



Cylindrical Roller Bearings

1. Structure and Characteristics







Since the rollers of the cylindrical roller bearings make line contact with the raceways, these bearings can support heavy radial loads and are suitable for high speed operation.

Assembly and disassembly are comparatively easy even if the inner or outer ring requires a shrink fit, as the bearing is a separation type.

Cylindrical roller bearings are classified as single row, double row and four row type, according to how many rollers are used, and there are models as shown in **Table 1 to 3**.

Although designed as a thin wall type, the SL Model double row cylindrical roller bearing can support enormous radial and impact loads. **Table 4** lists the configurations available.

Table 1 Model and characteristics of the single row cylindrical roller bearings

Model code	Drawing	Characteristics
Model NU Model N	 Model NU  Model N	<ul style="list-style-type: none"> Model NU has ribs on the outer ring and the inner ring can be separated from "the arranged set of outer ring, rollers and cage". Model N has ribs on the inner ring and the outer ring can be separated from "the arranged set of inner ring, rollers and cage". This bearing cannot support axial loads. The most suitable model widely used as the free end bearing.
Model NJ Model NF	 Model NJ  Model NF	<ul style="list-style-type: none"> Model NJ has ribs on the outer ring and a rib on the inner ring. Model NF has a rib on the outer ring and ribs on the inner ring. These bearings support axial loads in one direction only. There may be a case to use two bearings adjacent when they are used regardless of the fixed end or free end.
Model NUP Model NH (NJ+HJ)	 Model NUP  Model NH	<ul style="list-style-type: none"> Model NUP has a rib ring added on the side of the inner ring where it did not have a rib. Model NJ with the added ring rib of Model L is Model NH. The inner ring should be fixed along the axial direction since each ring rib will be separated. These bearings support axial loads in either direction. There may be a case to use as the fixed end bearing.

Note: Model E provides higher load capacity designed with increased diameter, length and numbers of rollers but the boundary dimensions are same as the standard type bearings.

Table 2 Model and characteristics of the double row cylindrical roller bearings

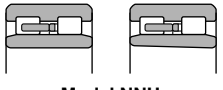
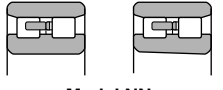
Model code	Drawing	Characteristics
Model NNU Model NN	 Model NNU Cylindrical hole Tapered hole  Model NN Cylindrical hole Tapered hole	<ul style="list-style-type: none"> These bearings are used in the main shaft of machine tools, rolling mill rolls and printing machine plate cylinders where thin walled bearings are needed. To use the bearing in the main shaft of machine tools, adjust the radial internal clearance by inserting a tapered inner ring to the tapered shaft.

Table 3 Models and characters of four row cylindrical roller bearings

Drawing	Characteristics
<p>Refer to the drawings.</p> <p>Drawing numbers are listed in the dimensions table.</p>	<ul style="list-style-type: none"> The bearing is mainly used for the roll neck of a rolling mill, and is designed so as to handle the maximum rating load for the allowable space in the roll neck part. Carbonized steel may be used to provide better resistance to cracking or impact to the inner ring. Consult NTN Engineering about the fitting and bearing internal clearance when the bearing is used for the preparing roll of a rolling mill. NTN provides bearings with special configurations: with tapered shaft holes; for high speed use; designed to prevent creeping; and, with dust and waterproof seals.

Remarks

Drawings from **A** to **E** show the long cylindrical rollers and the machined cage. **D**rawings from **F** to **G** show the hollow rollers and the pin type cage.

Suffix to the drawing number

M: Bearings which outer ring lubrication port is equipped with a fitting nozzle for oil mist.

R: Inner ring has a helical groove on its inner surface.

S: Special specifications.

Note 1) The bearing has lubricant grooves on both sides of the inner rings.
 2) The bearing has lubricant grooves on one of the inner rings.
 3) The bearing has lubricant grooves on one of the outer rings.
 4) No lubricant groove and hole is designed on the outer ring spacer.

Drawings

Table 4 Model and Characteristics of the Model SL cylindrical roller bearings

Model	Characteristics
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Open type</p> <p style="text-align: center;">Model SL01</p> <p style="text-align: center;">Model SL02</p>	<ul style="list-style-type: none"> Fixed end is Model SL01, free end is Model SL02. Since the outer ring is split in the circumference direction using a special method and fixed as a unit after mounting rollers, the bearing side face should be securely fixed using the shaft or housing shoulder in the axial direction. Outer ring has an oil groove and port. Model SL01 can support axial loads from both directions via rollers. Shoulder dimensions of shaft and bearings generally applies D_a and d_a dimensions in the dimensions table, but J and K dimensions are used when the moment or large axial loads are applied.
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Enclosed type</p> <p style="text-align: center;">Model SL04</p>	<ul style="list-style-type: none"> Model SL04 only with the fixed side. Since the inner ring is split in the circumference direction using a special method and fixed as a unit after mounting rollers, the bearing side face should be securely fixed by using the shaft or housing shoulder in the axial direction. Inner ring has an oil groove and port. Model SL04 can support radial and axial loads in either directions. A sealed bearing prelubricated with grease, the outer ring is fitted with a locating snap ring, making it easy to handle and appropriate for sheaves and other applications. Surface coating is added for rust prevention.

Note: We also provide 3-row, 4-row and 5-row bearings for the Model SL cylindrical roller bearing. Consult NTN Engineering for further details.

2. Dimensional Accuracy/Rotation Accuracy

Refer to Table 3.3 (Page A-12,13)

3. Recommended Fitting

Refer to Table 4.2 (Page A-24)

4. Bearing Internal Clearance

Refer to Table 5.5 and 5.6 (Page A-31, 32, 33)

5. Permissible slant angle

It varies according to the bearing type and internal specifications, the values in the table below are widely used to avoid edge loads under general load conditions.

When the width series is 0 or 10.001 rad (3.5°)
 When the width series is 20.0005 rad (1.5°)
 Double row cylindrical roller bearing ① ...0.0005 rad (1.5°)

① This is not applied to high accuracy bearings which are used as the main shaft of machine tools.

Table 5 Tolerance of inscribed circle diameter F_w of rollers and circumscribed circle diameter E_w of rollers for compatible bearings.

d mm		ΔF_w		ΔE_w	
over	Incl	high	low	low	high
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	0	- 45
500	630	+ 70	0	0	- 70
630	800	+ 80	0	0	- 80
800	1,000	+ 90	0	0	- 90
1,000	1,250	+105	0	0	-105
1,250	1,400	+125	0	0	-125

ΔF_w : Dimensional difference of inscribed circle diameter of rollers. ②
 ΔE_w : Dimensional difference of circumscribed circle diameter of rollers. ②
 ② Regulation range of JIS is $d \leq 500\text{mm}$ for ΔF_w , and $d \leq 400\text{mm}$ for ΔE_w .

Table 6 Radial internal clearance of Model SL cylindrical roller bearing.

Nominal bore diameter d mm		CN (Normal)		C 3		C 4	
over	Incl	min	max	min	max	min	max
30	50	20	75	40	95	55	110
50	80	30	90	55	115	75	135
80	120	35	105	80	150	105	175
120	180	60	150	110	200	150	240
180	250	90	190	155	255	205	305
250	315	110	225	195	310	255	370
315	400	140	265	245	370	320	445
400	500	180	320	300	440	395	535

6. Radial internal clearance of the Model SL cylindrical roller bearings.

Table 6 lists the radial internal clearance values of the Model SL cylindrical roller bearings.

7. Recommended fit of the Model SL cylindrical roller bearings, and selection of the radial internal clearance.

Table 7 lists the recommended fit for outer ring rotation such as sheaves and wheels, Table 8 lists the relation between the fitting and the radial internal clearance.

For assembling and disassembling the bearing, it is necessary to evenly load around the circumference of the raceway end on the fitting side.

8. General Operating Cautions

Slippage between the rollers and raceways may occur when bearings are operated under small loads (about $F_r \leq 0.04C_{or}$) and may cause smearing. This is most apparent when using large size cylindrical roller bearings due to the large cage mass. Please consult NTN Engineering for further details.

Table 7 Recommended fit

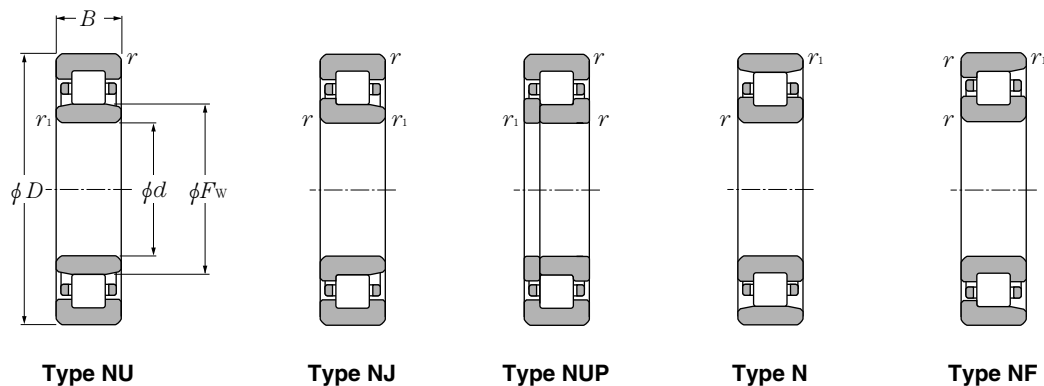
Conditions		Tolerance range class of shaft	Tolerance range class of housing
Outer ring rotating load	Heavy load with a thin walled housing.	g6 or h6	P7
	Normal load, heavy load		N7 ③
	Light load, changing load		M7

③ Be sure to use N7 for sheaves.

Table 8 Relation between fit and radial internal clearance.

		Housing fit													
		G7	H6	J6	J7	K6	K7	g6	M6	M7	N6	N7	P6	P7	
Shaft fit	g6														
	h6														
	j5														
	j6														
	k5														
	k6														
	m5														
	m6														
	n5														
	n6														
p6															

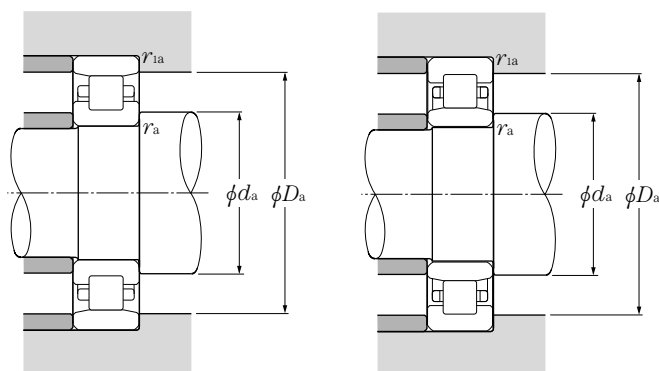
Note: When the shaft fit is g6, housing fit is N7(N6) and used at low speed (for sheaves), apply CN(normal) clearance.



d 100~120mm

d	Boundary dimensions				dynamic kN	Basic load ratings			Bearing numbers	Dimensions mm
	mm					static	dynamic	static		
	D	B	r _{s min} ^①	r _{1s min} ^①	C _r	C _{or}	C _r	C _{or}	type NU	F _w
							kgf			
100	140	20	1.1	1	70.0	98.0	7,100	10,000	NU1920	110
	150	24	1.5	1.1	93.0	126	9,500	12,800	NU1020	113
	180	34	2.1	2.1	183	217	18,600	22,200	NU220	120
	180	34	2.1	2.1	249	305	25,400	31,000	NU220E	119
	180	46	2.1	2.1	258	340	26,300	34,500	NU2220	120
	180	46	2.1	2.1	335	445	34,000	45,500	NU2220E	119
	215	47	3	3	299	335	30,500	34,500	NU320	129.5
	215	47	3	3	380	425	38,500	43,500	NU320E	127.5
	215	73	3	3	410	505	42,000	51,500	NU2320	129.5
	215	73	3	3	570	715	58,000	73,000	NU2320E	127.5
105	160	26	2	1.1	105	142	10,700	14,500	NU1021	119.5
	190	36	2.1	2.1	201	241	20,500	24,600	NU221	126.8
	190	65.1	2.1	2.1	360	505	36,500	51,500	NU3221	126.8
	225	49	3	3	320	360	32,500	36,500	NU321	135
110	150	20	1.1	1	72.5	106	7,400	10,800	NU1922	120
	170	28	2	1.1	131	174	13,400	17,700	NU1022	125
	200	38	2.1	2.1	240	290	24,500	29,500	NU222	132.5
	200	38	2.1	2.1	293	365	29,800	37,000	NU222E	132.5
	200	53	2.1	2.1	320	415	32,500	42,000	NU2222	132.5
	200	53	2.1	2.1	385	515	39,000	52,500	NU2222E	132.5
	200	69.8	2.1	2.1	425	605	43,500	62,000	NU3222	132.5
	240	50	3	3	360	400	36,500	41,000	NU322	143
	240	50	3	3	450	525	46,000	53,500	NU322E	143
	240	80	3	3	605	790	61,500	80,500	NU2322	143
	240	80	3	3	675	880	69,000	89,500	NU2322E	143
240	92.1	3	3	715	985	73,000	100,000	NU3322A	143	
120	165	22	1.1	1	89.5	134	9,150	13,700	NU1924	132
	165	27	1.1	1	116	188	11,900	19,100	NU2924	132
	180	28	2	1.1	139	191	14,100	19,500	NU1024	135
	215	40	2.1	2.1	260	320	26,500	32,500	NU224	143.5
	215	40	2.1	2.1	335	420	34,000	43,000	NU224E	143.5
	215	58	2.1	2.1	350	460	35,500	47,000	NU2224	143.5
	215	58	2.1	2.1	450	620	46,000	63,000	NU2224E	143.5
	215	76	2.1	2.1	540	815	55,000	83,000	NU3224	143.5
	260	55	3	3	450	510	46,000	52,000	NU324	154
	260	55	3	3	530	610	54,000	62,000	NU324E	154

① Minimal allowable dimension for chamfer dimension r or r₁.



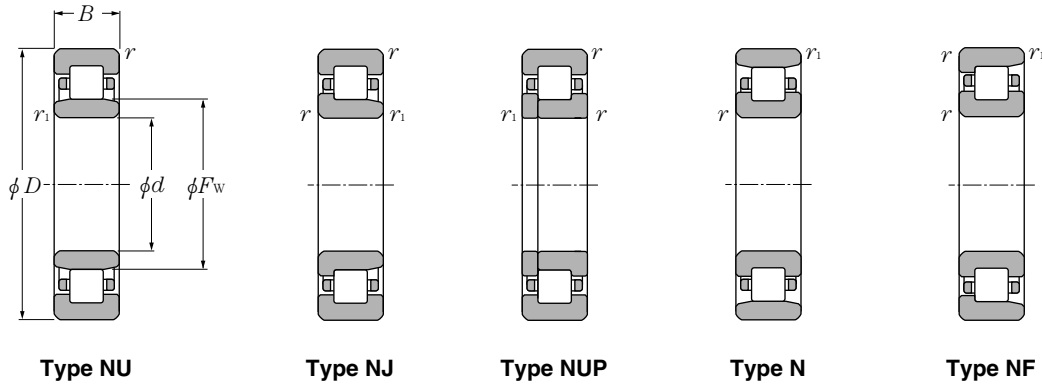
Type N

Type NU

Equivalent bearing load
dynamic
 $P_r = F_r$
static
 $P_{or} = F_r$

Abutment and fillet dimensions				Mass
d_a	D_a	r_{as}	r_{ias}	kg
min	max	max	max	type NU (approx.)
105	133.5	1	1	1.01
106.5	142	1.5	1	1.45
111	169	2	2	3.33
111	169	2	2	3.66
111	169	2	2	4.57
111	169	2	2	5.01
113	202	2.5	2.5	7.49
113	202	2.5	2.5	8.57
113	202	2.5	2.5	11.7
113	202	2.5	2.5	12.8
111.5	151	2	1	1.84
116	179	2	2	3.95
116	179	2	2	8.25
118	212	2.5	2.5	8.53
115	143.5	1	1	1.09
116.5	161	2	1	2.33
121	189	2	2	4.63
121	189	2	2	4.27
121	189	2	2	6.56
121	189	2	2	7.4
121	189	2	2	9.85
123	227	2.5	2.5	10
123	227	2.5	2.5	11.1
123	227	2.5	2.5	17.1
123	227	2.5	2.5	19.4
123	227	2.5	2.5	20.2
125	158.5	1	1	1.48
125	158.5	1	1	1.81
126.5	171	2	1	2.44
131	204	2	2	5.57
131	204	2	2	5.97
131	204	2	2	8.19
131	204	2	2	9.18
131	204	2	2	12.2
133	247	2.5	2.5	12.8
133	247	2.5	2.5	13.9

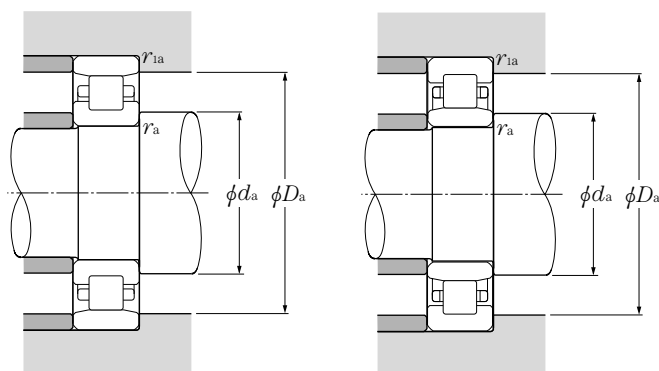




d 120~150mm

d	Boundary dimensions				dynamic kN	Basic load ratings			Bearing numbers	Dimensions mm
	D	B	$r_{s\ min}$ ^①	$r_{is\ min}$ ^①		static	dynamic	static		
	mm						kgf		type	
					C_r	C_{or}	C_r	C_{or}	NU	F_w
120	260	86	3	3	710	920	72,500	93,500	NU2324	154
	260	86	3	3	795	1,030	81,000	105,000	NU2324E	154
	260	106	3	3	845	1,150	86,000	117,000	NU3324	154
130	180	24	1.5	1.1	106	161	10,800	16,400	NU1926	143
	180	30	1.5	1.1	149	248	15,200	25,300	NU2926	143
	200	33	2	1.1	172	238	17,500	24,200	NU1026	148
	230	40	3	3	270	340	27,600	35,000	NU226	156
	230	40	3	3	365	455	37,000	46,000	NU226E	153.5
	230	64	3	3	380	530	38,500	54,000	NU2226	156
	230	64	3	3	530	735	54,000	75,000	NU2226E	153.5
	230	80	3	3	600	955	61,000	97,500	NU3226	156
	280	58	4	4	560	665	57,000	68,000	NU326	167
	280	58	4	4	615	735	63,000	75,000	NU326E	167
	280	93	4	4	840	1,130	85,500	115,000	NU2326	167
	280	93	4	4	920	1,230	94,000	126,000	NU2326E	167
280	112	4	4	975	1,360	99,500	139,000	NU3326	167	
140	190	30	1.5	1.1	151	258	15,400	26,300	NU2928	153
	210	33	2	1.1	176	250	17,900	25,500	NU1028	158
	210	53	2	2	350	585	36,000	60,000	NU3028	158
	250	42	3	3	310	400	31,500	40,500	NU228	169
	250	42	3	3	395	515	40,000	52,500	NU228E	169
	250	68	3	3	445	635	45,500	64,500	NU2228	169
	250	68	3	3	575	835	58,500	85,000	NU2228E	169
	250	88	3	3	695	1,120	70,500	114,000	NU3228	169
	300	62	4	4	615	745	63,000	76,000	NU328	180
	300	62	4	4	665	795	67,500	81,500	NU328E	180
	300	102	4	4	920	1,250	94,000	127,000	NU2328	180
300	102	4	4	1,020	1,380	104,000	141,000	NU2328E	180	
150	210	28	2	1.1	147	219	15,000	22,300	NU1930	165
	210	36	2	1.1	204	335	20,800	34,000	NU2930	165
	225	35	2.1	1.5	202	294	20,600	29,900	NU1030	169.5
	270	45	3	3	345	435	35,000	44,500	NU230	182
	270	45	3	3	450	595	45,500	60,500	NU230E	182
	270	73	3	3	500	710	51,000	72,500	NU2230	182
	270	73	3	3	660	980	67,500	100,000	NU2230E	182
	270	96	3	3	800	1,300	81,500	132,000	NU3230	182

① Minimal allowable dimension for chamfer dimension r or r_1 .



Type N

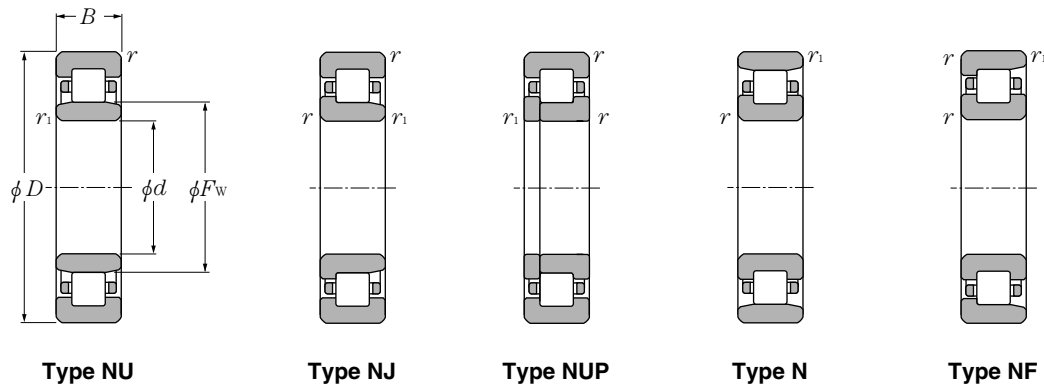
Type NU

Equivalent bearing load
dynamic
 $P_r = F_r$
static
 $P_{or} = F_r$

Abutment and fillet dimensions				Mass
mm				kg
d_a	D_a	r_{as}	r_{1as}	type NU
min	max	max	max	(approx.)

133	247	2.5	2.5	21.5
133	247	2.5	2.5	26.1
133	247	2.5	2.5	27.1
<hr/>				
136.5	172	1.5	1	1.95
136.5	172	1.5	1	2.44
136.5	191	2	1	3.69
143	217	2.5	2.5	6.3
143	217	2.5	2.5	6.9
143	217	2.5	2.5	10.2
143	217	2.5	2.5	11.8
143	217	2.5	2.5	14.6
146	264	3	3	17.4
146	264	3	3	19.4
146	264	3	3	26.9
146	264	3	3	30.9
146	264	3	3	33.1
<hr/>				
146.5	182	1.5	1	2.59
146.5	201	2	1	4.05
149	201	2	2	6.8
153	237	2.5	2.5	7.88
153	237	2.5	2.5	8.73
153	237	2.5	2.5	12.9
153	237	2.5	2.5	15.8
153	237	2.5	2.5	19.1
156	284	3	3	21.2
156	284	3	3	23.2
156	284	3	3	33.8
156	284	3	3	38.7
<hr/>				
156.5	201	2	1	3.17
156.5	201	2	1	4.08
158	214	2	1.5	4.77
163	257	2.5	2.5	9.92
163	257	2.5	2.5	11
163	257	2.5	2.5	16.3
163	257	2.5	2.5	19.7
163	257	2.5	2.5	24.5

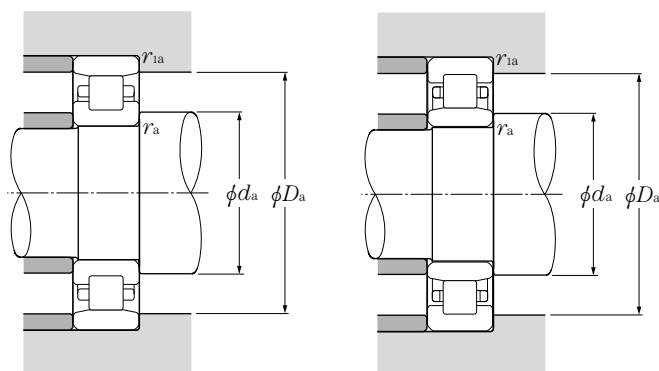




d 150~180mm

d	Boundary dimensions				dynamic kN	Basic load ratings			bearing numbers	Dimensions mm
	D	B	$r_{s\ min}$ ^①	$r_{is\ min}$ ^①		static	dynamic	static		
	mm					kgf			type	
					C_r	C_{or}	C_r	C_{or}	NU	F_w
150	320	65	4	4	665	805	67,500	82,500	NU330	193
	320	65	4	4	760	920	77,500	94,000	NU330E	193
	320	108	4	4	1,020	1,400	104,000	143,000	NU2330	193
	320	108	4	4	1,160	1,600	118,000	163,000	NU2330E	193
160	220	28	2	1.1	154	236	15,700	24,100	NU1932	175
	220	36	2	1.1	213	360	21,700	36,500	NU2932	175
	240	38	2.1	1.5	238	340	24,200	35,000	NU1032	180
	270	86	2.1	2.1	400	565	40,500	57,500	NU3132	189
	290	48	3	3	430	570	43,500	58,000	NU232	195
	290	48	3	3	500	665	51,000	68,000	NU232E	195
	290	80	3	3	630	940	64,500	96,000	NU2232	195
	290	80	3	3	810	1,190	82,500	121,000	NU2232E	193
	340	68	4	4	700	875	71,000	89,500	NU332	208
	340	68	4	4	860	1,050	87,500	107,000	NU332E	204
	340	114	4	4	1,070	1,520	109,000	155,000	NU2332	208
	340	114	4	4	1,310	1,820	134,000	186,000	NU2332E	204
170	230	28	2	1.1	160	254	16,300	25,900	NU1934	185
	230	36	2	1.1	222	385	22,600	39,500	NU2934	185
	260	42	2.1	2.1	278	400	28,300	41,000	NU1034	193
	310	52	4	4	475	635	48,500	65,000	NU234	208
	310	52	4	4	605	800	61,500	81,500	NU234E	207
	310	86	4	4	715	1,080	73,000	110,000	NU2234	208
	310	86	4	4	965	1,410	98,500	144,000	NU2234E	205
	310	110	4	4	1,020	1,690	104,000	172,000	NU3234	208
	360	72	4	4	795	1,010	81,500	103,000	NU334	220
	360	120	4	4	1,220	1,750	125,000	179,000	NU2334	220
180	250	33	2	1.1	215	335	21,900	34,000	NU1936	197
	250	42	2	1.1	293	495	29,900	50,500	NU2936	197
	280	46	2.1	2.1	340	485	35,000	49,500	NU1036	205
	280	74	2.1	2.1	610	1,030	62,000	105,000	NU3036	205
	320	52	4	4	495	675	50,500	69,000	NU236	218
	320	52	4	4	625	850	64,000	87,000	NU236E	217
	320	86	4	4	745	1,140	76,000	117,000	NU2236	218
	320	86	4	4	1,010	1,510	103,000	154,000	NU2236E	215
	320	112	4	4	1,010	1,700	103,000	174,000	NU3236	218
	380	75	4	4	905	1,150	92,000	118,000	NU336	232

① Minimal allowable dimension for chamfer dimension r or r_1 .



Type N

Type NU

Equivalent bearing load
dynamic
 $P_r = F_r$
static
 $P_{or} = F_r$

Abutment and fillet dimensions				Mass
mm				kg
d_a	D_a	r_{as}	r_{ias}	type NU
min	max	max	max	(approx.)

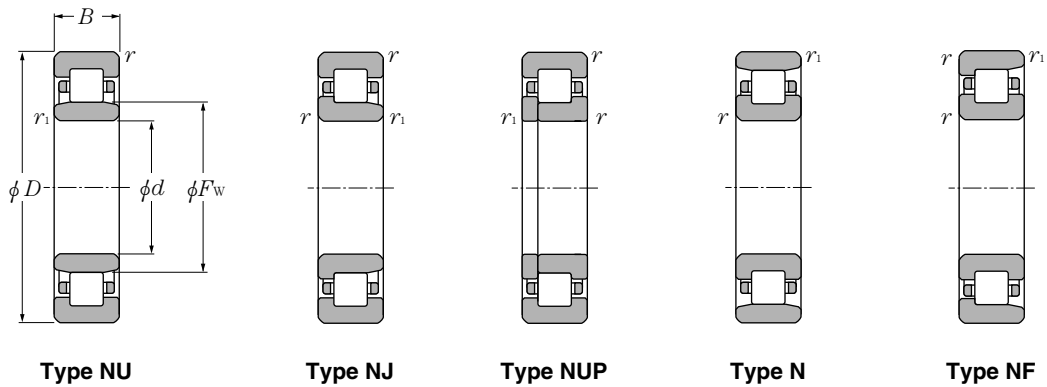
166	304	3	3	25.3
166	304	3	3	28.4
166	304	3	3	40.6
166	304	3	3	47.2

166.5	211	2	1	3.35
166.5	211	2	1	4.3
168	229	2	1.5	5.9
171	259	2	2	20.6
173	277	2.5	2.5	13.7
173	277	2.5	2.5	15.6
173	277	2.5	2.5	22
173	277	2.5	2.5	25.1
176	324	3	3	31.3
176	324	3	3	34
176	324	3	3	50.5
176	324	3	3	56

176.5	221	2	1	3.52
176.5	221	2	1	4.53
181	249	2	2	7.88
186	294	3	3	17
186	294	3	3	19.6
186	294	3	3	27.2
186	294	3	3	31
186	294	3	3	37.4
186	344	3	3	37
186	344	3	3	59.5

186.5	241	2	1	5.21
186.5	241	2	1	6.63
191	269	2	2	10.3
191	269	2	2	17.8
196	304	3	3	17.7
196	304	3	3	20.4
196	304	3	3	28.4
196	304	3	3	31.9
196	304	3	3	39.6
196	364	3	3	44.2

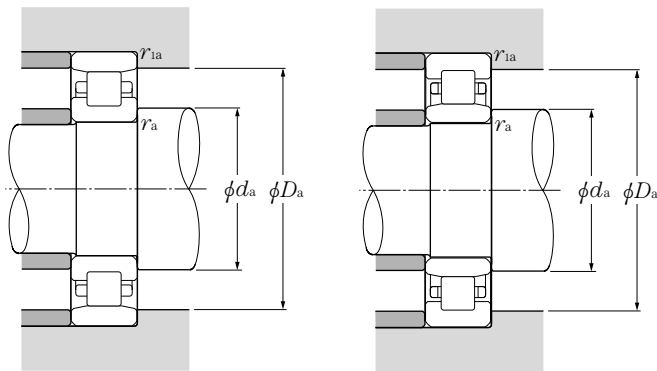




d 180~240mm

d	Boundary dimensions				dynamic kN	Basic load ratings			Bearing numbers	Dimensions mm
	D	B	$r_{s\ min}^{\text{①}}$	$r_{1s\ min}^{\text{①}}$		static	dynamic	static		
	mm					kgf			type	
					C_r	C_{or}	C_r	C_{or}	NU	F_w
180	380	126	4	4	1,380	1,990	141,000	203,000	NU2336	232
	380	150	4	4	1,600	2,410	163,000	246,000	NU3336	232
190	260	42	2	1.1	299	515	30,500	52,500	NU2938	207
	290	46	2.1	2.1	350	510	36,000	52,000	NU1038	215
	340	55	4	4	555	770	56,500	78,500	NU238	231
	340	55	4	4	695	955	71,000	97,500	NU238E	230
	340	92	4	4	830	1,290	84,500	131,000	NU2238	231
	340	92	4	4	1,100	1,670	113,000	170,000	NU2238E	228
	340	120	4	4	1,240	2,160	126,000	220,000	NU3238	231
	400	78	5	5	975	1,260	99,500	129,000	NU338	245
	400	132	5	5	1,520	2,220	155,000	226,000	NU2338	245
400	155	5	5	1,550	2,280	158,000	233,000	NU3338	245	
200	280	38	2.1	2.1	259	405	26,400	41,500	NU1940	220
	280	48	2.1	1.5	365	630	37,000	64,500	NU2940	220
	310	51	2.1	2.1	390	580	40,000	59,500	NU1040	229
	310	82	2.1	2.1	735	1,240	75,000	127,000	NU3040	227
	340	112	3	3	1,130	1,820	115,000	186,000	NU3140A	235
	360	58	4	4	620	865	63,500	88,500	NU240	244
	360	58	4	4	765	1,060	78,000	108,000	NU240E	243
	360	98	4	4	925	1,440	94,000	147,000	NU2240	244
	360	98	4	4	1,220	1,870	125,000	191,000	NU2240E	241
	360	128	4	4	1,260	2,150	128,000	219,000	NU3240	244
	420	80	5	5	975	1,270	99,500	130,000	NU340	260
	420	138	5	5	1,510	2,240	154,000	229,000	NU2340	260
420	165	5	5	1,870	2,930	190,000	299,000	NU3340	260	
220	300	48	2.1	1.5	390	705	39,500	72,000	NU2944	240
	340	56	3	3	500	750	51,000	76,500	NU1044	250
	340	90	3	3	860	1,490	87,500	152,000	NU3044	250
	370	120	4	4	1,180	2,090	120,000	213,000	NU3144	262
	400	65	4	4	760	1,080	77,500	110,000	NU244	270
	400	108	4	4	1,140	1,810	116,000	184,000	NU2244	270
	400	144	4	4	1,540	2,680	157,000	273,000	NU3244	270
	460	88	5	5	1,190	1,570	122,000	161,000	NU344	284
460	145	5	5	1,780	2,620	181,000	268,000	NU2344	284	
240	320	48	2.1	1.5	400	755	41,000	77,000	NU2948	260

① Minimal allowable dimension for chamfer dimension r or r_1 .



Type N

Type NU

Equivalent bearing load

dynamic

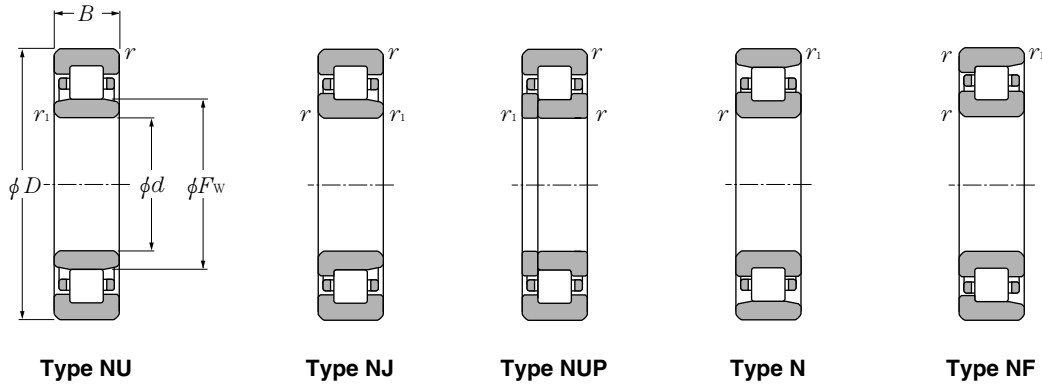
$$P_r = F_r$$

static

$$P_{or} = F_r$$

Abutment and fillet dimensions				Mass
mm				kg
d_a	D_a	r_{as}	r_{ias}	type NU
min	max	max	max	(approx.)
196	364	3	3	69.5
196	364	3	3	88
196.5	251	2	1	6.93
201	279	2	2	10.7
206	324	3	3	21.3
206	324	3	3	24.2
206	324	3	3	34.4
206	324	3	3	39.5
206	324	3	3	48.2
210	380	4	4	49.4
210	380	4	4	80.5
210	380	4	4	101
211	269	2	2	7.65
208	269	2	1.5	9.66
211	299	2	2	13.9
211	299	2	2	24.1
213	327	2.5	2.5	42.8
216	344	3	3	25.3
216	344	3	3	28.1
216	344	3	3	41.3
216	344	3	3	47.8
216	344	3	3	58
220	400	4	4	55.8
220	400	4	4	92.6
220	400	4	4	118
231	289	2	1.5	10.5
233	327	2.5	2.5	18.2
233	327	2.5	2.5	31.7
236	354	3	3	55.7
236	384	3	3	37.7
236	384	3	3	59
236	384	3	3	84.2
240	440	4	4	73.4
240	440	4	4	116
248	309	2	1.5	11.3

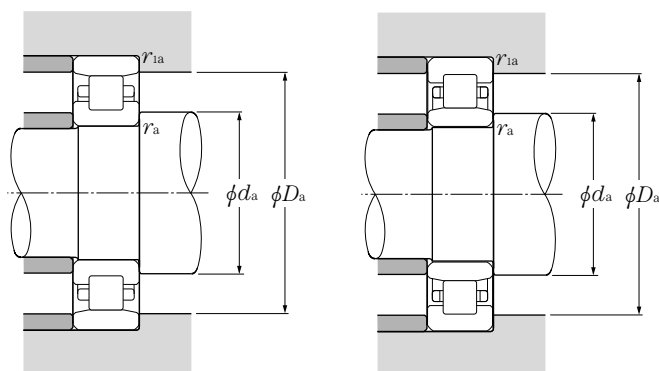




d 240~320mm

d	Boundary dimensions				dynamic kN	Basic load ratings			Bearing numbers	Dimensions mm
	mm					static	dynamic	static		
	D	B	$r_{s\ min}^{\text{①}}$	$r_{is\ min}^{\text{①}}$	C_r	C_{or}	C_r	C_{or}	type NU	F_w
							kgf			
240	360	56	3	3	530	820	54,000	83,500	NU1048	270
	360	92	3	3	940	1,710	95,500	174,000	NU3048	270
	440	72	4	4	935	1,340	95,500	136,000	NU248	295
	440	120	4	4	1,440	2,320	146,000	236,000	NU2248	295
	500	95	5	5	1,430	1,950	146,000	198,000	NU348	310
	500	155	5	5	2,100	3,200	214,000	325,000	NU2348	310
260	360	46	2.1	2.1	400	665	41,000	67,500	NU1952	285
	360	60	2.1	2.1	545	985	55,500	100,000	NU2952	285
	400	65	4	4	645	1,000	65,500	102,000	NU1052	296
	400	104	4	4	1,150	2,020	117,000	206,000	NU3052	294
	440	144	4	4	1,810	3,150	185,000	320,000	NU3152	305
	480	80	5	5	1,150	1,660	117,000	170,000	NU252	320
	480	130	5	5	1,780	2,930	182,000	299,000	NU2252	320
	540	102	6	6	1,620	2,230	165,000	228,000	NU352	336
	540	165	6	6	2,340	3,600	239,000	365,000	NU2352	336
540	206	6	6	2,930	4,800	299,000	490,000	NU3352	336	
280	380	46	2.1	2.1	415	710	42,500	72,500	NU1956	305
	380	60	2.1	2.1	565	1,060	58,000	108,000	NU2956	305
	420	65	4	4	660	1,050	67,000	107,000	NU1056	316
	420	106	4	4	1,240	2,260	126,000	230,000	NU3056	314
	500	80	5	5	1,190	1,760	121,000	180,000	NU256	340
	500	130	5	5	1,840	3,100	188,000	315,000	NU2256	340
	580	108	6	6	1,820	2,540	185,000	259,000	NU356	362
	580	175	6	6	2,700	4,250	275,000	430,000	NU2356	362
300	380	60	2.1	2.1	505	1,230	51,500	125,000	NU3860	324
	420	56	3	3	560	935	57,000	95,500	NU1960	330
	420	72	3	3	780	1,440	79,500	147,000	NU2960	330
	460	74	4	4	855	1,340	87,000	137,000	NU1060	340
	460	118	4	4	1,610	3,000	164,000	305,000	NU3060	340
	540	85	5	5	1,400	2,070	143,000	211,000	NU260	364
	540	140	5	5	2,180	3,650	223,000	370,000	NU2260	364
	620	185	7.5	7.5	3,250	5,150	330,000	525,000	NU2360	385
320	400	60	2.1	2.1	525	1,310	53,500	134,000	NU3864	344
	440	56	3	3	580	1,010	59,500	103,000	NU1964	350
	480	74	4	4	875	1,410	89,500	143,000	NU1064	360

① Minimal allowable dimension for chamfer dimension r or r_1 .



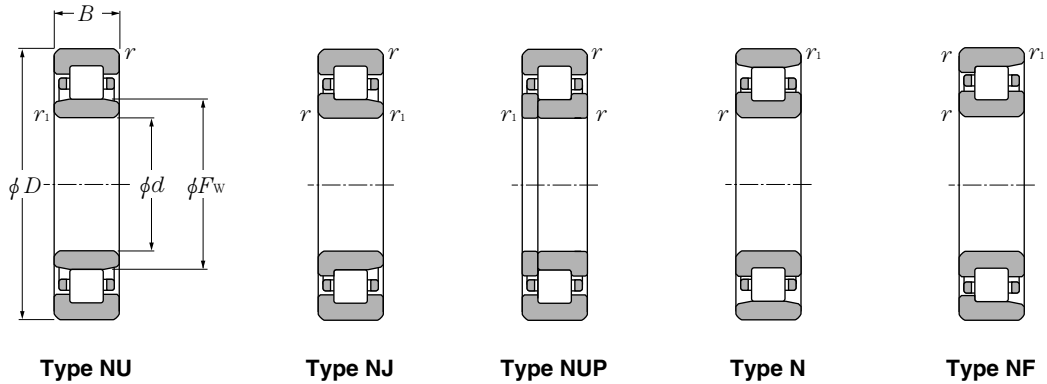
Type N

Type NU

Equivalent bearing load
dynamic
 $P_r = F_r$
static
 $P_{or} = F_r$

Abutment and fillet dimensions				Mass
mm				kg
d_a	D_a	r_{as}	r_{1as}	type NU
min	max	max	max	(approx.)
253	347	2.5	2.5	19.6
253	347	2.5	2.5	34.7
256	424	3	3	50.2
256	424	3	3	80
260	480	4	4	93.4
260	480	4	4	147
<hr/>				
271	349	2	2	14.9
271	349	2	2	19.5
276	384	3	3	29.1
276	384	3	3	50.4
276	424	3	3	95.1
280	460	4	4	66.9
280	460	4	4	104
284	516	5	5	117
284	516	5	5	182
284	516	5	5	242
<hr/>				
291	369	2	2	15.9
291	369	2	2	20.8
296	404	3	3	30.9
296	404	3	3	54.4
300	480	4	4	70.8
300	480	4	4	109
304	556	5	5	142
304	556	5	5	222
<hr/>				
311	369	2	2	17.1
313	407	2.5	2.5	25.4
313	407	2.5	2.5	32.6
316	444	3	3	43.6
316	444	3	3	75.2
320	520	4	4	88.2
320	520	4	4	138
332	588	6	6	316
<hr/>				
331	389	2	2	18.1
333	427	2.5	2.5	26.8
336	464	3	3	46

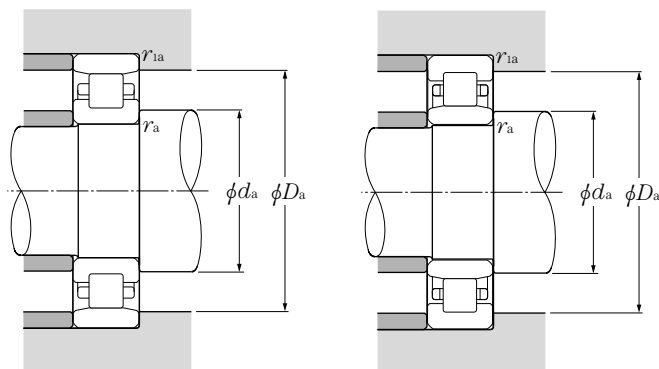




d 320~420mm

d	Boundary dimensions				dynamic kN	Basic load ratings			Bearing numbers	Dimensions mm
	mm					static	dynamic	static		
	D	B	r _{s min} ^①	r _{is min} ^①	C _r	C _{or}	C _r	C _{or}	type NU	F _w
							kgf			
320	480	121	4	4	1,580	2,890	161,000	295,000	NU3064	358
	540	176	5	5	2,530	4,550	258,000	465,000	NU3164	376
	580	92	5	5	1,600	2,390	164,000	244,000	NU264	390
	580	150	5	5	2,550	4,350	260,000	445,000	NU2264	390
	670	200	7.5	7.5	3,750	5,800	385,000	595,000	NU2364	410
340	460	56	3	3	590	1,040	60,500	107,000	NU1968	370
	460	72	3	3	830	1,610	84,500	164,000	NU2968	370
	520	82	5	5	1,050	1,670	107,000	170,000	NU1068	385
	520	133	5	5	2,030	3,900	207,000	400,000	NU3068	385
	580	190	5	5	3,050	5,450	310,000	555,000	NU3168	400
	620	165	6	6	2,880	4,650	294,000	475,000	NU2268	410
	620	224	6	6	4,000	7,100	410,000	725,000	NU3268	410
	710	118	7.5	7.5	2,250	3,300	230,000	340,000	NU368	450
710	212	7.5	7.5	4,250	6,600	430,000	675,000	NU2368	435	
360	440	60	2.1	2.1	460	1,090	47,000	111,000	NU3872	382
	480	56	3	3	615	1,120	62,500	114,000	NU1972	390
	480	72	3	3	860	1,720	87,500	176,000	NU2972	390
	540	82	5	5	1,080	1,750	110,000	179,000	NU1072	405
	540	134	5	5	1,990	4,200	202,000	430,000	NU3072	413
	600	192	5	5	3,150	5,500	320,000	560,000	NU3172A	416
	650	232	6	6	4,150	7,600	425,000	775,000	NU3272	435
750	224	7.5	7.5	4,500	7,000	460,000	710,000	NU2372	460	
380	520	65	4	4	740	1,330	75,500	136,000	NU1976	416
	520	82	4	4	1,110	2,230	113,000	227,000	NU2976	416
	560	82	5	5	1,100	1,840	112,000	187,000	NU1076	425
	560	135	5	5	2,200	4,450	224,000	455,000	NU3076	426
	680	175	6	6	3,350	5,800	340,000	590,000	NU2276	460
	680	240	6	6	4,300	7,650	440,000	780,000	NU3276	460
400	500	75	2.1	2.1	870	2,250	88,500	229,000	NU3880	430
	600	90	5	5	1,320	2,190	134,000	223,000	NU1080	450
	600	148	5	5	2,520	5,050	257,000	515,000	NU3080	450
420	560	65	4	4	800	1,510	81,500	154,000	NU1984	456
	560	82	4	4	1,190	2,530	122,000	258,000	NU2984	456
	620	90	5	5	1,350	2,290	138,000	233,000	NU1084	470

① Minimal allowable dimension for chamfer dimension r or r₁.



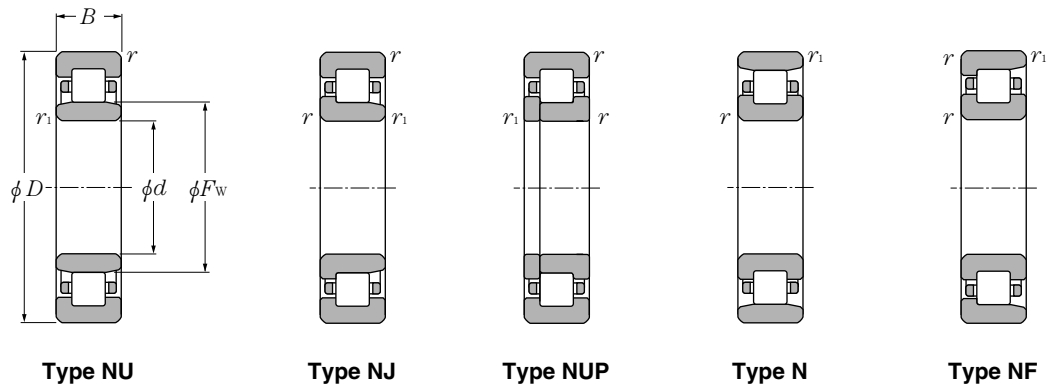
Type N

Type NU

Equivalent bearing load
dynamic
 $P_r = F_r$
static
 $P_{or} = F_r$

Abutment and fillet dimensions				Mass
mm				kg
d_a	D_a	r_{as}	r_{1as}	type NU
min	max	max	max	(approx.)
336	464	3	3	81.2
340	520	4	4	175
340	560	4	4	111
340	560	4	4	172
352	638	6	6	402
<hr/>				
353	447	2.5	2.5	28.2
353	447	2.5	2.5	36.2
360	500	4	4	61.8
360	500	4	4	108
360	560	4	4	220
364	596	5	5	260
364	596	5	5	316
372	678	6	6	246
372	678	6	6	477
<hr/>				
371	429	2	2	20.1
373	467	2.5	2.5	29.6
373	467	2.5	2.5	38
380	520	4	4	64.7
380	520	4	4	114
380	580	4	4	232
384	626	5	5	356
392	718	6	6	562
<hr/>				
396	504	3	3	42.9
396	504	3	3	54.1
400	540	4	4	67.5
400	540	4	4	120
404	656	5	5	326
404	656	5	5	400
<hr/>				
411	489	2	2	35.4
420	580	4	4	87.6
420	580	4	4	155
<hr/>				
436	544	3	3	46.7
436	544	3	3	59
440	600	4	4	91

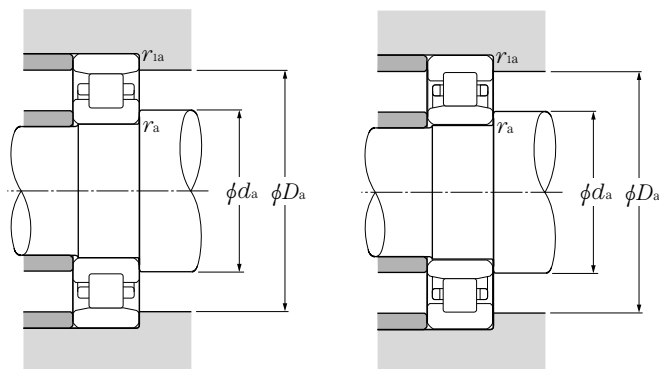




d 440~670mm

d	Boundary dimensions				dynamic kN	Basic load ratings			Bearing numbers	Dimensions mm
	mm					static	dynamic	static		
	D	B	r _{s min} ^①	r _{ls min} ^①	C _r	C _{or}	C _r	C _{or}	type NU	F _w
							kgf			
440	600	95	4	4	1,520	3,100	155,000	320,000	NU2988	480
	650	94	6	6	1,430	2,430	146,000	248,000	NU1088	493
	650	157	6	6	2,770	5,700	283,000	580,000	NU3088	493
460	580	72	3	3	990	2,230	101,000	227,000	NU2892	490
	680	100	6	6	1,540	2,630	157,000	269,000	NU1092	516
480	650	78	5	5	1,140	2,150	116,000	219,000	NU1996	523
	650	100	5	5	1,640	3,450	168,000	350,000	NU2996	523
	700	100	6	6	1,580	2,750	161,000	280,000	NU1096	536
500	620	72	3	3	1,030	2,390	105,000	244,000	NU28/500	530
	670	78	5	5	1,160	2,220	118,000	226,000	NU19/500	543
	720	100	6	6	1,610	2,870	164,000	292,000	NU10/500	556
530	710	82	5	5	1,290	2,480	132,000	253,000	NU19/530	576
	710	106	5	5	1,870	4,000	191,000	410,000	NU29/530	576
	780	112	6	6	1,930	3,450	197,000	350,000	NU10/530	595
	780	185	6	6	3,650	7,400	375,000	755,000	NU30/530	590
560	680	72	3	3	1,090	2,680	111,000	273,000	NU28/560	590
	680	90	3	3	1,250	3,200	127,000	325,000	NU38/560	590
	750	85	5	5	1,470	2,840	150,000	290,000	NU19/560	607
	750	112	5	5	2,010	4,250	205,000	435,000	NU29/560	607
	820	115	6	6	2,190	3,900	223,000	400,000	NU10/560	626
600	730	78	3	3	1,210	3,000	124,000	310,000	NU28/600	633
	800	90	5	5	1,620	3,200	165,000	325,000	NU19/600	650
	800	118	5	5	2,270	4,950	231,000	505,000	NU29/600	650
	870	200	6	6	4,450	9,350	455,000	955,000	NU30/600	670
630	780	88	4	4	1,520	3,650	155,000	370,000	NU28/630	667
	850	100	6	6	1,910	3,700	195,000	380,000	NU19/630	684
	850	128	6	6	2,710	5,850	277,000	595,000	NU29/630	684
	920	128	7.5	7.5	2,560	4,650	261,000	475,000	NU10/630	705
670	820	88	4	4	1,580	3,900	161,000	395,000	NU28/670	707
	820	112	4	4	2,010	5,500	205,000	560,000	NU38/670	709
	900	103	6	6	1,980	3,950	202,000	405,000	NU19/670	729

① Minimal allowable dimension for chamfer dimension r or r_s.



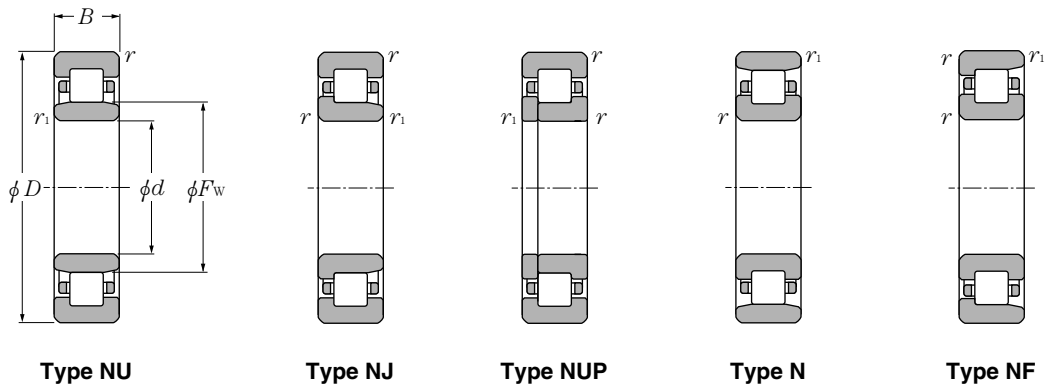
Type N

Type NU

Equivalent bearing load
dynamic
 $P_r = F_r$
static
 $P_{or} = F_r$

Abutment and fillet dimensions				Mass
mm				kg
d_a	D_a	r_{as}	r_{1as}	type NU
min	max	max	max	(approx.)
456	584	3	3	82.8
464	626	5	5	105
464	626	5	5	188
<hr/>				
473	567	2.5	2.5	47.1
484	656	5	5	122
<hr/>				
500	630	4	4	78.5
560	630	4	4	101
504	676	5	5	126
<hr/>				
513	607	2.5	2.5	50.7
520	650	4	4	81.3
524	696	5	5	130
<hr/>				
550	690	4	4	95.9
550	690	4	4	124
554	756	5	5	192
554	756	5	5	318
<hr/>				
573	667	2.5	2.5	56.1
573	667	2.5	2.5	72.7
580	730	4	4	111
580	730	4	4	146
584	796	5	5	216
<hr/>				
613	717	2.5	2.5	70.7
620	780	4	4	132
620	780	4	4	173
624	846	5	5	416
<hr/>				
646	764	3	3	97.5
654	826	5	5	171
654	826	5	5	218
662	888	6	6	302
<hr/>				
686	804	3	3	103
686	804	3	3	136
694	876	5	5	195

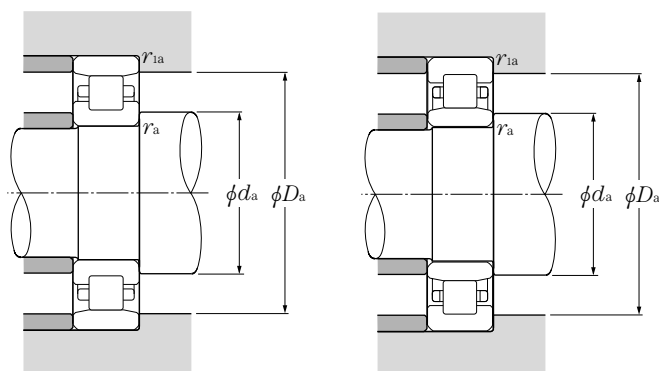




d 670~1,250mm

d	Boundary dimensions				dynamic kN	Basic load ratings			Bearing numbers	Dimensions mm
	D	B	$r_{s\ min}^{\text{①}}$	$r_{h\ min}^{\text{①}}$		static	dynamic	static		
	mm					kgf			type NU	F_w
670	900	136	6	6	2,940	6,600	300,000	675,000	NU29/670	729
710	950	106	6	6	2,260	4,600	231,000	465,000	NU19/710	770
	950	140	6	6	3,300	7,500	340,000	765,000	NU29/710	770
750	1,000	112	6	6	2,340	4,850	239,000	495,000	NU19/750	815
	1,000	145	6	6	3,600	8,400	365,000	860,000	NU29/750	815
800	980	106	5	5	2,310	5,950	236,000	605,000	NU28/800	845
	1,060	150	6	6	3,850	8,850	390,000	900,000	NU29/800	865
	1,150	155	7.5	7.5	4,100	7,800	415,000	795,000	NU10/800	887
850	1,030	106	5	5	2,390	6,350	244,000	645,000	NU28/850	895
	1,120	118	6	6	2,920	6,150	297,000	625,000	NU19/850	917
	1,120	155	6	6	4,000	9,250	410,000	945,000	NU29/850	917
1,060	1,400	195	7.5	7.5	6,100	14,500	620,000	1,480,000	NU29/1060	1,145
1,180	1,540	206	7.5	7.5	6,900	17,000	705,000	1,730,000	NU29/1180	1,270
1,250	1,630	170	7.5	7.5	5,550	12,500	565,000	1,280,000	NU19/1250	1,345

① Minimal allowable dimension for chamfer dimension r or r_1 .



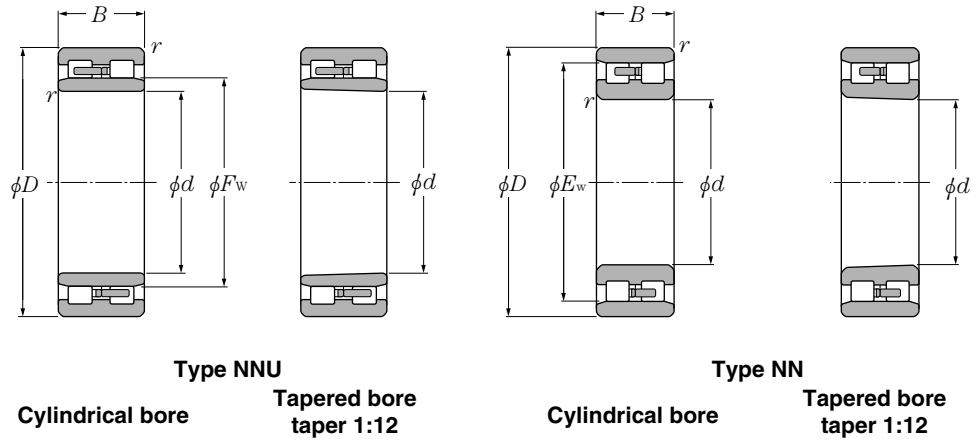
Type N

Type NU

Equivalent bearing load
dynamic
 $P_r = F_r$
static
 $P_{or} = F_r$

Abutment and fillet dimensions				Mass
mm				kg
d_a min	D_a max	r_{as} max	r_{ias} max	type NU (approx.)
694	876	5	5	257
734	926	5	5	221
734	926	5	5	292
774	976	5	5	257
774	976	5	5	332
820	960	4	4	178
824	1,036	5	5	380
832	1,118	6	6	554
870	1,010	4	4	188
874	1,096	5	5	329
874	1,096	5	5	432
1,092	1,368	6	6	855
1,212	1,508	6	6	1,060
1,282	1,598	6	6	975

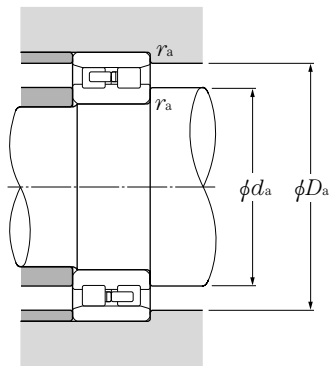




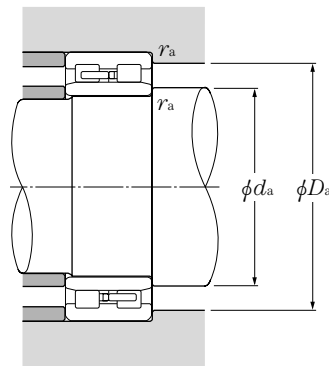
d 100~180mm

d	Boundary dimensions				Basic load ratings				Bearing numbers			
	mm				dynamic	static	dynamic	static	type NNU		type NN	
	D	B	r _{s min} ^②	r	C _r	C _{or}	C _r	C _{or}	Cylindrical bore	tapered bore ^①	Cylindrical bore	tapered bore ^①
100	140	40	1.1	131	260	13,300	26,500	—	—	NN4920	—	
	150	37	1.5	153	256	15,600	26,100	—	—	NN3020	—	
105	145	40	1.1	133	268	13,500	27,400	—	—	NN4921	—	
	160	41	2	198	320	20,200	33,000	—	—	NN3021	—	
110	150	30	1.1	107	206	10,900	21,000	—	—	NN3922	—	
	150	40	1.1	137	284	14,000	28,900	—	—	NN4922	—	
	170	45	2	229	375	23,300	38,000	—	—	NN3022	—	
120	165	45	1.1	183	360	18,700	37,000	—	—	NN4924	—	
	180	46	2	233	390	23,700	40,000	—	—	NN3024	—	
130	180	37	1.5	169	315	17,300	32,000	—	—	NN3926	—	
	180	50	1.5	220	440	22,400	45,000	—	—	NN4926	—	
	200	52	2	284	475	29,000	48,500	—	—	NN3026	—	
	210	64	2	340	560	35,000	57,000	—	—	NN3126	—	
140	190	37	1.5	175	335	17,800	34,000	—	—	NN3928	—	
	190	50	1.5	227	470	23,100	48,000	—	—	NN4928	—	
	210	53	2	298	515	30,500	52,500	—	—	NN3028	—	
150	210	45	2	256	475	26,100	48,500	—	—	NN3930	—	
	210	60	2	345	690	35,000	70,500	—	—	NN4930	—	
	225	56	2.1	335	585	34,000	60,000	—	—	NN3030	—	
	225	75	2.1	435	825	44,500	84,000	—	—	NN4030	—	
	250	80	2.1	555	900	56,500	92,000	—	—	—	—	
160	220	45	2	265	505	27,000	51,500	—	—	NN3932	—	
	220	60	2	355	740	36,500	75,500	—	—	NN4932	—	
	240	60	2.1	375	660	38,000	67,500	—	—	NN3032	—	
170	230	45	2	268	520	27,400	53,000	—	—	NN3934	—	
	230	60	2	360	765	37,000	78,000	—	—	NN4934	—	
	260	67	2.1	440	775	45,000	79,000	—	—	NN3034	—	
	280	88	2.1	635	1,050	65,000	107,000	—	—	NN3134	—	
180	250	52	2	340	665	35,000	67,500	—	—	NN3936	—	
	250	69	2	460	965	46,500	98,500	—	—	NN4936	—	

① "K" indicates bearings have tapered bore with a taper ratio of 1: 12. ② Smallest allowable dimension for chamfer dimension r.



Type NN

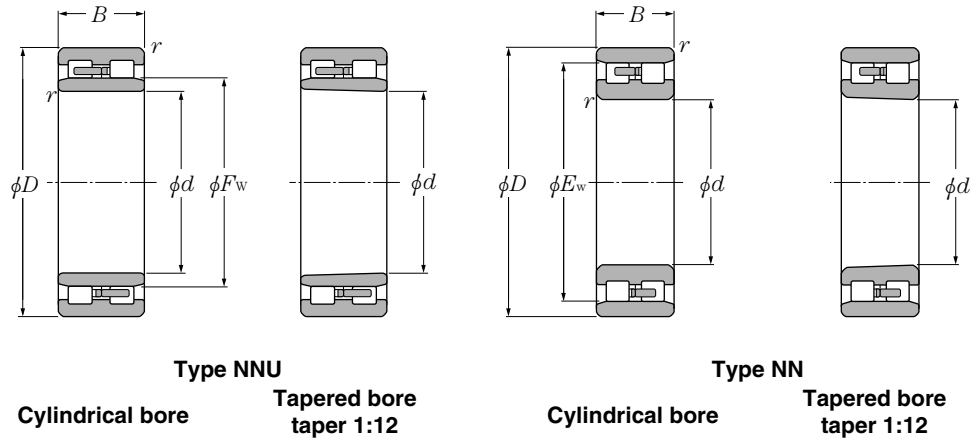


Type NNU

Equivalent bearing load
dynamic
 $P_r = F_r$
static
 $P_{or} = F_r$

Dimensions mm		Abutment and fillet dimensions mm			Mass (approx.) kg	
F_w	E_w	d_a min	D_a max	r_{as} max	type NNU Cylindrical bore	type NN Cylindrical bore
113	129	106.5	133.5	1	1.83	1.75
—	137	108	—	1.5	—	2.26
118	134	111.5	138.5	1	1.91	1.82
—	146	114	—	2	—	2.89
—	139	116.5	—	1	—	1.54
123	139	116.5	143.5	1	1.99	1.9
127	155	119	161	2	3.87	3.69
134.5	154.5	126.5	158.5	1	2.75	2.63
137	165	129	171	2	4.24	3.98
—	168	138	—	1.5	—	—
146	168	138	172	1.5	3.69	3.52
150	182	139	191	2	6.15	5.92
—	189	139	—	2	—	8.59
—	178	148	—	1.5	—	3.01
156	178	148	182	1.5	3.94	3.76
160	192	149	201	2	6.64	6.44
—	196.5	159	—	2	—	4.79
168.5	196.5	159	201	2	6.18	5.9
172	206	161	214	2	8.06	7.81
—	206	161	—	2	—	10.4
177	—	161	239	2	16.4	—
—	206.5	169	—	2	—	5.06
178.5	206.5	169	211	2	6.53	6.24
—	219	171	—	2	—	8.92
—	216.5	179	—	2	—	5.33
188.5	216.5	179	221	2	6.87	6.56
196	236	181	249	2	13.3	12.6
201	253	181	269	2	22.3	21.5
—	234	189	—	2	—	7.72
202	234	189	241	2	9.9	9.45

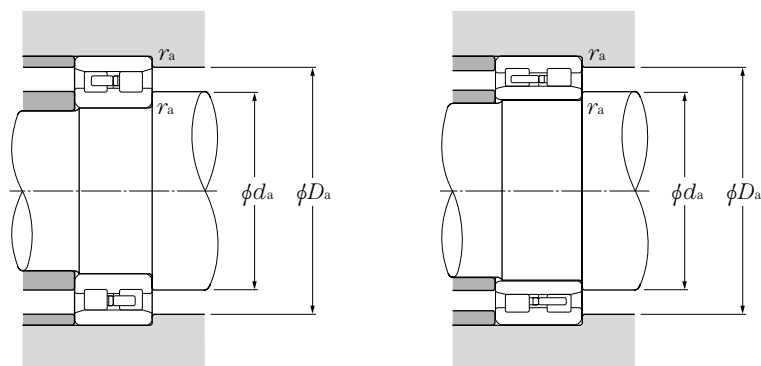




d 180~320mm

d	Boundary dimensions			Basic load ratings				Bearing numbers			
	mm			dynamic	static	dynamic	static	type NNU		type NN	
	D	B	r _{s min} ^②	C _r	C _{or}	C _r	C _{or}	Cylindrical bore	tapered bore ^①	Cylindrical bore	tapered bore ^①
180	280	74	2.1	565	995	57,500	102,000	NNU3036	—	NN3036	NN3036K
	260	52	2	355	705	36,000	72,000	—	—	NN3938	—
190	260	69	2	475	1,030	48,500	105,000	NNU4938	NNU4938K	NN4938	NN4938K
	290	75	2.1	580	1,040	59,000	106,000	NNU3038	—	NN3038	NN3038K
200	280	60	2.1	445	890	45,500	91,000	—	—	NN3940	—
	280	80	2.1	555	1,180	56,500	120,000	NNU4940	NNU4940K	NN4940	NN4940K
	310	82	2.1	655	1,170	66,500	119,000	NNU3040	—	NN3040	NN3040K
	310	109	2.1	890	1,730	90,500	177,000	—	—	NN4040	—
	340	112	3	970	1,660	99,000	169,000	—	—	NN3140	—
220	300	60	2.1	470	975	48,000	99,500	—	—	NN3944	NN3944K
	300	80	2.1	585	1,300	59,500	132,000	NNU4944	NNU4944K	NN4944	NN4944K
	340	90	3	815	1,480	83,000	151,000	NNU3044	—	NN3044	NN3044K
	370	120	4	1,080	1,890	111,000	193,000	NNU3144	—	NN3144	—
240	320	60	2.1	490	1,060	50,000	109,000	NNU3948	—	NN3948	NN3948K
	320	80	2.1	610	1,410	62,500	144,000	NNU4948	NNU4948K	NN4948	NN4948K
	360	92	3	855	1,600	87,000	163,000	NNU3048	—	NN3048	NN3048K
	400	128	4	1,250	2,230	127,000	228,000	—	—	NN3148	—
260	360	75	2.1	660	1,390	67,000	141,000	—	—	NN3952	NN3952K
	360	100	2.1	900	2,070	92,000	211,000	NNU4952	NNU4952K	NN4952	NN4952K
	400	104	4	1,060	1,990	108,000	203,000	—	—	NN3052	NN3052K
	400	140	4	1,500	3,100	153,000	315,000	NNU4052	—	NN4052	—
280	350	52	2	320	765	32,500	78,000	NNU3856	—	—	—
	350	69	2	505	1,300	51,000	132,000	NNU4856	NNU4856K	—	—
	380	75	2.1	690	1,510	70,500	154,000	—	—	NN3956	NN3956K
	380	100	2.1	925	2,200	94,500	224,000	NNU4956	NNU4956K	NN4956	NN4956K
	420	106	4	1,080	2,080	110,000	212,000	—	—	NN3056	NN3056K
300	420	90	3	945	2,050	96,000	209,000	—	—	NN3960	NN3960K
	420	118	3	1,200	2,800	122,000	285,000	NNU4960	NNU4960K	NN4960	NN4960K
	460	118	4	1,330	2,560	135,000	261,000	NNU3060	—	NN3060	NN3060K
	460	160	4	1,890	4,050	193,000	410,000	—	—	NN4060	—
320	400	80	2.1	610	1,600	62,500	163,000	NNU4864	—	—	—

① "K" indicates bearings have tapered bore with a taper ratio of 1: 12. ② Smallest allowable dimension for chamfer dimension r.



Type NN

Type NNU

Equivalent bearing load

dynamic

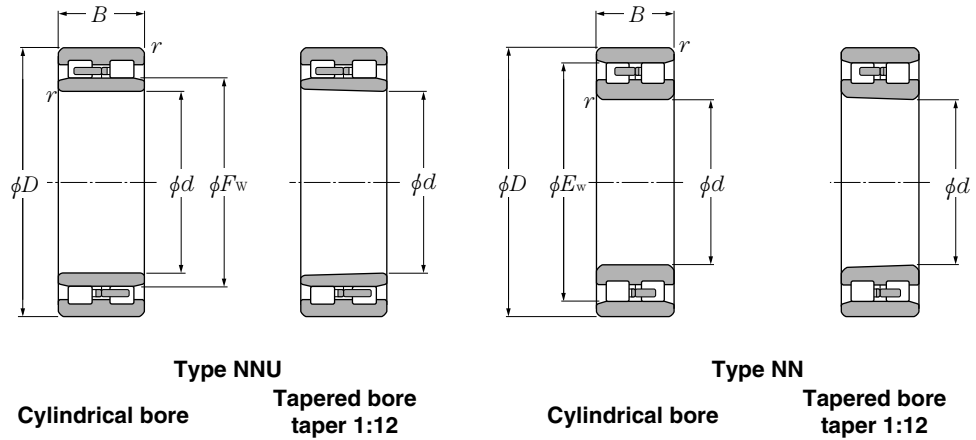
$$P_r = F_r$$

static

$$P_{or} = F_r$$

Dimensions mm		Abutment and fillet dimensions mm			Mass (approx.) kg	
F_w	E_w	d_a min	D_a max	r_{as} max	type NNU Cylindrical bore	type NN Cylindrical bore
209	255	191	269	2	17.4	16.6
—	244	199	—	2	—	8.08
212	244	199	251	2	10.4	9.93
219	265	201	279	2	18.4	18
—	261	211	—	2	—	11.4
225	261	211	269	2	14.7	14
232	282	211	299	2	23.5	21.6
—	282	211	—	2	—	30.2
—	304	213	—	2.5	—	41.8
—	281	231	—	2	—	12.3
245	281	231	289	2	15.9	15.2
254	310	233	327	2.5	31.0	29.3
263.5	331.5	236	354	3	54.4	52.4
265	301	251	309	2	13.8	13.3
265	301	251	309	2	17.2	16.4
274	330	253	347	2.5	33.9	32.8
—	361	256	—	3	—	64.7
—	336	271	—	2	—	22.9
292	336	271	349	2	29.6	28.3
—	364	276	—	3	—	47.4
298	362	276	384	3	66.2	63.8
301	—	289	341	2	11.7	—
301	—	289	341	2	15.6	—
—	356	291	—	2	—	24.4
312	356	291	369	2	31.6	30.2
—	384	296	—	3	—	51.1
—	391	313	—	2.5	—	38.4
339	391	313	407	2.5	48.6	46.4
346	418	316	444	3	73.4	70.8
—	418	316	—	3	—	96
344	—	331	389	2	23.6	—

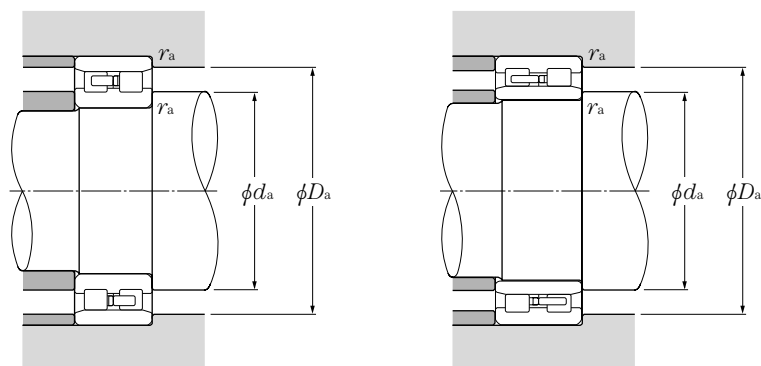




d 320~500mm

d	Boundary dimensions				Basic load ratings				Bearing numbers			
	mm				dynamic	static	dynamic	static	type NNU		type NN	
	D	B	r _{s min} ^②	r _s	C _r	C _{or}	C _r	C _{or}	Cylindrical bore	tapered bore ^①	Cylindrical bore	tapered bore ^①
320	440	90	3	975	2,180	99,000	222,000	—	—	NN3964	NN3964K	
	440	118	3	1,240	2,970	126,000	305,000	NUU4964	NUU4964K	NN4964	NN4964K	
	480	121	4	1,350	2,670	138,000	272,000	NUU3064	—	NN3064	NN3064K	
	540	176	5	2,160	3,950	220,000	400,000	NUU3164	—	—	—	
340	460	118	3	1,280	3,150	131,000	320,000	NUU4968	NUU4968K	NN4968	NN4968K	
	520	133	5	1,620	3,200	165,000	325,000	NUU3068	—	NN3068	NN3068K	
360	480	90	3	1,030	2,430	105,000	248,000	—	—	NN3972	—	
	480	118	3	1,290	3,250	131,000	330,000	NUU4972	NUU4972K	—	—	
	540	134	5	1,650	3,300	169,000	340,000	NUU3072	—	NN3072	NN3072K	
	540	180	5	2,470	5,550	252,000	570,000	NUU4072	—	—	—	
380	520	140	4	1,630	4,050	167,000	415,000	NUU4976	NUU4976K	—	—	
	560	135	5	1,690	3,450	172,000	355,000	NUU3076	—	NN3076	NN3076K	
400	500	100	2.1	1,070	2,950	109,000	300,000	NUU4880	—	—	—	
	540	140	4	1,690	4,300	172,000	435,000	NUU4980	NUU4980K	—	—	
	600	148	5	2,040	4,150	208,000	420,000	—	—	NN3080	NN3080K	
420	560	106	4	1,370	3,350	140,000	340,000	—	—	NN3984	—	
	560	140	4	1,740	4,500	177,000	460,000	NUU4984	NUU4984K	—	—	
	620	150	5	2,080	4,300	212,000	440,000	—	—	NN3084	NN3084K	
	700	224	6	3,400	6,400	345,000	650,000	NUU3184	—	—	—	
440	600	160	4	2,150	5,550	219,000	565,000	NUU4988	NUU4988K	—	—	
	650	157	6	2,420	5,100	247,000	520,000	NUU3088	—	NN3088	NN3088K	
	650	212	6	3,250	7,750	330,000	790,000	NUU4088	—	—	—	
460	620	160	4	2,220	5,850	226,000	595,000	NUU4992	NUU4992K	—	—	
	680	163	6	2,550	5,350	260,000	545,000	—	—	NN3092	NN3092K	
480	600	90	3	1,010	2,570	103,000	262,000	—	—	NN3896	—	
	650	170	5	2,280	5,900	233,000	600,000	NUU4996	NUU4996K	—	—	
	790	248	7.5	4,100	8,100	420,000	825,000	—	—	NN3196	—	
500	620	90	3	1,140	2,880	116,000	293,000	NUU38/500	—	—	—	
	670	170	5	2,360	6,200	240,000	635,000	NUU49/500	NUU49/500K	—	—	
	720	167	6	2,650	5,750	270,000	590,000	—	—	NN30/500	—	

① "K" indicates bearings have tapered bore with a taper ratio of 1: 12. ② Smallest allowable dimension for chamfer dimension r.



Type NN

Type NNU

Equivalent bearing load

dynamic

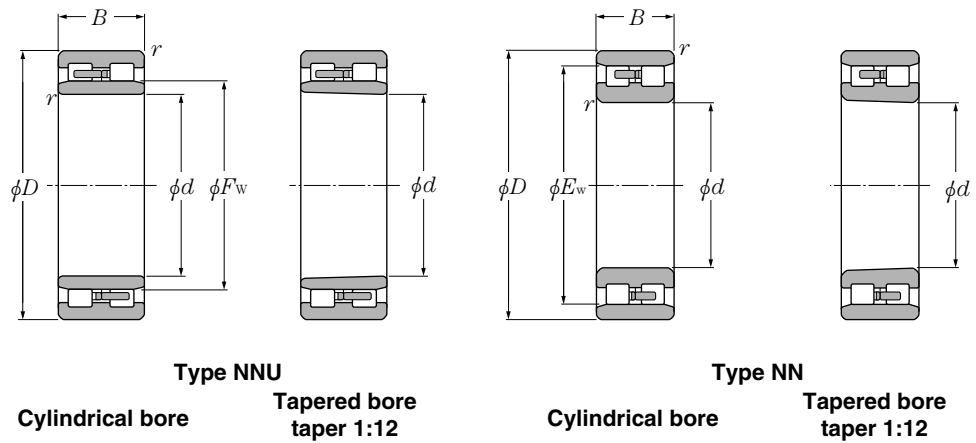
$$P_r = F_r$$

static

$$P_{or} = F_r$$

Dimensions mm		Abutment and fillet dimensions mm			Mass (approx.) kg	
F_w	E_w	d_a min	D_a max	r_{as} max	type NNU Cylindrical bore	type NN Cylindrical bore
—	411	333	—	2.5	—	40.5
359	411	333	427	2.5	51.4	49
366	438	336	464	3	79.3	76.2
383	—	340	520	4	170	—
<hr/>						
379	431	353	447	2.5	54.2	52.2
393	473	360	500	4	105	102
<hr/>						
—	451	373	—	2.5	—	44.8
398	—	373	467	2.5	57	—
413	493	380	520	4	111	107
415	—	380	520	4	136	—
<hr/>						
425	—	396	504	3	84.5	—
432	512	400	540	4	117	113
<hr/>						
430.5	—	411	489	2	46.1	—
445	—	416	524	3	88.2	—
—	547	420	—	4	—	146
<hr/>						
—	522	436	—	3	—	71.7
465	—	436	544	3	92	—
—	567	440	—	4	—	154
500	—	444	676	5	359	—
<hr/>						
492	—	456	584	3	127	—
500	596	464	626	5	184	178
505	—	464	626	5	248	—
<hr/>						
512	—	476	604	3	132	—
—	622	484	—	5	—	202
<hr/>						
—	566	493	—	2.5	—	57.5
534	—	500	630	4	156	—
—	710	512	—	6	—	482
<hr/>						
532	—	513	607	2.5	61.9	—
556	—	520	650	4	162	—
—	664	524	—	5	—	221

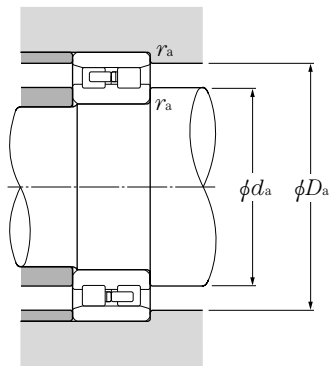




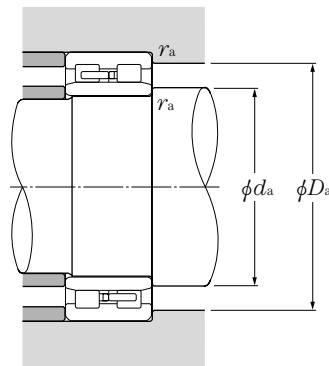
d 530~950mm

d	Boundary dimensions				Basic load ratings				Bearing numbers			
	mm				dynamic	static	dynamic	static	type NNU		type NN	
	D	B	r _{s min} ^②	r _{s min}	C _r	C _{or}	C _r	C _{or}	Cylindrical bore	tapered bore ^①	Cylindrical bore	tapered bore ^①
530	650	90	3	1,060	2,840	108,000	289,000	—	—	NN38/530	—	
	710	180	5	2,740	7,150	279,000	730,000	NNU49/530	NNU49/530K	—	—	
560	680	90	3	1,060	2,960	108,000	300,000	—	—	NN38/560	—	
	750	190	5	3,150	8,450	325,000	860,000	NNU49/560	NNU49/560K	NN49/560	—	
	820	195	6	3,550	7,700	365,000	785,000	NNU30/560	—	—	—	
600	730	128	3	1,840	5,400	188,000	550,000	NNU48/600	—	—	—	
	870	200	6	3,700	8,250	375,000	845,000	—	—	NN30/600	—	
630	780	150	4	2,200	6,200	224,000	630,000	NNU48/630	—	—	—	
	850	165	6	5,750	5,300	585,000	1,560,000	NNU39/630	—	—	—	
750	920	128	5	2,340	6,450	238,000	660,000	NNU38/750	—	—	—	
	1,000	250	6	4,850	3,200	495,000	1,340,000	NNU49/750	—	—	—	
800	980	136	5	2,430	6,700	248,000	680,000	NNU38/800	—	—	—	
	1,060	195	6	3,900	10,200	400,000	1,040,000	NNU39/800	—	—	—	
950	1,250	300	7.5	7,150	1,200	730,000	2,160,000	—	—	NN49/950	—	

① "K" indicates bearings have tapered bore with a taper ratio of 1: 12. ② Smallest allowable dimension for chamfer dimension r.



Type NN

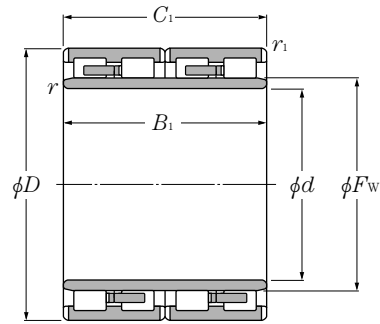


Type NNU

Equivalent bearing load
dynamic
 $P_r = F_r$
static
 $P_{or} = F_r$

Dimensions mm		Abutment and fillet dimensions mm			Mass (approx.) kg	
F_w	E_w	d_a min	D_a max	r_{as} max	type NNU Cylindrical bore	type NN Cylindrical bore
—	616	543	—	2.5	—	62.9
588	—	550	690	4	206	—
—	647	573	—	2.5	—	66.1
618	702	580	730	4	242	233
634	—	584	796	5	358	—
635	—	613	717	2.5	113	—
—	800	624	—	5	—	392
673	—	646	764	3	162	—
684	—	654	826	5	275	—
798	—	770	900	4	186	—
824	—	774	976	5	560	—
852	—	820	960	4	223	—
878	—	824	1,036	5	483	—
—	1,176	982	—	6	—	977

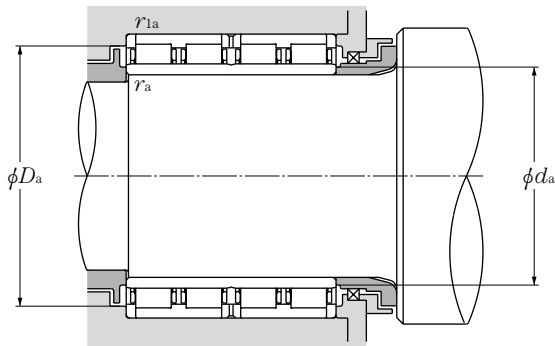




d 100~170mm

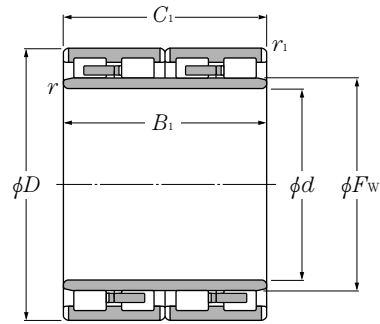
d	Boundary dimensions					dynamic kN	Basic load ratings		static kgf	static	bearing ^① numbers	Drawing ^② No.
	D	B ₁	C ₁	r _{s min} ^③	r _{ls min} ^③		C _r	C _{or}				
100	150	74	74	2	2	262	510	26,700	52,500	4R2035	A	
120	180	92	92	2.5	2.5	400	785	40,500	80,000	4R2437	A	
	180	105	105	2.5	2.5	445	855	45,500	87,000	4R2438	A	
130	200	104	104	2.5	2.5	490	955	49,500	97,000	4R2628	A	
140	190	119	119	1.5	1.5	495	1,190	50,500	121,000	4R2832	B ²⁾	
	210	116	116	2.5	2.5	510	1,030	52,000	105,000	4R2823	A	
145	210	155	155	2.5	2.5	705	1,640	71,500	168,000	4R2906	A	
	225	156	156	2.5	2.5	810	1,750	82,500	178,000	4R2904	A	
150	220	127	120	2.5	2.5	615	1,280	63,000	130,000	4R3036	A	
	220	150	150	2.5	2.5	750	1,640	76,500	168,000	4R3031	A	
	220	150	150	2.5	2.5	750	1,640	76,500	168,000	4R3056	A	
	230	130	130	2.5	2.5	725	1,520	73,500	155,000	4R3029	A	
	230	156	156	2.5	2.5	930	2,040	95,000	208,000	4R3040	A	
	230	168	168	2	2	845	1,950	86,000	199,000	4R3042	A	
	250	150	150	2.5	2.5	885	1,640	90,500	167,000	4R3039	A	
151.5	230	168	168	1.5	2.5	850	2,060	87,000	210,000	4R3033K	A	
160	220	180	180	2.5	2.5	920	2,490	93,500	254,000	4R3224	D ³⁾	
	230	130	130	2.5	2.5	665	1,340	68,000	136,000	4R3226	A	
	230	168	168	2.5	2.5	915	2,170	93,500	222,000	4R3232	A	
	230	168	168	2.5	2.5	895	2,200	91,500	225,000	4R3229	A	
	230	168	168	2.5	2.5	895	2,210	91,000	225,000	4R3231	A	
	230	180	180	2.5	2.5	920	2,490	93,500	254,000	4R3228	D ³⁾	
	240	170	170	2	2.5	980	2,290	100,000	234,000	4R3225	A	
170	230	120	120	2.5	2.5	620	1,520	63,000	155,000	4R3426	A	
	230	120	120	2	2	620	1,520	63,000	155,000	4R3443	C	
	240	156	156	2.5	2.5	905	2,170	92,500	222,000	4R3429	A	
	240	160	160	2.5	2.5	905	2,180	92,000	222,000	4R3423	A	
	250	168	168	2.5	2.5	970	2,220	99,000	226,000	4R3432	A	
	250	168	168	2.5	2.5	1,030	2,390	105,000	243,000	4R3428	A	
	255	180	180	2.5	2.5	1,100	2,430	112,000	247,000	4R3425	A	
	260	150	150	2.5	2.5	835	1,750	85,000	179,000	4R3433	A	

① "K" indicates bearings have tapered bore with a taper ratio of 1: 12. ② Drawing details are shown in Page B-38.
 ③ Minimal allowable dimension for chamfer dimension r or r₁.



F_w	Abutment and fillet dimensions				Mass
	d_a min	D_a max	r_{as} max	r_{las} max	kg (approx.)
115	109	141	2.0	2.0	4.68
137	131	169	2	2	8.2
135	131	169	2	2	9.3
150	141	189	2	2	12.1
154	148	182	1.5	1.5	9.93
160	151	199	2	2	13.9
166	156	199	2	2	18
169	156	214	2	2	23.3
168	161	209	2	2	15.7
168	161	209	2	2	19.4
168	161	209	2	2	19.6
174	161	219	2	2	20
174	161	219	2	2	24.5
178	159	221	2	2	25.8
177	161	239	2	2	29.6
179	159.5	219	1.5	2	25.4
177	171	209	2	2	20.2
180	171	219	2	2	16.6
179	171	219	2	2	23.4
180	171	219	2	2	23.2
182	171	219	2	2	23.2
177	171	219	2	2	24.8
183	169	229	2	2	27.8
187	181	219	2	2	14.2
187	179	221	2	2	14.6
189	181	229	2	2	22.2
190	181	229	2	2	22.8
193	181	239	2	2	28.2
193	181	239	2	2	28.5
193	181	244	2	2	19.3
192	181	249	2	2	29.5



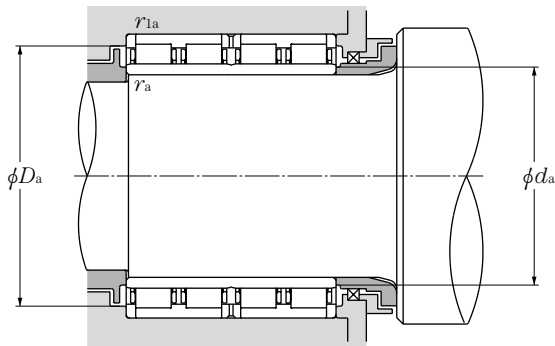


d 170~230mm

d	Boundary dimensions					dynamic kN	Basic load ratings		static kgf	static	Bearing [®] numbers	Drawing [®] No.
	D	B ₁	C ₁	r _{s min} ^①	r _{ls min} ^②		C _r	C _{or}				
170	260	225	225	2.5	2.5	1,310	3,150	134,000	320,000	4R3431	A	
180	250	156	156	2.5	2.5	895	2,180	91,500	223,000	4R3625	A	
	250	168	168	2	2	885	2,470	90,000	252,000	4R3639	A	
	260	168	168	2.5	2.5	1,020	2,400	104,000	244,000	4R3628	A	
	265	180	180	2.5	2.5	1,090	2,510	111,000	256,000	4R3618	A	
190	260	168	168	2.5	2.5	980	2,600	100,000	265,000	4R3820	A	
	270	170	170	2.5	2.5	1,090	2,660	111,000	272,000	4R3818	A	
	270	200	200	2.5	2.5	1,260	3,100	128,000	315,000	4R3821	A	
	270	200	200	2.5	2.5	1,230	3,200	125,000	330,000	4R3817	A	
	280	200	200	2.5	2.5	1,240	2,910	126,000	297,000	4R3823	B	
	280	200	200	2.5	2.5	1,240	2,910	126,000	297,000	4R3830	C	
200	270	170	170	2.5	2.5	970	2,610	99,000	266,000	4R4039	A	
	280	152	152	2.1	2.1	1,000	2,320	102,000	237,000	4R4054	B ²⁾	
	280	170	170	2.5	2.5	1,040	2,430	106,000	248,000	4R4048	A	
	280	190	190	2.5	2.5	1,190	3,150	121,000	320,000	4R4026	A	
	280	200	200	2.5	2.5	1,310	3,300	134,000	335,000	4R4037	A	
	280	200	200	2.5	2.5	1,250	3,350	127,000	340,000	4R4027	A	
	290	192	192	2.5	2.5	1,290	3,150	132,000	320,000	4R4041	A	
	210	290	192	192	2.5	2.5	1,230	3,350	126,000	340,000	4R4206	A
220	290	192	192	2.5	2.5	1,190	3,350	122,000	340,000	4R4413	A	
	300	160	160	2.5	2.5	1,000	2,590	102,000	264,000	4R4419	A	
	300	160	160	2.1	2.1	1,000	2,590	102,000	264,000	4R4445	C	
	310	192	192	2.5	2.5	1,350	3,550	138,000	360,000	4R4410	A	
	310	192	192	2.5	2.5	1,390	3,400	141,000	350,000	4R4426	A	
	310	204	204	2.5	2.5	1,420	3,750	144,000	385,000	4R4425	A	
	310	215	215	2.5	2.5	1,530	3,750	156,000	380,000	4R4420	A	
	310	225	225	2.5	2.5	1,480	3,950	151,000	405,000	4R4416	A	
	310	225	225	2.5	2.5	1,590	3,950	162,000	400,000	4R4449	A	
	320	160	160	3	3	1,190	2,550	121,000	260,000	4R4428	A	
	320	210	210	2.5	2.5	1,550	3,650	158,000	370,000	4R4429	A	
	320	210	210	2.5	2.5	1,560	3,600	159,000	370,000	4R4444	A	
	230	330	206	206	2.5	2.5	1,510	3,900	154,000	395,000	4R4610	A
330		206	206	2.5	2.5	1,520	3,800	155,000	385,000	4R4614	A	

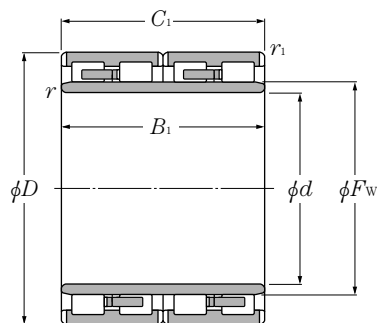
① Drawing details are shown in Page B-38.

② Minimal allowable dimension for chamfer dimension r or r₁.



F_w	Abutment and fillet dimensions				Mass
	d_a min	D_a max	r_{as} max	r_{las} max	kg (approx.)
196	181	249	2	2	44
200	191	239	2	2	23.2
202	189	241	2	2	25.6
202	191	249	2	2	29.4
204	191	254	2	2	34.2
212	201	249	2	2	26.9
213	201	259	2	2	31.7
212	201	259	2	2	37.5
212	201	259	2	2	37.2
214	201	269	2	2	41.5
214	201	269	2	2	42.8
222	211	259	2	2	28.5
222	211	269	2	2	29.5
222	211	269	2	2	33
223	211	269	2	2	36.7
222	211	269	2	2	40.5
224	211	269	2	2	38.8
226	211	279	2	2	42.5
236	221	279	2	2	39.5
239	231	279	2	2	33.8
245	231	289	2	2	32.8
245	231	289	2	2	33.7
247	231	299	2	2	46.3
246	231	299	2	2	46.9
247	231	299	2	2	49.8
242	231	299	2	2	51.5
245	231	299	2	2	54.9
244	231	299	2	2	54.3
245	233	307	2.5	2.5	46.5
248	231	309	2	2	60.5
246	231	309	2	2	57.3
260	241	319	2	2	58.3
258	241	319	2	2	58.6



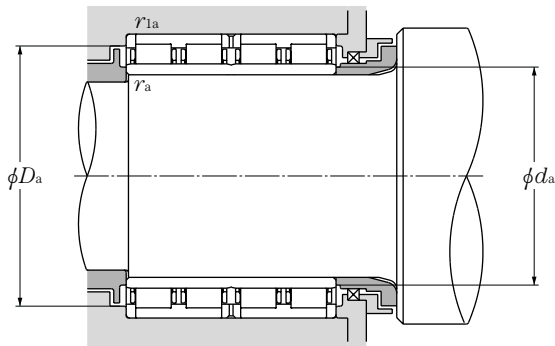


d 230~300mm

d	Boundary dimensions					dynamic kN	Basic load ratings		static kgf	Bearing numbers	Drawing ^① No.
	D	B ₁	C ₁	r _{s min} ^②	r _{is min} ^②		C _r	C _{or}			
230	340	260	260	3	3	2,050	5,100	209,000	520,000	4R4611	A
	330	220	220	3	3	1,490	4,150	152,000	420,000	4R4811	C
240	330	220	220	3	3	1,610	4,250	164,000	435,000	4R4819	A
	330	220	220	3	3	1,490	4,150	152,000	420,000	4R4821	C
	330	220	220	3	3	1,520	4,250	155,000	435,000	4R4804	A
	340	220	220	3	3	1,670	4,200	170,000	425,000	4R4806	A
	360	220	220	2.5	2.5	1,760	4,050	179,000	415,000	4R4807	A
	360	220	220	2.5	2.5	1,760	4,050	179,000	415,000	4R4813	A
250	350	220	220	3	3	1,730	4,300	176,000	440,000	4R5008	A
260	360	220	200	2.5	2.5	1,540	4,150	157,000	426,000	4R5221	D
	360	260	260	2.5	2.1	1,830	4,850	187,000	495,000	4R5231	C ¹⁾
	370	220	220	3	3	1,760	4,450	179,000	455,000	4R5208	A
	370	220	220	3	3	1,760	4,450	179,000	455,000	4R5217	A ¹⁾
	380	280	280	3	3	2,420	6,250	247,000	635,000	4R5213	A
265	400	290	290	4	2	3,050	7,150	315,000	730,000	4R5218	E ⁴⁾
	370	234	234	1.5	1.5	2,020	5,000	206,000	510,000	4R5306	A ¹⁾
270	380	280	280	2.5	2.5	2,260	5,750	231,000	585,000	4R5407	A
	380	280	280	2.5	2.5	2,580	6,850	263,000	700,000	4R5405	F ⁴⁾
280	350	208	208	2.5	2.5	1,290	3,950	132,000	405,000	4R5614	A
	390	220	220	3	3	1,780	4,650	181,000	475,000	4R5611	A
	390	220	220	3	3	1,820	4,800	186,000	490,000	4R5604	A
	390	275	275	2.5	2.5	2,290	6,250	233,000	635,000	4R5612	D ³⁾
	420	280	280	4	4	2,430	6,150	248,000	630,000	4R5605	A
290	410	240	240	3	3	2,240	5,550	228,000	565,000	4R5806	A
	420	300	300	3	3	2,830	7,500	288,000	765,000	4R5805	A
300	400	300	300	3	3	2,480	7,500	253,000	765,000	4R6014	A
	420	240	240	3	3	2,020	5,450	206,000	555,000	4R6017	A ¹⁾
	420	240	240	3	3	2,020	5,450	206,000	555,000	4R6012	A
	420	240	240	3	3	2,010	5,450	205,000	555,000	4R6023	A ¹⁾
	420	240	240	3	3	2,280	5,750	233,000	585,000	4R6027	A
	420	300	300	3	3	2,990	8,150	305,000	835,000	4R6030	F ¹⁾

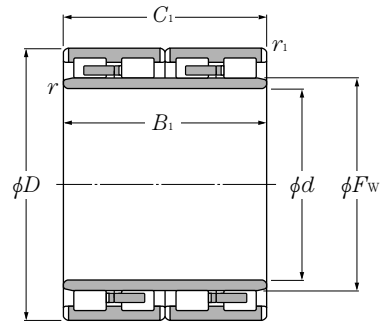
① Drawing details are shown in Page B-38.

② Minimal allowable dimension for chamfer dimension *r* or *r*₁.



F_w	Abutment and fillet dimensions				Mass
	d_a min	D_a max	r_{as} max	r_{las} max	kg (approx.)
261	243	327	2.5	2.5	82.6
270	253	317	2.5	2.5	56.8
264	253	317	2.5	2.5	57.1
268	253	317	2.5	2.5	57.1
270	253	317	2.5	2.5	57.1
268	253	327	2.5	2.5	63.6
274	251	349	2	2	79.6
274	251	349	2	2	80.1
278	263	337	2.5	2.5	66
292	271	349	2	2	62.7
287	271	349	2	2	81.5
292	273	357	2.5	2.5	77.1
292	273	357	2.5	2.5	76.5
294	273	367	2.5	2.5	109
296	276	391	3	2	135
300	273	362	1.5	1.5	78.9
297	281	369	2	2	101
299.7	281	369	2	2	105
298	291	339	2	2	46.4
312	293	377	2.5	2.5	81.3
312	293	377	2.5	2.5	82
312	291	379	2	2	105
323	296	404	3	3	139
320	303	397	2.5	2.5	103
327	303	407	2.5	2.5	141
328	313	387	2.5	2.5	104
334	313	407	2.5	2.5	106
334	313	407	2.5	2.5	105
336	313	407	2.5	2.5	105
332	313	407	2.5	2.5	105
331	313	407	2.5	2.5	136

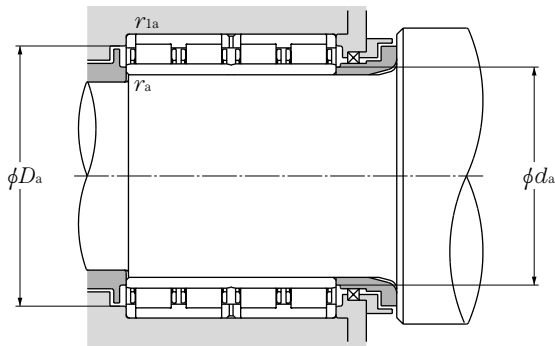




d 300~380mm

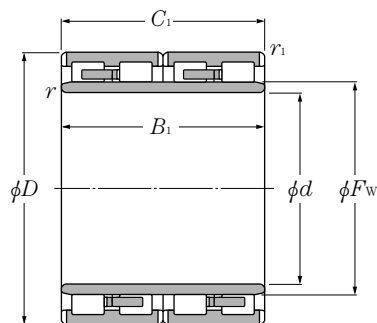
d	Boundary dimensions					dynamic kN	Basic load ratings		static kgf	static kgf	Bearing ^① numbers	Drawing ^② No.
	D	B ₁	C ₁	r _{s min} ^③	r _{ls min} ^③		C _r	C _{or}				
300	420	300	300	3	3	2,720	7,600	278,000	775,000	4R6015	A	
	420	300	300	3	3	2,900	7,850	295,000	800,000	4R6020	F ¹⁾	
	420	320	300	3	3	2,900	7,850	295,000	800,000	4R6018	F ²⁾	
	430	240	240	3	3	2,160	5,150	220,000	525,000	4R6021	A	
	460	270	270	3	3	2,510	5,350	256,000	545,000	4R6019	A	
310	430	240	240	3	3	2,240	5,950	228,000	605,000	4R6202	A	
320	440	240	230	3	3	2,290	6,050	234,000	615,000	4R6414	A	
	450	240	240	3	3	2,370	6,150	242,000	630,000	4R6411	A	
	460	340	340	3	3	3,400	9,450	345,000	960,000	4R6412	A	
	470	350	350	3	3	4,150	10,900	425,000	1,110,000	4R6406	F ⁴⁾	
330	440	200	200	3	3	1,820	4,850	186,000	495,000	4R6603	B	
	440	200	200	5	3	1,720	4,550	176,000	465,000	4R6608	B ¹⁾	
	460	340	340	4	4	3,250	8,850	330,000	905,000	4R6605	A	
	460	340	340	4	4	3,300	9,550	335,000	975,000	4R6602	A	
340	480	350	350	4	4	3,950	10,900	400,000	1,110,000	4R6819	FM ¹⁾	
	480	370	350	5	5	3,450	9,650	350,000	985,000	4R6811	A	
	490	300	300	4	4	3,350	8,300	340,000	845,000	4R6804	A	
	490	300	300	5	5	3,100	7,950	315,000	810,000	4R6805	A	
356.76	550	400	400	4	4	5,100	13,800	520,000	1,410,000	4R7105K	E	
360	480	290	290	3	3	2,990	8,150	305,000	830,000	4R7207	A	
	510	370	370	4	4	3,550	9,700	365,000	990,000	4R7212	C	
	510	400	380	4	2	4,350	11,900	445,000	1,210,000	4R7205	E ¹⁾	
	510	400	400	5	5	4,250	11,500	435,000	1,170,000	4R7203	B	
370	480	230	230	5	5	2,100	6,250	214,000	635,000	4R7405	A	
	480	250	250	3	3	2,200	6,450	225,000	660,000	4R7408	A	
	520	380	380	5	5	3,900	10,800	400,000	1,100,000	4R7411	A	
	520	400	400	5	5	4,650	13,500	475,000	1,370,000	4R7404	A	
380	520	280	280	4	4	3,400	9,150	350,000	935,000	4R7605	A	
	520	290	290	4	4	3,400	9,150	350,000	935,000	4R7617	A	
	520	300	300	4	4	3,550	9,600	360,000	980,000	4R7607	G ¹⁾	
	540	400	400	4	4	5,200	15,200	530,000	1,550,000	4R7604	G ²⁾	

① "K" indicates bearings have tapered bore with a taper ratio of 1: 12. ② Drawing details are shown in Page B-38.
③ Minimal allowable dimension for chamfer dimension r or r₁.



F_w	Abutment and fillet dimensions				Mass
	d_a min	D_a max	r_{as} max	r_{las} max	kg (approx.)
334	313	407	2.5	2.5	125
332	313	407	2.5	2.5	130
332	313	407	2.5	2.5	136
338	313	417	2.5	2.5	115
344	313	447	2.5	2.5	162
344.5	323	417	2.5	2.5	108
351	333	427	2.5	2.5	106
358	333	437	2.5	2.5	125
360	333	447	2.5	2.5	178
361.7	333	457	2.5	2.5	212
360	343	427	2.5	2.5	83.6
360	350	427	4	2.5	85.6
365	346	444	3	3	181
368	346	444	3	3	177
378	356	464	3	3	211
378	360	460	4	4	198
377	356	474	3	3	187
380	360	470	4	4	189
426	372.757	534	3	3	354
388	373	467	2.5	2.5	148
400	376	494	3	3	244
399	376	509	3	2	251
397	380	490	4	4	262
400	390	460	4	4	106
401	383	467	2.5	2.5	118
409	390	500	4	4	256
409	390	500	4	4	273
417	396	504	3	3	174
417	396	504	3	3	185
416	396	504	3	3	210
422	396	524	3	3	325



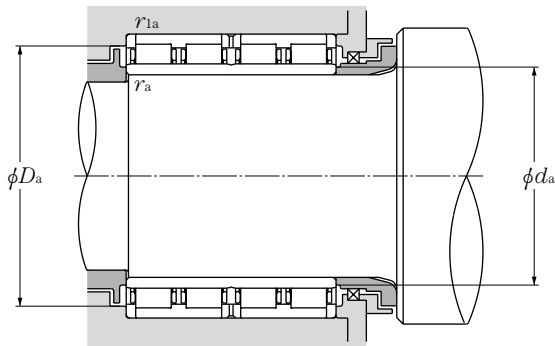


d 380~500mm

d	Boundary dimensions					dynamic		Basic load ratings		Bearing numbers	Drawing ^① No.
	D	B ₁	C ₁	r _{s min} ^②	r _{ls min} ^②	C _r	C _{or}	static	dynamic		
mm											
kN											
kgf											
380	540	400	400	4	4	4,950	14,400	505,000	1,470,000	4R7618 4R7613	FM ¹⁾ B ^{1) 3)}
	540	400	400	5	5	4,550	12,700	465,000	1,300,000		
400	560	400	400	5	5	4,250	11,800	430,000	1,210,000	4R8007 4R8010 4R8011	B F A
	560	410	410	4	4	5,750	17,000	585,000	1,730,000		
	590	420	420	4	4	5,150	13,000	525,000	1,330,000		
420	560	280	280	4	4	3,150	8,750	320,000	895,000	4R8403 4R8404 4R8407 4R8401	A A F ¹⁾ D ³⁾
	580	230	230	4	4	2,430	6,250	248,000	635,000		
	600	440	440	6	2.5	6,350	18,100	650,000	1,850,000		
	620	400	400	5	5	5,000	13,400	510,000	1,360,000		
430	591	420	420	5	5	5,500	17,400	560,000	1,770,000	4R8605	FM ^{1) 4)}
440	600	450	450	1.5	5	6,000	17,900	615,000	1,820,000	4R8806 4R8805 4R8803 4R8801	FR ²⁾ FR ¹⁾ F ¹⁾ F
	600	450	450	1.5	5	6,350	19,100	645,000	1,950,000		
	620	450	450	5	5	6,450	18,700	660,000	1,910,000		
	620	450	450	5	5	6,450	18,700	660,000	1,910,000		
460	620	400	400	4	4	5,350	16,700	545,000	1,700,000	4R9211 4R9209 4R9223 4R9216	GS A FM ¹⁾ F ¹⁾
	620	400	400	4	4	4,950	15,000	505,000	1,530,000		
	620	460	460	4	4	5,950	19,100	605,000	1,950,000		
	650	470	470	5	5	7,150	20,600	730,000	2,100,000		
470	660	470	470	5	5	7,300	21,300	745,000	2,170,000	4R9403	FM ¹⁾
480	600	236	236	3	3	2,620	7,850	267,000	805,000	4R9610 4R9613 4R9607 4R9604	A G ¹⁾ G F
	650	420	420	5	5	5,700	17,200	585,000	1,750,000		
	650	420	420	5	5	5,950	18,100	605,000	1,840,000		
	680	500	500	6	6	7,950	24,000	810,000	2,450,000		
500	680	420	405	5	5	7,100	22,900	725,000	2,340,000	4R10010 4R10020 4R10016 4R10006 4R10011 4R10008 4R10015 4R10024	F ²⁾ F ²⁾ F ¹⁾ F F F ¹⁾ F ¹⁾ FM ¹⁾
	680	420	405	5	5	6,300	18,800	640,000	1,920,000		
	690	470	470	5	5	7,650	22,500	780,000	2,290,000		
	690	510	510	5	5	7,750	24,600	790,000	2,500,000		
	700	515	515	5	5	7,900	24,100	805,000	2,450,000		
	710	480	480	6	6	8,650	24,700	880,000	2,520,000		
	720	530	530	5	5	8,250	25,000	840,000	2,550,000		
	720	530	530	5	5	8,250	25,000	840,000	2,550,000		

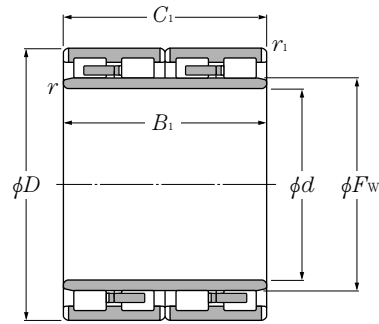
① Drawing details are shown in Page B-38.

② Minimal allowable dimension for chamfer dimension r or r_1 .



F_w	Abutment and fillet dimensions				Mass
	d_a min	D_a max	r_{as} max	r_{las} max	kg (approx.)
422	396	524	3	3	309
424	400	520	4	4	298
446	420	540	4	4	303
445	416	544	3	3	349
450	416	574	3	3	399
457	436	544	3	3	189
466	436	564	3	3	181
469.6	444	589	5	2	423
478	440	600	4	4	410
476	450	571	4	4	362
480	448	580	1.5	4	392
480	448	580	1.5	4	392
487	460	600	4	4	450
487	460	600	4	4	437
502	476	604	3	3	383
502	476	604	3	3	341
502	476	604	3	3	417
509	480	630	4	4	540
517	490	640	4	4	529
510	493	587	2.5	2.5	155
523	500	630	4	4	423
523	500	630	4	4	369
532	504	656	5	5	640
550	520	660	4	4	495
550	520	660	4	4	451
547	520	670	4	4	590
552	520	670	4	4	640
554	520	680	4	4	680
556	524	686	5	5	675
568	520	700	4	4	780
568	520	700	4	4	745



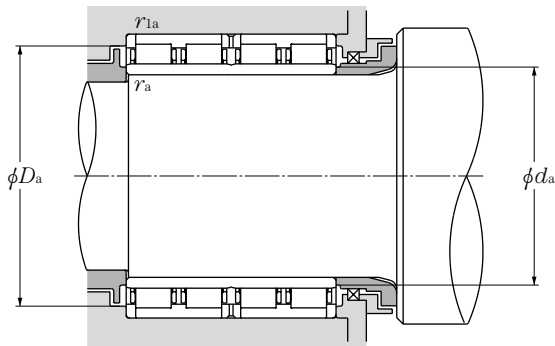


d 510~680mm

d	Boundary dimensions					dynamic	Basic load ratings		static	Bearing numbers	Drawing ^① No.
	D	B ₁	C ₁	r _{s min} ^②	r _{ls min} ^②		kN	dynamic			
510	670	320	320	5	5	4,550	13,500	465,000	1,380,000	4R10201 4R10202	G ¹⁾ F ¹⁾
	700	540	540	6	6	8,300	25,000	845,000	2,550,000		
520	700	540	540	6	6	8,200	25,500	835,000	2,600,000	4R10403 4R10406 4R10402	F ¹⁾ FR ¹⁾ F ²⁾
	720	550	550	5	5	9,400	27,700	960,000	2,820,000		
	735	535	535	5	5	9,000	26,600	915,000	2,710,000		
530	700	540	540	6	6	7,850	25,400	800,000	2,590,000	4R10603 4R10601 4R10602 4R10606	F ¹⁾ F ¹⁾ F ¹⁾ FM ¹⁾
	760	520	520	6	6	9,150	26,700	935,000	2,730,000		
	780	570	570	6	6	10,300	29,100	1,050,000	2,970,000		
	780	570	570	7.5	6	10,300	29,100	1,050,000	2,970,000		
536.18	762.03	558.8	558.8	5	6	10,100	29,200	1,030,000	2,980,000	4R10704	F ²⁾
550	800	520	520	6	6	9,450	27,000	965,000	2,750,000	4R11001	F ¹⁾
560	680	360	360	3	3	4,650	16,500	475,000	1,680,000	4R11202	A
570	800	514	514	2.5	6	10,200	29,200	1,040,000	2,970,000	4R11404 4R11402	FR ¹⁾ F
	815	594	594	6	6	11,800	34,500	1,200,000	3,500,000		
600	820	575	575	7.5	7.5	10,000	31,500	1,020,000	3,200,000	4R12006 4R12002 4R12001	FM ¹⁾ F ¹⁾ F
	870	540	540	7.5	7.5	10,600	29,600	1,090,000	3,000,000		
	870	640	640	7.5	7.5	13,600	40,500	1,390,000	4,150,000		
610	870	660	660	9.5	7.5	12,600	40,000	1,280,000	4,100,000	4R12202	F ^{1) 4)}
628	922	600	600	3	6	13,600	38,500	1,390,000	3,900,000	4R12602	F ¹⁾
640	880	600	600	6	6	11,500	36,000	1,170,000	3,650,000	4R12802	F ²⁾
650	920	670	670	7.5	4	14,600	46,000	1,490,000	4,700,000	4R13005 4R13010 4R13003	F ¹⁾ FR ¹⁾ F
	920	680	680	7.5	7.5	14,800	47,000	1,520,000	4,800,000		
	920	690	690	7.5	7.5	14,300	46,500	1,460,000	4,750,000		
660	820	440	440	5	4	7,300	27,800	745,000	2,840,000	4R13201	F
680	1,020	650	650	6	6	15,700	48,000	1,600,000	4,900,000	4R13603 4R13604	FM ²⁾ F ²⁾
	1,020	680	680	3	5	17,300	49,500	1,760,000	5,050,000		

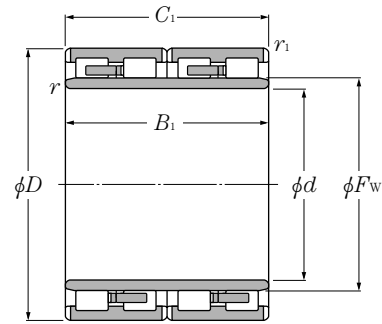
① Drawing details are shown in Page B-38.

② Minimal allowable dimension for chamfer dimension r or r_1 .



F_w	Abutment and fillet dimensions				Mass
	d_a min	D_a max	r_{as} max	r_{las} max	kg (approx.)
554	530	650	4	4	335
558	534	676	5	5	689
564	544	676	5	5	658
566	540	700	4	4	715
574.5	540	715	4	4	740
574	554	676	5	5	626
590	554	736	5	5	800
601	554	756	5	5	1,010
595	562	756	6	5	978
600	556.176	738.03	4	5	859
622	574	776	5	5	965
590	573	667	2.5	2.5	265
626	581	776	2	5	849
628	594	791	5	5	1,040
660	632	788	6	6	941
672	632	838	6	6	1,150
672	632	838	6	6	1,330
680	650	838	8	6	1,400
702	641	898	2.5	5	1,430
700	664	856	5	5	1,150
723	682	904	6	3	1,500
723	682	888	6	6	1,510
723	682	888	6	6	1,550
702	680	804	4	3	580
803	704	996	5	5	1,970
775	693	1,000	2.5	4	2,060



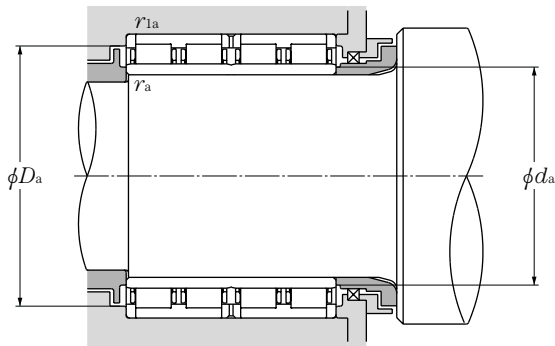


d 690~860mm

d	Boundary dimensions					dynamic kN	Basic load ratings		static kgf	Bearing numbers	Drawing ^① No.
	D	B ₁	C ₁	r _{s min} ^②	r _{is min} ^②		static	dynamic			
690	980	715	715	7.5	7.5	16,800	54,500	1,720,000	5,550,000	4R13802	F ²⁾
	980	750	750	7.5	7.5	16,500	53,000	1,680,000	5,400,000	4R13803	FM ²⁾
710	1,000	715	715	9.5	6	16,800	54,500	1,710,000	5,550,000	4R14205	FS ⁴⁾
725	1,000	700	700	6	6	15,900	53,500	1,620,000	5,450,000	4R14501	F ¹⁾
750	1,050	745	720	7.5	7.5	17,600	58,000	1,790,000	5,900,000	4R15001	FM ²⁾
	1,090	745	720	7.5	7.5	19,100	60,500	1,950,000	6,150,000	4R15002	FM ²⁾
755	1,070	750	750	7.5	7.5	18,700	58,500	1,910,000	5,950,000	4R15101	F ¹⁾
760	1,030	750	750	7.5	7.5	17,300	59,500	1,760,000	6,050,000	4R15204	FM ¹⁾
	1,080	805	790	6	6	18,700	61,000	1,900,000	6,250,000	4R15207	FM ²⁾
	1,100	745	720	7.5	7.5	19,100	60,500	1,950,000	6,150,000	4R15203	FM ²⁾
761.43	1,079.6	787.4	787.4	9.5	7.5	19,800	63,000	2,020,000	6,400,000	4R15201	F ¹⁾
800	1,080	700	700	7.5	7.5	16,500	55,000	1,680,000	5,600,000	4R16004	F ¹⁾
	1,080	750	750	6	6	17,300	59,000	1,760,000	6,000,000	4R16005	F ¹⁾
820	1,130	800	800	7.5	7.5	19,600	66,500	2,000,000	6,800,000	4R16406	FM ¹⁾
	1,130	800	800	7.5	7.5	21,500	72,000	2,200,000	7,300,000	4R16413	FMS ²⁾
	1,130	800	800	7.5	7.5	19,600	66,500	2,000,000	6,800,000	4R16415	F ²⁾
	1,130	825	800	7.5	7.5	19,600	66,500	2,000,000	6,800,000	4R16405	FM ¹⁾
	1,160	840	840	7.5	7.5	21,600	71,000	2,200,000	7,250,000	4R16403	F ²⁾
830	1,080	710	710	6	6	16,200	59,500	1,660,000	6,100,000	4R16601	F ²⁾
840	1,160	840	840	5	7.5	21,600	71,000	2,200,000	7,250,000	4R16801	F ¹⁾
850	1,150	650	650	9.5	9.5	15,700	51,000	1,610,000	5,200,000	4R17001	F ¹⁾
	1,150	800	800	6	6	19,700	71,000	2,010,000	7,250,000	4R17003	F ¹⁾
	1,150	840	840	6	6	22,000	77,500	2,240,000	7,900,000	4R17009	F ¹⁾
	1,180	650	650	7.5	7.5	16,400	51,500	1,670,000	5,250,000	4R17004	F ¹⁾
	1,180	850	850	9.5	9.5	24,100	78,500	2,460,000	8,000,000	4R17002	F
	1,180	850	850	7.5	7.5	21,700	72,000	2,210,000	7,350,000	4R17014	F ²⁾
860	1,140	750	750	7.5	7.5	17,200	61,000	1,750,000	6,200,000	4R17202	F ²⁾

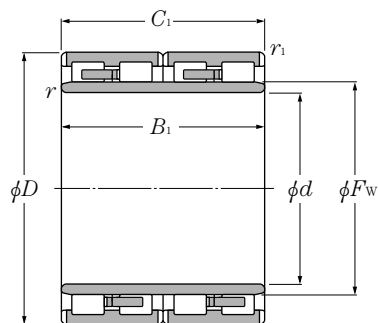
① Drawing details are shown in Page B-38.

② Minimal allowable dimension for chamfer dimension *r* or *r*₁.



F_w	Abutment and fillet dimensions				Mass
	d_a min	D_a max	r_{as} max	r_{las} max	kg (approx.)
767.5	722	948	6	6	1,850
766	722	948	6	6	1,900
787.5	750	976	8	5	1,900
796	749	976	5	5	1,730
830	782	1,018	6	6	2,180
845	782	1,058	6	6	2,530
837	787	1,038	6	6	2,260
828	792	998	6	6	2,000
845	784	1,056	5	5	2,550
855	792	1,068	6	6	2,560
846	801.425	1,047.6	8	6	2,420
870	832	1,048	6	6	1,950
880	824	1,056	5	5	2,090
903	852	1,098	6	6	2,450
903	852	1,098	6	6	2,530
903	852	1,098	6	6	2,530
903	852	1,098	6	6	2,520
910	852	1,128	6	6	2,930
896	854	1,056	5	5	1,780
920	860	1,128	4	6	2,840
941	890	1,110	8	8	1,980
930	874	1,126	5	5	2,430
928	874	1,126	5	5	2,640
945	882	1,148	6	6	2,270
928	890	1,140	8	8	2,970
940	882	1,148	6	6	2,980
938	892	1,108	6	6	2,200



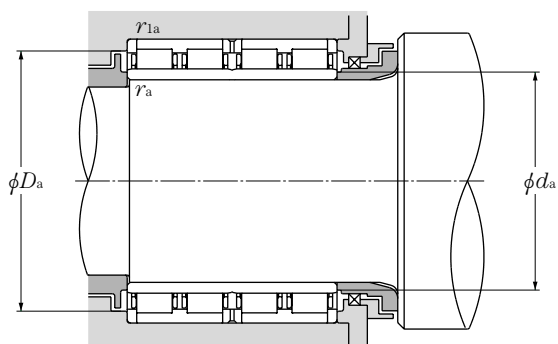


d 860~1,200mm

d	Boundary dimensions					dynamic	Basic load ratings		static	Bearing numbers	Drawing ^① No.
	D	B ₁	C ₁	r _{s min} ^②	r _{ls min} ^②		kN	dynamic			
860	1,160	735	710	6	6	17,800	62,500	1,810,000	6,400,000	4R17201	F ¹⁾
900	1,230	895	870	7.5	7.5	24,700	88,000	2,520,000	9,000,000	4R18001	FM ²⁾
920	1,280	865	850	7.5	7.5	26,200	88,500	2,670,000	9,000,000	4R18401	F
1,000	1,310	880	880	9.5	9.5	23,400	88,500	2,380,000	9,000,000	4R20001	F ¹⁾
	1,360	800	800	7.5	7.5	25,000	85,000	2,550,000	8,650,000	4R20002	F ¹⁾
1,030	1,380	850	850	7.5	7.5	24,400	89,000	2,490,000	9,100,000	4R20601	F ¹⁾
1,200	1,590	1,050	1,050	7.5	7.5	36,000	133,000	3,650,000	13,600,000	4R24002	FS

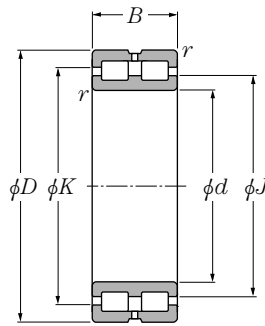
① Drawing details are shown in Page B-38.

② Minimal allowable dimension for chamfer dimension r or r₁.

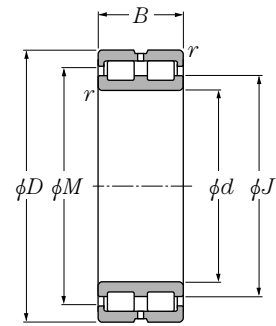


F_w	Abutment and fillet dimensions				Mass
	d_a min	D_a max	r_{as} max	r_{ias} max	kg (approx.)
940	884	1,136	5	5	2,310
985	932	1,198	6	6	3,250
1,015	952	1,248	6	6	3,560
1,080	1,040	1,270	8	8	3,260
1,090	1,032	1,328	6	6	3,530
1,124	1,062	1,348	6	6	3,800
1,295	1,232	1,558	6	6	6,220





SL01-48 type SL01-49 type
(Fixed side)

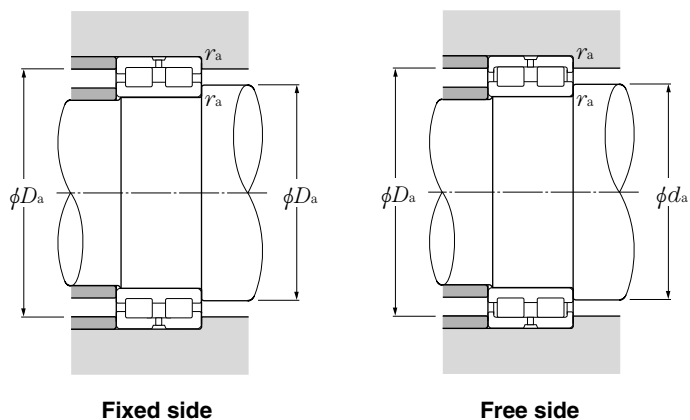


SL02-48 type SL02-49 type
(Free side)

d 100~280mm

d	Boundary dimensions			Basic load ratings				Bearing numbers		Dimensions			
	D	B	$r_{s\ min}^{\text{①}}$	dynamic kN	static kN	dynamic kgf	static kgf	Fixed side	Free side	J	K	M	$e^{\text{②}}$
100	140	40	1.1	194	400	19,800	41,000	SL01-4920	SL02-4920	116	125	126.5	2
	150	40	1.1	202	430	20,600	44,000	SL01-4922	SL02-4922	125	134	135.5	2
120	165	45	1.1	226	480	23,100	49,000	SL01-4924	SL02-4924	138.5	148.5	150.5	3
130	180	50	1.5	262	555	26,700	56,500	SL01-4926	SL02-4926	149	160	162	4
140	190	50	1.5	272	595	27,700	60,500	SL01-4928	SL02-4928	159.5	170	172.5	4
150	190	40	1.1	235	575	23,900	58,500	SL01-4830	SL02-4830	165.5	173.5	175.5	2
	210	60	2	410	865	41,500	88,000	SL01-4930	SL02-4930	171.5	186	189.5	4
160	200	40	1.1	241	605	24,600	62,000	SL01-4832	SL02-4832	173.5	182.5	184	2
	220	60	2	425	935	43,500	95,000	SL01-4932	SL02-4932	185	199	203	4
170	215	45	1.1	265	650	27,000	66,500	SL01-4834	SL02-4834	186.5	196.5	198	3
	230	60	2	435	980	44,500	100,000	SL01-4934	SL02-4934	194	208	211.5	4
180	225	45	1.1	275	695	28,000	71,000	SL01-4836	SL02-4836	199	209	211	3
	250	69	2	550	1,230	56,000	125,000	SL01-4936	SL02-4936	206	222	225.5	4
190	240	50	1.5	315	785	32,000	80,000	SL01-4838	SL02-4838	208.5	219.5	221.5	4
	260	69	2	565	1,290	57,500	131,000	SL01-4938	SL02-4938	216.5	232.5	235.5	4
200	250	50	1.5	320	825	33,000	84,000	SL01-4840	SL02-4840	219	230	232	4
	280	80	2.1	665	1,500	68,000	153,000	SL01-4940	SL02-4940	232	250	253.5	5
220	270	50	1.5	340	905	34,500	92,500	SL01-4844	SL02-4844	240	251	253	4
	300	80	2.1	695	1,620	70,500	165,000	SL01-4944	SL02-4944	249.5	267.5	271	5
240	300	60	2	510	1,330	52,000	136,000	SL01-4848	SL02-4848	261	275	276.5	4
	320	80	2.1	730	1,770	74,000	181,000	SL01-4948	SL02-4948	272.5	290.5	294	5
260	320	60	2	535	1,450	54,500	148,000	SL01-4852	SL02-4852	283	297	300	4
	360	100	2.1	1,070	2,520	109,000	257,000	SL01-4952	SL02-4952	297	320	324.5	6
280	350	69	2	685	1,860	69,500	189,000	SL01-4856	SL02-4856	308	324	327	4
	380	100	2.1	1,110	2,710	114,000	277,000	SL01-4956	SL02-4956	319	342	346	6

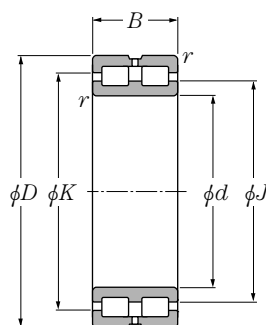
① Maximum allowable dimension for chamfer dimension r . ② Allowable axial move.



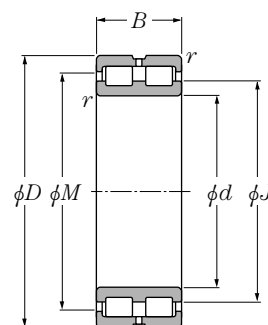
Abutment and fillet dimensions			Mass (approx.)	
$d_a^{\text{③}}$ min	$D_a^{\text{③}}$ max	r_{as} max	kg	
			Fixed side	Free side
106.5	133.5	1	1.95	1.9
116.5	143.5	1	2.15	2.1
126.5	158.5	1	2.95	2.85
138	172	1.5	3.95	3.8
148	182	1.5	4.2	4.1
156.5	183.5	1	2.9	2.8
159	201	2	6.65	6.45
166.5	193.5	1	3.05	2.9
169	211	2	7	6.8
176.5	208.5	1	4.1	3.95
179	221	2	7.35	7.1
186.5	218.5	1	4.3	4.15
189	241	2	10.7	10.5
198	232	1.5	5.65	5.45
199	251	2	11.2	10.9
208	242	1.5	5.9	5.7
211	269	2	15.7	15.3
228	262	1.5	6.4	6.2
231	289	2	17.1	16.6
249	291	2	10.2	9.9
251	309	2	18.4	17.9
269	311	2	11	10.6
271	349	2	32	31.2
289	341	2	16	15.6
291	369	2	33.9	33.1

③ Use J and K dimensions for bearings operating at inclined or large axial loads.





SL01-48 type SL01-49 type
(Fixed side)

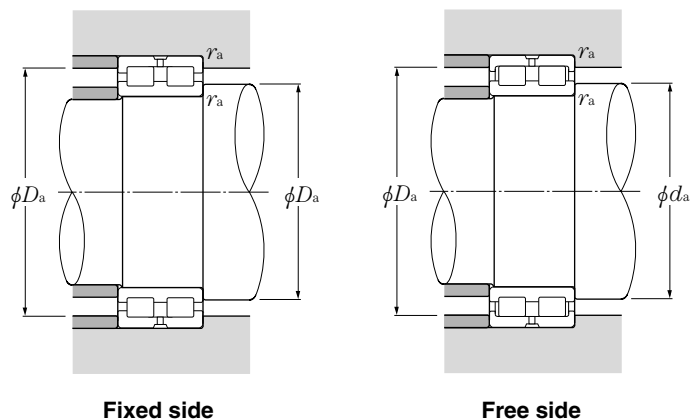


SL02-48 type SL02-49 type
(Free side)

d 300~440mm

d	Boundary dimensions			Basic load ratings				Bearing numbers		Dimensions			
	mm			dynamic	static	dynamic	static	Fixed side	Free side	mm			
	D	B	r _{s min} ^①	C _r	C _{or}	C _r	C _{or}			J	K	M	e ^②
300	380	80	2.1	805	2,160	82,000	220,000	SL01-4860	SL02-4860	330	348	351	6
	420	118	3	1,580	3,800	161,000	385,000	SL01-4960	SL02-4960	344	371	377	6
320	400	80	2.1	835	2,310	85,000	236,000	SL01-4864	SL02-4864	353	371	374	6
	440	118	3	1,650	4,100	168,000	415,000	SL01-4964	SL02-4964	371	398	404	6
340	420	80	2.1	855	2,430	87,500	248,000	SL01-4868	SL02-4868	370	388	391	6
	460	118	3	1,690	4,300	172,000	440,000	SL01-4968	SL02-4968	388	416	421	6
360	440	80	2.1	885	2,580	90,000	264,000	SL01-4872	SL02-4872	393	411	414	6
	480	118	3	1,730	4,500	176,000	460,000	SL01-4972	SL02-4972	406	434	439	6
380	480	100	2.1	1,290	3,600	132,000	370,000	SL01-4876	SL02-4876	422	444	449	6
	520	140	4	2,300	5,900	235,000	600,000	SL01-4976	SL02-4976	437	469	475	7
400	540	140	4	2,410	6,200	246,000	635,000	SL01-4980	SL02-4980	450	484	490	7
420	560	140	4	2,470	6,500	252,000	665,000	SL01-4984	SL02-4984	472	505	512	7
440	600	160	4	3,000	7,850	305,000	800,000	SL01-4988	SL02-4988	503	540	546	7

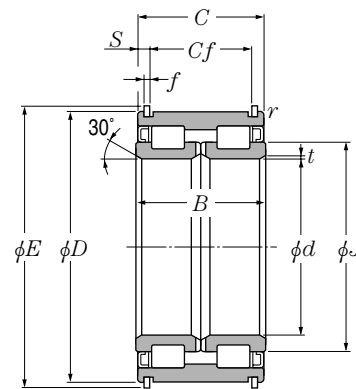
① Maximum allowable dimension for chamfer dimension r. ② Allowable axial move.



Abutment and fillet dimensions			Mass (approx.)	
$d_a^{\text{③}}$ min	mm		kg	
	$D_a^{\text{③}}$ max	r_{as} max	Fixed side	Free side
311	369	2	23	22.2
313	407	2.5	53	51.9
331	389	2	24.3	23.5
333	427	2.5	56	54.9
351	409	2	25.6	24.8
353	447	2.5	59	57.8
371	429	2	27	26
373	467	2.5	62	60.8
391	469	2	45.3	44
396	504	3	92.3	90.5
416	524	3	96.4	94.6
436	544	3	101	98.6
456	584	3	139	137

③ Use J and K dimensions for bearings operating at inclined or large axial loads.

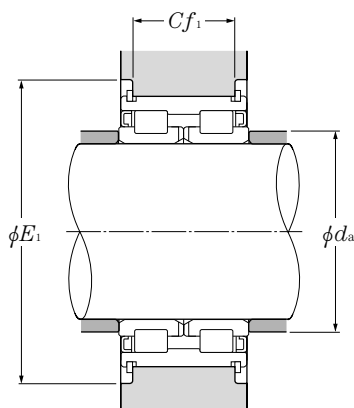




d 100~380mm

d	Boundary dimensions					dynamic kN	Basic load ratings		static kgf	Bearing numbers
	D	B	C	t	r		static	dynamic		
						C_r	C_{or}	C_r	C_{or}	
100	150	67	66	1.5	1	330	580	33,500	59,500	SL04-5020NR
110	170	80	79	1.8	1.5	385	695	39,000	71,000	SL04-5022NR
120	180	80	79	1.8	1.5	400	750	41,000	76,500	SL04-5024NR
130	200	95	94	1.8	1.5	535	1,000	55,000	102,000	SL04-5026NR
140	210	95	94	1.8	1.5	600	1,120	61,000	115,000	SL04-5028NR
150	225	100	99	2	1.5	690	1,290	70,500	131,000	SL04-5030NR
160	240	109	108	2	2	720	1,390	73,500	142,000	SL04-5032NR
170	260	122	121	2	2	925	1,790	94,500	182,000	SL04-5034NR
180	280	136	135	2	2	1,090	2,140	111,000	218,000	SL04-5036NR
190	290	136	135	2	2	1,120	2,230	114,000	227,000	SL04-5038NR
200	310	150	149	2	2	1,310	2,650	133,000	270,000	SL04-5040NR
220	340	160	159	2.5	2	1,640	3,300	167,000	335,000	SL04-5044NR
240	360	160	159	2.5	2	1,710	3,550	175,000	365,000	SL04-5048NR
260	400	190	189	3	2.5	2,130	4,500	217,000	460,000	SL04-5052NR
280	420	190	189	3	2.5	2,170	4,700	221,000	475,000	SL04-5056NR
300	460	218	216	3	2.5	2,670	5,850	272,000	600,000	SL04-5060NR
320	480	218	216	3	2.5	2,720	6,100	278,000	620,000	SL04-5064NR
340	520	243	241	3.5	3	3,650	8,000	370,000	815,000	SL04-5068NR
360	540	243	241	3.5	3	3,750	8,300	380,000	845,000	SL04-5072NR
380	560	243	241	3.5	3	3,800	8,750	385,000	895,000	SL04-5076NR

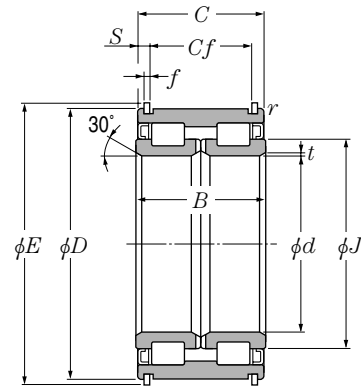
Note 1. The above are greased bearings. 2. The above are treated for rust prevention.
3. The above are non contact shielded bearings. Also, contact sealed can be applied upon request.



<i>J</i>	Dimensions				Abutment and fillet dimensions			Mass kg (approx.)
	<i>E</i> (approx.)	mm			mm			
		<i>f</i>	<i>C_f</i>	<i>S</i>	<i>d_a</i>	<i>E₁</i>	<i>C_{f1}</i> ●	
118.5	156	2.5	54	6	106	180	54	4.03
131.5	176	2.5	65	7	116.5	200	65	7
141.5	188	3	65	7	126.5	210	65	7.5
158	208	3	77	8.5	136.5	230	77	11.4
167	218	3	77	8.5	146.5	245	77	12.1
178	233	3	81	9	157	260	81	14.6
191	248	3	89	9.5	167	275	89	18.2
203	270	4	99	11	177	300	99	24.6
220	290	4	110	12.5	187	320	110	32.3
226	300	4	110	12.5	197	330	110	33.7
245.5	320	4	120	14.5	207	350	120	43.5
260	356	6	130	14.5	228.5	380	130	55.5
280.5	376	6	130	14.5	248.5	400	130	59.5
315.5	416	7	154	17.5	270	445	154	90.7
325	436	7	154	17.5	290	465	154	96.2
363	480	8	176	20	310	510	176	137
376	500	8	176	20	330	530	176	144
406	544	8	194	23.5	352	580	194	194
421	564	10	194	23.5	372	600	194	203
442	584	10	194	23.5	392	620	194	212

● *C_{f1}* deviation SL04-5020NR~SL04-5034NR : -0.1 ~ -0.5mm
SL04-5036NR~SL04-5076NR : -0.1 ~ -0.7mm

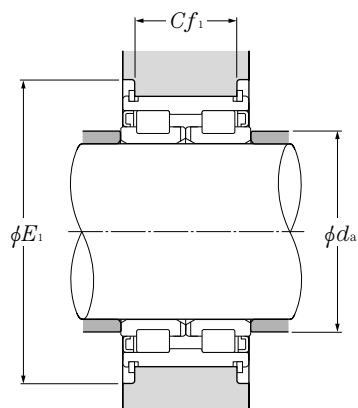




d 400~440mm

d	Boundary dimensions					Basic load ratings				Bearing numbers
	D	B	C	t	r	dynamic kN	static	dynamic kgf	static	
400	600	272	270	3.5	3	4,250	9,950	435,000	1,010,000	SL04-5080NR
420	620	272	270	3.5	3	4,350	10,300	445,000	1,050,000	SL04-5084NR
440	650	280	278	4.5	4	4,500	11,000	460,000	1,120,000	SL04-5088NR

Note 1. The above are greased bearings. 2. The above are treated for rust prevention.
3. The above are non contact shielded bearings. Also, contact sealed can be applied upon request.



<i>J</i>	Dimensions				Abutment and fillet dimensions			Mass
	<i>E</i> (approx.)	<i>f</i>	<i>C_f</i>	<i>S</i>	<i>d_a</i>	<i>E₁</i>	<i>C_{f1}</i> ^①	(approx.)
470	626	12	210	30	412	675	210	281
486	646	12	210	30	432	695	210	292
518	676	12	210	34	456	725	210	331

① *C_{f1}* deviation SL04-5080NR~SL04-5088NR : -0.1~ -0.7mm

