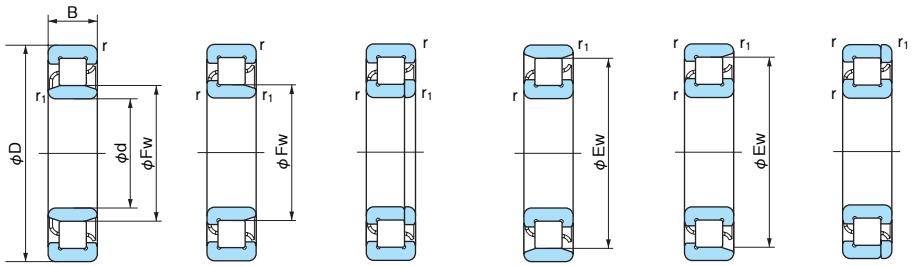
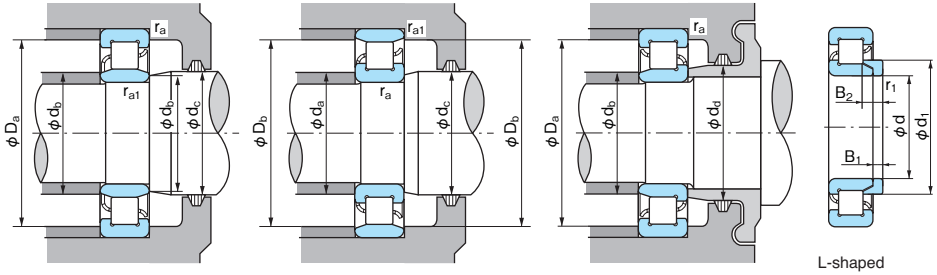
Cylindrical Roller Bearings

Bore Diameter: 17～30mm



NU NJ NUP N NF NP



L-shaped thrust collar

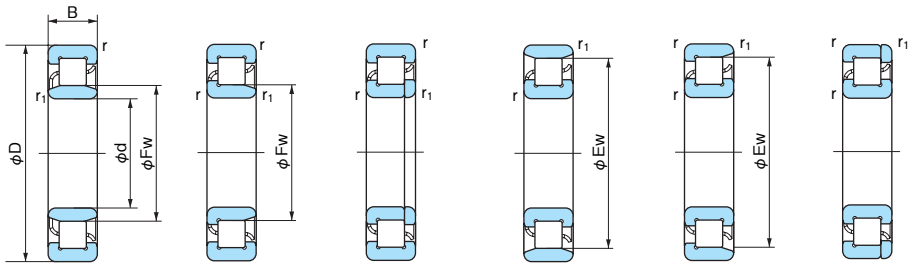
1N=0.102kgf

Boundary dimensions (mm)							Bearing No.						Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min⁻¹)(1)		Abutment and fillet dimensions (mm)										Mass (kg)		Dimensions of L-shaped thrust collar (mm)						
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	NP			Grease lubrication	Oil lubrication	da (min)	db (min)	db (max)	dc (min)	dd (min)	Da (max)	Db (max)	Db (min)	ra (max)	ra1 (max)	NU	N	Bearing No.	d	d1 (max)	B1	B2	r1 (min)	Mass (kg) Reference
17	40	12	33.9	22.9	0.6	0.3	NU 203	NJ	NUP	N	NF	NP	12600	7950	16000	19000	22	19	22	24	25	35	34	34	0.6	0.3	0.082	0.080	—	—	—	—	—	—	—
20	47	14	40	27	1	0.6	NU 204	NJ	NUP	N	NF	NP	15400	12700	15000	18000	26	25	26	29	32	41	42	42	1	0.6	0.112	0.110	HJ 204	20	30	3	6.75	0.6	0.012
	47	14	—	26.5	1	0.6	NU 204 E	NJ	NUP	—	—	—	25700	22600	13000	16000	—	25	26	29	32	41	—	—	1	0.6	0.124	—	HJ 204 E	20	29.8	3	5.5	0.6	0.011
	47	18	—	27	1	0.6	NU 2204	NJ	NUP	—	—	—	20700	18400	14000	17000	—	25	26	29	32	41	—	—	1	0.6	0.144	—	HJ 2204	20	30	3	7.5	0.6	0.012
	47	18	—	26.5	1	0.6	NU 2204 E	NJ	NUP	—	—	—	30500	28300	13000	16000	—	25	26	29	32	41	—	—	1	0.6	0.162	—	HJ 2204 E	20	29.8	3	6.5	0.6	0.011
	52	15	44.5	28.5	1.1	0.6	NU 304	NJ	NUP	N	NF	NP	21400	17300	12000	15000	27	25	27	30	33	45	47	47	1	0.6	0.154	0.150	HJ 304	20	31.8	4	7.5	0.6	0.017
	52	15	—	27.5	1.1	0.6	NU 304 EG	NJ	NUP	—	—	—	31500	26900	12000	15000	—	25	27	30	33	45	—	—	1	0.6	0.150	—	HJ 304 E	20	31.4	4	6.5	0.6	0.016
	52	21	—	28.5	1.1	0.6	NU 2304	NJ	NUP	—	—	—	30500	27200	11000	14000	—	25	27	30	33	45	—	—	1	0.6	0.213	—	HJ 2304	20	31.8	4	8.5	0.6	0.018
	52	21	—	27.5	1.1	0.6	NU 2304 E	NJ	NUP	—	—	—	42000	39000	11000	14000	—	25	27	30	33	45	—	—	1	0.6	0.240	—	HJ 2304 E	20	31.4	4	7.5	0.6	0.017
25	47	12	41.5	30.5	0.6	0.3	NU 1005	—	—	N	—	—	14300	13100	15000	18000	29	27.5	30	32	—	42	45	41.8	0.6	0.3	0.086	0.084	—	—	—	—	—	—	—
	52	15	45	32	1	0.6	NU 205	NJ	NUP	N	NF	NP	17700	15700	13000	16000	31	30	31	34	37	46	47	47	1	0.6	0.133	0.130	HJ 205	25	35	3	7.25	0.6	0.015
	52	15	—	31.5	1	0.6	NU 205 EG	NJ	NUP	—	—	—	29300	27700	12000	14000	—	30	31	34	37	46	—	—	1	0.6	0.140	—	HJ 205 E	25	34.8	3	6	0.6	0.013
	52	18	—	32	1	0.6	NU 2205	NJ	NUP	—	—	—	24300	23500	12000	14000	—	30	31	34	37	46	—	—	1	0.6	0.163	—	HJ 2205	25	35	3	7.5	0.6	0.016
	52	18	—	31.5	1	0.6	NU 2205 EG	NJ	NUP	—	—	—	35000	34500	12000	14000	—	30	31	34	37	46	—	—	1	0.6	0.185	—	HJ 2205 E	25	34.8	3	6.5	0.6	0.015
	62	17	53	35	1.1	1.1	NU 305	NJ	NUP	N	NF	NP	29300	25200	10000	13000	32	32	33	37	40	55	55	55	1	1	0.238	0.230	HJ 305	25	39	4	8	1.1	0.027
	62	17	—	34	1.1	1.1	NU 305 EG	NJ	NUP	—	—	—	41500	37500	10000	12000	—	32	33	37	40	55	—	—	1	1	0.240	—	HJ 305 E	25	38.2	4	7	1.1	0.024
	62	24	—	35	1.1	1.1	NU 2305	NJ	NUP	—	—	—	42500	41000	9300	11000	—	32	33	37	40	55	—	—	1	1	0.340	—	HJ 2305	25	39	4	9	1.1	0.029
	62	24	—	34	1.1	1.1	NU 2305 E	NJ	NUP	—	—	—	57000	56000	9000	11000	—	32	33	37	40	55	—	—	1	1	0.390	—	HJ 2305 E	25	38.2	4	8	1.1	0.026
	80	21	62.8	38.8	1.5	1.5	NU 405	NJ	NUP	N	NF	NP	46500	40000	9000	11000	33.5	33.5	38	41	46	71.5	71.5	64	1.5	1.5	0.564	0.550	HJ 405	25	43.6	6	10.5	1.5	0.054
30	55	13	48.5	36.5	1	0.6	NU 1006	—	—	N	—	—	19700	19600	12000	15000	35	33.5	35	38	—	49	52	49	1	0.6	0.123	0.121	—	—	—	—	—	—	—
	62	16	53.5	38.5	1	0.6	NU 206	NJ	NUP	N	NF	NP	23500	21500	11000	13000	36	35	37	40	44	56	57	56	1	0.6	0.204	0.200	HJ 206	30	41.8	4	8.25	0.6	0.026
	62	16	—	37.5	1	0.6	NU 206 EG	NJ	NUP	—	—	—	39000	37500	9500	12000	—	35	37	40	44	56	—	—	1	0.6	0.210	—	HJ 206 E	30	41.4	4	7	0.6	0.024
	62	20	—	38.5	1	0.6	NU 2206	NJ	NUP	—	—	—	33000	33000	10000	12000	—	35	37	40	44	56	—	—	1	0.6	0.262	—	HJ 2206	30	41.8	4	8.5	0.6	0.026
	62	20	—	37.5	1	0.6	NU 2206 EG	NJ	NUP	—	—	—	49000	50000	9500	12000	—	35	37	40	44	56	—	—	1	0.6	0.295	—	HJ 2206 E	30	41.4	4	7.5	0.6	0.025
	72	19	62	42	1.1	1.1	NU 306	NJ	NUP	N	NF	NP	38500	35000	8500	11000	37	37	40	44	48	65	65	64	1	1	0.357	0.350	HJ 306	30	45.9	5	9.5	1.1	0.044
	72	19	—	40.5	1.1	1.1	NU 306 EG	NJ	NUP	—	—	—	53000	50000	8500	10000	—	37	40	44	48	65	—	—	1	1	0.370	—	HJ 306 E	30	45.1	5	8.5	1.1	0.041
	72	27	—	42	1.1	1.1	NU 2306	NJ	NUP	—	—	—	51500	51000	8200	9800	—	37	40	44	48	65	—	—	1	1	0.500	—	HJ 2306	30	45.9	5	11.5	1.1	0.048
	72	27	—	40.5	1.1	1.1	NU 2306 E	NJ	NUP	—	—	—	74500	77500	8000	9500	—	37	40	44	48	65	—	—	1	1	0.585	—	HJ 2306 E	30	45.1	5	9.5	1.1	0.043
	90	23	73	45	1.5	1.5	NU 406	NJ	NUP	N	NF	NP	62500	55000	7500	9500	38.5	38.5	44	47	52	81.5	81.5	74	1.5	1.5	0.770	0.750	HJ 406	30	50.5	7	11.5	1.5	0.080

Note: (1) The dimension table shows limiting speed for bearings made with machined cages. For bearings made with pressed steel cages, multiply the table limits by 0.8.

Cylindrical Roller Bearings

Bore Diameter: 35～45mm



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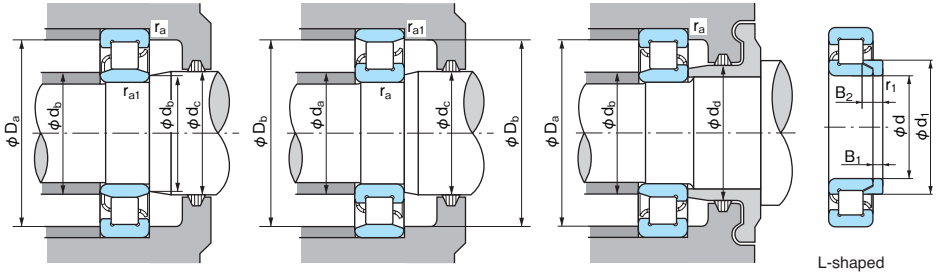


L-shaped thrust collar

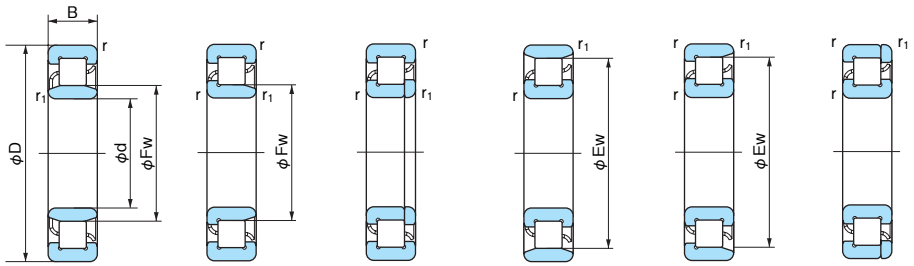
1N=0.102kgf

Boundary dimensions (mm)							Bearing No.						Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min⁻¹)(1)		Abutment and fillet dimensions (mm)										Mass (kg)		Dimensions of L-shaped thrust collar (mm)						
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	NP			Grease lubrication	Oil lubrication	da (min)	db (min)	db (max)	dc (min)	dd (min)	Da (max)	Db (max)	Db (min)	ra (max)	ra1 (max)	NU	N	Bearing No.	d	d1 (max)	B1	B2	r1 (min)	Mass (kg) Reference
35	62	14	55	42	1	0.6	NU 1007	—	—	N	—	—	22600	23200	11000	13000	40	38.5	41	44	—	56	59	55.5	1	0.6	0.185	0.182	—	—	—	—	—	—	—
	72	17	61.8	43.8	1.1	0.6	NU 207	NJ	NUP	N	NF	NP	33500	31500	9500	11000	42	40	43	46	50	65	67	64	1	0.6	0.295	0.290	HJ 207	35	47.6	4	8	0.6	0.032
	72	17	—	44	1.1	0.6	NU 207 EG	NJ	NUP	—	—	—	50500	50000	8500	10000	—	40	43	46	50	65	—	—	1	0.6	0.300	—	HJ 207 E	35	48.2	4	7	0.6	0.032
	72	23	—	43.8	1.1	0.6	NU 2207	NJ	NUP	—	—	—	49000	51000	8500	10000	—	40	43	46	50	65	—	—	1	0.6	0.402	—	HJ 2207	35	47.6	4	8.5	0.6	0.033
	72	23	—	44	1.1	0.6	NU 2207 EG	NJ	NUP	—	—	—	61500	65000	8500	10000	—	40	43	46	50	65	—	—	1	0.6	0.446	—	HJ 2207 E	35	48.2	4	8.5	0.6	0.035
	80	21	68.2	46.2	1.5	1.1	NU 307	NJ	NUP	N	NF	NP	49500	47000	8000	9500	43.5	42	45	48	53	71.5	73	71	1.5	1	0.470	0.460	HJ 307	35	50.8	6	11	1.1	0.060
	80	21	—	46.2	1.5	1.1	NU 307 EG	NJ	NUP	—	—	—	66500	65500	7500	9500	—	42	45	48	53	71.5	—	—	1.5	1	0.490	—	HJ 307 E	35	51.1	6	9.5	1.1	0.058
	80	31	—	46.2	1.5	1.1	NU 2307	NJ	NUP	—	—	—	60500	60000	7200	8600	—	42	45	48	53	71.5	—	—	1.5	1	0.696	—	HJ 2307	35	50.8	6	14	1.1	0.067
	80	31	—	46.2	1.5	1.1	NU 2307 E	NJ	NUP	—	—	—	99000	109000	6800	8500	—	42	45	48	53	71.5	—	—	1.5	1	0.780	—	HJ 2307 E	35	51.1	6	11	1.1	0.062
	100	25	83	53	1.5	1.5	NU 407	NJ	NUP	—	NF	NP	75500	69000	6700	8000	43.5	43.5	52	55	61	91.5	91.5	84	1.5	1.5	1.05	1.02	HJ 407	35	59	8	13	1.5	0.120
40	68	15	61	47	1	0.6	NU 1008	—	—	N	—	—	27300	29000	10000	12000	45	45	46	49	—	62	64	61.5	1	0.6	0.226	0.223	—	—	—	—	—	—	—
	80	18	70	50	1.1	1.1	NU 208	NJ	NUP	N	NF	NP	43500	43000	8500	10000	47	47	49	52	56	73	73	72	1	1	0.369	0.360	HJ 208	40	54.2	5	9	1.1	0.049
	80	18	—	49.5	1.1	1.1	NU 208 EG	NJ	NUP	—	—	—	55500	55500	9500	9000	—	47	49	52	56	73	—	—	1	1	0.380	—	HJ 208 E	40	54.1	5	8.5	1.1	0.047
	80	23	—	50	1.1	1.1	NU 2208	NJ	NUP	—	—	—	58000	62000	7500	9000	—	47	49	52	56	73	—	—	1	1	0.490	—	HJ 2208	40	54.2	5	9.5	1.1	0.050
	80	23	—	49.5	1.1	1.1	NU 2208 EG	NJ	NUP	—	—	—	72500	77500	7500	9000	—	47	49	52	56	73	—	—	1	1	0.743	—	HJ 2208 E	40	54.1	5	9	1.1	0.049
	90	23	77.5	53.5	1.5	1.5	NU 308	NJ	NUP	N	NF	NP	58500	57000	6700	8500	48.5	48.5	51	55	60	81.5	81.5	80	1.5	1.5	0.665	0.650	HJ 308	40	58.4	7	12.5	1.5	0.090
	90	23	—	52	1.5	1.5	NU 308 EG	NJ	NUP	—	—	—	83000	81500	6700	8000	—	48.5	51	55	60	81.5	—	—	1.5	1.5	0.670	—	HJ 308 E	40	57.7	7	11	1.5	0.084
	90	33	—	53.5	1.5	1.5	NU 2308	NJ	NUP	—	—	—	82500	88000	6500	7800	—	48.5	51	55	60	81.5	—	—	1.5	1.5	0.956	—	HJ 2308	40	58.4	7	14.5	1.5	0.097
	90	33	—	52	1.5	1.5	NU 2308 E	NJ	NUP	—	—	—	114000	122000	6400	7700	—	48.5	51	55	60	81.5	—	—	1.5	1.5	1.05	—	HJ 2308 E	40	57.7	7	12.5	1.5	0.090
	110	27	92	58	2	2	NU 408	NJ	NUP	N	NF	NP	95500	89000	6000	7500	50	50	57	60	67	100	100	93	2	2	1.33	1.30	HJ 408	40	64.8	8	13	2	0.144
45	75	16	67.5	52.5	1	0.6	NU 1009	—	—	N	—	—	32500	35500	9000	11000	50	50	52	54	—	69	71	68	1	0.6	0.284	0.289	—	—	—	—	—	—	—
	85	19	75	55	1.1	1.1	NU 209	NJ	NUP	N	NF	NP	46000	47000	7500	9000	52	52	54	57	61	78	78	77	1	1	0.430	0.420	HJ 209	45	59	5	9.5	1.1	0.054
	85	19	—	54.5	1.1	1.1	NU 209 EG	NJ	NUP	—	—	—	63000	66500	7000	8500	—	52	54	57	61	78	—	—	1	1	0.440	—	HJ 209 E	45	59.1	5	8.5	1.1	0.053
	85	23	—	55	1.1	1.1	NU 2209	NJ	NUP	—	—	—	61500	68000	7400	8900	—	52	54	57	61	78	—	—	1	1	0.536	—	HJ 2209	45	59	5	9.5	1.1	0.054
	85	23	—	54.5	1.1	1.1	NU 2209 EG	NJ	NUP	—	—	—	76000	84500	7000	8500	—	52	54	57	61	78	—	—	1	1	0.593	—	HJ 2209 E	45	59.1	5	9	1.1	0.054
	100	25	86.5	58.5	1.5	1.5	NU 309	NJ	NUP	N	NF	NP	78500	77500	6300	7500	53.5	53.5	57	60	66	91.5	91.5	89	1.5	1.5	0.871	0.850	HJ 309	45	64	7	12.5	1.5	0.105
	100	25	—	58.5	1.5	1.5	NU 309 EG	NJ	NUP	—	—	—	97500	98500	6000	7500	—	53.5	57	60	66	91.5	—	—	1.5	1.5	0.910	—	HJ 309 E	45	64.5	7	11.5	1.5	0.103
	100	36	—	58.5	1.5	1.5	NU 2309	NJ	NUP	—	—	—	99000	104000	6100	7300	—	53.5	57	60	66	91.5	—	—	1.5	1.5	1.25	—	HJ 2309	45	64	7	15	1.5	0.115
	100	36	—	58.5	1.5	1.5	NU 2309 E	NJ	NUP	—	—	—	137000	153000	6000	7200	—	53.5	57	60	66	91.5	—	—	1.5	1.5	1.40	—	HJ 2309 E	45	64.5	7	13	1.5	0.112
	120	29	100.5	64.5	2	2	NU 409	NJ	NUP	N	NF	NP	107000	102000	5600	6700	55	55	63	66	74	110	110	102	2	2	1.67	1.64	HJ 409	45	71.8	8	13.5	2	0.176

Note: (1) The dimension table shows limiting speed for bearings made with machined cages. For bearings made with pressed steel cages, multiply the table limits by 0.8.

Cylindrical Roller Bearings

Bore Diameter: 50～60mm



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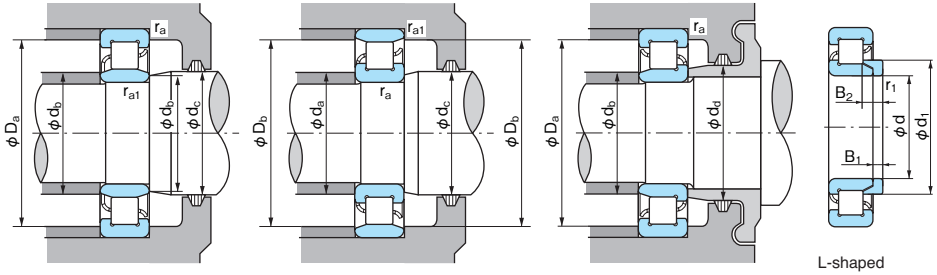


L-shaped thrust collar

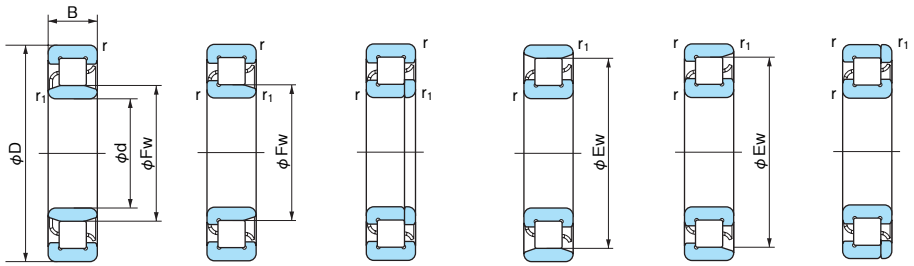
1N=0.102kgf

Boundary dimensions (mm)							Bearing No.						Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min⁻¹)(1)		Abutment and fillet dimensions (mm)										Mass (kg)		Dimensions of L-shaped thrust collar (mm)						
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	NP			Grease lubrication	Oil lubrication	da (min)	db (min)	db (max)	dc (min)	dd (min)	Da (max)	Db (max)	Db (min)	ra (max)	ra1 (max)	NU	N	Bearing No.	d	d1 (max)	B1	B2	r1 (min)	Mass (kg) Reference
50	80	16	72.5	57.5	1	0.6	NU 1010	—	—	N	—	—	32000	36000	8500	10000	53	55	57	59	—	74	76	73	1	0.6	0.310	0.306	—	—	—	—	—	—	—
	90	20	80.4	60.4	1.1	1.1	NU 210	NJ	NUP	N	NF	NP	48000	51000	7100	8500	57	57	58	62	67	83	83	83	1	1	0.481	0.470	HJ 210	50	64.6	5	10	1.1	0.063
	90	20	—	59.5	1.1	1.1	NU 210 EG	NJ	NUP	—	—	—	69000	76500	6400	7700	—	57	58	62	67	83	—	—	1	1	0.490	—	HJ 210 E	50	64.1	5	9	1.1	0.059
	90	23	—	60.4	1.1	1.1	NU 2210	NJ	NUP	—	—	—	64000	73500	6500	8000	—	57	58	62	67	83	—	—	1	1	0.580	—	HJ 2210	50	64.6	5	9.5	1.1	0.062
	90	23	—	59.5	1.1	1.1	NU 2210 EG	NJ	NUP	—	—	—	83500	97000	6400	8000	—	57	58	62	67	83	—	—	1	1	0.632	—	HJ 2210 E	50	64.1	5	9	1.1	0.059
	110	27	95	65	2	2	NU 310	NJ	NUP	N	NF	NP	87000	86000	5600	6700	60	60	63	67	73	100	100	98	2	2	1.17	1.14	HJ 310	50	71	8	14	2	0.145
	110	27	—	65	2	2	NU 310 EG	NJ	NUP	—	—	—	110000	113000	5400	6500	—	60	63	67	73	100	—	—	2	2	1.17	—	HJ 310 E	50	71.4	8	13	2	0.145
	110	40	—	65	2	2	NU 2310	NJ	NUP	—	—	—	121000	131000	5400	6500	—	60	63	67	73	100	—	—	2	2	1.69	—	HJ 2310	50	71	8	17	2	0.159
	110	40	—	65	2	2	NU 2310 E	NJ	NUP	—	—	—	163000	187000	5400	6500	—	60	63	67	73	100	—	—	2	2	1.85	—	HJ 2310 E	50	71.4	8	14.5	2	0.152
	130	31	110.8	70.8	2.1	2.1	NU 410	NJ	NUP	N	NF	NP	138000	136000	5000	6000	62	62	69	73	81	118	118	112	2	2	2.05	2.01	HJ 410	50	78.8	9	14.5	2.1	0.230
55	90	18	80.5	64.5	1.1	1	NU 1011	—	—	N	—	—	37500	44000	7500	9000	61.5	61	63	66	—	83	85	81.5	1	1	0.449	0.445	—	—	—	—	—	—	—
	100	21	88.5	66.5	1.5	1.1	NU 211	NJ	NUP	N	NF	NP	58000	62500	6300	7500	63.5	62	65	68	73	91.5	93	91	1.5	1	0.634	0.630	HJ 211	55	70.8	6	11	1.1	0.086
	100	21	—	66	1.5	1.1	NU 211 EG	NJ	NUP	—	—	—	86500	98500	5800	7100	—	62	65	68	73	91.5	—	—	1.5	1	0.670	—	HJ 211 E	55	70.9	6	9.5	1.1	0.083
	100	25	—	66.5	1.5	1.1	NU 2211	NJ	NUP	—	—	—	75500	87000	6200	7400	—	62	65	68	73	91.5	—	—	1.5	1	0.780	—	HJ 2211	55	70.8	6	11	1.1	0.086
	100	25	—	66	1.5	1.1	NU 2211 EG	NJ	NUP	—	—	—	101000	122000	5800	7100	—	62	65	68	73	91.5	—	—	1.5	1	0.870	—	HJ 2211 E	55	70.9	6	10	1.1	0.085
	120	29	104.5	70.5	2	2	NU 311	NJ	NUP	N	NF	NP	111000	111000	5000	6300	65	65	69	72	80	110	110	107	2	2	1.43	1.40	HJ 311	55	77.2	9	15	2	0.186
	120	29	—	70.5	2	2	NU 311 EG	NJ	NUP	—	—	—	137000	143000	4800	5600	—	65	69	72	80	110	—	—	2	2	1.50	—	HJ 311 E	55	77.6	9	14	2	0.186
	120	43	—	70.5	2	2	NU 2311	NJ	NUP	—	—	—	148000	162000	4800	5600	—	65	69	72	80	110	—	—	2	2	2.10	—	HJ 2311	55	77.2	9	18.5	2	0.206
	120	43	—	70.5	2	2	NU 2311 E	NJ	NUP	—	—	—	201000	233000	4800	5600	—	65	69	72	80	110	—	—	2	2	2.35	—	HJ 2311 E	55	77.6	9	15.5	2	0.195
	140	33	117.2	77.2	2.1	2.1	NU 411	NJ	NUP	N	NF	NP	139000	138000	4800	5600	67	67	76	79	87	128	128	119	2	2	2.54	2.51	HJ 411	55	85.2	10	16.5	2.1	0.292
60	95	18	85.5	69.5	1.1	1	NU 1012	—	—	N	—	—	40000	48500	6700	8500	66.5	66	68	71	—	88	90	86.5	1	1	0.484	0.477	—	—	—	—	—	—	—
	110	22	97.5	73.5	1.5	1.5	NU 212	NJ	NUP	N	NF	NP	68500	75000	6000	7100	68.5	68.5	71	75	80	101.5	101.5	100	1.5	1.5	0.835	0.820	HJ 212	60	78.4	6	11	1.5	0.109
	110	22	—	72	1.5	1.5	NU 212 E	NJ	NUP	—	—	—	97500	107000	5300	6300	—	68.5	71	75	80	101.5	—	—	1.5	1.5	0.921	—	HJ 212 E	60	77.7	6	10	1.5	0.104
	110	28	—	73.5	1.5	1.5	NU 2212	NJ	NUP	—	—	—	96000	116000	5300	6300	—	68.5	71	75	80	101.5	—	—	1.5	1.5	1.07	—	HJ 2212	60	78.4	6	11	1.5	0.109
	110	28	—	72	1.5	1.5	NU 2212 E	NJ	NUP	—	—	—	131000	157000	5300	6300	—	68.5	71	75	80	101.5	—	—	1.5	1.5	1.23	—	HJ 2212 E	60	77.7	6	10	1.5	0.104
	130	31	113	77	2.1	2.1	NU 312	NJ	NUP	N	NF	NP	124000	126000	4800	5600	72	72	75	79	86	118	118	116	2	2	1.82	1.78	HJ 312	60	84.2	9	15.5	2.1	0.224
	130	31	—	77	2.1	2.1	NU 312 EG	NJ	NUP	—	—	—	150000	157000	4300	5000	—	72	75	79	86	118	—	—	2	2	1.87	—	HJ 312 E	60	84.5	9	14.5	2.1	0.222
	130	46	—	77	2.1	2.1	NU 2312	NJ	NUP	—	—	—	169000	188000	4300	5300	—	72	75	79	86	118	—	—	2	2	2.69	—	HJ 2312	60	84.2	9	19	2.1	0.248
	130	46	—	77	2.1	2.1	NU 2312 E	NJ	NUP	—	—	—	222000	262000	4300	5300	—	72	75	79	86	118	—	—	2	2	3.01	—	HJ 2312 E	60	84.5	9	16	2.1	0.232
	150	35	127	83	2.1	2.1	NU 412	NJ	NUP	N	NF	NP	167000	168000	4300	5300	72	72	82	85	94	118	118	128	2	2	3.05	3.02	HJ 412	60	91.8	10	16.5	2.1	0.336

Note: (1) The dimension table shows limiting speed for bearings made with machined cages. For bearings made with pressed steel cages, multiply the table limits by 0.8.

Cylindrical Roller Bearings

Bore Diameter: 65～75mm



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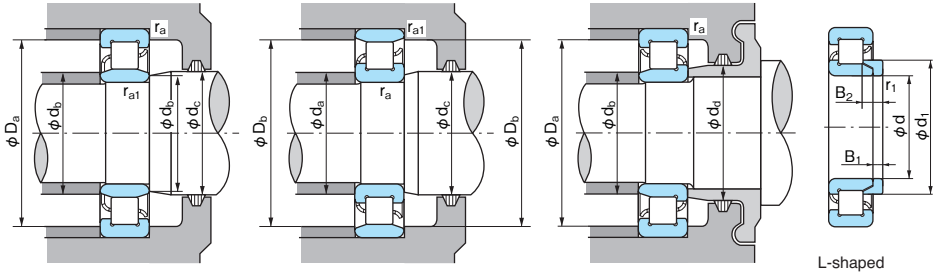


L-shaped thrust collar

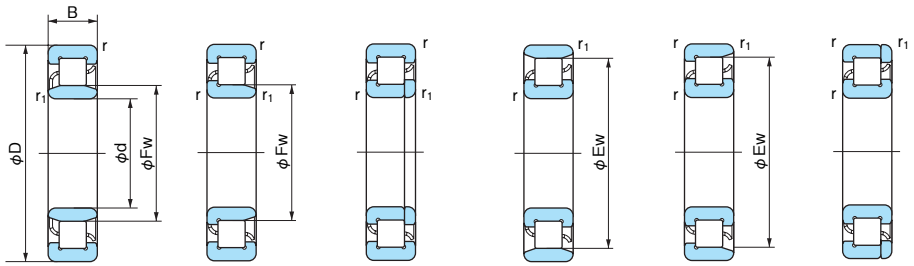
1N=0.102kgf

Boundary dimensions (mm)							Bearing No.						Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min⁻¹)(1)		Abutment and fillet dimensions (mm)										Mass (kg)		Dimensions of L-shaped thrust collar (mm)						
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	NP			Grease lubrication	Oil lubrication	da (min)	db (min)	db (max)	dc (min)	dd (min)	Da (max)	Db (max)	Db (min)	ra (max)	ra1 (max)	NU	N	Bearing No.	d	d1 (max)	B1	B2	r1 (min)	Mass (kg) Reference
65	100	18	90.5	74.5	1.1	1	NU 1013	—	—	N	—	—	41000	51000	6300	8000	71.5	71	73	75	—	93	95	91.5	1	1	0.514	0.560	—	—	—	—	—	—	—
	120	23	105.6	79.6	1.5	1.5	NU 213	NJ	NUP	N	NF	NP	84000	94500	5300	6300	73.5	73.5	77	81	87	111.5	111.5	108	1.5	1.5	1.06	1.04	HJ 213	65	84.8	6	11	1.5	0.127
	120	23	—	78.5	1.5	1.5	NU 213 E	NJ	NUP	—	—	—	108000	119000	4800	5600	—	73.5	77	81	87	111.5	—	—	1.5	1.5	1.18	—	HJ 213 E	65	84.5	6	10	1.5	0.123
	120	31	—	79.6	1.5	1.5	NU 2213	NJ	NUP	—	—	—	120000	149000	4800	6000	—	73.5	77	81	87	111.5	—	—	1.5	1.5	1.43	—	HJ 2213	65	84.8	6	11.5	1.5	0.130
	120	31	—	78.5	1.5	1.5	NU 2213 E	NJ	NUP	—	—	—	149000	181000	4800	6000	—	73.5	77	81	87	111.5	—	—	1.5	1.5	1.65	—	HJ 2213 E	65	84.5	6	10.5	1.5	0.126
	140	33	121.5	83.5	2.1	2.1	NU 313	NJ	NUP	N	NF	NP	135000	139000	4500	5300	77	77	81	85	93	128	128	125	2	2	2.27	2.22	HJ 313	65	91	10	17	2.1	0.286
	140	33	—	82.5	2.1	2.1	NU 313 E	NJ	NUP	—	—	—	181000	191000	4000	4800	—	77	81	85	93	128	—	—	2	2	2.55	—	HJ 313 E	65	90.6	10	15.5	2.1	0.274
	140	48	—	83.5	2.1	2.1	NU 2313	NJ	NUP	—	—	—	188000	212000	4000	4800	—	77	81	85	93	128	—	—	2	2	3.25	—	HJ 2313	65	91	10	20	2.1	0.309
	140	48	—	82.5	2.1	2.1	NU 2313 E	NJ	NUP	—	—	—	247000	287000	3800	4800	—	77	81	85	93	128	—	—	2	2	3.56	—	HJ 2313 E	65	90.6	10	18	2.1	0.309
	160	37	135.3	89.3	2.1	2.1	NU 413	NJ	NUP	N	NF	NP	195000	203000	4000	4800	77	77	88	91	100	148	148	137	2	2	3.68	3.58	HJ 413	65	98.5	11	18	2.1	0.417
70	110	20	100	80	1.1	1	NU 1014	—	—	N	—	—	58500	70500	6000	7100	76.5	76	78	82	—	103	105	100.5	1	1	0.712	0.702	—	—	—	—	—	—	—
	125	24	110.5	84.5	1.5	1.5	NU 214	NJ	NUP	N	NF	NP	83500	95000	5000	6300	78.5	78.5	82	86	92	116.5	116.5	114	1.5	1.5	1.16	1.14	HJ 214	70	89.6	7	12.5	1.5	0.154
	125	24	—	83.5	1.5	1.5	NU 214 E	NJ	NUP	—	—	—	119000	137000	4600	5600	—	78.5	82	86	92	116.5	—	—	1.5	1.5	1.26	—	HJ 214 E	70	89.5	7	11	1.5	0.149
	125	31	—	84.5	1.5	1.5	NU 2214	NJ	NUP	—	—	—	119000	151000	4800	5600	—	78.5	82	86	92	116.5	—	—	1.5	1.5	1.52	—	HJ 2214	70	89.6	7	12.5	1.5	0.154
	125	31	—	83.5	1.5	1.5	NU 2214 E	NJ	NUP	—	—	—	156000	194000	4600	5600	—	78.5	82	86	92	116.5	—	—	1.5	1.5	1.68	—	HJ 2214 E	70	89.5	7	11.5	1.5	0.152
	150	35	130	90	2.1	2.1	NU 314	NJ	NUP	N	NF	NP	158000	220000	4000	5000	82	82	87	92	100	138	138	134	2	2	2.73	2.68	HJ 314	70	98	10	17.5	2.1	0.336
	150	35	—	89	2.1	2.1	NU 314 E	NJ	NUP	—	—	—	205000	222000	3600	4300	—	82	87	92	100	138	—	—	2	2	3.15	—	HJ 314 E	70	97.5	10	15.5	2.1	0.315
	150	51	—	90	2.1	2.1	NU 2314	NJ	NUP	—	—	—	223000	262000	3800	4500	—	82	87	92	100	138	—	—	2	2	3.97	—	HJ 2314	70	98	10	20.5	2.1	0.362
	150	51	—	89	2.1	2.1	NU 2314 E	NJ	NUP	—	—	—	274000	325000	3600	4500	—	82	87	92	100	138	—	—	2	2	4.30	—	HJ 2314 E	70	97.5	10	18.5	2.1	0.343
	180	42	152	100	3	3	NU 414	NJ	NUP	N	NF	NP	228000	236000	3600	4300	84	84	99	102	112	166	166	153	2.5	2.5	5.40	5.26	HJ 414	70	110.5	12	20	3	0.607
75	115	20	105	85	1.1	1	NU 1015	—	—	N	—	—	60000	74500	5600	6700	81.5	81	83	87	—	108	110	105.5	1	1	0.745	0.735	—	—	—	—	—	—	—
	130	25	116.5	88.5	1.5	1.5	NU 215	NJ	NUP	N	NF	NP	96500	111000	4800	6000	83.5	83.5	87	90	96	121.5	121.5	120	1.5	1.5	1.24	1.22	HJ 215	75	94	7	12.5	1.5	0.161
	130	25	—	88.5	1.5	1.5	NU 215 E	NJ	NUP	—	—	—	130000	156000	4300	5300	—	83.5	87	90	96	121.5	—	—	1.5	1.5	1.38	—	HJ 215 E	75	94.5	7	11	1.5	0.159
	130	31	—	88.5	1.5	1.5	NU 2215	NJ	NUP	—	—	—	130000	162000	4500	5300	—	83.5	87	90	96	121.5	—	—	1.5	1.5	1.57	—	HJ 2215	75	94	7	12.5	1.5	0.161
	130	31	—	88.5	1.5	1.5	NU 2215 E	NJ	NUP	—	—	—	162000	207000	4300	5300	—	83.5	87	90	96	121.5	—	—	1.5	1.5	1.80	—	HJ 2215 E	75	94.5	7	11.5	1.5	0.162
	160	37	139.5	95.5	2.1	2.1	NU 315	NJ	NUP	N	NF	NP	190000	205000	3800	4800	87	87	93	97	106	148	148	143	2	2	3.21	3.15	HJ 315	75	104.2	11	18.5	2.1	0.406
	160	37	—	95	2.1	2.1	NU 315 E	NJ	NUP	—	—	—	240000	263000	3400	4000	—	87	93	97	106	148	—	—	2	2	3.70	—	HJ 315 E	75	104.2	11	16.5	2.1	0.389
	160	55	—	95.5	2.1	2.1	NU 2315	NJ	NUP	—	—	—	258000	300000	3400	4300	—	87	93	97	106	148	—	—	2	2	4.84	—	HJ 2315	75	104.2	11	21.5	2.1	0.437
	160	55	—	95	2.1	2.1	NU 2315 E	NJ	NUP	—	—	—	330000	395000	3400	4300	—	87	93	97	106	148	—	—	2	2	5.30	—	HJ 2315 E	75	104.2	11	19.5	2.1	0.421
	190	45	160.5	104.5	3	3	NU 415	NJ	NUP	N	NF	NP	262000	274000	3400	4000	89	89	103	107	118	176	176	162	2.5	2.5	6.40	6.25	HJ 415	75	116	13	21.5	3	0.710

Note: (1) The dimension table shows limiting speed for bearings made with machined cages. For bearings made with pressed steel cages, multiply the table limits by 0.8.

Cylindrical Roller Bearings

Bore Diameter: 80～90mm



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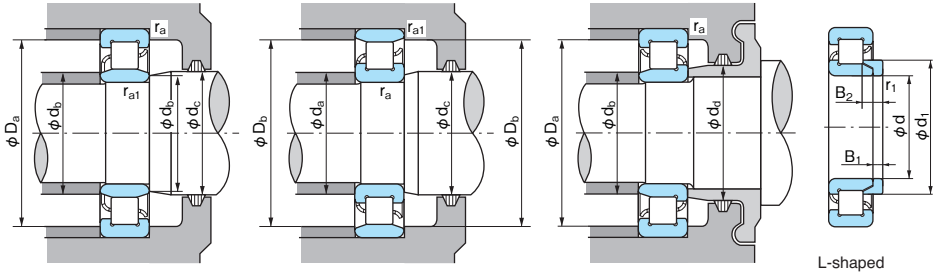

L-shaped thrust collar

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.						Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min⁻¹)(1)		Abutment and fillet dimensions (mm)										Mass (kg)		Dimensions of L-shaped thrust collar (mm)						
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	NP			Grease lubrication	Oil lubrication	da (min)	db (min)	db (max)	dc (min)	dd (min)	Da (max)	Db (max)	Db (min)	ra (max)	ra1 (max)	NU	N	Bearing No.	d	d1 (max)	B1	B2	r1 (min)	Mass (kg) Reference
80	125	22	113.5	91.5	1.1	1	NU 1016	—	—	N	—	—	72500	90500	5300	6300	86.5	86	90	94	—	118	120	113.5	1	1	1.03	0.994	—	—	—	—	—	—	—
	140	26	125.3	95.3	2	2	NU 216	NJ	NUP	N	NF	NP	106000	122000	4500	5300	90	90	94	97	104	130	130	128	2	2	1.53	1.50	HJ 216	80	101.2	8	13.5	2	0.214
	140	26	—	95.3	2	2	NU 216 E	NJ	NUP	—	—	—	139000	167000	4000	4800	—	90	94	97	104	130	—	—	2	2	1.66	—	HJ 216 E	80	101.6	8	12.5	2	0.213
	140	33	—	95.3	2	2	NU 2216	NJ	NUP	—	—	—	147000	186000	4000	5000	—	90	94	97	104	130	—	—	2	2	1.96	—	HJ 2216	80	101.2	8	13.5	2	0.214
	140	33	—	95.3	2	2	NU 2216 E	NJ	NUP	—	—	—	186000	243000	4000	5000	—	90	94	97	104	130	—	—	2	2	2.15	—	HJ 2216 E	80	101.6	8	12.5	2	0.213
	170	39	147	103	2.1	2.1	NU 316	NJ	NUP	N	NF	NP	190000	207000	3600	4300	92	92	99	105	114	158	158	151	2	2	3.93	3.83	HJ 316	80	111.8	11	19.5	2.1	0.479
	170	39	—	101	2.1	2.1	NU 316 E	NJ	NUP	—	—	—	256000	282000	3200	3800	—	92	99	105	114	158	—	—	2	2	4.38	—	HJ 316 E	80	110.6	11	17	2.1	0.440
	170	58	—	103	2.1	2.1	NU 2316	NJ	NUP	—	—	—	274000	330000	3200	4000	—	92	99	105	114	158	—	—	2	2	5.83	—	HJ 2316	80	111.8	11	23	2.1	0.517
	170	58	—	101	2.1	2.1	NU 2316 E	NJ	NUP	—	—	—	355000	430000	3200	4000	—	92	99	105	114	158	—	—	2	2	6.35	—	HJ 2316 E	80	110.6	11	20	2.1	0.475
	200	48	170	110	3	3	NU 416	NJ	NUP	N	NF	NP	299000	315000	3200	3800	94	94	109	112	124	186	186	172	2.5	2.5	7.45	7.28	HJ 416	80	122	13	22	3	0.779
85	130	22	118.5	96.5	1.1	1	NU 1017	—	—	N	—	—	74500	95500	5000	6000	91.5	91	95	99	—	123	125	118.5	1	1	1.06	1.04	—	—	—	—	—	—	—
	150	28	133.8	101.8	2	2	NU 217	NJ	NUP	N	NF	NP	120000	140000	4300	5000	95	95	99	104	110	140	140	137	2	2	1.92	1.87	HJ 217	85	108.2	8	14	2	0.253
	150	28	—	100.5	2	2	NU 217 E	NJ	NUP	—	—	—	167000	199000	3800	4500	—	95	99	104	110	140	—	—	2	2	2.10	—	HJ 217 E	85	107.6	8	12.5	2	0.239
	150	36	—	101.8	2	2	NU 2217	NJ	NUP	—	—	—	170000	218000	3800	4500	—	95	99	104	110	140	—	—	2	2	2.50	—	HJ 2217	85	108.2	8	14	2	0.253
	150	36	—	100.5	2	2	NU 2217 E	NJ	NUP	—	—	—	217000	279000	3800	4500	—	95	99	104	110	140	—	—	2	2	2.75	—	HJ 2217 E	85	107.6	8	13	2	0.243
	180	41	156	108	3	3	NU 317	NJ	NUP	N	NF	NP	224000	247000	3400	4000	99	99	106	110	119	166	166	160	2.5	2.5	4.54	4.44	HJ 317	85	117.5	12	20.5	3	0.560
	180	41	—	108	3	3	NU 317 E	NJ	NUP	—	—	—	291000	330000	3000	3600	—	99	106	110	119	166	—	—	2.5	2.5	5.12	—	HJ 317 E	85	117.9	12	18.5	3	0.545
	180	60	—	108	3	3	NU 2317	NJ	NUP	—	—	—	315000	380000	3000	3800	—	99	106	110	119	166	—	—	2.5	2.5	6.62	—	HJ 2317	85	117.5	12	24	3	0.603
	180	60	—	108	3	3	NU 2317 E	NJ	NUP	—	—	—	390000	485000	3000	3600	—	99	106	110	119	166	—	—	2.5	2.5	7.35	—	HJ 2317 E	85	117.9	12	22	3	0.590
	210	52	177	113	4	4	NU 417	NJ	NUP	N	NF	NP	330000	350000	3000	3800	103	103	111	115	128	192	192	179	3	3	9.10	8.68	HJ 417	85	126	14	24	4	0.876
90	140	24	127	103	1.5	1.1	NU 1018	—	—	N	—	—	88000	114000	4800	5600	98	97	101	106	—	131.5	133.5	127.5	1.5	1	1.36	1.34	—	—	—	—	—	5	—
	160	30	143	107	2	2	NU 218	NJ	NUP	N	NF	NP	152000	178000	4000	4800	100	100	105	109	116	150	150	146	2	2	2.30	2.25	HJ 218	90	114.2	9	15	2	0.311
	160	30	—	107	2	2	NU 218 E	NJ	NUP	—	—	—	182000	217000	3600	4300	—	100	105	109	116	150	—	—	2	2	2.53	—	HJ 218 E	90	114.4	9	14	2	0.306
	160	40	—	107	2	2	NU 2218	NJ	NUP	—	—	—	207000	265000	3600	4300	—	100	105	109	116	150	—	—	2	2	3.10	—	HJ 2218	90	114.2	9	16	2	0.320
	160	40	—	107	2	2	NU 2218 E	NJ	NUP	—	—	—	242000	315000	3600	4300	—	100	105	109	116	150	—	—	2	2	3.48	—	HJ 2218 E	90	114.4	9	15	2	0.315
	190	43	165	115	3	3	NU 318	NJ	NUP	N	NF	NP	240000	265000	3200	3800	104	104	111	117	127	176	176	169	2.5	2.5	5.37	5.25	HJ 318	90	125	12	21	3	0.644
	190	43	—	113.5	3	3	NU 318 E	NJ	NUP	—	—	—	335000	380000	2800	3400	—	104	111	117	127	176	—	—	2.5	2.5	5.92	—	HJ 318 E	90	124.2	12	18.5	3	0.601
	190	64	—	115	3	3	NU 2318	NJ	NUP	—	—	—	325000	395000	2800	3600	—	104	111	117	127	176	—	—	2.5	2.5	7.90	—	HJ 2318	90	125	12	26	3	0.713
	190	64	—	113.5	3	3	NU 2318 E	NJ	NUP	—	—	—	435000	535000	2800	3400	—	104	111	117	127	176	—	—	2.5	2.5	8.72	—	HJ 2318 E	90	124.2	12	22	3	0.653
	225	54	191.5	123.5	4	4	NU 418	NJ	NUP	N	NF	NP	375000	400000	2800	3400	108	108	122	125	139	207	207	194	3	3	10.6	10.3	HJ 418	90	137	14	24	4	1.06

Note: (1) The dimension table shows limiting speed for bearings made with machined cages. For bearings made with pressed steel cages, multiply the table limits by 0.8.