1.5	1.5	58.5	97,500	98,500	9,950	10,000	6,000	7,500
50	90	20	1.1	1.1	59.5	69,000	76,500	7,050	7,800	6,300	7,500
	110	27	2.0	2.0	65.0	110,000	113,000	11,200	11,500	5,000	6,000
55	100	21	1.5	1.1	66.0	86,500	98,500	8,800	10,100	5,600	7,100
	120	29	2.0	2.0	70.5	137,000	143,000	14,000	14,600	4,500	5,600
60	110	22	1.5	1.5	72.0	97,500	107,000	9,950	10,900	5,300	6,300
65	120	23	1.5	1.5	78.5	108,000	119,000	11,000	12,100	4,800	5,600



Bearing Numbers			Abutment and Fillet Dimensions (mm)								Permissible Axial Movement (mm)
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)	
NU205EW	NJ	NUP	30.0	29.0	30	34	37	47.0	1.0	0.6	1.2
NU305EW	NJ	NUP	31.5	31.5	32	37	40	55.5	1.0	1.0	1.2
NU206EW	NJ	NUP	35.0	34.0	36	40	44	57.0	1.0	0.6	1.2
NU306EW	NJ	NUP	36.5	36.5	39	44	48	65.5	1.0	1.0	1.2
NU207EW	NJ	NUP	41.5	39.0	42	46	50	65.5	1.0	0.6	1.2
NU307EW	NJ	NUP	43.0	41.5	44	48	53	72.0	1.5	1.0	1.2
NU208EW	NJ	NUP	46.5	46.5	48	52	56	73.5	1.0	1.0	1.2
NU308EW	NJ	NUP	48.0	48.0	50	55	60	82.0	1.5	1.5	1.2
NU209EW	NJ	NUP	51.5	51.5	52	57	61	78.5	1.0	1.0	1.2
NU309EW	NJ	NUP	53.0	53.0	56	60	66	92.0	1.5	1.5	1.4
NU210EW	NJ	NUP	56.5	56.5	57	62	67	83.5	1.0	1.0	1.7
NU310EW	NJ	NUP	59.0	59.0	63	67	73	101.0	2.0	2.0	1.4
NU211EW	NJ	NUP	63.0	61.5	64	68	73	92.0	1.5	1.0	1.2
NU311EW	NJ	NUP	64.0	64.0	68	72	80	111.0	2.0	2.0	1.4
NU212EW	NJ	NUP	68.0	68.0	70	75	80	102.0	1.5	1.5	1.2
NU213EW	NJ	NUP	73.0	73.0	76	81	87	112.0	1.5	1.5	1.4

Notes



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