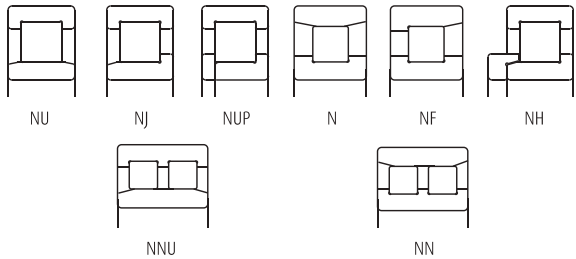


Cylindrical Roller Bearings

DESIGN, TYPES, AND FEATURES

Depending on the existence of ribs on their rings, Cylindrical Roller Bearings are classified into the following types.



Types NU, N, NNU, and NN are suitable as free-end bearings. Types NJ and NF can sustain limited axial loads in one direction. Types NH and NUP can be used as fixed-end bearings.

The inner ring loose rib of a NUP-type cylindrical roller bearing should be mounted so that the marked side is on the outside.

Features of Single-Row Cylindrical Roller Bearings

Cage Specification	Material	Steel	Steel	Polyamide 66 resin	L-PPS resin	Brass	
	Method	pressed		Molded		machined	
	Symbols	W	EW	ET	ET7	M	EM
Features	High Load Capacity	○	⊙	⊙	⊙	△	⊙
	High-Speed	△	○	○	○	○	⊙
	High-Temperature	○	○	△	○	○	○
	Vibration	×	×	×	×	△	○

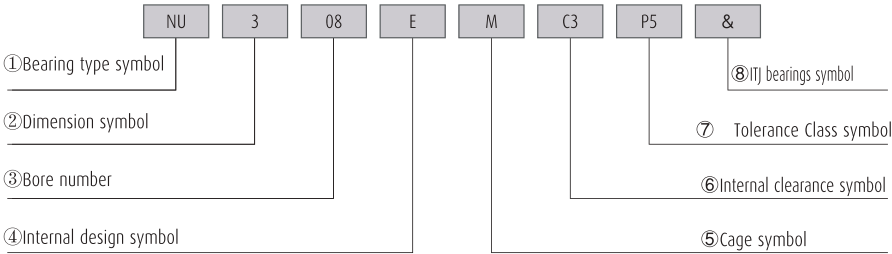
For a given bearing number, if the type of cage is not the standard one, the number of rollers may vary; in such a case, the load rating will differ from the one listed in the bearing tables.

Among the NN Type of double-row bearings, there are many of high precision that have tapered bores, and they are primarily used in the main spindles of machine tools. Their cages are either molded polyphenylenesulfide (PPS) or machined brass.

□ Formulation of Bearing Numbers

Single-Row Cylindrical Rollers

Bearing number example:



① Bearing type symbol	NU : Single-Row Cylindrical Roller Bearings (Outer ring with both ribs + Inner ring without ribs. 10 : 10 Series, 2: 02 Series, 22 : 22 Series, 3 : 03 Series, 23 : 23 Series, 4 : 04 Series, Less than 04, Bearing bore 01 : 12mm, 02 : 15mm, 03 : 17mm Over 03, Bearing bore Bore number × 5 (mm) E : High Load Capacity
② Dimension symbol	W : Pressed Steel Cage, M : Machined Brass Cage, No symbol : Machined Brass Cage
③ Bore number	(In case of 10 Series) T : Polyamide 66 Resin Cage, T7 : L-PPS Resin Cage For All Radial Brgs.
④ Internal design symbol	W : Pressed Steel Cage, M : Machined Brass Cage, No symbol : Machined Brass Cage
⑤ Cage symbol	(In case of 10 Series) T : Polyamide 66 Resin Cage, T7 : L-PPS Resin Cage For All Radial Brgs.
⑥ Radial Internal clearance symbol	Omitted : CN clearance, C3 : Clearance greater than CN, C4 : Clearance greater than C3, CT : Clearance for Electric Motors (for interchangeable bearings), CG : Special Clearance For Non-Interchangeable Cylindrical Roller Bearings CC : Normal Clearance, CC3 : Clearance greater than CC, CC4 : Clearance greater than CC3, CM : Clearance for Electric Motors (for non-interchangeable bearings), CCG : Special Clearance
⑦ Tolerance Class symbol	Omitted : ISO Normal, P6 : ISO Class 6, P5 : ISO Class 5, P4 : ISO Class 4
⑧ ITJ symbol	&: ITJ bearings symbol



PRECAUTIONS FOR USE OF CYLINDRICAL ROLLER BEARINGS

If the load on cylindrical roller bearings becomes too small during operation, slippage between the rollers and raceways occurs, which may result in smearing. Especially with large bearings since the weight of the roller and cage is high.

In case of strong shock loads or vibration, pressed-steel cages are sometimes inadequate.

If very small bearing load or strong shock loads or vibration are expected, please consult with ITJ for selection of the bearings.

Bearings with molded polyamide cages (ET type) can be used continuously at temperatures between -40 and 120°C.

If the bearings are used in gear oil, nonflammable hydraulic oil, or ester oil at a high temperature over 100°C, please contact ITJ beforehand.

Table 2 Tolerances for Roller Inscribed Circle Diameter F_w and Roller Circumscribed Circle Diameter E_w of Cylindrical Roller Bearings Having Interchangeable Rings

Units : μm

Nominal Bore Diameter d (mm)		Tolerances for F_w of types NU, NJ, NUP, NH, and NNU ΔF_w		Tolerances for E_w of types N, NF, and NN ΔE_w	
over	incl.	high	low	high	low
—	20	+10	0	0	-10
20	50	+15	0	0	-15
50	120	+20	0	0	-20
120	200	+25	0	0	-25
200	250	+30	0	0	-30
250	315	+35	0	0	-35
315	400	+40	0	0	-40
400	500	+45	0	—	—

Cylindrical Roller Bearings

TECHNICAL DATA

Free Space of Cylindrical Roller Bearings

Cylindrical roller bearings employ grease lubrication in many cases because it makes maintenance easier and simplifies the peripheral construction of the housing. It is essential to select a grease brand appropriate for the operating conditions while paying due attention to the filling amount and position of the bearing as well as its housing.

The cylindrical roller bearings can be divided into NU, NJ, N, NF, NH, and NUP types of construction according to the collar, collar ring, and position of the inner or outer ring ribs. Even if bearings belong to the same dimension series, they may have different amounts of free space. The free space also differs depending on whether the cage provided is

made from pressed steel or from machined high-tension brass. When determining the grease filling amount, please refer to Tables 1 and 2 which show the free space of NU type bearings. (By the way, the cylindrical roller bearing type is used most frequently).

For types other than the NU type, the free space can be determined from the free space ratio with the NU type. Table 3 shows the approximate free space ratio for each type of cylindrical roller bearing. For example, the free space of NJ310 with a pressed steel cage may be calculated approximately at 47 cm³. This result was calculated by multiplying the free space 52 cm³ of NU310 in Table 1 by the space ratio 0.90 for the NJ type (Table 3).

Table 1 Free Space of Cylindrical Roller Bearing (NU Type) (1) (with Pressed Cage)

Units: cm³

Bearing bore No.	Bearing free space			
	Bearing series			
	NU2	NU3	NU22	NU23
05	6.6	11	7.8	16
06	9.6	17	12	24
07	14	22	14	35
08	18	31	22	44
09	20	42	23	62
10	23	52	26	80
11	30	68	35	102
12	37	85	45	130
13	44	107	57	156
14	51	124	62	179
15	58	155	70	226
16	71	177	85	260
17	85	210	104	300
18	103	244	134	365
19	132	283	164	415
20	151	335	200	540

Table 2 Free Space of Cylindrical Roller Bearing (NU Type) (2)
(with High-Tension Brass Machined Cage)

Units: cm³

Bearing bore No.	Bearing free space			
	Bearing series			
	NU2	NU3	NU22	NU23
05	5.0	7.6	5.7	10
06	7.4	12	7.9	16
07	9.6	16	12	27
08	12	21	15	32
09	15	29	16	45
10	18	38	17	58
11	22	52	24	77
12	26	62	31	88
13	31	74	43	104
14	37	92	44	129
15	42	102	50	149
16	51	122	60	181
17	64	164	74	200
18	79	193	96	279
19	94	218	116	280
20	115	221	137	355

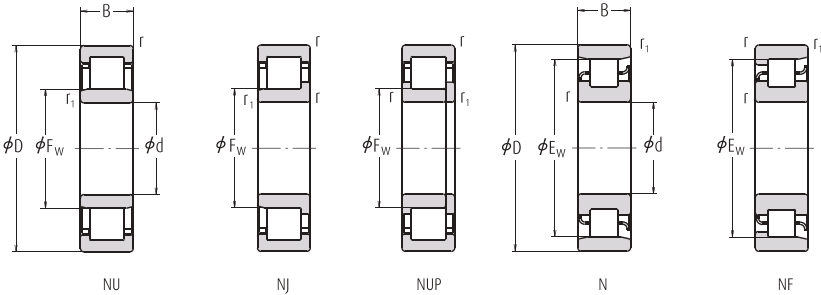


Table 3 Free Space Ratio of Each Type of Cylindrical Roller Bearing

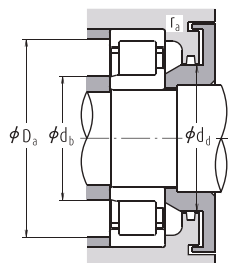
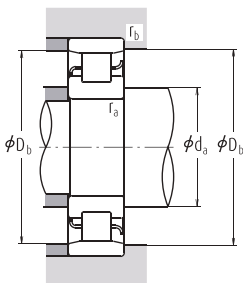
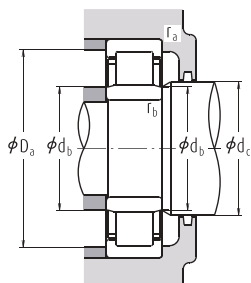
NU Type	NJ Type	N Type	NF Type
1	0.90	1.05	0.95

Single-Row Cylindrical Roller Bearings

Bore Diameter 20 – 30 mm



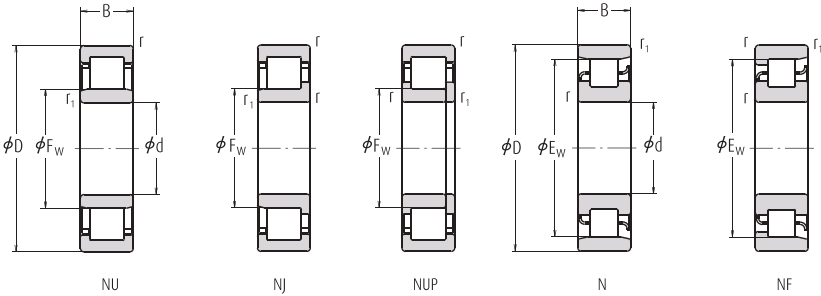
Boundary Dimensions (mm)							Basic Load Ratings (N)		Thermal Reference Speed	Speeds (min ⁻¹)	
d	D	B	r min.	r ₁ min.	F _W	E _W	C _r	C _{0r}		Mechanical (%)	Grease
20	47	14	1.0	0.6	—	40	15 400	12 700	15 400	—	12 000
	47	14	1.0	0.6	26.5	—	25 700	22 600	16 000	—	13 000
	47	18	1.0	0.6	27.0	—	20 700	18 400	19 000	—	11 000
	47	18	1.0	0.6	26.5	—	30 500	28 300	19 000	—	11 000
	52	15	1.1	0.6	—	44.5	21 400	17 300	14 000	—	10 000
	52	15	1.1	0.6	27.5	—	31 500	26 900	13 000	—	12 000
	52	21	1.1	0.6	28.5	—	30 500	27 200	14 000	—	11 000
	52	21	1.1	0.6	27.5	—	42 000	39 000	13 000	—	11 000
25	47	12	0.6	0.3	30.5	—	14 300	13 100	15 000	—	15 000
	52	15	1.0	0.6	—	45	17 700	15 700	17 700	—	10 000
	52	15	1.0	0.6	31.5	—	33 500	27 700	14 000	17 000	12 000
	52	15	1.0	0.6	31.5	—	29 300	27 700	14 000	17 000	12 000
	52	18	1.0	0.6	31.5	—	40 000	34 500	14 000	20 000	12 000
	52	18	1.0	0.6	31.5	—	35 000	34 500	14 000	20 000	12 000
	62	17	1.1	1.1	—	53	29 300	25 200	12 000	—	8 000
	62	17	1.1	1.1	34.0	—	48 000	37 500	11 000	15 000	10 000
	62	17	1.1	1.1	34.0	—	41 500	37 500	11 000	15 000	10 000
	62	24	1.1	1.1	34.0	—	65 500	56 000	11 000	18 000	9 000
	62	24	1.1	1.1	34.0	—	57 000	56 000	11 000	18 000	9 000
	80	21	1.5	1.5	38.8	62.8	46 500	40 000	9 500	—	7 100
30	55	13	1.0	0.6	36.5	48.5	19 700	19 600	13 000	—	12 000
	62	16	1.0	0.6	—	53.5	24 900	23 300	13 000	—	8 500
	62	16	1.0	0.6	37.5	—	45 000	37 500	12 000	14 000	9 500
	62	16	1.0	0.6	37.5	—	39 000	37 500	12 000	14 000	9 500
	62	20	1.0	0.6	37.5	—	56 500	50 000	12 000	17 000	9 500
	62	20	1.0	0.6	37.5	—	49 000	50 000	12 000	17 000	9 500
	72	19	1.1	1.1	—	62	38 500	35 000	10 000	—	7 100
	72	19	1.1	1.1	40.5	—	61 000	50 000	9 500	13 000	8 500
	72	19	1.1	1.1	40.5	—	53 000	50 000	9 500	13 000	8 500
	72	27	1.1	1.1	40.5	—	86 000	77 500	9 500	16 000	8 000
	72	27	1.1	1.1	40.5	—	74 500	77 500	9 500	16 000	8 000
	90	23	1.5	1.5	45.0	73	62 500	55 000	8 500	—	6 000



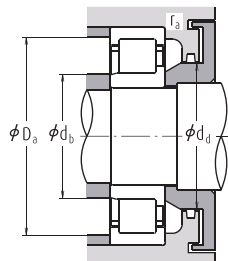
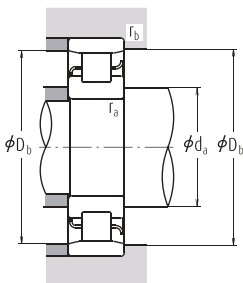
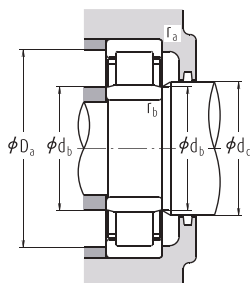
Bearing Numbers							Abutment and Fillet Dimensions (mm)											Mass (kg)
Cage symbol (1) Standard option			NU	(2) NJ	NUP	N	NF	d _a (3) min.	d _b min.	d _b (4) max.	d _c min.	d _d min.	D _a (3) max.	D _b max.	D _b min.	r _a max.	r _b max.	approx.
N 204	W	—	—	—	—	N	NF	25	—	—	—	—	—	43	42	1	0.6	0.107
NU 204 E	T	T7	NU	NJ	NUP	—	—	25	24	25	29	32	42	—	—	1	0.6	0.107
NU 2204	W	M	NU	NJ	—	—	—	25	24	25	29	32	42	—	—	1	0.6	0.144
NU 2204 ET	—	—	NU	NJ	NUP	—	—	25	24	25	29	32	42	—	—	1	0.6	0.138
N 304	W	—	—	—	—	N	NF	26.5	—	—	—	—	—	48	46	1	0.6	0.148
NU 304 E	T	T7	NU	NJ	NUP	—	—	26.5	24	26	30	33	45.5	—	—	1	0.6	0.145
NU 2304	M	—	NU	NJ	NUP	—	—	26.5	24	27	30	33	45.5	—	—	1	0.6	0.217
NU 2304 E	T7	—	NU	NJ	NUP	—	—	26.5	24	26	30	33	45.5	—	—	1	0.6	0.209
NU 1005	(M)	—	NU	—	—	—	—	—	27	30	32	—	43	—	—	0.6	0.3	0.094
N 205	W	M	—	—	—	N	NF	30	—	—	—	—	—	48	46	1	0.6	0.135
NU 205 E°	W	M,T,17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 205 E	T	M,T,17	NU	NJ	NUP	—	—	30	29	30	34	37	47	—	—	1	0.6	0.136
NU 2205 E°	M	T,17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2205 E	M	T,17	NU	NJ	NUP	—	—	30	29	30	34	37	47	—	—	1	0.6	0.16
N 305	W	M	—	—	—	N	NF	31.5	—	—	—	—	—	55.5	50	1	1	0.233
NU 305 E°	W	M,T,17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 305 E	W	M,T,17	NU	NJ	NUP	—	—	31.5	31.5	32	37	40	55.5	—	—	1	1	0.269
NU 2305 E°	M	T, 17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2305 E	M	T, 17	NU	NJ	NUP	—	—	31.5	31.5	32	37	40	55.5	—	—	1	1	0.338
NU 405	W	—	NU	NJ	—	N	NF	33	33	37	41	46	72	72	64	1.5	1.5	0.57
NU 1006	(M)	—	NU	—	—	N	—	35	34	36	38	—	50	51	49	1	0.5	0.136
N 206	W	M	—	—	—	N	NF	35	—	—	—	—	—	58	56	1	0.6	0.208
NU 206 E°	W	M,T,17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 206 E	W	M,T,17	NU	NJ	NUP	—	—	35	34	36	40	44	57	—	—	1	0.6	0.205
NU 2206 E°	M	T, 17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2206 E	M	T, 17	NU	NJ	NUP	—	—	35	34	36	40	44	57	—	—	1	0.6	0.255
N 306	W	M	—	—	—	N	NF	36.5	—	—	—	—	—	65.5	64	1	1	0.353
NU 306 E°	W	M,T,17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 306 E	W	M,T,17	NU	NJ	NUP	—	—	36.5	36.5	39	44	48	65.5	—	—	1	1	0.409
NU 2306 E°	M	T, 17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2306 E	M	T, 17	NU	NJ	NUP	—	—	36.5	36.5	39	44	48	65.5	—	—	1	1	0.518
NU 406	W	M	NU	NJ	—	N	NF	38	38	43	47	52	82	82	75	1.5	1.5	0.758

Single-Row Cylindrical Roller Bearings

Bore Diameter 35 – 40 mm



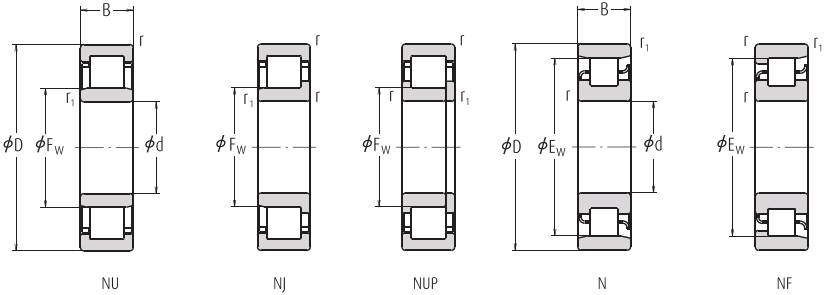
Boundary Dimensions (mm)							Basic Load Ratings (N)		Thermal Reference Speed	Speeds (min ⁻¹)	
d	D	B	r min.	r ₁ min.	F _W	E _W	C _r	C _{0R}		Limiting Speeds	
										Mechanical (%)	Grease
35	62	14	1.0	0.6	42.0	55	22 600	23 200	11 000	—	11 000
	72	17	1.1	0.6	—	61.8	35 500	34 000	11 000	—	7 500
	72	17	1.1	0.6	44.0	—	58 000	50 000	10 000	12 000	8 500
	72	17	1.1	0.6	44.0	—	50 500	50 000	10 000	12 000	8 500
	72	23	1.1	0.6	44.0	—	71 000	65 500	11 000	15 000	8 500
	72	23	1.1	0.6	44.0	—	61 500	65 500	11 000	15 000	8 500
	80	21	1.5	1.1	—	68.2	49 500	47 000	9 500	—	6 300
	80	21	1.5	1.1	46.2	—	76 500	65 500	8 500	11 000	7 500
	80	21	1.5	1.1	46.2	—	66 500	65 500	8 500	11 000	7 500
	80	31	1.5	1.1	46.2	—	107 000	101 000	9 000	14 000	6 700
40	80	31	1.5	1.1	46.2	—	93 000	101 000	9 000	14 000	6 700
	100	25	1.5	1.5	53.0	83	75 500	69 000	7 500	—	5 300
	68	15	1.0	0.6	47.0	61	27 300	29 000	10 000	—	10 000
	80	18	1.1	1.1	—	70	43 500	43 000	9 500	—	6 700
	80	18	1.1	1.1	49.5	—	64 000	55 500	9 000	11 000	7 500
	80	18	1.1	1.1	49.5	—	55 500	55 500	9 000	11 000	7 500
	80	23	1.1	1.1	49.5	—	83 000	77 500	9 000	13 000	7 500
	80	23	1.1	1.1	49.5	—	72 500	77 500	9 000	13 000	7 500
	90	23	1.5	1.5	—	77.5	58 500	57 000	8 500	—	5 600
	90	23	1.5	1.5	52.0	—	95 500	81 500	7 500	10 000	6 700
40	90	23	1.5	1.5	52.0	—	83 000	81 500	7 500	10 000	6 700
	90	33	1.5	1.5	52.0	—	131 000	122 000	8 000	12 000	6 000
	90	33	1.5	1.5	52.0	—	114 000	122 000	8 000	12 000	6 000
	110	27	2.0	2.0	58.0	92	95 500	89 000	6 700	—	4 800



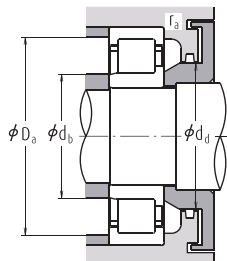
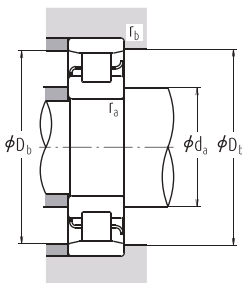
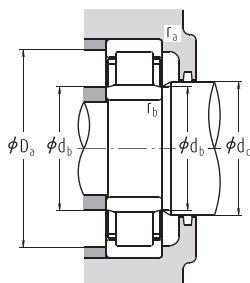
Bearing Numbers							Abutment and Fillet Dimensions (mm)											Mass (kg)
	Cage symbol (1) Standard option	NU	(2) NJ	NUP	N	NF	d _a (3) min.	d _b min.	d _b (4) max.	d _c min.	d _d min.	D _a (3) max.	D _b max.	D _b min.	r _a max.	r _b max.	approx.	
NU 1007	(M)	—	NU	NJ	—	N	—	40	39	41	44	—	57	58	56	1	0.5	0.18
N 207	W	M	—	—	—	N	NF	41.5	—	—	—	—	—	68	64	1	0.6	0.301
NU 207 E°	W	M,T,17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 207 E	W	M,T,17	NU	NJ	NUP	—	—	41.5	39	42	46	50	65.5	—	—	1	0.6	0.304
NU 2207 E°	M	T, 17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2207 E	M	T, 17	NU	NJ	NUP	—	—	41.5	39	42	46	50	65.5	—	—	1	0.6	0.40
N 307	W	M	—	—	—	N	NF	43	—	—	—	—	73.5	70	1.5	1	—	0.476
NU 307 E°	W	M,T,17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 307 E	W	M,T,17	NU	NJ	NUP	—	—	41.5	41.5	44	48	53	72	—	—	1.5	1	0.545
NU 2307 E°	M	T, 17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2307 E	M	T, 17	NU	NJ	NUP	—	—	43	41.5	44	48	53	72	—	—	1.5	1	0.711
NU 407	W	—	NU	NJ	—	N	NF	43	43	51	55	61	92	92	85	1.5	1.5	1.01
NU 1008	(M)	—	NU	NJ	NUP	N	—	45	44	46	49	—	63	64	62	1	0.6	0.223
N 208	W	M	—	—	—	N	NF	46.5	—	—	—	—	73.5	72	1	1	—	0.375
NU 208 E°	W	M,T,17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 208 E	W	M,T,17	NU	NJ	NUP	—	—	46.5	46.5	48	52	56	73.5	—	—	1	1	0.379
NU 2208 E°	M	T, 17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2208 E	M	T, 17	NU	NJ	NUP	—	—	46.5	46.5	48	52	56	73.5	—	—	1	1	0.480
N 308	W	M	—	—	—	N	NF	48	—	—	—	—	82	79	1.5	1.5	—	0.649
NU 308 E°	W	M,T,17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 308 E	W	M,T,17	NU	NJ	NUP	—	—	48	48	50	55	60	82	—	—	1.5	1.5	0.747
NU 2308 E°	M	T, 17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2308 E	M	T, 17	NU	NJ	NUP	—	—	48	48	50	55	60	82	—	—	1.5	1.5	0.933
NU 408	W	—	NU	NJ	NUP	N	NF	49	49	56	60	67	101	101	94	2	2	1.28

Single-Row Cylindrical Roller Bearings

Bore Diameter 45 – 50 mm



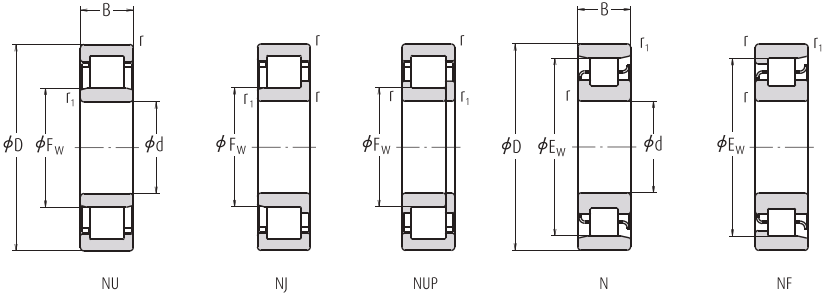
Boundary Dimensions (mm)							Basic Load Ratings (N)		Thermal Reference Speed	Speeds (min ⁻¹)	
d	D	B	r min.	r ₁ min.	F _W	E _W	C _r	C _{0R}		Limiting Speeds	
										Mechanical (%)	Grease
45	75	16	1.0	0.6	52.5	67.5	32 500	35 500	9 500	—	9 300
	85	19	1.1	1.1	—	75	46 000	47 000	9 500	—	6 300
	85	19	1.1	1.1	54.5	—	72 500	66 500	8 500	10 000	6 700
	85	19	1.1	1.1	54.5	—	63 000	66 500	8 500	10 000	6 700
	85	23	1.1	1.1	54.5	—	87 500	84 500	8 500	12 000	6 700
	85	23	1.1	1.1	54.5	—	76 000	84 500	8 500	12 000	6 700
	100	25	1.5	1.5	—	86.5	79 000	77 500	7 500	—	5 000
	100	25	1.5	1.5	58.5	—	112 000	98 500	7 100	9 000	6 000
	100	25	1.5	1.5	58.5	—	97 500	98 500	7 100	9 000	6 000
	100	36	1.5	1.5	58.5	—	158 000	153 000	7 100	11 000	5 300
	100	36	1.5	1.5	58.5	—	137 000	153 000	7 100	11 000	5 300
	120	29	2.0	2.0	64.5	100.5	107 000	102 000	6 300	—	4 300
50	80	16	1.0	0.6	57.5	72.5	32 000	36 000	8 500	—	8 000
	90	20	1.1	1.1	—	80.4	48 000	51 000	8 500	—	5 600
	90	20	1.1	1.1	59.5	—	79 500	76 500	8 000	9 000	6 300
	90	20	1.1	1.1	59.5	—	69 000	76 500	8 000	9 000	6 300
	90	23	1.1	1.1	59.5	—	96 000	97 000	7 500	11 000	6 300
	90	23	1.1	1.1	59.5	—	83 500	97 000	7 500	11 000	6 300
	110	27	2.0	2.0	—	95	87 000	86 000	7 100	—	4 500
	110	27	2.0	2.0	65.0	—	127 000	113 000	6 700	8 000	5 000
	110	27	2.0	2.0	65.0	—	110 000	113 000	6 700	8 000	5 000
	110	40	2.0	2.0	65.0	—	187 000	187 000	6 700	10 000	5 000
	110	40	2.0	2.0	65.0	—	163 000	187 000	6 700	10 000	5 000
	130	31	2.1	2.1	—	110.8	139 000	136 000	5 600	—	4 000
	130	31	2.1	2.1	70.8	110.8	129 000	124 000	5 600	—	4 000



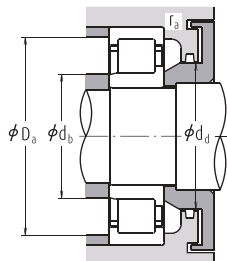
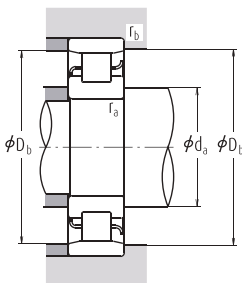
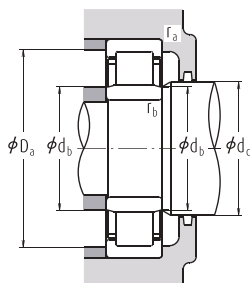
Bearing Numbers							Abutment and Fillet Dimensions (mm)											Mass (kg)
	Cage symbol (1) Standard option		NU	(2) NJ	NUP	N	NF	d _a (2) min.	d _b min.	d _b (4) max.	d _c min.	d _d min.	D _a (2) max.	D _b max.	D _b min.	r _a max.	r _b max.	approx.
NU 1009	(M)	—	NU	—	—	N	NF	50	49	51	54	—	70	71	68	1	0.6	0.279
N 209	W	M	—	—	—	N	NF	51.5	—	—	—	—	—	78.5	77	1	1	0.429
NU 209 E°	W	M, T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 209 E	W	M, T, T7	NU	NJ	NUP	—	—	51.5	51.5	52	57	61	78.5	—	—	1	1	0.438
NU 2209 E°	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2209 E	M	T, T7	NU	NJ	NUP	—	—	51.5	51.5	52	57	61	78.5	—	—	1	1	0.521
N 309	W	M	—	—	—	N	NF	53	—	—	—	—	—	92	77	1.5	1.5	0.869
NU 309 E°	W	M, T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 309 E	W	M, T, T7	NU	NJ	NUP	—	—	53	53	56	60	66	92	—	—	1.5	1.5	1.01
NU 2309 E°	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2309 E	M	T, T7	NU	NJ	NUP	—	—	53	53	56	60	66	92	—	—	1.5	1.5	1.28
NU 409	W	—	NU	NJ	NUP	N	NF	54	54	62	66	74	111	111	103	2	2	1.62
NU 1010	(M)	—	NU	NJ	NUP	N	—	55	54	56	59	—	75	76	73	1	0.6	0.301
N 210	W	M	—	—	—	N	NF	56.5	—	—	—	—	—	83.5	82	1	1	0.483
NU 210 E°	W	M, T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 210 E	W	M, T, T7	NU	NJ	NUP	—	—	56.5	56.5	57	62	67	83.5	—	—	1	1	0.50
NU 2210 E°	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2210 E	M	T, T7	NU	NJ	NUP	—	—	56.5	56.5	57	62	67	83.5	—	—	1	1	0.562
N 310	W	M	—	—	—	N	NF	59	—	—	—	—	—	101	97	2	2	1.11
NU 310 E°	W	M, T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 310 E	W	M, T, T7	NU	NJ	NUP	—	—	59	59	63	67	73	101	—	—	2	2	1.3
NU 2310 E°	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2310 E	M	T, T7	NU	NJ	NUP	—	—	59	59	63	67	73	101	—	—	2	2	1.7
N 410	W	M	—	—	—	N	NF	65	—	—	—	—	—	117	113	2	2	2.0
NU 410	W	M	NU	NJ	NUP	—	—	61	61	68	73	81	119	119	113.3	2	2	1.99

Single-Row Cylindrical Roller Bearings

Bore Diameter 55 – 60 mm



Boundary Dimensions (mm)							Basic Load Ratings (N)		Thermal Reference Speed	Speeds (min ⁻¹)	
d	D	B	r min.	r ₁ min.	F _w	E _w	C _r	C _{0R}		Limiting Speeds	
										Mechanical (%)	Grease
55	90	18	1.1	1.0	64.5	80.5	37 500	44 000	8 000	—	7 500
	100	21	1.5	1.1	—	88.5	58 000	62 500	7 500	—	5 300
	100	21	1.5	1.1	66.0	—	99 000	98 500	6 700	8 500	5 600
	100	21	1.5	1.1	66.0	—	86 500	98 500	6 700	8 500	5 600
	100	25	1.5	1.1	66.0	—	117 000	122 000	6 700	10 000	5 600
	100	25	1.5	1.1	66.0	—	101 000	122 000	6 700	10 000	5 600
	120	29	2.0	2.0	—	104.5	111 000	111 000	6 300	—	4 000
	120	29	2.0	2.0	70.5	—	158 000	143 000	6 000	7 500	4 500
	120	29	2.0	2.0	70.5	—	137 000	143 000	6 000	7 500	4 500
	120	43	2.0	2.0	70.5	—	231 000	233 000	6 000	9 000	4 500
	120	43	2.0	2.0	70.5	—	201 000	233 000	6 000	9 000	4 500
	140	33	2.1	2.1	77.2	117.2	139 000	138 000	5 300	—	3 800
60	95	18	1.1	1.0	69.5	85.5	40 000	48 500	7 500	—	6 700
	110	22	1.5	1.5	—	97.5	68 500	75 000	7 100	—	4 800
	110	22	1.5	1.5	72.0	—	112 000	107 000	6 300	7 500	5 300
	110	22	1.5	1.5	72.0	—	97 500	107 000	6 300	7 500	5 300
	110	28	1.5	1.5	72.0	—	151 000	157 000	6 300	9 500	5 300
	110	28	1.5	1.5	72.0	—	131 000	157 000	6 300	9 500	5 300
	130	31	2.1	2.1	—	113	124 000	126 000	6 000	—	3 800
	130	31	2.1	2.1	77.0	—	124 000	126 000	6 000	—	3 800
	130	31	2.1	2.1	77.0	—	169 000	157 000	5 600	9 500	4 800
	130	31	2.1	2.1	77.0	—	150 000	157 000	5 600	9 500	4 800
	130	46	2.1	2.1	77.0	—	251 000	262 000	5 600	8 500	4 300
	130	46	2.1	2.1	77.0	—	222 000	262 000	5 600	8 500	4 300
	150	35	2.1	2.1	83.0	127	167 000	168 000	5 000	—	3 400

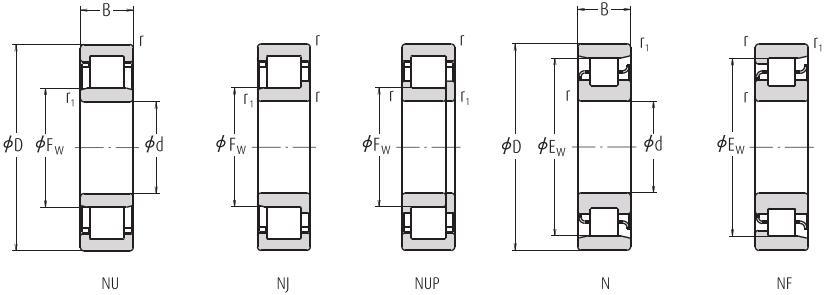


Bearing Numbers							Abutment and Fillet Dimensions (mm)											Mass (kg)
	Cage symbol (1) Standard option		NU	(2) NJ	NUP	N	NF	d _a (3) min.	d _b min.	d _b (4) max.	d _c min.	d _d min.	D _a (3) max.	D _b max.	D _b min.	r _a max.	r _b max.	approx.
NU 1011	(M)	—	NU	NJ	—	N	—	61.5	60	63	66	—	83.5	85	82	1	1	0.445
N 211	W	M	—	—	—	N	NF	63	—	—	—	—	—	93.5	91	1.5	1	0.634
NU 211 E*	W	M, T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 211 E	W	M, T, T7	NU	NJ	NUP	—	—	63	61.5	64	68	73	92	—	—	1.5	1	0.669
NU 2211 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2211 ET	M	T, T7	NU	NJ	NUP	—	—	63	61.5	64	68	73	92	—	—	1.5	1	0.783
N 311	W	M	—	—	—	N	NF	64	—	—	—	—	—	111	107	2	2	1.42
NU 311 E*	W	M, T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 311 E	W	M, T, T7	NU	NJ	NUP	—	—	64	64	68	72	80	111	—	—	2	2	1.64
NU 2311 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2311 E	M	T, T7	NU	NJ	NUP	—	—	64	64	68	72	80	111	—	—	2	2	2.18
NU 411	W	—	NU	NJ	NUP	N	NF	66	66	75	79	87	129	129	119	2	2	2.5
NU 1012	(M)	—	NU	NJ	—	N	NF	66.5	65	68	71	—	88.5	90	87	1	1	0.474
N 212	W	M	—	—	—	N	NF	68	—	—	—	—	—	102	100	1.5	1.5	0.823
NU 212 E*	W	M, T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 212 E	W	M, T, T7	NU	NJ	NUP	—	—	68	68	70	75	80	102	—	—	1.5	1.5	0.824
NU 2212 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2212 E	M	T, T7	NU	NJ	NUP	—	—	68	68	70	75	80	102	—	—	1.5	1.5	1.06
N 312	W	M	—	—	—	N	NF	71	—	—	—	—	—	119	115	2	2	1.78
NU 312	W	M	NU	NJ	NUP	—	—	71	71	75	79	86	119	—	—	2	2	1.82
NU 312 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 312 E	M	T, T7	NU	NJ	NUP	—	—	71	71	75	79	86	119	—	—	2	2	2.06
NU 2312 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2312 ET	M	T, T7	NU	NJ	NUP	—	—	71	71	75	79	86	119	—	—	2	2	2.7
NU 412	W	M	NU	NJ	NUP	N	NF	71	71	80	85	94	139	139	130	2	2	3.04

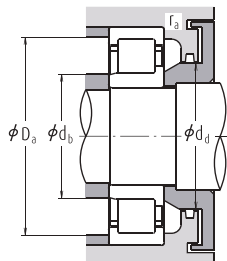
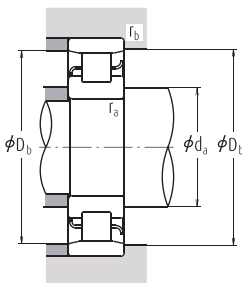
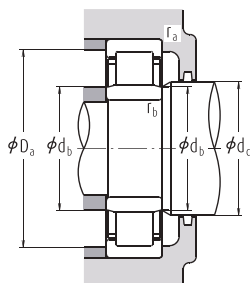


Single-Row Cylindrical Roller Bearings

Bore Diameter 65 – 70 mm



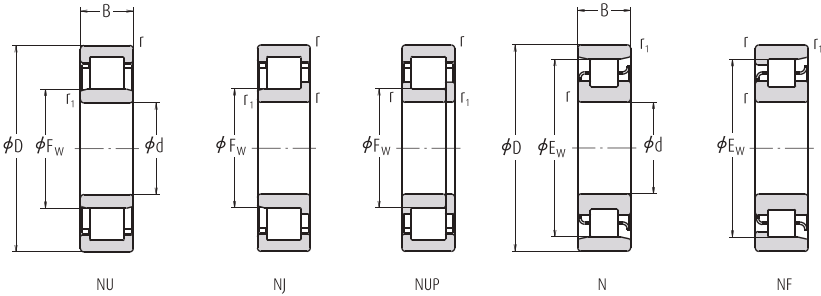
Boundary Dimensions (mm)							Basic Load Ratings (N)		Thermal Reference Speed	Speeds (min ⁻¹)	
d	D	B	r min.	r ₁ min.	F _W	E _W	C _r	C _{0R}		Limiting Speeds	
										Mechanical (%)	Grease
65	100	18	1.1	1.0	74.5	90.5	41 000	51 000	6 700	—	6 300
	120	23	1.5	1.5	—	105.6	84 000	94 500	6 300	—	4 300
	120	23	1.5	1.5	78.5	—	124 000	119 000	6 000	7 100	4 800
	120	23	1.5	1.5	78.5	—	108 000	119 000	6 000	7 100	4 800
	120	31	1.5	1.5	78.5	—	171 000	181 000	6 000	8 500	4 800
	120	31	1.5	1.5	78.5	—	149 000	181 000	6 000	8 500	4 800
	140	33	2.1	2.1	—	121.5	135 000	139 000	5 600	—	3 600
	140	33	2.1	2.1	83.5	—	135 000	139 000	5 600	—	3 600
	140	33	2.1	2.1	82.5	—	204 000	191 000	5 300	8 500	4 300
	140	33	2.1	2.1	82.5	—	181 000	191 000	5 300	8 500	4 300
	140	48	2.1	2.1	82.5	—	263 000	265 000	5 600	7 500	3 800
	140	48	2.1	2.1	82.5	—	233 000	265 000	5 600	7 500	3 800
	160	37	2.1	2.1	—	135.3	195 000	203 000	4 500	—	4 000
	160	37	2.1	2.1	89.3	—	182 000	186 000	4 800	—	3 200
	110	20	1.1	1.0	80.0	100	58 500	70 500	6 300	—	6 000
	125	24	1.5	1.5	—	110.5	83 500	95 000	6 300	—	4 000
70	125	24	1.5	1.5	83.5	—	136 000	137 000	5 600	9 000	5 000
	125	24	1.5	1.5	83.5	—	119 000	137 000	5 600	9 000	5 000
	125	31	1.5	1.5	83.5	—	179 000	194 000	5 600	8 000	4 500
	125	31	1.5	1.5	83.5	—	156 000	194 000	5 600	8 000	4 500
	150	35	2.1	2.1	—	130	149 000	156 000	5 600	—	3 200
	150	35	2.1	2.1	89.0	—	231 000	222 000	4 800	8 000	3 200
	150	35	2.1	2.1	90.0	—	231 000	222 000	4 800	8 000	4 000
	150	35	2.1	2.1	89.0	—	205 000	222 000	4 800	8 000	4 000
	150	51	2.1	2.1	89.0	—	310 000	325 000	5 000	7 100	3 600
	150	51	2.1	2.1	89.0	—	274 000	325 000	5 000	7 100	3 600
	180	42	3.0	3.0	100.0	152	228 000	236 000	4 500	—	2 800



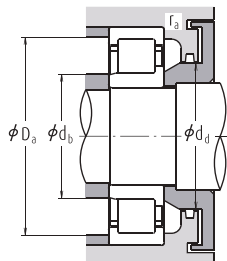
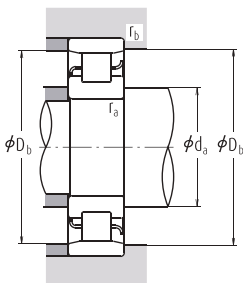
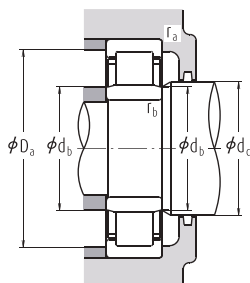
Bearing Numbers							Abutment and Fillet Dimensions (mm)											Mass (kg)
Cage symbol (1) Standard option							d _a (3) min.	d _b min.	d _b (4) max.	d _c min.	d _d min.	D _a (2) max.	D _b max.	D _b min.	r _a max.	r _b max.	approx.	
NU 1013	(M)	—	NU	NJ	—	N NF	71.5	70	73	76	—	93.5	95	92	1	1	0.504	
N 213	W	M	—	—	—	N NF	73	—	—	—	—	112	108	1.5	1.5	1.05		
NU 213 E ⁺	W	M, T, T7	NU	NJ	NUP	—	73	73	76	81	87	112	—	—	1.5	1.5	1.05	
NU 213 E	W	M, T, T7	NU	NJ	NUP	—	73	73	76	81	87	112	—	—	1.5	1.5	1.05	
NU 2213 E ⁺	M	T, T7	NU	NJ	NUP	—	73	73	76	81	87	112	—	—	1.5	1.5	1.41	
NU 2213 E	M	T, T7	NU	NJ	NUP	—	73	73	76	81	87	112	—	—	1.5	1.5	1.41	
N 313	W	M	—	—	—	N NF	76	—	—	—	—	129	125	2	2	2	2.17	
NU 313	W	M	NU	NJ	NUP	—	76	76	81	85	93	129	—	—	2	2	2.23	
NU 313 E ⁺	M	T, T7	NU	NJ	NUP	—	76	76	80	85	93	129	—	—	2	2	2.56	
NU 313 E	M	T, T7	NU	NJ	NUP	—	76	76	80	85	93	129	—	—	2	2	2.56	
NU 2313 E ⁺	M	T, T7	NU	NJ	NUP	—	76	76	80	85	93	129	—	—	2	2	3.16	
NU 2313 E	M	T, T7	NU	NJ	NUP	—	76	76	80	85	93	129	—	—	2	2	3.16	
N 413	M	—	—	—	—	N NF	76	—	—	—	—	149	138.8	2	2	2	3.63	
NU 413	W	M	NU	NJ	—	—	76	76	86	91	100	149	—	—	2	2	3.63	
NU 1014	(M)	—	NU	NJ	NUP	N NF	76.5	75	79	82	—	103.5	105	101	1	1	0.693	
N 214	W	M	—	—	—	N NF	78	—	—	—	—	117	113	1.5	1.5	1.14		
NU 214 E ⁺	M	T, T7	NU	NJ	NUP	—	78	78	81	86	92	117	—	—	1.5	1.5	1.29	
NU 214 E	M	T, T7	NU	NJ	NUP	—	78	78	81	86	92	117	—	—	1.5	1.5	1.29	
NU 2214 E ⁺	M	T, T7	NU	NJ	NUP	—	78	78	81	86	92	117	—	—	1.5	1.5	1.14	
NU 2214 E	M	T, T7	NU	NJ	NUP	—	78	78	81	86	92	117	—	—	1.5	1.5	1.49	
N 314	W	M	—	—	—	N NF	81	—	—	—	—	139	133.5	2	2	2	2.67	
NU 314	W	M	NU	NJ	NUP	—	81	81	87	92	100	139	—	—	2	2	2.75	
NU 314 E ⁺	M	T, T7	NU	NJ	NUP	—	81	81	87	92	100	139	—	—	2	2	3.09	
NU 314 E	M	T, T7	NU	NJ	NUP	—	81	81	86	92	100	139	—	—	2	2	3.09	
NU 2314 E ⁺	M	T, T7	NU	NJ	NUP	—	81	81	86	92	100	139	—	—	2	2	3.92	
NU 2314 E	M	T, T7	NU	NJ	NUP	—	81	81	86	92	100	139	—	—	2	2	3.92	
NU 414	W	M	NU	NJ	NUP	N NF	83	83	97	102	112	167	167	155	2.5	2.5	5.28	

Single-Row Cylindrical Roller Bearings

Bore Diameter 75 mm



Boundary Dimensions (mm)							Basic Load Ratings (N)		Speeds (min ⁻¹)		
d	D	B	r min.	r ₁ min.	F _W	E _W	C _r	C _{0r}	Thermal Reference Speed	Limiting Speeds	
										Mechanical (%)	Grease
75	115	20	1.1	1.0	85.0	105	60 000	74 500	6 000	—	5 600
	130	25	1.5	1.5	—	116.5	96 500	111 000	6 000	—	3 800
	130	25	1.5	1.5	88.5	—	150 000	156 000	5 300	8 500	4 800
	130	25	1.5	1.5	88.5	—	130 000	156 000	5 300	8 500	4 800
	130	31	1.5	1.5	88.5	—	186 000	207 000	5 300	7 500	4 300
	130	31	1.5	1.5	88.5	—	162 000	207 000	5 300	7 500	4 300
	160	37	2.1	2.1	—	139.5	179 000	189 000	5 000	—	3 000
	160	37	2.1	2.1	95.5	—	179 000	189 000	5 000	—	3 000
	160	37	2.1	2.1	95.0	—	271 000	263 000	4 500	7 500	3 800
	160	37	2.1	2.1	95.0	—	240 000	263 000	4 500	7 500	3 800
	160	55	2.1	2.1	95.0	—	370 000	395 000	4 800	6 700	3 400
	160	55	2.1	2.1	95.0	—	330 000	395 000	4 800	6 700	3 400
190	45	3.0	3.0	3.0	104.5	160.5	262 000	274 000	4 300	—	2 600

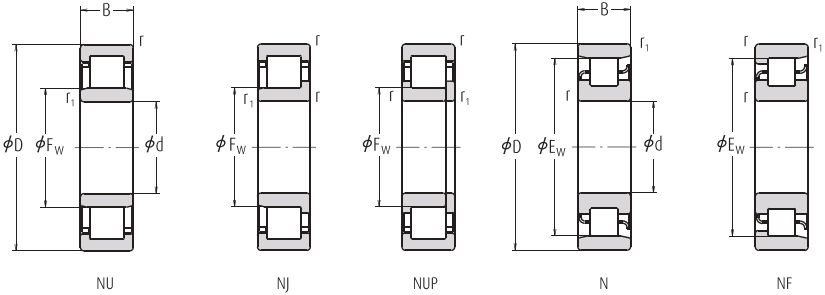


Bearing Numbers							Abutment and Fillet Dimensions (mm)										Mass (kg)	
Cage symbol (1) Standard option			NU	(2) NJ	NUP	N	NF	d _a (2) min.	d _b min.	d _b (4) max.	d _c min.	d _d min.	D _a (2) max.	D _b max.	D _b min.	r _a max.	r _b max.	approx.
NU 1015	(M)	—	NU	—	—	N	NF	81.5	80	83	87	—	108.5	110	106	1	1	0.731
N 215	W	M	—	—	—	N	NF	83	—	—	—	—	—	122	119	1.5	1.5	1.23
NU 215 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 215 E	M	T, T7	NU	NJ	NUP	—	—	83	83	86	90	96	122	—	—	1.5	1.5	1.44
NU 2215 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2215 E	M	T, T7	NU	NJ	NUP	—	—	83	83	86	90	96	122	—	—	1.5	1.5	1.57
N 315	W	M	—	—	—	N	NF	86	—	—	—	—	—	149	143	2	2	3.2
NU 315	W	T, T7	NU	NJ	NUP	—	—	86	86	93	97	106	149	—	—	2	2	3.26
NU 315 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 315 E	M	T, T7	NU	NJ	NUP	—	—	86	86	92	97	106	149	—	—	2	2	3.73
NU 2315 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NU 2315 E	M	T, T7	NU	NJ	NUP	—	—	86	86	92	97	106	149	—	—	2	2	4.86
NU 415	W	M	NU	NJ	—	N	NF	88	88	102	107	118	177	177	164	2.5	2.5	6.2

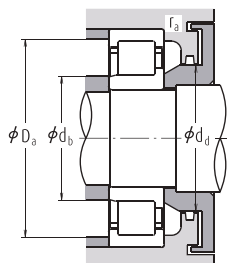
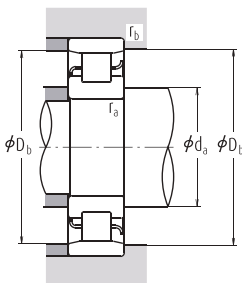
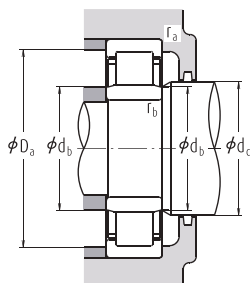


Single-Row Cylindrical Roller Bearings

Bore Diameter 80 – 90 mm



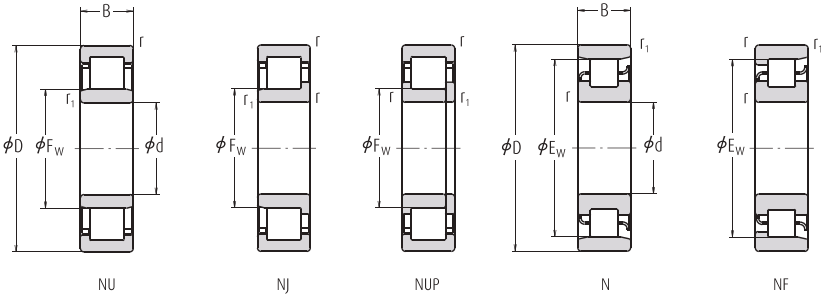
Boundary Dimensions (mm)							Basic Load Ratings (N)		Speeds (min ⁻¹)			
d	D	B	r min.	r ₁ min.	F _W	E _W	C _r	C _{0r}	Thermal Reference Speed	Limiting Speeds		
										Mechanical (%)	Grease	
80	125	22	1.1	1.0	91.5	113.5	72 500	90 500	6 000	—	5 300	
	140	26	2.0	2.0	—	125.3	106 000	122 000	5 600	—	3 600	
	140	26	2.0	2.0	95.3	—	160 000	167 000	5 000	8 000	4 500	
	140	26	2.0	2.0	95.3	—	139 000	167 000	5 000	8 000	4 500	
	140	33	2.0	2.0	95.3	—	214 000	243 000	5 000	7 100	4 000	
	140	33	2.0	2.0	95.3	—	186 000	243 000	5 000	7 100	4 000	
	170	39	2.1	2.1	—	147	190 000	207 000	4 800	—	2 800	
	170	39	2.1	2.1	101.0	—	289 000	282 000	4 300	7 100	3 600	
	170	39	2.1	2.1	101.0	—	256 000	282 000	4 300	7 100	3 600	
	170	58	2.1	2.1	101.0	—	400 000	430 000	4 500	6 300	3 200	
	170	58	2.1	2.1	101.0	—	355 000	430 000	4 500	6 300	3 200	
	200	48	3.0	3.0	110.0	170	299 000	315 000	4 000	—	2 600	
	85	130	22	1.1	1.0	96.5	118.5	74 500	95 500	5 600	—	5 000
		150	28	2.0	2.0	—	133.8	120 000	140 000	5 300	—	3 400
150		28	2.0	2.0	100.5	—	192 000	199 000	4 800	7 500	4 300	
150		28	2.0	2.0	100.5	—	167 000	199 000	4 800	7 500	4 300	
150		36	2.0	2.0	100.5	—	250 000	279 000	4 800	6 700	3 800	
150		36	2.0	2.0	100.5	—	217 000	279 000	4 800	6 700	3 800	
180		41	3.0	3.0	—	156	225 000	247 000	4 500	—	2 600	
180		41	3.0	3.0	108.0	—	212 000	228 000	4 800	—	2 600	
180		41	3.0	3.0	108.0	—	360 000	330 000	4 000	6 700	3 400	
180		60	3.0	3.0	108.0	—	485 000	485 000	4 300	6 000	3 000	
210		52	4.0	4.0	113.0	177	335 000	350 000	4 000	—	3 000	
90	140	24	1.5	1.1	103.0	127	88 000	114 000	5 300	—	4 500	
	160	30	2.0	2.0	—	143	152 000	178 000	5 000	—	3 200	
	160	30	2.0	2.0	107.0	—	205 000	217 000	4 800	7 100	4 000	
	160	30	2.0	2.0	107.0	—	182 000	217 000	4 800	7 100	4 000	
	160	40	2.0	2.0	107.0	—	274 000	315 000	4 800	6 300	3 600	
	160	40	2.0	2.0	107.0	—	242 000	315 000	4 800	6 300	3 600	
	190	43	3.0	3.0	—	165	240 000	265 000	4 500	—	2 600	
	190	43	3.0	3.0	115.0	—	240 000	265 000	4 500	—	2 600	
	190	43	3.0	3.0	113.5	—	390 000	355 000	4 000	6 300	3 200	
	190	64	3.0	3.0	113.5	—	535 000	535 000	4 000	5 600	2 800	
	225	54	4.0	4.0	123.5	191.5	375 000	400 000	3 600	—	2 800	



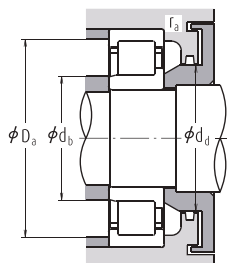
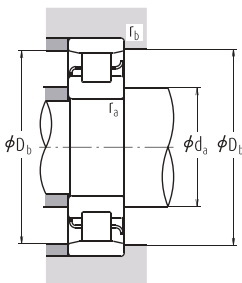
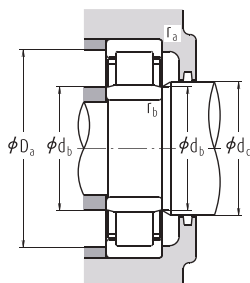
Bearing Numbers							Abutment and Fillet Dimensions (mm)												Mass (kg)
	Cage symbol (1) Standard option	NU	(2) NJ	NUP	N	NF	d _a (3) min.	d _b min.	d _b (4) max.	d _c min.	d _d min.	D _a (3) max.	D _b max.	D _b min.	r _a max.	r _b max.	approx.		
NU 1016	(M)	—	NU	—	NUP	N	—	86.5	85	90	94	—	118.5	120	115	1	1	0.969	
N 216	W	M	—	—	—	N	NF	89	—	—	—	—	—	131	128	2	2	1.47	
NU 216 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
NU 216 E	M	T, T7	NU	NJ	NUP	—	—	89	89	92	97	104	131	—	—	2	2	1.7	
NU 2216 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
NU 2216 E	M	T, T7	NU	NJ	NUP	—	—	89	89	92	97	104	131	—	—	2	2	1.96	
N 316	W	M	—	—	—	N	NF	91	—	—	—	—	—	159	150	2	2	3.85	
NU 316 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
NU 316 E	M	T, T7	NU	NJ	NUP	—	—	91	91	98	105	114	159	—	—	2	2	4.45	
NU 2316 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
NU 2316 E	M	T, T7	NU	NJ	NUP	—	—	91	91	98	105	114	159	—	—	2	2	5.73	
NU 416	W	M	NU	NJ	—	N	NF	93	93	107	112	124	187	187	173	2.5	2.5	7.36	
NU 1017	(M)	—	NU	—	—	N	—	91.5	90	95	99	—	123.5	125	120	1	1	1.01	
N 217	W	M	—	—	—	N	NF	94	—	—	—	—	—	141	137	2	2	1.87	
NU 217 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
NU 217 E	M	T, T7	NU	NJ	NUP	—	—	94	94	98	104	110	141	—	—	2	2	2.11	
NU 2217 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
NU 2217 E	M	T, T7	NU	NJ	NUP	—	—	94	94	98	104	110	141	—	—	2	2	2.44	
N 317	W	M	—	—	—	N	NF	98	—	—	—	—	—	167	159	2.5	2.5	4.53	
NU 317	W	N	NU	NJ	NUP	—	—	98	98	105	110	119	167	—	—	2.5	2.5	4.6	
NU 317 E*	M	T, T7	NU	NJ	NUP	—	—	98	98	105	110	119	167	—	—	2.5	2.5	5.26	
NU 2317 E*	M	T, T7	NU	NJ	NUP	—	—	98	98	105	110	119	167	—	—	2.5	2.5	6.77	
NU 417	M	—	NU	NJ	—	N	NF	101	101	110	115	128	194	194	180	3	3	9.56	
NU 1018	(M)	—	NU	—	NUP	N	—	98	96.5	101	106	—	132	133.5	129	1.5	1	1.35	
N 218	W	M	—	—	—	N	NF	99	—	—	—	—	—	151	146	2	2	2.31	
NU 218 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
NU 218 E	M	T, T7	NU	NJ	NUP	—	—	99	99	104	109	116	151	—	—	2	2	2.6	
NU 2218 E*	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
NU 2218 E	M	T, T7	NU	NJ	NUP	—	—	99	99	104	109	116	151	—	—	2	2	3.11	
N 318	W	M	—	—	—	N	NF	103	—	—	—	—	—	177	168	2.5	2.5	5.31	
NU 318	W	M	NU	NJ	NUP	—	—	103	103	112	117	127	177	—	—	2.5	2.5	5.38	
NU 318 E*	M	T, T7	NU	NJ	NUP	—	—	103	103	111	117	127	177	—	—	2.5	2.5	6.1	
NU 2318 E*	M	T, T7	NU	NJ	NUP	—	—	103	103	111	117	127	177	—	—	2.5	2.5	7.9	
NU 418	M	—	NU	NJ	—	N	NF	106	106	120	125	139	209	209	196	3	3	11.5	

Single-Row Cylindrical Roller Bearings

Bore Diameter 95 – 110 mm



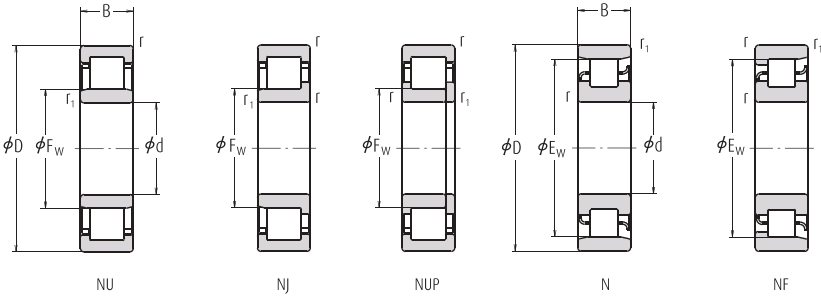
Boundary Dimensions (mm)							Basic Load Ratings (N)		Thermal Reference Speed	Speeds (min ⁻¹)	
d	D	B	r min.	r ₁ min.	F _w	E _w	C _r	C _{0R}		Limiting Speeds	
										Mechanical (%)	Grease
95	145	24	1.5	1.1	108.0	132	90 500	120 000	5 000	—	4 300
	170	32	2.1	2.1	—	151.5	166 000	196 000	4 800	—	3 000
	170	32	2.1	2.1	112.5	—	249 000	265 000	4 300	6 700	3 800
	170	32	2.1	2.1	112.5	—	220 000	265 000	4 300	6 700	3 800
	170	43	2.1	2.1	112.5	—	325 000	370 000	4 500	6 000	3 400
	170	43	2.1	2.1	112.5	—	286 000	370 000	4 500	6 000	3 400
	200	45	3.0	3.0	—	173.5	259 000	289 000	4 300	—	2 400
	200	45	3.0	3.0	121.5	—	259 000	289 000	4 300	—	2 400
	200	45	3.0	3.0	121.5	—	410 000	385 000	3 800	6 000	3 000
	200	67	3.0	3.0	121.5	—	565 000	585 000	3 800	5 300	2 600
100	240	55	4.0	4.0	133.5	201.5	400 000	445 000	3 200	—	2 600
	150	24	1.5	1.1	113	137	93 000	126 000	4 800	—	4 300
	180	34	2.1	2.1	—	160	183 000	217 000	4 500	—	2 800
	180	34	2.1	2.1	119	—	305 000	305 000	4 300	6 300	3 600
	180	46	2.1	2.1	119	—	410 000	445 000	4 300	5 600	3 200
	215	47	3.0	3.0	—	185.5	299 000	335 000	4 000	—	2 200
	215	47	3.0	3.0	129.5	—	299 000	335 000	4 000	—	2 200
	215	47	3.0	3.0	127.5	—	465 000	425 000	3 600	5 600	2 800
	215	73	3.0	3.0	127.5	—	700 000	715 000	3 400	5 600	2 400
	250	58	4.0	4.0	139	211	450 000	500 000	3 000	—	2 600
105	160	26	2.0	1.1	119.5	145.5	109 000	149 000	4 500	—	4 000
	190	36	2.1	2.1	—	168.8	201 000	241 000	4 500	—	2 600
	190	36	2.1	2.1	125	—	320 000	310 000	4 300	6 000	3 400
	225	49	3.0	3.0	—	195	340 000	390 000	3 800	—	2 200
	225	49	3.0	3.0	133	—	525 000	480 000	3 400	5 300	2 600
110	260	60	4.0	4.0	144.5	220.5	495 000	555 000	2 800	—	2 400
	170	28	2.0	1.1	125	155	131 000	174 000	4 500	—	3 800
	200	38	2.1	2.1	—	178.5	229 000	272 000	4 300	—	2 600
	200	38	2.1	2.1	132.5	—	360 000	365 000	4 000	5 600	3 200
	200	53	2.1	2.1	132.5	—	470 000	515 000	4 000	5 000	2 800
	240	50	3.0	3.0	—	207	380 000	435 000	3 400	—	2 000
	240	50	3.0	3.0	143	—	555 000	525 000	3 200	5 000	2 600
	240	80	3.0	3.0	143	—	830 000	880 000	3 000	4 500	2 200
	280	65	4.0	4.0	155	—	550 000	620 000	2 600	—	2 200



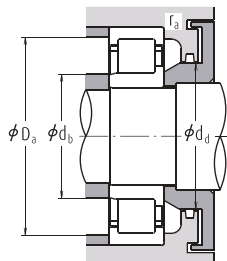
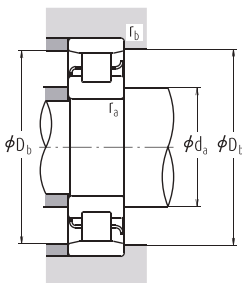
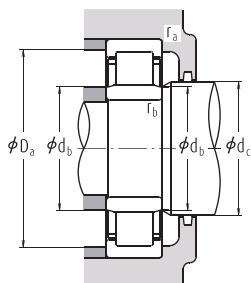
Bearing Numbers							Abutment and Fillet Dimensions (mm)											Mass (kg)
							$d_a^{(2)}$	d_b	$d_b^{(4)}$	d_c	d_d	$D_a^{(2)}$	D_b	D_b	r_a	r_b	approx.	
							min.	min.	max.	min.	min.	max.	max.	min.	max.	max.		
NU 1019	(M)	—	NU	NJ	—	N	—	103	101.5	106	111	—	137	138.5	134	1.5	1	1.41
N 219	W	M	—	—	—	N	NF	106	—	—	—	—	159	155	2	2	2.79	
NU 219 E°	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
NU 219 E	M	T, T7	NU	NJ	NUP	—	—	106	106	110	116	123	159	—	—	2	2	3.17
NU 2219 E°	M	T, T7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
NU 2219 E	M	T, T7	NU	NJ	NUP	—	—	106	106	110	116	123	159	—	—	2	2	3.81
N 319	W	M	—	—	—	N	NF	108	—	—	—	—	187	177	2.5	2.5	6.09	
NU 319	W	M	NU	NJ	NUP	—	—	108	108	118	124	134	187	—	—	2.5	2.5	6.23
NU 319 E°	M	T, T7	NU	NJ	NUP	—	—	108	108	118	124	134	187	—	—	2.5	2.5	7.13
NU 2319 E°	M	T, T7	NU	NJ	NUP	—	—	108	108	118	124	134	187	—	—	2.5	2.5	9.21
NU 419	M	—	NU	NJ	NUP	—	NF	111	111	130	136	149	224	224	206	3	3	13.6
NU 1020	(M)	—	NU	NJ	NUP	N	—	108	106.5	111	116	—	142	143.5	139	1.5	1	1.47
N 220	W	M	—	—	—	N	NF	111	—	—	—	—	169	163	2	2	3.36	
NU 220 E°	M	T, T7	NU	NJ	NUP	—	—	111	111	116	122	130	169	—	—	2	2	3.81
NU 2220 E°	M	T, T7	NU	NJ	NUP	—	—	111	111	116	122	130	169	—	—	2	2	4.69
N 320	W	M	—	—	—	N	NF	113	—	—	—	—	202	190	2.5	2.5	7.59	
NU 320	W	M	NU	NJ	NUP	—	—	113	113	126	132	143	202	—	—	2.5	2.5	7.69
NU 320 E°	M	T, T7	NU	NJ	NUP	—	—	113	113	124	132	143	202	—	—	2.5	2.5	8.63
NU 2320 E°	M	T, T7	NU	NJ	NUP	—	—	113	113	124	132	143	202	—	—	2.5	2.5	11.8
NU 420	M	—	NU	NJ	—	N	NF	116	116	135	141	156	234	234	215	3	3	15.5
NU 1021	(M)	—	NU	—	—	N	NF	114	111.5	118	122	—	151	153.5	147	2	1	1.83
N 221	W	M	—	—	—	N	NF	116	—	—	—	—	179	172	2	2	4.0	
NU 221 E°	M	—	NU	NJ	NUP	—	—	116	116	121	129	137	179	—	—	2	2	4.58
N 321	W	M	—	—	—	N	NF	118	—	—	—	—	212	199	2.5	2.5	8.69	
NU 321 E°	M	—	NU	NJ	NUP	—	—	118	118	131	137	149	212	—	—	2.5	2.5	9.84
NU 421	M	—	NU	NJ	—	N	NF	121	121	141	147	162	244	244	225	3	3	17.3
NU 1022	(M)	—	NU	NJ	—	N	NF	119	116.5	123	128	—	161	163.5	157	2	1	2.27
N 222	W	M	—	—	—	N	NF	121	—	—	—	—	189	182	2	2	4.64	
NU 222 E°	M	T, T7	NU	NJ	NUP	—	—	121	121	129	135	144	189	—	—	2	2	5.37
NU 2222 E°	M	—	NU	NJ	NUP	—	—	121	121	129	135	144	189	—	—	2	2	7.65
N 322	W	M	—	—	—	N	NF	123	—	—	—	—	227	211	2.5	2.5	10.3	
NU 322 E°	M	—	NU	NJ	NUP	—	—	123	123	139	145	158	227	—	—	2.5	2.5	11.8
NU 2322 E°	M	T, T7	NU	NJ	—	—	—	123	123	139	145	158	227	—	—	2.5	2.5	18.8
NU 422	M	—	NU	NJ	—	—	—	126	126	151	157	173	264	—	—	3	3	22.1

Single-Row Cylindrical Roller Bearings

Bore Diameter 120 – 150 mm



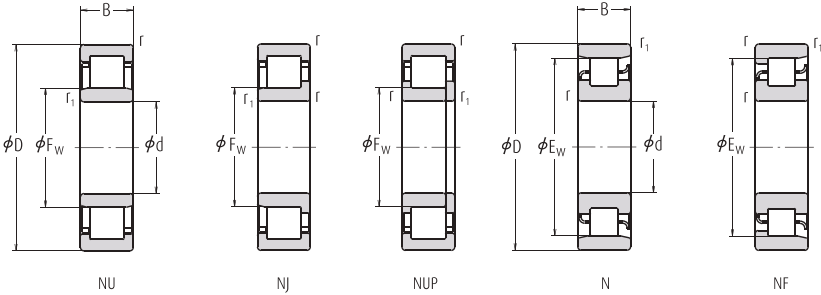
Boundary Dimensions (mm)							Basic Load Ratings (N)		Thermal Reference Speed	Speeds (min ⁻¹)	
d	D	B	r min.	r ₁ min.	F _W	E _W	C _r	C _{0r}		Mechanical (%)	Grease
120	180	28	2.0	1.1	135	165	139 000	191 000	4 000	—	3 400
	215	40	2.1	2.1	—	191.5	260 000	320 000	4 000	—	2 400
	215	40	2.1	2.1	143.5	—	410 000	420 000	3 600	5 300	3 000
	215	58	2.1	2.1	143.5	—	555 000	620 000	3 600	4 800	2 600
	260	55	3.0	3.0	—	226	450 000	510 000	3 000	—	1 800
	260	55	3.0	3.0	154	—	650 000	610 000	2 800	4 800	2 200
	260	86	3.0	3.0	154	—	975 000	1 030 000	2 600	4 300	2 000
	310	72	5.0	5.0	170	260	675 000	770 000	2 400	—	2 000
130	200	33	2.0	1.1	148	182	172 000	238 000	4 000	—	3 200
	230	40	3.0	3.0	—	204	270 000	340 000	3 800	—	2 200
	230	40	3.0	3.0	153.5	—	445 000	455 000	3 400	5 000	2 600
	230	64	3.0	3.0	153.5	—	650 000	735 000	3 400	4 500	2 400
	280	58	4.0	4.0	—	243	500 000	570 000	2 800	—	2 200
	280	58	4.0	4.0	167	—	760 000	735 000	2 600	4 300	2 200
	280	93	4.0	4.0	167	—	1 130 000	1 230 000	2 400	3 800	1 900
	340	78	5.0	5.0	185	285	825 000	955 000	2 000	—	1 800
140	210	33	2.0	1.1	158	192	176 000	250 000	3 800	—	3 000
	250	42	3.0	3.0	—	221	297 000	375 000	3 400	—	2 000
	250	42	3.0	3.0	169	—	485 000	515 000	3 200	4 500	2 400
	250	68	3.0	3.0	169	—	675 000	790 000	3 200	4 000	2 200
	300	62	4.0	4.0	—	260	550 000	640 000	2 600	—	2 000
	300	62	4.0	4.0	180	—	815 000	795 000	2 400	4 000	2 000
	300	102	4.0	4.0	180	—	1 250 000	1 380 000	2 200	2 600	1 700
	360	82	5.0	5.0	198	302	875 000	1 020 000	1 900	—	1 700
150	225	35	2.1	1.5	169.5	205.5	202 000	294 000	3 600	—	2 800
	270	45	3.0	3.0	—	238	360 000	465 000	3 000	—	1 800
	270	45	3.0	3.0	182	—	550 000	595 000	2 800	4 300	2 200
	270	73	3.0	3.0	182	—	780 000	930 000	2 800	3 800	2 000
	320	65	4.0	4.0	—	277	665 000	805 000	2 200	—	1 800
	320	65	4.0	4.0	193	—	930 000	920 000	2 200	3 800	1 800
	320	108	4.0	4.0	193	—	1 430 000	1 600 000	2 000	2 400	1 600
	380	85	5.0	5.0	213	—	930 000	1 120 000	1 700	—	1 600



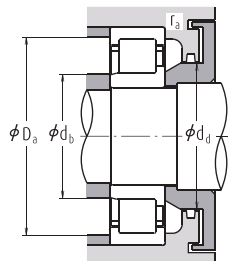
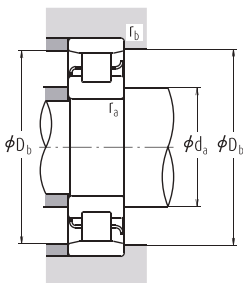
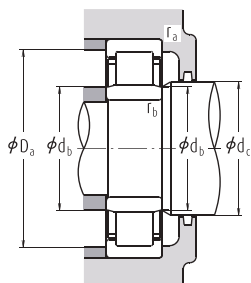
Bearing Numbers							Abutment and Fillet Dimensions (mm)											Mass (kg)
Cage symbol (1) Standard option	NU	(2) NJ	NUP	N	NF		d _a (3) min.	d _b min.	d _b (4) max.	d _c min.	d _d min.	D _a (3) max.	D _b max.	D _b min.	r _a max.	r _b max.	approx.	
NU 1024 (M)	—	NU	NJ	NUP	N	—	129	126.5	133	138	—	171	173.5	167	2	1	2.43	
N 224 W	M	—	—	—	N	NF	131	—	—	—	—	204	196	2	2	—	5.63	
NU 224 E°	M	—	NU	NJ	NUP	—	131	131	140	146	156	204	—	—	2	2	6.43	
NU 2224 E°	M	—	NU	NJ	NUP	—	131	131	140	146	156	204	—	—	2	2	9.51	
N 324 W	M	—	—	—	N	NF	133	—	—	—	—	247	230	2.5	2.5	—	12.9	
NU 324 E°	M	—	NU	NJ	NUP	—	133	133	150	156	171	247	—	—	2.5	2.5	15	
NU 2324 E°	M	—	NU	NJ	NUP	—	133	133	150	156	171	247	—	—	2.5	2.5	25	
NU 424 M	—	NU	NJ	NUP	N	—	140	140	166	172	190	290	290	266	4	4	30.2	
NU 1026 (M)	—	NU	NJ	—	N	NF	139	136.5	146	151	—	191	193.5	184	2	1	3.66	
N 226 W	M	—	—	—	N	NF	143	—	—	—	—	217	208	2.5	2.5	—	6.48	
NU 226 E°	M	T, T7	NU	NJ	NUP	—	143	143	150	158	168	217	—	—	2.5	2.5	8.03	
NU 2226 E°	M	—	NU	NJ	NUP	—	143	143	150	158	168	217	—	—	2.5	2.5	9.44	
N 326 M	—	—	—	—	N	NF	146	—	—	—	—	264	247.5	3	3	—	17.7	
NU 326 E°	M	—	NU	NJ	NUP	—	146	146	163	169	184	264	—	—	3	3	18.7	
NU 2326 E°	M	—	NU	NJ	NUP	—	146	146	163	169	184	264	—	—	3	3	30	
NU 426 M	—	NU	NJ	—	—	NF	150	150	180	187	208	320	320	291	4	4	39.6	
NU 1028 (M)	—	NU	NJ	NUP	N	—	149	146.5	156	161	—	201	203.5	194	2	1	3.87	
N 228 W	M	—	—	—	N	NF	153	—	—	—	—	237	225	2.5	2.5	—	8.08	
NU 228 E°	M	—	NU	NJ	NUP	—	153	153	165	171	182	237	—	—	2.5	2.5	9.38	
NU 2228 E°	M	—	NU	NJ	NUP	—	153	153	165	171	182	237	—	—	2.5	2.5	15.2	
N 328 M	—	—	—	—	N	NF	156	—	—	—	—	284	266	3	3	—	21.7	
NU 328 E°	M	—	NU	NJ	NUP	—	156	156	176	182	198	284	—	—	3	3	22.8	
NU 2328 E°	M	—	NU	NJ	NUP	—	156	156	176	182	198	284	—	—	3	3	37.7	
NU 428 M	—	NU	NJ	—	N	—	160	160	193	200	222	340	340	308	4	4	46.4	
NU 1030 (M)	—	NU	NJ	—	N	NF	161	158	167	173	—	214	217	208	2	1.5	4.77	
N 230 W	M	—	—	—	N	NF	163	—	—	—	—	257	242	2.5	2.5	—	10.4	
NU 230 E°	M	—	NU	NJ	NUP	—	163	163	177	184	196	257	—	—	2.5	2.5	11.9	
NU 2230 E°	M	—	NU	NJ	NUP	—	163	163	177	184	196	257	—	—	2.5	2.5	19.3	
N 330 M	—	—	—	—	N	NF	166	—	—	—	—	304	283	3	3	—	25.8	
NU 330 E°	M	—	NU	NJ	NUP	—	166	166	188	195	213	304	—	—	3	3	27.1	
NU 2330 E°	M	—	NU	NJ	NUP	—	166	166	188	195	213	304	—	—	3	3	45.1	
NU 430 M	—	NU	NJ	—	—	—	170	170	208	216	237	360	—	—	4	4	55.8	

Single-Row Cylindrical Roller Bearings

Bore Diameter 160 - 190 mm



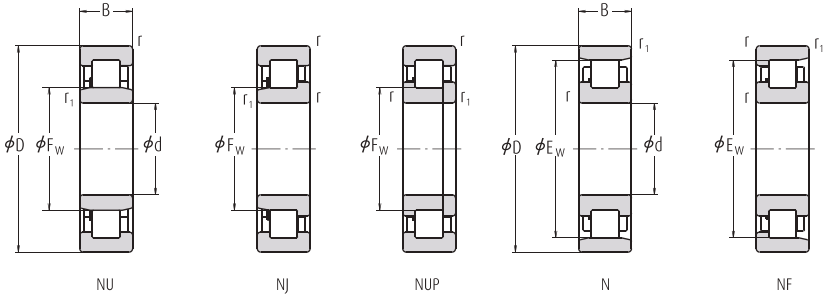
Boundary Dimensions (mm)							Basic Load Ratings (N)		Thermal Reference Speed	Speeds (min ⁻¹)	
d	D	B	r min.	r ₁ min.	F _w	E _w	C _r	C _{0r}		Limiting Speeds	
										Mechanical (%)	Grease
160	240	38	2.1	1.5	180	220	238 000	340 000	3 400	—	2 600
	290	48	3.0	3.0	—	255	430 000	570 000	2 800	—	2 200
	290	48	3.0	3.0	195	—	615 000	665 000	2 600	4 000	2 200
	290	80	3.0	3.0	193	—	995 000	1 190 000	2 400	3 600	1 900
	340	68	4.0	4.0	—	292	700 000	875 000	2 000	—	1 700
	340	68	4.0	4.0	204	—	1 060 000	1 050 000	1 900	3 600	1 700
	340	114	4.0	4.0	204	—	1 310 000	1 820 000	1 800	2 400	1 500
170	260	42	2.1	2.1	193	237	287 000	415 000	3 200	—	2 400
	310	52	4	4	—	272	475 000	635 000	2 600	—	2 000
	310	52	4	4	207	—	740 000	800 000	2 400	3 800	2 000
	310	86	4	4	205	—	1 140 000	1 330 000	2 200	3 200	1 800
	360	72	4	4	—	310	795 000	1 010 000	1 900	—	1 600
	360	72	4	4	218	—	930 000	1 150 000	1 800	3 400	1 600
	360	120	4	4	216	—	1 490 000	2 070 000	1 600	2 200	1 400
180	280	46	2.1	2.1	205	255	355 000	510 000	3 000	—	2 200
	320	52	4	4	—	282	495 000	675 000	2 400	—	1 900
	320	52	4	4	217	—	770 000	850 000	2 200	3 600	1 900
	320	86	4	4	215	—	1 240 000	1 510 000	2 000	3 200	1 700
	380	75	4	4	—	328	905 000	1 150 000	1 700	—	1 500
	380	75	4	4	231	—	985 000	1 230 000	1 700	2 800	1 500
	380	126	4	4	227	—	1 560 000	2 220 000	1 500	2 000	1 300
190	290	46	2.1	2.1	215	265	365 000	535 000	2 800	—	2 000
	340	55	4	4	—	299	555 000	770 000	2 200	—	1 800
	340	55	4	4	230	—	885 000	955 000	2 000	3 400	1 800
	340	92	4	4	228	—	1 360 000	1 670 000	1 900	3 000	1 600
	400	78	5	5	—	345	975 000	1 260 000	1 600	—	1 400
	400	78	5	5	245	—	1 060 000	1 340 000	1 600	2 600	1 400
	400	132	5	5	240	—	1 770 000	2 520 000	1 400	2 000	1 300



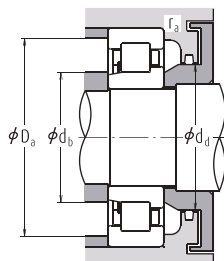
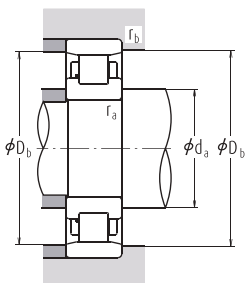
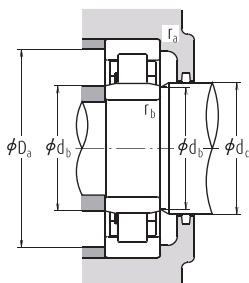
Bearing Numbers							Abutment and Fillet Dimensions (mm)											Mass (kg)
							$d_a^{(2)}$ min.	d_b min.	$d_b^{(4)}$ max.	d_c min.	d_d min.	$D_a^{(3)}$ max.	D_b max.	D_b min.	r_a max.	r_b max.	approx.	
NU 1032	(M)	—	NU	NJ	—	N	171	168	178	184	—	229	232	222	2	1.5	5.81	
N 232	M	—	—	—	—	N	173	—	—	—	—	277	261	2.5	2.5	—	14.1	
NU 232 E°	M	—	NU	NJ	NUP	—	173	173	190	197	210	277	—	—	2.5	2.5	14.7	
NU 2232 E°	M	—	NU	NJ	NUP	—	173	173	188	197	210	277	—	—	2.5	2.5	24.5	
N 332	M	—	—	—	—	N	176	—	—	—	—	324	298	3	3	—	30.8	
NU 332 E°	M	—	NU	NJ	NUP	—	176	176	199	211	228	324	—	—	3	3	32.1	
NU 2332 E	M	—	NU	NJ	NUP	—	176	176	199	211	228	324	—	—	3	3	53.9	
NU 1034	(M)	—	NU	NJ	—	N	181	181	190	197	—	249	249	239	2	2	7.91	
N 234	M	—	—	—	—	N	186	—	—	—	—	294	278	3	3	—	17.4	
NU 234 E°	M	—	NU	NJ	NUP	—	186	186	202	211	223	294	—	—	3	3	18.3	
NU 2234 E°	M	—	NU	NJ	NUP	—	186	186	200	211	223	294	—	—	3	3	29.9	
N 334	M	—	—	—	—	N	186	—	—	—	—	344	316	3	3	—	36.6	
NU 334 E	M	—	NU	NJ	NUP	—	186	186	213	223	241	344	—	—	3	3	37.9	
NU 2334 E	M	—	NU	NJ	NUP	—	186	186	210	223	241	344	—	—	3	3	63.4	
NU 1036	(M)	—	NU	NJ	—	N	191	191	202	209	—	269	269	258	2	2	10.2	
N 236	M	—	—	—	—	N	196	—	—	—	—	304	288	3	3	—	18.1	
NU 236 E°	M	—	NU	NJ	NUP	—	196	196	212	221	233	304	—	—	3	3	19	
NU 2236 E°	M	—	NU	NJ	NUP	—	196	196	210	221	233	304	—	—	3	3	31.4	
N 336	M	—	—	—	—	N	196	—	—	—	—	364	335	3	3	—	42.6	
NU 336 E	M	—	NU	NJ	NUP	—	196	196	226	235	255	364	—	—	3	3	44	
NU 2336 E	M	—	NU	NJ	NUP	—	196	196	222	235	255	364	—	—	3	3	74.6	
NU 1038	(M)	—	NU	NJ	—	N	201	201	212	219	—	279	279	268	2	2	10.7	
N 238	M	—	—	—	—	N	206	—	—	—	—	324	305	3	3	—	22	
NU 238 E°	M	—	NU	NJ	NUP	—	206	206	225	234	247	324	—	—	3	3	23	
NU 2238 E°	M	—	NU	NJ	NUP	—	206	206	223	234	247	324	—	—	3	3	38.3	
N 338	M	—	—	—	—	N	210	—	—	—	—	380	352	4	4	—	48.7	
NU 338 E	M	—	NU	NJ	NUP	—	210	210	240	248	268	380	—	—	4	4	50.6	
NU 2338 E	M	—	NU	NJ	NUP	—	210	210	235	248	268	380	—	—	4	4	86.2	

Single-Row Cylindrical Roller Bearings

Bore Diameter 200 – 320 mm



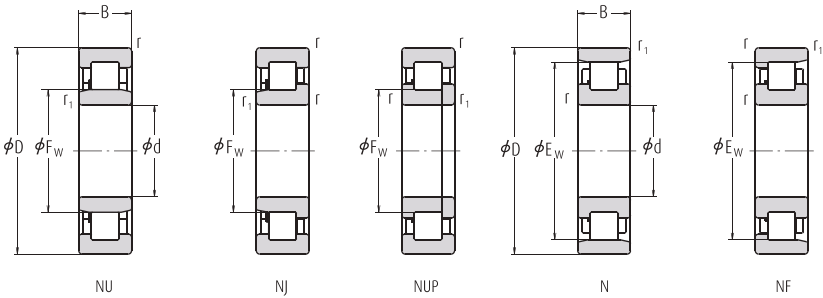
Boundary Dimensions (mm)							Basic Load Ratings (N)		Speeds (min ⁻¹)		
d	D	B	r min.	r ₁ min.	F _W	E _W	C _r	C _{0r}	Thermal Reference Speed	Limiting Speeds	
										Mechanical (%)	Grease
200	310	51	2.1	2.1	229	281	390 000	580 000	2 600	—	2 000
	360	58	4	4	—	316	620 000	865 000	2 000	—	1 700
	360	58	4	4	243	—	945 000	1 060 000	1 900	3 200	1 700
	360	98	4	4	241	—	1 500 000	1 870 000	1 800	2 200	1 500
	420	80	5	5	—	360	975 000	1 270 000	1 600	—	1 300
	420	80	5	5	258	—	1 140 000	1 450 000	1 500	2 600	1 200
220	420	138	5	5	253	—	1 910 000	2 760 000	1 300	1 900	1 200
	340	56	3	3	250	310	500 000	750 000	2 400	—	1 800
	400	65	4	4	—	350	760 000	1 080 000	1 800	—	1 500
	400	65	4	4	270	—	1 110 000	1 250 000	1 800	—	1 500
	400	108	4	4	270	—	1 140 000	1 810 000	1 700	—	1 300
	460	88	5	5	—	396	1 190 000	1 570 000	1 400	—	1 200
240	460	88	5	5	284	—	1 190 000	1 570 000	1 400	—	1 200
	360	56	3	3	270	330	530 000	820 000	2 200	—	1 600
	440	72	4	4	—	385	935 000	1 340 000	1 600	—	1 300
	440	72	4	4	295	—	935 000	1 340 000	1 600	—	1 300
	440	120	4	4	295	—	1 440 000	2 320 000	1 500	—	1 200
	500	95	5	5	—	430	1 360 000	1 820 000	1 200	—	1 100
260	500	95	5	5	310	—	1 360 000	1 820 000	1 200	—	1 100
	400	65	4	4	296	364	645 000	1 000 000	1 900	—	1 500
	480	80	5	5	—	420	1 100 000	1 580 000	1 500	—	1 200
	480	80	5	5	320	—	1 100 000	1 580 000	1 500	—	1 200
	480	130	5	5	320	—	1 710 000	2 770 000	1 300	—	1 100
	540	102	6	6	336	—	1 540 000	2 090 000	1 100	—	1 000
280	420	65	4	4	316	384	660 000	1 050 000	1 800	—	1 400
	500	80	5	5	—	440	1 140 000	1 680 000	1 300	—	1 100
	500	80	5	5	340	—	1 140 000	1 680 000	1 300	—	1 100
300	460	74	4	4	340	420	885 000	1 400 000	1 600	—	1 300
	540	85	5	5	364	—	1 400 000	2 070 000	1 200	—	1 100
320	480	74	4	4	360	440	905 000	1 470 000	1 500	—	1 200
	580	92	5	5	—	510	1 540 000	2 270 000	1 100	—	950
	580	92	5	5	390	—	1 540 000	2 270 000	1 100	—	950



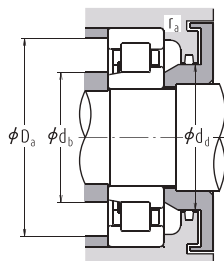
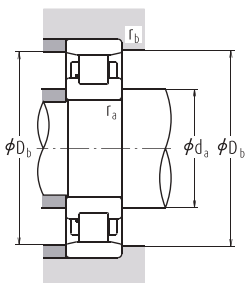
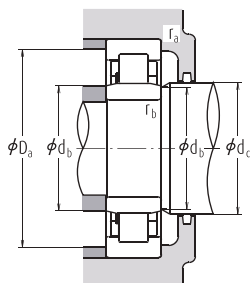
Bearing Numbers							Abutment and Fillet Dimensions (mm)											Mass (kg)
	Cage symbol (1) Standard option	NU	(2) NJ	NUP	N	NF	d _a (3) min.	d _b min.	d _b (4) max.	d _c min.	d _d min.	D _s (2) max.	D _b max.	D _b min.	r _a max.	r _b max.	approx.	
NU 1040	(M)	—	NU	NJ	—	N	NF	211	211	226	233	—	299	299	284	2	2	14
N 240	M	—	—	—	—	N	NF	216	—	—	—	—	344	323	3	3	26.2	
NU 240 E*	M	—	NU	NJ	NUP	—	—	216	216	238	247	261	344	—	—	3	3	27.4
NU 2240 E*	M	—	NU	NJ	NUP	—	—	216	216	235	247	261	344	—	—	3	3	46.1
N 340	M	—	—	—	—	N	NF	220	—	—	—	—	400	367	4	4	55.3	
NU 340 E	M	—	NU	NJ	NUP	—	—	220	220	252	263	283	400	—	—	4	4	57.1
NU 2340 E	M	—	NU	NJ	NUP	—	—	220	220	247	263	283	400	—	—	4	4	99.3
NU 1044	(M)	—	NU	NJ	—	N	—	233	233	247	254	—	327	327	313	2.5	2.5	18.2
N 244	M	—	—	—	—	N	NF	236	—	—	—	—	384	357	3	3	37	
NU 244 E*	M	—	NU	NJ	NUP	—	—	236	236	264	273	289	384	—	—	3	3	37.3
NU 2244	M	—	NU	—	—	—	—	—	236	264	273	289	384	—	—	3	3	61.8
N 344	M	—	—	—	—	N	—	240	—	—	—	—	440	403	4	4	72.8	
NU 344	M	—	NU	NJ	—	—	—	240	240	278	287	307	440	—	—	4	4	74.6
NU 1048	(M)	—	NU	NJ	—	N	—	253	253	266	275	—	347	347	333	2.5	2.5	19.5
N 248	M	—	—	—	—	N	NF	256	—	—	—	—	424	392	3	3	49.6	
NU 248	M	—	NU	NJ	NUP	—	—	256	256	289	298	316	424	—	—	3	3	50.4
NU 2248	M	—	NU	—	—	—	—	—	256	289	298	316	424	—	—	3	3	84.9
N 348	M	—	—	—	—	N	—	260	—	—	—	—	480	438	4	4	92.3	
NU 348	M	—	NU	NJ	—	—	—	260	260	304	313	333	480	—	—	4	4	94.6
NU 1052	(M)	—	NU	NJ	—	N	NF	276	276	292	300	—	384	384	367	3	3	29.1
N 252	M	—	—	—	—	N	—	280	—	—	—	—	460	428	4	4	66.2	
NU 252	M	—	NU	NJ	—	—	—	280	280	314	323	343	460	—	—	4	4	67.1
NU 2252	M	—	NU	—	NUP	—	—	280	280	314	323	343	460	—	—	4	4	111
NU 352	M	—	NU	NJ	—	—	—	286	286	330	339	359	514	—	—	5	5	118
NU 1056	(M)	—	NU	NJ	NUP	N	NF	296	296	312	320	—	404	404	387	3	3	30.8
N 256	M	—	—	—	—	N	NF	300	—	—	—	—	480	448	4	4	69.6	
NU 256	M	—	NU	NJ	—	—	—	300	300	334	344	364	480	—	—	4	4	70.7
NU 1060	(M)	—	NU	NJ	—	N	NF	316	316	336	344	—	444	444	424	3	3	43.7
NU 260	M	—	NU	NJ	—	—	—	320	320	358	368	391	520	—	—	4	4	89.2
NU 1064	(M)	—	NU	—	—	N	NF	336	336	356	365	—	464	464	444	3	3	46.1
N 264	M	—	—	—	—	N	—	340	—	—	—	—	560	519	4	4	110	
NU 264	M	—	NU	NJ	—	—	—	340	340	384	394	420	560	—	—	4	4	112

Single-Row Cylindrical Roller Bearings

Bore Diameter 340 – 500 mm



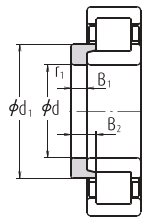
Boundary Dimensions (mm)							Basic Load Ratings (N)		Speeds (min ⁻¹)		
d	D	B	r min.	r ₁ min.	F _w	E _w	C _r	C _{0r}	Thermal Reference Speed	Limiting Speeds	
										Mechanical (%)	Grease
340	520	82	5	5	385	475	1 080 000	1 740 000	1 400	—	1 100
360	540	82	5	5	405	495	1 110 000	1 830 000	1 300	—	1 000
380	560	82	5	5	425	—	1 140 000	1 910 000	1 200	—	1 000
400	600	90	5	5	450	550	1 360 000	2 280 000	1 100	—	900
420	620	90	5	5	470	570	1 390 000	2 380 000	1 100	—	850
440	650	94	6	6	493	—	1 470 000	2 530 000	1 000	—	800
460	680	100	6	6	516	624	1 580 000	2 740 000	950	—	750
480	700	100	6	6	536	644	1 620 000	2 860 000	900	—	750
500	720	100	6	6	556	664	1 660 000	2 970 000	900	—	710



Bearing Numbers							Abutment and Fillet Dimensions (mm)										Mass (kg)
							$d_a^{(1)}$ min.	d_b min.	$d_b^{(1)}$ max.	d_c min.	d_d min.	$D_c^{(1)}$ max.	D_b max.	D_b min.	r_a max.	r_b max.	approx.
NU 1068	(M)	—	NU	NJ	—	N NF	360	360	381	390	—	500	500	479	4	4	61.8
NU 1072	(M)	—	NU	—	—	N NF	380	380	400	410	—	520	520	499	4	4	64.6
NU 1076	(M)	—	NU	—	—	—	—	400	420	430	—	540	—	—	4	4	67.5
NU 1080	(M)	—	NU	—	NUP	N —	420	420	445	455	—	580	580	554.5	4	4	88.2
NU 1084	(M)	—	NU	—	—	N —	440	440	465	475	—	600	600	574.5	4	4	91.7
NU 1088	(M)	—	NU	—	—	—	—	466	488	498	—	624	—	—	5	5	105
NU 1092	(M)	—	NU	—	NUP	N —	486	486	511	521	—	654	654	628.5	5	5	123
NU 1096	(M)	—	NU	NJ	—	N —	506	506	531	541	—	674	674	654	5	5	127
NU10/500	(M)	—	NU	—	—	N —	526	526	551	558	—	694	694	674	5	5	131

Cylindrical Roller Bearings

L-Shaped Thrust Collars Bore Diameter 20 – 85 mm



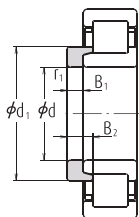
L-Shaped Thrust Collar

Boundary Dimensions (mm)					Thrust Collar Numbers	Mass (kg) approx.
d	d ₁	B ₁	B ₂	r ₁ min.		
20	30	3	6.75	0.6	HJ 204	0.012
	29.8	3	5.5	0.6	HJ 204 E	0.011
	30	3	7.5	0.6	HJ 2204	0.012
	29.8	3	6.5	0.6	HJ 2204 E	0.012
	31.7	4	7.5	0.6	HJ 304	0.017
	31.4	4	6.5	0.6	HJ 304 E	0.017
	31.8	4	8.5	0.6	HJ 2304	0.017
	31.4	4	7.5	0.6	HJ 2304 E	0.018
25	34.8	3	6	0.6	HJ 205 E	0.014
	34.8	3	6.5	0.6	HJ 2205 E	0.014
	38.2	4	7	1.1	HJ 305 E	0.025
	38.2	4	8	1.1	HJ 2305 E	0.026
	43.6	6	10.5	1.5	HJ 405	0.057
	41.3	4	7	0.6	HJ 206 E	0.025
30	41.4	4	7.5	0.6	HJ 2206 E	0.025
	45.1	5	8.5	1.1	HJ 306 E	0.042
	45.1	5	9.5	1.1	HJ 2306 E	0.043
	50.5	7	11.5	1.5	HJ 406	0.080
35	48.2	4	7	0.6	HJ 207 E	0.033
	48.2	4	8.5	0.6	HJ 2207 E	0.035
	51.1	6	9.5	1.1	HJ 307 E	0.060
	51.1	6	11	1.1	HJ 2307 E	0.062
	59	8	13	1.5	HJ 407	0.12
	54.1	5	8.5	1.1	HJ 208 E	0.049
40	54.1	5	9	1.1	HJ 2208 E	0.050
	57.6	7	11	1.5	HJ 308 E	0.088
	57.7	7	12.5	1.5	HJ 2308 E	0.091
	64.8	8	13	2	HJ 408	0.14
45	59.1	5	8.5	1.1	HJ 209 E	0.055
	59.1	5	9	1.1	HJ 2209 E	0.055
	64.5	7	11.5	1.5	HJ 309 E	0.11
	64.5	7	13	1.5	HJ 2309 E	0.113
	71.7	8	13.5	2	HJ 409	0.175
	64.1	5	9	1.1	HJ 210 E	0.061
50	64.1	5	9	1.1	HJ 2210 E	0.061
	71.4	8	13	2	HJ 310 E	0.151
	71.4	8	14.5	2	HJ 2310 E	0.155
	78.8	9	14.5	2.1	HJ 410	0.23

Boundary Dimensions (mm)					Thrust Collar Numbers	Mass (kg) approx.
d	d ₁	B ₁	B ₂	r ₁ min.		
55	70.9	6	9.5	1.1	HJ 211 E	0.087
	70.9	6	10	1.1	HJ 2211 E	0.088
	77.6	9	14	2	HJ 311 E	0.195
	77.6	9	15.5	2	HJ 2311 E	0.20
	85.2	10	16.5	2.1	HJ 411	0.29
	77.7	6	10	1.5	HJ 212 E	0.108
60	77.7	6	10	1.5	HJ 2212 E	0.108
	84.5	9	14.5	2.1	HJ 312 E	0.231
	84.5	9	16	2.1	HJ 2312 E	0.237
	91.8	10	16.5	2.1	HJ 412	0.34
65	84.5	6	10	1.5	HJ 213 E	0.129
	84.5	6	10.5	1.5	HJ 2213 E	0.131
	90.6	10	15.5	2.1	HJ 313 E	0.288
	90.6	10	18	2.1	HJ 2313 E	0.298
	98.5	11	18	2.1	HJ 413	0.42
	89.5	7	11	1.5	HJ 214 E	0.157
70	89.5	7	11.5	1.5	HJ 2214 E	0.158
	97.5	10	15.5	2.1	HJ 314 E	0.33
	97.5	10	18.5	2.1	HJ 2314 E	0.345
	110.5	12	20	3	HJ 414	0.605
75	94.5	7	11	1.5	HJ 215 E	0.166
	94.5	7	11.5	1.5	HJ 2215 E	0.167
	104.2	11	16.5	2.1	HJ 315 E	0.41
	104.2	11	19.5	2.1	HJ 2315 E	0.43
	116	13	21.5	3	HJ 415	0.71
	101.6	8	12.5	2	HJ 216 E	0.222
80	101.6	8	12.5	2	HJ 2216 E	0.222
	110.6	11	17	2.1	HJ 316 E	0.46
	110.6	11	20	2.1	HJ 2316 E	0.48
	122	13	22	3	HJ 416	0.78
85	107.6	8	12.5	2	HJ 217 E	0.25
	107.6	8	13	2	HJ 2217 E	0.252
	117.9	12	18.5	3	HJ 317 E	0.575
	117.9	12	22	3	HJ 2317 E	0.595
	126	14	24	4	HJ 417	0.88

L-Shaped Thrust Collars

Bore Diameter 90 – 320 mm



L-Shaped Thrust Collar

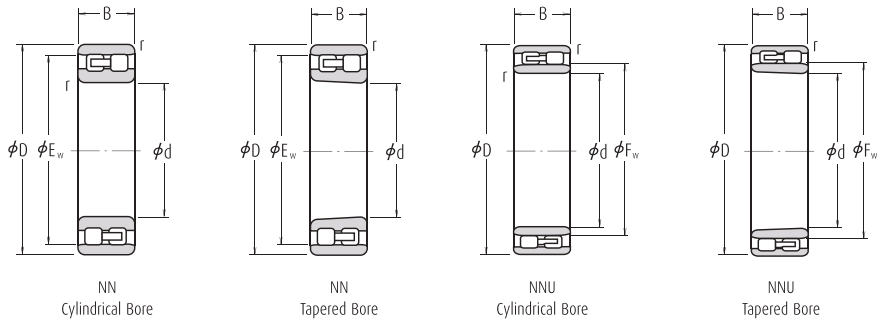


Boundary Dimensions (mm)					Thrust Collar Numbers	Mass (kg) approx.
d	d ₁	B ₁	B ₂	r ₁ min.		
90	114.3	9	14	2	HJ 218 E	0.32
	114.3	9	15	2	HJ 2218 E	0.325
	124.2	12	18.5	3	HJ 318 E	0.63
	124.2	12	22	3	HJ 2318 E	0.66
	137	14	24	4	HJ 418	1.05
95	120.6	9	14	2.1	HJ 219 E	0.355
	120.6	9	15.5	2.1	HJ 2219 E	0.365
	132.2	13	20.5	3	HJ 319 E	0.785
	132.2	13	24.5	3	HJ 2319 E	0.815
	147	15	25.5	4	HJ 419	1.3
100	127.5	10	15	2.1	HJ 220 E	0.44
	127.5	10	16	2.1	HJ 2220 E	0.45
	139.6	13	20.5	3	HJ 320 E	0.89
	139.6	13	23.5	3	HJ 2320 E	0.92
	153.5	16	27	4	HJ 420	1.5
105	145	13	20.5	3	HJ 321 E	0.97
	159.5	16	27	4	HJ 421	1.65
110	141.7	11	17	2.1	HJ 222 E	0.62
	141.7	11	19.5	2.1	HJ 2222 E	0.645
	155.8	14	22	3	HJ 322 E	1.21
	155.8	14	26.5	3	HJ 2322 E	1.27
	171	17	29.5	4	HJ 422	2.1
120	153.4	11	17	2.1	HJ 224 E	0.71
	153.4	11	20	2.1	HJ 2224 E	0.745
	168.6	14	22.5	3	HJ 324 E	1.41
	168.6	14	26	3	HJ 2324 E	1.46
	188	17	30.5	5	HJ 424	2.6
130	164.2	11	17	3	HJ 226 E	0.79
	164.2	11	21	3	HJ 2226 E	0.84
	182.3	14	23	4	HJ 326 E	1.65
	182.3	14	28	4	HJ 2326 E	1.73
	205	18	32	5	HJ 426	3.3
140	180	11	18	3	HJ 228 E	0.99
	180	11	23	3	HJ 2228 E	1.07
	196	15	25	4	HJ 328 E	2.04
	196	15	31	4	HJ 2328 E	2.14
	219	18	33	5	HJ 428	3.75

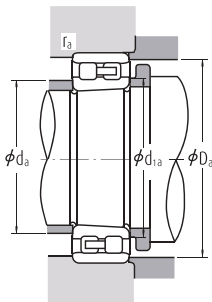
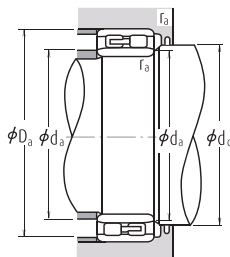
Boundary Dimensions (mm)					Thrust Collar Numbers	Mass (kg) approx.
d	d ₁	B ₁	B ₂	r ₁ min.		
150	193.7	12	19.5	3	HJ 230 E	1.26
	193.7	12	24.5	3	HJ 2230 E	1.35
	210	15	25	4	HJ 330 E	2.35
	210	15	31.5	4	HJ 2330 E	2.48
	234	20	36.5	5	HJ 430	4.7
160	207.3	12	20	3	HJ 232 E	1.48
	206.1	12	24.5	3	HJ 2232 E	1.55
	222	15	25	4	HJ 332 E	2.59
	222.1	15	32	4	HJ 2332 E	2.76
	220.8	12	20	4	HJ 234 E	1.7
170	219.5	12	24	4	HJ 2234 E	1.79
	238	16	33.5	4	HJ 334 E	3.25
180	230.8	12	20	4	HJ 236 E	1.79
	229.5	12	24	4	HJ 2236 E	1.88
	252	17	35	4	HJ 336 E	3.85
	244.5	13	21.5	4	HJ 238 E	2.19
	243.2	13	26.5	4	HJ 2238 E	2.31
200	260.6	18	36.5	5	HJ 338 E	4.45
	258.2	14	23	4	HJ 240 E	2.65
	258	14	34	4	HJ 2240	2.6
	256.9	14	28	4	HJ 2240 E	2.78
	280	18	30	5	HJ 340 E	5.0
220	286	15	27.5	4	HJ 244	3.55
	286	15	36.5	4	HJ 2244	3.55
	307	20	36	5	HJ 344	7.05
240	313	16	29.5	4	HJ 248	4.65
	313	16	38.5	4	HJ 2248	4.65
	334	22	39.5	5	HJ 348	8.2
260	340	18	33	5	HJ 252	6.2
	340	18	40.5	5	HJ 2252	6.2
	362	24	43	6	HJ 352	11.4
	360	18	33	5	HJ 256	7.4
	387	20	34.5	5	HJ 260	9.15
320	415	21	37	5	HJ 264	11.3

Double-Row Cylindrical Roller Bearings

Bore Diameter 25 – 140 mm



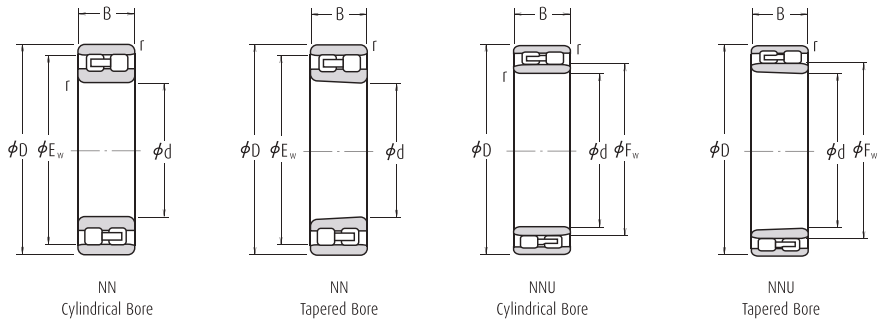
Boundary Dimensions (mm)						Basic Load Ratings (N)		Limiting Speeds (min ⁻¹)	
d	D	B	r min.	F _w	E _w	C _r	C _{0r}	Grease	Oil
25	47	16	0.6	—	41.3	25 800	30 000	14 000	17 000
30	55	19	1	—	48.5	31 000	37 000	12 000	14 000
35	62	20	1	—	55	39 500	50 000	10 000	12 000
40	68	21	1	—	61	43 500	55 500	9 000	11 000
45	75	23	1	—	67.5	52 000	68 500	8 500	10 000
50	80	23	1	—	72.5	53 000	72 500	7 500	9 000
55	90	26	1.1	—	81	69 500	96 500	6 700	8 000
60	95	26	1.1	—	86.1	73 500	106 000	6 300	7 500
65	100	26	1.1	—	91	77 000	116 000	6 000	7 100
70	110	30	1.1	—	100	97 500	148 000	5 600	6 700
75	115	30	1.1	—	105	96 500	149 000	5 300	6 300
80	125	34	1.1	—	113	119 000	186 000	4 800	6 000
85	130	34	1.1	—	118	125 000	201 000	4 500	5 600
90	140	37	1.5	—	127	143 000	228 000	4 300	5 000
95	145	37	1.5	—	132	150 000	246 000	4 000	5 000
100	140	40	1.1	112	—	155 000	295 000	4 000	5 000
	150	37	1.5	—	137	157 000	265 000	4 000	4 800
105	145	40	1.1	117	—	161 000	315 000	3 800	4 800
	160	41	2	—	146	198 000	320 000	3 800	4 500
110	150	40	1.1	122	—	167 000	335 000	3 600	4 500
	170	45	2	—	155	229 000	375 000	3 400	4 300
120	165	45	1.1	133.5	—	183 000	360 000	3 200	4 000
	180	46	2	—	165	239 000	405 000	3 200	3 800
130	180	50	1.5	144	—	274 000	545 000	3 000	3 800
	200	52	2	—	182	284 000	475 000	3 000	3 600
140	190	50	1.5	154	—	283 000	585 000	2 800	3 600
	210	53	2	—	192	298 000	515 000	2 800	3 400



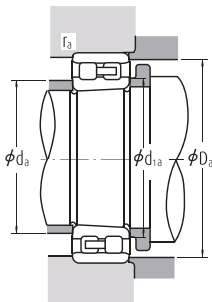
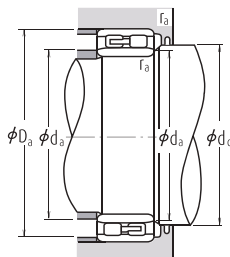
Bearing Numbers		Abutment and Fillet Dimensions (mm)							Mass (kg)
Cylindrical Bore	Tapered Bore (°)	$d_a(^{\circ})$		d_{1a}	d_c	D_a	r_a		
		min.	max.	min.	min.	max.	min.	max.	approx.
NN 3005	NN 3005 K	29	—	29	—	43	42	0.6	0.127
NN 3006	NN 3006 K	35	—	36	—	50	50	1	0.198
NN 3007	NN 3007 K	40	—	41	—	57	56	1	0.258
NN 3008	NN 3008 K	45	—	46	—	63	62	1	0.309
NN 3009	NN 3009 K	50	—	51	—	70	69	1	0.407
NN 3010	NN 3010 K	55	—	56	—	75	74	1	0.436
NN 3011	NN 3011 K	61.5	—	62	—	83.5	83	1	0.647
NN 3012	NN 3012 K	66.5	—	67	—	88.5	88	1	0.693
NN 3013	NN 3013 K	71.5	—	72	—	93.5	93	1	0.741
NN 3014	NN 3014 K	76.5	—	77	—	103.5	102	1	1.06
NN 3015	NN 3015 K	81.5	—	82	—	108.5	107	1	1.11
NN 3016	NN 3016 K	86.5	—	87	—	118.5	115	1	1.54
NN 3017	NN 3017 K	91.5	—	92	—	123.5	120	1	1.63
NN 3018	NN 3018 K	98	—	99	—	132	129	1.5	2.09
NN 3019	NN 3019 K	103	—	104	—	137	134	1.5	2.19
NNU 4920	NNU 4920 K	106.5	111	108	115	133.5	—	1	1.9
NN 3020	NN 3020 K	108	—	109	—	142	139	1.5	2.28
NNU 4921	NNU 4921 K	111.5	116	113	120	138.5	—	1	1.99
NN 3021	NN 3021 K	114	—	115	—	151	148	2	2.88
NNU 4922	NNU 4922 K	116.5	121	118	125	143.5	—	1	2.07
NN 3022	NN 3022 K	119	—	121	—	161	157	2	3.71
NNU 4924	NNU 4924 K	126.5	133	128	137	158.5	—	1	2.85
NN 3024	NN 3024 K	129	—	131	—	171	167	2	4.04
NNU 4926	NNU 4926 K	138	143	140	148	172	—	1.5	3.85
NN 3026	NN 3026 K	139	—	141	—	191	185	2	5.88
NNU 4928	NNU 4928 K	148	153	150	158	182	—	1.5	4.08
NN 3028	NN 3028 K	149	—	151	—	201	195	2	6.34

Double-Row Cylindrical Roller Bearings

Bore Diameter 150 – 360 mm



Boundary Dimensions (mm)						Basic Load Ratings (N)		Limiting Speeds (min ⁻¹)	
d	D	B	r min.	F _W	E _W	C _r	C _{0r}	Grease	Oil
150	210	60	2	167	—	350 000	715 000	2 600	3 200
	225	56	2.1	—	206	335 000	585 000	2 600	3 000
160	220	60	2	177	—	365 000	760 000	2 400	3 000
	240	60	2.1	—	219	375 000	660 000	2 400	2 800
170	230	60	2	187	—	375 000	805 000	2 400	2 800
	260	67	2.1	—	236	450 000	805 000	2 200	2 600
180	250	69	2	200	—	480 000	1 020 000	2 200	2 600
	280	74	2.1	—	255	565 000	995 000	2 000	2 400
190	260	69	2	211.5	—	485 000	1 060 000	2 000	2 600
	290	75	2.1	—	265	595 000	1 080 000	2 000	2 400
200	280	80	2.1	223	—	570 000	1 220 000	1 900	2 400
	310	82	2.1	—	282	655 000	1 170 000	1 800	2 200
220	300	80	2.1	243	—	600 000	1 330 000	1 700	2 200
	340	90	3	—	310	815 000	1 480 000	1 700	2 000
240	320	80	2.1	263	—	625 000	1 450 000	1 600	2 000
	360	92	3	—	330	855 000	1 600 000	1 500	1 800
260	360	100	2.1	289	—	935 000	2 100 000	1 400	1 800
	400	104	4	—	364	1 030 000	1 920 000	1 400	1 700
280	380	100	2.1	309	—	960 000	2 230 000	1 300	1 700
	420	106	4	—	384	1 080 000	2 080 000	1 300	1 500
300	420	118	3	336	—	1 230 000	2 870 000	1 200	1 500
	460	118	4	—	418	1 290 000	2 460 000	1 200	1 400
320	440	118	3	356	—	1 260 000	3 050 000	1 100	1 400
	480	121	4	—	438	1 350 000	2 670 000	1 100	1 300
340	520	133	5	—	473	1 670 000	3 300 000	1 000	1 200
360	540	134	5	—	493	1 700 000	3 450 000	950	1 200



Bearing Numbers		Abutment and Fillet Dimensions (mm)							Mass (kg)
Cylindrical Bore	Tapered Bore (°)	d_a (°)		d_{1a}	d_c	D_a	r_a		approx.
		min.	max.	min.	min.	max.	min.	max.	
NUU 4930	NUU 4930 K	159	166	162	171	201	—	2	6.39
NN 3030	NN 3030 K	161	—	162	—	214	209	2	7.77
NUU 4932	NUU 4932 K	169	176	172	182	211	—	2	6.76
NN 3032	NN 3032 K	171	—	172	—	229	222	2	9.41
NUU 4934	NUU 4934 K	179	186	182	192	221	—	2	7.12
NN 3034	NN 3034 K	181	—	183	—	249	239	2	12.8
NUU 4936	NUU 4936 K	189	199	193	205	241	—	2	10.4
NN 3036	NN 3036 K	191	—	193	—	269	258	2	16.8
NUU 4938	NUU 4938 K	199	211	203	217	251	—	2	10.9
NN 3038	NN 3038 K	201	—	203	—	279	268	2	17.8
NUU 4940	NUU 4940 K	211	222	214	228	269	—	2	15.3
NN 3040	NN 3040 K	211	—	214	—	299	285	2	22.7
NUU 4944	NUU 4944 K	231	242	234	248	289	—	2	16.6
NN 3044	NN 3044 K	233	—	236	—	327	313	2.5	29.6
NUU 4948	NUU 4948 K	251	262	254	269	309	—	2	18
NN 3048	NN 3048 K	253	—	256	—	347	334	2.5	32.7
NUU 4952	NUU 4952 K	271	288	275	295	349	—	2	31.1
NN 3052	NN 3052 K	276	—	278	—	384	368	3	47.7
NUU 4956	NUU 4956 K	291	308	295	315	369	—	2	33
NN 3056	NN 3056 K	296	—	298	—	404	388	3	51.1
NUU 4960	NUU 4960 K	313	335	318	343	407	—	2.5	51.9
NN 3060	NN 3060 K	316	—	319	—	444	422	3	70.7
NUU 4964	NUU 4964 K	333	355	338	363	427	—	2.5	54.9
NN 3064	NN 3064 K	336	—	340	—	464	442	3	76.6
NN 3068	NN 3068 K	360	—	365	—	500	477	4	102
NN 3072	NN 3072 K	380	—	385	—	520	497	4	106