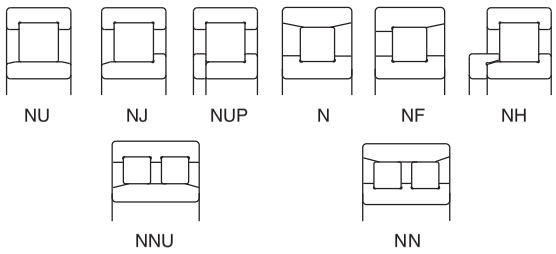
5. CYLINDRICAL ROLLER BEARINGS

DESIGN, TYPES, AND FEATURES

Cylindrical roller bearings are classified into the following types depending on whether or not they have ribs on their rings:



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 NH type consists of NJ-type cylindrical roller bearings and HJ-type L-shaped thrust collars (see Pages C156 and C157).

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

Features of Single-Row Cylindrical Roller Bearings

Cage Spec.	Material	Steel	Steel	Polyamide 66 resin	L-PPS resin	Brass	
	Method	Pressed		Molded		Machined	
	Designation	W	EW	ET	ET7	M	EM
Features	High Load Capacity	○	◎	◎	◎	△	◎
	High-Speed	△	○	○	○	○	◎
	High-Temperature	○	○	△	○	○	○
	Vibration	×	×	×	×	△	○

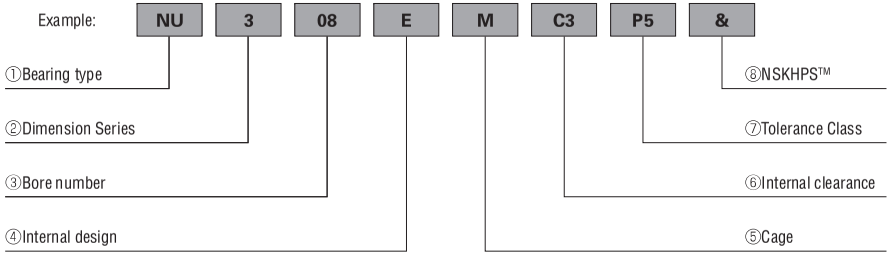
◎ Excellent ○ Good △ Fair × Poor

If a cage is nonstandard for a given bearing number the number of rollers may vary; in such a case, the load rating will differ from that listed in the bearing tables.

Many NN double-row bearings have tapered bores, and they are primarily used in the main spindles of machine tools. Cages are made of either molded polyphenylenesulfide (PPS) or machined brass.

Formulation of Bearing Designations

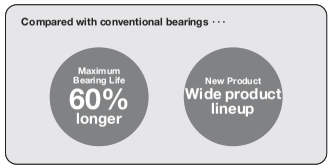
Single-Row Cylindrical Roller Bearing



①Bearing type	NU : Single-row cylindrical roller bearings
	(Outer ring with both ribs + Inner ring without rib)
	Please refer to page C124 for detailed information.
②Dimension Series	10 : 10 Series, 2: 02 Series, 22 : 22 Series, 3 : 03 Series, 23 : 23 Series, 4 : 04 Series,
③Bore number	Less than 03, Bearing bore 01 : 12mm, 02 : 15mm, 03 : 17mm
	Over 04, Bearing bore Bore number X 5 (mm)
④Internal design	E : High load capacity
⑤Cage	W : Pressed-steel Cage, M : Machined Brass Cage, No designation : Machined-brass cage (in Series 10)
	T : Polyamide 66 resin cage, T7 : L-PPS resin cage
⑥Internal clearance	For All Radial Brgs.
	Omitted : CN clearance, C3 : Clearance greater than CN, C4 : Clearance
	greater than C3, CG : Special Clearance
	For Non-Interchangeable Cylindrical Roller Bearings
	CC : Normal Clearance, CC3 : Clearance greater than CC, CC4 : Clearance
	greater than CC3, CCG : Special Clearance
⑦Tolerance class	Omitted : ISO Normal, P6 : ISO Class 6,
	P5 : ISO Class 5, P4 : ISO Class 4
⑧NSKHPS™	& : NSKHPS™ Designation
	Tolerance Class : ISO Normal

NSKHPS™ Cylindrical Roller Bearings

Features



1. Improved reliability
Up to 60% longer life than that of conventional bearings by optimization of the bearing's internal design and improvement of processing technology.
2. Wide product lineup
NSK offers a wide lineup of NSKHPS bearings with four types of cages for wide range of sizes, offering a high degree of versatility for various general-purpose applications.
- Pressed-steel cage with high cost perfomance
- Highly reliable machined-brass cage
- Polyamide-resin cage that excels in heat and chemical resistance

PRECAUTIONS FOR USE OF CYLINDRICAL ROLLER BEARINGS

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

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

If very small bearing loads, strong shock loads, or vibration are expected, please consult with NSK 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 to be used in gear oil, nonflammable hydraulic oil, or ester oil at a temperature over 100 °C, please contact NSK beforehand.

TOLERANCES AND RUNNING ACCURACY

CYLINDRICAL ROLLER BEARINGS ..... Table 7.2 (Pages A128 to A131)
NSKHPS CYLINDRICAL ROLLER BEARINGS
Tolerance for Dimensions : ISO Normal
Running Accuracy : ISO Normal

DOUBLE-ROW CYLINDRICAL ROLLER BEARINGS ..... Table 7.2 (Pages A128 to A131)

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

Units : μm

Nominal Bore Diameter d (mm)		Tolerances for F_w of Types NU, NJ, NUP, NH, and NNU Δ_{F_w}		Tolerances for E_w of Types N, NF, and NN Δ_{E_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	—	—

RECOMMENDED FITS

CYLINDRICAL ROLLER BEARINGS ..... Table 8.3 (Page A164)
Table 8.5 (Page A165)
DOUBLE-ROW CYLINDRICAL ROLLER BEARINGS ..... Table 8.3 (Page A164)
Table 8.5 (Page A165)

INTERNAL CLEARANCES

CYLINDRICAL ROLLER BEARINGS ..... Table 8.15 (Page A171)
NSKHPS CYLINDRICAL ROLLER BEARINGS
INTERNAL CLEARANCE DESIGNATION : CN, C3, C4
DOUBLE-ROW CYLINDRICAL ROLLER BEARINGS .... Table 8.15 (Page A171)

PERMISSIBLE MISALIGNMENT

The permissible misalignment of cylindrical roller bearings varies depending on the type and internal specifications, but under normal loads, the angles are approximately as follows:

Cylindrical roller bearings of Width Series 0 or 1 ..... 0.0012 radian (4′)
Cylindrical roller bearings of Width Series 2 ..... 0.0006 radian (2′)

For double-row cylindrical roller bearings, nearly no misalignment is allowed.

LIMITING SPEEDS (Mechanical)

In some single-row cylindrical roller bearings, optional cage types are available for special purposes or customer requests. The limiting speeds (mechanical) in the bearing tables reflect values for the standard cage type. Please consult with NSK regarding limiting speeds (mechanical) for optional cages.

LIMITING SPEEDS (Grease/Oil)

The limiting speeds (grease) and limiting speeds (oil) listed in the bearing tables should be adjusted depending on bearing load. Furthermore, higher speeds are attainable by making changes in the lubrication method, cage design, etc. Refer to Page A098 for more detailed information.

TECHNICAL DATA

Free Space of Cylindrical Roller Bearings

Cylindrical roller bearings often employ grease lubrication because it makes maintenance easier and simplifies the peripheral construction of the housing. Select a grease brand appropriate for the operating conditions while noting the grease fill amount and position of the bearing and housing.

Cylindrical roller bearings can be divided into types NU, NJ, N, NF, NH, and NUP 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 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 for the free space of NU type bearings.

For other types, the free space can be determined from a free space ratio based on the NU type, as shown in Table 3. For example, the free space of an NJ310 bearing with a pressed steel cage may be calculated approximately as 47 cm^3. This result was obtained by multiplying the free space of the bearing (52 cm^3) in Table 1 by the space ratio 0.90 for the NJ type (Table 3).

Table 1 Free Space of Cylindrical Roller Bearings (NU Type) (1) (With Pressed Cage)

Units: cm^3

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	18	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 Bearings (NU Type) (2) (With High-Tension Brass Machined Cage)

Units: cm^3

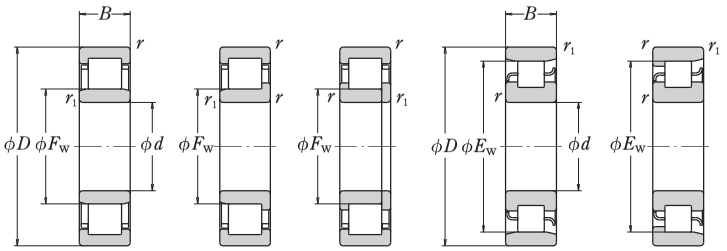
Bearing Bore No.	Bearing Free Space			
	Bearing Series			
	NU2	NU3	NU22	NU23
05	5.0	7.6	5.7	10
06	7.4	12	7.9	16
07	9.6	16	12	27
08	12	21	15	32
09	15	29	16	45
10	18	38	17	58
11	22	52	24	77
12	26	62	31	88
13	31	74	43	104
14	37	92	44	129
15	42	102	50	149
16	51	122	60	181
17	64	164	74	200
18	79	193	96	279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

Table 3 Ratio of Free Space in Cylindrical Roller Bearing Types

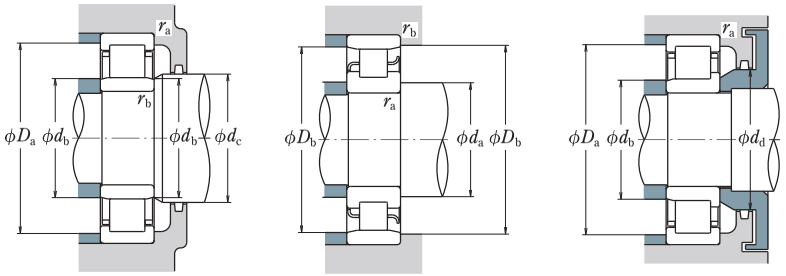
NU Type	NJ Type	N Type	NF Type
1	0.90	1.05	0.95

SINGLE-ROW CYLINDRICAL ROLLER BEARINGS

Bore Diameter 20 – 30 mm



NU NJ NUP N NF



Boundary Dimensions (mm)							Basic Load Ratings (N)		Speeds (min^{-1})		
									Thermal Reference Speed	Limiting Speeds (5)	
d	D	B	r min.	r_1 min.	F_w	E_w	C_r	C_{0r}		Mechanical	Grease
20	47	14	1	0.6	—	40	15 400	12 700	18 000	—	12 000
	47	14	1	0.6	26.5	—	25 700	22 600	16 000	—	13 000
	47	18	1	0.6	27	—	20 700	18 400	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	0.6	—	45	17 700	15 700	16 000	—	10 000
	52	15	1	0.6	31.5	—	33 500	27 700	14 000	17 000	12 000
	52	15	1	0.6	31.5	—	29 300	27 700	14 000	17 000	12 000
	52	18	1	0.6	31.5	—	40 000	34 500	14 000	20 000	12 000
	52	18	1	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	—	48 000	37 500	11 000	15 000	10 000
	62	17	1.1	1.1	34	—	41 500	37 500	11 000	15 000	10 000
	62	24	1.1	1.1	34	—	65 500	56 000	11 000	18 000	9 000
	62	24	1.1	1.1	34	—	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	0.6	36.5	48.5	19 700	19 600	13 000	—	12 000
	62	16	1	0.6	—	53.5	24 900	23 300	13 000	—	8 500
	62	16	1	0.6	37.5	—	45 000	37 500	12 000	14 000	9 500
	62	16	1	0.6	37.5	—	39 000	37 500	12 000	14 000	9 500
	62	20	1	0.6	37.5	—	56 500	50 000	12 000	17 000	9 500
	62	20	1	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	73	62 500	55 000	8 500	—	6 000

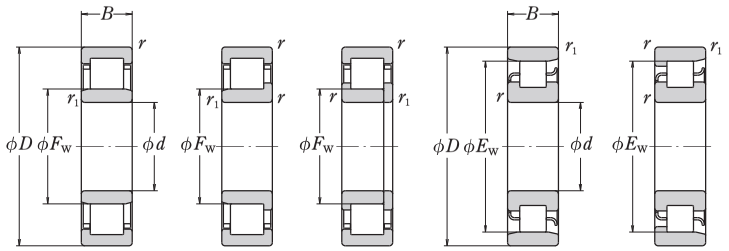
Notes (1) Cage designation (M) is usually omitted from the bearing designation.
(2) When L-shaped thrust collars (see Pages C156-C157) are used, the bearings are considered the NH type.

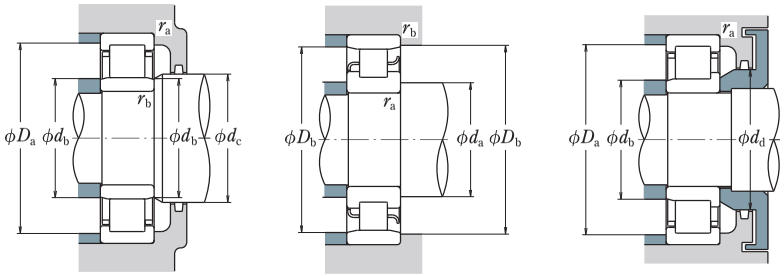
Bearing Designations									Abutment and Fillet Dimensions (mm)									Mass (kg)
	Cage (1) Standard Option		(2) NU	NJ	NUP	N	NF		d_a (3) min.	d_b min.	d_b (4) max.	d_c min.	d_d min.	D_a (3) max.	D_b max.	D_b min.	r_a max.	r_b max.	approx.
N 204	W	—	—	—	—	N	NF		25	—	—	—	—	—	43	42	1	0.6	0.107
NU204E	T	T7	NU	NJ	NUP	—	—		25	24	25	29	32	42	—	—	1	0.6	0.107
NU2204	W	M	NU	NJ	—	—	—		25	24	25	29	32	42	—	—	1	0.6	0.144
N 304	W	—	—	—	—	N	NF		26.5	—	—	—	—	—	48	46	1	0.6	0.148
NU304E	T	T7	NU	NJ	NUP	—	—		26.5	24	26	30	33	45.5	—	—	1	0.6	0.145
NU2304	M	—	NU	NJ	NUP	—	—		26.5	24	27	30	33	45.5	—	—	1	0.6	0.217
NU2304E	T7	—	NU	NJ	NUP	—	—		26.5	24	26	30	33	45.5	—	—	1	0.6	0.209
NU1005	(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
***NU205E**	W	M, T, T7	NU	NJ	NUP	—	—		30	29	30	34	37	47	—	—	1	0.6	0.136
NU205E	W	M, T, T7	NU	NJ	NUP	—	—		30	29	30	34	37	47	—	—	1	0.6	0.136
***NU2205E**	M	T, T7	NU	NJ	NUP	—	—		30	29	30	34	37	47	—	—	1	0.6	0.16
NU2205E	M	T, T7	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
***NU305E**	W	M, T, T7	NU	NJ	NUP	—	—		31.5	31.5	32	37	40	55.5	—	—	1	1	0.269
NU305E	W	M, T, T7	NU	NJ	NUP	—	—		31.5	31.5	32	37	40	55.5	—	—	1	1	0.269
***NU2305E**	M	T, T7	NU	NJ	NUP	—	—		31.5	31.5	32	37	40	55.5	—	—	1	1	0.338
NU2305E	M	T, T7	NU	NJ	NUP	—	—		31.5	31.5	32	37	40	55.5	—	—	1	1	0.338
NU405	W	—	NU	NJ	—	N	NF		33	33	37	41	46	72	72	64	1.5	1.5	0.57
NU1006	(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
***NU206E**	W	M, T, T7	NU	NJ	NUP	—	—		35	34	36	40	44	57	—	—	1	0.6	0.205
NU206E	W	M, T, T7	NU	NJ	NUP	—	—		35	34	36	40	44	57	—	—	1	0.6	0.205
***NU2206E**	M	T, T7	NU	NJ	NUP	—	—		35	34	36	40	44	57	—	—	1	0.6	0.255
NU2206E	M	T, T7	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
***NU306E**	W	M, T, T7	NU	NJ	NUP	—	—		36.5	36.5	39	44	48	65.5	—	—	1	1	0.409
NU306E	W	M, T, T7	NU	NJ	NUP	—	—		36.5	36.5	39	44	48	65.5	—	—	1	1	0.409
***NU2306E**	M	T, T7	NU	NJ	NUP	—	—		36.5	36.5	39	44	48	65.5	—	—	1	1	0.518
NU2306E	M	T, T7	NU	NJ	NUP	—	—		36.5	36.5	39	44	48	65.5	—	—	1	1	0.518
NU406	W	M	NU	NJ	—	N	NF		38	38	43	47	52	82	82	75	1.5	1.5	0.758

Notes (3) If axial loads are applied, increase d_a and reduce D_a from the values listed above.
(4) d_b (max.) refers to values for adjusting rings for NU and NJ bearings.
(5) The limiting speeds (mechanical) in the bearing tables are for standard cages.
Remark Bearings denoted by an asterisk (*) are NSKHPS™ cylindrical roller bearings.

SINGLE-ROW CYLINDRICAL ROLLER BEARINGS

Bore Diameter 35 – 40 mm





Bearing Designations								Boundary Dimensions (mm)						Basic Load Ratings (N)		Speeds (min⁻¹)		
	Cage(1) Standard Option	(2) NU	NJ	NUP	N	NF		d	D	B	r min.	r1 min.	Fw	Ew	Cr	C0r	Thermal Reference Speed	Limiting Speeds (5) Mechanical	Grease
NU1007	(M)	—	NU	NJ	—	N	—	35	62	14	1	0.6	42	55	22 600	23 200	11 000	—	11 000
N 207	W	M	—	—	—	N	NF		72	17	1.1	0.6	—	61.8	35 500	34 000	11 000	—	7 500
*NU207E	W	M, T, T7	NU	NJ	NUP	—	—		72	17	1.1	0.6	44	—	58 000	50 000	10 000	12 000	8 500
NU207E	W	M, T, T7	NU	NJ	NUP	—	—		72	17	1.1	0.6	44	—	50 500	50 000	10 000	12 000	8 500
*NU2207E	M	T, T7	NU	NJ	NUP	—	—		72	23	1.1	0.6	44	—	71 000	65 500	11 000	15 000	8 500
NU2207E	M	T, T7	NU	NJ	NUP	—	—		72	23	1.1	0.6	44	—	61 500	65 500	11 000	15 000	8 500
N 307	W	M	—	—	—	N	NF		80	21	1.5	1.1	—	68.2	49 500	47 000	9 500	—	6 300
*NU307E	W	M, T, T7	NU	NJ	NUP	—	—		80	21	1.5	1.1	46.2	—	76 500	65 500	8 500	11 000	7 500
NU307E	W	M, T, T7	NU	NJ	NUP	—	—		80	21	1.5	1.1	46.2	—	66 500	65 500	8 500	11 000	7 500
*NU2307E	M	T, T7	NU	NJ	NUP	—	—		80	31	1.5	1.1	46.2	—	107 000	101 000	9 000	14 000	6 700
NU2307E	M	T, T7	NU	NJ	NUP	—	—		80	31	1.5	1.1	46.2	—	93 000	101 000	9 000	14 000	6 700
NU407	W	—	NU	NJ	—	N	NF		100	25	1.5	1.5	53	83	75 500	69 000	7 500	—	5 300
NU1008	(M)	—	NU	NJ	NUP	N	—	40	68	15	1	0.6	47	61	27 300	29 000	10 000	—	10 000
N 208	W	M	—	—	—	N	NF		80	18	1.1	1.1	—	70	43 500	43 000	9 500	—	6 700
*NU208E	W	M, T, T7	NU	NJ	NUP	—	—		80	18	1.1	1.1	49.5	—	64 000	55 500	9 000	11 000	7 500
NU208E	W	M, T, T7	NU	NJ	NUP	—	—		80	18	1.1	1.1	49.5	—	55 500	55 500	9 000	11 000	7 500
*NU2208E	M	T, T7	NU	NJ	NUP	—	—		80	23	1.1	1.1	49.5	—	83 000	77 500	9 000	13 000	7 500
NU2208E	M	T, T7	NU	NJ	NUP	—	—		80	23	1.1	1.1	49.5	—	72 500	77 500	9 000	13 000	7 500
N 308	W	M	—	—	—	N	NF		90	23	1.5	1.5	—	77.5	58 500	57 000	8 500	—	5 600
*NU308E	W	M, T, T7	NU	NJ	NUP	—	—		90	23	1.5	1.5	52	—	95 500	81 500	7 500	10 000	6 700
NU308E	W	M, T, T7	NU	NJ	NUP	—	—		90	23	1.5	1.5	52	—	83 000	81 500	7 500	10 000	6 700
*NU2308E	M	T, T7	NU	NJ	NUP	—	—		90	33	1.5	1.5	52	—	131 000	122 000	8 000	12 000	6 000
NU2308E	M	T, T7	NU	NJ	NUP	—	—		90	33	1.5	1.5	52	—	114 000	122 000	8 000	12 000	6 000
NU408	W	—	NU	NJ	NUP	N	NF		110	27	2	2	58	92	95 500	89 000	6 700	—	4 800

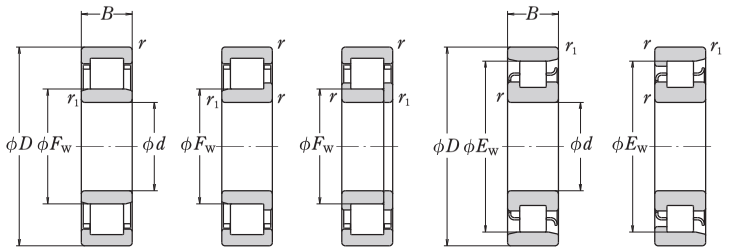
Abutment and Fillet Dimensions (mm)											Mass (kg)
da (3) min.	db min.	db (4) max.	dc min.	dd min.	Da (3) max.	Db max.	Db min.	ra max.	rb max.	approx.
40	39	41	44	—	57	58	56	1	0.5	0.18
41.5	—	—	—	—	—	68	64	1	0.6	0.301
41.5	39	42	46	50	65.5	—	—	1	0.6	0.304
41.5	39	42	46	50	65.5	—	—	1	0.6	0.304
41.5	39	42	46	50	65.5	—	—	1	0.6	0.40
41.5	39	42	46	50	65.5	—	—	1	0.6	0.40
43	—	—	—	—	—	73.5	70	1.5	1	0.476
41.5	41.5	44	48	53	72	—	—	1.5	1	0.545
41.5	41.5	44	48	53	72	—	—	1.5	1	0.545
43	41.5	44	48	53	72	—	—	1.5	1	0.711
43	41.5	44	48	53	72	—	—	1.5	1	0.711
43	43	51	55	61	92	92	85	1.5	1.5	1.01
45	44	46	49	—	63	64	62	1	0.6	0.223
46.5	—	—	—	—	—	73.5	72	1	1	0.375
46.5	46.5	48	52	56	73.5	—	—	1	1	0.379
46.5	46.5	48	52	56	73.5	—	—	1	1	0.379
46.5	46.5	48	52	56	73.5	—	—	1	1	0.480
46.5	46.5	48	52	56	73.5	—	—	1	1	0.480
48	—	—	—	—	—	82	79	1.5	1.5	0.649
48	48	50	55	60	82	—	—	1.5	1.5	0.747
48	48	50	55	60	82	—	—	1.5	1.5	0.747
48	48	50	55	60	82	—	—	1.5	1.5	0.933
48	48	50	55	60	82	—	—	1.5	1.5	0.933
49	49	56	60	67	101	101	94	2	2	1.28

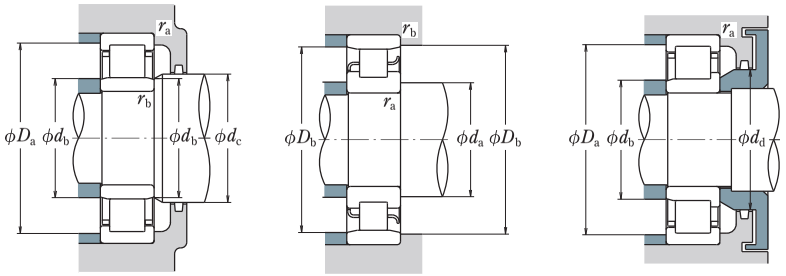
Notes (1) Cage designation (M) is usually omitted from the bearing designation.
(2) When L-shaped thrust collars (see Pages C156-C157) are used, the bearings are considered the NH type.

Notes (3) If axial loads are applied, increase d_a and reduce D_a from the values listed above.
(4) d_b (max.) refers to values for adjusting rings for NU and NJ bearings.
(5) The limiting speeds (mechanical) in the bearing tables are for standard cages.
Remark Bearings denoted by an asterisk (*) are NSKHPS™ cylindrical roller bearings.

SINGLE-ROW CYLINDRICAL ROLLER BEARINGS

Bore Diameter 45 – 50 mm





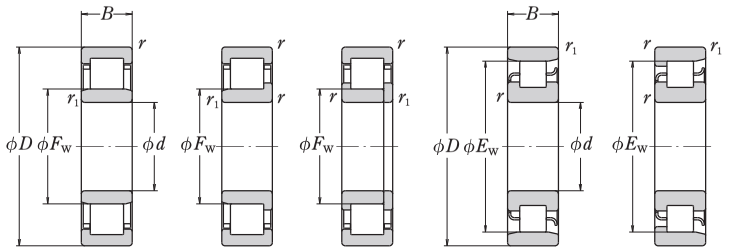
Bearing Designations								Boundary Dimensions (mm)						Basic Load Ratings (N)		Speeds (min⁻¹)			Abutment and Fillet Dimensions (mm)										Mass (kg)
	Cage(1) Standard Option		(2) NU	NJ	NUP	N	NF	d	D	B	r min.	r1 min.	FW	EW	Cr	C0r	Thermal Reference Speed	Limiting Speeds (5) Mechanical	Limiting Speeds Grease	da(3) min.	db min.	db(4) max.	dc min.	dd min.	Da(3) max.	Db max.	Db min.	ra max.	rb max.	approx.
NU1009	(M)	—	NU	—	—	N	NF	45	75	16	1	0.6	52.5	67.5	32 500	35 500	9 500	—	9 000	50	49	51	54	—	70	71	68	1	0.6	0.279
N 209	W	M	—	—	—	N	NF		85	19	1.1	1.1	—	75	46 000	47 000	9 000	—	6 300	51.5	—	—	—	—	—	78.5	77	1	1	0.429
*NU209E	W	M, T, T7	NU	NJ	NUP	—	—		85	19	1.1	1.1	54.5	—	72 500	66 500	8 500	10 000	6 700	51.5	51.5	52	57	61	78.5	—	—	1	1	0.438
NU209E	W	M, T, T7	NU	NJ	NUP	—	—		85	19	1.1	1.1	54.5	—	63 000	66 500	8 500	10 000	6 700	51.5	51.5	52	57	61	78.5	—	—	1	1	0.438
*NU2209E	M	T, T7	NU	NJ	NUP	—	—		85	23	1.1	1.1	54.5	—	87 500	84 500	8 500	12 000	6 700	51.5	51.5	52	57	61	78.5	—	—	1	1	0.521
NU2209E	M	T, T7	NU	NJ	NUP	—	—		85	23	1.1	1.1	54.5	—	76 000	84 500	8 500	12 000	6 700	51.5	51.5	52	57	61	78.5	—	—	1	1	0.521
N 309	W	M	—	—	—	N	NF		100	25	1.5	1.5	—	86.5	79 000	77 500	7 500	—	5 000	53	—	—	—	—	—	92	77	1.5	1.5	0.869
*NU309E	W	M, T, T7	NU	NJ	NUP	—	—		100	25	1.5	1.5	58.5	—	112 000	98 500	7 100	9 000	6 000	53	53	56	60	66	92	—	—	1.5	1.5	1.01
NU309E	W	M, T, T7	NU	NJ	NUP	—	—		100	25	1.5	1.5	58.5	—	97 500	98 500	7 100	9 000	6 000	53	53	56	60	66	92	—	—	1.5	1.5	1.01
*NU2309E	M	T, T7	NU	NJ	NUP	—	—		100	36	1.5	1.5	58.5	—	158 000	153 000	7 100	11 000	5 300	53	53	56	60	66	92	—	—	1.5	1.5	1.28
NU2309E	M	T, T7	NU	NJ	NUP	—	—		100	36	1.5	1.5	58.5	—	137 000	153 000	7 100	11 000	5 300	53	53	56	60	66	92	—	—	1.5	1.5	1.28
NU409	W	—	NU	NJ	NUP	N	NF		120	29	2	2	64.5	100.5	107 000	102 000	6 300	—	4 300	54	54	62	66	74	111	111	103	2	2	1.62
NU1010	(M)	—	NU	NJ	NUP	N	—	50	80	16	1	0.6	57.5	72.5	32 000	36 000	8 500	—	8 000	55	54	56	59	—	75	76	73	1	0.6	0.301
N 210	W	M	—	—	—	N	NF		90	20	1.1	1.1	—	80.4	48 000	51 000	8 500	—	5 600	56.5	—	—	—	—	—	83.5	82	1	1	0.483
*NU210E	W	M, T, T7	NU	NJ	NUP	—	—		90	20	1.1	1.1	59.5	—	79 500	76 500	8 000	9 000	6 300	56.5	56.5	57	62	67	83.5	—	—	1	1	0.50
NU210E	W	M, T, T7	NU	NJ	NUP	—	—		90	20	1.1	1.1	59.5	—	69 000	76 500	8 000	9 000	6 300	56.5	56.5	57	62	67	83.5	—	—	1	1	0.50
*NU2210E	M	T, T7	NU	NJ	NUP	—	—		90	23	1.1	1.1	59.5	—	96 000	97 000	7 500	11 000	6 300	56.5	56.5	57	62	67	83.5	—	—	1	1	0.562
NU2210E	M	T, T7	NU	NJ	NUP	—	—		90	23	1.1	1.1	59.5	—	83 500	97 000	7 500	11 000	6 300	56.5	56.5	57	62	67	83.5	—	—	1	1	0.562
N 310	W	M	—	—	—	N	NF		110	27	2	2	—	95	87 000	86 000	7 100	—	4 500	59	—	—	—	—	—	101	97	2	2	1.11
*NU310E	W	M, T, T7	NU	NJ	NUP	—	—		110	27	2	2	65	—	127 000	113 000	6 700	8 000	5 000	59	59	63	67	73	101	—	—	2	2	1.3
NU310E	W	M, T, T7	NU	NJ	NUP	—	—		110	27	2	2	65	—	110 000	113 000	6 700	8 000	5 000	59	59	63	67	73	101	—	—	2	2	1.3
*NU2310E	M	T, T7	NU	NJ	NUP	—	—		110	40	2	2	65	—	187 000	187 000	6 700	10 000	5 000	59	59	63	67	73	101	—	—	2	2	1.7
NU2310E	M	T, T7	NU	NJ	NUP	—	—		110	40	2	2	65	—	163 000	187 000	6 700	10 000	5 000	59	59	63	67	73	101	—	—	2	2	1.7
N 410	W	M	—	—	—	N	NF		130	31	2.1	2.1	—	110.8	139 000	136 000	5 600	—	4 000	65	—	—	—	—	—	117	113	2	2	2
NU410	W	M	NU	NJ	NUP	—	—		130	31	2.1	2.1	70.8	—	129 000	124 000	5 600	—	4 000	61	61	68	73	81	119	119	113.3	2	2	1.99

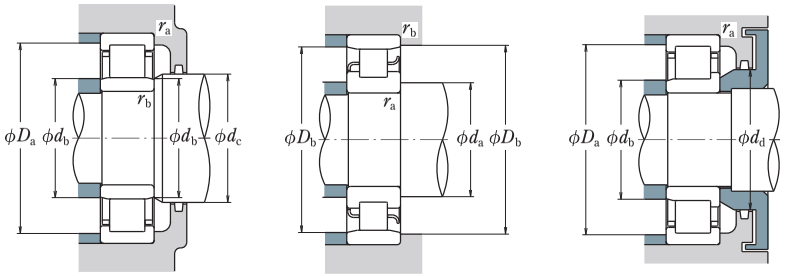
Notes (1) Cage designation (M) is usually omitted from the bearing designation.
(2) When L-shaped thrust collars (see Pages C156-C157) are used, the bearings are considered the NH type.

Notes (3) If axial loads are applied, increase d_a and reduce D_a from the values listed above.
(4) d_b (max.) refers to values for adjusting rings for NU and NJ bearings.
(5) The limiting speeds (mechanical) in the bearing tables are for standard cages.
Remark Bearings denoted by an asterisk (*) are NSKHPS™ cylindrical roller bearings.

SINGLE-ROW CYLINDRICAL ROLLER BEARINGS

Bore Diameter 55 – 60 mm





Boundary Dimensions (mm)							Basic Load Ratings (N)		Speeds (min^{-1})		
										Limiting Speeds	
d	D	B	r min.	r_1 min.	F_w	E_w	C_r	C_{0r}	Thermal Reference Speed	(5) Mechanical	Grease
55	90	18	1.1	1	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	—	99 000	98 500	6 700	8 500	5 600
	100	21	1.5	1.1	66	—	86 500	98 500	6 700	8 500	5 600
	100	25	1.5	1.1	66	—	117 000	122 000	6 700	10 000	5 600
	100	25	1.5	1.1	66	—	101 000	122 000	6 700	10 000	5 600
	120	29	2	2	—	104.5	111 000	111 000	6 300	—	4 000
	120	29	2	2	70.5	—	158 000	143 000	6 000	7 500	4 500
	120	29	2	2	70.5	—	137 000	143 000	6 000	7 500	4 500
	120	43	2	2	70.5	—	231 000	233 000	6 000	9 000	4 500
	120	43	2	2	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	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	—	112 000	107 000	6 300	7 500	5 300
	110	22	1.5	1.5	72	—	97 500	107 000	6 300	7 500	5 300
	110	28	1.5	1.5	72	—	151 000	157 000	6 300	9 500	5 300
	110	28	1.5	1.5	72	—	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	—	124 000	126 000	6 000	—	3 800
	130	31	2.1	2.1	77	—	169 000	157 000	5 600	9 500	4 800
	130	31	2.1	2.1	77	—	150 000	157 000	5 600	9 500	4 800
	130	46	2.1	2.1	77	—	251 000	262 000	5 600	8 500	4 300
	130	46	2.1	2.1	77	—	222 000	262 000	5 600	8 500	4 300
	150	35	2.1	2.1	83	127	167 000	168 000	5 000	—	3 400

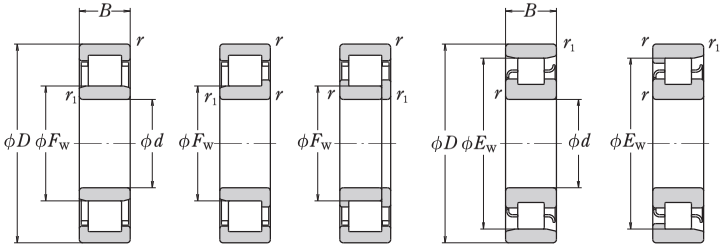
Notes (1) Cage designation (M) is usually omitted from the bearing designation.
(2) When L-shaped thrust collars (see Pages C156-C157) are used, the bearings are considered the NH type.

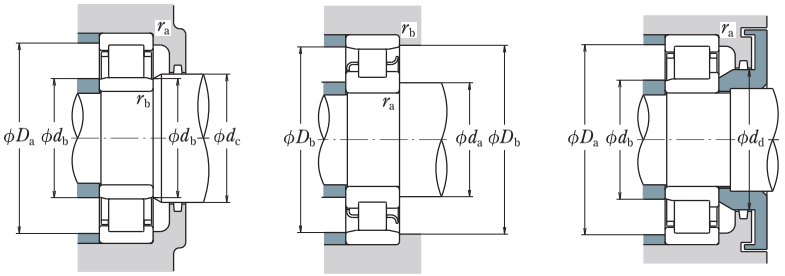
Bearing Designations									Abutment and Fillet Dimensions (mm)										Mass (kg)
	Cage(1) Standard Option		(2) NU	NJ	NUP	N	NF		d_a(3) min.	d_b min.	d_b(4) max.	d_c min.	d_d min.	D_a(3) max.	D_b max.	D_b min.	r_a max.	r_b max.	approx.
	NU1011	**(M)**	—	**NU**	**NJ**	—	**N**	—	61.5	60	63	66	—	83.5	85	82	1	1	0.445
	N 211	**W**	**M**	—	—	—	**N**	**NF**	63	—	—	—	—	—	93.5	91	1.5	1	0.634
*	**NU211E**	**W**	**M, T, T7**	**NU**	**NJ**	**NUP**	—	—	63	61.5	64	68	73	92	—	—	1.5	1	0.669
	NU211E	**W**	**M, T, T7**	**NU**	**NJ**	**NUP**	—	—	63	61.5	64	68	73	92	—	—	1.5	1	0.669
*	**NU2211E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	63	61.5	64	68	73	92	—	—	1.5	1	0.783
	NU2211E	**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
*	**NU311E**	**W**	**M, T, T7**	**NU**	**NJ**	**NUP**	—	—	64	64	68	72	80	111	—	—	2	2	1.64
	NU311E	**W**	**M, T, T7**	**NU**	**NJ**	**NUP**	—	—	64	64	68	72	80	111	—	—	2	2	1.64
*	**NU2311E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	64	64	68	72	80	111	—	—	2	2	2.18
	NU2311E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	64	64	68	72	80	111	—	—	2	2	2.18
	NU411	**W**	—	**NU**	**NJ**	**NUP**	**N**	**NF**	66	66	75	79	87	129	129	119	2	2	2.5
	NU1012	**(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
*	**NU212E**	**W**	**M, T, T7**	**NU**	**NJ**	**NUP**	—	—	68	68	70	75	80	102	—	—	1.5	1.5	0.824
	NU212E	**W**	**M, T, T7**	**NU**	**NJ**	**NUP**	—	—	68	68	70	75	80	102	—	—	1.5	1.5	0.824
*	**NU2212E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	68	68	70	75	80	102	—	—	1.5	1.5	1.06
	NU2212E	**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
	NU312	**W**	**M**	**NU**	**NJ**	**NUP**	—	—	71	71	75	79	86	119	—	—	2	2	1.82
*	**NU312E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	71	71	75	79	86	119	—	—	2	2	2.06
	NU312E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	71	71	75	79	86	119	—	—	2	2	2.06
*	**NU2312E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	71	71	75	79	86	119	—	—	2	2	2.7
	NU2312E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	71	71	75	79	86	119	—	—	2	2	2.7
	NU412	**W**	**M**	**NU**	**NJ**	**NUP**	**N**	**NF**	71	71	80	85	94	139	139	130	2	2	3.04

Notes (3) If axial loads are applied, increase d_a and reduce D_a from the values listed above.
(4) d_b (max.) refers to values for adjusting rings for NU and NJ bearings.
(5) The limiting speeds (mechanical) in the bearing tables are for standard cages.
Remark Bearings denoted by an asterisk (*) are NSKHPS™ cylindrical roller bearings.

SINGLE-ROW CYLINDRICAL ROLLER BEARINGS

Bore Diameter 65 – 70 mm





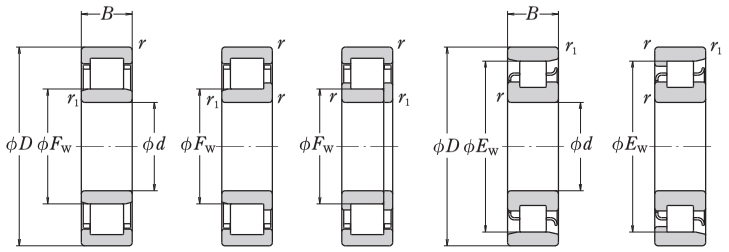
Bearing Designations								Boundary Dimensions (mm)						Basic Load Ratings (N)		Speeds (min⁻¹)		Abutment and Fillet Dimensions (mm)										Mass (kg)
	Cage(1) Standard Option		(2) NU NJ NUP		N	NF		d	D	B	r min.	r1 min.	Fw	Ew	Cr	C0r	Thermal Reference Speed	Limiting Speeds (5) Mechanical	Limiting Speeds Grease	da(3) min.	db min.	db(4) max.	dc min.	dd min.	Da(3) max.	Db max.	Db min.	ra max.	rb max.	approx.
	(M)	—	NU	NJ	—	N	NF	65	100	18	1.1	1	74.5	90.5	41 000	51 000	6 700	—	6 300	71.5	70	73	76	—	93.5	95	92	1	1	0.504
	W	M	—	—	—	N	NF		120	23	1.5	1.5	—	105.6	84 000	94 500	6 300	—	4 300	73	—	—	—	—	—	112	108	1.5	1.5	1.05
*NU213E	W	M, T, T7	NU	NJ	NUP	—	—		120	23	1.5	1.5	78.5	—	124 000	119 000	6 000	7 100	4 800	73	73	76	81	87	112	—	—	1.5	1.5	1.05
NU213E	W	M, T, T7	NU	NJ	NUP	—	—		120	23	1.5	1.5	78.5	—	108 000	119 000	6 000	7 100	4 800	73	73	76	81	87	112	—	—	1.5	1.5	1.05
*NU2213E	M	T, T7	NU	NJ	NUP	—	—		120	31	1.5	1.5	78.5	—	171 000	181 000	6 000	8 500	4 800	73	73	76	81	87	112	—	—	1.5	1.5	1.41
NU2213E	M	T, T7	NU	NJ	NUP	—	—		120	31	1.5	1.5	78.5	—	149 000	181 000	6 000	8 500	4 800	73	73	76	81	87	112	—	—	1.5	1.5	1.41
N 313	W	M	—	—	—	N	NF		140	33	2.1	2.1	—	121.5	135 000	139 000	5 600	—	3 600	76	—	—	—	—	—	129	125	2	2	2.17
NU313	W	M	NU	NJ	NUP	—	—		140	33	2.1	2.1	83.5	—	135 000	139 000	5 600	—	3 600	76	76	81	85	93	129	—	—	2	2	2.23
*NU313E	M	T, T7	NU	NJ	NUP	—	—		140	33	2.1	2.1	82.5	—	204 000	191 000	5 300	8 500	4 300	76	76	80	85	93	129	—	—	2	2	2.56
NU313E	M	T, T7	NU	NJ	NUP	—	—		140	33	2.1	2.1	82.5	—	181 000	191 000	5 300	8 500	4 300	76	76	80	85	93	129	—	—	2	2	2.56
*NU2313E	M	T, T7	NU	NJ	NUP	—	—		140	48	2.1	2.1	82.5	—	263 000	265 000	5 600	7 500	3 800	76	76	80	85	93	129	—	—	2	2	3.16
NU2313E	M	T, T7	NU	NJ	NUP	—	—		140	48	2.1	2.1	82.5	—	233 000	265 000	5 600	7 500	3 800	76	76	80	85	93	129	—	—	2	2	3.16
N 413	M	—	—	—	—	N	NF		160	37	2.1	2.1	—	135.3	195 000	203 000	4 500	—	4 000	76	—	—	—	—	—	149	138.8	2	2	3.63
NU413	W	M	NU	NJ	—	—	—		160	37	2.1	2.1	89.3	—	182 000	186 000	4 800	—	3 200	76	76	86	91	100	149	—	—	2	2	3.63
NU1014	(M)	—	NU	NJ	NUP	N	NF	70	110	20	1.1	1	80	100	58 500	70 500	6 300	—	6 000	76.5	75	79	82	—	103.5	105	101	1	1	0.693
N 214	W	M	—	—	—	N	NF		125	24	1.5	1.5	—	110.5	83 500	95 000	6 300	—	4 000	78	—	—	—	—	—	117	113	1.5	1.5	1.14
*NU214E	M	T, T7	NU	NJ	NUP	—	—		125	24	1.5	1.5	83.5	—	136 000	137 000	5 600	9 000	5 000	78	78	81	86	92	117	—	—	1.5	1.5	1.29
NU214E	M	T, T7	NU	NJ	NUP	—	—		125	24	1.5	1.5	83.5	—	119 000	137 000	5 600	9 000	5 000	78	78	81	86	92	117	—	—	1.5	1.5	1.29
*NU2214E	M	T, T7	NU	NJ	NUP	—	—		125	31	1.5	1.5	83.5	—	179 000	194 000	5 600	8 000	4 500	78	78	81	86	92	117	—	—	1.5	1.5	1.49
NU2214E	M	T, T7	NU	NJ	NUP	—	—		125	31	1.5	1.5	83.5	—	156 000	194 000	5 600	8 000	4 500	78	78	81	86	92	117	—	—	1.5	1.5	1.49
N 314	W	M	—	—	—	N	NF		150	35	2.1	2.1	—	130	149 000	156 000	5 600	—	3 200	81	—	—	—	—	—	139	133.5	2	2	2.67
NU314	W	M	NU	NJ	NUP	—	—		150	35	2.1	2.1	90	—	158 000	168 000	5 300	—	3 200	81	81	87	92	100	139	—	—	2	2	2.75
*NU314E	M	T, T7	NU	NJ	NUP	—	—		150	35	2.1	2.1	89	—	231 000	222 000	4 800	8 000	4 000	81	81	86	92	100	139	—	—	2	2	3.09
NU314E	M	T, T7	NU	NJ	NUP	—	—		150	35	2.1	2.1	89	—	205 000	222 000	4 800	8 000	4 000	81	81	86	92	100	139	—	—	2	2	3.09
*NU2314E	M	T, T7	NU	NJ	NUP	—	—		150	51	2.1	2.1	89	—	310 000	325 000	5 000	7 100	3 600	81	81	86	92	100	139	—	—	2	2	3.92
NU2314E	M	T, T7	NU	NJ	NUP	—	—		150	51	2.1	2.1	89	—	274 000	325 000	5 000	7 100	3 600	81	81	86	92	100	139	—	—	2	2	3.92
NU414	W	M	NU	NJ	NUP	N	NF		180	42	3	3	100	152	228 000	236 000	4 500	—	2 800	83	83	97	102	112	167	167	155	2.5	2.5	5.28

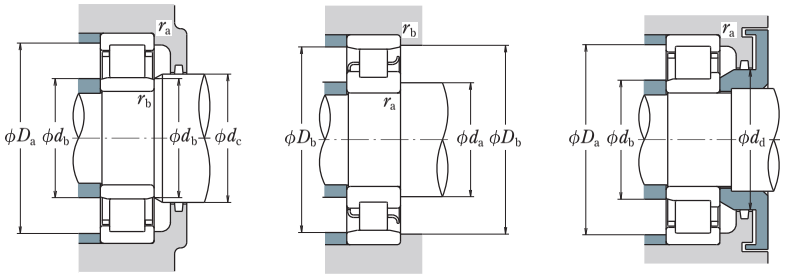
Notes (1) Cage designation (M) is usually omitted from the bearing designation.
(2) When L-shaped thrust collars (see Pages C156-C157) are used, the bearings are considered the NH type.

Notes (3) If axial loads are applied, increase d_a and reduce D_a from the values listed above.
(4) d_b (max.) refers to values for adjusting rings for NU and NJ bearings.
(5) The limiting speeds (mechanical) in the bearing tables are for standard cages.
Remark Bearings denoted by an asterisk (*) are NSKHPS™ cylindrical roller bearings.

SINGLE-ROW CYLINDRICAL ROLLER BEARINGS

Bore Diameter 75 mm





Boundary Dimensions (mm)							Basic Load Ratings (N)		Speeds (min⁻¹)		
									Thermal Reference Speed	Limiting Speeds (5)	
d	D	B	r min.	r_1 min.	F_w	E_w	C_r	C_{0r}		Mechanical	Grease
75	115	20	1.1	1	85	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	—	271 000	263 000	4 500	7 500	3 800
	160	37	2.1	2.1	95	—	240 000	263 000	4 500	7 500	3 800
	160	55	2.1	2.1	95	—	370 000	395 000	4 800	6 700	3 400
	160	55	2.1	2.1	95	—	330 000	395 000	4 800	6 700	3 400
	190	45	3	3	104.5	160.5	262 000	274 000	4 300	—	2 600

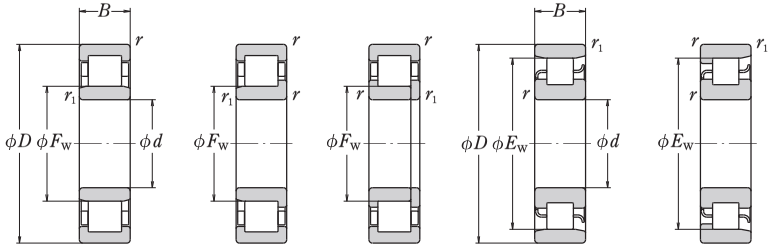
Notes (1) Cage designation (M) is usually omitted from the bearing designation.
(2) When L-shaped thrust collars (see Pages C156-C157) are used, the bearings are considered the NH type.

Bearing Designations									Abutment and Fillet Dimensions (mm)										Mass (kg)
	Cage (1) Standard Option		(2) NU	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.
NU1015	**(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
***NU215E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		83	83	86	90	96	122	—	—	1.5	1.5	1.44
NU215E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		83	83	86	90	96	122	—	—	1.5	1.5	1.44
***NU2215E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		83	83	86	90	96	122	—	—	1.5	1.5	1.57
NU2215E	**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
NU315	**W**	**M**	**NU**	**NJ**	**NUP**	—	—		86	86	93	97	106	149	—	—	2	2	3.26
***NU315E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		86	86	92	97	106	149	—	—	2	2	3.73
NU315E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		86	86	92	97	106	149	—	—	2	2	3.73
***NU2315E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		86	86	92	97	106	149	—	—	2	2	4.86
NU2315E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		86	86	92	97	106	149	—	—	2	2	4.86
NU415	**W**	**M**	**NU**	**NJ**	—	**N**	**NF**		88	88	102	107	118	177	177	164	2.5	2.5	6.27

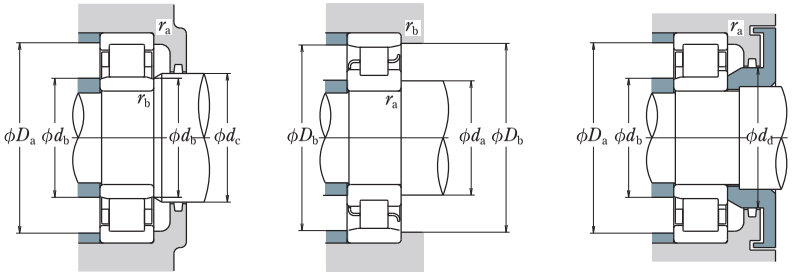
Notes (3) If axial loads are applied, increase d_a and reduce D_a from the values listed above.
(4) d_b (max.) refers to values for adjusting rings for NU and NJ bearings.
(5) The limiting speeds (mechanical) in the bearing tables are for standard cages.
Remark Bearings denoted by an asterisk (*) are NSKHPS™ cylindrical roller bearings.

SINGLE-ROW CYLINDRICAL ROLLER BEARINGS

Bore Diameter 80 – 90 mm



NU NJ NUP N NF



Boundary Dimensions (mm)							Basic Load Ratings (N)		Speeds (min^{-1})		
									Thermal Reference Speed	Limiting Speeds (5)	
d	D	B	r min.	r_1 min.	F_W	E_W	C_r	C_{0r}		Mechanical	Grease
80	125	22	1.1	1	91.5	113.5	72 500	90 500	6 000	—	5 300
	140	26	2	2	—	125.3	106 000	122 000	5 600	—	3 600
	140	26	2	2	95.3	—	160 000	167 000	5 000	8 000	4 500
	140	26	2	2	95.3	—	139 000	167 000	5 000	8 000	4 500
	140	33	2	2	95.3	—	214 000	243 000	5 000	7 100	4 000
	140	33	2	2	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	—	289 000	282 000	4 300	7 100	3 600
	170	39	2.1	2.1	101	—	256 000	282 000	4 300	7 100	3 600
	170	58	2.1	2.1	101	—	400 000	430 000	4 500	6 300	3 200
	170	58	2.1	2.1	101	—	355 000	430 000	4 500	6 300	3 200
	200	48	3	3	110	170	299 000	315 000	4 000	—	2 600
85	130	22	1.1	1	96.5	118.5	74 500	95 500	5 600	—	5 000
	150	28	2	2	—	133.8	120 000	140 000	5 300	—	3 400
	150	28	2	2	100.5	—	192 000	199 000	4 800	7 500	4 300
	150	28	2	2	100.5	—	167 000	199 000	4 800	7 500	4 300
	150	36	2	2	100.5	—	250 000	279 000	4 800	6 700	3 800
	150	36	2	2	100.5	—	217 000	279 000	4 800	6 700	3 800
	180	41	3	3	—	156	225 000	247 000	4 500	—	2 600
	180	41	3	3	108	—	212 000	228 000	4 800	—	2 600
	180	41	3	3	108	—	360 000	330 000	4 000	6 700	3 400
	180	41	3	3	108	—	291 000	330 000	4 000	6 700	3 400
	180	60	3	3	108	—	485 000	485 000	4 300	6 000	3 000
	180	60	3	3	108	—	395 000	485 000	4 300	6 000	3 000
	210	52	4	4	113	177	335 000	350 000	4 000	—	3 000
90	140	24	1.5	1.1	103	127	88 000	114 000	5 300	—	4 500
	160	30	2	2	—	143	152 000	178 000	5 000	—	3 200
	160	30	2	2	107	—	205 000	217 000	4 800	7 100	4 000
	160	30	2	2	107	—	182 000	217 000	4 800	7 100	4 000
	160	40	2	2	107	—	274 000	315 000	4 800	6 300	3 600
	160	40	2	2	107	—	242 000	315 000	4 800	6 300	3 600
	190	43	3	3	—	165	240 000	265 000	4 500	—	2 600
	190	43	3	3	115	—	240 000	265 000	4 500	—	2 600
	190	43	3	3	113.5	—	390 000	355 000	4 000	6 300	3 200
	190	43	3	3	113.5	—	315 000	355 000	4 000	6 300	3 200
	190	64	3	3	113.5	—	535 000	535 000	4 000	5 600	2 800
	190	64	3	3	113.5	—	435 000	535 000	4 000	5 600	2 800
	225	54	4	4	123.5	191.5	375 000	400 000	3 600	—	2 800

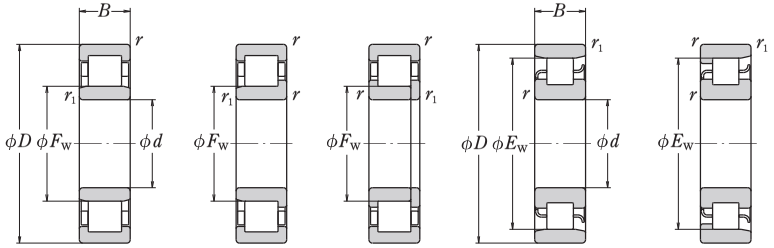
Notes (1) Cage designation (M) is usually omitted from the bearing designation.
(2) When L-shaped thrust collars (see Pages C156-C157) are used, the bearings are considered the NH type.

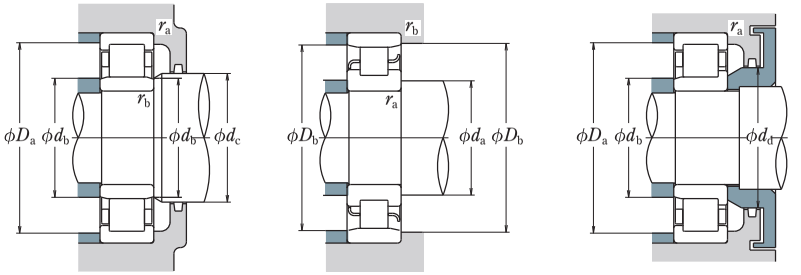
Bearing Designations								Abutment and Fillet Dimensions (mm)									Mass (kg)
	Cage (1) Standard Option		(2) NU	NJ	NUP	N	NF	d_a (3) min.	d_b min.	d_b (4) max.	d_c min.	d_d min.	D_a (3) max.	D_b max.	D_b min.	r_a max.	r_b max.	approx.
NU1016	(M)	—	**NU**	—	**NUP**	**N**	—	86.5	85	90	94	—	118.5	120	115	1	1	0.969
N 216	**W**	**M**	—	—	—	**N**	**NF**	89	—	—	—	—	—	131	128	2	2	1.47
***NU216E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	89	89	92	97	104	131	—	—	2	2	1.7
NU216E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	89	89	92	97	104	131	—	—	2	2	1.7
***NU2216E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	89	89	92	97	104	131	—	—	2	2	1.96
NU2216E	**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
***NU316E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	91	91	98	105	114	159	—	—	2	2	4.45
NU316E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	91	91	98	105	114	159	—	—	2	2	4.45
***NU2316E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	91	91	98	105	114	159	—	—	2	2	5.73
NU2316E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	91	91	98	105	114	159	—	—	2	2	5.73
NU416	**W**	**M**	**NU**	**NJ**	—	**N**	**NF**	93	93	107	112	124	187	187	173	2.5	2.5	7.36
NU1017	(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
***NU217E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	94	94	98	104	110	141	—	—	2	2	2.11
NU217E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	94	94	98	104	110	141	—	—	2	2	2.11
***NU2217E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	94	94	98	104	110	141	—	—	2	2	2.44
NU2217E	**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
NU317	**W**	**N**	**NU**	**NJ**	**NUP**	—	—	98	98	105	110	119	167	—	—	2.5	2.5	4.6
***NU317E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	98	98	105	110	119	167	—	—	2.5	2.5	5.26
NU317E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	98	98	105	110	119	167	—	—	2.5	2.5	5.26
***NU2317E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	98	98	105	110	119	167	—	—	2.5	2.5	6.77
NU2317E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	98	98	105	110	119	167	—	—	2.5	2.5	6.77
NU417	**M**	—	**NU**	**NJ**	—	**N**	**NF**	101	101	110	115	128	194	194	180	3	3	9.56
NU1018	(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
***NU218E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	99	99	104	109	116	151	—	—	2	2	2.6
NU218E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	99	99	104	109	116	151	—	—	2	2	2.6
***NU2218E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	99	99	104	109	116	151	—	—	2	2	3.11
NU2218E	**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
NU318	**W**	**M**	**NU**	**NJ**	**NUP**	—	—	103	103	112	117	127	177	—	—	2.5	2.5	5.38
***NU318E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	103	103	111	117	127	177	—	—	2.5	2.5	6.1
NU318E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	103	103	111	117	127	177	—	—	2.5	2.5	6.1
***NU2318E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	103	103	111	117	127	177	—	—	2.5	2.5	7.9
NU2318E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	103	103	111	117	127	177	—	—	2.5	2.5	7.9
NU418	**M**	—	**NU**	**NJ**	—	**N**	**NF**	106	106	120	125	139	209	209	196	3	3	11.5

Notes (3) If axial loads are applied, increase d_a and reduce D_a from the values listed above.
(4) d_b (max.) refers to values for adjusting rings for NU and NJ bearings.
(5) The limiting speeds (mechanical) in the bearing tables are for standard cages.
Remark Bearings denoted by an asterisk (*) are NSKHPS™ cylindrical roller bearings.

SINGLE-ROW CYLINDRICAL ROLLER BEARINGS

Bore Diameter 95 – 105 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 (5) Mechanical	Grease
95	145	24	1.5	1.1	108	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	3	—	173.5	259 000	289 000	4 300	—	2 400
	200	45	3	3	121.5	—	259 000	289 000	4 300	—	2 400
	200	45	3	3	121.5	—	410 000	385 000	3 800	6 000	3 000
	200	45	3	3	121.5	—	335 000	385 000	3 800	6 000	3 000
	200	67	3	3	121.5	—	565 000	585 000	3 800	5 300	2 600
	200	67	3	3	121.5	—	460 000	585 000	3 800	5 300	2 600
	240	55	4	4	133.5	201.5	400 000	445 000	3 200	—	2 600
100	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	34	2.1	2.1	119	—	249 000	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
	180	46	2.1	2.1	119	—	335 000	445 000	4 300	5 600	3 200
	215	47	3	3	—	185.5	299 000	335 000	4 000	—	2 200
	215	47	3	3	129.5	—	299 000	335 000	4 000	—	2 200
	215	47	3	3	127.5	—	465 000	425 000	3 600	5 600	2 800
	215	47	3	3	127.5	—	380 000	425 000	3 600	5 600	2 800
	215	73	3	3	127.5	—	700 000	715 000	3 400	5 000	2 400
	215	73	3	3	127.5	—	570 000	715 000	3 400	5 000	2 400
	250	58	4	4	139	211	450 000	500 000	3 000	—	2 600
105	160	26	2	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	—	3 400
	190	36	2.1	2.1	125	—	320 000	310 000	4 300	6 000	3 400
	190	36	2.1	2.1	125	—	262 000	310 000	4 300	6 000	3 400
	225	49	3	3	—	195	340 000	390 000	3 800	—	2 200
	225	49	3	3	133	—	525 000	480 000	3 400	5 300	2 600
	225	49	3	3	133	—	425 000	480 000	3 400	5 300	2 600
	260	60	4	4	144.5	220.5	495 000	555 000	2 800	—	2 400

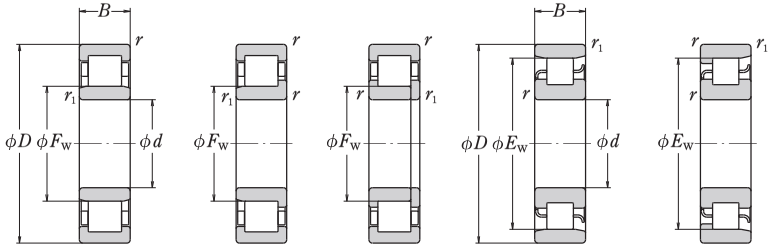
Notes (1) Cage designation (M) is usually omitted from the bearing designation.
(2) When L-shaped thrust collars (see Pages C156-C157) are used, the bearings are considered the NH type.

Bearing Designations									Abutment and Fillet Dimensions (mm)									Mass (kg)
	Cage (1) Standard Option		(2) NU	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.
NU1019	(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
***NU219E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		106	106	110	116	123	159	—	—	2	2	3.17
NU219E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		106	106	110	116	123	159	—	—	2	2	3.17
***NU2219E**	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		106	106	110	116	123	159	—	—	2	2	3.81
NU2219E	**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
NU319	**W**	**M**	**NU**	**NJ**	**NUP**	—	—		108	108	118	124	134	187	—	—	2.5	2.5	6.23
***NU319E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		108	108	118	124	134	187	—	—	2.5	2.5	7.13
NU319E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		108	108	118	124	134	187	—	—	2.5	2.5	7.13
***NU2319E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		108	108	118	124	134	187	—	—	2.5	2.5	9.21
NU2319E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		108	108	118	124	134	187	—	—	2.5	2.5	9.21
NU419	**M**	—	**NU**	**NJ**	**NUP**	—	**NF**		111	111	130	136	149	224	224	206	3	3	13.6
NU1020	(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
***NU220E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		111	111	116	122	130	169	—	—	2	2	3.81
NU220E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		111	111	116	122	130	169	—	—	2	2	3.81
***NU2220E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		111	111	116	122	130	169	—	—	2	2	4.69
NU2220E	**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
NU320	**W**	**M**	**NU**	**NJ**	**NUP**	—	—		113	113	126	132	143	202	—	—	2.5	2.5	7.69
***NU320E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		113	113	124	132	143	202	—	—	2.5	2.5	8.63
NU320E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		113	113	124	132	143	202	—	—	2.5	2.5	8.63
***NU2320E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		113	113	124	132	143	202	—	—	2.5	2.5	11.8
NU2320E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		113	113	124	132	143	202	—	—	2.5	2.5	11.8
NU420	**M**	—	**NU**	**NJ**	—	**N**	**NF**		116	116	135	141	156	234	234	215	3	3	15.5
NU1021	(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
***NU221E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		116	116	121	129	137	179	—	—	2	2	4.58
NU221E	**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
***NU321E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		118	118	131	137	149	212	—	—	2.5	2.5	9.84
NU321E	**M**	—	**NU**	**NJ**	**NUP**	—	—		118	118	131	137	149	212	—	—	2.5	2.5	9.84
NU421	**M**	—	**NU**	**NJ**	—	**N**	**NF**		121	121	141	147	162	244	244	225	3	3	17.3

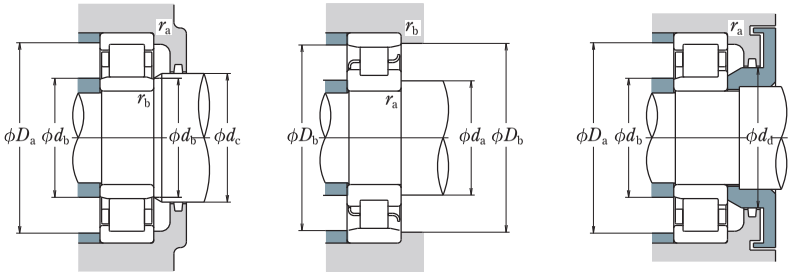
Notes (3) If axial loads are applied, increase d_a and reduce D_a from the values listed above.
(4) d_b (max.) refers to values for adjusting rings for NU and NJ bearings.
(5) The limiting speeds (mechanical) in the bearing tables are for standard cages.
Remark Bearings denoted by an asterisk (*) are NSKHPS™ cylindrical roller bearings.

SINGLE-ROW CYLINDRICAL ROLLER BEARINGS

Bore Diameter 110 – 130 mm



NU NJ NUP N NF



Bearing Designations								Boundary Dimensions (mm)					Basic Load Ratings (N)		Speeds (min⁻¹)		
	Cage(1) Standard Option		(2) NU	NJ	NUP	N	NF	d	D	B	r min.	r_1 min.	F_w	E_w	C_r	C_{0r}	Thermal Reference Speed	Limiting Speeds (5) Mechanical	Limiting Speeds Grease
NU1022	(M)	—	**NU**	**NJ**	—	**N**	**NF**	**110**	170	28	2	1.1	125	155	131 000	174 000	4 500	—	3 800
N 222	**W**	**M**	—	—	—	**N**	**NF**		200	38	2.1	2.1	—	178.5	229 000	272 000	4 300	—	2 600
***NU222E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		200	38	2.1	2.1	132.5	—	360 000	365 000	4 000	5 600	3 200
NU222E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		200	38	2.1	2.1	132.5	—	293 000	365 000	4 000	5 600	3 200
***NU2222E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		200	53	2.1	2.1	132.5	—	470 000	515 000	4 000	5 000	2 800
NU2222E	**M**	—	**NU**	**NJ**	**NUP**	—	—		200	53	2.1	2.1	132.5	—	385 000	515 000	4 000	5 000	2 800
N 322	**W**	**M**	—	—	—	**N**	**NF**		240	50	3	3	—	207	380 000	435 000	3 400	—	2 000
***NU322E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		240	50	3	3	143	—	555 000	525 000	3 200	5 000	2 600
NU322E	**M**	—	**NU**	**NJ**	**NUP**	—	—		240	50	3	3	143	—	450 000	525 000	3 200	5 000	2 600
***NU2322E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		240	80	3	3	143	—	830 000	880 000	3 000	4 500	2 200
NU2322E	**M**	—	**NU**	**NJ**	**NUP**	—	—		240	80	3	3	143	—	675 000	880 000	3 000	4 500	2 200
NU422	**M**	—	**NU**	**NJ**	—	—	—		280	65	4	4	155	—	550 000	620 000	2 600	—	2 200
NU1024	(M)	—	**NU**	**NJ**	**NUP**	**N**	—	**120**	180	28	2	1.1	135	165	139 000	191 000	4 000	—	3 400
N 224	**W**	**M**	—	—	—	**N**	**NF**		215	40	2.1	2.1	—	191.5	260 000	320 000	4 000	—	2 400
***NU224E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		215	40	2.1	2.1	143.5	—	410 000	420 000	3 600	5 300	3 000
NU224E	**M**	—	**NU**	**NJ**	**NUP**	—	—		215	40	2.1	2.1	143.5	—	335 000	420 000	3 600	5 300	3 000
***NU2224E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		215	58	2.1	2.1	143.5	—	555 000	620 000	3 600	4 800	2 600
NU2224E	**M**	—	**NU**	**NJ**	**NUP**	—	—		215	58	2.1	2.1	143.5	—	450 000	620 000	3 600	4 800	2 600
N 324	**W**	**M**	—	—	—	**N**	**NF**		260	55	3	3	—	226	450 000	510 000	3 000	—	2 200
***NU324E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		260	55	3	3	154	—	650 000	610 000	2 800	4 800	2 200
NU324E	**M**	—	**NU**	**NJ**	**NUP**	—	—		260	55	3	3	154	—	530 000	610 000	2 800	4 800	2 200
***NU2324E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		260	86	3	3	154	—	975 000	1 030 000	2 600	4 300	2 000
NU2324E	**M**	—	**NU**	**NJ**	**NUP**	—	—		260	86	3	3	154	—	795 000	1 030 000	2 600	4 300	2 000
NU424	**M**	—	**NU**	**NJ**	**NUP**	**N**	—		310	72	5	5	170	260	675 000	770 000	2 400	—	2 000
NU1026	(M)	—	**NU**	**NJ**	—	**N**	**NF**	**130**	200	33	2	1.1	148	182	172 000	238 000	4 000	—	3 200
N 226	**W**	**M**	—	—	—	**N**	**NF**		230	40	3	3	—	204	270 000	340 000	3 800	—	2 200
***NU226E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		230	40	3	3	153.5	—	445 000	455 000	3 400	5 000	2 600
NU226E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—		230	40	3	3	153.5	—	365 000	455 000	3 400	5 000	2 600
***NU2226E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		230	64	3	3	153.5	—	650 000	735 000	3 400	4 500	2 400
NU2226E	**M**	—	**NU**	**NJ**	**NUP**	—	—		230	64	3	3	153.5	—	530 000	735 000	3 400	4 500	2 400
N 326	**M**	—	—	—	—	**N**	**NF**		280	58	4	4	—	243	500 000	570 000	2 800	—	2 200
***NU326E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		280	58	4	4	167	—	760 000	735 000	2 600	4 300	2 200
NU326E	**M**	—	**NU**	**NJ**	**NUP**	—	—		280	58	4	4	167	—	615 000	735 000	2 600	4 300	2 200
***NU2326E**	**M**	—	**NU**	**NJ**	**NUP**	—	—		280	93	4	4	167	—	1 130 000	1 230 000	2 400	3 800	1 900
NU2326E	**M**	—	**NU**	**NJ**	**NUP**	—	—		280	93	4	4	167	—	920 000	1 230 000	2 400	3 800	1 900
NU426	**M**	—	**NU**	**NJ**	—	—	**NF**		340	78	5	5	185	285	825 000	955 000	2 000	—	1 800

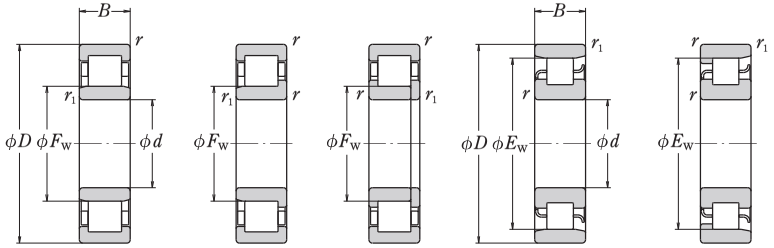
Bearing Designations								Abutment and Fillet Dimensions (mm)										Mass (kg)
	Cage(1) Standard Option		(2) NU	NJ	NUP	N	NF	d_a(3) min.	d_b min.	d_b(4) max.	d_c min.	d_d min.	D_a(3) max.	D_b max.	D_b min.	r_a max.	r_b max.	approx.
NU1022	(M)	—	**NU**	**NJ**	—	**N**	**NF**	119	116.5	123	128	—	161	163.5	157	2	1	2.27
N 222	**W**	**M**	—	—	—	**N**	**NF**	121	—	—	—	—	—	189	182	2	2	4.64
***NU222E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	121	121	129	135	144	189	—	—	2	2	5.37
NU222E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	121	121	129	135	144	189	—	—	2	2	5.37
***NU2222E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	121	121	129	135	144	189	—	—	2	2	7.65
NU2222E	**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
***NU322E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	123	123	139	145	158	227	—	—	2.5	2.5	11.8
NU322E	**M**	—	**NU**	**NJ**	**NUP**	—	—	123	123	139	145	158	227	—	—	2.5	2.5	11.8
***NU2322E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	123	123	139	145	158	227	—	—	2.5	2.5	18.8
NU2322E	**M**	—	**NU**	**NJ**	**NUP**	—	—	123	123	139	145	158	227	—	—	2.5	2.5	18.8
NU422	**M**	—	**NU**	**NJ**	—	—	—	126	126	151	157	173	264	—	—	3	3	22.1
NU1024	(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
***NU224E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	131	131	140	146	156	204	—	—	2	2	6.43
NU224E	**M**	—	**NU**	**NJ**	**NUP**	—	—	131	131	140	146	156	204	—	—	2	2	6.43
***NU2224E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	131	131	140	146	156	204	—	—	2	2	9.51
NU2224E	**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
***NU324E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	133	133	150	156	171	247	—	—	2.5	2.5	15
NU324E	**M**	—	**NU**	**NJ**	**NUP**	—	—	133	133	150	156	171	247	—	—	2.5	2.5	15
***NU2324E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	133	133	150	156	171	247	—	—	2.5	2.5	25
NU2324E	**M**	—	**NU**	**NJ**	**NUP**	—	—	133	133	150	156	171	247	—	—	2.5	2.5	25
NU424	**M**	—	**NU**	**NJ**	**NUP**	**N**	—	140	140	166	172	190	290	290	266	4	4	30.2
NU1026	(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
***NU226E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	143	143	150	158	168	217	—	—	2.5	2.5	8.03
NU226E	**M**	**T, T7**	**NU**	**NJ**	**NUP**	—	—	143	143	150	158	168	217	—	—	2.5	2.5	8.03
***NU2226E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	143	143	150	158	168	217	—	—	2.5	2.5	9.44
NU2226E	**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
***NU326E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	146	146	163	169	184	264	—	—	3	3	18.7
NU326E	**M**	—	**NU**	**NJ**	**NUP**	—	—	146	146	163	169	184	264	—	—	3	3	18.7
***NU2326E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	146	146	163	169	184	264	—	—	3	3	30
NU2326E	**M**	—	**NU**	**NJ**	**NUP**	—	—	146	146	163	169	184	264	—	—	3	3	30
NU426	**M**	—	**NU**	**NJ**	—	—	**NF**	150	150	180	187	208	320	320	291	4	4	39.6

Notes (1) Cage designation (M) is usually omitted from the bearing designation.
(2) When L-shaped thrust collars (see Pages C156-C157) are used, the bearings are considered the NH type.

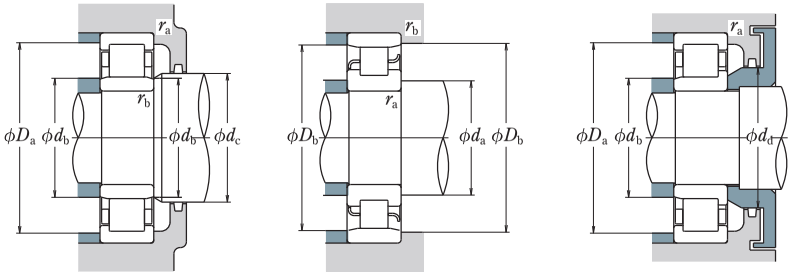
Notes (3) If axial loads are applied, increase d_a and reduce D_a from the values listed above.
(4) d_b (max.) refers to values for adjusting rings for NU and NJ bearings.
(5) The limiting speeds (mechanical) in the bearing tables are for standard cages.
Remark Bearings denoted by an asterisk (*) are NSKHPS™ cylindrical roller bearings.

SINGLE-ROW CYLINDRICAL ROLLER BEARINGS

Bore Diameter 140 – 160 mm



NU NJ NUP N NF



Bearing Designations								Boundary Dimensions (mm)						Basic Load Ratings (N)		Speeds (min⁻¹)		
	Cage(1) Standard Option		(2) NU	NJ	NUP	N	NF	d	D	B	r min.	r1 min.	Fw	Ew	Cr	C0r	Thermal Reference Speed	(5) Limiting Speeds Mechanical	Grease
140								210	33	2	1.1	158	192	176 000	250 000	3 800	—	3 000
								250	42	3	3	—	221	297 000	375 000	3 400	—	2 000
								250	42	3	3	169	—	485 000	515 000	3 200	4 500	2 400
								250	42	3	3	169	—	395 000	515 000	3 200	4 500	2 400
								250	68	3	3	169	—	675 000	790 000	3 200	4 000	2 200
								250	68	3	3	169	—	550 000	790 000	3 200	4 000	2 200
								300	62	4	4	—	260	550 000	640 000	2 600	—	2 000
								300	62	4	4	180	—	815 000	795 000	2 400	4 000	2 000
								300	62	4	4	180	—	665 000	795 000	2 400	4 000	2 000
								300	102	4	4	180	—	1 250 000	1 380 000	2 200	2 600	1 700
								300	102	4	4	180	—	1 020 000	1 380 000	2 200	2 600	1 700
								360	82	5	5	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	3	—	238	360 000	465 000	3 000	—	1 800
								270	45	3	3	182	—	550 000	595 000	2 800	4 300	2 200
								270	45	3	3	182	—	450 000	595 000	2 800	4 300	2 200
								270	73	3	3	182	—	780 000	930 000	2 800	3 800	2 000
								270	73	3	3	182	—	635 000	930 000	2 800	3 800	2 000
								320	65	4	4	—	277	665 000	805 000	2 200	—	1 800
								320	65	4	4	193	—	930 000	920 000	2 200	3 800	1 800
								320	65	4	4	193	—	760 000	920 000	2 200	3 800	1 800
								320	108	4	4	193	—	1 430 000	1 600 000	2 000	2 400	1 600
								320	108	4	4	193	—	1 160 000	1 600 000	2 000	2 400	1 600
								380	85	5	5	213	—	930 000	1 120 000	1 700	—	1 600
160								240	38	2.1	1.5	180	220	238 000	340 000	3 400	—	2 600
								290	48	3	3	—	255	430 000	570 000	2 800	—	2 200
								290	48	3	3	195	—	615 000	665 000	2 600	4 000	2 200
								290	48	3	3	195	—	500 000	665 000	2 600	4 000	2 200
								290	80	3	3	193	—	995 000	1 190 000	2 400	3 600	1 900
								290	80	3	3	193	—	810 000	1 190 000	2 400	3 600	1 900
								340	68	4	4	—	292	700 000	875 000	2 000	—	1 700
								340	68	4	4	204	—	1 060 000	1 050 000	1 900	3 600	1 700
								340	68	4	4	204	—	860 000	1 050 000	1 900	3 600	1 700
								340	114	4	4	204	—	1 310 000	1 820 000	1 800	2 400	1 500

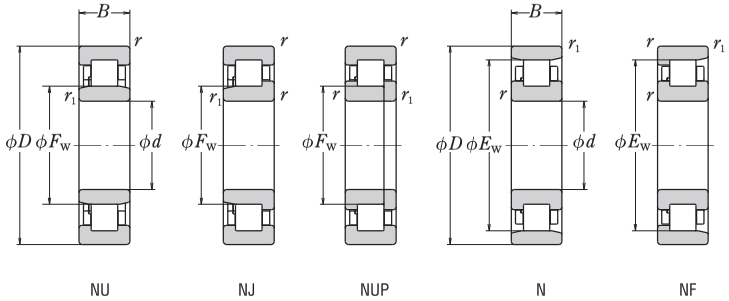
Notes (1) Cage designation (M) is usually omitted from the bearing designation.
(2) When L-shaped thrust collars (see Pages C156-C157) are used, the bearings are considered the NH type.

Bearing Designations								Abutment and Fillet Dimensions (mm)										Mass (kg)
	Cage(1) Standard Option		(2) NU	NJ	NUP	N	NF	da(3) min.	db min.	db(4) max.	dc min.	dd min.	Da(3) max.	Db max.	Db min.	ra max.	rb max.	approx.
NU1028	(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
***NU228E**	M	—	NU	NJ	NUP	—	—	153	153	165	171	182	237	—	—	2.5	2.5	9.38
NU228E	M	—	NU	NJ	NUP	—	—	153	153	165	171	182	237	—	—	2.5	2.5	9.38
***NU2228E**	M	—	NU	NJ	NUP	—	—	153	153	165	171	182	237	—	—	2.5	2.5	15.2
NU2228E	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
***NU328E**	M	—	NU	NJ	NUP	—	—	156	156	176	182	198	284	—	—	3	3	22.8
NU328E	M	—	NU	NJ	NUP	—	—	156	156	176	182	198	284	—	—	3	3	22.8
***NU2328E**	M	—	NU	NJ	NUP	—	—	156	156	176	182	198	284	—	—	3	3	37.7
NU2328E	M	—	NU	NJ	NUP	—	—	156	156	176	182	198	284	—	—	3	3	37.7
NU428	M	—	NU	NJ	—	N	—	160	160	193	200	222	340	340	308	4	4	46.4
NU1030	(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
***NU230E**	M	—	NU	NJ	NUP	—	—	163	163	177	184	196	257	—	—	2.5	2.5	11.9
NU230E	M	—	NU	NJ	NUP	—	—	163	163	177	184	196	257	—	—	2.5	2.5	11.9
***NU2230E**	M	—	NU	NJ	NUP	—	—	163	163	177	184	196	257	—	—	2.5	2.5	19.3
NU2230E	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
***NU330E**	M	—	NU	NJ	NUP	—	—	166	166	188	195	213	304	—	—	3	3	27.1
NU330E	M	—	NU	NJ	NUP	—	—	166	166	188	195	213	304	—	—	3	3	27.1
***NU2330E**	M	—	NU	NJ	NUP	—	—	166	166	188	195	213	304	—	—	3	3	45.1
NU2330E	M	—	NU	NJ	NUP	—	—	166	166	188	195	213	304	—	—	3	3	45.1
NU430	M	—	NU	NJ	—	—	—	170	170	208	216	237	360	—	—	4	4	55.8
NU1032	(M)	—	NU	NJ	—	N	NF	171	168	178	184	—	229	232	222	2	1.5	5.81
N 232	M	—	—	—	—	N	NF	173	—	—	—	—	—	277	261	2.5	2.5	14.1
***NU232E**	M	—	NU	NJ	NUP	—	—	173	173	190	197	210	277	—	—	2.5	2.5	14.7
NU232E	M	—	NU	NJ	NUP	—	—	173	173	190	197	210	277	—	—	2.5	2.5	14.7
***NU2232E**	M	—	NU	NJ	NUP	—	—	173	173	188	197	210	277	—	—	2.5	2.5	24.5
NU2232E	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
***NU332E**	M	—	NU	NJ	NUP	—	—	176	176	199	211	228	324	—	—	3	3	32.1
NU332E	M	—	NU	NJ	NUP	—	—	176	176	199	211	228	324	—	—	3	3	32.1
NU2332E	M	—	NU	NJ	NUP	—	—	176	176	199	211	228	324	—	—	3	3	53.9

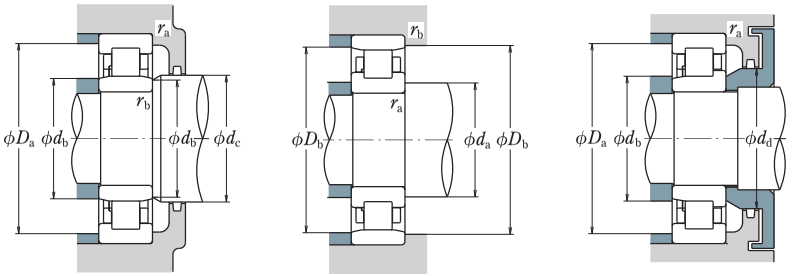
Notes (3) If axial loads are applied, increase d_a and reduce D_a from the values listed above.
(4) d_b (max.) refers to values for adjusting rings for NU and NJ bearings.
(5) The limiting speeds (mechanical) in the bearing tables are for standard cages.
Remark Bearings denoted by an asterisk (*) are NSKHPS™ cylindrical roller bearings.

■SINGLE-ROW CYLINDRICAL ROLLER BEARINGS

Bore Diameter 170 – 200 mm



NU NJ NUP N NF



Bearing Designations								Boundary Dimensions (mm)						Basic Load Ratings (N)		Speeds (min⁻¹)		
	Cage[1] Standard Option		[2] NU	NJ	NUP	N	NF	d	D	B	r min.	r1 min.	Fw	Ew	Cr	C0r	Thermal Reference Speed	Limiting Speeds [5] Mechanical	Limiting Speeds Grease
NU1034	(M)	—	NU	NJ	—	N	—	170	260	42	2.1	2.1	193	237	287 000	415 000	3 200	—	2 400
N 234	M	—	—	—	—	N	NF		310	52	4	4	—	272	475 000	635 000	2 600	—	2 000
*NU234E	M	—	NU	NJ	NUP	—	—		310	52	4	4	207	—	740 000	800 000	2 400	3 800	2 000
NU234E	M	—	NU	NJ	NUP	—	—		310	52	4	4	207	—	605 000	800 000	2 400	3 800	2 000
*NU2234E	M	—	NU	NJ	NUP	—	—		310	86	4	4	205	—	1 140 000	1 330 000	2 200	3 200	1 800
NU2234E	M	—	NU	NJ	NUP	—	—		310	86	4	4	205	—	925 000	1 330 000	2 200	3 200	1 800
N 334	M	—	—	—	—	N	NF		360	72	4	4	—	310	795 000	1 010 000	1 900	—	1 600
NU334E	M	—	NU	NJ	NUP	—	—		360	72	4	4	218	—	930 000	1 150 000	1 800	3 400	1 600
NU2334E	M	—	NU	NJ	NUP	—	—		360	120	4	4	216	—	1 490 000	2 070 000	1 600	2 200	1 400
NU1036	(M)	—	NU	NJ	—	N	NF	180	280	46	2.1	2.1	205	255	355 000	510 000	3 000	—	2 200
N 236	M	—	—	—	—	N	NF		320	52	4	4	—	282	495 000	675 000	2 400	—	1 900
*NU236E	M	—	NU	NJ	NUP	—	—		320	52	4	4	217	—	770 000	850 000	2 200	3 600	1 900
NU236E	M	—	NU	NJ	NUP	—	—		320	52	4	4	217	—	625 000	850 000	2 200	3 600	1 900
*NU2236E	M	—	NU	NJ	NUP	—	—		320	86	4	4	215	—	1 240 000	1 510 000	2 000	3 200	1 700
NU2236E	M	—	NU	NJ	NUP	—	—		320	86	4	4	215	—	1 010 000	1 510 000	2 000	3 200	1 700
N 336	M	—	—	—	—	N	NF		380	75	4	4	—	328	905 000	1 150 000	1 700	—	1 500
NU336E	M	—	NU	NJ	NUP	—	—		380	75	4	4	231	—	985 000	1 230 000	1 700	2 800	1 500
NU2336E	M	—	NU	NJ	NUP	—	—		380	126	4	4	227	—	1 560 000	2 220 000	1 500	2 000	1 300
NU1038	(M)	—	NU	NJ	—	N	—	190	290	46	2.1	2.1	215	265	365 000	535 000	2 800	—	2 000
N 238	M	—	—	—	—	N	NF		340	55	4	4	—	299	555 000	770 000	2 200	—	1 800
*NU238E	M	—	NU	NJ	NUP	—	—		340	55	4	4	230	—	855 000	955 000	2 000	3 400	1 800
NU238E	M	—	NU	NJ	NUP	—	—		340	55	4	4	230	—	695 000	955 000	2 000	3 400	1 800
*NU2238E	M	—	NU	NJ	NUP	—	—		340	92	4	4	228	—	1 360 000	1 670 000	1 900	3 000	1 600
NU2238E	M	—	NU	NJ	NUP	—	—		340	92	4	4	228	—	1 100 000	1 670 000	1 900	3 000	1 600
N 338	M	—	—	—	—	N	—		400	78	5	5	—	345	975 000	1 260 000	1 600	—	1 400
NU338E	M	—	NU	NJ	NUP	—	—		400	78	5	5	245	—	1 060 000	1 340 000	1 600	2 600	1 400
NU2338E	M	—	NU	NJ	NUP	—	—		400	132	5	5	240	—	1 770 000	2 520 000	1 400	2 000	1 300
NU1040	(M)	—	NU	NJ	—	N	NF	200	310	51	2.1	2.1	229	281	390 000	580 000	2 600	—	2 000
N 240	M	—	—	—	—	N	NF		360	58	4	4	—	316	620 000	865 000	2 000	—	1 700
*NU240E	M	—	NU	NJ	NUP	—	—		360	58	4	4	243	—	945 000	1 060 000	1 900	3 200	1 700
NU240E	M	—	NU	NJ	NUP	—	—		360	58	4	4	243	—	765 000	1 060 000	1 900	3 200	1 700
*NU2240E	M	—	NU	NJ	NUP	—	—		360	98	4	4	241	—	1 500 000	1 870 000	1 800	2 200	1 500
NU2240E	M	—	NU	NJ	NUP	—	—		360	98	4	4	241	—	1 220 000	1 870 000	1 800	2 200	1 500
N 340	M	—	—	—	—	N	NF		420	80	5	5	—	360	975 000	1 270 000	1 600	—	1 300
NU340E	M	—	NU	NJ	NUP	—	—		420	80	5	5	258	—	1 140 000	1 450 000	1 500	2 600	1 300
NU2340E	M	—	NU	NJ	NUP	—	—		420	138	5	5	253	—	1 910 000	2 760 000	1 300	1 900	1 200

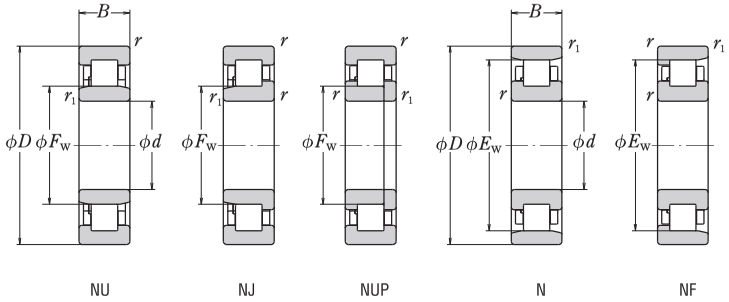
Abutment and Fillet Dimensions (mm)											Mass (kg)
da[3] min.	db min.	db[4] max.	dc min.	dd min.	Da[3] max.	Db max.	Db min.	ra max.	rb max.	approx.
181	181	190	197	—	249	249	239	2	2	7.91
186	—	—	—	—	—	294	278	3	3	17.4
186	186	202	211	223	294	—	—	3	3	18.3
186	186	202	211	223	294	—	—	3	3	18.3
186	186	200	211	223	294	—	—	3	3	29.9
186	186	200	211	223	294	—	—	3	3	29.9
186	—	—	—	—	—	344	316	3	3	36.6
186	186	213	223	241	344	—	—	3	3	37.9
186	186	210	223	241	344	—	—	3	3	63.4
191	191	202	209	—	269	269	258	2	2	10.2
196	—	—	—	—	—	304	288	3	3	18.1
196	196	212	221	233	304	—	—	3	3	19
196	196	212	221	233	304	—	—	3	3	19
196	196	210	221	233	304	—	—	3	3	31.4
196	196	210	221	233	304	—	—	3	3	31.4
196	—	—	—	—	—	364	335	3	3	42.6
196	196	226	235	255	364	—	—	3	3	44
196	196	222	235	255	364	—	—	3	3	74.6
201	201	212	219	—	279	279	268	2	2	10.7
206	—	—	—	—	—	324	305	3	3	22
206	206	225	234	247	324	—	—	3	3	23
206	206	225	234	247	324	—	—	3	3	23
206	206	223	234	247	324	—	—	3	3	38.3
206	206	223	234	247	324	—	—	3	3	38.3
210	—	—	—	—	—	380	352	4	4	48.7
210	210	240	248	268	380	—	—	4	4	50.6
210	210	235	248	268	380	—	—	4	4	86.2
211	211	226	233	—	299	299	284	2	2	14
216	—	—	—	—	—	344	323	3	3	26.2
216	216	238	247	261	344	—	—	3	3	27.4
216	216	238	247	261	344	—	—	3	3	27.4
216	216	235	247	261	344	—	—	3	3	46.1
216	216	235	247	261	344	—	—	3	3	46.1
220	—	—	—	—	—	400	367	4	4	55.3
220	220	252	263	283	400	—	—	4	4	57.1
220	220	247	263	283	400	—	—	4	4	99.3

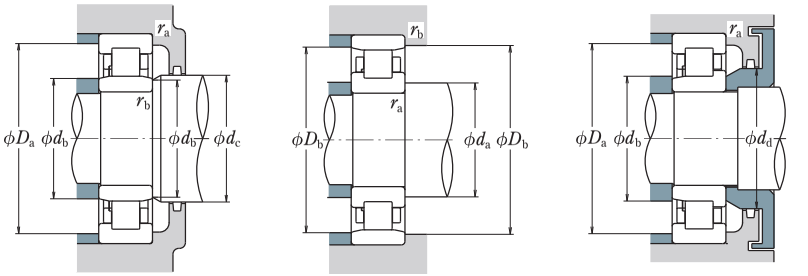
Notes (1) Cage designation (M) is usually omitted from the bearing designation.
(2) When L-shaped thrust collars (see Pages C156-C157) are used, the bearings are considered the NH type.

Notes (3) If axial loads are applied, increase d_a and reduce D_a from the values listed above.
(4) d_b (max.) refers to values for adjusting rings for NU and NJ bearings.
(5) The limiting speeds (mechanical) in the bearing tables are for standard cages.
Remark Bearings denoted by an asterisk (*) are NSKHPS™ cylindrical roller bearings.

SINGLE-ROW CYLINDRICAL ROLLER BEARINGS

Bore Diameter 220 – 500 mm





Boundary Dimensions (mm)							Basic Load Ratings (N)		Speeds (min⁻¹)		
									Thermal Reference Speed	Limiting Speeds	
d	D	B	r min.	r_1 min.	F_w	E_w	C_r	C_{0r}		Mechanical	Grease
220	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	268	—	1 110 000	1 250 000	1 800	—	1 500
	400	65	4	4	268	—	905 000	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
	460	88	5	5	284	—	1 190 000	1 570 000	1 400	—	1 200
240	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
	500	95	5	5	310	—	1 360 000	1 820 000	1 200	—	1 100
260	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
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 Designations								Abutment and Fillet Dimensions (mm)										Mass (kg)
	Cage(1) Standard Option		(2) NU	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.
NU1044	(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
***NU244E**	**M**	—	**NU**	**NJ**	**NUP**	—	—	236	236	264	273	289	384	—	—	3	3	37.4
NU244E	**M**	—	**NU**	**NJ**	**NUP**	—	—	236	236	264	273	289	384	—	—	3	3	37.4
NU2244	**M**	—	**NU**	—	—	—	—	—	236	264	273	289	384	—	—	3	3	61.8
N 344	**M**	—	—	—	—	**N**	**NF**	240	—	—	—	—	—	440	403	4	4	72.8
NU344	**M**	—	**NU**	**NJ**	—	—	—	240	240	278	287	307	440	—	—	4	4	74.6
NU1048	(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
NU248	**M**	—	**NU**	**NJ**	**NUP**	—	—	256	256	289	298	316	424	—	—	3	3	50.4
NU2248	**M**	—	**NU**	—	—	—	—	—	256	289	298	316	424	—	—	3	3	84.9
N 348	**M**	—	—	—	—	**N**	**NF**	260	—	—	—	—	—	480	438	4	4	92.3
NU348	**M**	—	**NU**	**NJ**	—	—	—	260	260	304	313	333	480	—	—	4	4	94.6
NU1052	(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
NU252	**M**	—	**NU**	**NJ**	—	—	—	280	280	314	323	343	460	—	—	4	4	67.1
NU2252	**M**	—	**NU**	—	**NUP**	—	—	280	280	314	323	343	460	—	—	4	4	111
NU352	**M**	—	**NU**	**NJ**	—	—	—	286	286	330	339	359	514	—	—	5	5	118
NU1056	(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
NU256	**M**	—	**NU**	**NJ**	—	—	—	300	300	334	344	364	480	—	—	4	4	70.7
NU1060	(M)	—	**NU**	**NJ**	—	**N**	**NF**	316	316	336	344	—	444	444	424	3	3	43.7
NU260	**M**	—	**NU**	**NJ**	—	—	—	320	320	358	368	391	520	—	—	4	4	89.2
NU1064	(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
NU264	**M**	—	**NU**	**NJ**	—	—	—	340	340	384	394	420	560	—	—	4	4	112
NU1068	(M)	—	**NU**	**NJ**	—	**N**	**NF**	360	360	381	390	—	500	500	479	4	4	61.8
NU1072	(M)	—	**NU**	—	—	**N**	**NF**	380	380	400	410	—	520	520	499	4	4	64.6
NU1076	(M)	—	**NU**	—	—	—	—	—	400	420	430	—	540	—	—	4	4	67.5
NU1080	(M)	—	**NU**	—	**NUP**	**N**	—	420	420	445	455	—	580	580	554.5	4	4	88.2
NU1084	(M)	—	**NU**	—	—	**N**	—	440	440	465	475	—	600	600	574.5	4	4	91.7
NU1088	(M)	—	**NU**	—	—	—	—	—	466	488	498	—	624	—	—	5	5	105
NU1092	(M)	—	**NU**	—	**NUP**	**N**	—	486	486	511	521	—	654	654	628.5	5	5	123
NU1096	(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

Notes (1) Cage designation (M) is usually omitted from the bearing designation.
(2) When L-shaped thrust collars (see Pages C156-C157) are used, the bearings are considered the NH type.

Notes (3) If axial loads are applied, increase d_a and reduce D_a from the values listed above.
(4) d_b (max.) refers to values for adjusting rings for NU and NJ bearings.
Remark Bearings denoted by an asterisk (*) are NSKHPS™ cylindrical roller bearings.