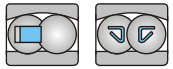
Self-Aligning Ball Bearings



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Self-Aligning Ball Bearings

Self-Aligning Ball Bearings

LYC's self-aligning ball bearing has a spherical raceway in the outer ring and a double-raceway in the inner ring. This feature gives the bearings the self-aligning property, which can keep the machine operating well even when angular misalignment of the shaft relative to the housing occurs. Values of permissible misalignment errors of double row self-aligning ball bearings are given in the section "selection of bearing type".

The self-aligning ball bearing is mainly used to carry radial loads and light axial loads, but they can not carry pure axial loads.

Basic Structure

The self-aligning ball bearings of LYC's standard design are available with a cylindrical bore and with a taper bore (taper 1:12). Self-aligning ball bearings can be directly located on the taper journal with lock nut and can also be mounted on the cylindrical shaft with suitable adapter or withdrawal sleeve. The internal radial clearance of bearings can be adjusted by adapter sleeve.

LYC can provide other structures of self-aligning ball bearings for customers, such as sealed self-aligning bearing, self-aligning ball bearing with extended inner ring etc. All types can not be listed in this catalogue. If customers require these, then please consult LYC technical department.

Cage

LYC self-aligning ball bearings are supplied with a pressed steel cage, a machined solid cage or glass fiber reinforced polyimide 66 and brass solid cage.

Axial Load Carrying Capacity

Self-aligning ball bearings with adapter sleeve normally will be fixed on a plain shaft without a shoulder. Axial load depends on friction between shaft and adapter sleeve. The allowed maximum axial load can be calculated from

$$Fp=0.003Bd$$

where

Fp — Allowed max axial load, KN
B — Bearing width, mm
d — Bearing inner diameter, mm

Minimum Load

In order to keep bearings working in a good condition, a minimum load must be imposed on bearings, particularly on bearings working at high speeds, high accelerations, or with the load direction changing frequently, because under these working conditions, inertial force of balls and cage and lubricant friction will have bad influence on the rotation of bearings, and detrimental sliding movement may be caused.

The minimum axial load of a self-aligning ball bearing can be obtained from

$$F_{min}=0.01C_o$$

Where

C_o — Basic static load rating, KN

When bearings are started at low ambient temperatures or in the condition where the viscosity of lubricant is very high, a larger minimum load probably is needed. Usually, the weight of bearing supporting parts plus the load on the bearing have been over the minimum load. If the weight can't be up to the required minimum load, then extra radial load must be imposed on this type of bearing in order to meet the requirement of minimum load,e.g. increase the tension for driving belt, or other similar methods.

Dimension, Tolerance, Clearance

The boundary dimension of LYC standard self-aligning ball bearing is according to GB/T273.3 <Rolling Bearing, Radial Bearing, and Boundary Dimension General Specification>, GB/T281<Rolling Bearing, Self-aligning Ball Bearing, and Boundary Dimension>.

The tolerance of the LYC standard self-aligning ball bearing is according to GB/T307.1 <Rolling Bearing, Radial Bearing and Tolerance>.

The clearance of LYC standard self-aligning ball bearing is according to GB/4604<Rolling Bearing, Radial Clearance>.

The dimensional tolerance of LYC standard self-aligning ball bearing is usually the normal grade P0 and the clearance is group 0.If customers have other special requirements on dimension, tolerance, and clearance, then LYC have the ability to supply the corresponding bearings to meet customer needs.

Equivalent Dynamic Load

The equivalent dynamic load of self-aligning bearing can be calculated from

when $Fa/Fr \leqslant e$ $P=Fr+Y_1Fa$

when $Fa/Fr > e$ $P=0.65Fr+Y_2F_2$

Equivalent Static Load

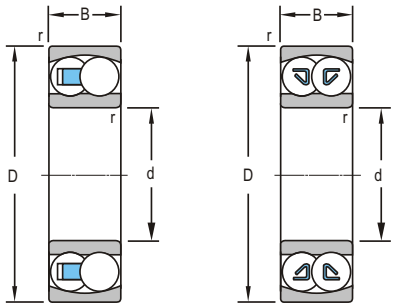
The equivalent static load of self-aligning ball bearing can be calculated from.

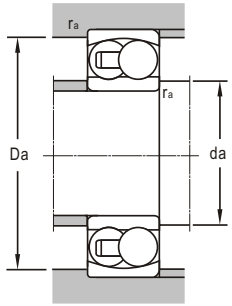
$$Po=Fr+Y_oFa$$

where

Fr — Radial load, N
Fa — Axial load, N
Y_1, Y_2 — Radial load factor
Y_o — Axial load factor

Coefficients e, Y0, Y1 and Y2 are listed in bearing dimension table.

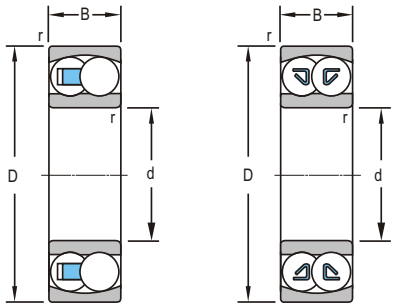


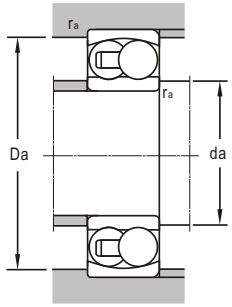


d 17～60mm

Boundary Dimensions				Basic Load Ratings		Limiting Speeds	
				Dynamic	Static	Grease	Oil
d	D	B	r_{min}	C	C_0		
mm				kN		r/min	
17	40	12	0.6	0.6	2.45	13500	16200
20	47	14	1	1	3.2	13500	16200
	52	21	1.1	1.1	4.75	10000	13000
25	52	15	1	1	4.05	11700	14400
	52	18	1	1	4.28	11700	14400
	62	17	1.1	1.1	6	8500	11000
	62	24	1.1	1.1	6.95	8500	11000
30	62	16	1	1	5.85	9000	11700
	62	16	1	1	5.85	9000	11701
	62	20	1	1	5.68	9500	11700
	72	19	1.1	1.1	7.8	8100	10000
35	72	17	1.1	1.1	6.7	8100	10000
	72	23	1.1	1.1	8.6	8100	10000
	80	21	1.5	1.5	9.8	6800	8100
	80	31	1.5	1.5	12.9	6800	8100
40	80	18	1.1	1.1	8.65	6800	8100
	80	23	1.1	1.1	9.8	6800	8100
	90	23	1.5	1.5	12.2	6000	7200
	90	33	1.5	1.5	15.6	6000	7200
45	85	19	1.1	1.1	9.65	6000	7200
	85	23	1.1	1.1	10.8	6000	7200
	100	25	1.5	1.5	16	5700	6800
	100	36	1.5	1.5	19.6	5700	6800
50	90	20	1.1	1.1	10.8	6300	7700
	90	23	1.1	1.1	11.2	6300	7700
	110	27	2	2	17.6	5000	6000
	110	40	2	2	20	5000	6000
55	100	21	1.5	1.5	13.4	5000	6000
	120	29	2	2	22.4	4500	5400
	120	43	2	2	24	4500	5400
60	110	22	1.5	1.5	15.6	5000	6000
	110	28	1.5	1.5	16.8	5000	6000

Bearing Designations				Mounting Dimensions			Calculation Factors				Mass
Cylindrical Bore	Tapered Bore	Cylindrical Bore	Tapered Bore								
Present		Original		d_{amin}	D_{amax}	r_{amax}	e	Y_1	Y_2	Y_0	
				mm							kg
1203	**1203K**	1203	111203	21	36	0.6	0.31	2	3.1	2.2	0.076
1204	**1204 K**	1204	111204	25	42	1	0.27	2.3	3.6	2.4	0.119
2304	**2304K**	1604	111604	26.5	45.5	1	0.51	1.2	1.9	1.3	0.219
1205	**1205 K**	1205	111205	30	47	1	0.27	2.3	3.6	2.4	0.144
2205	**2205 K**	1505	111505	30	47	1	0.41	1.5	2.3	1.5	0.187
1305	**1305 K**	1305	111305	31.5	55.5	1	0.27	2.3	3.5	2.4	0.258
2305	**2305K**	1605	111605	31.5	55.5	1	0.47	1.3	2.1	1.4	0.354
1206	**1206 K**	1206	111206	35	57	1	0.24	2.6	4	2.7	0.227
1206TN1				35	57	1	0.24	2.6	4	2.7	0.224
2206	**2206 K**	1506	111506	35	57	1	0.39	1.6	2.4	1.7	0.26
1306	**1306 K**	1306	111306	36.5	65.5	1	0.34	2.4	3.8	2.6	0.39
1207	**1207 K**	1207	111207	41.5	65.5	1	0.23	2.7	4.2	2.9	0.347
2207	**2207 K**	1507	111507	41.5	65.5	1	0.38	1.7	2.6	1.8	0.441
1307	**1307 K**	1307	111307	43	72	1.5	0.25	2.6	4	2.7	0.538
2307	**2307 K**	1607	111607	43	72	1.5	0.46	1.4	2.1	1.4	0.675
1208	**1208 K**	1208	111208	46.5	73.5	1	0.22	2.9	4.4	3	0.419
2208	**2208 K**	1508	111508	46.5	73.5	1	0.34	1.9	2.9	2	0.53
1308	**1308 K**	1308	111308	48	82	1.5	0.24	2.6	4	2.7	0.711
2308	**2308 K**	1608	111608	48	82	1.5	0.43	1.5	2.3	1.5	0.93
1209	**1209 K**	1209	111209	51.5	78.5	1	0.21	2.9	4.6	3.1	0.493
2209	**2209 K**	1509	111509	51.5	78.5	1	0.31	2.1	3.2	2.2	0.553
1309	**1309 K**	1309	111309	53	92	1.5	0.25	2.5	3.9	2.6	0.951
2309	**2309 K**	1609	111609	53	92	1.5	0.42	1.5	2.3	1.6	1.25
1210	**1210 K**	1210	111240	56.5	83.5	1	0.2	3.1	4.8	3.3	0.545
2210	**2210 K**	1510	111510	56.5	83.5	1	0.29	2.2	3.4	2.3	0.678
1310	**1310 K**	1310	111310	59	101	2	0.24	2.7	4.1	2.8	1.21
2310	**2310 K**	1610	111610	59	101	2	0.43	1.5	2.3	1.6	1.66
1211	**1211 K**	1211	111211	63	92	1.5	0.2	3.2	5	3.4	0.704
1311	**1311 K**	1311	111211	64	111	2	0.23	2.7	4.2	2.8	1.58
2311	**2311 K**	1611	111611	64	111	2	0.41	1.5	2.4	1.6	2.09
1212	**1212 K**	1212	111212	68	102	1.5	0.19	3.4	5.3	3.6	0.896
2212	**2212 K**	1512	111512	68	102	1.5	0.28	2.3	3.5	2.4	1.15



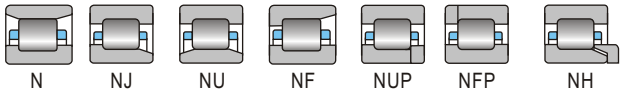


d 60～750mm

Boundary Dimensions				Basic Load Ratings		Limiting Speeds	
				Dynamic	Static	Grease	Oil
d	D	B	r_{min}	C	C_0		
mm				kN		r/min	
60	130	31	2.1	57.2	26.5	4050	5000
	130	46	2.1	87.1	28.5	4050	5000
65	140	33	2.1	63.7	29	3870	4500
70	150	35	2.1	74.1	27.5	3600	4320
75	160	37	2.1	79.3	30	3400	4300
	160	55	2.1	124	43	3400	4300
80	170	39	2.1	88.4	33.5	3200	4100
85	180	41	3	97.9	38	3100	3600
750	920	78	5	276	307	260	340

Bearing Designations				Mounting Dimensions			Calculation Factors				Mass
Cylindrical Bore	Tapered Bore	Cylindrical Bore	Tapered Bore								
Present		Original									
				d_{amin}	D_{amax}	r_{amax}	e	Y_1	Y_2	Y_0	
				mm							kg
1312	**1312 K**	1312	111312	71	119	2	0.23	2.8	4.3	2.9	1.96
2312	**2312K**	1612	111612	71	119	2	0.41	1.6	2.5	1.6	2.58
1313	**1313 K**	1313	111313	76	129	2	0.23	2.8	4.3	2.9	2.38
1314	**1314 K**	1314	111314	81	139	2	0.22	2.8	4.4	2.9	2.98
1315	**1315 K**	1315	111315	86	149	2	0.22	2.8	4.4	3	3.55
2315	**2315 K**	1615	111615	86	149	2	0.38	1.7	2.6	1.7	4.71
1316	**1316**	1316	111316	91	159	2	0.22	2.9	4.5	3.1	4.17
1317	**1317**	1317	111317	98	167	2.5	0.22	2.9	4.5	3	4.95
118/750	**118/750 K**	118/750	11118/750	761	909	4	0.059	10.6	16.4	11.1	116

Cylindrical Roller Bearings



N NJ NU NF NUP NFP NH

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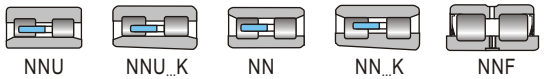
Single Row Cylindrical Roller Bearings



NNU NNU..K NN NN..K NNF

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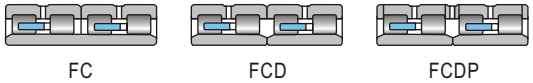
Double-Row Cylindrical Roller Bearings



FC FCD FCDP

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Four-Row Cylindrical Roller Bearings

Cylindrical Roller Bearings

Most of LYC's cylindrical roller bearings are separable. This make it very convenient to mount and dismount. Cylindrical roller bearings can carry heavier radial load, and are suitable to be used in the condition of high speed.
This type of bearings can allow a small angular error between inner axes and outer axes in the range of 2' ～ 4'. Therefore, it requires higher machining precision on shaft and housing; otherwise, asymmetrical load and stress would be focused at the position of raceway. However, this situation can be improved by correcting the contacted generatrix of rollers or raceways.
According to different rows, LYC's cylindrical roller bearings are divided into single row, double-row, and multi-row cylindrical rollers. These differences are also displayed on the design of flange position. The common used types of LYC's cylindrical roller bearings are as follows.

Single Row Cylindrical Roller Bearings Type N, NU

Bearings of type N have two integral flanges on inner ring and a flangeless outer ring. This type of bearings permits axial displacement in double directions of the housing relative to the shaft.
The bearings of type NU have two integral flanges on outer ring and a flangeless inner ring. This type of bearings permits axial displacement in double directions of the housing relative to the shaft.
Therefore, this type of bearings is suitable to be used as non-locating bearings.

Type NJ, NF

Bearings of type NJ have two integral flanges one on the outer ring, and one on the inner ring. This type of bearing can carry a certain amount of axial load in a single direction.
Bearings of type NF have one flange on the outer ring, and two integral flanges on the inner ring. This type of bearing can carry a certain amount of axial load in a single direction.
Therefore, they are suitable to be used as an axial location bearing in single direction..

Type NUP, NFP

Bearings of type NUP have two integral flanges on outer ring, one flange and separable loose flange on inner ring. This type of bearing can carry a certain amount of axial loads in double directions.
Bearings of type NFP have one flange, a loose flange on outer ring, and two integral flanges on inner ring. This type of bearing also can carry a certain amount of axial loads in double directions. This type of bearing can limit the displacement in double directions of the housing relative to the shaft.
Therefore, they are suitable to be used as a locating bearing.

Type NH (NJ+HJ)

Bearings of type NH are combined by the bearing of type NJ and the bearing of type HJ with catercornered flange. Comparing to NUP type with short flange ring and non-locating loose flange, type NH can take the advantage of the whole inner ring width of NJ to match with axes tightly. Moreover, it's quite convenient to mount and dismount.
This type of bearings can limit axial displacement in double directions of the housing relative to the shaft. Therefore, they are suitable to be used as a locating bearing.

Double-Row Cylindrical Roller Bearings

LYC's double-row cylindrical roller bearings are divided into bearings with cylindrical inner bore and tapered inner bore (added K behind bearing type). This type of bearing has these advantages, such as compact structure, good rigidity, heavy load carrying capacity, and little distortion under loads. Consequently, it's applicable for the machine tool spindle. Tapered inner bore could fine adjust clearance, simplify positioning fixture and be convenient to mount and dismount.
The common used types of LYC's double-row cylindrical roller bearings are as follows.

Type NN, NNU

Bearings of type NN have two integral flanges on the inner ring, a flangeless outer ring and a centre flange in the middle. This type of bearing permits axial displacement in double directions of the housing relative to the shaft.
The bearings of type NNU have two integral flanges on the outer ring, a non-contacting inner ring and a centre flange in the middle. This type of bearing permits axial displacement in double directions of the housing relative to the shaft.
Therefore, this type of bearing is suitable to be used as non-locating bearings.

Type NNF

Bearings of type NNF are one kind of double-row cylindrical roller bearings full of rollers, which consist of the outer ring with a center flange, two inner rings with double flanges. Rollers are guided by flanges on inner ring, and two inner rings are fixed up by a fastening ring. This structure can carry not only considerable radial load and axial load, but also tilting moment. Therefore, they are suitable to be used as non-locating bearings.
Bearings of type NNF have contact seals at two sides. And they are filled with grease lubricant, whose working temperature would be -50℃ ~+110℃.However, after considering the seal material, available working temperature shall be -40℃~+80℃Under appropriate conditions, sealed NNF bearing require little maintenance and can be kept for long periods in water vapor or polluted environment. When at mid or high speed, bearing can get make-up lubricating through lubrication groove and bore.

Four-Row Cylindrical Roller Bearings

LYC's four-row cylindrical roller bearings are mainly used for rolling mill. The bearing are separable, i.e. the rings and rolling elements could be separated. Therefore it is convenient to wash, check, mount and dismount.

Type FC

The bearings of type FC consist of two outer rings and one inner ring, which have two integral flanges on outer rings, a center flange in the middle and a flangeless inner ring.

Type FCD

Essentially, bearing of type FCD consists of two bearings of type NN.
Bearings of type FC and FCD can permit axial displacement in double directions of the housing relative to the shaft
Therefore, they are suitable to be used as non-locating bearings. Normally, their cages are made from solid machinery.

Special Design The Structure of Type E

Comparing to the former bearings with the same types, the internal structures have been improved so as to increase bearing carrying capacity and life. In order to distinguish with the former design, E will be added behind the bearing type.

Tapered Bore Bearing

LYC's single row and double-row cylindrical roller bearings normally have cylindrical inner holes. But for some parts of the dimensions and specifications, tapered holes (taper: 1:12) can also be provide. In this case, K would be added behind the bearing type.

Bearings with Snap Ring Groove

LYC can also supply single row cylindrical roller bearings with snap ring groove on inner ring. This type of bearings can be located through the snap ring. While mounting, it is convenient to fix the bearing into the housing. Consequently, it could be taken into consideration when the mounting position is limited. In this case, N should be added behind the bearing type.
LYC can also provide customers cylindrical roller bearings with other structures, such as insulative cylindrical roller bearings, cylindrical roller bearings without inner ring or outer ring, cylindrical roller bearings full of rollers, and sealed etc. All types can not be list in this catalogue. If customers require, please consult LYC technical department.

Cage

Most cages for LYC's single row cylindrical roller bearings are pressed steel cages or machined brass cages. According to different working conditions and customers' requirements, cages with other design and structure could be supplied, e.g.glass fiber reinforced polyamide 66, which can works continuously at the maximum temperature +120℃.
Under continuous high temperatures or bad conditions, steel pressed cages and machined brass cages are recommended for single row cylindrical roller bearings.
Normally cage materials of LYC's double (four)-row cylindrical roller bearings are machined brass cages. For bearings with extra-large size, welded steel cages also can be selected.

Axial Dynamic Load Carrying Capacity

LYC's cylindrical roller bearings with designed flanges on inner and outer ring can carry not only radial load but also a certain amount of axial loads. The axial load carrying capacity mainly depends on the form of interface between roller end face and flange, lubricating conditions, and heat dissipation, etc.

Based on the following supposed conditions, the permissible axial load can be calculated from

$$F_{max}=\frac{K_1C_0 10^4}{n(d+D)}-K_2Fr$$

where

F_{max} — Max permissible axial load, kN
C_0 — Basic static load rating, kN
Fr — Actual radial load, kN
n — Speed, r/min
d (D) — Bearing inner diameter(outer diameter), mm
K_1 — Factor, oil lubricating is 1.5, grease lubricating 0.5
K_2 — Factor, oil lubricating is 0.3, grease lubricating 0.15

The above formula is based on the temperature difference of 60℃ between working and ambient temperature, and the viscosity ratio≥2.

Note that this formula will not be applicable in the case of roller end face or flange with special design.

In order to avoid flange cracking, LYC technical department advises that the axial load Fa (frequently or occasionally) cannot be larger than the following value:

$$F_a=0.0023D^{1.7}kN$$

D — Bearing outer diameter, mm

The axial load Fa acting on bearings in a short time or occasionally can not be larger than the following value:

$$Fa=0.007D^{1.7}\ kN$$

D — Bearing outer diameter, mm

When single row cylindrical roller bearings carry heavy axial load, the loads need to be distributed equally. In addition, a certain rotating precision, dimension of shaft shoulder and axial runout should be reached. The related axial runout of shaft shoulder can be referred to "Bearing application".

When axial load and deflexion happen at the same time, the height of the shaft shoulder of supporting inner ring should be one half of the flange, see Fig.1. In order to avoid the flange carrying circular stress, the shaft shoulder diameter can be calculated from

$$d_a=0.5(d_1+F)$$

where

da — Shaft shoulder diameter, mm
d_1 — Flange diameter of inner ring , mm
F — Raceway diameter of inner ring , mm

When axes angular error between inner ring and outer ring exceed 1', the load carrying capacity on the flange shall be changed extremely. In that case, safe coefficient as above may not be suitable. In this case, please consult LYC technical department.

To ensure cylindrical roller bearing is working in good condition under axial loads, especially heavy axial loads, LYC technical department suggests to notice the following several points:

- Internal radial clearance should be controlled within the required range, and small clearance is preferred to big.
- Please use lubricant with extreme pressure additive.

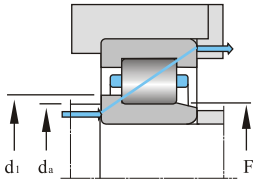


Fig 1

Minimum Load

In order to keep bearings working in good condition, a minimum load must be imposed on bearings, particularly on bearings working at high speeds, high accelerations, or with the load direction changing frequently, because under these working conditions, inertial force of balls and cage and lubricant friction will have bad influence on the rotation of bearings, and detrimental sliding movement may be caused. The minimum load of a cylindrical roller bearing can be obtained from

$$F_{min}=K_r\left(6+\frac{4n}{n_{limit}}\right)\left(\frac{dm}{100}\right)^2$$

where

n — Working speed, r/min
n_{limit} — Limiting speed, r/min
dm — Mean bearing diameter dm=0.5(d+D), mm

Kr Minimal load factors,the values are Listed in the table below

Kr	Dimension Series			
	10	2、3、4	22	23
	100	150	200	250

When bearings are started at low ambient temperatures or in the condition that the viscosity of the lubricant is very high, bigger minimum load is required. Usually, the weight of the bearing supporting parts plus the load on the bearing have been over the required minimum load. If the weight cannot be up to the minimum load, extra radial load must be exerted on this type of bearing in order to meet the requirement of minimum load.

Dimension, Tolerance, Clearance

LYC's standard cylindrical roller bearing dimension is in accordance to GB/T273.3 <Rolling Bearing, Radial Bearing, and Boundary Dimension General Specification>, GB/T283 <Rolling Bearing, Cylindrical Roller Bearing, and Boundary Dimension>, GB/T285 <Rolling Bearing, Double-Row Cylindrical Roller Bearing, and Boundary Dimension>, JB/T5389.1 <Rolling Bearing, Four-Row Cylindrical Roller Bearing Used by Rolling Mill>. <Rolling Bearing, Radial Bearing, and Boundary Dimension General Specification>, GB/T283 <Rolling Bearing, Cylindrical Roller Bearing, and Boundary Dimension>, GB/T285 <Rolling Bearing, Double-Row Cylindrical Roller Bearing, and Boundary Dimension>, JB/T5389.1 <Rolling Bearing, Four-Row Cylindrical Roller Bearing Used by Rolling Mill>.

The tolerance of LYC's standard cylindrical roller bearing is in accordance to GB/T307.1 <Rolling Bearing, Radial Bearing, and Tolerance>.

The clearance of LYC;s standard cylindrical roller bearing is in accordance to GB/T4604 <Rolling Bearing, and Radial Clearance>.

The dimensional tolerance of LYC;s standard cylindrical roller bearing is the normal grade P0 and the clearance is group 0.If customers have other special requirements on dimension, tolerance, and clearance, LYC have the ability to supply the corresponding products, including non-standard products.

Equivalent Dynamic Load

For cylindrical roller bearings carrying dynamic loads, when applied as wandering end bearings, the equivalent dynamic load can be calculated as following

$$P=Fr$$

If the bearing carries axial load in one direction or double directions,the equivalent dynamic load can

when $Fa/Fr\leqslant e$ $P=Fr$
when $Fa/Fr>e$ $P=0.92Fr+YFa$

e — Limiting value
For dimension series 2, 3, 4, e=0.2,
For other series e=0.3

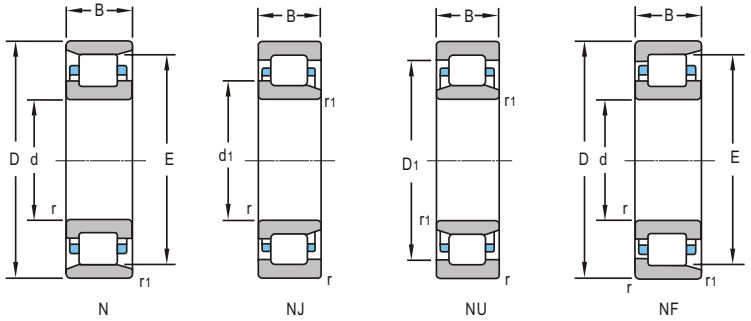
Y — Axial load coefficient
For dimension series 2, 3, 4, Y=0.6,
For other series Y=0.4

In order to obtain ideal effect, cylindrical roller bearing needs to carry axial load and radial load at the same time. However, the ratio of axial load and radial load should be smaller than 0.5.

Equivalent Static Load

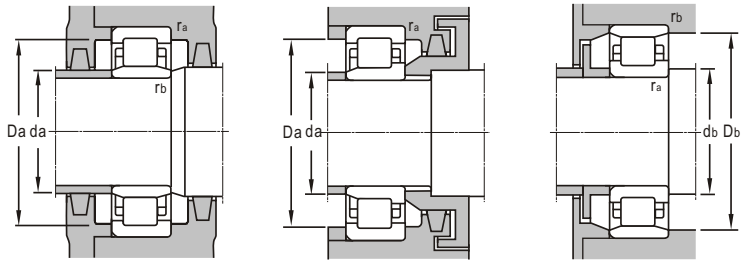
For the cylindrical roller bearing carrying static load, the equivalent static load can be calculated from

$$P_0=Fr$$

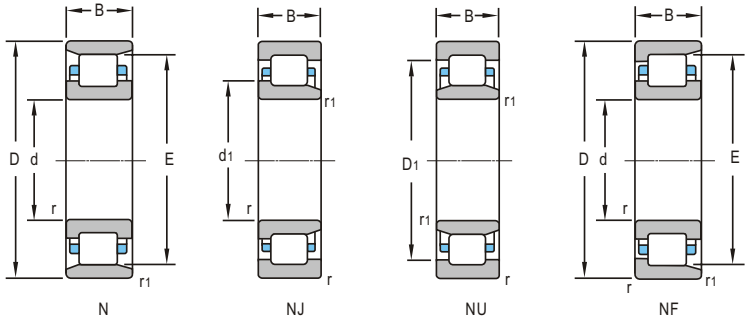


d 17～35mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	D	B	r_{min}	r_{1min}	C	C_0		
mm					kN		r/min	
17	47	14	1	0.6	19.2	16.9	14000	17000
18	52	15	0.6	0.6	30.8	25.4	10000	14000
20	47	14	1	0.6	23.8	23.9	13000	16000
	47	14	1	0.6	25.1	25.2	13000	16000
	47	14	1	0.6	25.1	25.2	13000	16000
25	52	15	1	0.6	28.8	27.1	11000	14000
	52	15	1	0.6	30.6	29.3	10500	13500
	52	15	1	0.6	30.6	29.3	11000	14000
	52	15	1	0.6	28.8	27.1	11000	14000
	52	15	1	0.6	28.8	27.1	11000	14000
	52	18	1	0.6	37.8	40.2	2200	4500
	62	17	1.1	1.1	36.9	32	9500	12000
	62	17	1.1	1.1	30.6	26.6	9500	12000
	62	17	1.1	1.1	38	37	9500	12000
	62	17	1.1	1.1	38.2	34.7	2500	5000
	62	17	1.1	1.1	38	37	9500	12000
	62	24	1.1	1.1	50.5	49.5	9000	11000
	62	24	1.1	1.1	58.4	62.2	2200	4500
27	58	18	1.1	1.1	50	55	11000	14000
30	62	16	1	0.6	34.3	21.7	9500	12000
	62	16	1	0.6	34.3	21.7	9500	12000
	62	16	1	0.6	34.3	21.7	9500	12000
	62	16	1	0.6	26.5	25.3	9500	12000
	62	16	1	0.6	26.5	25.3	9500	12000
	62	16	1	0.6	32.9	29.7	9500	12000
	62	16	1	0.6	26.5	25.3	9500	12000
	62	16	1	0.6	26.5	25.3	9500	12000
	62	16	1	0.6	36.1	34.7	10810	13620
	62	16	1	0.6	36.1	34.7	10810	13620
	62	16	1	0.6	36.1	34.7	10810	13620
	62	16	1	1	36.1	34.7	9000	11500
	72	19	1.1	1.1	51.2	48	9000	11000
	72	19	1.1	1.1	51.2	48	9000	11000
35	72	17	1.1	0.6	45.3	43.8	8500	10000
	72	17	1.1	0.6	45.3	43.8	8500	10000

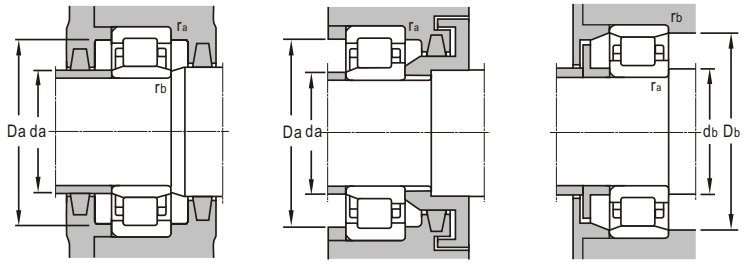


Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	E	F	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
NU 303M	32303H	17		36.8		27	21.2	41		1	0.6	0.147
NB 3/18 JR/YA4	822903	18				25	23	47		0.6	0.6	0.1756
N 204	2204	20	30.4		40				43	1	0.6	0.112
NU 204M	32204H	20		36.8		27	24	42		1	0.6	0.112
NJ 204M	42204H	20	30	36.8		27	24	42		1	0.6	0.135
NU 205M	32205H	25		41.8		32	29	47		1	0.6	0.168
NJ 205 EF1		25	34.7	43.5		31.5	29	47		1	0.6	0.146
NJ 205 ETN1	42205EA	25	34.7	43.5		31.5	29	47		1	0.6	0.135
NJ 205 EM		25	34.7	43.5		31.5	29	47		1	0.6	0.152
NU 205 EM		25		43.5		31.5	29	47		1	0.6	0.15
NU 2205 V/C9	3-258	25		41.12		31.12	29	47		1	0.6	0.178
NJ 305 E	42305E	25	38.1	50.4		34	31	55		1	1	0.256
NJ 305		25	38.6	48.7		35	31	55		1	1	0.255
NJ 305 ETN1	42305EA	25	38.1	50.4		34	31	55		1	1	0.251
NCL 305 V	102305	25	39		53		31		55	1	1	0.254
NU 305 M		25		50.4		34	32	55		1	1	0.273
NJ 2305M	42605 HY	25	39	48.7		35	32	55		1	1	0.452
NCL 2305 V	102605	25	39		53		32		52	1	1	0.351
NU 6/27 EV		27		47.6		35.53	33	53		1	1	0.23
N 206 E	2206E	30	41.3		55.5		35		57	1	0.6	0.205
NJ 206 E	42206E	30	41.3	52.3		37.5	35	57		1	0.6	0.213
NU 206 E	32206E	30		52.3		37.5	35	57		1	0.6	0.207
N 206	2206	30	42.1		53.5				57	1	0.6	0.219
NU 206M	32206H1	30		49.9		38.5	34	57		1	0.6	0.239
NU 206EM		30		52.3		37.5	34	57		1	0.6	0.223
NU 206Q1PS	32206Q1	30		49.9		38.5	34	57		1	0.6	0.238
NJ 206M	42206H1	30	41.8	49.9		38.5	34	57		1	0.6	0.247
N 206 ETN1	2206EA	30	41.3		55.5				57	1	0.6	0.205
NU 206 ETN1	32206EA	30		52.3		37.5	34	57		1	0.6	0.207
NJ 206 ETN1	42206EA	30	41.3	52.3		37.5	34	57		1	0.6	0.213
NJ 206 EF1		30	41.3	52.3		37.5	34	57		1	0.6	0.31
NF 306 E	12306E	30	44.9	58.9	62.5		37	65		1	1	0.377
NU 306 EM		30		58		40.5	37	65		1	1	0.399
NJ 207 EM		35	48	60		44	39	65		1	0.6	0.337
NU 207 EM		35		60		44	39	65		1	0.6	0.328

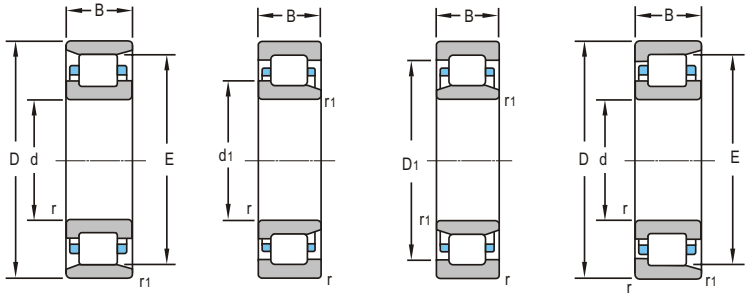


d 35～45mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	r_{1min}	*C*	C_0		
mm					kN		r/min	
35	72	17	1.1	0.6	49.2	51.9	9340	11770
	80	21	1.5	1.1	50.9	48.5	7000	8500
	80	21	1.5	1.1	50.9	48.5	7000	8500
	80	21	1.5	1.1	50.9	48.5	7000	8500
	80	21	1.5	1.1	59.1	39.2	8000	9500
	80	21	1.5	1.1	70.6	66.2	7000	8500
	80	21	1.5	1.1	70.6	66.2	7000	8500
	80	21	1.5	1.1	80.2	83.3	2500	3050
	80	21	1.5	1.1	80.2	83.3	2500	3050
	80	31	1.5	1.1	64.8	66.1	7000	8500
	80	31	1.5	1.1	92.2	99.3	7000	8500
	80	31	1.5	1.1	92.2	99.3	7000	8500
	100	25	1.5	1.5	77.5	72.5	6700	8000
40	80	18	1.1	1.1	49.1	31.9	7500	9000
	80	18	1.1	1.1	49.1	31.9	7500	9000
	80	18	1.1	1.1	49.1	31.9	7500	9000
	80	18	1.1	1.1	48.5	47.7	7500	9000
	80	18	1.1	1.1	48.5	47.7	7500	9000
	80	18	1.1	1.1	48.5	47.7	7500	9000
	80	18	1.1	1.1	48.5	47.7	7500	9000
	80	18	1.1	1.1	48.5	47.7	7500	9000
	80	18	1.1	1.1	51.2	50.4	8330	10500
	80	18	1.1	1.1	51.2	50.4	8330	10500
	80	18	1.1	1.1	51.2	50.4	8330	10500
	90	23	1.5	1.5	59.8	58.4	6700	8000
	90	23	1.5	1.5	59.8	58.4	6700	8000
	90	23	1.5	1.5	59.8	58.4	6700	8000
	90	23	1.5	1.5	59.8	58.4	6700	8000
	90	23	1.5	1.5	59.8	58.4	6700	8000
	90	23	1.5	1.5	83.6	88.4	6700	8000
	90	23	1.5	1.5	98.9	103		
	90	23	1.5	1.5	59.8	58.4	6700	8000
	90	23	1.5	1.5	59.8	58.4	6700	8000
	90	23	1.5	1.5	87.7	87.4	6500	7500
	90	33	1.5	1.5	111	119	6300	7500
	110	27	2	2	106	102	6000	7000
45	85	19	1.1	1.1	60.1	62.5	6700	8000
	85	19	1.1	1.1	64.3	68.1	6700	8000
	85	23	1.1	1.1	66.1	79.5	6700	8000

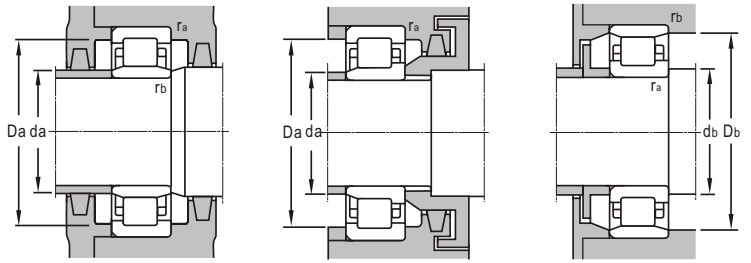


Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	*E*	*F*	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
N 207 ETN1	2207 EA	35	48.3		64		42		67.8	1.1	0.6	0.296
NU 307 M	32307H	35		63.5		46.2	43	72		1.5	1	0.546
NF 307	12307	35	51.5	64	68.2		43		72	1.5	1	0.509
NJ 307	42307	35	50.8	63.5		46.2	43	72		1.5	1	0.505
NJ 307 E	42307E	35	51.1	66.3		46.2	43	72		1.5	1	0.482
NJ307ETN1	42307EA	35	51.1	66.3		46.2	43	72		1.5	1	0.482
NJ 307 EF1		35	51.1	66.3		46.2	43	72		1.5	1	0.676
NJ307ENV/C9		35	52.2	64.4		46.2	44	72		1.5	1	0.531
NJ 307 EV		35	52.2	64.4		46.2	44	72		1.5	1	0.537
NJ 2307	42607H	35	50.8	63.5		46.2	42	72		1.5	1	0.876
NJ2307EF1		35	55.1	66.3		46.2	42	72		1.5	1	0.936
NU2307EF1		35		66.3		46.2	42	72		1.1	1	0.917
NJ 407 M		35	59	78.1		53	44	92		1.5	1.5	1.14
NJ 208 E	42208E	40	54.2	67.6		49.5	47	73		1	1	0.395
NF 208 E	12208E	40	54.2	67.6	71.5		47		72	1	1	0.392
NU 208 E	32208E	40		67.6		49.5	47	70		1	1	0.383
N 208 M	2208H	40	54.6		70		47		73	1	1	0.439
N 208	2208	40	54.6		70		47		73	1	1	0.394
NF 208	12208	40	54.6	66	70		47	73		1	1	0.404
NU 208M	32208H1	40		65.6		50	47	73		1	1	0.448
NJ 208M	42208H1	40	54.2	65.6		50	47	73		1	1	0.458
NU 208 ETN1	32208EA	40		67.6		49.5	47	73		1	1	0.383
NJ 208 ETN1	42208EA	40	54.2	67.6		49.5	47	73		1	1	0.395
NF 208 ETN1	12208EA	40	54.2	67.6	71.5		47	73		1	1	0.392
N 308	2308	40	58.4		77.5		48		80	1.5	1.5	0.662
NU308Q1	32308Q	40		72.1		53.5	48	82		1.5	1.5	0.761
NU 308M	32308H	40		72.1		53.5	48	82		1.5	1.5	0.760
NU308L	32308L	40		72.1		53.5	48	82		1.5	1.5	0.694
NJ 308M	42308H	40	57.6	72.1		53.5	48	82		1.5	1.5	0.750
NU 308 EPC/P5		40		75.5		52	49	82		1.5	1.5	0.638
NJ 308 EV/C9YB2		40	59.5	76		53.46	48	82		1.5	1.5	0.693
NJ308L	42308L2	40	57.5	72.1		53.5	48	82		1.5	1.5	0.684
NF 308 M		40	58.4	72.5	77.5		49		80	1.5	1.5	0.674
NF308EF1		40	57.5	75	81.3		49		80	1.5	1.5	0.876
NJ2308E		40	57.7	75.4		52	48	82		1.5	1.5	1.17
N408M		40	66		92		50		93	2	2	1.44
NJ 209 EM		45	59.2	72.6		54.5	53	78		1	1	0.49
NJ 209EF1		45	59.2	72.6		54.5	53	78		1	1	0.623
NU 2209 L1		45		72.4		54.5	52	78		1	1	0.567

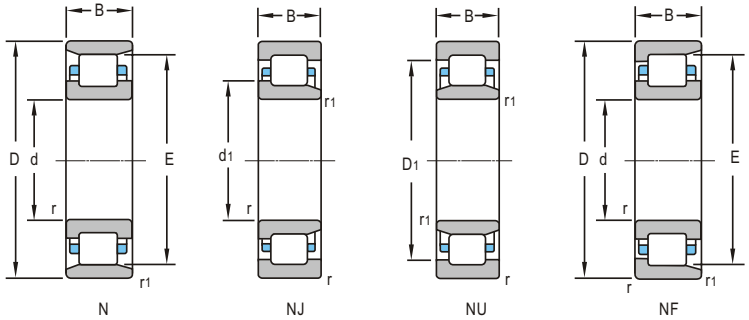


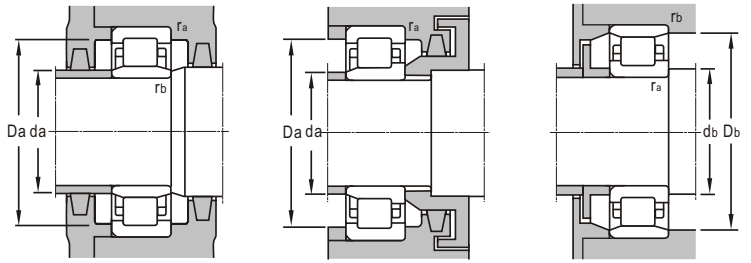
d 45～55mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	D	B	r_{min}	r_{1min}	C	C_0		
mm					kN		r/min	
45	85	23	1.1	1.1	72.6	79.5	6700	8000
	85	23	1.1	1.1	72.6	79.5	6700	8000
	85	23	1.1	1.1	72.6	79.5	6700	8000
	100	25	1.5	1.5	101	103.0	6300	7500
	100	25	1.5	1.5	79.5	78.5	6300	7500
	100	25	1.5	1.5	79.5	78.5	6300	7500
	100	25	1.5	1.5	79.5	78.5	6300	7500
	100	25	1.5	1.5	79.5	78.5	6300	7500
	100	25	1.5	1.5	79.5	78.5	6300	7500
	100	31	1.5	1.5	130	149	5600	6700
	100	36	1.5	1.5	93.3	104	5600	6700
	120	29	2	2	117	115	5600	6700
50	90	20	1.1	1.1	52.3	56.8	6300	7500
	90	20	1.1	1.1	54.8	60.3	6300	7500
	90	20	1.1	1.1	54.8	60.3	6300	7500
	90	20	1.1	1.1	52.3	56.8	6300	7500
	90	20	1.1	1.1	54.8	60.3	6300	7500
	90	20	1.1	1.1	54.8	60.3	6300	7500
	90	20	1.1	1.1	59.9	63.4	6300	7500
	90	20	1.1	1.1	59.9	63.4	6300	7500
	90	23	1.1	1.1	64.1	69.1	6300	7500
	90	23	1.1	1.1	76.2	86.4	6300	7500
	110	27	2	2	90.4	90.7	5000	6000
	110	27	2	2	90.4	90.7	5000	6000
	110	27	2	2	90.4	90.7	5000	6000
	110	27	2	2	90.4	90.7	5000	6000
	110	27	2	2	90.4	90.7	5000	6000
	110	40	2	2	121	133	5000	6000
	110	40	2	2	153	172	5000	6000
55	100	21	1.5	1.1	87	100	6000	7000
	100	21	1.5	1.1	87	100	6000	7000
	100	21	1.5	1.1	87	100	6000	7000
	100	21	1.5	1.1	87	100	6000	7000
	120	29	2	2	110	110	4800	5600
	120	29	2	2	110	110	4800	5600
	120	29	2	2	110	110	4800	5600
	120	29	2	2	110	110	4800	5600
	120	29	2	2	140	146	4800	5600
	120	43	2	2	148	162	4800	5600



Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	E	F	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
NJ 2209 EF1		45	59.2	72.6		54.5	52	78		1	1	0.767
NJ 2209 EM1		45		72.4		54.5	52	78		1	1	0.624
NU 2209 EM		45		72.4		54.5	52	78		1	1	0.63
NF309EF1		45	64.7	83.6	90		53	92	92	1.5	1.5	1.24
N 309	2309	45	64		86.5		53		89	1.5	1.5	0.876
NU 309M	32309H	45		80.2		58.5	53	92		1.5	1.5	1.01
NU 309L	32309L	45		80.2		58.5	53	92		1.5	1.5	0.9
NJ 309M	42309H	45	62.9	80.2		58.5	53	92		1.5	1.5	1.03
NJ 309L	42309L	45	62.9	80.2		58.5	53	92		1.5	1.5	0.922
NJ2309 X2V/C9		45	63.5	80.2		57.87	53	92		1.5	1.5	1.21
N 2309M	2609H	45	64		86.5		53		89	1.5	1.5	1.51
NJ 409 M		45	72	94		64.5	55	110		2	2	1.85
N 210	2210	50	64.6		80.4		56.5		83.5	1	1	0.513
NU 210M	32210H	50		76.25		60.4	56.5	83.5		1	1	0.564
NU 210L	32210L	50		76.25		60.4	56.5	83.5		1	1	0.51
NU 210Q1	32210Q1	50		76.25		60.4	56.5	83.5		1	1	0.546
NJ 210M	42210H	50	64	76.25		60.4	56.5	83.5		1	1	0.581
NJ 210L	42210L	50	64	76.25		60.4	56.5	83.5		1	1	0.527
NJ 210EM		50	64	77.6		59.5	56.5	83.5		1	1	0.577
NU 210EM		50		77.6		59.5	56.5	83.5		1	1	0.559
NU 2210 EM		50		77.6		59.5	56.5	83.5		1	1	0.625
NU 2210 EM1		50		78		59.5	56.5	83.5		1	1	0.648
N 310	2310	50	71		95		59		98	2	2	1.15
NU 310	32310	50		89.6		65	59	101		2	2	1.14
NU 310M	32310H	50		89.6		65	59	101		2	2	1.29
NJ 310	42310	50	70.2	89.6		65	59	101		2	2	1.17
NJ 310M	42310H	50	70.2	89.6		65	59	101		2	2	1.32
NU 2310M	32610H	50		88.1		65	59	101	101	2	2	2.01
NJ 2310 EM/C9S0		50	71	91.8		65	59	101		2	2	2.02
NJ 211 E	42211E	55	70.9	86.3		66	61.5	91		1.5	1	0.753
NJ 211 EF1		55	70.9	86.3		66	61.5	91		1.5	1	0.796
NF 211 E		55	70.9	86.5	90		61.5	91		1.5	1	0.741
NU 211 EF1		55		86.5		66	61.5	91		1.5	1	0.726
N 311	2311	55	77		104.5		64		107	2	2	1.53
N 311M	2311H	55	77		104.5		64		107	2	2	1.67
NU 311 M	32311H	55		98.5		70.5	64	111		2	2	1.71
NF 311	12311	55	77	99	104.5		64	111	107	2	2	1.54
NU 311 EPC/P5		55		100.6		70.5	64	111		2	2	1.44
NU 2311 M	32611H	55		98.5		70.5	64	111		2	2	2.77

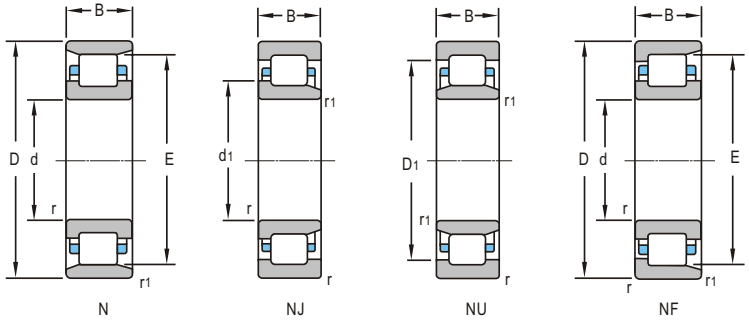


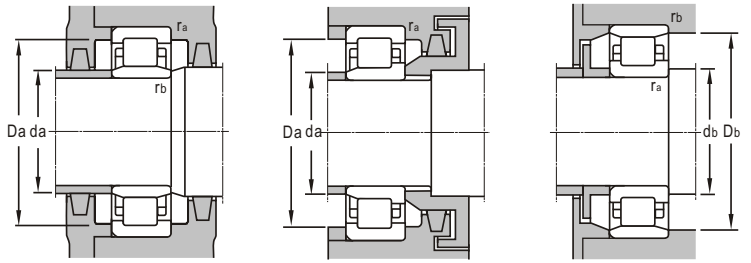


d 55～65mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	D	B	r_{min}	r_{1min}	C	C_0		
mm					kN		r/min	
55	120	43	2	2	148	162	4800	5600
	120	43	2	2	202	235	4800	5600
	140	33	2.1	2.1	139	138	4800	5600
	140	33	2.1	2.1	139	138	4800	5600
60	95	18	1.1	1	48.7	62.3	6700	8000
	110	22	1.5	1.5	73.3	82	5300	6300
	110	22	1.5	1.5	98.5	108.6	5300	6300
	110	22	1.5	1.5	76	87	5300	6300
	110	22	1.5	1.5	76	87	5300	6300
	130	31	2.1	2.1	126	130	4300	5000
	130	31	2.1	2.1	135	140	4300	5000
	130	31	2.1	2.1	126	130	4300	5000
	130	31	2.1	2.1	126	130	4300	5000
	130	31	2.1	2.1	135	140	4300	5000
	130	31	2.1	2.1	126	130	4300	5000
	130	31	2.1	2.1	135	140	4300	5000
	130	31	2.1	2.1	155	164	4300	5000
	130	31	2.1	2.1	155	164	4300	5000
	130	46	2.1	2.1	222	262	4300	5000
	130	46	2.1	2.1	222	262	300	5000
	140	51	2.5	2.5	145	108	4300	5000
	150	35	2.1	2.1	167	168	4300	5000
	150	35	2.1	2.1	167	168	4300	5000
	150	35	2.1	2.1	206	220	4300	5000
65	100	18	1.1	1	41.0	51	6300	7500
	120	23	1.5	1.5	85	96.1	4800	5600
	120	23	1.5	1.5	85	96.1	4800	5600
	120	31	1.5	1.5	144	172	4800	5600
	120	31	1.5	1.5	144	172	4800	5600
65	140	33	2.1	2.1	140	146	4000	4800
	140	33	2.1	2.1	140	146	4000	4800
	140	33	2.1	2.1	140	146	4000	4800
	140	33	2.1	2.1	140	146	4000	4800
	140	33	2.1	2.1	140	146	4000	4800
	140	33	2.1	2.1	177	211	4000	4800
	140	33	2.1	2.1	177	211	4000	4800
	140	33	2.1	2.1	140	146	4000	4800
	140	33	2.1	2.1	140	146	4000	4800
	140	33	2.1	2.1	140	146	4000	4800

Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	E	F	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
NJ 2311 M	42611 H	55	76	98.5		70.5	64	111		2	2	2.93
NJ 2311EF1/C4YB		55	77.5	100		77.2	64	111		2	2	2.45
NU 411M	32411H	55		108		77.2	66	129		2	2	3.24
NJ 411M	42411 H	55	85	108		77.2	66	129		2	2	3.29
NU1012 M		60		82.2		69.5	65	88.5		1	1	0.49
N 212	2212	60	78.4		97.5		68		100	1.5	1.5	0.872
NJ 212 E	42212E	60	77.6	95		72	68	102		1.5	1.5	0.705
NU 212M	32212H	60		92.2		73.5	68	102		1.5	1.5	0.955
NJ 212M	42212H	60	77.6	92.2		73.5	68	102		1.5	1.5	0.981
N 312	2312	60	82.6		113		71		116	2	2	1.86
N 312M	2312H	60	85.4		113		71		116	2	2	2.05
NU 312	32312	60		106.5		77	71	120		2	2	1.86
NU 312Q1	32312Q	60		106.5		77	71	120		2	2	2.08
NU 312M	32312H	60		106.5		77	71	120		2	2	2.08
NJ 312	42312	60	84.2	106.5		77	71	120		2	2	1.9
NJ 312M	42312H	60	84.2	106.5		77	71	120		2	2	2.12
NJ 312 EF1		60	84.3	109		77	71	120		2	2	1.95
NU 312 EPC/P5		60		110		77	71	120		2	2	1.82
N 2312EF1		60	84.3		115		71		116	2	2	2.9
NJ2312EF1		60	84.3	108		77	71	120		2	2	2.99
N 612/C9	2712 U	60	86		122		75		125	2	2	3.21
N 412M	2412H	60	91.65		127		71		128	2	2	3.52
NJ 412	42412	60	91	118.8		83	71	138		2	2	3.21
NJ 412 EF1		60	91.5	121		83	72	138		2	2	3.14
NU 1013M	32113H	65		86.6		74.5	70	93.5		1	1	0.522
NJ 213 M		65	85	101.6		79.5	74	111		1.5	1.5	1.18
N 213 M		65	85		105.5		74		108	1.5	1.5	1.15
NU2213EM		65		104		78.5	74	111		1.5	1.5	1.63
NU2213ENM		65		104		78.5	74	111		1.5	1.5	1.61
N 313	2313	65	91		121.5		77		125	2	2	2.32
N 313M	2313H	65	92.3		121.5		77		125	2	2	2.58
NU 313M	32313H	65		114.9		83.5	77	129		2	2	2.51
NU 313Q1	32313Q	65		114.9		83.5	77	129		2	2	2.53
NJ 313M	42313H	65	91	114.9		83.5	77	129		2	2	2.57
NJ 313 E		65	90.6	118.8		82.5	77	129		2	2	2.45
NU 313 EF1		65		118.8		82.5	77	128		2	2	2.41
N 313Q1/P6 S0		65	92.3		121.5		77		125	2	2	2.54
NU 313Q1/P63 S0		65		114.9		83.5	77	129		2	2	2.53
NJ 313Q1/P63 S0		65	90.5	114.9		83.5	77	129		2	2	2.6

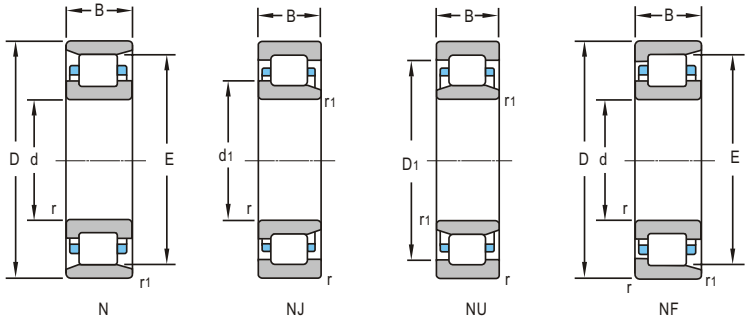


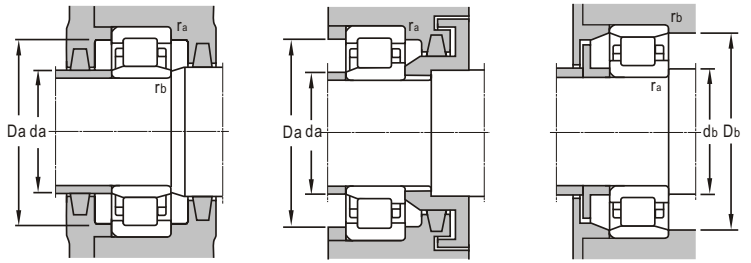


d 65～75mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	r_{1min}	*C*	C_0		
mm					kN		r/min	
65	140	48	2.1	2.1	238	276	4000	4800
70	125	24	1.5	1.5	83.5	95.0	4500	5300
	125	24	1.5	1.5	83.5	95.0	4500	5300
	125	24	1.5	1.5	123	143	4500	5300
	125	24	1.5	1.5	112	126	4500	5300
	125	24	4	1.5	123	143	4500	5300
	125	24	1.5	1.5	123	143	4500	5300
	125	24	1.5	1.5	123	143	4500	5300
	125	31	1.5	1.5	145	185	4500	5300
	133	35	201		209	228		
	150	35	2.1	2.1	173	189	3600	4300
	150	35	2.1	2.1	173	189	3600	4300
	150	35	2.1	2.1	173	189	3600	4300
	150	35	2.1	2.1	173	189	3600	4300
	150	35	2.1	2.1	173	189	3600	4300
	150	35	2.1	2.1	173	189	3600	4300
	150	35	2.1	2.1	209	228	3600	4300
	150	35	2.1	2.1	209	228	3600	4300
	150	35	2.1	2.1	209	228	3600	4300
	150	51	2.1	2.1	274	322	3600	4300
	150	51	2.1	2.1	258	298	3600	4300
	180	42	3	3	250	266	3600	4300
75	115	20	1.1	1	66.8	85.5	5600	6700
	130	25	1.5	1.5	123	146	4500	5300
	130	25	1.5	1.5	134	162	4500	5300
	160	37	2.1	2.1	190	205	3400	4000
	160	37	2.1	2.1	190	205	3400	4000
	160	37	2.1	2.1	190	205	3400	4000
	160	37	2.1	2.1	190	205	3400	4000
	160	37	2.1	2.1	190	205	3400	4000
	160	37	2.1	2.1	217	236	3400	4000
	160	37	2.1	2.1	172	172	3400	4000
	160	37	2.1	2.1	217	236	3400	4000
	160	37	2.1	2.1	217	236	3400	4000
	160	37	2.1	2.1	217	236	3400	4000
	160	37	2.1	2.1	190	205	3400	4000
	160	37	2.1	2.1	182	200	3400	4000
	160	37	2.1	2.1	182	200	3400	4000
	190	45	3	3	301	329	3400	4000
	160	55	2.1	2.1	308	361	3400	4000

Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	*E*	*F*	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
NU 2313 EM	32613EH	65		119		82.5	77	129		2	2	3.71
NJ 214M	42214H	70	88.6	105.1		84.5	78	117		1.5	1.5	1.36
NU 214M	32214H	70		105.1		84.5	78	117		1.5	1.5	1.34
N 214 EL	2214EL	70	89.6		114		78		114	1.5	1.5	1.21
N 214 EM		70	89.6			83.5	78		114	1.5	1.5	1.33
NF 214/C9YB2		70	89.6	109	114		78		114	3	1.5	1.25
NJ 214 EF1		70	89.6	109		83.5	78	117		1.5	1.5	1.25
NJ 214 EF1/YB2		70	89.6	109		83.5	78	117		1.5	1.5	1.25
NJ2214EM	42514EH	70	89.4	10		83.5	78	117		1.5	1.5	1.93
RN 214 EM/HE		70	98	9			80			2		2.16
N 314	2314	70	97.8		130		81		134	2	2	2.73
N 314 M	2314H	70	99.3		130		81		134	2	2	3.02
NU 314M	32314H	70		120.5		90	81	139		2	2	3.09
NU 314Q1	32314Q	70		120.5		90	81	139		2	2	3.12
NJ 314M	42314H	70	98	120.5		90	81	139		2	2	3.18
NJ 314Q1	42314Q	70	98	120.5		90	81	139	139	2	2	3.12
NJ 314 EF1		70	97.5	126		89	81	139		2	2	2.97
NU 314 EF1/C4YB		70		126		89	81	139		2	2	2.97
NU 314 ENM		70		125		89	81	139		2	2	3.2
NJ 2314 EF1		70	97.5	126		89	81	139		2	2	5.6
NJ 2314 EM		70	97.5	126		89	81	139		2	2	4.4
N 414 M/YA1		70	110		152		81	167		2.5	2.5	6.1
NU 1015M		75		100.6		85	80	108.5		1	1	0.728
NJ215EQ1/P63SO		75	95	113		88.5	84	121		1.5	1.5	1.45
N 215 EF1		75	94.6		118.5		84		120	1.5	1.5	1.8
N315M	2315H	75	103.7		139.5		86		143	2	2	3.77
N 315	2315	75	103.7		139.5		86		143	2	2	3.49
NU315M	32315H	75		130.2		95.5	86	148		2	2	3.80
NU315Q1	32315Q	75		130.2		95.5	86	148		2	2	3.68
NU 315	32315	75		130.2		95.5	86	148		2	2	3.34
N315EF1	2315EW1	75	104.2		143		86		143	2	2	3.56
NJ 315	42315	75	102.2	130.2		95.5	86	148		2	2	3.959
NU 315 E	32315E	75		136.5		95	86	148		2	2	3.71
NU315EF1	32315EW1	75		136.5		95	86	148		2	2	3.71
NJ 315 EF1	42315EW1	75	104.2	136.5		95	86	148		2	2	3.63
NJ315M	42315H	75		130.2		95.5	86	148		2	2	3.96
NJ315Q1/P63S0	3E42315QT	75	104.8	128.8		96.5	86	148		2	2	3.81
NU315Q1/P63S0		75	102.2	128.8		96.5	86	148		2	2	3.76
NJ 415 F1		75	116	149.8		104.5	88	177		2	2	8.73
NU2315 EM	32615 EH	75		136		95	86	148		2	2	5.58

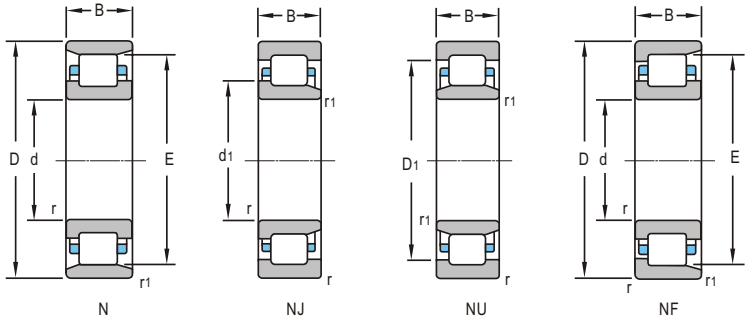




d 75～95mm

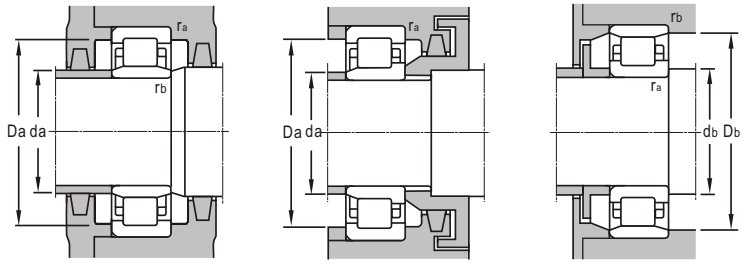
Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	r_{1min}	*C*	C_0		
mm					kN		r/min	
75	160	55	2.1	2.1	308	361	3400	4000
	160	68.3	2.1	2.1	321	306	2500	3000
80	140	26	2	2	121	145	4000	4800
	140	26	2	2	121	145	4000	4800
	140	26	2	2	121	145	4000	4800
	140	26	2	2	121	145	4000	4800
	140	26	2	2	131	154	4000	4800
	140	26	2	2	127	95.8	4000	4800
	140	33	2	2	187	245	4000	4800
	170	39	2.1	2.1	262	291	3200	3800
	170	39	2.1	2.1	233	249	3200	3800
	170	39	2.1	2.1	262	299	3200	3800
	170	58	2.1	2.1	274	330	3200	3800
	170	58	2.1	2.1	274	330	3200	3800
85	130	22	1.1	1	74	108	5000	6000
	180	41	3	3	242	273	3000	3600
	180	41	3	3	242	273	3000	3600
	180	41	3	3	242	273	3000	3600
	180	41	3	3	298	339	3000	3600
	180	41	3	3	250	270	3000	3600
	180	60	3	3	315	380	3000	3600
	180	60	3	3	380	475	3000	3600
	180	60	3	3	315	380	3000	3600
	180	60	3	3	380	475	3000	3600
	180	60	3	3	380	475	3000	3600
90	160	30	2	2	163	195	3600	4300
	160	30	2	2	163	195	3600	4300
	160	30	2	2	163	195	3600	4300
	190	43	3	3	261	297	2800	3400
	190	43	3	3	261	297	2800	3400
	190	43	3	3	322	362	2800	3400
	190	43	3	3	261	297	2800	3400
	190	43	3	3	355	362	2800	3400
	190	64	3	3	430	530	2800	3400
	190	64	3	3	430	530	2800	3400
95	200	45	3	3	340	395	2600	3200
	200	45	3	3	340	395	2600	3200

Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	*E*	*F*	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
NJ 2315 EM		75	104	136		95	86	148		2	2	5.69
NU 3315M	3032315H	75		130.2		95.5	86	148		2	2	7.39
NJ216	42216	80	101	118.3		95.3	89	131		2	2	1.63
N 216M	2216H	80	102		125		89		128	2	2	1.72
NU 216	32216	80		118.3		95.3	89	131		2	2	1.59
NJ 216M	42216H	80	101	118.3		95.3	89	131		2	2	1.78
NU 216 E	32216E	80		122		95.3	89	131		2	2	1.52
NU 216 EF1	32216 EW1	80		118.3		95.3	89		128	2	2	1.64
NU 2216 EQ1/P63S0		80		122.5		95.3	89	131		2	2	2.32
NU316EF1		80		144.2		101	91	159		2	2	4.23
N316EM		80	110		151		91		151	2	2	4.34
NU 316EM		80		144.2		101	91	159		2	2	4.35
NU 2316L	32616L	80		139		103	91	159		2	2	6.10
NJ 2316L	42616L	80	111	139		103	91	159		2	2	6.21
NU1017 M1		85		114		96.5	90	123.5		1	1	1.06
N317L	2317L	85	115.5		156		99		162	2.5	2.5	4.78
N317L/YB2	2317L(Y)	85	115.5		156		103		162	2.5	2.5	4.7
NJ317Q1/C63S0	3E42317QT	85	118	145.5		108.5	99	166		2.5	2.5	5.29
N317EF1		85	117.4		160		98		162	2.5	2.5	6.51
N 317 EM		85	117.5		160		98		162	2.5	2.5	5.02
NU 2317M	32617H	85		147.3		108	108	108	108	108	108	8.00
NU2317EM	32617EH	85		153		108	98	166		2.5	2.5	8.1
NJ 2317M	42617H	85	114	147.3		108	98	166		2.5	2.5	8.58
NU 2317 EF1	32617E	85		153		108	98	166		2.5	2.5	6.9
NU 2317 EM/YA1	32617EHY	85		153		108	98	166		2.5	2.5	8.1
N218M		90	113.6		143		100	150		2	2	2.55
NU218M		90		134.5		107	100	150	150	2	2	2.62
NF 218M		90	113.6	136	143			150		2	2	2.42
NU 318M	32318H	90		153.5		115	104	176		2.5	2.5	6.2
NU 318Q1/P63S0	3E32318QT	90		153.5		115	104	176		2.5	2.5	6.2
NU318EF1		90		161		113.5	104	176		2.5	2.5	7.7
N 318	2318	90	125		165		104		169	2.5	2.5	5.46
NU 318EM												
NU2318M		90		159.3		113.5	104	176		2.5	2.5	8.87
NJ 2318 EM/C9S0		90	124.4	159.3		113.5	104	176		2.5	2.5	9.51
N 319 EL	2319EL	95	132		177.5		108		178	2.5	2.5	6.44
NU319EL1		95		170		121.5	108	186		2.5	2.5	6.52

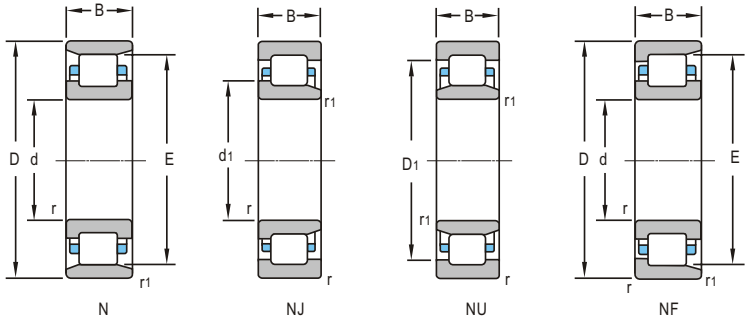


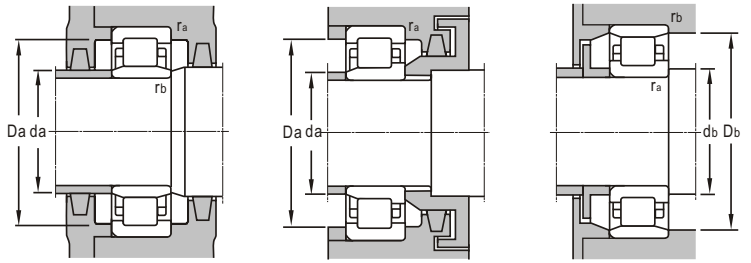
d 95～120mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	r_{1min}	*C*	C_0		
mm					kN		r/min	
95	200	45	3	3	340	395	2600	3200
	200	45	3	3	340	395	2600	3200
	200	67	3	3	458	580	2600	3200
	200	67	3	3	433	538	2600	3200
	200	67	3	3	411	496		
	220	67	3	3	518	610	2400	3000
100	180	34	2.1	2.1	183	217	3200	3800
	180	34	2.1	2.1	227	270	3200	3800
	180	46	2.1	2.1	333	444	3200	3800
	180	46	2.1	2.1	335	445	3200	3800
	180	50	2.5	2.5	258	315	3200	3800
	215	47	3	3	390	440	2400	3000
	215	47	3	3	408	440	2400	3000
	215	73	3	3	524	505	2400	3000
	215	73	3	3	524	505	2400	3000
	215	73	3	3	524	505	2400	3000
	215	73	3	3	536	726	2400	3000
	215	73	3	3	536	726	2400	3000
	215	73	3	3	579	732	2400	3000
105	160	26	2	1.1	105	142	4000	4800
110	170	28	2	1.1	144	195	3800	4500
	200	38	2.1	2.1	266	323	2800	3400
	200	38	2.1	2.1	266	323	2800	3400
	200	38	2.1	2.1	266	323	2800	3400
	200	38	2.1	2.1	266	323	2800	3400
	200	69.85	2	4	402	655	2800	3400
	240	50	3	3	411	545	2000	2600
	240	50	3	3	411	545	2000	2600
	240	50	3	3	411	545	2000	2600
	240	50	3	3	411	545	2000	2600
	240	80	3	3	621	735	2000	2600
	240	80	3	3	621	735	2000	2600
	240	80	3	3	635	822	2000	2600
	260	92	3	3	796	971	1800	2400
	280	65	4	4	555	631	2000	2600
	280	65	4	4	555	631	2000	2600
120	215	40	2.1	2.1	282	355	2400	3000



Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	*E*	*F*	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
N 319 EF1		95	132		177.5		108		178	2.5	2.5	8.69
NU 319 EF1		95		170		121.5	108	186		2.5	2.5	8.77
NJ 2319EF 1		95	131.5	168		121.5	108	187		2.5	2.5	13.1
NU 2319EM		95	131.5	168		121.5	108	187		2.5	2.5	10.2
NU 2319Q Y		95		164		121.5	108	187		2.5	2.5	10.5
NF 619	3-256	95	137.2	182	193			108	200	2.5	2.5	13.9
NJ 220M	42220H	100	128	151		120	111	169		2	2	3.98
N 220 EM		100	127		163		111		164	2	2	3.93
NU 2220 EM/P5		100		157		119	111	169		2	2	5
NU 2220 EM		100	127	157		119	111	169		2	2	4.9
NJ 2220 X2M	42720H	100	127.9	151		120	111	169		2	2	5.91
N320 EF1		100	139		191.5		114	202	202	2.5	2.5	8.08
NJ 320 EM		100	139	182		128	114	202		2.5	2.5	8.67
N 2320 EM	2620EH	100	139		191.5		114	202		2.5	2.5	14.4
NU 2320 EM	32620EH	100		182		127.5	114	202		2.5	2.5	14.3
NU 2320 EM/YA1	32620HY	100		182		127.5	114	202		2.5	2.5	14.3
NJ 2320EQ 1/P63S 0	3E42620EQT	100	140	182		127.5	114	202		2.5	2.5	13.3
NJ 2320EM /C9S 0		100	140	182		127.5	114	202		2.5	2.5	14.3
NJ 2320 ZEM		100	139	182		127.5	114	201		2.5	2.5	14.4
NF1021M	12121H	105	124.7	141	145.5			151		2	1	1.99
NU1022 M		110		149		125	116.5	161		2	1	2.34
NJ 222 EM		110	141.3	174		132.5	122	188		2	2	5.26
NU 222 EM		110		174		132.5	122	188		2	2	5.19
N222 EM		110	141.3		180.5		122		182	2	2	5.33
NU 222EQ 1/P53 SO		110		174		132.5	122	188		2	2	5.41
LY-N006		110		171		133	122	188		2	3	9
N 322 E	2322EL	110	155	198	211		124		215	2.5	2.5	10.5
NJ32 2EQ		110	154.5	198		143	124	226		2.5	2.5	12.7
N322 EM		110	154.4	198	207		124		211	2.5	2.5	12.1
NJ32 2EM		110	154.5	198		143	124	226		2.5	2.5	12.9
NU 2322 EM	32622EH	110		201		143	124	226		2.5	2.5	19.9
NJ 2322 EM/YA1	32622EAY	110		201		143	124	226		2.5	2.5	19.9
NU 2322EQ 1/P63S 0		110		201		143	124	226		2.5	2.5	19.1
NF 622	3-257	110	161.4	214	227			226		2.5	2.5	27.4
NJ 422M		110	169.5	223		155	126	264		3	3	22
NJ 422Q 1/C350		110	169.5	223		155	126	264		3	3	22
NU 224EQ 1	3D32224EQT	120		184		143.5	131	204		2	2	7.07

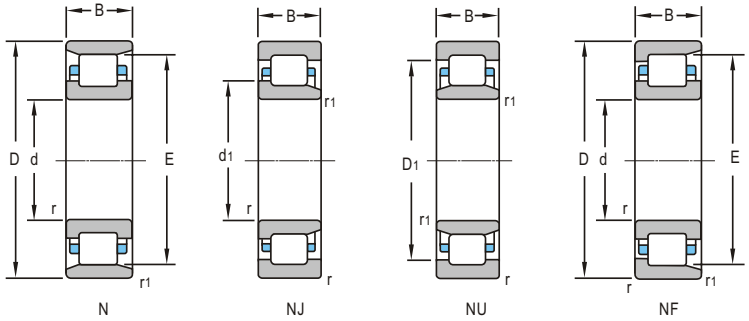


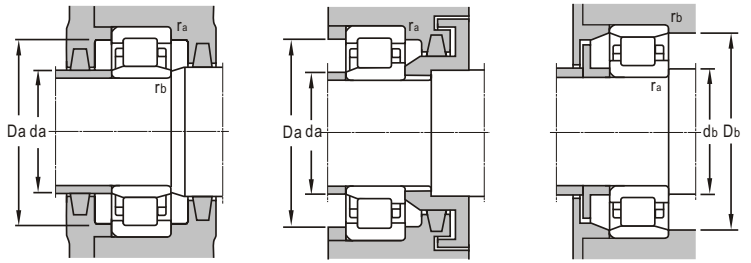


d 120～140mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	r_{1min}	*C*	C_0		
mm					kN		r/min	
120	215	40	2.1	2.1	300	420	2400	3000
	215	40	2.1	2.1	300	420	2400	3000
	215	40	2.1	2.1	300	420	2400	3000
	215	40	2.1	2.1	342	433	2400	3000
	215	58	2.1	2.1	380	520	2400	3000
	217	58	2.1	2.1	380	520	2400	3000
	240	80	3	3	477	408	2400	3200
	240	80	3	3	477	408	2400	3200
	240	80	3	3	477	408	2400	3200
	260	55	3	3	537	623	1900	2400
	260	55	3	3	537	623	1900	2400
	260	86	3	3	285	1020	1900	2400
	260	86	3	3	285	1020	1900	2400
	260	86	3	3	785	1020	1900	2400
	260	86	3	3	915	1040	2800	4300
130	200	33	2	1.1	213	315	3200	3800
	200	33	2	1.1	172	238	3200	3800
	200	33	2	1.1	172	238	3200	3800
	230	40	3	3	371	466	2200	2800
	230	40	3	3	288	372	2200	2800
	250	80	3	3	604	807	2200	3000
	250	80	3	3	604	807	2200	3000
	250	80	3	3	604	807	2200	3000
	250	80	3	3	604	807	2200	3000
	280	58	4	4	590	694	1800	2200
	280	58	4	4	590	694	1800	2200
	280	93	4	4	920	1230	1800	2200
	280	93	4	4	920	1230	1800	2200
	280	93	4	4	1060	1250	2400	3800
	340	78	5	5	825	955	1500	1900
	340	78	5	5	825	955	1500	1900
	340	78	5	5	825	955	1500	1900
140	210	33	2	1.1	212	317	3000	3600
	210	33	2	1.1	212	317	3000	3600
	250	42	3	3	406	536	2000	2600
	250	42	3	3	406	536	2000	2600
	250	42	3	3	389	507	2000	2600
	250	42	3	3	389	507	2000	2600
	250	42	3	3	406	556	2000	2600

Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	*E*	*F*	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
N 224M	2224H	120	153.1	188	191.5		131		196	2	2	6.19
NU 224M	32224H	120		182.3		143.5	131	204		2	2	6.47
NJ 224M	42224H	120	151.5	182.3		143.5	131	204		2	2	6.48
NJ 224EM		120	152.3	188		143.5	140	204		2	2	6.5
N 2224M		120	152.3		191.5		140		204	2	2	9.4
N 2224 MX1/CN2		120	152.3	188	195.5		140		206	2	2	9.7
NJ 3224X3Q1/S0	42724QT	120	162	194		150	134	226		3	3	17.1
NJ 3224X3M	42724QT	120	162	194		150	134	226		2.5	2.5	17.8
NJ3224X3Q1	42724H	120	161	199		150	134	226		3	3	17.7
N324EM		120	167.5		230		134		230	2.5	2.5	14.4
NU324EM		120		219		154	134	246		2.5	2.5	14.5
NU 2324 EM	32624EH	120		219		154	134	246		2.5	2.5	23.8
NU2324EM/YA1	32624EHY	120		219		154	134	246		2.5	2.5	23.8
NJ 2324EM/C9S0		120	168	216		154	134	246		2.5	2.5	23.6
NJ 2324 ZEM		120	168	219		154	134	246		2.5	2.5	23.6
N1026 M	32126Q	130	154	148	182		137	191	190	2	1	3.48
NU 1026Q1	32126Q	130		174		148	136.5	191		2	1	3.83
NU 1026M	32126H	130		174		148	136.5	191		2	1	3.84
NU 226 EM		130		201.5		153.5	144	216		2.5	2.5	7.11
NU 226 Q1/P53 SO		130		193.4		156	144	216		2.5	2.5	7.12
NJ 3226x1M	42726H	130	170	208		158	144	236		2.5	2.5	18.7
NJ 3226x1Q1/SO	42726QT	130	170.5	205		158	144	236		3	3	18.7
NJP3226X1		130	171	205.6		158	144	236		3	3	18.5
NJ3226X1		130	171	205.6		158	144	236		3	2.5	18.3
N 326EM		130	181.5		247		148		247	3	3	18.2
NU 326EM		130		235.5		167	148	262		3	3	18.3
NU2326EM		130		236		167	148	262		3	3	28.8
NJ 2326EM		130	181	236		167	148	262		3	3	29.5
NJ 2326 ZEM		130	181	236		167	147	263		3	3	30.5
NU 426M	32426H	130		265		183	150	320		4	4	41.5
NJ 426M	42426H	130	203	265		183	150	320		4	4	41.7
NU426Q1	32426Q	130	203	262		185	150	320		4	4	39.2
NU 1028 M		140		184.5		158	146.5	201		2	1	4.03
NU 1028Q1/P64		140		184.5		158	146.5	201		2	1	4.03
NJ 228 EF1		140	179.5	217		169	154	236		2.5	2.5	11.6
NU 228 EF1		140		217		169	154	236		2.5	2.5	10.9
NJ 228 EM		140	179.5	217		169	154	236		2.5	2.5	9.35
NU 228 EM		140		217		169	154	236		2.5	2.5	8.72
NU 228 EL	32228 EL	140		217		169	154	236		2.5	2.5	8.97

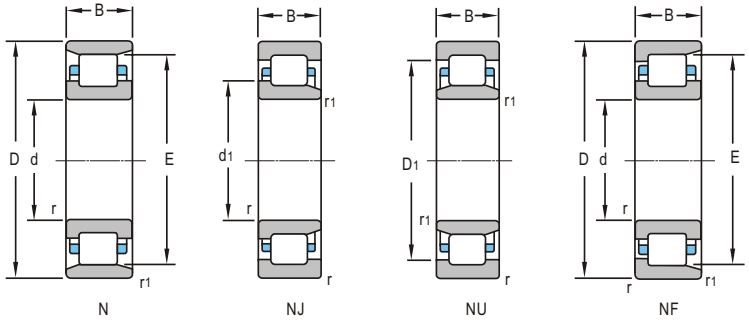


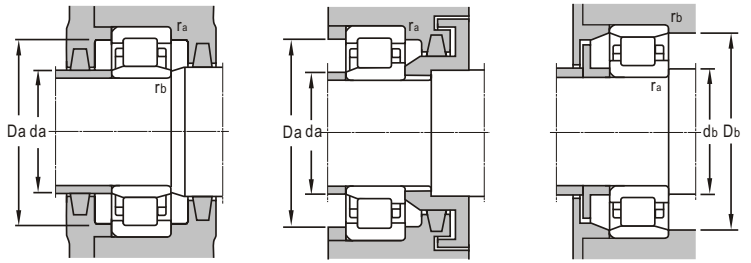


d 140～180mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	D	B	r_{min}	r_{1min}	C	C_0		
mm					kN		r/min	
140	250	68	3	3	547	787	2000	2600
	250	68	3	3	547	787	2000	2600
	250	68	3	3	547	787	2000	2600
	250	68	3	3	577	843	2000	2600
	250	82.55	3	3	661	1060	2000	2600
	300	62	4	4	624	758	1980	2490
	300	62	4	4	624	758	1800	2200
	300	62	4	4	624	758	1800	2200
	300	102	4	4	959	1320	1800	2200
	300	102	4	4	959	1320	1800	2200
	300	114	4	4	1250	1100	1800	2200
	360	82	5	5	964	1135	1800	2200
	360	82	5	5	964	1135	1800	2200
150	270	45	3	3	419	543	1900	2400
	270	45	3	3	419	543	1900	2400
	270	45	3	3	419	543	2090	2640
	320	65	4	4	720	970	1820	2300
	320	65	4	4	720	970	1820	2300
	320	108	4	4	1092	1472	1700	2000
160	290	48	3	3	493	665	1900	2300
	290	48	3	3	443	655	1800	2200
	290	48	3	3	493	655	1800	2200
	290	48	3	3	493	655	2200	2600
	290	80	3	3	771	1118	1800	2200
	340	68	4	4	873	1080	1500	1800
	340	114	4	4	1138	1800	1500	1800
170	260	42	2.1	2.1	260	380	2200	2800
	310	52	4	4	530	747	1900	2300
	310	52	4	4	589	776	1800	2200
	310	52	4	4	589	776	1800	2200
	310	86	4	4	914	1315	1800	2200
	360	72	4	4	892	1090	1400	1700
	360	120	4	4	1154	1622	1400	1700
	360	120	4	4	1154	1622	1400	1700
180	280	82.6	2.1	2.1	817	1290	2000	2600
	280	31	2	2	270	423	2000	2600
	320	52	4	4	587	782	1700	2000

Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	E	F	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
NJ 2228 EM	42528EH	140	179	217		169	154	236		2.5	2.5	17
NJ 2228Q1/C4S 0		140	179	217		169	154	236		2.5	2.5	15.5
NU 2228 Q1/C4S0		140		217		169	154	236		2.5	2.5	15.1
NU 2228EM/P5		140		217		169	154	236		2.5	2.5	14.4
NU 3228X2M		140		213		169	154	236		2.5	2.5	18.4
NJ 328Q1/P64S0	4E42328EQTY	140	194	248.5		180	158	282		3	3	21.5
NU 328Q1/P63SO	3E32328EQT	140		248.5		180	158	282		3	3	21.6
N 328 EM		140	194		260		156		265	3	3	21.7
NJ 2328EM		140	194	248.5		180	158	282		3	3	37.3
NU 2328EM		140		248.5		180	158	282		3	3	36.7
NF3328X2	3-254	140	190.4	253.4	266			156	278	3	3	43.3
NU428M	32428H	140		279		196	160	340		4	4	48
NJ428M	42428H	140	217	279		196	160	340		4	4	48.7
NJ 230EM		150	193.5	233		182	164	256		2.5	2.5	11.7
NU230EM		150		233		182	164	256		2.5	2.5	11.4
NU230EQ1/P63SO	3E32230EQT	150		233		182	164	256		2.5	2.5	10.4
NJ330Q1/P64S0	4E42330EQTY	150	209	270		193	166	304		3	3	25.7
NU330Q1/P63S0	3E32330EQT	150		270		193	166	304		3	3	26.6
NU 2330 EM	32630EH	150		270		193	166	304		3	3	45.7
NU 232EQ1/P63S0	3E32232EQT	160		250		195	174	276		2.5	2.5	14.6
NU232EM		160		250		195	174	276		2.5	2.5	14.7
NJ 232 EM		160	206.5	250		195	174	276		2.5	2.5	14.9
N 232EM		160	206		259		174	276		2.5	2.5	14.6
NU 2232 EM	32532EH	160		245		193	174	276		2.5	2.5	24.5
NU 332 EQ1/P64S0	4E32332EQT	160		285		204	178	322		3	3	31.1
NU2332E.M1		160		284.6		204	178	322		3	3	52
NU 1034M	32134H	170		227		193	181	249		2	2	8.31
NU 234Q1/P63S0	3E32234QT	170		263		208	188	292		3	3	17.8
NJ234M		170	220	268.5		207	188	292		3	3	17.9
NU234M		170		268.5		207	188	292		3	3	17.7
NU 2234 EM	32534EH	170		270		205	188	292		3	3	30
NU334EM		170		300.6		218	188	344		3	3	36.3
NU 2334M	32634H	170		289		220	188	344		3	3	62.3
NJ 2334M	42634H	170	237	289		220	188	344		3	3	63.6
NU 3036X2M	32836H	180		246		204	191	269		3	3	19.6
N 036M		180	219		250		191		257	2	2	7.97
NU 236 M		180		278.5		217	198	302		3	3	18.6

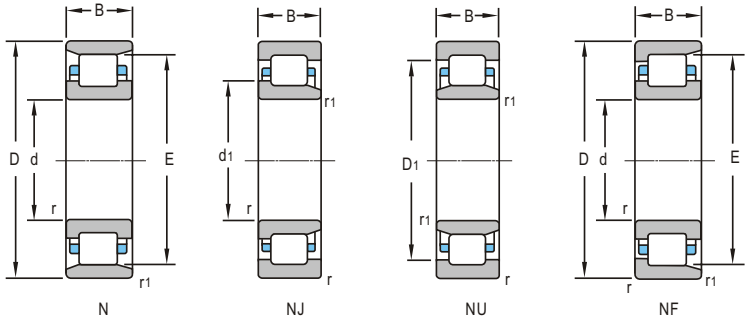




d 180～240mm

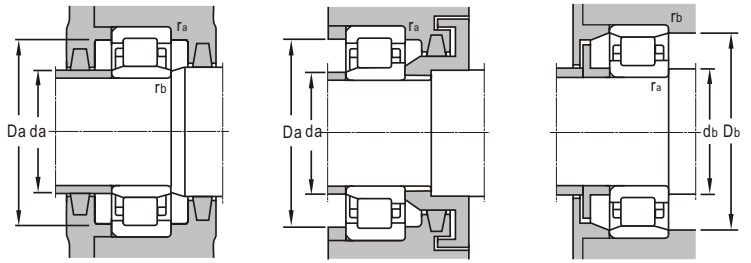
Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	D	B	r_{min}	r_{1min}	C	C_0		
mm					kN		r/min	
180	320	52	4	4	587	782	1700	2000
	320	86	4	4	954	1408	1700	2000
	380	126	4	4	1554	2212	1300	1600
	380	126	4	4	1860	2610	1600	2800
	380	252	4	4	3190	5220	1300	1600
190	260	42	2	2	239	216	2000	2800
	290	46	2.1	2.1	384	575	2000	2600
	340	55	4	4	649	871	1600	1900
	340	92	3	3	1220	1600	1600	1900
200	310	34	2	2	280	300	1900	2400
	310	34	2	2	280	300	1900	2400
	310	51	2.1	2.1	388	580	1900	2400
	310	51	2.1	2.1	388	580	1900	2400
	310	51	2.1	2.1	448	695	1900	2400
	310	51	2.1	2.1	450	700	3000	3400
	320	88.9	2.5	2.5	946	1346	1800	2300
	340	50	4	4	421	603	1700	2200
	360	58	4	4	745	1020	1500	1800
	360	58	4	4	745	1020	1500	1800
220	340	56	3	3	470	750	1800	2200
	340	56	3	3	470	750	1800	2200
	350	98.42	3	3	1150	1792	1600	2000
	400	65	4	4	769	1100	1500	1800
	400	65	4	4	769	1100	1500	1800
	460	88	5	5	1130	1020	1200	1500
230	370	80	4	4	844	1371	1400	1800
240	360	37	2.1	2.1	388	392	1700	2000
	360	56	3	3	497	820	1700	2000
	360	56	3	3	530	850	1700	2000
	360	56	3	3	497	820	1700	2000
	360	92	3	3	855	938	1600	1900
	390	108	4	4	1370	2310	1500	1800
	440	72	4	4	997	1450	1300	1600
	440	72	4	4	997	1450	1300	1600
	500	95	5	5	1390	1610	1000	1300

Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	E	F	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
NJ 236 M		180	230	278.5		217	198	302		3	3	18.9
NU 2236 EM	32536EH	180		280		215	198	302		3	3	30.8
NJ 2336 EM	42636EH	180	246	320		231	198	362		3	3	77.9
FD-NUP2336VH		180	245	315		211.69	200	360		3	3	69.9
FD-NJ2336VH-DF		180	245	315		211.71	200	360		3	3	137
NU 2938Q1	2032938Q	190		235		207	201	249		2	2	6.45
NU1038 M		190		254		215	201	279		2	2	10.8
NJ 238 EM		190	244	295.2		230	206	324		3	3	22.4
NU 2238MA		190		297		206	210	324		2	2	39
N040H	7002140W	200	243		277		211		283	2	2	10.2
NFP 040H	7022140W	200	243	269	277		211	299		2	2	10.5
NU 1040	32140	200		269		229	211	299		2	2	14.3
NU 1040 NQ1	232140Q	200		269		229	211	299		2	2	14.3
NJ 1040M		200	239	269		224	211	249		2	2	14.9
N 1040M		200	242		282		211	299	284	2	2	14.3
NU 640M	32840H	200		286.3		228	212	308		2	3	26.5
N 640M	2740H	200	250		303		218		322	3	3	18.6
NJ 240 EM		200	258	310		243	218	342		3	3	27.8
NU 240 EM		200		310		243	218	342		3	2.5	27.3
NU 1044	32144	220		297		250	233	327		2.5	2.5	19.3
NU 1044 NQ	232144Q	220		297		250	233	327		2.5	2.5	18.9
NU 644M	32844H	220		313		245	234	336		2.5	3	37.5
NJ 244M		220	286	336.6		270	236	384		3	3	39.2
NU 244M		220		336.6		270	236	384		3	4	38.4
NU 344M	32344H	220		370.2		284	240	438		4	3	75.6
N 646	2746H	230	282		334	334	246	354		3	2	37
N 048F1	7002148W	240	287		325		251		348	2	2.5	14.7
NU 1048M	32148H	240		318		270	253	347		2.5	2.5	20.4
NU 1048Q	32148Q	240		318		270	253	347		2.5	2.5	20.4
NJ 1048M	42148H	240	279	318		270	253	347		2.5	2.5	20.8
NU3048EM	3032148EH	240		316.2		270	253	347		2.5	3	35.5
NU 2148X3M/C9		240		340		275	258	372		3	3	53.7
NU248		240		367.3		295	258	372		3	3	50
NJ 248		240	313	367.3		295	258	422		3	4	50.7
NU 348M	32348H	240		402.7		310	262	478		4		97.7

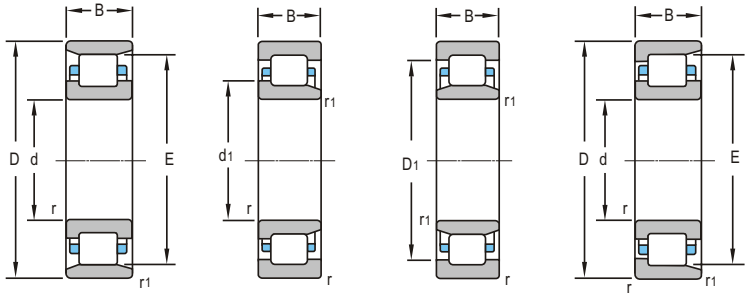


d 250～380mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	r_{1min}	*C*	C_0		
mm					kN		r/min	
250	380	50	5	2.1	660	643	1300	1700
260	400	44	3	3	552	603	1500	1800
	400	65	4	4	659	1030	1500	1800
	400	65	4	4	659	1030	1500	1800
	400	65	4	4	659	1030	1500	1800
	400	65	4	4	659	1030	1500	1800
	400	65	4	4	659	1030	1500	1800
	480	80	5	5	1170	1700	1200	1500
280	420	65	4	4	693	1120		
	420	65	4	4	693	1120	1400	1700
	580	108	6	6	1642	2523	850	1000
300	460	74	4	4	1000	1660	1200	1500
	460	74	4	4	1000	1660	1200	1500
	460	74	3	3	885	1400	1300	1500
	460	74	4	4	893	1420	1200	1500
	460	118	4	4	1650	3050	1000	1300
	540	85	5	5	1420	2100	1000	1300
305	460	65	4	4	800	878	1200	1500
	460	65	4	4	800	878	1200	1500
320	480	74	4	4	1021	1727	1100	1400
	480	74	4	4	941	1549	1100	1400
	480	74	4	4	1021	1727	1100	1400
	480	74	4	4	941	1549	1100	1400
	670	200	7.5	7.5	3810	5700		
340	520	57	4	4	1035	1800	1000	1300
	520	57	4	4	957	1420	1000	1300
	530	133	5	5	1660	3320	900	1100
360	650	170	6	6	3000	5080	800	950
	750	224	7.5	7.5	5200	8300	630	750
368.1	558.8	114	5	5			900	1100
380	480	60	2.1	2.1	668	1437	1000	1300
	680	240	6	6	5450	10000	850	1300

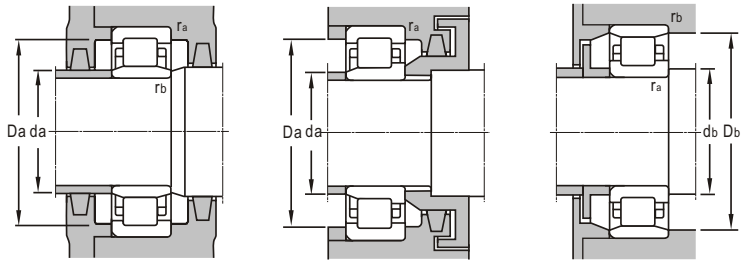


Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	*E*	*F*	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
N 650L	2750L	250	298		347		272		368	4	2	19.8
N 052F1	7002152W	260	314		360		274		367	2.5	2.5	22.7
N 1052F1	2152W	260	312		364		276		367	3	3	30.8
NUP 1052F1		260		348		296	276	384		3	3	32.3
NU 1052F2		260		348		296	276	384		3	3	30.5
NU 1052F1		260		348		296	276	384		3	3	30.5
NU 1052M		260		348		296	276	384		3	3	31.4
Nu252 EMA		260		397		320	280	460		4	4	67.6
NJ 1056M		280	329	368		396	298	404		3	3	34.5
NU 1056M	32156H	280		368		316	298	404		3	3	33.4
NU 356M		280		469		362	308	552		5	5	139
NU 1060	32160	300		407		340	318	442		3	3	44.4
N 1060		300	353	407	420		318		423	3	3	44
NU 1060MA		300		402		340	316	444		2	2	44
NJ 1060M		300	356	407		340	318	442		3	3	44.3
NU 3060	3032160	300		407		340	316	442		3	3	72
NU 260	32260	300		450		365	322	520		4	4	87.2
N 661L	2761L	305	362		420.5		325		423	2.5	2.5	35.2
N 661	3-208	305	362		420.5		325		423	2.5	2.5	39.7
NU 1064	32164	320		427		360	338	462		3	3	47
NU 1064M		320		423		360	338	462		3	3	46.6
NU 1064 K	332164	320		427		360	338	462		3	3	46.1
NJ 1064M		320	376	423		360	338	462		3	3	47.7
NU 2364M		320		556		410	348	642		6	6	368
N 068	7002168	340	408		470		358		483	4	3	45.5
NJ 068 M		340	405	459		390	358	500		4	3	46.8
N 668 M	2768H	340	405		476		362		490	4	4	117
NU2272EM	32572EH	360		542		437	386	624		5	5	263
NU 2372	32672	360		610		455	395	715		6	6	485
N6/368.3	3-245	368.1	437		510		386		530	4	4	101
N 2876	2002876K	380	417		455		392		468	2	2	24.6
NU 3276/HCC 3 YA		380		581		451	410	650		5	5	384

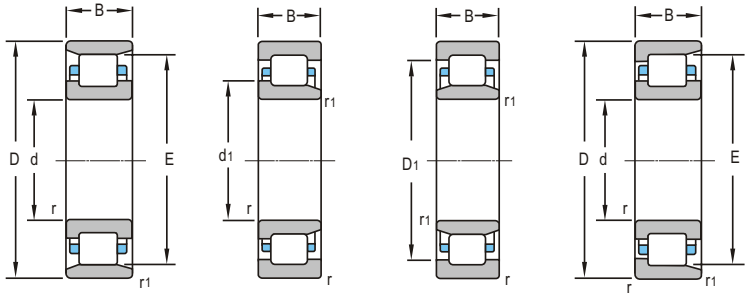


d 400～530mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	D	B	r_{min}	r_{1min}	C	C_0		
mm					kN		r/min	
400	540	65	4	4	965	1831	950	1150
	600	90	5	5	1627	2806	900	1100
	600	90	5	5	1627	1627	900	1100
	600	148	5	5	2530	4950	800	980
	650	145	6	6	2907	5429	750	900
420	560	65	4	4	825	1650	900	1100
	560	82	4	4	1440	3240	400	480
	560	82	4	4	1240	2660	850	1100
	700	224	6	6	5260	9730	630	800
434	540	46	]2.5	1.5	423	918	900	1100
440	546	46	2.5	1.5	423	918	850	1000
	720	122	6	6	2423	4052	800	950
460	620	95	4	4	1769	3883	750	900
	620	95	4	4	1700	3380	750	900
	620	95	4	4	1769	3883	750	900
	620	95	4	4	1870	4180	350	450
	680	100	6	6	2000	3700	800	950
	760	240	7.5	7.5	5600	10500	560	670
	760	240	7.5	7.5	5880	11200	560	670
	820	200	7.5	7.5	4900	8510	510	610
470	870	210	7.5	7.5	5100	8720	530	630
480	650	78	5	5	1136	2213	850	950
	790	248	7.5	7.5	6230	12100	530	630
500	620	56	3	3	847	1790	800	950
	670	100	5	5	2000	4510	750	900
	720	100	6	6	2300	4510	750	900
	720		6	6	9270	27100	900	1200
	830	264	7.5	7.5	7100	13500	500	600
	900	210	7.5	7.5	6590	11500	440	550
	900	210	7.5	4.5	6590	11500	670	950
530	650	72	3	3	1190	2820	750	900
	710	106	4.5	4.5	2170	5200	700	850
	870	272	7.5	7.5	7690	15100	440	550

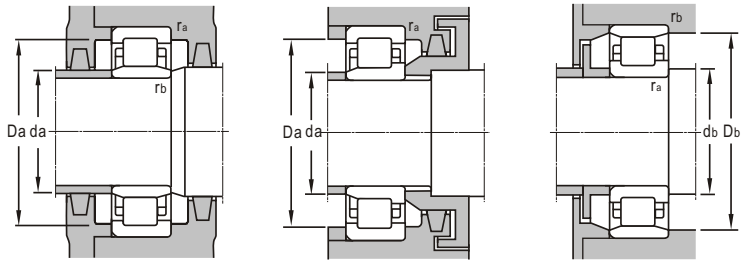


Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	E	F	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
NU 1980	1032980	400		490		434	418	522		3	3	42.7
NU 1080	32180	400		528		448	420	580		4	4	88.8
NU 1080K	332180	400		528		448	420	580		4	4	88.8
NU 3080	3032180	400		528		448	420	580		4	4	145
N 2180	2002780	400	492		585		428		612	5	5	190
NF1984/C9YA1		420	470.8	509.2	522		438	542		3	3	41.6
NCF 2984V		420	469	509	524		438	542		3	3	52.5
NU 2984M		470		727		575	490	850		6	6	595
NU 3184		420		613		485	444	676		5	5	348
NU 16/434	32987	434		502		468	445	525		2	1.5	26.2
NU 188X1	32788	440		502		468	454	534		2	1.5	26.5
N 1188	1002788	440	543		648		466		680	5	5	191
N 2992	2002992	460	516		580		480		588	3	3	82.4
NJ 2992EM		460	510	570		495	479	601		3	3	85.1
NU 2992	2032992	460		562		500	480	596		3	3	84
NCF 2992V		460	516	562	580		480	596		3	3	82.3
NU 1092M		460		600		516	484	656		5	5	130
NU 3192MA/4HC		460		662		529	489	731		6	6	647
NU 3192		460		659		529.3	496	724		6	6	435
NU 692/HC YA		460		697		550	489	791		6	6	465
NU 694M		470		727		575	490	850		6	6	595
NU1996-2		480		592		525	500	6300		4	4	76
NU 3196		480		701		556	516	754		6	6	489
NF 18/500EM		500	542	584	530		514	606		2	2	37.1
NU 29/500	20329/500	500		610		543	522	648		4	4	99.5
NU 10/500		500		648		556	528	692		5	5	135
500RV7211		500		648		560	525	700		6	6	730
NU 31/500		500		728		576	536	794		6	6	563
NU 6/500/HC		500		767		599	529	871		6	6	603
NU 6/500/HCC 3 YA		500		767		599	520	880		6	6	603
NU 28/530 EMA		530		614		561	544	636		2.1	2.1	52
NU 29/530	20329/530	530		644		575	555	685		4	4	123
NU 31/530/HC		530		764		612	559	841		6	6	649

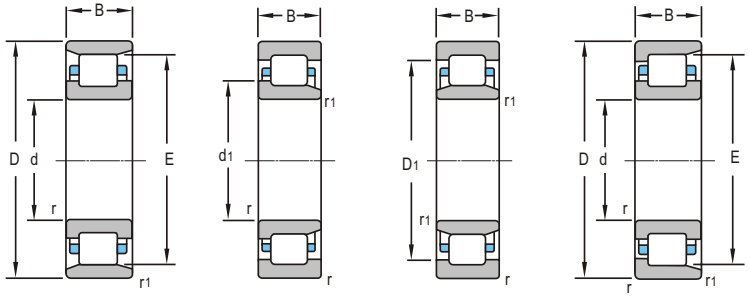


d 560～1250mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	D	B	r_{min}	r_{1min}	C	C_0		
mm					kN		r/min	
560	680	56	3	3	908	2130	700	850
	680	72	3	3	1100	2720	680	820
	920	128	7.5	7.5	3540	6370	500	600
	920	128	7.5	7.5	3540	6370	900	1000
	920	128	6	6	3710	6210	900	1000
	920	128	7.5	7.5	3630	5820	900	1000
600	1090	155	9.5	9.5	4930	8390	480	850
630	850	100	6	6	2230	4633	600	700
	850	128	6	6	3158	7244	600	700
666.75	838.2	114.3	4	4	2890	6860	560	670
670	820	69	4	4	1208	2870	560	670
	820	112	4	4	2500	6760	560	670
	900	103	6	6	2640	5860	530	630
700	930	160	6	6	3450	8400	500	600
710	870	74	4	4	1370	3180	520	620
	950	106	6	6	2610	5530	500	600
	950	106	6	6	2610	5530	500	600
750	920	120	5	5	2530	6870	500	600
800	980	82	5	5	1804	4320	450	530
840	1040	125	4	4	3315	9729	430	500
950	1250	224	7.5	7.5	6549	17838	340	400
	1250	175	7.5	7.5	5317	13932	340	400
1060	1400	150	7.5	7.5	5768	15570	280	340
1120	1360	106	6	6	3430	8660	121	151
	1360	112	6	6	3720	10100	220	280
	1360	112	6	6	3720	10100		
1200	1520	185	7.5	7.5	5277	10223	200	260
1250	1630	170	7.5	7.5	5830	14000	195	250

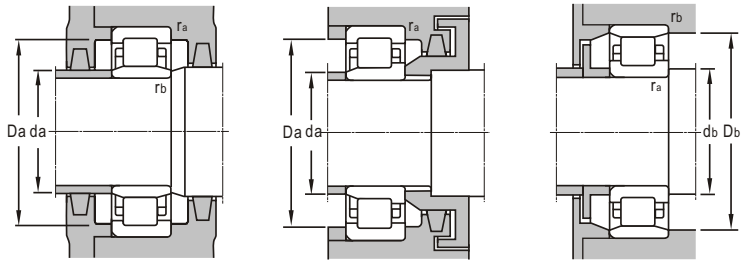


Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	E	F	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
N 18/560		560	601		650		574		650	2.5	2.5	43.3
NF 28/560M		560	601	640	650		574	666	650	2.5	2.5	55.8
NU 1/560		560		797		660	596	884		6	6	381
NU1/560X2+HJ1/560X		560		797		660	580	900		6	9	381
NU 1/560+HJ/560		560		797		660	580	900		6	6	381
NU1/560+HJ1/560X		560		807		653	580	900		3	3	373
NU2/600X+HJ2/600X		600		916		748	620	1070		8	8	727
N 19/630	10029/630	630	710		795		658		822	5	5	160
NU 29/630	20329/630	630		770		685	658	822		5	5	206
NFP6/666.75Q1/C9	3-235U	666.75	724	785	803.3		685	820		3	3	146
NJ 18/670M		670	726	769.5		712	688	802		3	3	78.9
NJ 38/670Q1		670	718	774		706	688	802		3	3	123
NU 19/670		670		825.5		731	698	872		5	5	188
NU 6/700	327/700	700		845		760	728	902		5	5	295
N 18/710/HC/P6		710	765		830		726		845	3	3	95.2
N 19/710	10029/710	710	797		890		738		912	5	5	205
NU 19/710	10329/710	710		863		770	738	922		5	5	207
N 38/750X2M		750	809		878		772		890	4	4	178
NJ 18/800M		800	868	921		849	822	958		4	4	120
N 6/840	27/840	840	912		985		858		1022	3	3	240
N 39/950	30029/950	950	1062		1170		986		1214	6	6	745
NU 29/950	20329/950	950		1137		1032	986	1214		6	6	563
NU 19/1060M	10329/1060H	1060		1270		1162	1096	1364		6	6	683
NJ 18/1120/YA		1120	1202	1290		1182	1150	1330		5	5	311
NU 18/1120X2		1120		1282		1180	1148	1332		5	5	333
NU 18/1120X2/HC		1120		1290		1182	1146	1334		5	5	333
NU 6/1200	329/1200	1200		1410		1280	1236	1484		6	6	815
NU 19/1250		1250	1498	1350								977

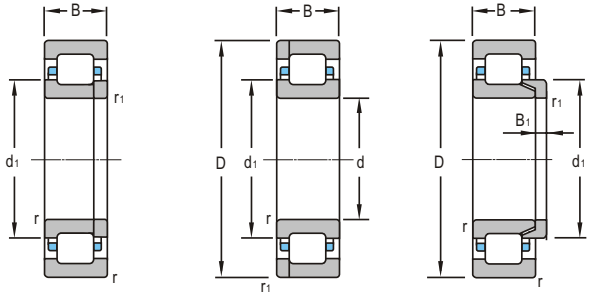


d 1320～1600mm

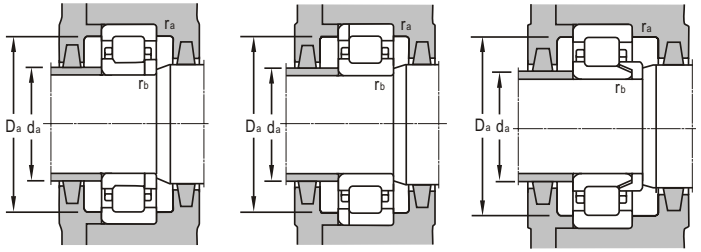
Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	r_{1min}	*C*	C_0		
mm					kN		r/min	
1320	1720	175	7.5	7.5	4482	11034	190	240
	1720	175	7.5	7.5	4482	11034	190	240
1400	1700	175	7.5	7.5	7590	22100	70	90
1500	1800	150	7.5	7.5	5320	16790	170	200
	1820	140	7.5	7.5	5090	13900	60	80
1600	1950	155	7.5	7.5	6174	17694	150	180



Bearing Designations		Journal	Other Dimensions				Mounting Dimensions					Mass
Present	Original		d_1	D_1	*E*	*F*	d_{amin}	D_{amax}	d_{bmin}	r_{amax}	r_{bmax}	
		mm					mm					kg
NU 19/1320	10329/1320	1320		1565		1440	1356	1684		6	6	1148
NU 19/1320M	10329/1320H	1320		1565		1440	1356	1684		6	6	1164
N 28/1400		1400	1506			1637	1370		1647	6	6	812
NU 6/1500/YA	3-248	1500		1688.4		1586	1536	1764		6	6	805
NU 18/1500C3		1500		1706		1585	1530	1790		6	6	758
NU 18/1600	10328/1600	1600		1818		1695	1636	1914		6	6	1059



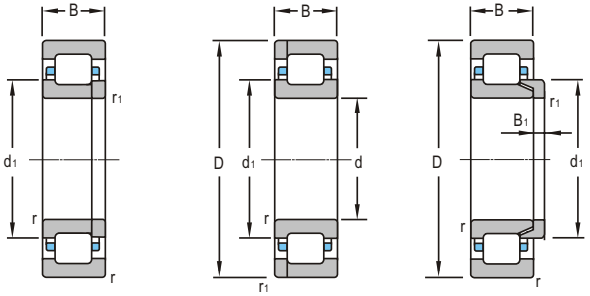
NUP NFP NH



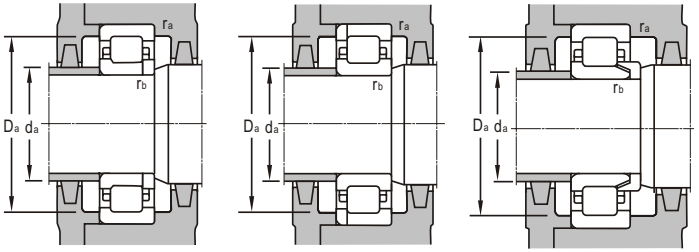
d 25～65mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	r_{1min}	*C*	C_0		
mm					kN		r/min	
25	52	15	1	0.6	30.6	29.3	11000	14000
	62	17	1.1	1.1	36.6	33.0	9500	12000
	80	24	1.1	1.1	46.4	40.0	8500	10000
30	72	19	1.1	1.1	43.2	43.3	9000	11000
	72	27	1.1	1.1	61.5	64.1	8000	9500
32.5	62	16	1	1	21.9	13.5	10000	13000
35	80	21	1.5	1.1	64.2	39.2	8700	10960
	80	21	1.5	1.1	64.2	39.2	8700	10960
	80	21	1.5	1.1	80.2	83.3	2200	2750
	80	21	1.5	1.1	80.2	83.3	2200	2750
	80	21	1.5	1.1	70.6	66.2	7000	8500
	80	31	1.5	1.1	91.5	98.0	7000	8500
	90	23	1.5	1.1	91.4	95.9	8000	10080
40	80	18	1.1	1.1	49.1	43.0	7500	9000
	80	18	1.1	1.1	49.1	43.0	7500	9000
	90	23	1.5	1.5	83.6	88.4	6700	8000
	90	23	1.5	1.5	59.8	58.4	6700	8000
45	100	25	1.5	1.5	101	103	6300	7500
	100	25	1.5	1.5	115	145	3000	3500
	100	25	1.5	1.5	115	145	3000	3500
50	90	20	1.1	1.1	59.5	63.4	6300	7500
	110	27	2	2	90.4	90.7	5000	6000
	110	27	2	2	108	125	5000	6000
55	100	21	1.5	1.1	87	100	6000	7000
	120	29	2	2	140	146	4800	5600
	120	43	2	2	148	162	4800	5600
60	110	22	1.5	1.5	76	87	5300	6300
	130	31	2.1	2.1	135	141	4300	5000
	130	31	2.1	2.1	146	151	4300	5000
	150	35	2.1	2.1	167	168	4300	5000
65	140	33	2.1	2.1	140	146	4000	4800

Bearing Designations		Journal	Other Dimensions				Mounting Dimensions				Mass
Present	Original		d_1	D_1	B_1	B_2	d_{amin}	D_{amax}	r_{amax}	r_{bmax}	
		mm	mm				mm				kg
NUP 205ETN1	92205EA	25	34.7	43.5			29	47	1	0.6	0.14
NUP 305 ENTN1	192305EA	25	38.1	50.4			31	55	1	1	0.253
NH 405 X2M	62705H	25	39	48.7	4	8.83	32	72	1	1	0.853
NUP 306 EM		30	45	58			37	65	1	1	0.418
NUP 2306M		30	46	58.4			37	65	1	1	0.603
NUP 6/32.5	3-250	32.5	41.8	49.9			37	57	1	1	0.24
NUP307M	92307H	35	50.8	63.5			43	72	1.5	1	0.575
NUP307NM	192307HK	35	50.8	63.5			43	72	1.5	1	0.569
NUP 307EV/C9		35	52.2	64.4			44	71	1.5	1	0.552
NUP 307ENV/C9		35	52.2	64.4			44	71	1.5	1	0.546
NUP 307EF1		35	51.1	66.3			44	72	1.5	1	0.687
NUP 2307M	92607H	35	50.8	63.5			42	71	1.5	1	0.902
NUP2207X1V/C9YB2		35	55.2	70			53	81	1.5	1	0.812
NUP 208 ETN1	92208EA	40	54.2	65.6			47	73	1	1	0.396
NUP 208 M	92208H	40	54.2	65.6			47	73	1	1	0.468
NUP 308 EN	192308E	40	57.5	75			49	81	1.5	1.5	0.693
NUP 308 M		40	57.5	72.1			49	81	1.5	1.5	0.786
NUP 309 EF1		45	64.7	83.6			54	91	1.5	1.5	1.27
NUP 309 ENV		45	63.5	80.2			54	91	1.5	1.5	0.978
NUP 309 EV		45	63.5	80.2			54	91	1.5	1.5	0.988
NH 210EM		50	64	77.6	5	9.2	56.5	83.5	1.1	1.1	0.643
NH 310M	62310H	50	70.2	89.6	8	13.81	59	101	2	2	1.46
NH 310 EF1		50	71.2	91.7	8	12.81	59	101	2	2	1.72
NUP 211 EF1		55	70.9	86.3			61.5	91	1.5	1	0.757
NUP 311 EF1		55		100.6			64	111	2	2	1.69
NUP 2311M	92611H	55	76	98.5			64	111	2	2	2.89
NUP 212 M	92212H	60	77.6	92.2			68	102	1.5	1.5	1.09
NUP 312 M		60	84	106.5			71	120	2	2	2.16
NH312E/C9		60	84.3	110	9	14.29	71	120	2	2	2.29
NUP 412	92412	60	91	118.8			72	138	2	2	3.42
NUP 313M	92313H	65	91	114.9			77	129	2	2	2.65



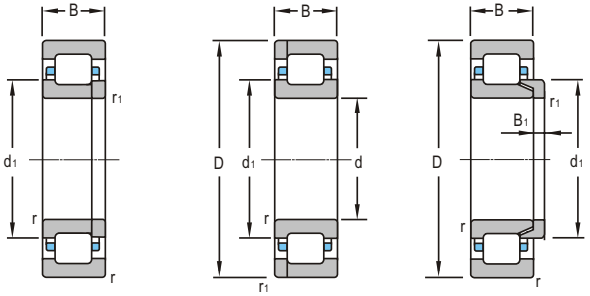
NUP NFP NH



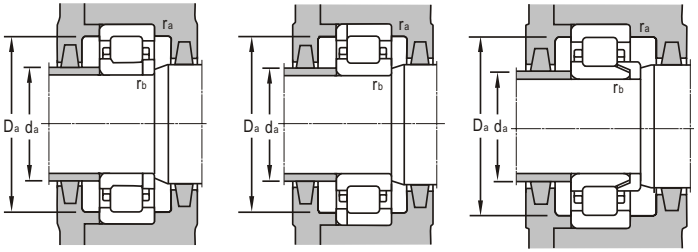
d 70～360mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	r_{1min}	*C*	C_0		
mm					kN		r/min	
70	110	20	1.1	1	64.9	80.9	6000	7000
	125	24	1.5	1.5	123	143	4500	5300
	125	31	1.5	1.5	145	185	4500	5300
	150	35	2.1	2.1	209	228	3600	4300
	150	35	2.1	2.1	173	190	3600	4300
75	130	25	1.5	1.5	122	144	4500	5300
80	140	33	2	2	187	245	4000	4800
85	210	52	4	4	357	386	3180	4010
100	180	50	2.1	2.1	335	445	3200	3800
	215	47	3	3	365	406	2400	3000
	215	47	3	3	390	440	2400	3000
120	215	40	2.1	2.1	250	299	2400	3000
	240	80	3	4	477	408	2520	3180
130	250	80	3	4	547	473	2360	2980
	250	80	3	3				
	250	80	3	4	604	807	2360	2980
	280	58	4	4	566	679	1800	2200
140	250	68	4	3	547	787	2000	2600
	310	108	4	4	1280	1800	1000	1300
150	225	35	2.1	2.1	216	320	2600	3200
190	340	92	4	4	1046	1555	1600	1900
240	500	95	5	5	1390	1610	1000	1300
260	400	65	4	4	659	1030	1500	1800
	400	65	4	4	659	1030	1500	1800
305	460	65	4	4	800	878	1200	1500
320	580	92	5	5	1825	2839	950	1200
360	520	82	5	5	1160	2100	1000	1300

Bearing Designations		Journal	Other Dimensions				Mounting Dimensions				Mass
Present	Original		d_1	D_1	B_1	B_2	d_{amin}	D_{amax}	r_{amax}	r_{bmax}	
		mm	mm				mm				kg
NUP1014M		70	84	95.6			75	103.5	1	1	0.74
NUP 214 E		70	89.6	109			78	117	1.5	1.5	1.32
NUP 2214 M	92514EH	70	89.4	114.9			78	117	1.5	1.5	1.9
NUP 314ENM/C3 YA4		70	98	125			81	139	2	2	3.32
NUP 314NM		70	98	120.5			81	139	2	2	3.16
NUP 215EM		75	94.5	114			95	121	1.5	1.5	1.46
NUP 2216 EQ1/P63S0		80	101	122.5			89	131	2	2	2.38
NUP417Q1/C9S0	8G92417QT	85	127	170.5			105	190	3	3	9.7
NJP 2220X2M	152720H	100	127.9	151.3			111	169	2	2	5.9
NUP 320 EM		100	139	182.3			114	202	2.5	2.5	8.78
NH 320		100	139.1	182.3	13	20.23	114	201	2.5	2.5	9.74
NUP 224M	92224H	120	151.1	182.3			131	204	2	2	6.51
NJP 624Q/SO	152724QT	120	162	194			150	218	3	3	17.2
NJP626Q/SO	152726QT	130	170.5	205			152	228	4	4	18.7
NJP626M	152726H	130	170	205			152	228	4	4	18.7
NJP3226X1		130	171	206			152	228	4	4	18.5
NH326E/P64		130	182	227			148	262	3	3	20.5
NJP 2228Q1/C4S0		140	179	216			154	236	2.5	2.5	15.5
NH 2328X3V		140	203.5	261.5	16	31.2	158	292	3	3	42.8
NUP 1030Q1/P64		150	176	199			161	214	2	1.5	5.09
NH 2238EM	62538EH 92348H	190	240.8	296.8	13	26.12	208	322	3	3	44.1
NUP348M		240	329.2	402.7			262	478	4	4	111
NUP 1052		260	309.2	348.4			276	384	3	3	32.3
NUP 1052F1		260	309.2	348.4			276	384	3	3	32.3
NFP 661	22761 52264	305	362				325	442	2.5	2.5	41.1
NH264		320		415			340	560	4	4	125
NUP 1072X1M		360	416	463			382	498	4	4	61.3



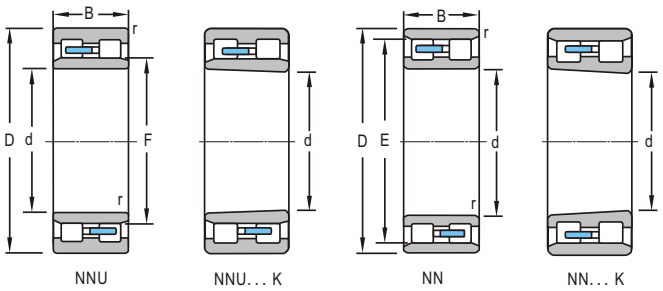
NUP NFP NH



d 360～950mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	D	B	r_{min}	r_{1min}	C	C_0		
mm					kN		r/min	
360	540	106	5	5	1750	3240	900	1100
380	480	60	2.1	2.1	668	1437	1000	1300
419.1	558.8	76.2	4	4	1240	2550	950	1200
460	620	95	4	4	1769	3883	750	900
	680	100	6	6	2000	3700	800	950
500	670	100	5	5	2000	4510	750	900
508	622.3	95.25	3	3	1627	3858	800	950
530	710	106	5	5	2170	5200	700	850
558.8	685.8	100	3	3	1936	4560	700	850
560	920	128	7.5	7.5	3540	6370	500	600
600	730	90	3	3	1800	4240	670	800
630	780	112	4	4	2000	4800	560	670
650	900	170	6	6	4497	10875	480	560
660.4	812.8	107.95	6	6	2286	6000	600	700
670	820	112	3.5	3.5	2135	5700	500	600
700	930	160	6	6	3450	8400	500	600
710	950	106	6	6	2610	5530	500	600
723.795	908.05	120.65	5	5	3060	7620	500	600
750	1000	112	6	6	3070	6960	480	560
950	1250	175	7.5	7.5	5317	13932	340	400

Bearing Designations		Journal	Other Dimensions				Mounting Dimensions				Mass
Present	Original		d_1	D_1	B_1	B_2	d_{amin}	D_{amax}	r_{amax}	r_{bmax}	
		mm	mm				mm				kg
NJP2072 EM	2152172	360	423	475		405	380	520	4	4	96
NUP 2876/Y A	2092876K	380	417	444			392	468	2	2	26.4
NUP 6/419.1Q1/C9	92984Q U	419.1	465	515			437	540	3	3	55.4
NUP 2992	2092992	460	516	562			480	596	3	3	87
LY-N024		460	537.6	600	25	40.49	488	652	5	5	144
NUP 29/500		500	560	610			522	648	4	4	105
NUP 6/508Q1/C9	928/508 QU	508	544.6	586.6			520	611	2.5	2.5	64.7
NUP 29/530	20929/530	530	592	644			555	685	4	4	127
NUP 6/558.8	929/558.8 QU	558.8	599	646.5			570	674	2.5	2.5	84.2
NU1/560X2 +HJ1/560		560	693	797	25	48.4	592	888	6	6	381
NFP6/600M	228/600H	600	636	694			613	717	2.5	2.5	89.1
NFP6/630M	30228/630	630	678	731.5			648	762	3	3	119
NUP 6/650	927/650	650	739	808			678	872	5	5	349
NUP 6/660.4	929/660.4	660.4	709.4	763.8			688	784	5	5	131
NFP6/670M	30228/670H	670	724	769			684	805	3	3	142
NUP 6/700	927/700	700	781	845			728	902	5	5	308
NUP 19/710	10929/710	710	797	863			738	922	5	5	220
NFP6/723.795Q1		725.795	784.2	852.8			700	932	4	4	198
NUP 19/750		750	840	917			778	972	5	5	255
NUP 29/950	20929/950	950	1058	1137			986	1214	6	6	612



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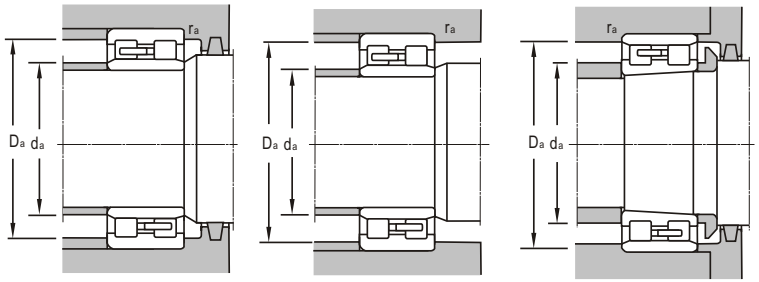
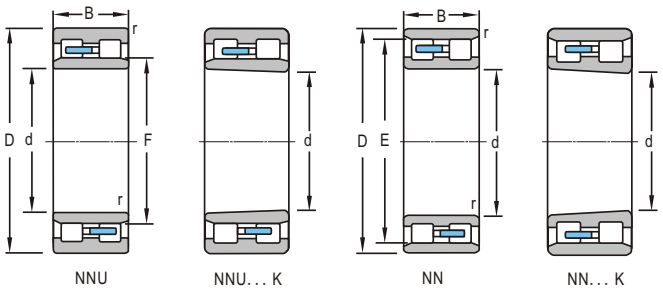


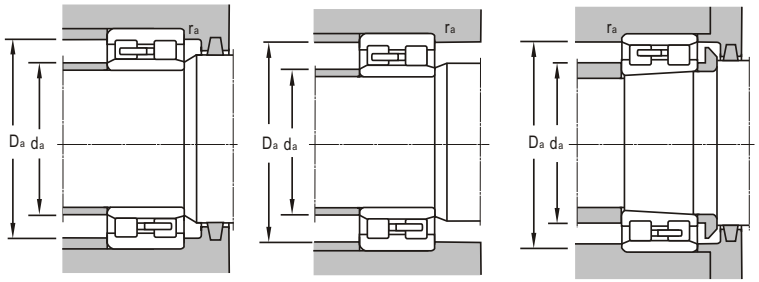
d 40～140mm

Boundary Dimensions				Basic Load Ratings		Limiting Speeds	
				Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	*C*	C_0		
mm				kN		r/min	
40	68	37	0.6	82.1	121	2000	
	68	38	0.6	100	142	2000	
	68	38	1.5	99.6	141	4800	6000
50	80	23	1	53	73.2	8000	9400
55	90	45	0.6	144	228	1500	
60	95	26	1.1	70.2	105	8500	10000
	95	26	1.1	70.2	105	8500	10000
70	110	30	1.1	95.8	145	7000	8500
	110	30	1.1	95.8	145	7000	8500
75	115	30	1.1	101	158	6700	8000
	115	30	1.1	101	158	6700	8000
80	125	34	1.1	123	194	6300	7500
	125	34	1.1	123	194	6300	7500
	125	34	1.1	123	194	6300	7500
85	130	34	1.1	122	195	6000	7000
90	140	37	1.5	142	226	5600	6700
	140	66	0.6	297	560	900	
100	150	37	1.5	161	274	5300	6000
	150	66	1.5	320	585	850	
105	160	41	2	201	328	4800	5600
110	170	80	1.8	389	711	570	750
	200	69.8	2.1	372	592	3100	3900
120	180	46	2	235	397	4300	5000
	180	79	1.8	406	765	530	700
130	200	52	2	294	498	4000	4500
	200	52	2	294	498	4000	4500
140	210	53	2	308	539	3800	4300

Bearing Designations		Journal	Other Dimensions		Mounting Dimensions					Mass
Present	Original		*F*	*E*	d_{amin}	d_{amax}	D_{amax}	D_{amin}	r_{amax}	
		mm	mm		mm					kg
NNF5008- 2LSNV		40	47	61	44	50	65	63	0.6	0.535
NNF5008DA.V .C4.S3		40	46	62	44	50	65	63	0.6	0.524
NNCF5008V/P54 S3		40		61.74	44.6	45.9	63.4	68	1	0.545
NN 3010 K	3182110	50		72.5	55		75	74	1	0.421
NNF5011-2LS		55	63.5	81.5	60	67	85	83	0.6	1.16
NN3012K		60		85.5	66.5		88.5	87	1	0.707
NN3012		60		85.5	66.5		88.5	87	1	0.708
NN3014K		70		100	76.5		103.5	101		0.963
NN3014K/ P4W33		70		100	76.5		103.5	101	1	1.04
NN3015K		75		105	81.5		108.5	106	1	1.12
NN3015		75		105	81.5		108.5	106	1	1.13
NN3016K		80		113	86.5		118.5	114	1	1.54
Nn3016		80		113	86.5		118.5	114	1	1.6
NN3016K/ P4W33		80		113	86.5		118.5	114	1	1.5
NN3017K		85		118	91.5		123.5	119	1	1.59
NN3018K		90		127	98		132	129	1.5	2.12
NNF5018- 2LSNV		90	103.5	127.5	96	106	135	130	0.6	3.24
NN 3020 K		100		137	108		142	139	1.5	2.31
NNF5020- 2LSV/Y A1		100	113	139	105	117	146	141	1.5	3.98
NN 3021K	3282222	105		146	115		150	148	2	2.99
NNF5022-2LSNV		110		154.5	117	125	165	160	1	5.37
NN 3222		110		178.5	139		182	180	2	9.52
NN3024K		120		165	130		170	167	2	3.99
NNF5024-2LSNV		120		164	127	134	175	170	1	6.81
NN3026K		130		182	140		190	183	2	5.76
NN3026K/ W33		130		182	140		190	183	2	5.76
NN 3028 K		140		192	150		200	194	2	6.43



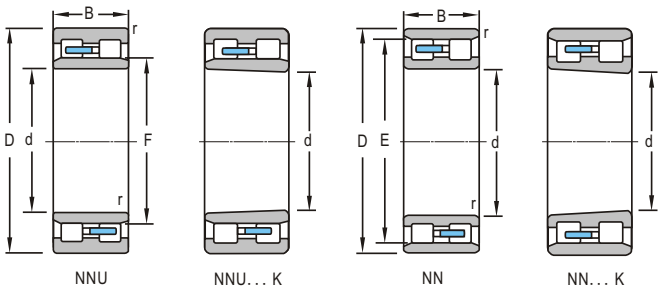
NNU　NNU... K　NN　NN... K



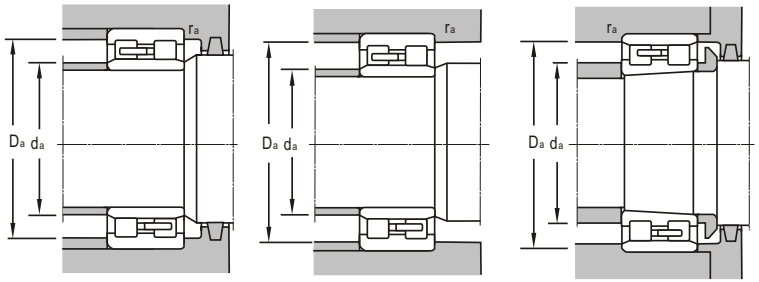
d 140～280mm

Boundary Dimensions				Basic Load Ratings		Limiting Speeds	
				Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	*C*	C_0		
mm				kN		r/min	
140	210	53	2	308	539	3800	4300
150	225	56	2.1	335	587	3600	4000
160	240	60	2.1	446	776	3400	3800
	240	60	2.1	446	776	3400	3800
	262	108	2	784	1600	380	500
170	260	67	2.1	450	805	3000	3400
180	260	84	2.1	567	1130	2000	2600
	270	120	2.1	815	1570	2000	2600
190	260	69	2	485	1060	1900	2400
	260	69	2	485	1060	2000	2600
200	280	80	2.1	480	1040	1900	2400
	280	80	2.1	480	1040	1900	2400
	310	82	2.1	653	1170	2400	2800
	310	82	2.1	653	1170	2400	2800
220	340	90	3	815	1480	2200	2600
	340	90	3	815	1480	2200	2600
	340	90	3	815	1480	2200	2600
240	300	60	2	446	1180	1100	1400
	320	80	2.1	546	1270	1700	2000
	360	92	3	892	1610	1600	1900
	360	92	3	892	1610	1600	1900
	400	160	4	1900	3600	1600	1400
260	360	100	2.1	785	1800	1400	1700
	360	100	2.1	785	1800	1400	1700
	360	100	2.1	785	1800	1400	1700
	400	104	4	1030	1920	1500	1700
	400	104	4	1030	1920	1500	1700
	400	189	1.1	2400	4720	330	
	400	189	1.1	2400	4720	330	
	440	180	5	2370	4270	1000	1300
280	380	100	2.1	760	1800	1300	1600

Bearing Designations		Journal	Other Dimensions		Mounting Dimensions					Mass
Present	Original		*F*	*E*	d_{amin}	d_{amax}	D_{amax}	D_{amin}	r_{amax}	
		mm	mm		mm					kg
NN 3028		140		192	150		200	194	2	6.56
NN3030K		150		206	161		214	208	2	7.87
NN3032K		160		223	171		229	221	2	9.25
NN3032K/ W33		160		223	171		229	221	2	9.18
NNF5032-2LSNRV		160		222.6	167	184	235	229	2	17.2
NN3034K		170		236	180		249	238	2	12.8
NNU4936X3/ W33		180	202		190		249	238	2	15
NNU4136X3		180	202		190	199	259	248	2	24
NNU 4938 K	438293 8	190	211		200	209	250	246	2	10.96
NNU4938K/P5W33YA		190	211.5		199	211	251	242	2	10.9
NN 4940K	418294 0	200		259	211	222	269	264	2	14.1
NN 4940 K/W33	418294 0Y	200		259	211	222	269	264	2	14.1
NN3040K		200		282	211		299	285	2	22.6
NN3040K/ W33		200		282	211		299	285	2	22.6
NN3044		220		310	230		327	313	2	30.1
NN3044K/ W33		220		310	230		327	313	2	29.1
NNU3044K/ W33		220	254		230		327	313	2	29.2
NNC4848V	448274 8H	240	253.5	279.5	247.5	255	290	287		
NNU4948		240	265		251	262	309		2	18.1
NN 3048		240		330	253		347	333	2.5	32.3
NN 3048K/ W33		240		330	253		347	333	2.5	32
NNU 4148M		240	282		256	278	384		3	81.8
NN 4952 K		260		334	271	288	349		2	30.2
NNU 4952/ C4W33-1		260	292		271	288	349		2	31.7
NNU4952/ C3W33-1		260	292		272	288	349		2	31.7
NN 3052 K	318215 2	260		364	276		384	367	3	44.3
NN 3052	328215 2	260		364	276		384	367	3	47.1
NNF5052- 2LSNV /W33		260	292.5	372.5	276	298	385	368	3	80.2
NNF5052- 2LSNV /C9W33		260	292.5	372.5	276	298	385	368	1.1	80.2
NNU4152/W33		260	306		276	300	424	407	3	112
NNU4956		280	312		291	308	369		2	33.6



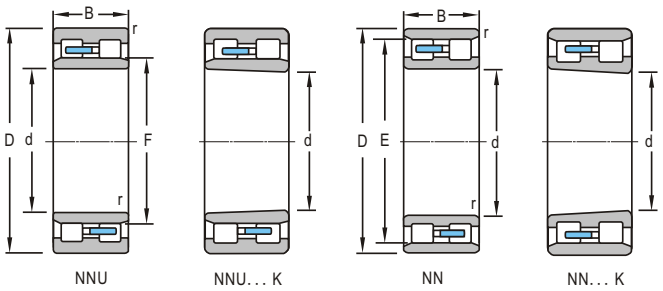
NNU　NNU... K　NN　NN... K

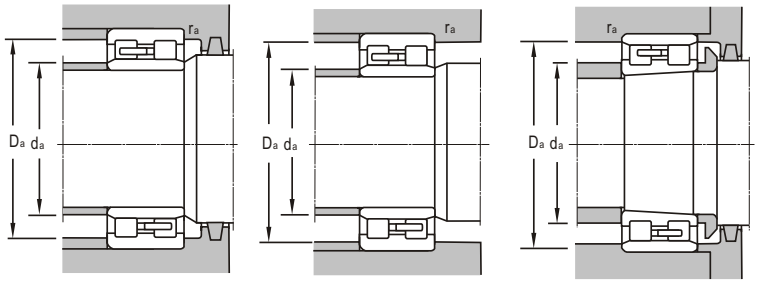


d 280～400mm

Boundary Dimensions				Basic Load Ratings		Limiting Speeds	
				Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	*C*	C_0		
mm				kN		r/min	
280	420	106	4	1110	2160	1800	2000
	420	106	4	1110	2160	1800	2000
	420	106	4	1110	2160	1800	2000
	460	180	5	2400	4250	950	1200
300	460	118	4	1280	2430	1700	1900
	460	118	4	1280	2430	1700	1900
	460	118	4	1280	2430	1700	1900
	460	118	4	1280	2430	1700	1900
	460	118	4	1580	3200	320	600
	460	118	4	1580	3200	320	600
320	440	118	3	1110	2640	1100	1400
	440	118	3	1110	2640	1100	1400
	440	118	3	1110	2640	1100	1400
	480	121	4	1300	2600	1600	1800
	480	121	4	1570	2970	920	1200
340	460	118	3	1270	3250	1100	1300
	520	133	5	1670	3300	1100	1300
	520	133	5	1670	3300	1100	1300
	520	133	5	1912	4084	550	610
360	480	118	3	1270	3250	1100	1300
	540	134	5	1630	3240	1000	1200
380	540	180	4	2500	5690	900	1050
	540	180	4	2880	6630	900	1050
	560	135	5	1690	3450	940	1100
	560	135	5	1690	3450	940	1100
	560	135	5	1690	3450	940	1100
	620	194	5	2700	5800	500	700
400	540	106	4	1240	2400	780	980
	540	106	4	1240	2400	780	980
	540	106	4	1240	2400	780	980
	600	148	5	2140	4420	1200	1400
	600	148	5	2140	4420	1200	1400
	600	148	5	2140	4420	1200	1400
	600	148	5	2140	4420	1200	1400
	650	250	6	4610	8970	710	890

Bearing Designations		Journal	Other Dimensions		Mounting Dimensions					Mass
Present	Original		*F*	*E*	d_{amin}	d_{amax}	D_{amax}	D_{amin}	r_{amax}	
		mm	mm		mm					kg
NN 3056 K		280		384	296		404	387	3	49.1
NN 3056		280		384	296		404	387	3	49.9
NN 3056K/ W33		280		384	296		404	387	3	48.9
NNU4156		280	326		300	318	440		4	120
NN 3060		300		418	316		444	421	3	71.5
NN 3060/ W33		300		418	316		444	421	3	71.1
NN 3060 K		300		418	316		444	421	3	69.8
NN3060K/W33		300		418	316		444	421	3	69.4
NNF3060V/W33		300	346	418	316		444	421	3	69.8
NNCF3060V		300	346	418			444	421	3	69.8
NN 4964 K/W33	4182 964Y	320		409	334	355	427		2.5	52
NNU 4964 K/W33		320	359		334	355	427		2.5	54.7
NNU 4964 K/P5W33		320	359		334	355	427		2.5	54.7
NN 3064 K	3182 164	320		438	336		464	442	3	77.9
NNU3064/W33		320	366		336	343	464	400	3	76.4
NN 4968 K/W33	4182 968Y	340		433	353	375	447		2.5	53.8
NN 3068 K	3182 168	340		473	360		500	477	4	101
NN 3068	3282 168	340		473	360		500	477	4	104
NN3068V	3682 168U	340		473	360		500	477	4	100
NNU4972K		360	396		374	395	466		2.5	57.8
NN 3072 K	3182 172	360		493	380		520	497	4	106
NNU4076X1/W33XYA3		380	420		400	418	520		4	132
LY-N025		380	420		400	418	520		4	132
NN 3076		380		515	400		540	516	3.5	114
NN3076K		380		515	400		540	516	4	110
NN3076K/W33X		380		515	400		540	516	4	110
NN 3176 V	3202 776	380		560	458		560	534	4	221
NN3980K	3182 980	400		505	430		510	486	3	71.3
NN 3980 K/W33	3182 980Y	400		505	430		510	486	3	71.3
NN 3980 K/W33	3282 980	400		505	430		510	486	3	73.6
NN 3080 K		400		549	420		580	533	4	149
NN3080K/W33		400		549	420		580	533	4	149
NN 3080		400		549	420		580	533	4	150
NN3080/W33		400		549	420		580	533	4	150
NNU 4180 M/HC/C3		400	463		424	455	626		5	319

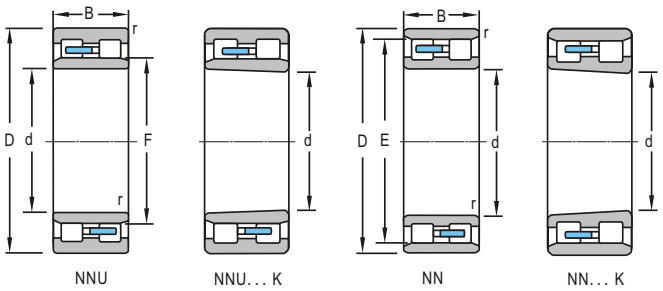




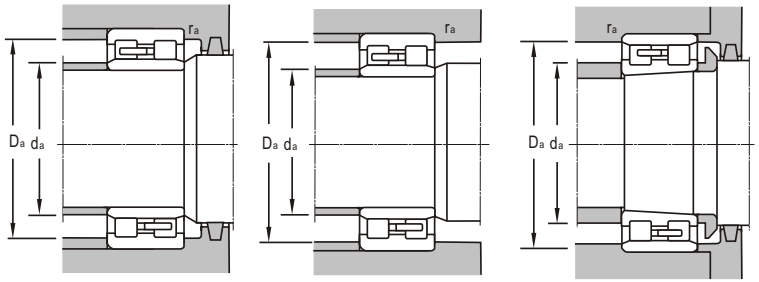
d 420～600mm

Boundary Dimensions				Basic Load Ratings		Limiting Speeds	
				Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	*C*	C_0		
mm				kN		r/min	
420	620	150	5	2170	4560	1000	1300
	620	200	5	3230	6850	740	920
	760	280	7.5	6000	11300	510	640
440	640	230	5	4340	9180	700	850
460	620	160	4	2230	5210	800	950
	620	160	4	2230	5210	800	950
	680	163	6	2590	5470	750	890
	680	163	6	2590	5470	750	890
	680	163	6	2590	5470	750	890
	800	250	7.5	5830	11200	560	700
480	700	165	6	2642	5680	700	850
500	670	170	5	2360	6200	700	850
	670	170	5	2570	6440	700	850
	720	167	6	2840	6140	950	1100
	830	325	7.5	7090	14400	460	600
530	710	136	5	2270	5130	670	800
	710	180	5	2820	7690	670	800
	760	260	6	5353	12834	600	700
	870	335	7.5	7800	15900	510	640
560	735	170	5	3030	7560	560	730
	750	140	5	2370	4860	670	800
	750	140	5	2450	5780	800	1000
	750	190	5	3480	8660	670	800
	780	180	6	3600	8270	600	700
	780	180	5	3600	8270	600	700
	820	195	6	3620	7890	560	670
	820	195	6	3620	7890	560	670
	820	195	6	3620	7890	560	670
600	800	200	5	3350	9320	700	900
	800	200	5	3580	10200	560	670
	820	287.5	5	6080	16600	530	630
	870	270	6	6450	15500	500	600
	980	375	7.5	9950	21000	370	480

Bearing Designations		Journal	Other Dimensions		Mounting Dimensions					Mass
Present	Original		*F*	*E*	d_{amin}	d_{amax}	D_{amax}	D_{amin}	r_{amax}	
		mm	mm		mm					kg
NN3084K		420		569	440	477	600	588	4	151
NNU 4084/W33/C3		420	469		440	463	601		4	204
NNU 4184 X1/HC/P6		420	508		448	499	732		6	587
NNU6/400/HC		440	482		466	475	614		5	250
NNU 4992/W33		460	504		476	504	604		3	
NNU 4992K/W33		460	504		476	504	604		3	
NN 3092 K		460		623	484		656	627	5	204
NN 3092		460		623	484		656	627	5	204
NN3092/W33		460		623	484		656	627	5	204
NNU 3192 X3/HC W33		460	554		489	554	771		6	550
NN3096K/W33		480		643	506		674	648	5	214
NNU 49/500/YA	44829/500	500	548		520	548	650		4	166
NNU 49/500K/W33		500	551		520	548	650		4	169
NN30/500K/W33		500		664	526		694	668		223
NNU41/500/HC		500	582		533	568	587	797	6	710
NN39/530K		530		663	550	582	690		4	149
NN 49/530 K/P4W33		530			549	580	691	673	4	203
NNU6/530/W33XYA3		530	587		550		740		5	387
NNU 41/530 M/HC W33		530	618		580	608	842		6	781
NNU19/560X1/HCW33		560	603		580	590	715	695	5	190
NN 39/560	32829/560	560		705	576		735	711	4	188
NN39/560K		560		705	590	623	725	715	5	172
NNU 49/560/SPC3W33X		560	617		580	644	730		4	234
NN 6/560	2827/560	560		725	580		765	732	5	266
NN6/560KW/W33		560		725	580		765	732	4	257
NN 30/560 KF1	31821/560 W	560		755	600		794	765	5	341
NN30/560KF1/W33		560		755	600		794	765	5	336
NN30/560F1/W33		560		755	600		794	765	5	347
NN49/600K		600		750	630	662.8	770	760	5	281
NN 49/600 K	41829/600	600		755	620	662	780		4	257
NNU6/600/HC		600	660		620	651	805		5	470
NNU40/600X2		600	672		626	653	844		6	559
NNU41/600M/W33		600	699		633	682	947	898	6	1117



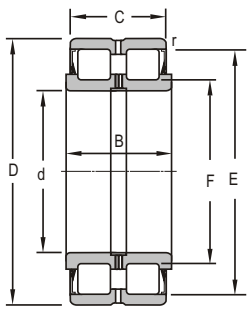
NNU　NNU...K　NN　NN...K

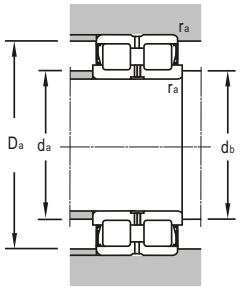


d 650～900mm

Boundary Dimensions				Basic Load Ratings		Limiting Speeds	
				Dynamic	Static	Grease	Oil
d	*D*	*B*	r_{min}	*C*	C_0		
mm				kN		r/min	
650	900	128	6	3750	8250	270	330
670	980	230	7.5	4890	10400	670	750
750	920	170	5	3380	10000	360	450
900	1180	280	5	6600	20000	170	210

Bearing Designations		Journal	Other Dimensions		Mounting Dimensions					Mass
Present	Original		*F*	*E*	d_{amin}	d_{amax}	D_{amax}	D_{amin}	r_{amax}	
		mm	mm		mm					kg
NCF6/650V/P59		650		841.5	680	720	880	836	5	247
NN 30/670 Kf1	31821/670 W	670		900	704		946	907	6	597
NN 48/750/P69W33		750	879		770		900	885	4	240
NNU49/900C3W33X		900	986		926	977	1154	1110	4	805

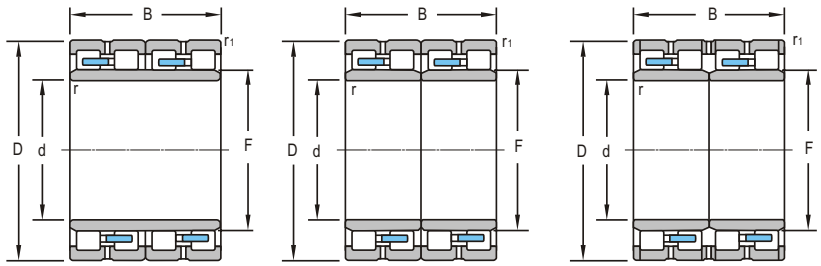




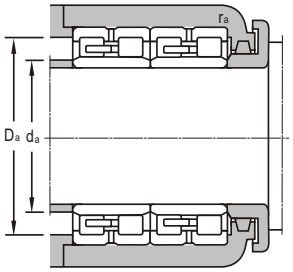
d 40～260mm

Boundary Dimensions					Basic Load Ratings		Limiting Speeds	
					Dynamic	Static	Grease	Oil
d	*D*	*B*	*C*	r_{min}	*C*	C_0		
mm					kN		r/min	
40	68	37	38	0.6	82.1	121	2000	
	68	38	38	0.6	100	142	2000	
55	90	45	46	0.6	144	228	1500	
85	130	59		0.6	248	459	930	
90	140	66	67	0.6	297	560	900	
	140	66		0.6	319	580	900	
100	150	66	67	1.5	320	585	850	
110	170	79		0.6	389	711	800	
120	180	79		0.6	406	765	750	
140	210	94		0.6	608	1150	650	
160	240	108	109	0.6	800	1590	500	
170	230	80		1	544	1147	450	
260	400	189	190	1.1	2400	4720	330	
	400	189	190	1.1	2400	4720	330	

Bearing Designations		Journal	Other Dimensions								Mass
Present	Original		*F*	*E*	d_{amin}	d_{amax}	d_{bmin}	D_{amax}	D_{amin}	r_{amax}	
		mm	mm								kg
NNF5008-2LSNV		40	47	61	44	50	60	65	63	0.6	0.535
NNF5008DA.V.C4.S3		40	46	62	44	50	60	65	63	0.6	0.524
NNF5011-2LS		55	63.5	81.5	60	67	77	85	83	0.6	1.16
NNF5017-2LSNRV		85	98.2	120.2	91	102		125	123	0.6	2.79
NNF5018-2LSNV		90	103.5	127.5	96	106	124	135	130	0.6	3.24
NNF5018-2LSNRV		90	103.5	127.5	96	106		135	130	0.6	3.71
NNF5020-2LSV/YA1		100	113	139	105	117	130	146	141	1.5	3.98
NNF5022-2LSNRV		110	124.5	154.5	116	129		165	158	0.6	7
NNF5024-2LSNRV		120	134	164	126	138		175	168	0.6	7.5
NNF5028-2LSNRV		140	157.5	195.5	146	163		205	199	0.6	12.1
NNF5032-2LSNV/W33		160	180.6	222.6	165	189	210	234	226	0.6	17.3
NNF170-2RV		170	184	218	176	185		225	221	1	9.09
NNF5052-2LSNV/W33		260	292.5	372.5	276	298	305	385	368	3	80.2
NNF5052-2LSNV/C9W33		260	292.5	372.5	276	298	305	385	368	1.1	80.2



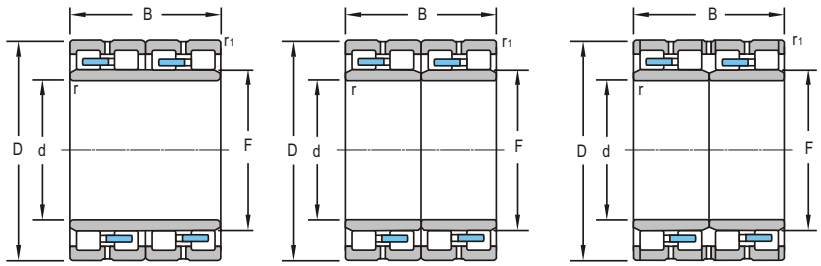
FC FCD FCDP



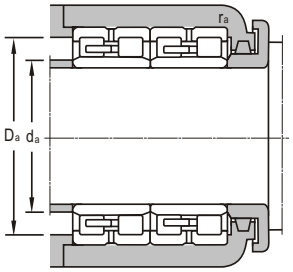
d 90～280mm

Boundary Dimensions						Basic Load Ratings	
						Dynamic	Static
d	*D*	*B*	*F*	r_{min}	r_{1min}	*C*	C_0
mm						kN	
90	140	70	105	1.5	1.1	219	423
100	140	104	111	1.5	1.1	333	793
131	196.85	128	148	2.1	2.1	604	1200
140	210	125	158	2	2	622	1270
	210	155	158	2	2	786	1710
150	225	120	169	2	2	658	1289
160	230	130	180	2	2	703	1560
170	230	160	185.6	2.1	2.1	894	2220
180	260	168	202	2.1	2.1	1152	2250
	260	168	202	2.1	2.1	1152	2250
	260	168	202.1	2.1	2.1	1152	2250
190	260	168	212	2.1	2.1	870	2340
	270	200	212	2.1	2.1	1359	3020
	270	200	212.3	2.1	2.1	1359	3020
200	290	192	226	2.1	2.1	1386	2880
	290	192	226	2.1	2.1	1330	3160
210	300	210	234	2.1	2.1	1520	3170
220	310	192	246	2.1	2.1	1512	3285
230	330	206	260	2.1	2.1	1683	3600
250	340	230	176	2.1	2.1	1720	4680
260	370	220	292	3	3	1944	4460
	370	220	292	3	3	1944	4460
	370	220	292	3	3	2012	4620
270	380	275	300	2.1	2.1	2620	6990
280	390	220	312	3	3	2016	4760

Bearing Designations		Other Dimensions				Mass
Present	Original	d_{amin}	D_{amin}	D_{amax}	r_{amax}	
		mm				kg
FC182870		98	126	132	1	4.08
FC2028104		108	129	135	1	5.18
BFC 2639128 X3/P5		142	181	186	1.5	13.4
FC2842125		151	192	199	1.5	15.6
FC2842155		151	192	199	1.5	18.9
FC3045120		161	207	216	1.5	15.9
FC3246130		171	214	219	1.5	19.8
BFCD3446160/YA		178	218	220	6.5	18.8
FC3652168		191	240	248	1.5	30
FC3652168/YA		191	240	248	1.5	30
FC3652168-1		191	240	248	1.5	30
FC3852168/c4		203	243	249	1.5	38.3
FC3854200		215	252	259	1.5	38.3
FC3854200-1		215	252	259	1.5	37.1
FC4058192		212	268	278	2	42.8
FC4058192F/P54 S0		212	268	278	2	43.1
FC4260210		223	278	287	2	47.5
FC4462192		233	286	298	2	47.1
FC4666206/SO		243	306	317	2	59.3
FC5068230/HC/P64	6672164Y	263	318	329	1.5	19.2
FC5274220		274	342	356	2.5	77.3
FC5274220A	672764Y	274	342	356	2.5	77.3
FC5274220/YA		274	342	356	2.5	80.8
FCD 5476275 WB/P69	972768Y	283	352	369	1.5	100
FC5678220		294	362	376	2.5	83.4



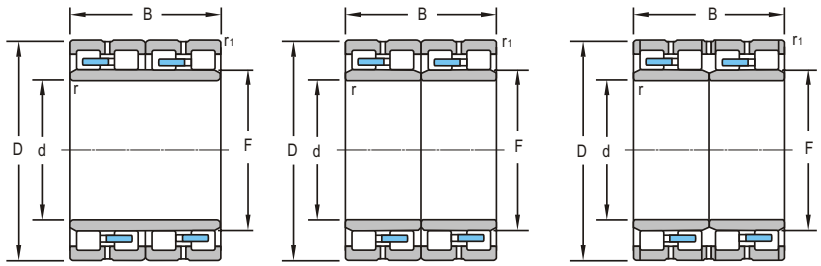
FC FCD FCDP



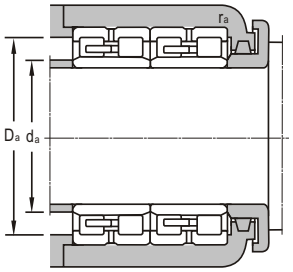
d 280～460mm

Boundary Dimensions						Basic Load Ratings	
						Dynamic	Static
d	D	B	F	r_{min}	r_{1min}	C	C_0
mm						kN	
280	390	275	312	3	3	2472	6190
	390	275	308	3	3	2530	6720
290	410	240	320	4	4	2150	5260
	410	240	320	4	4	2220	5450
300	420	240	332	4	4	2060	5020
	420	300	332	3	3	3366	7920
	420	300	332	3	3	3366	7920
310	420	300	338	4	4	2800	7520
320	480	290	364	4	4	3474	8847
	480	350	364	4	4	4455	9720
	480	350	364	4	4	4455	9720
	480	350	364	4	4	5779	13000
340	480	350	378	4	4	3790	10334
	480	350	378	4	4	3790	10334
360	510	370	397	8X20·	4	4330	11300
370	520	380	409	4	4	4438	11815
	530	400	413		5	4650	12600
380	540	400	422	4	4	5148	12600
400	560	410	445	5	5	6330	15800
	560	410	445	5	5	4680	13500
	560	410	445	12X20·	4	5590	16400
410	600	440	460		5	6640	17700
420	620	90	470	5	5	1500	2620
440	620	485	487	12.5X20·	4	7090	20200
447.295	635.176	463.55	495	6	3	8250	20000
460	650	470	509	5	5	7920	20160

Bearing Designations		Other Dimensions				Mass
Present	Original	d_{amin}	D_{amin}	D_{amax}	r_{amax}	
		mm				kg
FCDP5678275/HCYB		293	362	377	2.5	105
FC5678275		293	363	377	2	101
FC5882240		304	380	396	3	97.5
FC5882240/YA		304	380	396	3	91.9
FC6084240		314	392	406	3	98.3
FCD6084300		314	392	406	2.5	128
FCDP6084300		314	392	406	2.5	133
FCD 6284300 HC/P64		328	391	402	3	117
FCDP6496290		346	462	466	3	186
FC6496350		346	462	466	3	225
FCD6496350		346	462	466	3	225
FCDP6496350		346	462	466	3	225
FCD6896350		355	446	465	2.5	230
FCDP6896350		355	446	465	2.5	230
FCDP72102370/HC		377	470	493	3	234
FCDP74104380		389	481	500	3	244
FCDP 74106400/HC/C4		382	456	510	4	313
FCD76108400		397	502	523	3	291
FCDP80112410		419	525	547	4	320
FCDP 80112410		419	525	547	4	320
FCDP80112410-1		419	525	547	2	322
FCDP 82120440 HC/C4		423	550	580	4	423
NU1084(NU 1084 M)		440	590	600	4	90.1
FCDP88124450WB1		480	570	595	2	444
LY-N040						490
FCDP92130470M/HC		484	609	626	4	500



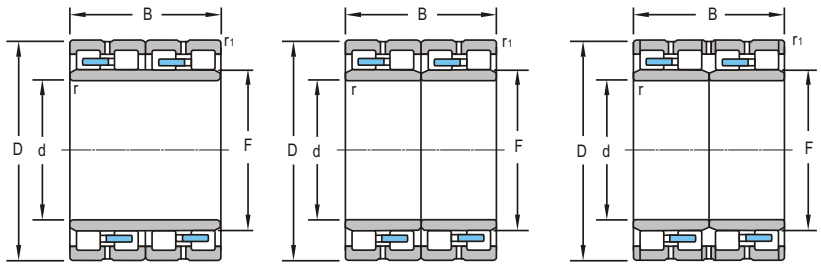
FC FCD FCDP



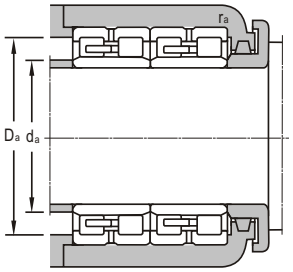
d 480～748mm

Boundary Dimensions						Basic Load Ratings	
						Dynamic	Static
d	D	B	F	r_{min}	r_{1min}	C	C_0
mm						kN	
480	650	450	525	6	6	7425	19080
	650	450	525	6	6	7425	19080
	680	500	532	6	6	8217	19800
	700	400	538	5	5	8568	21600
500	670	450	540	6	6	9800	20200
	720	530	568	6	6	10000	28000
520	735	535	574.5	6	6	9620	27600
530	760	520	587	12X20·	5	11800	27900
560	820	600	625	6	4	12780	35600
	820	630	625	6	6	14000	35800
570	815	594	628	6	6	12080	30180
600	870	640	672	6	6	14900	26100
	870	640	669	6	6	15000	37700
	870	640	669	6	6	15000	37700
	870	640	669	6	6	15000	37700
610	870	660	680		6	14500	44600
	870	660	680		6	14500	44600
650	900	650	704		7.5	14200	42100
	900	650	704	20X11.20'	7.5	14200	42100
	920	690	723	18X20·	6	14500	46300
	920	670	723	8X20·	7.5	14000	41900
	920	670	723	17X20·	7.5	14000	41900
658	1075	650	766	6	6	18450	38700
680	980	640	760	18X20·	4	15300	46000
690	980	715	767.5	6	4	17820	55330
	980	750	766		7.5	17000	52000
	980	750	766	20X20·	7.5	17000	52000
	980	750	766	20X20·	7.5	17000	52000
748	1135	690	851	6	4	19800	45900

Bearing Designations		Other Dimensions				Mass
Present	Original	d_{amin}	D_{amin}	D_{amax}	r_{amax}	
		mm				kg
FCD96130450		500	610	630	4	453
FCDP96130500		500	610	630	4	448
FCDP96136500		500	632	660	4	607
FCDP96140400	672796Y	500	648	680	4	508
FCDP100134450	6728/500Y	520	629	650	4	441
FCDP100144530						248
FCD104147535/HC		541	680.5	714	4	721
BFCDP106152520/YB		548	705	735	5	804
FCDP112164600		577	757	803	4	1071
FCD112164630		577	757	803	4	1134
FCD114163594	9727/570Y	595	757	730	4	1066
FCDP120174640K		625	808	845	4	1286
FCDP120174640K1						1294
FCDP120174640K2		621	809	849	4	1294
FCDP120174640K2		621	809	849	4	1294
BFCDP 120174640/HC/P64YA		623	791	845	4	1303
BFCDP 120164575/HC P64		618	760	805	2.5	920
BFCDP 122174660/P5		625	799	845		1316
FCDP130180650HC/P64		662	830	872	5	1270
BFCDP130180650/HC		690	830	850	6	1270
BFCDP130184690		680	856	890	6	1510
BFCDP130184670-2		680	855	890	6	1492
BFCDP130184670-3		680	855	890	6	1492
FCDP132215650X3	6729/658	621	809	872	5	2400
BFCDP136196640/HC		748	895	915	3	1633
FCDP138196715		720	911.5	950	4	1862
BFCDP 138196750-4/P5		771	896	950	5	1894
BFCDP138196750-4		720	910	954	5	1894
BFCDP138196750-5/HC		720	910	954	5	1900
FCDP150227690X3	6729/748	777	1038	1100	4	2570



FC FCD FCDP



d 780～950mm

Boundary Dimensions						Basic Load Ratings	
						Dynamic	Static
d	*D*	*B*	*F*	r_{min}	r_{1min}	*C*	C_0
mm						kN	
780	1070	780	849	17X20·	7.5	19600	64500
800	1080	700	870	7.5	3	19000	57000
	1080	700	878	7.5	3	17850	53650
	1080	700	891	15X20·	3	16900	58800
820	1130	800	903		6	21700	67000
850	1150	840	928	7.5	7.5	30500	67500
900	1220	840	989	7.5	7.5	23600	72000
	1220	840	989		7.5	27000	81200
950	1300	850	1044	7.5	7.5	29000	92000

Bearing Designations		Other Dimensions				Mass
Present	Original	d_{amin}	D_{amin}	D_{amax}	r_{amax}	
		mm				kg
BFCDP156214780/HC Yb1		870	1009	1039	6	2159
FCDP160216700		827	1010	1050	5	1912
BFCDP160216700/YA		827	1010	1050	5	1981
BFCDP160216700-2/P6		827	1010	1050	5	1981
BFCDP 164226800-1/P6		835	1040	1100	4	2533
FCDP170230840		875	1088	1130	5	2529
FCDP180244840		931	1145	1190	5	3010
BFCDP 180244840/YA/P64		923	1130	1190	5	2984
FCDP190260850	6727/950Y	980	1210	1270	5	3523