Cylindrical roller Bearings

Single row cylindrical roller bearings

The rollers in a single row cylindrical roller bearing are always guided between the integral flanges on one of the rings. These flanges combined with the special designed and surface finished roller ends, provide improved lubrication, reduced friction and consequently lower operating temperature.

Single row cylindrical roller bearing can accommodate heavy radial loads and high speeds. They are manufactured in several different designs, the main difference being in the configuration of the flanges. The most common designs are NU, NJ, NUP and N designs,

NU design: The outer ring of an NU design bearing has two integral flanges while inner ring has no flanges. Axial displacement of the shaft with respect to the housing can be accommodated in both directions. NU design bearings are normally selected as locating bearings.

N design: The inner ring of an N design bearing has two integral flanges while the outer ring has no flanges. Axial displacement of the shaft with respect to the housing can be accommodated in both directions. N design bearings are normally selected as non-locating bearings.

NJ design: The outer ring of an NJ design bearing has two integral flanges and the inner ring has one integral flange. These bearings can locate the shaft axially in one direction.

NUP design: The outer ring of an NUP design bearing has two integral flanges and the inner ring has one integral and one non-integral flange and one non-integral flange in the form of a loose flange ring. These bearings can be used as locating bearings to locate the shaft axially in both directions.

C2 Bearing internal clearance smaller than Normal
C3 Bearing internal clearance greater than Normal
C4 Bearing internal clearance greater than C3
C5 Bearing internal clearance greater than C4
E Modified internal design inlcuding more or bigger rollers with optimized contact surface between rollers and flange
J Press steel cage, Rolling element centered
M Machined brass cage, Rolling element centered
N Snap ring groove in the outer ring
NR Snap ring groove in the outer ring with appropriate snap ring
TN Injection moulded cage of polyamide 66

Double row cylindrical roller bearing

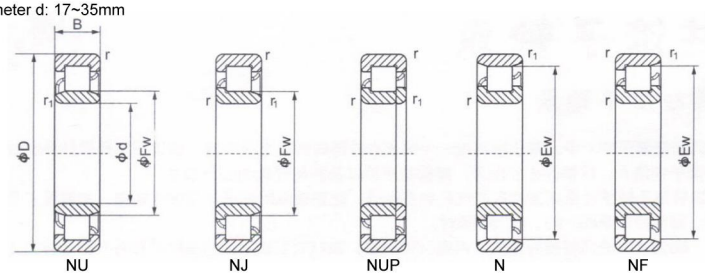
Double row cylindrical roller bearing have small cross section and can accommodate very heavy radial loads. Those bearings are widely used for machine tools, rolling stations, plastic cylinder cans, grinding machines and large size gearboxes.

NNU design and NN design double row cylindrical roller bearings are separable, so their roller and cage assembly can be mounted separately with bearing rings or all bearing components can be mounted separately and thus make the mounting, dismounting and inspection of the bearing very easy.

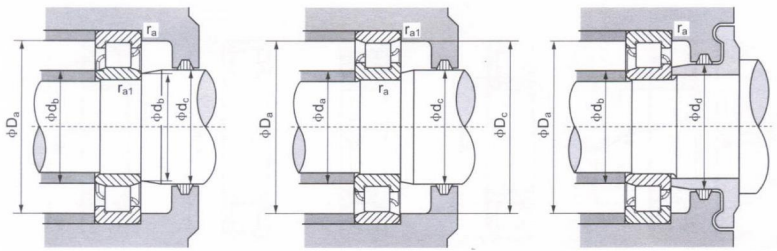
Double row cylindrical roller bearings have cylindrical bore and tapered bore. Normally NN design double row cylindrical bearing has tapered bore and it's possible to achieve certain radial clearance or preload during bearing mounting.

C1 Bearing internal clearance smaller than C2
C2 Bearing internal clearance smaller than Normal
C3 Bearing internal clearance greater than Normal
C4 Bearing internal clearance greater than C3
C5 Bearing internal clearance greater than C4
K Tapered bore, taper: 1:12
K30 Tapered bore, taper: 1:30
M Machined brass cage, Rolling element centered
TN Injection moulded cage of polyamide 66
W33 Annular groove and 3 lubrication holes in the outer ring

Bore diameter d: 17~35mm

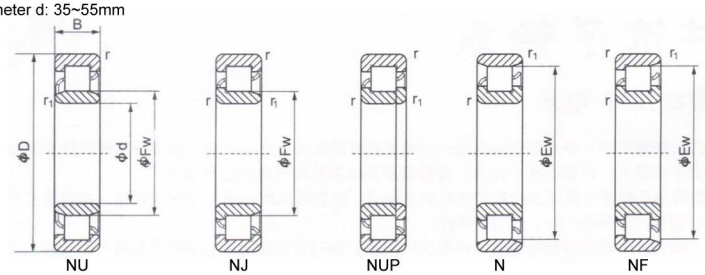


Principal dimensions (mm)							Designation					Basic load rating	
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	Dynamic Cr(N)	Static Cor(N)
17	40	12	33.9	22.9	0.6	0.3	**NU 203**	NJ	NUP	N	NF	12600	7950
20	47	14	40	27	1	0.6	**NU 204**	NJ	NUP	N	NF	15400	12700
	47	14	-	26.5	1	0.6	**NU 204E**	NJ	NUP	-	-	25700	22600
	47	18	-	27	1	0.6	**NU 2204**	NJ	NUP	-	-	20600	20700
	47	18	-	26.5	1	0.6	**NU 2204E**	NJ	NUP	-	-	30500	28300
	52	15	44.5	28.5	1.1	0.6	**NU 304**	NJ	NUP	N	NF	20700	19200
	52	15	-	27.5	1.1	0.6	**NU 304**	NJ	NUP	-	-	31500	26900
	52	21	-	28.5	1.1	0.6	**NU 2304**	NJ	NUP	-	-	30500	27200
	52	21	-	27.5	1.1	0.6	**NU 2304E**	NJ	NUP	-	-	42000	38500
25	47	12	41.5	30.5	0.6	0.08	**NU 1005**	-	-	N	-	14300	13100
	52	15	45	32	1	0.08	**NU 205**	NJ	NUP	N	NF	17500	15700
	52	15	-	31.5	1	0.15	**NU 205E**	NJ	NUP	-	-	29300	27700
	52	18	-	32	1	0.15	**NU 2205**	NJ	NUP	-	-	24300	23500
	52	18	-	31.5	1	0.08	**NU 2205E**	NJ	NUP	-	-	35000	34500
	62	17	53	35	1.1	0.1	**NU 305**	NJ	NUP	N	NF	29200	25200
	62	17	-	34	1.1	0.15	**NU 305E**	NJ	NUP	-	-	41500	37500
	62	24	-	35	1.1	0.15	**NU 2305**	NJ	NUP	-	-	42500	41000
	62	24	-	34	1.1	0.15	**NU 2305E**	NJ	NUP	-	-	57000	56000
	80	21	62.8	38.8	1.5	0.08	**NU 405**	NJ	NUP	N	NF	46500	40000
30	55	13	48.5	36.5	1	0.1	**NU 1006**	-	-	N	-	18700	18400
	62	16	53.5	38.5	1	0.1	**NU 206**	NJ	NUP	N	NF	23500	21500
	62	16	-	37.5	1	0.15	**NU 206E**	NJ	NUP	-	-	39000	37500
	62	20	-	38.5	1	0.2	**NU 2206**	NJ	NUP	-	-	33000	33000
	62	20	-	37.5	1	0.2	**NU 2206E**	NJ	NUP	-	-	49000	50000
	72	19	62	42	1.1	0.3	**NU 306**	NJ	NUP	N	NF	38500	35000
	72	19	-	40.5	1.1	0.3	**NU 306E**	NJ	NUP	-	-	53000	50000
	72	27	-	42	1.1	0.6	**NU 2306**	NJ	NUP	-	-	51500	51000
	72	27	-	40.5	1.1	0.6	**NU 2306E**	NJ	NUP	-	-	74500	77500
	90	23	73	45	1.5	0.6	**NU 406**	NJ	NUP	N	NF	62500	55000
35	62	14	55	42	1	0.6	**NU 1007**	-	-	N	-	21600	21800
	72	17	61.8	43.8	1.1	0.6	**NU 207**	NJ	NUP	N	NF	33500	31500
	72	17	-	44	1.1	0.6	**NU 207E**	NJ	NUP	-	-	50000	50000
	72	23	-	43.8	1.1	0.6	**NU 2207**	NJ	NUP	-	-	49000	51000
	72	23	-	44	1.1	0.6	**NU 2207E**	NJ	NUP	-	-	61500	65000
	80	21	68.2	46.2	1.5	0.08	**NU 307**	NJ	NUP	N	NF	49500	47000
	80	21	-	46.2	1.5	0.08	**NU 307E**	NJ	NUP	-	-	66500	65500
	80	31	-	46.2	1.5	0.15	**NU 2307**	NJ	NUP	-	-	60500	60000
	80	31	-	46.2	1.5	0.15	**NU 2307E**	NJ	NUP	-	-	99000	109000

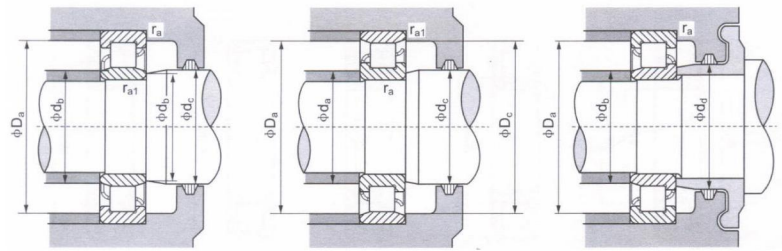


Limiting speed		Abutment and fillet Dimensions (mm)										Ref.Weight (kg) NU
Grease	Oil	d_a (min)	d_b (min)	d_b (max)	d_c (min)	d_d (min)	d_a (max)	d_b (max)	d_b (min)	r_a (max)	r_{a1} (max)	
16000	19000	22	19	22	24	25	35	34	34	0.6	0.3	0.082
15000	18000	26	25	26	29	32	41	42	42	1	0.6	0.112
13000	16000	-	25	26	29	32	41	-	-	1	0.6	0.124
14000	17000	-	25	26	29	32	41	-	-	1	0.6	0.144
13000	16000	-	25	26	29	32	41	-	-	1	0.6	0.162
12000	14000	27	25	27	30	33	45	47	47	1	0.6	0.154
10000	12000	-	25	27	30	33	45	-	-	1	0.6	0.150
11000	13000	-	25	27	30	33	45	-	-	1	0.6	0.213
10000	12000	-	25	27	30	33	45	-	-	1	0.6	0.240
15000	18000	29	27.5	30	32	-	42	45	41.8	0.6	0.3	0.086
12000	15000	31	30	31	34	37	46	47	47	1	0.6	0.133
10000	12000	-	30	31	34	37	46	-	-	1	0.6	0.140
11000	13000	-	30	31	34	37	46	-	-	1	0.6	0.163
10000	12000	-	30	31	34	37	46	-	-	1	0.6	0.185
9500	12000	32	32	33	37	40	55	55	55	1	1	0.238
8500	10000	-	32	33	37	40	55	-	-	1	1	0.240
9300	11000	-	32	33	37	40	55	-	-	1	1	0.340
8500	10000	-	32	33	37	40	55	-	-	1	1	0.390
7500	9000	33.5	33.5	38	41	46	71.5	71.5	64	1.5	1.5	0.564
12000	15000	35	33.5	35	38	-	49	52	49	1	1	0.123
10000	13000	36	35	37	40	44	56	57	56	1	1	0.204
8500	10000	-	35	37	40	44	56	-	-	1	1	0.210
9200	11000	-	35	37	40	44	56	-	-	1	1	0.262
8500	10000	-	35	37	40	44	56	-	-	1	1	0.295
8500	10000	37	37	40	44	48	65	65	64	1	1	0.357
7800	9400	-	37	40	44	48	65	-	-	1	1	0.370
8200	9800	-	37	40	44	48	65	-	-	1	1	0.500
7800	9400	-	37	40	44	48	65	-	-	1	1	0.585
7500	9000	38.5	38.5	44	47	52	81.5	81.5	74	1.5	1.5	0.770
10000	13000	40	38.5	41	44	-	56	59	55.5	1	0.6	0.185
9000	11000	42	40	43	46	50	65	67	64	1	0.6	0.295
8200	9800	-	40	43	46	50	65	-	-	1	0.6	0.300
8500	10000	-	40	43	46	50	65	-	-	1	0.6	0.402
8200	9800	-	40	43	46	50	65	-	-	1	0.6	0.446
8000	9500	43.5	42	45	48	53	71.5	73	71	1.5	1	0.470
6800	8200	-	42	45	48	53	71.5	-	-	1.5	1	0.490
7200	8600	-	42	45	48	53	71.5	-	-	1.5	1	0.696
6800	8200	-	42	45	48	53	71.5	-	-	1.5	1	0.780

Bore diameter d: 35~55mm

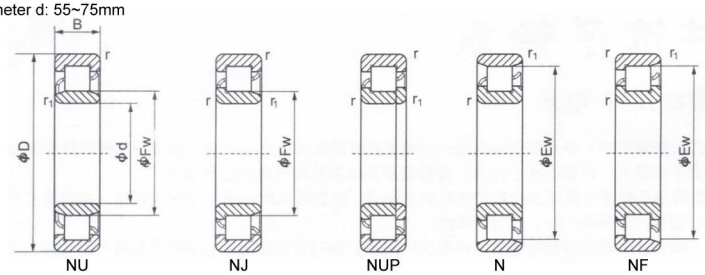


Principal dimensions (mm)							Designation					Basic load rating	
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	Dynamic Cr(N)	Static Cor(N)
35	100	25	83	53	1.5	1.5	**NU 407**	NJ	NUP	N	NF	75000	69000
40	68	15	61	47	1	0.6	**NU 1008**	-	-	N	-	25000	25700
	80	18	70	50	1.1	1.1	**NU 208**	NJ	NUP	N	NF	43500	43000
	80	18	-	49.5	1.1	1.1	**NU 208E**	NJ	NUP	-	-	55500	55500
	80	23	-	50	1.1	1.1	**NU 2208**	NJ	NUP	-	-	58000	62000
	80	23	-	49.5	1.1	1.1	**NU 2208E**	NJ	NUP	-	-	72000	77500
	90	23	77.5	53.5	1.5	1.5	**NU 308**	NJ	NUP	N	NF	58500	57000
	90	23	-	52	1.5	1.5	**NU 308E**	NJ	NUP	-	-	83000	81500
	90	33	-	53.5	1.5	1.5	**NU 2308**	NJ	NUP	-	-	82000	88000
	90	33	-	52	1.5	1.5	**NU 2308E**	NJ	NUP	-	-	114000	122000
	110	27	92	58	2	2	**NU 408**	NJ	NUP	N	NF	95500	89000
45	75	16	67.5	52.5	1	0.6	**NU 1009**	-	-	N	-	29700	32000
	85	19	75	55	1.1	1.1	**NU 209**	NJ	NUP	N	NF	46000	47000
	85	19	-	54.5	1.1	1.1	**NU 209E**	NJ	NUP	-	-	63000	66500
	85	23	-	55	1.1	1.1	**NU 2209**	NJ	NUP	-	-	61500	67500
	85	23	-	54.5	1.1	1.1	**NU 2209E**	NJ	NUP	-	-	76000	84500
	100	25	86.5	58.5	1.5	1.5	**NU 309**	NJ	NUP	N	NF	78500	77500
	100	25	-	58.5	1.5	1.5	**NU 309E**	NJ	NUP	-	-	97500	98500
	100	36	-	58.5	1.5	1.5	**NU 2309**	NJ	NUP	-	-	99000	104000
	100	36	-	58.5	1.5	1.5	**NU 2309E**	NJ	NUP	-	-	137000	153000
	120	29	100.5	64.5	2	2	**NU 409**	NJ	NUP	N	NF	107000	102000
50	80	16	72.5	57.5	1	0.6	**NU 1010**	-	-	N	-	32000	36000
	90	20	80.4	60.4	1.1	1.1	**NU 210**	NJ	NUP	N	NF	48000	51000
	90	20	-	59.5	1.1	1.1	**NU 210E**	NJ	NUP	-	-	66000	72000
	90	23	-	60.4	1.1	1.1	**NU 2210**	NJ	NUP	-	-	64000	73500
	90	23	-	59.5	1.1	1.1	**NU 2210E**	NJ	NUP	-	-	79500	91500
	110	27	95	65	2	2	**NU 310**	NJ	NUP	N	NF	86500	86000
	110	27	-	65	2	2	**NU 310E**	NJ	NUP	-	-	110000	113000
	110	40	-	65	2	2	**NU 2310**	NJ	NUP	-	-	120000	131000
	110	40	-	65	2	2	**NU 2310E**	NJ	NUP	-	-	162000	187000
	130	31	110.8	70.8	2.1	2.1	**NU 410**	NJ	NUP	N	NF	138000	136000
55	90	18	80.5	64.5	1.1	1	**NU 1011**	-	-	N	-	36000	41500
	100	21	88.5	66.5	1.5	1.1	**NU 211**	NJ	NUP	N	NF	58000	62000
	100	21	-	66	1.5	1.1	**NU 211E**	NJ	NUP	-	-	82500	93000
	100	25	-	66.5	1.5	1.1	**NU 2211**	NJ	NUP	-	-	75000	87000
	100	25	-	66	1.5	1.1	**NU 2211E**	NJ	NUP	-	-	97000	114000
	120	29	104.5	70.5	2	2	**NU 311**	NJ	NUP	N	NF	110000	111000
	120	29	-	70.5	2	2	**NU 311E**	NJ	NUP	-	-	137000	143000

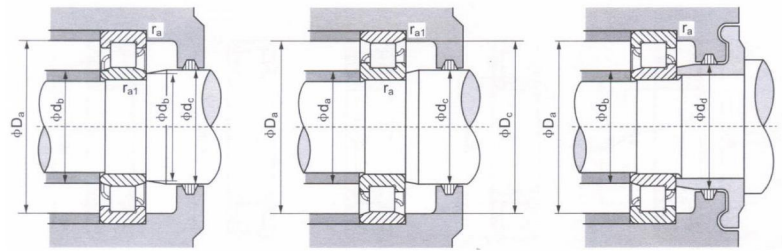


Limiting speed		Abutment and fillet Dimensions (mm)										Ref.Weight (kg) NU
Grease	Oil	d_a (min)	d_b (min)	d_b (max)	d_c (min)	d_d (min)	d_a (max)	d_b (max)	d_b (min)	r_a (max)	r_{a1} (max)	
6700	8000	43.5	43.5	52	55	61	91.5	91.5	84	1.5	1.5	1.05
9500	12000	45	45	46	49	-	62	64	61.5	1	0.6	0.226
8500	10000	47	47	49	52	56	73	73	72	1	1	0.369
7200	8600	-	47	49	52	56	73	-	-	1	1	0.380
7500	9000	-	47	49	52	56	73	-	-	1	1	0.490
7200	8600	-	47	49	52	56	73	-	-	1	1	0.743
6700	8000	48.5	48.5	51	55	60	81.5	81.5	80	1.5	1.5	0.665
6400	7700	-	48.5	51	55	60	81.5	-	-	1.5	1.5	0.670
6500	7800	-	48.5	51	55	60	81.5	-	-	1.5	1.5	0.956
6400	7700	-	48.5	51	55	60	81.5	-	-	1.5	1.5	1.050
6000	7000	50	50	57	60	67	100	100	93	2	2	1.330
9000	11000	50	50	52	54	-	69	71	68	1	0.6	0.284
7500	9000	52	52	54	57	61	78	78	77	1	1	0.430
7000	8500	-	52	54	57	61	78	-	-	1	1	0.440
7400	8900	-	52	54	57	61	78	-	-	1	1	0.536
7000	8500	-	52	54	57	61	78	-	-	1	1	0.593
6300	7500	53.5	53.5	57	60	66	91.5	91.5	89	1.5	1.5	0.871
6000	7200	-	53.5	57	60	66	91.5	-	-	1.5	1.5	0.910
6100	7300	-	53.5	57	60	66	91.5	-	-	1.5	1.5	1.250
6000	7200	-	53.5	57	60	66	91.5	-	-	1.5	1.5	1.400
5600	6700	55	55	63	66	74	110	110	102	2	2	1.670
8500	10000	53	53	57	59	-	74	76	73	1	0.6	0.310
7000	8500	57	57	58	62	67	83	83	83	1	1	0.481
6400	7700	-	57	58	62	67	83	-	-	1	1	0.490
6500	7800	-	57	58	62	67	83	-	-	1	1	0.580
6400	7700	-	57	58	62	67	83	-	-	1	1	0.632
5600	6700	60	60	63	67	73	100	100	98	2	2	1.170
5400	6500	-	60	63	67	73	100	-	-	2	2	1.170
5400	6500	-	60	63	67	73	100	-	-	2	2	1.690
5400	6500	-	60	63	67	73	100	-	-	2	2	1.850
5000	6000	62	62	69	73	81	118	118	112	2	2	2.050
7500	9000	61.5	61	63	66	-	83	85	81.5	1	1	0.449
6300	7500	63.5	62	65	68	73	91.5	93	91	1.5	1	0.634
5800	7000	-	62	65	68	73	91.5	-	-	1.5	1	0.670
6200	7400	-	62	65	68	73	91.5	-	-	1.5	1	0.780
5800	7000	-	62	65	68	73	91.5	-	-	1.5	1	0.870
5000	6000	65	65	69	72	80	110	110	107	2	2	1.430
4800	5600	-	65	69	72	80	110	-	-	2	2	1.500

Bore diameter d: 55~75mm

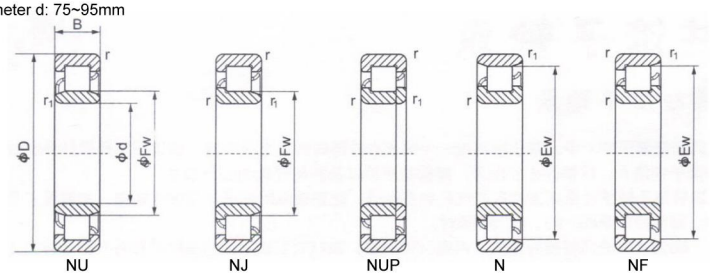


Principal dimensions (mm)							Designation					Basic load rating	
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	Dynamic Cr(N)	Static Cor(N)
55	120	43	-	70.5	2	2	**NU 2311**	NJ	NUP	-	-	148000	162000
	120	43	-	70.5	2	2	**NU 2311E**	NJ	NUP	-	-	201000	233000
	140	33	117.2	77.2	2.1	2.1	**NU 411**	NJ	NUP	N	NF	139000	138000
60	95	18	85.5	69.5	1.1	1	**NU 1012**	-	-	N	-	37000	44000
	110	22	97.5	73.5	1.5	1.5	**NU 212**	NJ	NUP	N	NF	68500	75000
	110	22	-	72	1.5	1.5	**NU 212E**	NJ	NUP	-	-	97500	107000
	110	28	-	73.5	1.5	1.5	**NU 2212**	NJ	NUP	-	-	96000	116000
	110	28	-	72	1.5	1.5	**NU 2212E**	NJ	NUP	-	-	131000	157000
	130	31	113	77	2.1	2.1	**NU 312**	NJ	NUP	N	NF	123000	126000
	130	31	-	77	2.1	2.1	**NU 312E**	NJ	NUP	-	-	150000	150000
	130	46	-	77	2.1	2.1	**NU 2312**	NJ	NUP	-	-	168000	188000
	130	46	-	77	2.1	2.1	**NU 2312E**	NJ	NUP	-	-	222000	262000
	150	35	127	83	2.1	2.1	**NU 412**	NJ	NUP	N	NF	167000	168000
65	100	18	90.5	74.5	1.1	1	**NU 1013**	-	-	N	-	38000	46500
	120	23	105.6	79.6	1.5	1.5	**NU 213**	NJ	NUP	N	NF	83500	94500
	120	23	-	78.5	1.5	1.5	**NU 213E**	NJ	NUP	-	-	107000	119000
	120	31	-	79.6	1.5	1.5	**NU 2213**	NJ	NUP	-	-	120000	149000
	120	31	-	78.5	1.5	1.5	**NU 2213E**	NJ	NUP	-	-	149000	181000
	140	33	121.5	83.5	2.1	2.1	**NU 313**	NJ	NUP	N	NF	135000	139000
	140	33	-	82.5	2.1	2.1	**NU 313E**	NJ	NUP	-	-	180000	191000
	140	48	-	83.5	2.1	2.1	**NU 2313**	NJ	NUP	-	-	187000	212000
	140	48	-	82.5	2.1	2.1	**NU 2313E**	NJ	NUP	-	-	247000	287000
	160	37	135.3	89.3	2.1	2.1	**NU 413**	NJ	NUP	N	NF	195000	203000
70	110	20	100	80	1.1	1	**NU 1014**	-	-	N	-	55500	67000
	125	24	110.5	84.5	1.5	1.5	**NU 214**	NJ	NUP	N	NF	83000	95000
	125	24	-	83.5	1.5	1.5	**NU 214E**	NJ	NUP	-	-	119000	137000
	125	31	-	84.5	1.5	1.5	**NU 2214**	NJ	NUP	-	-	119000	151000
	125	31	-	83.5	1.5	1.5	**NU 2214E**	NJ	NUP	-	-	156000	194000
	150	35	130	90	2.1	2.1	**NU 314**	NJ	NUP	N	NF	158000	220000
	150	35	-	89	2.1	2.1	**NU 314E**	NJ	NUP	-	-	205000	222000
	150	51	-	90	2.1	2.1	**NU 2314**	NJ	NUP	-	-	223000	262000
	150	51	-	89	2.1	2.1	**NU 2314E**	NJ	NUP	-	-	274000	320000
	180	42	152	100	3	3	**NU 414**	NJ	NUP	N	NF	228000	235000
75	115	20	105	85	1.1	1	**NU 1015**	-	-	N	-	57500	71000
	130	25	116.5	88.5	1.5	1.5	**NU 215**	NJ	NUP	N	NF	96000	111000
	130	25	-	88.5	1.5	1.5	**NU 215E**	NJ	NUP	-	-	130000	156000
	130	31	-	88.5	1.5	1.5	**NU 2215**	NJ	NUP	-	-	129000	162000
	130	31	-	88.5	1.5	1.5	**NU 2215E**	NJ	NUP	-	-	161000	207000

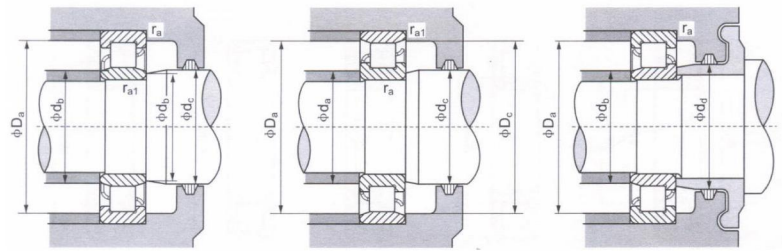


Limiting speed		Abutment and fillet Dimensions (mm)										Ref.Weight (kg) NU
Grease	Oil	d_a (min)	d_b (min)	d_b (max)	d_c (min)	d_d (min)	d_a (max)	d_b (max)	d_b (min)	r_a (max)	r_{a1} (max)	
4800	5600	-	65	69	72	80	110	-	-	2	2	2.10
4800	5600	-	65	69	72	80	110	-	-	2	2	2.35
4800	5600	67	67	76	79	87	128	128	119	2	2	2.54
6700	8000	66.5	66	68	71	-	88	90	86.5	1	1	0.484
5600	6700	68.5	68.5	71	75	80	101.5	101.5	100	1.5	1.5	0.835
5000	6000	-	68.5	71	75	80	101.5	-	-	1.5	1.5	0.921
5300	6300	-	68.5	71	75	80	101.5	-	-	1.5	1.5	1.07
5000	6000	-	68.5	71	75	80	101.5	-	-	1.5	1.5	1.23
4800	5600	72	72	75	79	86	118	118	116	2	2	1.82
4200	4800	-	72	75	79	86	118	-	-	2	2	1.87
4300	5000	-	72	75	79	86	118	-	-	2	2	2.69
4200	4800	-	72	75	79	86	118	-	-	2	2	3.01
4300	5000	72	72	82	85	94	118	118	128	2	2	3.05
6300	7500	71.5	71	73	75	-	93	95	91.5	1	1	0.514
5300	6300	73.5	73.5	77	81	87	111.5	111.5	108	1.5	1.5	1.06
4800	5600	-	73.5	77	81	87	111.5	-	-	1.5	1.5	1.18
4800	5600	-	73.5	77	81	87	111.5	-	-	1.5	1.5	1.43
4800	5600	-	73.5	77	81	87	111.5	-	-	1.5	1.5	1.65
4500	5300	77	77	81	85	93	128	128	125	2	2	2.27
3800	4500	-	77	81	85	93	128	-	-	2	2	2.55
4000	4800	-	77	81	85	93	128	-	-	2	2	3.25
3800	4500	-	77	81	85	93	128	-	-	2	2	3.56
4000	4800	77	77	88	91	100	148	148	137	2	2	3.68
6000	7000	76.5	76	78	82	-	103	105	100.5	1	1	0.712
5000	6000	78.5	78.5	82	86	92	116.5	116.5	114	1.5	1.5	1.16
4600	5500	-	78.5	82	86	92	116.5	-	-	1.5	1.5	1.26
4800	5600	-	78.5	82	86	92	116.5	-	-	1.5	1.5	1.52
4600	5500	-	78.5	82	86	92	116.5	-	-	1.5	1.5	1.68
4000	4800	82	82	87	92	100	138	138	134	2	2	2.73
3600	4300	-	82	87	92	100	138	-	-	2	2	3.15
3800	4500	-	82	87	92	100	138	-	-	2	2	3.97
3600	4300	-	82	87	92	100	138	-	-	2	2	4.30
3600	4300	84	84	99	102	112	166	166	153	2.5	2.5	5.40
5600	6700	81.5	81	83	87	-	108	110	105.5	1	1	0.745
4800	5600	83.5	83.5	87	90	96	121.5	121.5	120	1.5	1.5	1.24
4300	5200	-	83.5	87	90	96	121.5	-	-	1.5	1.5	1.38
4500	5300	-	83.5	87	90	96	121.5	-	-	1.5	1.5	1.57
4300	5200	-	83.5	87	90	96	121.5	-	-	1.5	1.5	1.80

Bore diameter d: 75~95mm

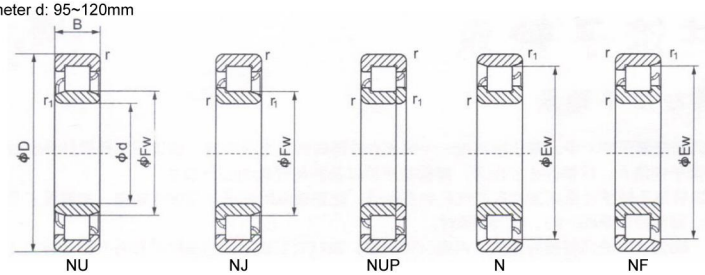


Principal dimensions (mm)							Designation					Basic load rating	
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	Dynamic Cr(N)	Static Cor(N)
75	160	37	139.5	95.5	2.1	2.1	**NU 315**	NJ	NUP	N	NF	190000	205000
	160	37	-	95	2.1	2.1	**NU 315E**	NJ	NUP	-	-	240000	263000
	160	55	-	95.5	2.1	2.1	**NU 2315**	NJ	NUP	-	-	258000	300000
	160	55	-	95	2.1	2.1	**NU 2315E**	NJ	NUP	-	-	330000	395000
	190	45	160.5	104.5	3	3	**NU 415**	NJ	NUP	N	NF	262000	274000
80	125	22	113.5	91.5	1.1	1	**NU 1016**	-	-	N	-	69000	86500
	140	26	125.3	95.3	2	2	**NU 216**	NJ	NUP	N	NF	106000	122000
	140	26	-	95.3	2	2	**NU 216E**	NJ	NUP	-	-	139000	167000
	140	33	-	95.3	2	2	**NU 2216**	NJ	NUP	-	-	147000	186000
	140	33	-	95.3	2	2	**NU 2216E**	NJ	NUP	-	-	186000	243000
	170	39	147	103	2.1	2.1	**NU 316**	NJ	NUP	N	NF	190000	207000
	170	39	-	101	2.1	2.1	**NU 316E**	NJ	NUP	-	-	256000	282000
	170	58	-	103	2.1	2.1	**NU 2316**	NJ	NUP	-	-	274000	330000
	170	58	-	101	2.1	2.1	**NU 2316E**	NJ	NUP	-	-	355000	430000
	200	48	170	110	3	3	**NU 416**	NJ	NUP	N	NF	299000	315000
85	130	22	118.5	96.5	1.1	1	**NU 1017**	-	-	N	-	71500	91000
	150	28	133.8	101.8	2	2	**NU 217**	NJ	NUP	N	NF	120000	140000
	150	28	-	100.5	2	2	**NU 217E**	NJ	NUP	-	-	167000	199000
	150	36	-	101.8	2	2	**NU 2217**	NJ	NUP	-	-	169000	218000
	150	36	-	100.5	2	2	**NU 2217E**	NJ	NUP	-	-	217000	279000
	180	41	156	108	3	3	**NU 317**	NJ	NUP	N	NF	224000	247000
	180	41	-	108	3	3	**NU 317E**	NJ	NUP	-	-	291000	330000
	180	60	-	108	3	3	**NU 2317**	NJ	NUP	-	-	315000	380000
	180	60	-	108	3	3	**NU 2317E**	NJ	NUP	-	-	390000	485000
	210	52	177	113	4	4	**NU 417**	NJ	NUP	N	NF	330000	350000
90	140	24	127	103	1.5	1.1	**NU 1018**	-	-	N	-	81500	104000
	160	30	143	107	2	2	**NU 218**	NJ	NUP	N	NF	152000	178000
	160	30	-	107	2	2	**NU 218E**	NJ	NUP	-	-	182000	217000
	160	40	-	107	2	2	**NU 2218**	NJ	NUP	-	-	207000	265000
	160	40	-	107	2	2	**NU 2218E**	NJ	NUP	-	-	242000	315000
	190	43	165	115	3	3	**NU 318**	NJ	NUP	N	NF	240000	265000
	190	43	-	113.5	3	3	**NU 318E**	NJ	NUP	-	-	315000	355000
	190	64	-	115	3	3	**NU 2318**	NJ	NUP	-	-	325000	395000
	190	64	-	113.5	3	3	**NU 2318E**	NJ	NUP	-	-	435000	535000
	225	54	191.5	123.5	4	4	**NU 418**	NJ	NUP	N	NF	365000	400000
95	145	24	132	108	1.5	1.1	**NU 1019**	-	-	N	-	84000	110000
	170	32	151.5	113.5	2.1	2.1	**NU 219**	NJ	NUP	N	NF	165000	195000
	170	32	-	113.5	2.1	2.1	**NU 219E**	NJ	NUP	-	-	222000	259000

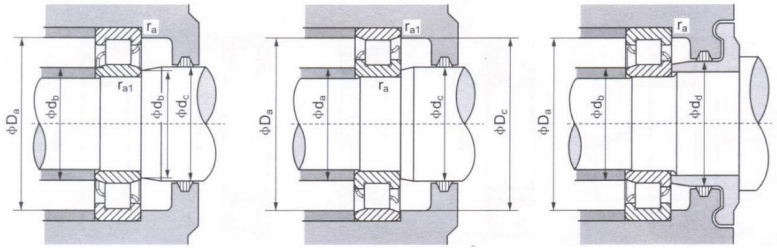


Limiting speed		Abutment and fillet Dimensions (mm)										Ref.Weight (kg) NU
Grease	Oil	d_a (min)	d_b (min)	d_b (max)	d_c (min)	d_d (min)	d_a (max)	d_b (max)	d_b (min)	r_a (max)	r_{a1} (max)	
3800	4500	87	87	93	97	106	148	148	143	2	2	3.21
3400	4000	-	87	93	97	106	148	-	-	2	2	3.70
3400	4000	-	87	93	97	106	148	-	-	2	2	4.84
3400	4000	-	87	93	97	106	148	-	-	2	2	5.30
3400	4000	89	89	103	107	118	176	176	162	2.5	2.5	6.40
5300	6300	86.5	86	90	94	-	118	120	113.5	1	1	1.03
4500	5300	90	90	94	97	104	130	130	128	2	2	1.53
4000	4800	-	90	94	97	104	130	-	-	2	2	1.66
4000	4800	-	90	94	97	104	130	-	-	2	2	1.96
4000	4800	-	90	94	97	104	130	-	-	2	2	2.15
3600	4300	92	92	99	105	114	158	158	151	2	2	3.93
3200	3800	-	92	99	105	114	158	-	-	2	2	4.38
3200	3800	-	92	99	105	114	158	-	-	2	2	5.83
3200	3800	-	92	99	105	114	158	-	-	2	2	6.35
3200	3800	94	94	109	112	124	186	186	172	2.5	2.5	7.45
5000	6000	91.5	91	95	99	-	123	125	118.5	1	1	1.06
4300	5000	95	95	99	104	110	140	140	137	2	2	1.92
3800	4500	-	95	99	104	110	140	-	-	2	2	2.10
3800	4500	-	95	99	104	110	140	-	-	2	2	2.50
3800	4500	-	95	99	104	110	140	-	-	2	2	2.75
3400	4000	99	99	106	110	119	166	166	160	2.5	2.5	4.54
3000	3600	-	99	106	110	119	166	-	-	2.5	2.5	5.12
3000	3600	-	99	106	110	119	166	-	-	2.5	2.5	6.62
3000	3600	-	99	106	110	119	166	-	-	2.5	2.5	7.35
3000	3600	103	103	111	115	128	192	192	179	3	3	9.10
4800	5600	98	97	101	106	-	131.5	133.5	127.5	1.5	1	1.36
3800	4500	100	100	105	109	116	150	150	146	2	2	2.30
3400	4000	-	100	105	109	116	150	-	-	2	2	2.53
3600	4300	-	100	105	109	116	150	-	-	2	2	3.10
3400	4000	-	100	105	109	116	150	-	-	2	2	3.48
3200	3800	104	104	111	117	127	176	176	169	2.5	2.5	5.37
2500	3200	-	104	111	117	127	176	-	-	2.5	2.5	5.92
2800	3400	-	104	111	117	127	176	-	-	2.5	2.5	7.90
2600	3200	-	104	111	117	127	176	-	-	2.5	2.5	8.72
2800	3400	108	108	122	125	139	207	207	194	3	3	10.6
4500	5000	103	102	106	111	-	136.5	138.5	132.5	1.5	1	1.42
3600	4300	107	107	111	116	123	158	158	155	2	2	2.81
3200	4000	-	107	111	116	123	158	-	-	2	2	3.08

Bore diameter d: 95~120mm

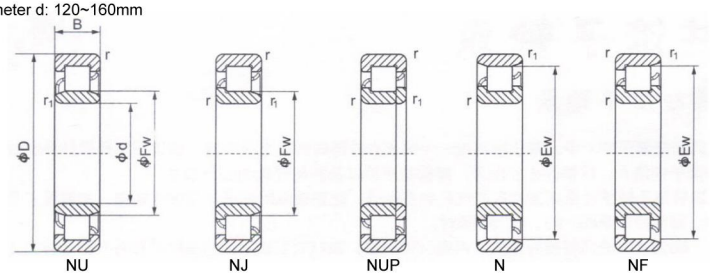


Principal dimensions (mm)							Designation					Basic load rating	
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	Dynamic Cr(N)	Static Cor(N)
95	170	43	-	113.5	2.1	2.1	**NU 2219**	NJ	NUP	-	-	230000	298000
	170	43	-	112.5	2.1	2.1	**NU 2219E**	NJ	NUP	-	-	286000	370000
	200	45	173.5	121.5	3	3	**NU 319**	NJ	NUP	N	NF	258000	289000
	200	45	-	121.5	3	3	**NU 319E**	NJ	NUP	-	-	335000	385000
	200	67	-	121.5	3	3	**NU 2319**	NJ	NUP	-	-	370000	460000
	200	67	-	121.5	3	3	**NU 2319E**	NJ	NUP	-	-	460000	585000
	240	55	201.5	133.5	4	4	**NU 419**	NJ	NUP	N	NF	400000	445000
100	150	24	137	113	1.5	1.1	**NU 1020**	-	-	N	-	87000	116000
	180	34	160	120	2.1	2.1	**NU 220**	NJ	NUP	N	NF	183000	217000
	180	34	-	119	2.1	2.1	**NU 220E**	NJ	NUP	-	-	250000	305000
	180	46	-	120	2.1	2.1	**NU 2220**	NJ	NUP	-	-	257000	335000
	180	46	-	119	2.1	2.1	**NU 2220E**	NJ	NUP	-	-	335000	445000
	215	47	185.5	129.5	3	3	**NU 320**	NJ	NUP	N	NF	300000	335000
	215	47	-	127.5	3	3	**NU 320E**	NJ	NUP	-	-	380000	425000
	215	73	-	129.5	3	3	**NU 2320**	NJ	NUP	-	-	435000	545000
	215	73	-	127.5	3	3	**NU 2320E**	NJ	NUP	-	-	570000	715000
	250	58	211	139	4	4	**NU 420**	NJ	NUP	N	NF	445000	500000
105	160	26	145.5	119.5	2	1.1	**NU 1021**	-	-	N	-	101000	136000
	190	36	168.8	126.8	2.1	2.1	**NU 221**	NJ	NUP	N	NF	202000	241000
	225	49	195	135	3	3	**NU 321**	NJ	NUP	N	NF	340000	385000
	260	60	220.5	144.5	4	4	**NU 421**	NJ	NUP	N	NF	495000	555000
110	170	28	155	125	2	1.1	**NU 1022**	-	-	N	-	127000	166000
	200	38	178.5	132.5	2.1	2.1	**NU 222**	NJ	NUP	N	NF	240000	290000
	200	38	-	132.5	2.1	2.1	**NU 222E**	NJ	NUP	-	-	293000	365000
	200	53	-	132.5	2.1	2.1	**NU 2222**	NJ	NUP	-	-	320000	440000
	200	53	-	132.5	2.1	2.1	**NU 2222E**	NJ	NUP	-	-	385000	515000
	240	50	207	143	3	3	**NU 322**	NJ	NUP	N	NF	380000	435000
	240	50	-	143	3	3	**NU 322E**	NJ	NUP	-	-	450000	525000
	240	80	-	143	3	3	**NU 2322**	NJ	NUP	-	-	570000	730000
	240	80	-	143	3	3	**NU 2322E**	NJ	NUP	-	-	670000	880000
	280	65	235	155	4	4	**NU 422**	NJ	NUP	N	NF	545000	620000
120	180	28	165	135	2	1.1	**NU 1024**	-	-	N	-	131000	175000
	215	40	191.5	143.5	2.1	2.1	**NU 224**	NJ	NUP	N	NF	260000	320000
	215	40	-	143.5	2.1	2.1	**NU 224E**	NJ	NUP	-	-	335000	420000
	215	58	-	143.5	2.1	2.1	**NU 2224**	NJ	NUP	-	-	365000	490000
	215	58	-	143.5	2.1	2.1	**NU 2224E**	NJ	NUP	-	-	450000	620000
	260	55	226	154	3	3	**NU 324**	NJ	NUP	N	NF	445000	510000
	260	55	-	154	3	3	**NU 432E**	NJ	NUP	-	-	525000	610000

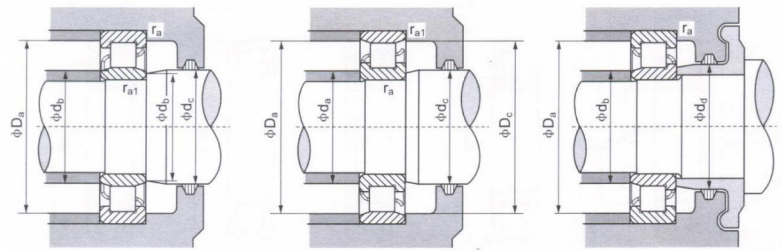


Limiting speed		Abutment and fillet Dimensions (mm)										Ref.Weight (kg)
Grease	Oil	d_a (min)	d_b (min)	d_b (max)	d_c (min)	d_d (min)	d_a (max)	d_b (max)	d_b (min)	r_a (max)	r_{a1} (max)	NU
3400	4000	-	107	111	116	123	158	-	-	2	2	3.85
3200	4000	-	107	111	116	123	158	-	-	2	2	4.23
3000	3600	109	109	119	124	134	186	186	178	2.5	2.5	6.23
2400	3000	-	109	119	124	134	186	-	-	2.5	2.5	6.92
2600	3200	-	109	119	124	134	186	-	-	2.5	2.5	9.39
2400	3000	-	109	119	124	134	186	-	-	2.5	2.5	10.3
2600	3200	113	113	132	136	149	222	222	204	3	3	14.0
4300	5000	108	107	111	116	-	141.5	143.5	137.5	1.5	1	1.48
3400	4000	112	112	117	122	130	168	168	164	2	2	3.30
3200	3800	-	112	117	122	130	168	-	-	2	2	3.73
3200	3800	-	112	117	122	130	168	-	-	2	2	4.67
3200	3800	-	112	117	122	130	168	-	-	2	2	5.13
2800	3400	114	114	125	132	143	201	201	190	2.5	2.5	7.70
2200	2800	-	114	125	132	143	201	-	-	2.5	2.5	8.45
2400	3000	-	114	125	132	143	201	-	-	2.5	2.5	11.9
2200	2800	-	114	125	132	143	201	-	-	2.5	2.5	12.9
2400	3000	118	118	137	141	156	232	232	213	3	3	14.4
4000	4800	114	112	118	122	-	150	153.5	146.5	2	1	1.88
3200	3800	117	117	124	129	137	178	178	173	2	2	4.03
2600	3200	119	119	132	137	149	211	211	199	2.5	2.5	8.73
2200	2800	123	123	143	147	162	242	242	223	3	3	19.5
3800	4500	119	117	124	128	-	160	163.5	156	2	1	2.34
3000	3600	122	122	130	135	144	188	188	182	2	2	4.64
2600	3200	-	122	130	135	144	188	-	-	2	2	5.17
2800	3400	-	122	130	135	144	188	-	-	2	2	6.93
2600	3200	-	122	130	135	144	188	-	-	2	2	7.32
2400	3000	124	124	140	145	158	226	226	211	2.5	2.5	10.4
2200	2800	-	124	140	145	158	226	-	-	2.5	2.5	11.1
2000	2600	-	124	140	145	158	226	-	-	2.5	2.5	18.8
2000	2600	-	124	140	145	158	226	-	-	2.5	2.5	18.5
2000	2600	128	128	153	157	173	262	262	237	3	3	20.5
3400	4000	129	127	134	138	-	170	173.5	166	2	1	2.51
2800	3400	132	132	141	146	156	203	203	196	2	2	5.61
2400	3000	-	132	141	146	156	203	-	-	2	2	6.25
2600	3200	-	132	141	146	156	203	-	-	2	2	8.56
2400	3000	-	132	141	146	156	203	-	-	2	2	9.35
2200	2800	134	134	151	156	171	246	246	230	2.5	2.5	15.4
1900	2400	-	134	151	156	171	246	-	-	2.5	2.5	15.2

Bore diameter d: 120~160mm

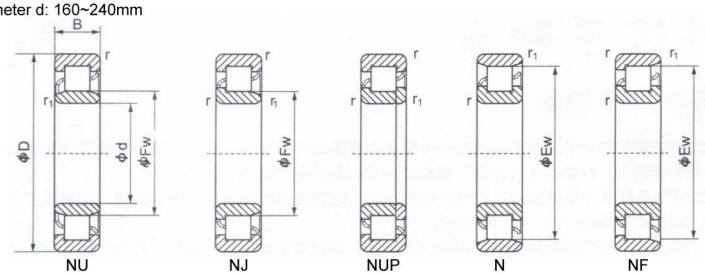


Principal dimensions (mm)							Designation					Basic load rating	
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	Dynamic Cr(N)	Static Cor(N)
120	260	86	-	154	3	3	**NU 2324**	NJ	NUP	-	-	710000	915000
	260	86	-	154	3	3	**NU 2324E**	NJ	NUP	-	-	790000	1030000
	310	72	260	170	5	5	**NU 424**	NJ	NUP	N	NF	670000	770000
130	200	33	182	148	2	1.1	**NU 1026**	-	-	N	-	160000	217000
	230	40	204	156	3	3	**NU 226**	NJ	NUP	N	NF	270000	340000
	230	40	-	153.5	3	3	**NU 226E**	NJ	NUP	-	-	365000	455000
	230	64	-	156	3	3	**NU 2226**	NJ	NUP	-	-	380000	530000
	230	64	-	153.5	3	3	**NU 2226E**	NJ	NUP	-	-	530000	735000
	280	58	243	167	4	4	**NU 326**	NJ	NUP	N	NF	555000	665000
	280	58	-	167	4	4	**NU 326E**	NJ	NUP	-	-	615000	735000
	280	93	-	167	4	4	**NU 2326**	NJ	NUP	-	-	790000	1040000
	280	93	-	167	4	4	**NU 2326E**	NJ	NUP	-	-	920000	1230000
	340	78	285	185	5	5	**NU 426**	NJ	NUP	N	NF	820000	955000
140	210	33	192	158	2	1.1	**NU 1028**	-	-	N	-	170000	239000
	250	42	221	169	3	3	**NU 228**	NJ	NUP	N	NF	310000	420000
	250	42	-	169	3	3	**NU 228E**	NJ	NUP	-	-	390000	515000
	250	68	-	169	3	3	**NU 2228**	NJ	NUP	-	-	465000	670000
	250	68	-	169	3	3	**NU 2228E**	NJ	NUP	-	-	570000	835000
	300	62	260	180	4	4	**NU 328**	NJ	NUP	N	NF	595000	745000
	300	62	-	180	4	4	**NU 328E**	NJ	NUP	-	-	660000	795000
	300	102	-	180	4	4	**NU 2328**	NJ	NUP	-	-	920000	1250000
	300	102	-	180	4	4	**NU 2328E**	NJ	NUP	-	-	1020000	1380000
	360	82	302	198	5	5	**NU 428**	NJ	NUP	N	NF	875000	1020000
150	225	35	205.5	169.5	2.1	1.5	**NU 1030**	-	-	N	-	189000	270000
	270	45	238	182	3	3	**NU 230**	NJ	NUP	N	NF	375000	490000
	270	45	-	182	3	3	**NU 230E**	NJ	NUP	-	-	445000	595000
	270	73	-	182	3	3	**NU 2230**	NJ	NUP	-	-	545000	800000
	270	73	-	182	3	3	**NU 2230E**	NJ	NUP	-	-	660000	990000
	320	65	277	193	4	4	**NU 330**	NJ	NUP	N	NF	660000	805000
	320	65	-	193	4	4	**NU 330E**	NJ	NUP	-	-	755000	920000
	320	108	-	193	4	4	**NU 2330**	NJ	NUP	-	-	1020000	1400000
	320	108	-	193	4	4	**NU 2330E**	NJ	NUP	-	-	1160000	1600000
	380	85	317	213	5	5	**NU 430**	NJ	NUP	N	NF	930000	1120000
160	240	38	220	180	2.1	1.5	**NU 1032E**	-	-	N	-	229000	325000
	290	48	255	195	3	3	**NU 232**	NJ	NUP	N	NF	425000	570000
	290	48	-	195	3	3	**NU 232E**	NJ	NUP	-	-	500000	665000
	290	80	-	195	3	3	**NU 2232**	NJ	NUP	-	-	630000	940000
	290	80	-	195	3	3	**NU 2232E**	NJ	NUP	-	-	810000	1190000

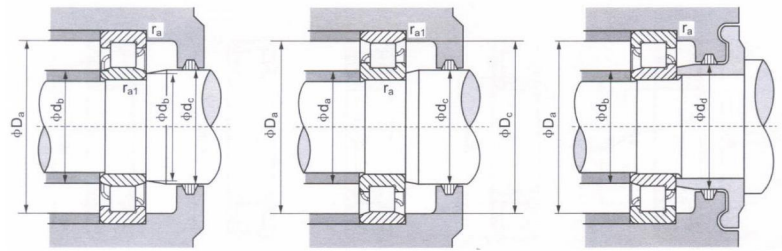


Limiting speed		Abutment and fillet Dimensions (mm)										Ref.Weight (kg) NU
Grease	Oil	d_a (min)	d_b (min)	d_b (max)	d_c (min)	d_d (min)	d_a (max)	d_b (max)	d_b (min)	r_a (max)	r_{a1} (max)	
1900	2400	-	134	151	156	171	246	-	-	2.5	2.5	23.1
1900	2400	-	134	151	156	171	246	-	-	2.5	2.5	22.9
1900	2400	142	142	168	172	190	288	288	262	4	4	28.7
3200	3800	139	137	146	151	-	190	193.5	183	2	1	3.83
2600	3200	144	144	151	158	168	216	216	208	2.5	2.5	7.60
2200	2800	-	144	151	158	168	216	-	-	2.5	2.5	7.50
2200	2800	-	144	151	158	168	216	-	-	2.5	2.5	11.2
2200	2800	-	144	151	158	168	216	-	-	2.5	2.5	12.5
2000	2600	148	148	164	169	184	262	262	247	3	3	18.2
1800	2200	-	148	164	169	184	262	-	-	3	3	18.5
1800	2200	-	148	164	169	184	262	-	-	3	3	29.1
1800	2200	-	148	164	169	184	262	-	-	3	3	28.5
1700	2200	152	152	183	187	208	318	318	287	4	4	36.9
3000	3600	149	147	156	161	-	200	203.5	193	2	1	4.07
2400	3000	154	154	166	171	182	236	236	228	2.5	2.5	9.49
2000	2600	-	154	166	171	182	236	-	-	2.5	2.5	8.90
2000	2600	-	154	166	171	182	236	-	-	2.5	2.5	14.3
2000	2600	-	154	166	171	182	236	-	-	2.5	2.5	14.9
1900	2400	158	158	176	182	198	282	282	268	3	3	22.4
1800	2200	-	158	176	182	198	282	-	-	3	3	21.8
1800	2200	-	158	176	182	198	282	-	-	3	3	36.8
1800	2200	-	158	176	182	198	282	-	-	3	3	35.9
1500	1900	162	162	195	200	222	338	338	304	4	4	48.0
2600	3200	161	158.5	167	173	-	213	217	207	2	1.5	4.90
2000	2600	164	164	179	184	196	256	256	245	2.5	2.5	11.9
1900	2400	-	164	179	184	196	256	-	-	2.5	2.5	11.5
1900	2400	-	164	179	184	196	256	-	-	2.5	2.5	18.7
1900	2400	-	164	179	184	196	256	-	-	2.5	2.5	18.5
1700	2000	168	168	190	195	213	302	302	287	3	3	26.5
1600	1900	-	168	190	195	213	302	-	-	3	3	28.8
1700	2000	-	168	190	195	213	302	-	-	3	3	44.7
1600	1900	-	168	190	195	213	302	-	-	3	3	48.2
1300	1600	172	172	210	216	237	358	358	319	4	4	54.5
2400	3000	171	168.5	178	184	-	228	232	220	2	1.5	6.01
1800	2200	174	174	192	197	210	276	276	262	2.5	2.5	14.5
1700	2000	-	174	192	197	210	276	-	-	2.5	2.5	15.6
1800	2200	-	174	192	197	210	276	-	-	2.5	2.5	24.1
1700	2000	-	174	192	197	210	276	-	-	2.5	2.5	25.9

Bore diameter d: 160~240mm

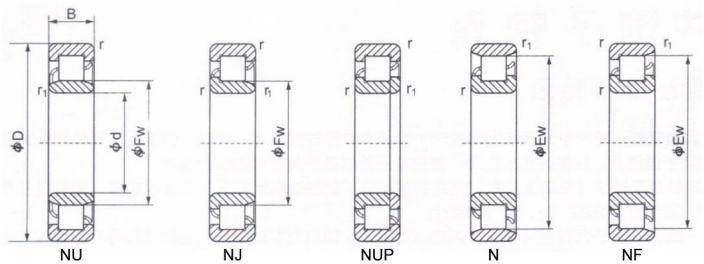


Principal dimensions (mm)							Designation					Basic load rating	
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	Dynamic Cr(N)	Static Cor(N)
160	340	68	292	208	4	4	**NU 332**	NJ	NUP	N	NF	695000	875000
	340	68	-	204	4	4	**NU 332E**	NJ	NUP	-	-	855000	1050000
	340	114	-	208	4	4	**NU 2332**	NJ	NUP	-	-	1040000	1460000
	340	114	-	204	4	4	**NU 2332E**	NJ	NUP	-	-	1310000	1820000
170	260	42	237	193	2.1	2.1	**NU 1034**	-	-	N	-	276000	400000
	310	52	272	208	4	4	**NU 234**	NJ	NUP	N	NF	475000	635000
	310	52	-	207	4	4	**NU 234E**	NJ	NUP	-	-	605000	800000
	310	86	-	208	4	4	**NU 2234**	NJ	NUP	-	-	725000	1100000
	310	86	-	205	4	4	**NU 2234E**	NJ	NUP	-	-	970000	1400000
	360	72	310	220	4	4	**NU 334**	NJ	NUP	N	NF	795000	1010000
	360	120	-	220	4	4	**NU 2334**	NJ	NUP	-	-	1170000	1630000
180	280	46	255	205	2.1	2.1	**NU 1036**	-	-	N	-	340000	485000
	320	52	282	218	4	4	**NU 236**	NJ	NUP	N	NF	490000	675000
	320	52	-	217	4	4	**NU 236E**	NJ	NUP	-	-	625000	850000
	320	86	-	218	4	4	**NU 2236**	NJ	NUP	-	-	775000	1210000
	320	86	-	215	4	4	**NU 2236E**	NJ	NUP	-	-	1010000	1510000
	380	75	328	232	4	4	**NU 336**	NJ	NUP	N	NF	900000	1150000
	380	126	-	232	4	4	**NU 2336**	NJ	NUP	-	-	1310000	1860000
190	290	46	265	215	2.1	2.1	**NU 1038**	-	-	N	-	345000	510000
	340	55	299	231	4	4	**NU 238**	NJ	NUP	N	NF	555000	770000
	340	55	-	230	4	4	**NU 238E**	NJ	NUP	-	-	695000	955000
	340	92	-	231	4	4	**NU 2238**	NJ	NUP	-	-	825000	1290000
	340	92	-	228	4	4	**NU 2238E**	NJ	NUP	-	-	1100000	1670000
	400	78	345	245	5	5	**NU 338**	NJ	NUP	N	NF	975000	1260000
	400	132	-	245	5	5	**NU 2338**	NJ	NUP	-	-	1440000	2070000
200	310	51	281	229	2.1	2.1	**NU 1040**	-	-	N	-	375000	555000
	360	58	316	244	4	4	**NU 240**	NJ	NUP	N	NF	615000	865000
	360	58	-	243	4	4	**NU 240E**	NJ	NUP	-	-	765000	1060000
	360	98	-	244	4	4	**NU 2240**	NJ	NUP	-	-	920000	1440000
	360	98	-	241	4	4	**NU 2240E**	NJ	NUP	-	-	1210000	1870000
	420	80	360	260	5	5	**NU 340**	NJ	NUP	N	NF	975000	1270000
	420	138	-	260	5	5	**NU 2340**	NJ	NUP	-	-	1440000	2090000
220	340	56	310	250	3	3	**NU 1044**	-	-	N	-	480000	715000
	400	65	350	270	4	4	**NU 244**	NJ	NUP	N	NF	760000	1080000
	400	108	-	270	4	4	**NU 2244**	NJ	NUP	-	-	1130000	1810000
	460	88	396	284	5	5	**NU 344**	NJ	NUP	N	NF	1200000	1570000
240	360	56	330	270	3	3	**NU 1048**	-	-	N	-	500000	755000
	440	72	385	295	4	4	**NU 248**	NJ	NUP	N	NF	935000	1340000

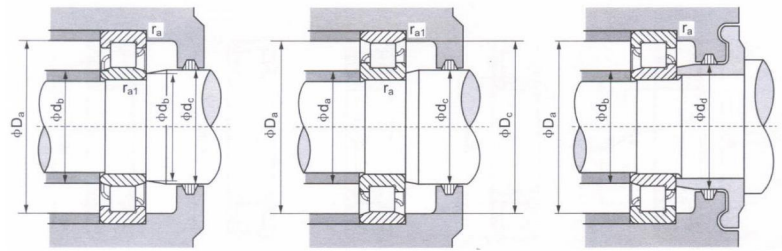


Limiting speed		Abutment and fillet Dimensions (mm)										Ref.Weight (kg) NU
Grease	Oil	d_a (min)	d_b (min)	d_b (max)	d_c (min)	d_d (min)	d_a (max)	d_b (max)	d_b (min)	r_a (max)	r_{a1} (max)	
1600	1900	178	178	200	211	228	322	322	304	3	3	31.2
1700	2000	-	178	200	211	228	322	-	-	3	3	34.1
1500	1800	-	178	200	211	228	322	-	-	3	3	52.5
1600	1900	-	178	200	211	228	322	-	-	3	3	57.2
2200	2800	181	182	190	197	-	248	249	237	2	2	8.02
1800	2200	188	188	204	211	223	292	292	284	3	3	17.9
1900	2300	-	188	204	211	223	292	-	-	3	3	19.3
1800	2200	-	188	204	211	223	292	-	-	3	3	29.6
1900	2300	-	188	204	211	223	292	-	-	3	3	31.9
1600	1800	188	188	216	223	241	342	342	314	3	3	37.1
1400	1700	-	188	216	223	241	342	-	-	3	3	62.7
2100	2600	191	192	203	209	-	268	269	256	2	2	10.8
1700	2000	198	198	214	221	233	302	302	294	3	3	19.3
1800	2200	-	198	214	221	233	302	-	-	3	3	20.5
1700	2000	-	198	214	221	233	302	-	-	3	3	30.4
1800	2200	-	198	214	221	233	302	-	-	3	3	34.5
1500	1800	198	198	227	235	255	362	362	332	3	3	42.8
1300	1600	-	198	227	235	255	362	-	-	3	3	73.1
2000	2600	201	202	213	219	-	278	279	266	2	2	11.2
1600	1900	208	208	227	234	247	322	322	311	3	3	22.6
1700	2000	-	208	227	234	247	322	-	-	3	3	26.0
1600	1900	-	208	227	234	247	322	-	-	3	3	37.5
1700	2000	-	208	227	234	247	322	-	-	3	3	45.2
1400	1700	212	212	240	248	268	378	378	349	4	4	49.4
1200	1500	-	212	240	248	268	378	-	-	4	4	85.0
1900	2400	211	212	226	233	-	298	299	283	2	2	14.4
1500	1800	218	218	240	247	261	342	342	328	3	3	26.8
1600	1900	-	218	240	247	261	342	-	-	3	3	29.5
1500	1800	-	218	240	247	261	342	-	-	3	3	45.4
1500	1700	-	218	240	247	261	342	-	-	3	3	52.3
1300	1600	222	222	254	263	283	398	398	364	4	4	55.8
1100	1400	-	222	254	263	283	398	-	-	4	4	96.8
1800	2300	233	234	248	254	-	326	327	311	2.5	2.5	18.8
1500	1700	238	238	266	273	289	382	382	362	3	3	37.8
1400	1700	-	238	266	273	289	382	-	-	3	3	61.8
1200	1500	242	242	279	287	307	438	438	400	4	4	73.6
1700	2100	253	254	268	275	-	346	347	331	2.5	2.5	20.4
1400	1600	258	258	293	298	316	422	422	397	3	3	51.1

Bore diameter d: 240~500mm

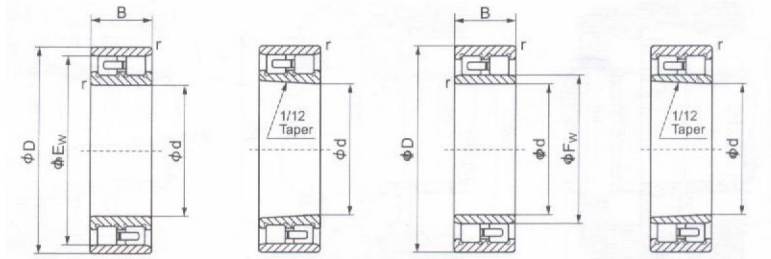


Principal dimensions (mm)							Designation					Basic load rating	
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	Dynamic Cr(N)	Static Cor(N)
240	440	120	-	295	4	4	**NU 2248**	NJ	NUP	-	-	1430000	2320000
	500	95	430	310	5	5	**NU 348**	NJ	NUP	N	NF	1430000	1950000
260	400	65	364	296	4	4	**NU 1052**	-	-	N	-	620000	955000
	480	80	420	320	5	5	**NU 252**	NJ	NUP	N	NF	1140000	1660000
	480	130	-	320	5	5	**NU 2252**	NJ	NUP	-	-	1780000	2930000
	540	102	464	336	6	6	**NU 352**	NJ	NUP	N	NF	1620000	2230000
280	420	65	384	316	4	4	**NU 1056**	-	-	N	-	630000	1000000
	500	80	440	340	5	5	**NU 256**	NJ	NUP	N	NF	1140000	1680000
300	460	74	420	340	4	4	**NU 1060**	-	-	N	-	845000	1340000
	540	85	476	364	5	5	**NU 260**	NJ	NUP	N	NF	1400000	2070000
320	480	74	440	360	4	4	**NU 1064**	-	-	N	-	870000	1410000
	580	92	510	390	5	5	**NU 264**	NJ	NUP	N	NF	1600000	2390000
340	520	82	475	385	5	5	**NU 1068**	-	-	N	-	1050000	1670000
360	540	82	495	405	5	5	**NU 1072**	-	-	N	-	1070000	1750000
380	560	82	515	425	5	5	**NU 1076**	-	-	N	-	1100000	1840000
400	600	90	550	450	5	5	**NU 1080**	-	-	N	-	1350000	2280000
420	620	90	570	470	5	5	**NU 1084**	-	-	N	-	1390000	2380000
440	650	94	597	493	6	6	**NU 1088**	-	-	N	-	1530000	2430000
460	680	100	624	516	6	6	**NU 1092**	-	-	N	-	1630000	2630000
480	700	100	644	536	6	6	**NU 1096**	-	-	N	-	1590000	2750000
500	720	100	664	556	6	6	**NU 10/500**	-	-	N	-	1700000	2870000



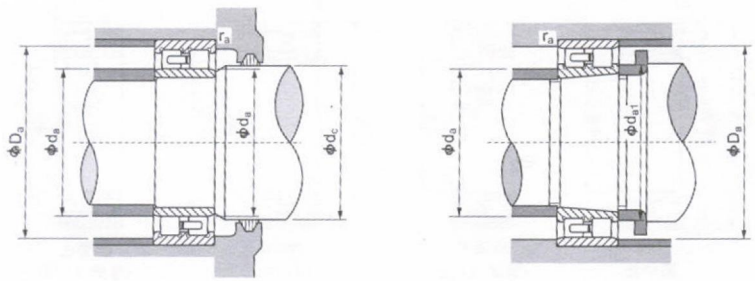
Limiting speed		Abutment and fillet Dimensions (mm)										Ref.Weight (kg) NU
Grease	Oil	d_a (min)	d_b (min)	d_b (max)	d_c (min)	d_d (min)	d_a (max)	d_b (max)	d_b (min)	r_a (max)	r_{a1} (max)	
1300	1600	-	258	293	298	316	422	-	-	3	3	83.5
1100	1300	262	262	305	313	333	478	478	434	4	4	93.0
1600	1800	278	278	292	300	-	382	382	365	3	3	29.6
1300	1500	282	282	318	323	343	458	458	432	4	4	69.0
1100	1300	-	282	318	323	343	458	458	-	4	4	106
1000	1200	288	288	331	339	359	512	512	468	5	5	117
1500	1700	298	298	313	320	-	402	402	385	3	3	33.0
1200	1400	302	302	336	343	365	478	478	452	4	4	71.5
1400	1500	318	318	337	344	-	442	442	421	3	3	44.7
1100	1300	322	322	361	368	392	518	518	487	4	4	88.9
1300	1400	338	338	356	365	-	462	462	441	3	3	49.3
1000	1200	342	342	386	393	419	558	558	522	4	4	113
1200	1300	362	362	381	390	-	498	498	476	4	4	65.9
1100	1250	382	382	401	410	-	518	518	496	4	4	68.8
1000	1200	402	402	421	430	-	538	538	516	4	4	72.3
950	1100	422	422	446	455	-	578	578	551	4	4	92.5
900	1100	422	422	466	475	-	598	598	571	4	4	97.6
850	1050	468	468	489	498	-	622	622	598	5	5	112
800	1000	488	488	512	520	-	652	652	625	5	5	130
780	950	508	508	532	541	-	672	672	645	5	5	135
750	900	528	528	552	561	-	692	692	665	5	5	140

Bore diameter d: 25~180mm



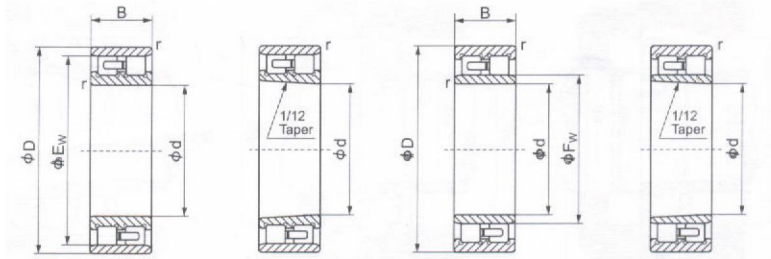
NN cylindrical bore | taper bore (Taper：1/12) | NNU cylindrical bore | taper bore (Taper：1/12)

Principal dimensions (mm)						Designation		Basic load rating	
d	D	B	Ew	Fw	r (min)	cylindrical bore	taper bore	Dynamic Cr(N)	Static Cor(N)
25	47	16	41.3		0.6	**NN3005**	**NN3005K**	25700	30000
30	55	19	48.5		1	**NN3006**	**NN3006K**	30500	37000
35	62	20	55		1	**NN3007**	**NN3007K**	39000	50000
40	68	21	61		1	**NN3008**	**NN3008K**	43000	55500
45	75	23	67.5		1	**NN3009**	**NN3009K**	49500	65500
50	80	23	72.5		1	**NN3010**	**NN3010K**	52500	72500
55	90	26	81		1.1	**NN3011**	**NN3011K**	69000	96500
60	95	26	86.5		1.1	**NN3012**	**NN3012K**	73000	106000
65	100	26	91		1.1	**NN3013**	**NN3013K**	76500	116000
70	110	30	100		1.1	**NN3014**	**NN3014K**	97000	148000
75	115	30	105		1.1	**NN3015**	**NN3015K**	96000	149000
80	125	34	113		1.1	**NN3016**	**NN3016K**	118000	186000
85	130	34	118		1.1	**NN3017**	**NN3017K**	125000	201000
90	140	37	127		1.5	**NN3018**	**NN3018K**	142000	228000
95	145	37	132		1.5	**NN3019**	**NN3019K**	150000	246000
100	140	40	-	113	1.1	**NNU4920**	**NNU4920K**	155000	305000
	150	37	137	-	1.5	**NN3020**	**NN3020K**	156000	265000
105	145	40	-	118	1.1	**NNU4921**	**NNU4921K**	161000	325000
	160	41	146	-	2	**NN3021**	**NN3021K**	197000	320000
110	150	40	-	123	1.1	**NNU4922**	**NNU4922K**	165000	335000
	170	45	155	-	2	**NN3022**	**NN3022K**	227000	375000
120	165	45	-	134.5	1.1	**NNU4924**	**NNU4924K**	183000	360000
	180	46	165	-	2	**NN3024**	**NN3024K**	238000	405000
130	180	50	-	146	1.5	**NNU4926**	**NNU4926K**	275000	565000
	200	52	182	-	2	**NU3026**	**NU3026K**	283000	475000
140	190	50	-	156	1.5	**NNU4928**	**NNU4928K**	281000	585000
	210	53	192	-	2	**NU3028**	**NU3028K**	297000	515000
150	210	60	-	168.5	2	**NNU4930**	**NNU4930K**	350000	715000
	225	56	206	-	2.1	**NU3030**	**NU3030K**	335000	585000
160	220	60	-	178.5	2	**NNU4932**	**NNU4932K**	365000	760000
	240	60	219	-	2.1	**NU3032**	**NU3032K**	370000	660000
170	230	60	-	188.5	2	**NNU4934**	**NNU4934K**	375000	805000
	260	67	236	-	2.1	**NU3034**	**NU3034K**	450000	805000
180	250	69	-	202	2	**NNU4936**	**NNU4936K**	480000	1020000



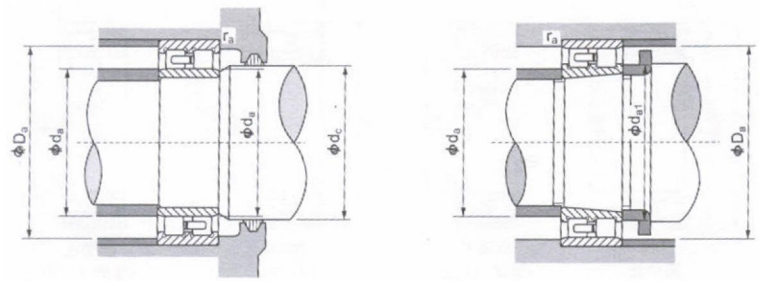
Limiting speed		Abutment and fillet Dimensions (mm)							Ref.Weight (kg)
Grease	Oil	da (min)	da (max)	d_{a1} (min)	d_c (min)	Da (max)	Da (min)	r_a (max)	
15000	17000	30		30		42	41.8	0.6	0.123
12000	15000	36		37		49	49	1	0.199
11000	13000	41		42		56	56	1	0.258
9800	11000	46		48		62	62	1	0.312
8800	10000	51		52		69	69	1	0.405
8200	9600	56		58		74	74	1	0.454
7300	8600	62		64		83	82	1	0.651
6800	8000	67		68		88	87	1	0.704
6400	7600	72		74		93	92	1	0.758
5700	6800	77		78		103	101	1	1.04
5500	6400	82		84		108	106	1	1.14
5000	6000	87		90		118	114	1	1.52
4800	5600	92		96		123	119	1	1.61
4500	5200	98.5		100		131.5	129	1.5	2.07
4300	5000	103.5		106		136.5	134	1.5	2.17
4200	5000	106.5	111	110	115	133.5	-	1	1.77
4000	4700	108.5	-	112	-	141.5	139	1.5	2.26
4000	4800	111.5	116	115	120	138.5	-	1	1.85
3800	4400	115	-	116	-	150	148	2	2.89
3900	4600	116.5	121	120	125	143.5	-	1	1.93
3600	4200	120	-	122	-	160	157	2	3.68
3500	4200	126.5	133	130	137	158.5	-	1	2.65
3300	3900	130	-	132	-	170	167	2	3.98
3200	3800	138	144	142	148	172	-	1.5	3.55
3000	3500	140	-	144	-	190	183	2	5.92
3000	3600	148	154	151	158	182	-	1.5	3.80
2800	3300	150	-	154	-	200	194	2	6.44
2700	3300	159	166	162	171	201	-	2	5.95
2600	3100	162	-	164	-	213	082	2	7.81
2600	3100	169	176	172	182	211	-	2	6.25
2500	2900	172	-	174	-	228	221	2	8.92
2400	2900	179	186	182	192	221	-	2	6.60
2300	2700	182	-	184	-	248	238	2	12.6
2200	2700	189	199	194	205	241	-	2	9.50

Bore diameter d: 180~320mm



NN cylindrical bore | taper bore (Taper：1/12) | NNU cylindrical bore | taper bore (Taper：1/12)

Principal dimensions (mm)						Designation		Basic load rating	
d	D	B	Ew	Fw	r (min)	cylindrical bore	taper bore	Dynamic Cr(N)	Static Cor(N)
180	280	74	255		2.1	**NN3036**	**NN3036K**	560000	995000
190	260	69	-	212	2	**NNU4938**	**NNU4938K**	485000	1060000
	290	75	265	-	2.1	**NN3038**	**NN3038K**	590000	1080000
200	280	80	-	225	2.1	**NNU4940**	**NNU4940K**	570000	1220000
	310	82	282	-	2.1	**NN3040**	**NN3040K**	650000	1170000
220	300	80	-	245	2.1	**NNU4944**	**NNU4944K**	595000	1330000
	340	90	310	-	3	**NN3044**	**NN3044K**	810000	1480000
240	320	80	-	265	2.1	**NNU4948**	**NNU4948K**	610000	1410000
	360	92	330	-	3	**NN3048**	**NN3048K**	850000	1600000
260	360	100	-	292	2.1	**NNU4952**	**NNU4952K**	925000	2100000
	400	104	364	-	4	**NN3052**	**NN3052K**	1080000	2070000
280	380	100	-	312	2.1	**NNU4956**	**NNU4956K**	950000	2230000
	420	106	384	-	4	**NN3056**	**NN3056K**	1080000	2080000
300	420	118	-	339	3	**NNU4960**	**NNU4960K**	1220000	2880000
	460	118	418	-	4	**NN3060**	**NN3060K**	1430000	2740000
320	440	118	-	359	3	**NNU4964**	**NNU4964K**	1270000	3050000
	480	121	438	-	4	**NN3064**	**NN3064K**	1430000	2750000



Limiting speed		Abutment and fillet Dimensions (mm)							Ref.Weight (kg)
Grease	Oil	da (min)	da (max)	d_{a1} (min)	d_c (min)	Da (max)	Da (min)	r_a (max)	
2100	2500	192	-	196	-	268	257	2	16.6
2100	2600	199	209	204	215	251	-	2	10.0
2000	2400	202	-	206	-	278	267	2	17.5
2000	2400	211	222	214	228	269	-	2	10.1
1900	2200	212	-	216	-	298	285	2	21.6
1800	2200	231	242	234	248	289	-	2	15.5
1700	2000	234	-	238	-	326	313	2.5	28.4
1700	2000	251	262	254	269	309	-	2	17.0
1600	1900	254	-	256	-	346	333	2.5	31.8
1500	1800	271	288	276	296	349	-	2	28.3
1400	1700	278	-	280	-	382	367	3	46.0
1400	1700	291	308	296	316	369	-	2.5	30.3
1300	1600	298	-	300	-	402	387	3	49.6
1300	1500	313	335	320	343	407	-	2.5	46.7
1200	1400	318	-	325	-	442	421	3	68.7
1200	1400	333	335	340	363	427	-	2.5	49.6
1200	1400	338	-	345	-	462	442	3	74.0