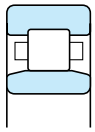
Cylindrical roller bearings

Cylindrical roller bearings feature high radial load capacity because the rollers and raceway are in linear contact. These bearings are suitable for applications that involve heavy radial and impact loading.

They are also appropriate for high-speed applications in that they can be machined very accurately due to their structure.

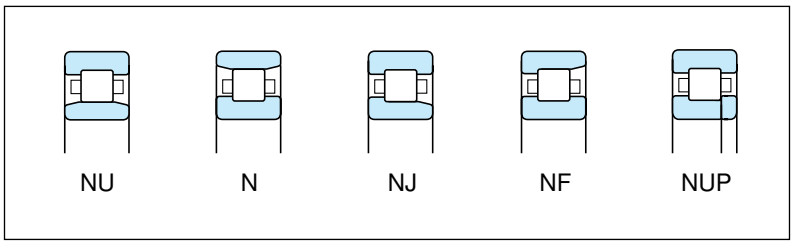
Having a separable inner ring or outer ring, these bearings can be mounted and dismounted easily.

Cylindrical roller bearings



Bore diameter **20 – 200 mm**

Cylindrical roller bearings



- The NU and N types exhibit their best performance when used as free side bearings since they adjust to the shaft's axial movement, to a certain extent, relative to the housing position.
- The NJ and NF types carry axial load in one direction, while the NUP type can carry a certain degree of axial load in both directions.

Cylindrical roller bearings

Boundary dimensions

The dimensions of standard series are as specified in JIS B 1512.

Tolerances

As specified in JIS B 1514.

Tolerances of roller set bore diameter F_w and roller set outside diameter E_w of interchangeable bearings are as follows :

Unit μm

Nominal bore diameter d (mm)		ΔF_W Roller set bore diameter deviation		ΔE_W Roller set outside diameter deviation	
over	up to	upper	lower	upper	lower
–	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	–	–

Remark) Interchangeable bearings have an inner ring with rollers that can be matched with the outer ring, or an outer ring with rollers that can be matched with the inner ring, without affecting performance.

Radial internal clearance

- Cylindrical bore and tapered bore bearings ..... (refer to Table 2-7 on pp. A 16, 17.)
- Motor bearings ..... (refer to Table 2-6 on P. A 14.)

Standard cages

- Pressed steel cage (supplementary code : //)
- Copper alloy machined cage (supplementary code : FY)

For application range, refer to Table 1.

Copper alloy machined cages without rivets (LY) are also used for some special purposes.

Allowable misalignment

Allowable misalignment of single-row cylindrical roller bearings depends on bearing type and specification.
General values are as follows :

1) When P_r / C_r is approx. 10% under load of normal use
..... 0.000 6 – 0.000 9 rad (2' – 3')
2) When P_r / C_r is approx. 6% under load lighter than 1)
..... 0.001 2 rad (4')

When very large allowable misalignment is required, consult Koyo.

Equivalent radial load

Dynamic equivalent radial load $P_r = F_r$

Static equivalent radial load $P_{0r} = F_r$

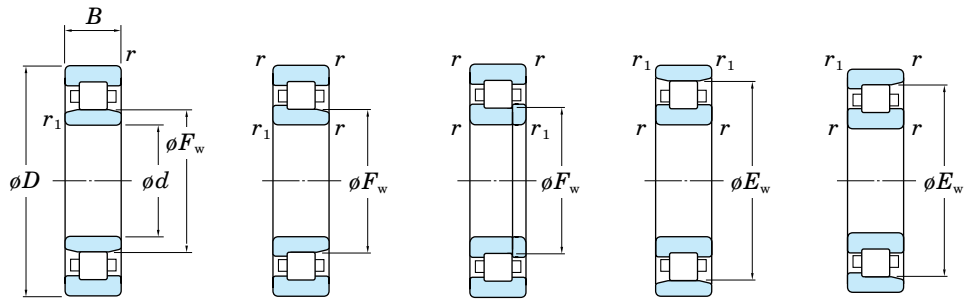
Allowable axial load

Cylindrical roller bearings with ribs, including loose rib and thrust coller, on both inner and outer rings accommodate axial load to a certain extent.
(NJ and NF types accommodate load applied in one direction : NUP type in both directions.)

Table 1 Application of standard cages

Bearing series	Pressed cage	Machined cage
NU 10	–	1005 – 1092
NU, NJ, NUP, NF 2	204 – 220	204 – 264
NU, NJ, NUP 22	2204 – 2220	2204 – 2252
NU, NJ, NUP, NF 3	304 – 320	304 – 348
NU, NJ, NUP 23	2304 – 2320	2304 – 2340
NU, NJ, NUP, NF 4	406 – 420	406 – 430

d 20 – (45) mm



NU NJ NUP N NF

Boundary dimensions (mm)							Basic load ratings (kN)		Limiting speeds (min⁻¹)		Bearing No.					(Refer.) Mass
d	*D*	*B*	*r* min.	*r*1 min.	F_w	E_w	C_r	C_{0r}	Grease lub.	Oil lub.	NU	NJ	NUP	N	NF	NU (kg)
20	47	14	1	0.6	27	40	15.4	12.7	15 000	18 000	**NU204**	**NJ**	**NUP**	**N**	**NF**	0.108
	47	18	1	0.6	27	–	20.7	18.4	13 000	18 000	**NU2204**	**NJ**	–	–	–	0.146
	52	15	1.1	0.6	28.5	44.5	23.1	19.2	12 000	16 000	**NU304**	**NJ**	**NUP**	**N**	**NF**	0.147
	52	21	1.1	0.6	28.5	–	32.9	30.2	11 000	16 000	**NU2304**	–	–	–	–	0.212
25	47	12	0.6	0.3	30.5	–	14.3	13.1	15 000	18 000	**NU1005**	–	–	–	–	0.084
	52	15	1	0.6	32	45	17.7	15.7	13 000	16 000	**NU205**	**NJ**	**NUP**	**N**	**NF**	0.132
	52	18	1	0.6	32	–	23.7	22.8	12 000	16 000	**NU2205**	**NJ**	**NUP**	–	–	0.163
	62	17	1.1	1.1	35	53	29.3	25.2	10 000	14 000	**NU305**	**NJ**	**NUP**	**N**	**NF**	0.241
	62	24	1.1	1.1	35	–	42.7	40.9	9 100	14 000	**NU2305**	**NJ**	**NUP**	–	–	0.340
30	55	13	1	0.6	36.5	–	18.7	18.4	13 000	15 000	**NU1006**	–	–	–	–	0.121
	62	16	1	0.6	38.5	53.5	23.5	21.5	11 000	13 000	**NU206**	**NJ**	**NUP**	**N**	**NF**	0.200
	62	20	1	0.6	38.5	–	32.9	33.1	9 800	13 000	**NU2206**	**NJ**	**NUP**	–	–	0.262
	72	19	1.1	1.1	42	62	38.6	35.2	8 700	12 000	**NU306**	**NJ**	**NUP**	**N**	**NF**	0.358
	72	27	1.1	1.1	42	–	51.4	50.8	7 700	12 000	**NU2306**	**NJ**	**NUP**	–	–	0.500
	90	23	1.5	1.5	45	73	62.8	55.0	7 600	10 000	**NU406**	**NJ**	–	–	**NF**	0.753
35	62	14	1	0.6	42	–	22.6	23.2	11 000	13 000	**NU1007**	–	–	–	–	0.182
	72	17	1.1	0.6	43.8	61.8	33.6	31.5	9 500	11 000	**NU207**	**NJ**	**NUP**	**N**	**NF**	0.293
	72	23	1.1	0.6	43.8	–	49.0	51.2	8 500	11 000	**NU2207**	**NJ**	**NUP**	–	–	0.402
	80	21	1.5	1.1	46.2	68.2	49.6	46.9	7 900	10 000	**NU307**	**NJ**	**NUP**	**N**	**NF**	0.477
	80	31	1.5	1.1	46.2	–	64.4	65.7	7 000	10 000	**NU2307**	**NJ**	**NUP**	–	–	0.696
	100	25	1.5	1.5	53	83	75.2	68.9	6 600	8 800	**NU407**	**NJ**	–	–	**NF**	1.02
40	68	15	1	0.6	47	–	24.9	25.7	10 000	12 000	**NU1008**	–	–	–	–	0.223
	80	18	1.1	1.1	50	70	43.8	42.9	8 300	10 000	**NU208**	**NJ**	**NUP**	**N**	**NF**	0.366
	80	23	1.1	1.1	50	–	58.3	62.0	7 500	10 000	**NU2208**	**NJ**	**NUP**	–	–	0.490
	90	23	1.5	1.5	53.5	77.5	58.6	56.9	6 900	9 100	**NU308**	**NJ**	**NUP**	**N**	**NF**	0.657
	90	33	1.5	1.5	53.5	–	82.2	88.0	6 100	9 100	**NU2308**	**NJ**	**NUP**	–	–	0.956
	110	27	2	2	58	92	97.1	89.1	6 000	8 000	**NU408**	**NJ**	–	**N**	**NF**	1.30
45	75	16	1	0.6	52.5	–	31.0	33.8	9 200	11 000	**NU1009**	–	–	–	–	0.289
	85	19	1.1	1.1	55	75	46.1	46.9	7 700	9 200	**NU209**	**NJ**	**NUP**	**N**	**NF**	0.427
	85	23	1.1	1.1	55	–	61.4	67.8	6 900	9 200	**NU2209**	**NJ**	**NUP**	–	–	0.536
	100	25	1.5	1.5	58.5	86.5	78.8	77.5	6 200	8 300	**NU309**	**NJ**	**NUP**	**N**	**NF**	0.870

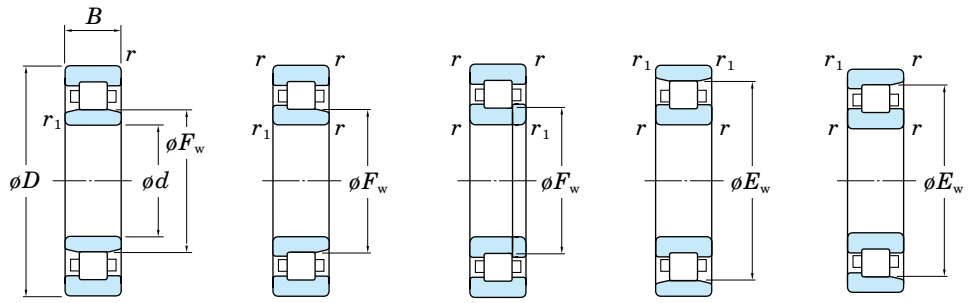
Remarks) Standard cage types used for the above bearings are shown in Table 1 earlier in this section. Please note that basic load ratings and rotation speed limits shown above indicate the value applicable to machined cage. When bearings with pressed cage are used, consult Koyo.

d (45) – 80 mm

Boundary dimensions (mm)							Basic load ratings (kN)		Limiting speeds (min⁻¹)		Bearing No.					(Refer.) Mass
d	*D*	*B*	*r* min.	r_1 min.	F_W	E_W	C_r	C_{0r}	Grease lub.	Oil lub.	NU	NJ	NUP	N	NF	NU (kg)
45	100	36	1.5	1.5	58.5	–	106	113	5 500	8 300	**NU2309**	**NJ**	**NUP**	**–**	**–**	1.25
	120	29	2	2	64.5	100.5	115	112	5 400	7 200	**NU409**	**NJ**	**–**	**N**	**NF**	1.64
50	80	16	1	0.6	57.5	–	33.6	36.8	8 400	9 900	**NU1010**	**–**	**–**	**–**	**–**	0.306
	90	20	1.1	1.1	60.4	80.4	48.2	51.0	7 100	8 500	**NU210**	**NJ**	**NUP**	**N**	**NF**	0.479
	90	23	1.1	1.1	60.4	–	64.2	73.6	6 400	8 500	**NU2210**	**NJ**	**NUP**	**–**	**–**	0.580
	110	27	2	2	65	95	92.2	93.4	5 600	7 500	**NU310**	**NJ**	**NUP**	**N**	**NF**	1.15
	110	40	2	2	65	–	128	142	5 000	7 500	**NU2310**	**NJ**	**NUP**	**–**	**–**	1.69
	130	31	2.1	2.1	70.8	110.8	139	136	4 900	6 600	**NU410**	**NJ**	**–**	**–**	**NF**	2.01
55	90	18	1.1	1	64.5	–	37.4	43.8	7 600	8 900	**NU1011**	**–**	**–**	**–**	**–**	0.445
	100	21	1.5	1.1	66.5	88.5	58.0	62.3	6 400	7 700	**NU211**	**NJ**	**NUP**	**N**	**NF**	0.640
	100	25	1.5	1.1	66.5	–	75.3	87.2	5 800	7 700	**NU2211**	**NJ**	**NUP**	**–**	**–**	0.780
	120	29	2	2	70.5	104.5	111	111	5 100	6 800	**NU311**	**NJ**	**NUP**	**N**	**NF**	1.44
	120	43	2	2	70.5	–	148	162	4 500	6 800	**NU2311**	**NJ**	**NUP**	**–**	**–**	2.10
	140	33	2.1	2.1	77.2	117.2	142	138	4 600	6 100	**NU411**	**NJ**	**–**	**N**	**NF**	2.51
60	95	18	1.1	1	69.5	–	42.1	50.0	7 000	8 300	**NU1012**	**–**	**–**	**–**	**–**	0.477
	110	22	1.5	1.5	73.5	97.5	71.9	79.9	5 800	7 000	**NU212**	**NJ**	**NUP**	**N**	**NF**	0.823
	110	28	1.5	1.5	73.5	–	101	123	5 200	7 000	**NU2212**	**NJ**	**NUP**	**–**	**–**	1.07
	130	31	2.1	2.1	77	113	124	126	4 700	6 300	**NU312**	**NJ**	**NUP**	**N**	**NF**	1.83
	130	46	2.1	2.1	77	–	168	188	4 200	6 300	**NU2312**	**NJ**	**NUP**	**–**	**–**	2.69
	150	35	2.1	2.1	83	127	178	184	4 200	5 700	**NU412**	**NJ**	**NUP**	**N**	**NF**	3.02
65	100	18	1.1	1	74.5	–	43.3	52.9	6 600	7 800	**NU1013**	**–**	**–**	**–**	**–**	0.506
	120	23	1.5	1.5	79.6	105.6	83.8	94.4	5 400	6 400	**NU213**	**NJ**	**NUP**	**N**	**NF**	1.05
	120	31	1.5	1.5	79.6	–	120	149	4 800	6 400	**NU2213**	**NJ**	**NUP**	**–**	**–**	1.43
	120	38.1	1.5	1.5	79.6	–	148	197	4 300	6 400	**NU3213**	**–**	**–**	**–**	**–**	1.90
	140	33	2.1	2.1	83.5	121.5	137	139	4 300	5 800	**NU313**	**NJ**	**NUP**	**N**	**NF**	2.24
	140	48	2.1	2.1	83.5	–	190	212	3 900	5 800	**NU2313**	**NJ**	**NUP**	**–**	**–**	3.25
	160	37	2.1	2.1	89.3	135.3	198	203	4 000	5 300	**NU413**	**NJ**	**NUP**	**–**	**NF**	3.58
70	110	20	1.1	1	80	–	57.9	70.4	6 100	7 200	**NU1014**	**–**	**–**	**–**	**–**	0.702
	125	24	1.5	1.5	84.5	110.5	83.3	95.2	5 100	6 100	**NU214**	**NJ**	**NUP**	**N**	**NF**	1.15
	125	31	1.5	1.5	84.5	–	119	151	4 600	6 100	**NU2214**	**NJ**	**NUP**	**–**	**–**	1.52
	150	35	2.1	2.1	90	130	162	168	4 000	5 400	**NU314**	**NJ**	**NUP**	**N**	**NF**	2.73
	150	51	2.1	2.1	90	–	224	262	3 600	5 400	**NU2314**	**NJ**	**NUP**	**–**	**–**	3.97
	180	42	3	3	100	152	246	257	3 500	4 700	**NU414**	**NJ**	**NUP**	**N**	**NF**	5.26
75	115	20	1.1	1	85	–	63.6	78.1	5 700	6 800	**NU1015**	**–**	**–**	**–**	**–**	0.735
	130	25	1.5	1.5	88.5	116.5	101	118	4 800	5 800	**NU215**	**NJ**	**NUP**	**N**	**NF**	1.24
	130	31	1.5	1.5	88.5	–	135	172	4 300	5 800	**NU2215**	**NJ**	**NUP**	**–**	**–**	1.57
	160	37	2.1	2.1	95.5	139.5	194	205	3 800	5 000	**NU315**	**NJ**	**NUP**	**N**	**NF**	3.24
	160	55	2.1	2.1	95.5	–	275	327	3 400	5 000	**NU2315**	**NJ**	**NUP**	**–**	**–**	4.84
	190	45	3	3	104.5	160.5	265	274	3 300	4 400	**NU415**	**NJ**	**NUP**	**N**	**NF**	6.25
80	125	22	1.1	1	91.5	–	69.3	86.4	5 300	6 300	**NU1016**	**–**	**–**	**–**	**–**	0.994
	140	26	2	2	95.3	125.3	106	122	4 500	5 400	**NU216**	**NJ**	**NUP**	**N**	**NF**	1.51
	140	33	2	2	95.3	–	148	186	4 000	5 400	**NU2216**	**NJ**	**NUP**	**–**	**–**	1.96
	170	39	2.1	2.1	103	147	194	207	3 500	4 700	**NU316**	**NJ**	**NUP**	**N**	**NF**	3.92
	170	58	2.1	2.1	103	–	275	332	3 100	4 700	**NU2316**	**NJ**	**NUP**	**–**	**–**	5.83
	200	48	3	3	110	170	302	315	3 100	4 200	**NU416**	**NJ**	**NUP**	**N**	**NF**	7.28

Remarks) Standard cage types used for the above bearings are shown in Table 1 earlier in this section. Please note that basic load ratings and rotation speed limits shown above indicate the value applicable to machined cage. When bearings with pressed cage are used, consult Koyo.

d 85 – (120) mm



NU NJ NUP N NF

Boundary dimensions (mm)							Basic load ratings (kN)		Limiting speeds (min⁻¹)		Bearing No.					(Refer.) Mass
d	*D*	*B*	*r* min.	r_1 min.	F_w	E_w	C_r	C_{0r}	Grease lub.	Oil lub.	NU	NJ	NUP	N	NF	NU (kg)
85	130	22	1.1	1	96.5	–	71.4	91.2	5 100	6 000	**NU1017**	–	–	–	–	1.04
	150	28	2	2	101.8	133.8	121	140	4 200	5 000	**NU217**	**NJ**	**NUP**	**N**	**NF**	1.90
	150	36	2	2	101.8	–	169	218	3 800	5 000	**NU2217**	**NJ**	**NUP**	–	–	2.50
	180	41	3	3	108	156	225	247	3 300	4 500	**NU317**	**NJ**	**NUP**	**N**	**NF**	4.52
	180	60	3	3	108	–	315	382	3 000	4 500	**NU2317**	**NJ**	**NUP**	–	–	6.62
	210	52	4	4	113	177	340	350	3 000	4 000	**NU417**	**NJ**	**NUP**	**N**	**NF**	8.68
90	160	30	2	2	107	143	152	178	3 900	4 700	**NU218**	**NJ**	**NUP**	**N**	**NF**	2.28
	160	40	2	2	107	–	207	265	3 500	4 700	**NU2218**	**NJ**	**NUP**	–	–	3.10
	190	43	3	3	115	165	243	265	3 100	4 200	**NU318**	**NJ**	**NUP**	**N**	**NF**	5.38
	190	64	3	3	115	–	329	395	2 800	4 200	**NU2318**	**NJ**	**NUP**	–	–	7.90
	225	54	4	4	123.5	191.5	374	400	2 800	3 700	**NU418**	**NJ**	**NUP**	**N**	**NF**	10.3
95	170	32	2.1	2.1	113.5	151.5	165	195	3 700	4 400	**NU219**	**NJ**	**NUP**	**N**	**NF**	2.80
	170	43	2.1	2.1	113.5	–	230	298	3 300	4 400	**NU2219**	**NJ**	**NUP**	–	–	3.85
	200	45	3	3	121.5	173.5	277	311	3 000	4 000	**NU319**	**NJ**	**NUP**	**N**	**NF**	6.20
	200	67	3	3	121.5	–	394	496	2 600	4 000	**NU2319**	**NJ**	**NUP**	–	–	9.39
	240	55	4	4	133.5	–	410	444	2 600	3 400	**NU419**	**NJ**	–	–	–	13.6
100	180	34	2.1	2.1	120	160	183	217	3 500	4 200	**NU220**	**NJ**	**NUP**	**N**	**NF**	3.38
	180	46	2.1	2.1	120	–	259	338	3 100	4 200	**NU2220**	**NJ**	**NUP**	–	–	4.67
	215	47	3	3	129.5	185.5	323	337	2 800	3 700	**NU320**	**NJ**	**NUP**	**N**	**NF**	7.70
	215	73	3	3	129.5	–	464	548	2 500	3 700	**NU2320**	**NJ**	**NUP**	–	–	11.9
	250	58	4	4	139	–	458	498	2 500	3 300	**NU420**	**NJ**	–	–	–	14.0
105	190	36	2.1	2.1	126.8	168.8	201	241	3 300	3 900	**NU221**	**NJ**	**NUP**	**N**	**NF**	4.00
	225	49	3	3	135	195	366	417	2 600	3 500	**NU321**	**NJ**	**NUP**	**N**	**NF**	8.76
110	200	38	2.1	2.1	132.5	178.5	241	290	3 100	3 700	**NU222**	**NJ**	**NUP**	**N**	**NF**	4.65
	200	53	2.1	2.1	132.5	–	334	442	2 800	3 700	**NU2222**	**NJ**	**NUP**	–	–	6.93
	240	50	3	3	143	207	411	467	2 500	3 300	**NU322**	**NJ**	**NUP**	**N**	**NF**	10.4
	240	80	3	3	143	–	604	789	2 200	3 300	**NU2322**	**NJ**	–	–	–	18.8
	280	65	4	4	155	–	550	621	2 200	2 900	**NU422**	**NJ**	–	–	–	19.9
120	215	40	2.1	2.1	143.5	191.5	260	318	2 900	3 400	**NU224**	**NJ**	**NUP**	**N**	**NF**	5.65
	215	58	2.1	2.1	143.5	–	367	492	2 600	3 400	**NU2224**	**NJ**	**NUP**	–	–	8.56

Remarks) Standard cage types used for the above bearings are shown in Table 1 earlier in this section. Please note that basic load ratings and rotation speed limits shown above indicate the value applicable to machined cage. When bearings with pressed cage are used, consult Koyo.

d (120) – 200 mm

Boundary dimensions (mm)							Basic load ratings (kN)		Limiting speeds (min⁻¹)		Bearing No.					(Refer.) Mass
d	*D*	*B*	*r* min.	r_1 min.	F_W	E_W	C_r	C_{0r}	Grease lub.	Oil lub.	NU	NJ	NUP	N	NF	NU (kg)
120	260	55	3	3	154	226	485	551	2 200	3 000	**NU324**	**NJ**	**NUP**	**N**	**NF**	13.1
	260	86	3	3	154	–	708	918	2 000	3 000	**NU2324**	**NJ**	**NUP**	–	–	23.1
	310	72	5	5	170	–	690	770	1 900	2 600	**NU424**	**NJ**	–	–	–	28.0
130	200	33	2	1.1	148	–	171	238	3 200	3 800	**NU1026**	–	–	–	–	3.77
	230	40	3	3	156	204	282	362	2 700	3 200	**NU226**	**NJ**	**NUP**	**N**	**NF**	6.49
	230	64	3	3	156	–	395	560	2 400	3 200	**NU2226**	**NJ**	**NUP**	–	–	11.2
	280	58	4	4	167	243	564	667	2 100	2 700	**NU326**	**NJ**	**NUP**	**N**	**NF**	16.4
	280	93	4	4	167	–	838	1 130	1 800	2 700	**NU2326**	**NJ**	**NUP**	–	–	29.1
	340	78	5	5	185	–	771	876	1 800	2 300	**NU426**	**NJ**	–	–	–	36.1
140	210	33	2	1.1	158	–	175	250	3 000	3 600	**NU1028**	–	–	–	–	4.00
	250	42	3	3	169	221	324	421	2 400	2 900	**NU228**	**NJ**	**NUP**	**N**	–	8.27
	250	68	3	3	169	–	465	671	2 200	2 900	**NU2228**	**NJ**	**NUP**	–	–	14.3
	300	62	4	4	180	260	623	746	1 900	2 500	**NU328**	**NJ**	**NUP**	**N**	**NF**	20.1
	300	102	4	4	180	–	920	1 250	1 700	2 500	**NU2328**	**NJ**	**NUP**	–	–	36.8
	360	82	5	5	198	–	874	1 020	1 600	2 200	**NU428**	**NJ**	–	–	–	46.8
150	225	35	2.1	1.5	169.5	–	201	281	2 800	3 300	**NU1030**	–	–	–	–	4.83
	270	45	3	3	182	238	374	492	2 200	2 700	**NU230**	**NJ**	**NUP**	**N**	**NF**	10.3
	270	73	3	3	182	–	545	800	2 000	2 700	**NU2230**	**NJ**	**NUP**	–	–	18.7
	320	65	4	4	193	277	663	807	1 800	2 300	**NU330**	**NJ**	**NUP**	**N**	**NF**	26.4
	320	108	4	4	193	–	1 020	1 400	1 600	2 300	**NU2330**	**NJ**	**NUP**	–	–	44.7
	380	85	5	5	213	–	930	1 120	1 500	2 000	**NU430**	**NJ**	–	–	–	53.3
160	290	48	3	3	195	255	427	568	2 100	2 500	**NU232**	**NJ**	**NUP**	**N**	**NF**	14.4
	290	80	3	3	195	–	631	939	1 800	2 500	**NU2232**	**NJ**	**NUP**	–	–	23.6
	340	68	4	4	208	292	698	876	1 600	2 200	**NU332**	**NJ**	**NUP**	**N**	–	31.7
	340	114	4	4	208	–	1 070	1 520	1 400	2 200	**NU2332**	**NJ**	**NUP**	–	–	53.1
170	310	52	4	4	208	272	475	637	1 900	2 300	**NU234**	**NJ**	**NUP**	**N**	–	18.4
	310	86	4	4	208	–	715	1 080	1 700	2 300	**NU2234**	**NJ**	**NUP**	–	–	29.2
	360	72	4	4	220	310	809	1 010	1 500	2 000	**NU334**	**NJ**	**NUP**	**N**	–	38.6
	360	120	4	4	220	–	1 220	1 750	1 300	2 000	**NU2334**	**NJ**	**NUP**	–	–	62.6
180	320	52	4	4	218	282	492	677	1 800	2 200	**NU236**	**NJ**	**NUP**	**N**	–	19.3
	320	86	4	4	218	–	741	1 140	1 600	2 200	**NU2236**	**NJ**	**NUP**	–	–	30.4
	380	75	4	4	232	328	917	1 150	1 400	1 900	**NU336**	**NJ**	**NUP**	**N**	–	42.6
	380	126	4	4	232	–	1 350	1 940	1 300	1 900	**NU2336**	**NJ**	**NUP**	–	–	73.0
190	340	55	4	4	231	299	554	768	1 700	2 000	**NU238**	**NJ**	**NUP**	**N**	–	23.2
	340	92	4	4	231	–	828	1 290	1 500	2 000	**NU2238**	**NJ**	**NUP**	–	–	37.0
	400	78	5	5	245	345	987	1 260	1 300	1 800	**NU338**	**NJ**	**NUP**	**N**	–	49.9
	400	132	5	5	245	–	1 520	2 220	1 200	1 800	**NU2338**	**NJ**	**NUP**	–	–	84.7
200	360	58	4	4	244	316	618	865	1 600	1 900	**NU240**	**NJ**	**NUP**	**N**	–	26.8
	360	98	4	4	244	–	946	1 490	1 400	1 900	**NU2240**	**NJ**	**NUP**	–	–	44.4
	420	80	5	5	260	360	987	1 270	1 200	1 700	**NU340**	**NJ**	**NUP**	**N**	–	56.2
	420	138	5	5	260	–	1 520	2 240	1 100	1 700	**NU2340**	**NJ**	**NUP**	–	–	97.4

Remarks) Standard cage types used for the above bearings are shown in Table 1 earlier in this section. Please note that basic load ratings and rotation speed limits shown above indicate the value applicable to machined cage. When bearings with pressed cage are used, consult Koyo.