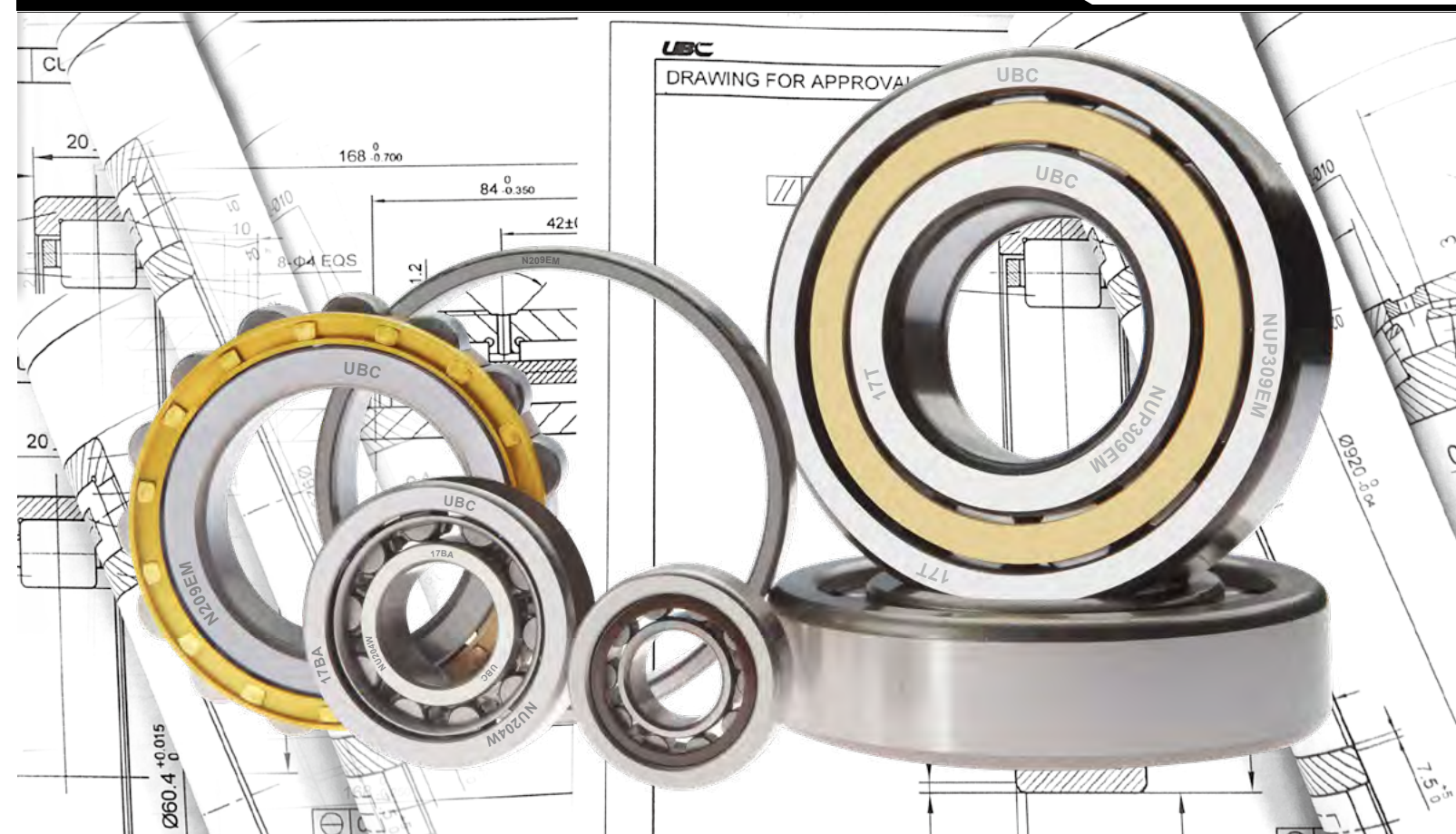


**CONTACT US**

## CYLINDRICAL ROLLER BEARINGS



***OUR BEARINGS, YOUR SOLUTION.***



**PREMIUM QUALITY.  
OPTIMUM PERFORMANCE.  
COST EFFICIENT.**



UBC operates a modern manufacturing facility that has passed strict audits by some of the most demanding industrial companies worldwide.

We have been able to accomplish this by adopting the latest manufacturing technology that previously was offered only by major global bearing companies and investing in top class equipments. Japanese production and quality management systems have also been adopted as part of UBC's overall commitment to quality, allowing UBC to manufacture affordable, world class quality products with optimum performance.

Our factory is ISO 9001 certified and observes our Quality Management System according to TS16949. To be a "World Class Manufacturing" operation, our factory utilizes 5S Site Management and Safety Production Management practices.

- Advanced production facilities
- Temperature controlled environment
- Central emulsion supply system
- World class inspection equipment
- IT innovation in quality management
- Premium raw materials
- Top-tier component suppliers
- Complete traceability
- Premium packaging
- Excellent pre- & after- service

☆ ISO 9001:2008 certified by SGS

☆ ISO/TS 16949:2009 certified by SGS

☆ 5S on site management





# MAIN APPLICATIONS OF UBC BEARINGS

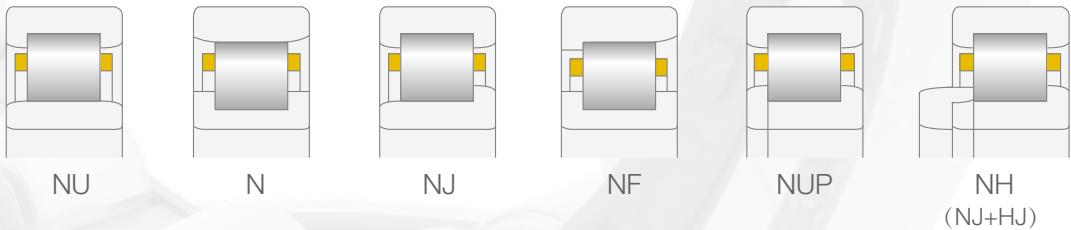
- Industrial gearbox
- Automotive gearbox
- Pump and compressor
- Electric motor
- Speed reducer for robotics
- Crane / Construction machinery
- Forklift
- Agriculture machinery
- Steel mill
- Mining
- Cement
- Paper machine
- Sugar mill
- Textile machinery



# CYLINDRICAL ROLLER BEARINGS



UBC cylindrical roller bearings are available in a variety of sizes in single-row configurations (shown below) with different cage designs in pressed steel, machined brass, polyamide, or advanced special materials. In addition to these single-row configurations, we also offer cylindrical roller bearings in double- row and multi-row designs. These bearings can be supplied in either full complement or caged configurations.



## HOW THESE CYLINDRICAL ROLLER BEARING DESIGNS ARE USED:

**Bi-Directional Positioning for Floating Applications - NU & N type**  
The NU and N type designs allow axial displacement of the shaft with respect to the housing in both directions. These designs are normally selected as non-locating bearings

**Uni-Directional Positioning for Floating or Fixed Applications - NJ & NF type**  
The NJ and NF designs allow axial displacement of the shaft with respect to the housing in only one direction. These designs can only locate the shaft axially in one direction.

**Locked Positioning for Fixed Applications - NUP & NH type**  
The NUP and NH type designs do not allow axial displacement of the shaft with respect to the housing in either direction. These designs can locate the shaft axially in both directions.

UBC offers several different cage designs and materials, each developed to meet the specific needs of your application.

Cage Material	Suffix	Description
Brass	M	Machined brass, roller centred
	MA	Machined brass, outer ring centred
	MB	Machined brass, inner ring centred
Nylon	TN	Injection moulded cage of polyamide 6.6, rolling element centred
Plastic	TN7	Injection moulded cage of glass fibre reinforced polyamide 6.6, rolling element centred
Steel	J	Pressed steel, roller centred

Country	Bearing steel	Standard
USA	52100	ASTM
Germany	100Cr6	DIN
Japan	SUJ2	JIS
China	GCr15	GB

- Made with ultra clean and homogenous steel with a minimum number of inclusions.
- Cage material selection and suggestion for larger load capacity applications.



# ADVANCED TECHNOLOGY



## Optimum Rib Geometry from Hard Turning

- Greater axial load carrying capacity due to optimized rib contact
- A higher level of energy efficiency due to reduced frictional torque
- Suitable for extremely high radial loads at very high speeds
- Enhanced lubrication
- Increased misalignment capabilities
- Maximum usable rib length
- Increased performance under axial loading conditions
- Up to 1.5 times increase in axial load capacity



## Finish Hard Turning

### Greater accuracy, excellent value.

Finish hard turning allows for machining parts in one set up resulting in more precise geometry.

- **More flexibility:** With a single standard tool and clamping set-up, you can machine a wide variety of products with different forms and sizes. Providing more flexibility and reduces changeovers.
- **Higher productivity:** Finish hard turning can remove more material per machining operation than grinding. Making hard turning 3 to 4 times faster when compared to grinding.
- **Cost savings:** Multiple operations can be done in one set-up which eliminates the need for a multi-step grinding process.

## Control

- Temperature controlled for manufacturing environment
- Precision levels of ABEC5 (P5) and above
- Control on raw materials and production processes
- 100% traceable on material, components, manufacturing and assembly
- IT innovation adapted in quality control system
- Manufacturing SPC controlled at center of tolerance range

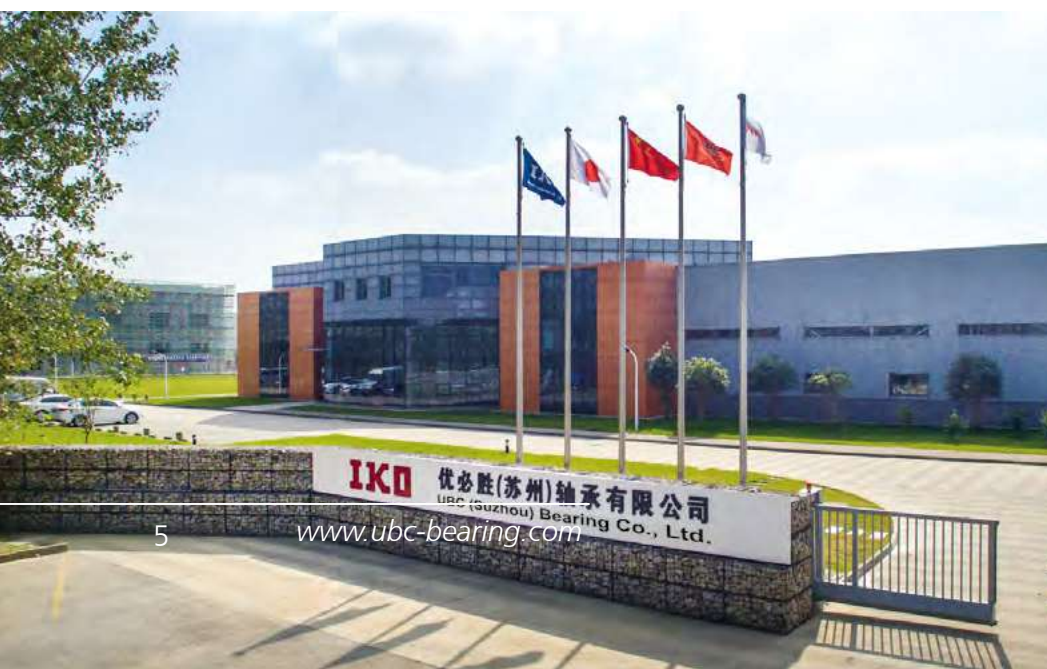
## Material, Grinding and Heat Treatment

- Ultraclean, extremely wear resistant, low oxygen level bearing steel
- Grinding and hard turning facilities
- New heat treatment procedures optimize the bearing resistance to operational damage and temperatures without affecting dimensional stability



## Machines

- German engineered production Machineries controlled by SIEMENS Systems interfaces
- Vertical turning machinery for hard turning process
- German engineered production machinery, most notably Thielenhaus superfinishing machines
- 3-stage ultrasonic washing equipment
- Marh profile inspection equipment
- Magnetic particle flaw detect machinery
- Mitutoyo roundness inspection equipment



## Cylindrical Roller Bearings

### Single row cylindrical roller bearings

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

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

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

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

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

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

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

### Double row cylindrical roller bearing

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

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

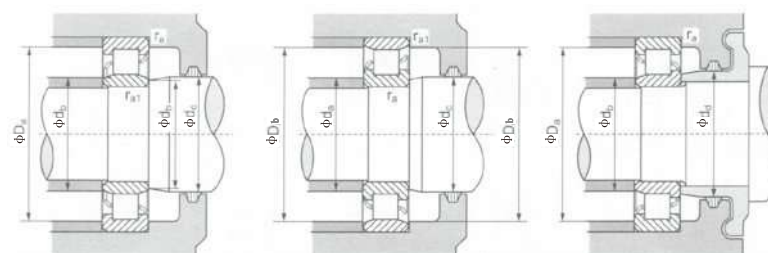
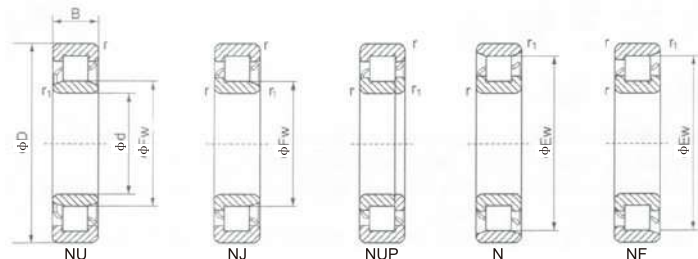
Double row cylindrical roller bearings have cylindrical bore and tapered bore. Normally NN design double row cylindrical bearing has tapered bore and it's possible to achieve certain radial clearance or preload during bearing mounting.

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



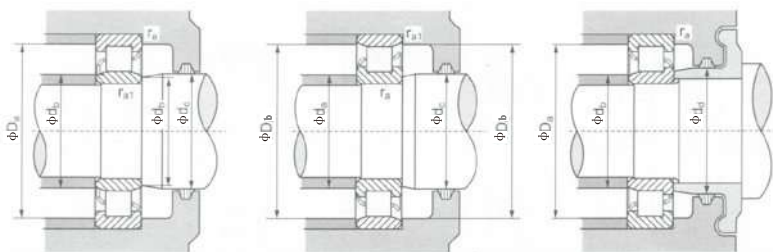
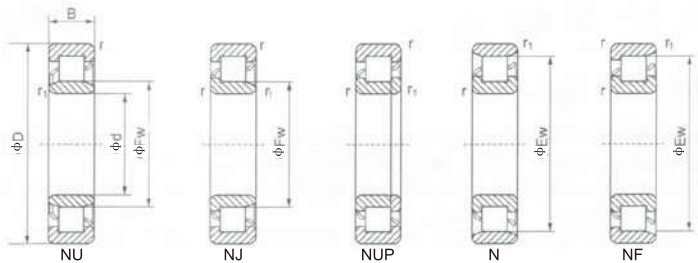


d: 17 ~ 35 mm



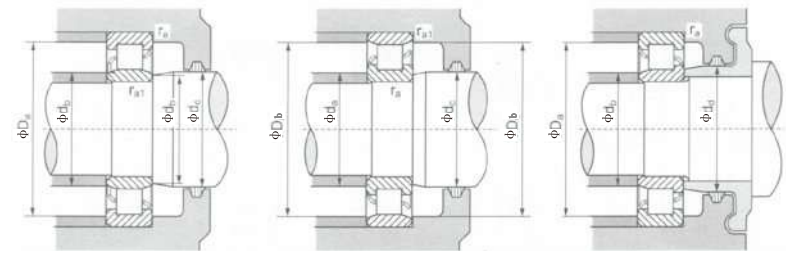
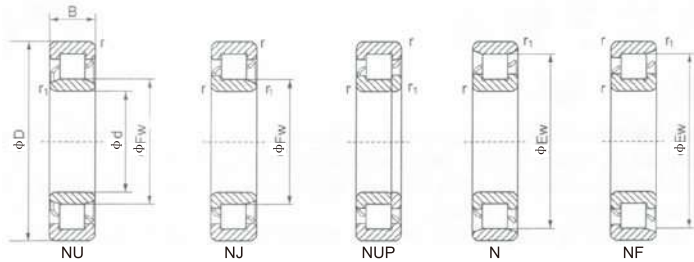
Principal Dimensions (mm)							Bearing Designations					Basic Load Ratings (N)		
d	D	B	Ew	Fw	r <sub>(min)</sub>	r <sub>1(min)</sub>	NU	NJ	NUP	N	NF	Dynamic Cr	Static Cor	
17	40	12	33.9	22.9	0.6	0.3	NU 203	NJ	NUP	N	NF	12600	7950	
20	47	14	40	27	1	0.6	NU 204	NJ	NUP	N	NF	15400	12700	
	47	14	-	26.5	1	0.6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

d: 35 ~ 55 mm



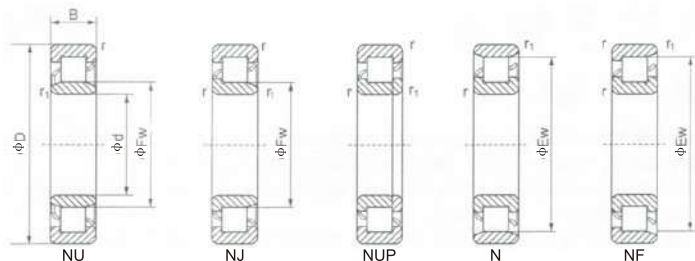
Principal Dimensions (mm)							Bearing Designations					Basic Load Ratings (N)			Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)										Weight (kg)
d	D	B	Ew	Fw	r <sub>1</sub> (min)	r <sub>1</sub> (min)	NU	NJ	NUP	N	NF	Dynamic Cr	Static Cor		Grease	Oil	d <sub>a</sub> (min)	d <sub>b</sub> (min)	d <sub>b</sub> (max)	d <sub>c</sub> (min)	d <sub>d</sub> (min)	D <sub>a</sub> (max)	D <sub>b</sub> (max)	D <sub>b</sub> (min)	r <sub>a</sub> (max)	r <sub>a1</sub> (max)	
35	100	25	83	53	1.5	1.5	NU 407	NJ	NUP	N	NF	75000	69000		6700	8000	43.5	43.5	52	55	61	91.5	91.5	84	1.5	1.5	1.05
40	68	15	61	47	1	0.6	NU 1008	-	-	N	-	25000	25700		9500	12000	45	45	46	49	-	62	64	61.5	1	0.6	0.226
	80	18	70	50	1.1	1.1	NU 208	NJ	NUP	N	NF	43500	43000		8500	10000	47	47	49	52	56	73	73	72	1	1	0.369
	80	18	-	49.5	1.1	1.1	NU 208E	NJ	NUP	-	-	55500	55500		7200	8600	-	47	49	52	56	73	-	-	1	1	0.380
	80	23	-	50	1.1	1.1	NU 2208	NJ	NUP	-	-	58000	62000		7500	9000	-	47	49	52	56	73	-	-	1	1	0.490
	80	23	-	49.5	1.1	1.1	NU 2208E	NJ	NUP	-	-	72000	77500		7200	8600	-	47	49	52	56	73	-	-	1	1	0.743
	90	23	77.5	53.5	1.5	1.5	NU 308	NJ	NUP	N	NF	58500	57000		6700	8000	48.5	48.5	51	55	60	81.5	81.5	80	1.5	1.5	0.665
	90	23	-	52	1.5	1.5	NU 308E	NJ	NUP	-	-	83000	81500		6400	7700	-	48.5	51	55	60	81.5	-	-	1.5	1.5	0.670
	90	33	-	53.5	1.5	1.5	NU 2308	NJ	NUP	-	-	82000	88000		6500	7800	-	48.5	51	55	60	81.5	-	-	1.5	1.5	0.956
	90	33	-	52	1.5	1.5	NU 2308E	NJ	NUP	-	-	114000	122000		6400	7700	-	48.5	51	55	60	81.5	-	-	1.5	1.5	1.050
45	110	27	92	58	2	2	NU 408	NJ	NUP	N	NF	95500	89000		6000	7000	50	50	57	60	67	100	100	93	2	2	1.330
	75	16	67.5	52.5	1	0.6	NU 1009	-	-	N	-	29700	32000		9000	11000	50	50	52	54	-	69	71	68	1	0.6	0.284
	85	19	75	55	1.1	1.1	NU 209	NJ	NUP	N	NF	46000	47000		7500	9000	52	52	54	57	61	78	78	77	1	1	0.430
	85	19	-	54.5	1.1	1.1	NU 209E	NJ	NUP	-	-	63000	66500		7000	8500	-	52	54	57	61	78	-	-	1	1	0.440
	85	23	-	55	1.1	1.1	NU 2209	NJ	NUP	-	-	61500	67500		7400	8900	-	52	54	57	61	78	-	-	1	1	0.536
	85	23	-	54.5	1.1	1.1	NU 2209E	NJ	NUP	-	-	76000	84500		7000	8500	-	52	54	57	61	78	-	-	1	1	0.593
	100	25	86.5	58.5	1.5	1.5	NU 309	NJ	NUP	N	NF	78500	77500		6300	7500	53.5	53.5	57	60	66	91.5	91.5	89	1.5	1.5	0.871
	100	25	-	58.5	1.5	1.5	NU 309E	NJ	NUP	-	-	97500	98500		6000	7200	-	53.5	57	60	66	91.5	-	-	1.5	1.5	0.910
	100	36	-	58.5	1.5	1.5	NU 2309	NJ	NUP	-	-	99000	104000		6100	7300	-	53.5	57	60	66	91.5	-	-	1.5	1.5	1.250
50	100	36	-	58.5	1.5	1.5	NU 2309E	NJ	NUP	-	-	137000	153000		6000	7200	-	53.5	57	60	66	91.5	-	-	1.5	1.5	1.400
	120	29	100.5	64.5	2	2	NU 409	NJ	NUP	N	NF	107000	102000		5600	6700	55	55	63	66	74	110	110	102	2	2	1.670
	80	16	72.5	57.5	1	0.6	NU 1010	-	-	N	-	32000	36000		8500	10000	53	53	57	59	-	74	76	73	1	0.6	0.310
	90	20	80.4	60.4	1.1	1.1	NU 210	NJ	NUP	N	NF	48000	51000		7000	8500	57	57	58	62	67	83	83	83	1	1	0.481
	90	20	-	59.5	1.1	1.1	NU 210E	NJ	NUP	-	-	66000	72000		6400	7700	-	57	58	62	67	83	-	-	1	1	0.490
	90	23	-	60.4	1.1	1.1	NU 2210	NJ	NUP	-	-	64000	73500		6500	7800	-	57	58	62	67	83	-	-	1	1	0.580
	90	23	-	59.5	1.1	1.1	NU 2210E	NJ	NUP	-	-	79500	91500		6400	7700	-	57	58	62	67	83	-	-	1	1	0.632
	110	27	95	65	2	2	NU 310	NJ	NUP	N	NF	86500	86000		5600	6700	60	60	63	67	73	100	100	98	2	2	1.170
	110	27	-	65	2	2	NU 310E	NJ	NUP	-	-	110000	113000		5400	6500	-	60	63	67	73	100	-	-	2	2	1.170
55	110	40	-	65	2	2	NU 2310	NJ	NUP	-	-	120000	131000		5400	6500	-	60	63	67	73	100	-	-	2	2	1.690
	110	40	-	65	2	2	NU 2310E	NJ	NUP	-	-	162000	187000		5400	6500	-	60	63	67	73	100	-	-	2	2	1.850
	130	31	110.8	70.8	2.1	2.1	NU 410	NJ	NUP	N	NF	138000	136000		5000	6000	62	62	69	73	81	118	118	112	2	2	2.050
	90	18	80.5	64.5	1.1	1	NU 1011	-	-	N	-	36000	41500		7500	9000	61.5	61	63	66	-	83	85	81.5	1	1	0.449
	100	21	88.5	66.5	1.5	1.1	NU 211	NJ	NUP	N	NF	58000	62000		6300	7500	63.5	62	65	68	73	91.5	93	91	1.5	1	0.634
	100	21	-	66	1.5	1.1	NU 211E	NJ	NUP	-	-	82500	93000		5800	7000	-	62	65	68	73	91.5	-	-	1.5	1	0.670
	100	25	-	66.5	1.5	1.1	NU 2211	NJ	NUP	-	-	75000	87000		6200	7400	-	62	65	68	73	91.5	-	-	1.5	1	0.780
55	100	25	-	66	1.5	1.1	NU 2211E	NJ	NUP	-	-	97000	114000		5800	7000	-	62	65	68	73	91.5	-	-	1.5	1	0.870
	120	29	104.5	70.5	2	2	NU 311	NJ	NUP	N	NF	110000	111000		5000	6000	65	65	69	72	80	110	110	107	2	2	1.430
	120	29	-	70.5	2	2	NU 311E	NJ	NUP	-	-	137000	143000		4800	5600	-	65	69	72	80	110	-	-	2	2	1.500

d: 55 ~ 75 mm

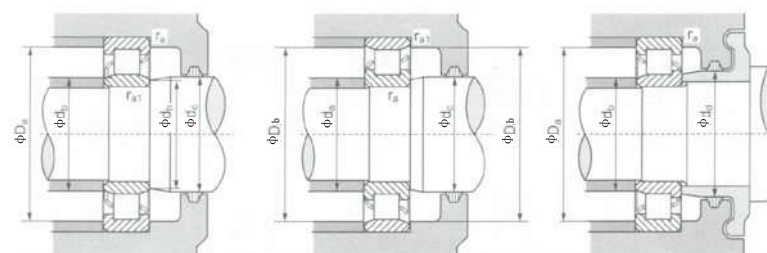


Principal Dimensions (mm)							Bearing Designations					Basic Load Ratings (N)				Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)										Weight (kg)
d	D	B	Ew	Fw	r <sub>(min)</sub>	r <sub>1(min)</sub>	NU	NJ	NUP	N	NF	Dynamic Cr	Static Cor			Grease	Oil	d <sub>a</sub> (min)	d <sub>b</sub> (min) (max)	d <sub>c</sub> (min)	d <sub>d</sub> (min)	D <sub>a</sub> (max)	D <sub>b</sub> (min)	r <sub>a</sub> (max)	r <sub>a1</sub> (max)			
55	120	43	-	70.5	2	2	NU 2311	NJ	NUP	-	-	148000	162000			4800	5600	-	65	69	72	80	110	-	-	2	2	2.10
	120	43	-	70.5	2	2	NU 2311E	NJ	NUP	-	-	201000	233000			4800	5600	-	65	69	72	80	110	-	-	2	2	2.35
	140	33	117.2	77.2	2.1	2.1	NU 411	NJ	NUP	N	NF	139000	138000			4800	5600	67	67	76	79	87	128	128	119	2	2	2.54
60	95	18	85.5	69.5	1.1	1	NU 1012	-	-	N	-	37000	44000			6700	8000	66.5	66	68	71	-	88	90	86.5	1	1	0.484
	110	22	97.5	73.5	1.5	1.5	NU 212	NJ	NUP	N	NF	68500	75000			5600	6700	68.5	68.5	71	75	80	101.5	101.5	100	1.5	1.5	0.835
	110	22	-	72	1.5	1.5	NU 212E	NJ	NUP	-	-	97500	107000			5000	6000	-	68.5	71	75	80	101.5	-	-	1.5	1.5	0.921
	110	28	-	73.5	1.5	1.5	NU 2212	NJ	NUP	-	-	96000	116000			5300	6300	-	68.5	71	75	80	101.5	-	-	1.5	1.5	1.07
	110	28	-	72	1.5	1.5	NU 2212E	NJ	NUP	-	-	131000	157000			5000	6000	-	68.5	71	75	80	101.5	-	-	1.5	1.5	1.23
	130	31	113	77	2.1	2.1	NU 312	NJ	NUP	N	NF	123000	126000			4800	5600	72	72	75	79	86	118	118	116	2	2	1.82
	130	31	-	77	2.1	2.1	NU 312E	NJ	NUP	-	-	150000	150000			4200	4800	-	72	75	79	86	118	-	-	2	2	1.87
	130	46	-	77	2.1	2.1	NU 2312	NJ	NUP	-	-	168000	188000			4300	5000	-	72	75	79	86	118	-	-	2	2	2.69
	130	46	-	77	2.1	2.1	NU 2312E	NJ	NUP	-	-	222000	262000			4200	4800	-	72	75	79	86	118	-	-	2	2	3.01
150	35	127	83	2.1	2.1	NU 412	NJ	NUP	N	NF	167000	168000			4300	5000	72	72	82	85	94	118	118	128	2	2	3.05	
65	100	18	90.5	74.5	1.1	1	NU 1013	-	-	N	-	38000	46500			6300	7500	71.5	71	73	75	-	93	95	91.5	1	1	0.514
	120	23	105.6	79.6	1.5	1.5	NU 213	NJ	NUP	N	NF	83500	94500			5300	6300	73.5	73.5	77	81	87	111.5	111.5	108	1.5	1.5	1.06
	120	23	-	78.5	1.5	1.5	NU 213E	NJ	NUP	-	-	107000	119000			4800	5600	-	73.5	77	81	87	111.5	-	-	1.5	1.5	1.18
	120	31	-	79.6	1.5	1.5	NU 2213	NJ	NUP	-	-	120000	149000			4800	5600	-	73.5	77	81	87	111.5	-	-	1.5	1.5	1.43
	120	31	-	78.5	1.5	1.5	NU 2213E	NJ	NUP	-	-	149000	181000			4800	5600	-	73.5	77	81	87	111.5	-	-	1.5	1.5	1.65
	140	33	121.5	83.5	2.1	2.1	NU 313	NJ	NUP	N	NF	135000	139000			4500	5300	77	77	81	85	93	128	128	125	2	2	2.27
	140	33	-	82.5	2.1	2.1	NU 313E	NJ	NUP	-	-	180000	191000			3800	4500	-	77	81	85	93	128	-	-	2	2	2.55
	140	48	-	83.5	2.1	2.1	NU 2313	NJ	NUP	-	-	187000	212000			4000	4800	-	77	81	85	93	128	-	-	2	2	3.25
	140	48	-	82.5	2.1	2.1	NU 2313E	NJ	NUP	-	-	247000	287000			3800	4500	-	77	81	85	93	128	-	-	2	2	3.56
160	37	135.3	89.3	2.1	2.1	NU 413	NJ	NUP	N	NF	195000	203000			4000	4800	77	77	88	91	100	148	148	137	2	2	3.68	
70	110	20	100	80	1.1	1	NU 1014	-	-	N	-	55500	67000			6000	7000	76.5	76	78	82	-	103	105	100.5	1	1	0.712
	125	24	110.5	84.5	1.5	1.5	NU 214	NJ	NUP	N	NF	83000	95000			5000	6000	78.5	78.5	82	86	92	116.5	116.5	114	1.5	1.5	1.16
	125	24	-	83.5	1.5	1.5	NU 214E	NJ	NUP	-	-	119000	137000			4600	5500	-	78.5	82	86	92	116.5	-	-	1.5	1.5	1.26
	125	31	-	84.5	1.5	1.5	NU 2214	NJ	NUP	-	-	119000	151000			4800	5600	-	78.5	82	86	92	116.5	-	-	1.5	1.5	1.52
	125	31	-	83.5	1.5	1.5	NU 2214E	NJ	NUP	-	-	156000	194000			4600	5500	-	78.5	82	86	92	116.5	-	-	1.5	1.5	1.68
	150	35	130	90	2.1	2.1	NU 314	NJ	NUP	N	NF	158000	220000			4000	4800	82	82	87	92	100	138	138	134	2	2	2.73
	150	35	-	89	2.1	2.1	NU 314E	NJ	NUP	-	-	205000	222000			3600	4300	-	82	87	92	100	138	-	-	2	2	3.15
	150	51	-	90	2.1	2.1	NU 2314	NJ	NUP	-	-	223000	262000			3800	4500	-	82	87	92	100	138	-	-	2	2	3.97
	150	51	-	89	2.1	2.1	NU 2314E	NJ	NUP	-	-	274000	320000			3600	4300	-	82	87	92	100	138	-	-	2	2	4.30
180	42	152	100	3	3	NU 414	NJ	NUP	N	NF	228000	235000			3600	4300	84	84	99	102	112	166	166	153	2.5	2.5	5.40	
75	115	20	105	85	1.1	1	NU 1015	-	-	N	-	57500	71000			5600	6700	81.5	81	83	87	-	108	110	105.5	1	1	0.745
	130	25	116.5	88.5	1.5	1.5	NU 215	NJ	NUP	N	NF	96000	111000			4800	5600	83.5	83.5	87	90	96	121.5	121.5	120	1.5	1.5	1.24
	130	25	-	88.5	1.5	1.5	NU 215E	NJ	NUP	-	-	130000	156000			4300	5200	-	83.5	87	90	96	121.5	-	-	1.5	1.5	1.38
	130	31	-	88.5	1.5	1.5	NU 2215	NJ	NUP	-	-	129000	162000			4500	5300	-	83.5	87	90	96	121.5	-	-	1.5	1.5	1.57
	130	31	-	88.5	1.5	1.5	NU 2215E	NJ	NUP	-	-	161000	207000			4300	5200	-	83.5	87	90	96	121.5	-	-	1.5	1.5	1.80



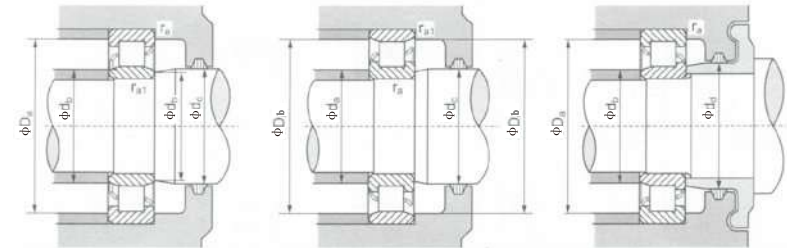
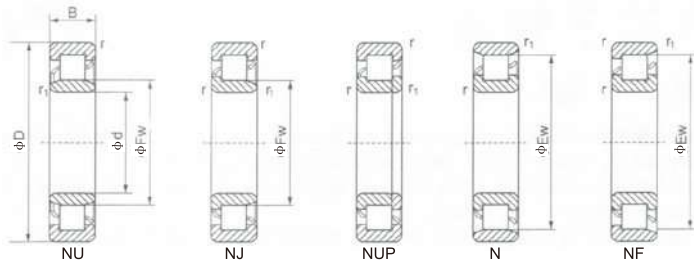


Principal Dimensions (mm)							Bearing Designations					Basic Load Ratings (N)	
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	Dynamic Cr	Static Cor
75	160	37	139.5	95.5	2.1	2.1	<b>NU 315</b>	NJ	NUP	N	NF	190000	205000
	160	37	-	95	2.1	2.1	<b>NU 315E</b>	NJ	NUP	-	-	240000	263000
	160	55	-	95.5	2.1	2.1	<b>NU 2315</b>	NJ	NUP	-	-	258000	300000
	160	55	-	95	2.1	2.1	<b>NU 2315E</b>	NJ	NUP	-	-	330000	395000
	190	45	160.5	104.5	3	3	<b>NU 415</b>	NJ	NUP	N	NF	262000	274000
80	125	22	113.5	91.5	1.1	1	<b>NU 1016</b>	-	-	N	-	69000	86500
	140	26	125.3	95.3	2	2	<b>NU 216</b>	NJ	NUP	N	NF	106000	122000
	140	26	-	95.3	2	2	<b>NU 216E</b>	NJ	NUP	-	-	139000	167000
	140	33	-	95.3	2	2	<b>NU 2216</b>	NJ	NUP	-	-	147000	186000
	140	33	-	95.3	2	2	<b>NU 2216E</b>	NJ	NUP	-	-	186000	243000
	170	39	147	103	2.1	2.1	<b>NU 316</b>	NJ	NUP	N	NF	190000	207000
	170	39	-	101	2.1	2.1	<b>NU 316E</b>	NJ	NUP	-	-	256000	282000
	170	58	-	103	2.1	2.1	<b>NU 2316</b>	NJ	NUP	-	-	274000	330000
	170	58	-	101	2.1	2.1	<b>NU 2316E</b>	NJ	NUP	-	-	355000	430000
85	200	48	170	110	3	3	<b>NU 416</b>	NJ	NUP	N	NF	299000	315000
	130	22	118.5	96.5	1.1	1	<b>NU 1017</b>	-	-	N	-	71500	91000
	150	28	133.8	101.8	2	2	<b>NU 217</b>	NJ	NUP	N	NF	120000	140000
	150	28	-	100.5	2	2	<b>NU 217E</b>	NJ	NUP	-	-	167000	199000
	150	36	-	101.8	2	2	<b>NU 2217</b>	NJ	NUP	-	-	169000	218000
	150	36	-	100.5	2	2	<b>NU 2217E</b>	NJ	NUP	-	-	217000	279000
	180	41	156	108	3	3	<b>NU 317</b>	NJ	NUP	N	NF	224000	247000
	180	41	-	108	3	3	<b>NU 317E</b>	NJ	NUP	-	-	291000	330000
	180	60	-	108	3	3	<b>NU 2317</b>	NJ	NUP	-	-	315000	380000
90	180	60	-	108	3	3	<b>NU 2317E</b>	NJ	NUP	-	-	390000	485000
	210	52	177	113	4	4	<b>NU 417</b>	NJ	NUP	N	NF	330000	350000
	140	24	127	103	1.5	1.1	<b>NU 1018</b>	-	-	N	-	81500	104000
	160	30	143	107	2	2	<b>NU 218</b>	NJ	NUP	N	NF	152000	178000
	160	30	-	107	2	2	<b>NU 218E</b>	NJ	NUP	-	-	182000	217000
	160	40	-	107	2	2	<b>NU 2218</b>	NJ	NUP	-	-	207000	265000
	160	40	-	107	2	2	<b>NU 2218E</b>	NJ	NUP	-	-	242000	315000
	190	43	165	115	3	3	<b>NU 318</b>	NJ	NUP	N	NF	240000	265000
	190	43	-	113.5	3	3	<b>NU 318E</b>	NJ	NUP	-	-	315000	355000
95	190	64	-	115	3	3	<b>NU 2318</b>	NJ	NUP	-	-	325000	395000
	190	64	-	113.5	3	3	<b>NU 2318E</b>	NJ	NUP	-	-	435000	535000
	225	54	191.5	123.5	4	4	<b>NU 418</b>	NJ	NUP	N	NF	365000	400000
	145	24	132	108	1.5	1.1	<b>NU 1019</b>	-	-	N	-	84000	110000
	170	32	151.5	113.5	2.1	2.1	<b>NU 219</b>	NJ	NUP	N	NF	165000	195000
	170	32	-	112.5	2.1	2.1	<b>NU 219E</b>	NJ	NUP	-	-	222000	259000



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

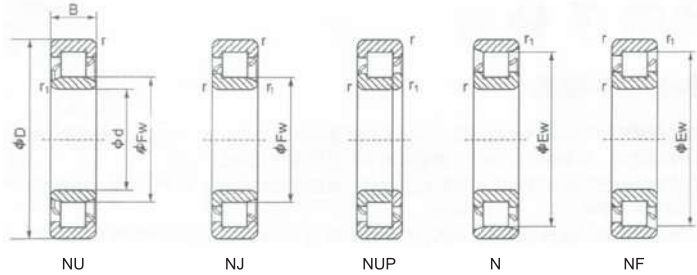
d: 95 ~ 120 mm



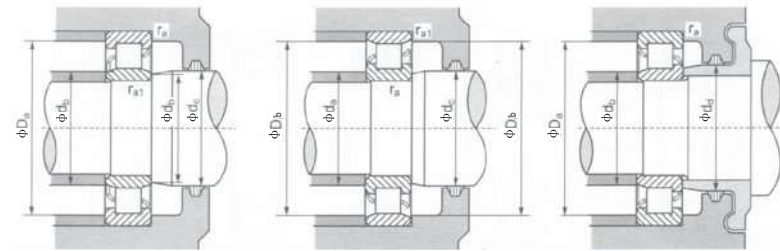
Principal Dimensions (mm)							Bearing Designations					Basic Load Ratings (N)				Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)										Weight (kg)
d	D	B	Ew	Fw	r <sub>(min)</sub>	r <sub>1</sub> (min)	NU	NJ	NUP	N	NF	Dynamic Cr	Static Cor			Grease	Oil	d <sub>a</sub> (min)	d <sub>b</sub>		d <sub>c</sub> (min)	d <sub>g</sub> (min)	D <sub>a</sub> (max)	D <sub>b</sub>		r <sub>a</sub>	r <sub>a1</sub> (max)	
																			(min)	(max)				(max)	(min)			
95	170	43	-	113.5	2.1	2.1	NU 2219	NJ	NUP	-	-	230000	298000			3400	4000	-	107	111	116	123	158	-	-	2	2	3.85
	170	43	-	112.5	2.1	2.1	NU 2219 E	NJ	NUP	-	-	286000	370000			3200	4000	-	107	111	116	123	158	-	-	2	2	4.23
	200	45	173.5	121.5	3	3	NU 319	NJ	NUP	N	NF	258000	289000			3000	3600	109	109	119	124	134	186	186	178	2.5	2.5	6.23
	200	45	-	121.5	3	3	NU 319 E	NJ	NUP	-	-	335000	385000			2400	3000	-	109	119	124	134	186	-	-	2.5	2.5	6.92
	200	67	-	121.5	3	3	NU 2319	NJ	NUP	-	-	370000	460000			2600	3200	-	109	119	124	134	186	-	-	2.5	2.5	9.39
	200	67	-	121.5	3	3	NU 2319 E	NJ	NUP	-	-	460000	585000			2400	3000	-	109	119	124	134	186	-	-	2.5	2.5	10.3
	240	55	201.5	133.5	4	4	NU 419	NJ	NUP	N	NF	400000	445000			2600	3200	113	113	132	136	149	222	222	204	3	3	14.0
100	150	24	137	113	1.5	1.1	NU 1020	-	-	N	-	87000	116000			4300	5000	108	107	111	116	-	141.5	143.5	137.5	1.5	1	1.48
	180	34	160	120	2.1	2.1	NU 220	NJ	NUP	N	NF	183000	217000			3400	4000	112	112	117	122	130	168	168	164	2	2	3.30
	180	34	-	119	2.1	2.1	NU 220 E	NJ	NUP	-	-	250000	305000			3200	3800	-	112	117	122	130	168	-	-	2	2	3.73
	180	46	-	120	2.1	2.1	NU 2220	NJ	NUP	-	-	257000	335000			3200	3800	-	112	117	122	130	168	-	-	2	2	4.67
	180	46	-	119	2.1	2.1	NU 2220 E	NJ	NUP	-	-	335000	445000			3200	3800	-	112	117	122	130	168	-	-	2	2	5.13
	215	47	185.5	129.5	3	3	NU 320	NJ	NUP	N	NF	300000	335000			2800	3400	114	114	125	132	143	201	201	190	2.5	2.5	7.70
	215	47	-	127.5	3	3	NU 320 E	NJ	NUP	-	-	380000	425000			2200	2800	-	114	125	132	143	201	-	-	2.5	2.5	8.45
	215	73	-	129.5	3	3	NU 2320	NJ	NUP	-	-	435000	545000			2400	3000	-	114	125	132	143	201	-	-	2.5	2.5	11.9
	215	73	-	127.5	3	3	NU 2320 E	NJ	NUP	-	-	570000	715000			2200	2800	-	114	125	132	143	201	-	-	2.5	2.5	12.9
	250	58	211	139	4	4	NU 420	NJ	NUP	N	NF	445000	500000			2400	3000	118	118	137	141	156	232	232	213	3	3	14.4
105	160	26	145.5	119.5	2	1.1	NU 1021	-	-	N	-	101000	136000			4000	4800	114	112	118	122	-	150	153.5	146.5	2	1	1.88
	190	36	168.8	126.8	2.1	2.1	NU 221	NJ	NUP	N	NF	202000	241000			3200	3800	117	117	124	129	137	178	178	173	2	2	4.03
	225	49	195	135	3	3	NU 321	NJ	NUP	N	NF	340000	385000			2600	3200	119	119	132	137	149	211	211	199	2.5	2.5	8.73
	260	60	220.5	144.5	4	4	NU 421	NJ	NUP	N	NF	495000	555000			2200	2800	123	123	143	147	162	242	242	223	3	3	19.5
110	170	28	155	125	2	1.1	NU 1022	-	-	N	-	127000	166000			3800	4500	119	117	124	128	-	160	163.5	156	2	1	2.34
	200	38	178.5	132.5	2.1	2.1	NU 222	NJ	NUP	N	NF	240000	290000			3000	3600	122	122	130	135	144	188	188	182	2	2	4.64
	200	38	-	132.5	2.1	2.1	NU 222 E	NJ	NUP	-	-	293000	365000			2600	3200	-	122	130	135	144	188	-	-	2	2	5.17
	200	53	-	132.5	2.1	2.1	NU 2222	NJ	NUP	-	-	320000	440000			2800	3400	-	122	130	135	144	188	-	-	2	2	6.93
	200	53	-	132.5	2.1	2.1	NU 2222 E	NJ	NUP	-	-	385000	515000			2600	3200	-	122	130	135	144	188	-	-	2	2	7.32
	240	50	207	143	3	3	NU 322	NJ	NUP	N	NF	380000	435000			2400	3000	124	124	140	145	158	226	226	211	2.5	2.5	10.4
	240	50	-	143	3	3	NU 322 E	NJ	NUP	-	-	450000	525000			2200	2800	-	124	140	145	158	226	-	-	2.5	2.5	11.1
	240	80	-	143	3	3	NU 2322	NJ	NUP	-	-	570000	730000			2000	2600	-	124	140	145	158	226	-	-	2.5	2.5	18.8
	240	80	-	143	3	3	NU 2322 E	NJ	NUP	-	-	670000	880000			2000	2600	-	124	140	145	158	226	-	-	2.5	2.5	18.5
	280	65	235	155	4	4	NU 422	NJ	NUP	N	NF	545000	620000			2000	2600	128	128	153	157	173	262	262	237	3	3	20.5
120	180	28	165	135	2	1.1	NU 1024	-	-	N	-	131000	175000			3400	4000	129	127	134	138	-	170	173.5	166	2	1	2.51
	215	40	191.5	143.5	2.1	2.1	NU 224	NJ	NUP	N	NF	260000	320000			2800	3400	132	132	141	146	156	203	203	196	2	2	5.61
	215	40	-	143.5	2.1	2.1	NU 224 E	NJ	NUP	-	-	335000	420000			2400	3000	-	132	141	146	156	203	-	-	2	2	6.25
	215	58	-	143.5	2.1	2.1	NU 2224	NJ	NUP	-	-	365000	490000			2600	3200	-	132	141	146	156	203	-	-	2	2	8.56
	215	58	-	143.5	2.1	2.1	NU 2224 E	NJ	NUP	-	-	450000	620000			2400	3000	-	132	141	146	156	203	-	-	2	2	9.35
	260	55	226	154	3	3	NU 324	NJ	NUP	N	NF	445000	510000			2200	2800	134	134	151	156	171	246	246	230	2.5	2.5	15.4
	260	55	-	154	3	3	NU 432 E	NJ	NUP	-	-	525000	610000			1900	2400	-	134	151	156	171	246	-	-	2.5	2.5	15.2



d: 120 ~ 160 mm

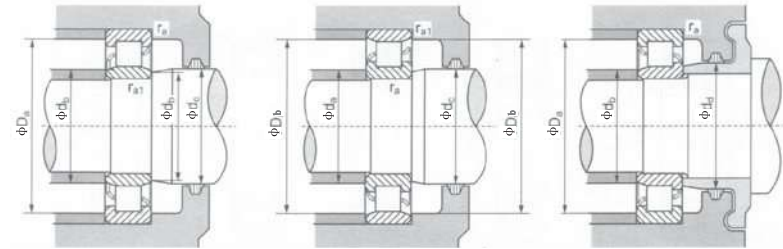
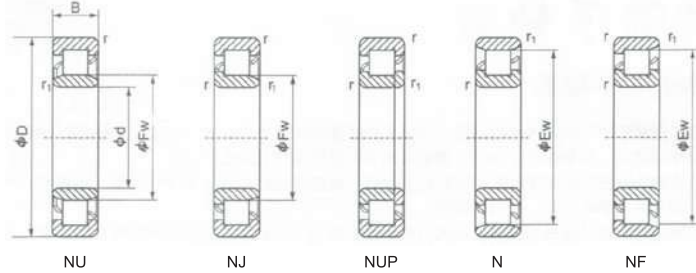


Principal Dimensions (mm)							Bearing Designations					Basic Load Ratings (N)	
d	D	B	Ew	Fw	r <sub>(min)</sub>	r <sub>1(min)</sub>	NU	NJ	NUP	N	NF	Dynamic Cr	Static Cor
120	260	86	-	154	3	3	NU 2324	NJ	NUP	-	-	710000	915000
	260	86	-	154	3	3	NU 2324E	NJ	NUP	-	-	790000	1030000
	310	72	260	170	5	5	NU 424	NJ	NUP	N	NF	670000	770000
130	200	33	182	148	2	1.1	NU 1026	-	-	N	-	160000	217000
	230	40	204	156	3	3	NU 226	NJ	NUP	N	NF	270000	340000
	230	40	-	153.5	3	3	NU 226E	NJ	NUP	-	-	365000	455000
	230	64	-	156	3	3	NU 2226	NJ	NUP	-	-	380000	530000
	230	64	-	153.5	3	3	NU 2226E	NJ	NUP	-	-	530000	735000
	280	58	243	167	4	4	NU 326	NJ	NUP	N	NF	555000	665000
	280	58	-	167	4	4	NU 326E	NJ	NUP	-	-	615000	735000
	280	93	-	167	4	4	NU 2326	NJ	NUP	-	-	790000	1040000
	280	93	-	167	4	4	NU 2326E	NJ	NUP	-	-	920000	1230000
	340	78	285	185	5	5	NU 426	NJ	NUP	N	NF	820000	955000
140	210	33	192	158	2	1.1	NU 1028	-	-	N	-	170000	239000
	250	42	221	169	3	3	NU 228	NJ	NUP	N	NF	310000	420000
	250	42	-	169	3	3	NU 228E	NJ	NUP	-	-	390000	515000
	250	68	-	169	3	3	NU 2228	NJ	NUP	-	-	465000	670000
	250	68	-	169	3	3	NU 2228E	NJ	NUP	-	-	570000	835000
	300	62	260	180	4	4	NU 328	NJ	NUP	N	NF	595000	745000
	300	62	-	180	4	4	NU 328E	NJ	NUP	-	-	660000	795000
	300	102	-	180	4	4	NU 2328	NJ	NUP	-	-	920000	1250000
	300	102	-	180	4	4	NU 2328E	NJ	NUP	-	-	1020000	1380000
150	360	82	302	198	5	5	NU 428	NJ	NUP	N	NF	875000	1020000
	225	35	205.5	169.5	2.1	1.5	NU 1030	-	-	N	-	189000	270000
	270	45	238	182	3	3	NU 230	NJ	NUP	N	NF	375000	490000
	270	45	-	182	3	3	NU 230E	NJ	NUP	-	-	445000	595000
	270	73	-	182	3	3	NU 2230	NJ	NUP	-	-	545000	800000
	270	73	-	182	3	3	NU 2230E	NJ	NUP	-	-	660000	990000
	320	65	277	193	4	4	NU 330	NJ	NUP	N	NF	660000	805000
	320	65	-	193	4	4	NU 330E	NJ	NUP	-	-	755000	920000
	320	108	-	193	4	4	NU 2330	NJ	NUP	-	-	1020000	1400000
	320	108	-	193	4	4	NU 2330E	NJ	NUP	-	-	1160000	1600000
160	380	85	317	213	5	5	NU 430	NJ	NUP	N	NF	930000	1120000
	240	38	220	180	2.1	1.5	NU 1032E	-	-	N	-	229000	325000
	290	48	255	195	3	3	NU 232	NJ	NUP	N	NF	425000	570000
	290	48	-	195	3	3	NU 232E	NJ	NUP	-	-	500000	665000
	290	80	-	195	3	3	NU 2232	NJ	NUP	-	-	630000	940000
	290	80	-	193	3	3	NU 2232E	NJ	NUP	-	-	810000	1190000



Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)										Weight (kg)
Grease	Oil	d <sub>a</sub> (min)	d <sub>b</sub> (min)	d <sub>c</sub> (max)	d <sub>d</sub> (min)	D <sub>a</sub> (max)	D <sub>b</sub> (max)	r <sub>a</sub> (min)	r <sub>a1</sub> (max)	r <sub>a2</sub> (max)	r <sub>a3</sub> (max)	
1900	2400	-	134	151	156	171	-	-	2.5	2.5	2.5	23.1
1900	2400	-	134	151	156	171	246	-	-	2.5	2.5	22.9
1900	2400	142	142	168	172	190	288	288	262	4	4	28.7
3200	3800	139	137	146	151	-	190	193.5	183	2	1	3.83
2600	3200	144	144	151	158	168	216	216	208	2.5	2.5	7.60
2200	2800	-	144	151	158	168	216	-	-	2.5	2.5	7.50
2200	2800	-	144	151	158	168	216	-	-	2.5	2.5	11.2
2200	2800	-	144	151	158	168	216	-	-	2.5	2.5	12.5
2000	2600	148	148	164	169	184	262	262	247	3	3	18.2
1800	2200	-	148	164	169	184	262	-	-	3	3	18.5
1800	2200	-	148	164	169	184	262	-	-	3	3	29.1
1800	2200	-	148	164	169	184	262	-	-	3	3	28.5
1700	2200	152	152	183	187	208	318	318	287	4	4	36.9
3000	3600	149	147	156	161	-	200	203.5	193	2	1	4.07
2400	3000	154	154	166	171	182	236	236	228	2.5	2.5	9.49
2000	2600	-	154	166	171	182	236	-	-	2.5	2.5	8.90
2000	2600	-	154	166	171	182	236	-	-	2.5	2.5	14.3
2000	2600	-	154	166	171	182	236	-	-	2.5	2.5	14.9
1900	2400	158	158	176	182	198	282	282	268	3	3	22.4
1800	2200	-	158	176	182	198	282	-	-	3	3	21.8
1800	2200	-	158	176	182	198	282	-	-	3	3	36.8
1800	2200	-	158	176	182	198	282	-	-	3	3	35.9
1500	1900	162	162	195	200	222	338	338	304	4	4	48.0
2600	3200	161	158.5	167	173	-	213	217	207	2	1.5	4.90
2000	2600	164	164	179	184	196	256	256	245	2.5	2.5	11.9
1900	2400	-	164	179	184	196	256	-	-	2.5	2.5	11.5
1900	2400	-	164	179	184	196	256	-	-	2.5	2.5	18.7
1900	2400	-	164	179	184	196	256	-	-	2.5	2.5	18.5
1700	2000	168	168	190	195	213	302	302	287	3	3	26.5
1600	1900	-	168	190	195	213	302	-	-	3	3	28.8
1700	2000	-	168	190	195	213	302	-	-	3	3	44.7
1600	1900	-	168	190	195	213	302	-	-	3	3	48.2
1300	1600	172	172	210	216	237	358	358	319	4	4	54.5
2400	3000	171	168.5	178	184	-	228	232	220	2	1.5	6.01
1800	2200	174	174	192	197	210	276	276	262	2.5	2.5	14.5
1700	2000	-	174	192	197	210	276	-	-	2.5	2.5	15.6
1800	2200	-	174	192	197	210	276	-	-	2.5	2.5	24.1
1700	2000	-	174	192	197	210	276	-	-	2.5	2.5	25.9

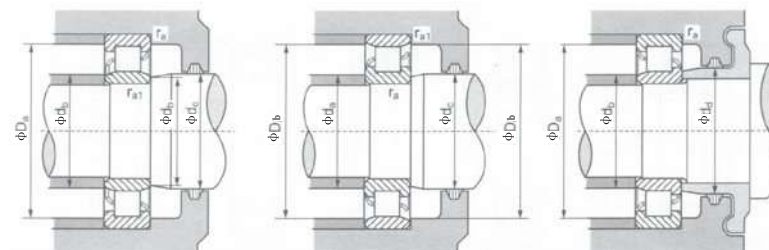
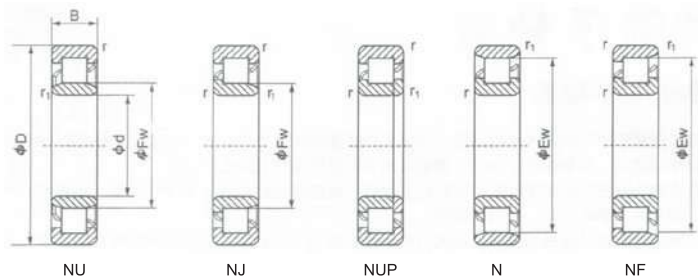
d: 160 ~ 240 mm



Principal Dimensions (mm)										Bearing Designations					Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)										Weight (kg)
d	D	B	Ew	Fw	r <sub>(min)</sub>	r <sub>1(min)</sub>	NU	NJ	NUP	N	NF	Dynamic Cr	Static Cor				Grease	Oil	d <sub>a</sub> (min)	d <sub>b</sub> (min)	d <sub>b</sub> (max)	d <sub>c</sub> (min)	d <sub>d</sub> (min)	D <sub>a</sub> (max)	D <sub>b</sub> (max)	D <sub>b</sub> (min)	r <sub>a</sub> (max)	r <sub>a1</sub> (max)	
160	340	68	292	208	4	4	NU 332	NJ	NUP	N	NF	695000	875000				1600	1900	178	178	200	211	228	322	322	304	3	3	31.2
	340	68	-	204	4	4	NU 332E	NJ	NUP	-	-	855000	1050000				1700	2000	-	178	200	211	228	322	-	-	3	3	34.1
	340	114	-	208	4	4	NU 2332	NJ	NUP	-	-	1040000	1460000				1500	1800	-	178	200	211	228	322	-	-	3	3	52.5
	340	114	-	204	4	4	NU 2332E	NJ	NUP	-	-	1310000	1820000				1600	1900	-	178	200	211	228	322	-	-	3	3	57.2
170	260	42	237	193	2.1	2.1	NU 1034	-	-	N	-	276000	400000				2200	2800	181	182	190	197	-	248	249	237	2	2	8.02
	310	52	272	208	4	4	NU 234	NJ	NUP	N	NF	475000	635000				1800	2200	188	188	204	211	223	292	292	284	3	3	17.9
	310	52	-	207	4	4	NU 234E	NJ	NUP	-	-	605000	800000				1900	2300	-	188	204	211	223	292	-	-	3	3	19.3
	310	86	-	208	4	4	NU 2234	NJ	NUP	-	-	725000	1100000				1800	2200	-	188	204	211	223	292	-	-	3	3	29.6
	310	86	-	205	4	4	NU 2234E	NJ	NUP	-	-	970000	1400000				1900	2300	-	188	204	211	223	292	-	-	3	3	31.9
	360	72	310	220	4	4	NU 334	NJ	NUP	N	NF	795000	1010000				1600	1800	188	188	216	223	241	342	342	314	3	3	37.1
180	360	120	-	220	4	4	NU 2334	NJ	NUP	-	-	1170000	1630000				1400	1700	-	188	216	223	241	342	-	-	3	3	62.7
	280	46	255	205	2.1	2.1	NU 1036	-	-	N	-	340000	485000				2100	2600	191	192	203	209	-	268	269	256	2	2	10.8
	320	52	282	218	4	4	NU 236	NJ	NUP	N	NF	490000	675000				1700	2000	198	198	214	221	233	302	302	294	3	3	19.3
	320	52	-	217	4	4	NU 236E	NJ	NUP	-	-	625000	850000				1800	2200	-	198	214	221	233	302	-	-	3	3	20.5
	320	86	-	218	4	4	NU 2236	NJ	NUP	-	-	775000	1210000				1700	2000	-	198	214	221	233	302	-	-	3	3	30.4
	320	86	-	215	4	4	NU 2236E	NJ	NUP	-	-	1010000	1510000				1800	2200	-	198	214	221	233	302	-	-	3	3	34.5
190	380	75	328	232	4	4	NU 336	NJ	NUP	N	NF	900000	1150000				1500	1800	198	198	227	235	255	362	362	332	3	3	42.8
	380	126	-	232	4	4	NU 2336	NJ	NUP	-	-	1310000	1860000				1300	1600	-	198	227	235	255	362	-	-	3	3	73.1
	290	46	265	215	2.1	2.1	NU 1038	-	-	N	-	345000	510000				2000	2600	201	202	213	219	-	278	279	266	2	2	11.2
	340	55	299	231	4	4	NU 238	NJ	NUP	N	NF	555000	770000				1600	1900	208	208	227	234	247	322	322	311	3	3	22.6
	340	55	-	230	4	4	NU 238E	NJ	NUP	-	-	695000	955000				1700	2000	-	208	227	234	247	322	-	-	3	3	26.0
	340	92	-	231	4	4	NU 2238	NJ	NUP	-	-	825000	1290000				1600	1900	-	208	227	234	247	322	-	-	3	3	37.5
200	340	92	-	228	4	4	NU 2238E	NJ	NUP	-	-	1100000	1670000				1700	2000	-	208	227	234	247	322	-	-	3	3	45.2
	400	78	345	245	5	5	NU 338	NJ	NUP	N	NF	975000	1260000				1400	1700	212	212	240	248	268	378	378	349	4	4	49.4
	400	132	-	245	5	5	NU 2338	NJ	NUP	-	-	1440000	2070000				1200	1500	-	212	240	248	268	378	-	-	4	4	85.0
	310	51	281	229	2.1	2.1	NU 1040	-	-	N	-	375000	555000				1900	2400	211	212	226	233	-	298	299	283	2	2	14.4
	360	58	316	244	4	4	NU 240	NJ	NUP	N	NF	615000	865000				1500	1800	218	218	240	247	261	342	342	328	3	3	26.8
	360	58	-	243	4	4	NU 240E	NJ	NUP	-	-	765000	1060000				1600	1900	-	218	240	247	261	342	-	-	3	3	29.5
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	360	98	-	241	4	4	NU 2240E	NJ	NUP	-	-	1210000	1870000				1500	1700	-	218	240	247	261	342	-	-	3	3	52.3
	420	80	360	260	5	5	NU 340	NJ	NUP	N	NF	975000	1270000				1300	1600	222	222	254	263	283	398	398	364	4	4	55.8
	420	138	-	260	5	5	NU 2340	NJ	NUP	-	-	1440000	2090000				1100	1400	-	222	254	263	283	398	-	-	4	4	96.8
	340	56	310	250	3	3	NU 1044	-	-	N	-	480000	715000				1800	2300	233	234	248	254	-	326	327	311	2.5	2.5	18.8
	400	65	350	270	4	4	NU 244	NJ	NUP	N	NF	760000	1080000				1500	1700	238	238	266	273	289	382	382	362	3	3	37.8
240	400	108	-	270	4	4	NU 2244	NJ	NUP	-	-	1130000	1810000				1400	1700	-	238	266	273	289	382	-	-	3	3	61.8
	460	88	396	284	5	5	NU 344	NJ	NUP	N	NF	1200000	1570000				1200	1500	242	242	279	287	307	438	438	400	4	4	73.6
240	360	56	330	270	3	3	NU 1048	-	-	N	-	500000	755000				1700	2100	253	254	268	275	-	346	347	331	2.5	2.5	20.4
	440	72	385	295	4	4	NU 248	NJ	NUP	N	NF	935000	1340000				1400	1600	258	258	293	298	316	422	422	397	3	3	51.1

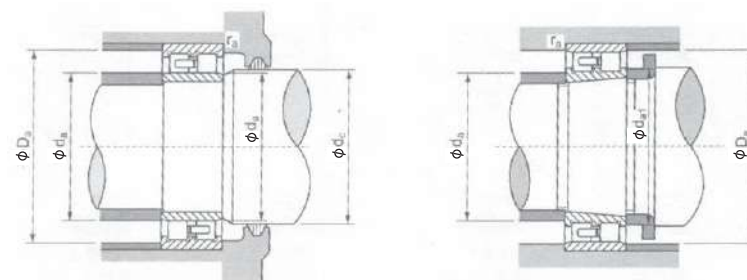
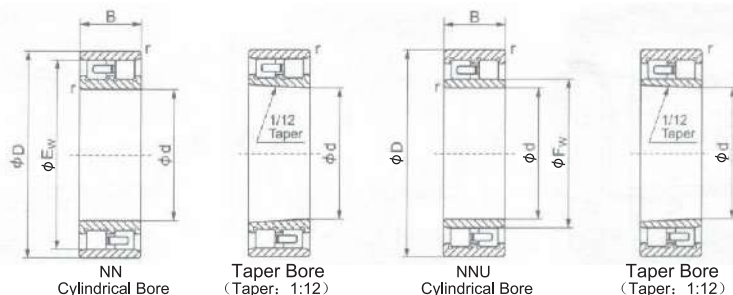


d: 240 ~ 500 mm



Principal Dimensions (mm)							Bearing Designations					Basic Load Ratings (N)				Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)										Weight (kg)
d	D	B	Ew	Fw	r (min)	r1 (min)	NU	NJ	NUP	N	NF	Dynamic Cr	Static Cor			Grease	Oil	d <sub>a</sub> (min)	d <sub>b</sub> (min) (max)		d <sub>c</sub> (min)	d <sub>d</sub> (min)	D <sub>a</sub> (max)	D <sub>b</sub> (max) (min)		r <sub>a</sub> (max)	r <sub>a1</sub> (max)	
240	440	120	-	295	4	4	NU 2248	NJ	NUP	-	-	1430000	2320000			1300	1600	-	258	293	298	316	422	-	-	3	3	83.5
	500	95	430	310	5	5	NU 348	NJ	NUP	N	NF	1430000	1950000			1100	1300	262	262	305	313	333	478	478	434	4	4	93.0
260	400	65	364	296	4	4	NU 1052	-	-	N	-	620000	955000			1600	1800	278	278	292	300	-	382	382	365	3	3	29.6
	480	80	420	320	5	5	NU 252	NJ	NUP	N	NF	1140000	1660000			1300	1500	282	282	318	323	343	458	458	432	4	4	69.0
	480	130	-	320	5	5	NU 2252	NJ	NUP	-	-	1780000	2930000			1100	1300	-	282	318	323	343	458	458	-	4	4	106
	540	102	464	336	6	6	NU 352	NJ	NUP	N	NF	1620000	2230000			1000	1200	288	288	331	339	359	512	512	468	5	5	117
280	420	65	384	316	4	4	NU 1056	-	-	N	-	630000	1000000			1500	1700	298	298	313	320	-	402	402	385	3	3	33.0
	500	80	440	340	5	5	NU 256	NJ	NUP	N	NF	1140000	1680000			1200	1400	302	302	336	343	365	478	478	452	4	4	71.5
300	460	74	420	340	4	4	NU 1060	-	-	N	-	845000	1340000			1400	1500	318	318	337	344	-	442	442	421	3	3	44.7
	540	85	476	364	5	5	NU 260	NJ	NUP	N	NF	1400000	2070000			1100	1300	322	322	361	368	392	518	518	487	4	4	88.9
320	480	74	440	360	4	4	NU 1064	-	-	N	-	870000	1410000			1300	1400	338	338	356	365	-	462	462	441	3	3	49.3
	580	92	510	390	5	5	NU 264	NJ	NUP	N	NF	1600000	2390000			1000	1200	342	342	386	393	419	558	558	522	4	4	113
340	520	82	475	385	5	5	NU 1068	-	-	N	-	1050000	1670000			1200	1300	362	362	381	390	-	498	498	476	4	4	65.9
360	540	82	495	405	5	5	NU 1072	-	-	N	-	1070000	1750000			1100	1250	382	382	401	410	-	518	518	496	4	4	68.8
380	560	82	515	425	5	5	NU 1076	-	-	N	-	1100000	1840000			1000	1200	402	402	421	430	-	538	538	516	4	4	72.3
400	600	90	550	450	5	5	NU 1080	-	-	N	-	1350000	2280000			950	1100	422	422	446	455	-	578	578	551	4	4	92.5
420	620	90	570	470	5	5	NU 1084	-	-	N	-	1390000	2380000			900	1100	422	422	466	475	-	598	598	571	4	4	97.6
440	650	94	597	493	6	6	NU 1088	-	-	N	-	1530000	2430000			850	1050	468	468	489	498	-	622	622	598	5	5	112
460	680	100	624	516	6	6	NU 1092	-	-	N	-	1630000	2630000			800	1000	488	488	512	520	-	652	652	625	5	5	130
480	700	100	644	536	6	6	NU 1096	-	-	N	-	1590000	2750000			780	950	508	508	532	541	-	672	672	645	5	5	135
500	720	100	664	556	6	6	NU 10/500	-	-	N	-	1700000	2870000			750	900	528	528	552	561	-	692	692	665	5	5	140

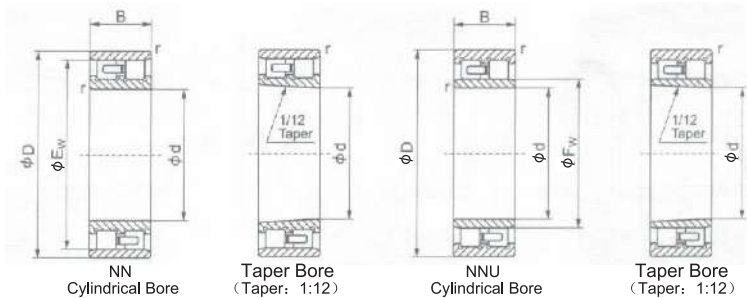
d: 25 ~ 180 mm



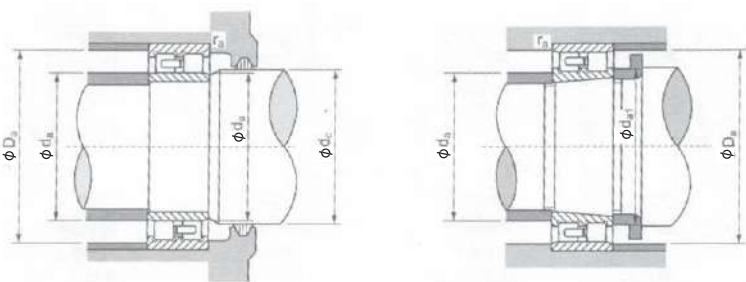
Principal Dimensions (mm)						Bearing Designations		Basic Load Ratings (N)				Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)						Weight (kg)	
d	D	B	Ew	Fw	r (min)	Cylindrical Bore	Tapered Bore	Dynamic Cr	Static Cor			Grease	Oil	da		d <sub>a1</sub> (min)	d <sub>c</sub> (min)	Da			r <sub>a</sub> (max)
														(min)	(max)						
25	47	16	41.3		0.6	NN3005	NN3005K	25700	30000		15000	17000	30		30		42	41.8	0.6	0.123	
30	55	19	48.5		1	NN3006	NN3006K	30500	37000		12000	15000	36		37		49	49	1	0.199	
35	62	20	55		1	NN3007	NN3007K	39000	50000		11000	13000	41		42		56	56	1	0.258	
40	68	21	61		1	NN3008	NN3008K	43000	55500		9800	11000	46		48		62	62	1	0.312	
45	75	23	67.5		1	NN3009	NN3009K	49500	65500		8800	10000	51		52		69	69	1	0.405	
50	80	23	72.5		1	NN3010	NN3010K	52500	72500		8200	9600	56		58		74	74	1	0.454	
55	90	26	81		1.1	NN3011	NN3011K	69000	96500		7300	8600	62		64		83	82	1	0.651	
60	95	26	86.1		1.1	NN3012	NN3012K	73000	106000		6800	8000	67		68		88	87	1	0.704	
65	100	26	91		1.1	NN3013	NN3013K	76500	116000		6400	7600	72		74		93	92	1	0.758	
70	110	30	100		1.1	NN3014	NN3014K	97000	148000		5700	6800	77		78		103	101	1	1.04	
75	115	30	105		1.1	NN3015	NN3015K	96000	149000		5500	6400	82		84		108	106	1	1.14	
80	125	34	113		1.1	NN3016	NN3016K	118000	186000		5000	6000	87		90		118	114	1	1.52	
85	130	34	118		1.1	NN3017	NN3017K	125000	201000		4800	5600	92		96		123	119	1	1.61	
90	140	37	127		1.5	NN3018	NN3018K	142000	228000		4500	5200	98.5		100		131.5	129	1.5	2.07	
95	145	37	132		1.5	NN3019	NN3019K	150000	246000		4300	5000	103.5		106		136.5	134	1.5	2.17	
100	140	40	-	113	1.1	NNU4920	NNU4920K	155000	305000		4200	5000	106.5	111	110	115	133.5	-	1	1.77	
	150	37	137	-	1.5	NN3020	NN3020K	156000	265000		4000	4700	108.5	-	112	-	141.5	139	1.5	2.26	
105	145	40	-	118	1.1	NNU4921	NNU4921K	161000	325000		4000	4800	111.5	116	115	120	138.5	-	1	1.85	
	160	41	146	-	2	NN3021	NN3021K	197000	320000		3800	4400	115	-	116	-	150	148	2	2.89	
110	150	40	-	123	1.1	NNU4922	NNU4922K	165000	335000		3900	4600	116.5	121	120	125	143.5	-	1	1.93	
	170	45	155	-	2	NN3022	NN3022K	227000	375000		3600	4200	120	-	122	-	160	157	2	3.68	
120	165	45	-	134.5	1.1	NNU4924	NNU4924K	183000	360000		3500	4200	126.5	133	130	137	158.5	-	1	2.65	
	180	46	165	-	2	NN3024	NN3024K	238000	405000		3300	3900	130	-	132	-	170	167	2	3.98	
130	180	50	-	146	1.5	NNU4926	NNU4926K	275000	565000		3200	3800	138	144	142	148	172	-	1.5	3.55	
	200	52	182	-	2	NU3026	NU3026K	283000	475000		3000	3500	140	-	144	-	190	183	2	5.92	
140	190	50	-	156	1.5	NNU4928	NNU4928K	281000	585000		3000	3600	148	154	151	158	182	-	1.5	3.80	
	210	53	192	-	2	NU3028	NU3028K	297000	515000		2800	3300	150	-	154	-	200	194	2	6.44	
150	210	60	-	168.5	2	NNU4930	NNU4930K	350000	715000		2700	3300	159	166	162	171	201	-	2	5.95	
	225	56	206	-	2.1	NU3030	NU3030K	335000	585000		2600	3100	162	-	164	-	213	208	2	7.81	
160	220	60	-	178.5	2	NNU4932	NNU4932K	365000	760000		2600	3100	169	176	172	182	211	-	2	6.25	
	240	60	219	-	2.1	NU3032	NU3032K	370000	660000		2500	2900	172	-	174	-	228	221	2	8.92	
170	230	60	-	188.5	2	NNU4934	NNU4934K	375000	805000		2400	2900	179	186	182	192	221	-	2	6.60	
	260	67	236	-	2.1	NU3034	NU3034K	450000	805000		2300	2700	182	-	184	-	248	238	2	12.6	
180	250	69	-	202	2	NNU4936	NNU4936K	480000	1020000		2200	2700	189	199	194	205	241	-	2	9.50	



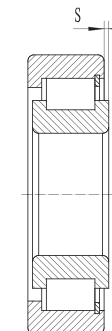
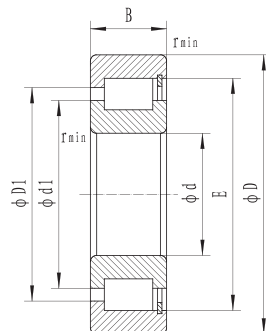
d: 180 ~ 320 mm



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

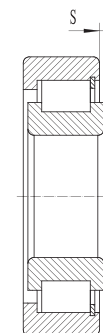
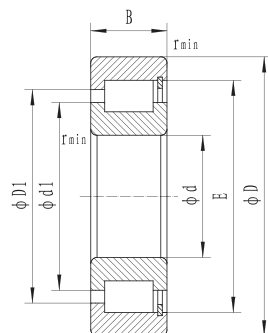


Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)							Weight (kg)
Grease	Oil	d <sub>a</sub>		d <sub>a1</sub> (min)	d <sub>c</sub> (min)	D <sub>a</sub>		r <sub>a</sub> (max)	
		(min)	(max)			(max)	(min)		
2100	2500	192	-	196	-	268	257	2	16.6
2100	2600	199	209	204	215	251	-	2	10.0
2000	2400	202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

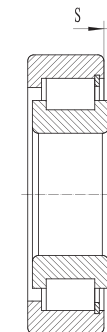
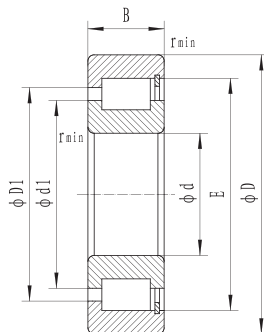


Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)				Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	$r_{min}$		Dynamic $C_r$	Static $C_{or}$			Grease $\text{min}^{-1}$	Oil $\text{min}^{-1}$	E*	F	$d_1$	$D_1$	S**	
150	190	20	1.1	<b>NCF1830-VX</b>	115	220			700	1500	177	--	163	176	1.5	1.3
160	200	20	1.1	<b>NCF1832-VX</b>	120	230			670	1400	186.8	--	173	185	1.5	1.45
170	215	22	1.1	<b>NCF1834-VX</b>	145	260			630	1300	210.7	--	185	200	1.5	1.85
180	225	22	1.1	<b>NCF1836-VX</b>	153	282			600	1200	210	--	196	211	1.5	1.95
190	240	24	1.5	<b>NCF1838-VX</b>	175	320			560	1100	225	--	208	224	2	2.4
200	250	24	1.5	<b>NCF1840-VX</b>	180	335			560	1100	237.6	--	216.6	231.6	2	2.57
220	270	24	1.5	<b>NCF1844-VX</b>	187	365			530	1000	258.5	--	237.3	252.3	2	2.8
240	300	28	2	<b>NCF1848-VX</b>	268	500			480	900	287	--	260.5	281	2	4.29
260	320	28	2	<b>NCF1852-VX</b>	280	540			430	800	308	--	281	301.5	2	4.61
280	350	33	2	<b>NCF1856-VX</b>	360	680			400	750	334	--	304	327	2.5	6.89
300	380	38	2.1	<b>NCF1860-VX</b>	460	850			360	670	363	--	323.5	350.5	3	9.79
320	400	38	2.1	<b>NCF1864-VX</b>	475	910			340	630	383	--	344.5	371.5	3	10.36
340	420	38	2.1	<b>NCF1868-VX</b>	490	970			320	600	403	--	365.5	392.5	3	10.93
360	440	38	2.1	<b>NCF1872-VX</b>	510	1030			300	560	418.9	--	387	413.5	3	11.49
380	480	46	2.1	<b>NCF1876-VX</b>	660	1300			280	530	458	--	415.5	448	4	18.87
400	500	46	2.1	<b>NCF1880-VX</b>	670	1360			260	500	475	--	432	464.5	4	19.81
420	520	46	2.1	<b>NCF1884-VX</b>	690	1500			240	480	499	--	457	489.5	4	20.6
440	540	46	2.1	<b>NCF1888-VX</b>	705	1510			220	450	516	--	473.5	506	4	21.54
460	580	56	3	<b>NCF1892-VX</b>	945	1900			200	430	551	--	501.5	541	5	33.21
480	600	56	3	<b>NCF1896-VX</b>	970	1990			190	400	573.5	--	522	561	5	34.53
500	620	56	3	<b>NCF18/500-VX</b>	1000	2080			180	380	594	--	542	581.5	5	35.73
530	650	56	3	<b>NCF18/530-VX</b>	1130	2240			170	360	624.5	--	572	614	5	37.5
560	680	56	3	<b>NCF18/560-VX</b>	1190	2400			160	340	655	--	603	645	5	40.5
600	730	60	3	<b>NCF18/600-VX</b>	1220	2550			150	320	696	--	644	686	7	49.5
630	780	69	4	<b>NCF18/630-VX</b>	1280	2950			140	300	739	--	680	728	8	70
670	820	69	4	<b>NCF18/670-VX</b>	1320	3180			130	280	783	--	724	772	8	74

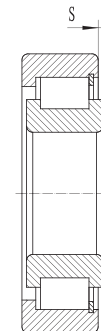
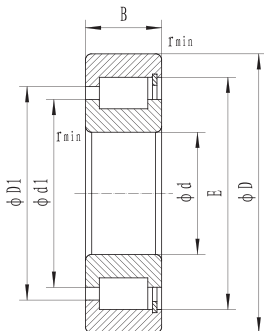




Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)			Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	r <sub>min</sub>		Dynamic Cr	Static Cor		Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	E*	F	d <sub>1</sub>	D <sub>1</sub>	S**	
710	870	74	4	<b>NCF18/710-VX</b>	1560	3780		120	260	831	--	766	818	8	90
750	920	78	5	<b>NCF18/750-VX</b>	1790	4350		110	240	880	--	810	867	8	110
25	52	18	1	<b>NCF2205-VX</b>	51	45		2850	5800	46.52	--	35.5	41.9	1	0.18
30	62	20	1	<b>NCF2206-VX</b>	70	65		2600	5000	55.19	--	42	50.6	1	0.3
35	72	23	1.1	<b>NCF2207-VX</b>	88	79		2350	4300	63.97	--	47	59.3	1	0.44
40	80	23	1.1	<b>NCF2208-VX</b>	97	93		2100	3900	70.94	--	54	66.3	1	0.55
45	85	23	1.1	<b>NCF2209-VX</b>	103	99.9		1850	3600	74.43	--	57.5	69.8	1	0.59
50	90	23	1.1	<b>NCF2210-VX</b>	109	113		1700	3300	81.4	--	64.4	76.7	1	0.64
55	100	25	1.5	<b>NCF2211-VX</b>	140	150		1550	3000	88.81	--	70	84.1	1	0.87
60	110	28	1.5	<b>NCF2212-VX</b>	169	180		1450	2700	99.17	--	76.8	93.9	1.5	1.18
65	120	31	1.5	<b>NCF2213-VX</b>	198	214		1350	2550	106.25	--	82.3	100.7	1.5	1.57
70	125	31	1.5	<b>NCF2214-VX</b>	184	227		1250	2400	111.45	--	87	105.2	1.5	1.66
75	130	31	1.5	<b>NCF2215-VX</b>	190	241		1150	2250	116.2	--	91.8	110	1.5	1.75
80	140	33	2	<b>NCF2216-VX</b>	226	285		1050	2100	126.3	--	98.6	119.3	1.5	2.15
85	150	36	2	<b>NCF2217-VX</b>	255	325		980	1950	133.75	--	104.4	126.3	1.5	2.74
90	160	40	2	<b>NCF2218-VX</b>	290	370		920	1800	141.15	--	110.2	133.3	2.5	3.48
95	170	43	2.1	<b>NCF2219-VX</b>	340	435		860	1700	155.95	--	122	147.3	2.5	4.17
100	180	46	2.1	<b>NCF2220-VX</b>	395	520		800	1600	163.35	--	127.5	154.3	2.5	5.13
110	200	53	2.1	<b>NCF2222-VX</b>	455	590		750	1500	177.6	--	137	168	4	7.24
120	215	58	2.1	<b>NCF2224-VX</b>	540	730		700	1500	192.9	--	150.7	183	4	9.08
130	230	64	3	<b>NCF2226-VX</b>	630	860		650	1300	207.75	--	162.3	197	5	11.25
140	250	68	3	<b>NCF2228-VX</b>	720	1020		600	1200	222.55	--	173.9	211.1	5	14.47
150	270	73	3	<b>NCF2230-VX</b>	830	1180		550	1100	237.35	--	185.5	225.2	6	18.43
160	290	80	3	<b>NCF2232-VX</b>	1030	1490		500	1000	267.1	--	208.7	253.4	6	23
170	310	86	4	<b>NCF2234-VX</b>	1150	1680		470	950	281.9	--	220.3	267.4	7	28.65
180	320	86	4	<b>NCF2236-vx</b>	1190	1780		450	900	294	--	232.4	279.5	7	29.8

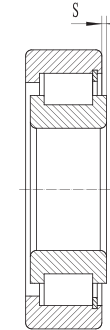
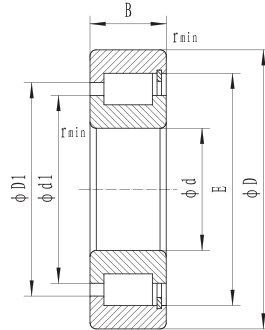


Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)			Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	r <sub>min</sub>		Dynamic C <sub>r</sub>	Static C <sub>or</sub>		Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	E*	F	d <sub>1</sub>	D <sub>1</sub>	S**	
190	340	92	4	<b>NCF2238-VX</b>	1310	1920		420	850	311.5	--	243.5	295.5	9	35.65
200	360	98	4	<b>NCF2240-VX</b>	1420	2040		400	800	319.4	--	246.6	302.4	9	43.12
220	400	108	4	<b>NCF2244-VX</b>	1850	2750		370	760	366	--	277	349	9	59.5
60	85	16	1	<b>NCF2912-VX</b>	64	78		4800	9000	78.55	--	69	74.4	1	0.29
65	90	16	1	<b>NCF2913-VX</b>	68	84		4000	7500	85.24	--	75.7	81	1	0.31
70	100	19	1	<b>NCF2914-VX</b>	90	115		3600	6700	92.31	--	81.2	87.8	1	0.49
75	105	19	1	<b>NCF2915-VX</b>	91.5	120		3000	5600	97.41	--	86.3	92.8	1	0.52
80	110	19	1	<b>NCF2916-VX</b>	94.5	128		2600	5000	102.51	--	91.4	98	1	0.55
85	120	22	1.1	<b>NCF2917-VX</b>	120	160		2200	4500	109.58	--	96.4	105	1	0.81
90	125	22	1.1	<b>NCF2918-VX</b>	123	170		1900	4000	115.75	--	102	110.7	1	0.84
95	130	22	1.1	<b>NCF2919-VX</b>	135	180		1800	3800	122.25	--	106.7	117	1	0.86
100	140	24	1.1	<b>NCF2920-VX</b>	155	205		1600	3400	130.95	--	113.4	125.7	1.5	1.14
110	150	24	1.1	<b>NCF2922-VX</b>	158	215		1600	3400	141.5	--	124	136.2	1.5	1.23
120	165	27	1.1	<b>NCF2924-VX</b>	200	290		1400	3000	154.3	--	134.8	149	1.5	1.73
130	180	30	1.5	<b>NCF2926-VX</b>	240	355		1300	2800	167.15	--	146	161.1	2	2.33
140	190	30	1.5	<b>NCF2928-VX</b>	265	380		1200	2600	180	--	157	174	2	2.42
150	210	36	2	<b>NCF2930-VX</b>	345	490		1100	2400	196.75	--	169	189.6	2.5	3.77
160	220	36	2	<b>NCF2932-VX</b>	354	511		1100	2400	207.6	--	179.7	200.5	2.5	4
170	230	36	2	<b>NCF2934-VX</b>	365	540		1000	2200	218.45	--	190.6	211.3	2.5	4.3
180	250	42	2	<b>NCF2936-VX</b>	459	683		1000	2200	231.85	--	200.7	224	2.5	6.2
190	260	42	2	<b>NCF2938-VX</b>	511	775		900	1900	244.15	--	211.5	238.5	2	6.5
200	280	48	2.1	<b>NCF2940-VX</b>	613	945		850	1800	261.6	--	225.5	252.4	3	9.1
220	300	48	2.1	<b>NCF2944-VX</b>	655	1030		750	1600	282.44	--	246.3	273.2	3	9.9
240	320	48	2.1	<b>NCF2948-VX</b>	600	1120		700	1500	303.7	--	267.5	294.4	3	10.6
260	360	60	2.1	<b>NCF2952-VX</b>	780	1460		670	1400	333.7	--	291.5	323.4	5	18.5
280	380	60	2.1	<b>NCF2956-VX</b>	910	1750		630	1300	359.5	--	314	348.5	3.5	19.7

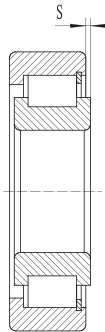
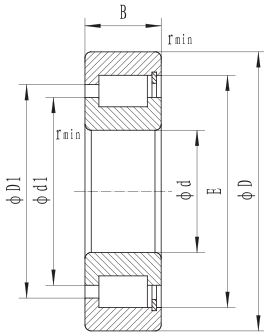


Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)			Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	r <sub>min</sub>		Dynamic Cr	Static Cor		Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	E*	F	d <sub>1</sub>	D <sub>1</sub>	S**	
300	420	72	3	<b>NCF2960-VX</b>	1120	2170		600	1200	389.45	--	338	376.9	5	31.2
320	440	72	3	<b>NCF2964-VX</b>	1250	2300		560	1100	409.85	--	358.5	397.4	5	32.9
340	460	72	3	<b>NCF2968-VX</b>	1300	2490		560	1100	430.2	--	379	418.7	5	34.7
360	480	72	3	<b>NCF2972-VX</b>	1285	2655		530	1000	450.6	--	399.5	438.6	5	36.4
380	520	82	4	<b>NCF2976-VX</b>	1660	3315		480	900	486.7	--	426	472.1	5	52.1
400	540	82	4	<b>NCF2980-VX</b>	1720	3500		450	850	510.85	--	450	496.1	5	54.3
420	560	82	4	<b>NCF2984-VX</b>	1750	3600		400	750	522.95	--	462	509	5	56.9
440	600	95	4	<b>NCF2988-VX</b>	2100	4105		380	700	562	--	490	544.6	7	78.1
460	620	95	4	<b>NCF2992-VX</b>	2150	4250		340	630	576.3	--	504	559.6	7	81.1
480	650	100	5	<b>NCF2996-VX</b>	2400	4800		320	600	614.75	--	538	596.6	7	94.7
500	670	100	5	<b>NCF29/500-VX</b>	2450	5000		300	560	630	--	553	612.7	7	98.3
530	710	106	5	<b>NCF29/530-VX</b>	2700	6050		280	530	673	--	598	648	7	1.20
560	750	112	2	<b>NCF29/560-VX</b>	3050	6720		260	500	709	--	628	682	7	1.40
600	800	118	5	<b>NCF29/600-VX</b>	3400	7555		240	480	--	--	670	762	7	1.70
630	850	128	6	<b>NCF29/630-VX</b>	3750	8700		220	450	807	--	709	788	8	2.05
670	900	136	6	<b>NCF29/670-VX</b>	3900	8750		200	430	846	--	748	827	10	2.45
710	950	140	6	<b>NCF29/710-VX</b>	4000	9200		190	400	--	--	790	876	10	2.75
750	1000	145	6	<b>NCF29/750-VX</b>	4500	1700		180	380	938	--	832	918	11	3.15
25	47	16	0.6	<b>NCF3005-VX</b>	37.4	46.9		3600	7000	42.51	--	34.6	38.5	1.5	0.12
30	55	19	1	<b>NCF3006-VX</b>	49	63		3200	5600	49.6	--	40	45.4	2	0.2
35	62	20	1	<b>NCF3007-VX</b>	55	71.5		2800	5300	55.52	--	44.9	51.3	2	0.26
40	68	21	1	<b>NCF3008-VX</b>	66	83		2400	4500	61.74	--	50.5	57.1	2	0.31
45	75	23	1	<b>NCF3009-VX</b>	81	110		2000	4300	66.85	--	55.3	62.2	2	0.4
50	80	23	1	<b>NCF3010-VX</b>	86	120		1900	4000	72.33	--	59.1	67.7	2	0.43
55	90	26	1.1	<b>NCF3011-VX</b>	121	152		1600	3400	83.54	--	68.5	78.8	2	0.64
60	95	26	1.1	<b>NCF3012-VX</b>	125	156		1600	3200	78.55	--	71.7	82.1	2	0.69



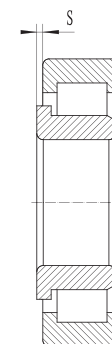
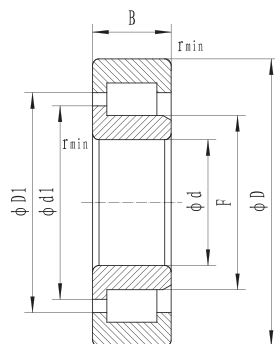


Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)				Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	r <sub>min</sub>		Dynamic C <sub>r</sub>	Static C <sub>or</sub>			Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	E*	F	d <sub>1</sub>	D <sub>1</sub>	S**	
65	100	26	1.1	<b>NCF3013-VX</b>	131	162			1400	3000	85.24	—	78.1	88.4	2	0.73
70	110	30	1.1	<b>NCF3014-VX</b>	155	176			1300	2800	100.28	—	81.5	95.6	3	1.02
75	115	30	1.1	<b>NCF3015-VX</b>	165	195			1200	2600	107.9	—	89	103.2	3	1.06
80	125	34	1.1	<b>NCF3016-VX</b>	173	225			1100	2400	117.4	—	95	111.7	4	1.43
85	130	34	1.1	<b>NCF3017-VX</b>	179	235			1100	2200	121.95	—	99.4	116.1	4	1.51
90	140	37	1.5	<b>NCF3018-VX</b>	210	285			1000	2200	130.65	—	106.1	124.5	4	1.97
100	150	37	1.5	<b>NCF3020-VX</b>	219	300			950	2000	140.2	—	115.7	134	4	2.15
110	170	46	2	<b>NCF3022-VX</b>	284	390			950	2000	156.7	—	127.3	149.3	5.5	3.5
120	180	46	2	<b>NCF3024-VX</b>	299	430			850	1800	—	—	138.8	1607	5.5	3.8
130	200	52	2	<b>NCF3026-VX</b>	425	610			800	1700	—	—	148.6	175.5	5.5	5.65
140	210	53	2	<b>NCF3028-VX</b>	454	670			700	1500	—	—	162.2	189.5	5.5	6.04
150	225	56	2.1	<b>NCF3030-VX</b>	479	705			670	1400	—	—	170	198	7	7.33
160	240	60	2.1	<b>NCF3032-VX</b>	550	810			630	1300	—	—	184.8	215.8	7	8.8
170	260	67	2.1	<b>NCF3034-VX</b>	705	1100			600	1100	—	—	198.1	232.7	7	12.2
180	280	74	2.1	<b>NCF3036-VX</b>	820	1250			560	1000	—	—	212.2	249.4	7	16.1
190	290	75	2.1	<b>NCF3038-VX</b>	850	1340			560	1100	—	—	221.8	259	9	17
200	310	82	2.1	<b>NCF3040-VX</b>	960	1650			530	1000	—	—	236.6	276.2	9	21.8
220	340	90	3	<b>NCF3044-VX</b>	1200	1910			450	800	—	—	254.6	299.2	9	28.4
240	360	92	3	<b>NCF3048-VX</b>	1250	2000			430	850	—	—	277.5	322.1	11	30.9
260	400	104	4	<b>NCF3052-VX</b>	1650	2540			430	800	—	—	304	358.4	11	44.5
280	420	106	4	<b>NCF3056-VX</b>	1710	3000			380	700	—	—	319.5	372.9	11	48
300	460	118	4	<b>NCF3060-VX</b>	2050	3370			320	560	—	—	353.6	415.6	14	66.6
320	480	121	4	<b>NCF3064-VX</b>	2090	3500			300	560	—	—	369.5	430.1	14	72
340	520	133	5	<b>NCF3068-VX</b>	2500	4200			280	530	—	—	396.1	463.9	15	96
360	540	134	5	<b>NCF3072-VX</b>	2600	4450			260	500	503.45	—	414	481.6	15	101
380	560	135	5	<b>NCF3076-VX</b>	2650	4500			240	480	521.25	—	431.7	499.5	15	106



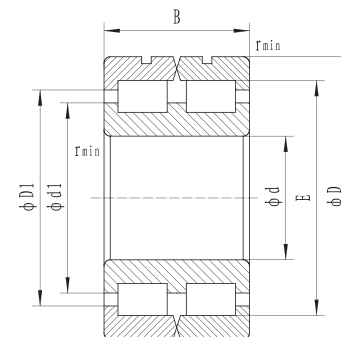
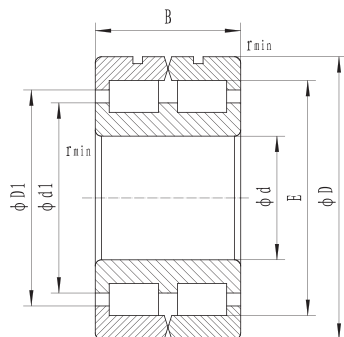
Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)				Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	r_min		Dynamic Cr	Static Cor			Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	E*	F	d <sub>1</sub>	D <sub>1</sub>	S**	
400	600	148	5	NCF3080-VX	3100	5500			220	450	558.52	--	462.5	535.1	16	145
420	650	150	5	NCF3084-VX	3300	6300			200	430	577.6	--	482	555	16	150
440	650	157	6	NCF3088-VX	3740	7400			190	400	590	--	507	582	16	175
460	680	163	6	NCF3092-VX	4150	8050			180	380	632.97	--	526	608	16	195
480	700	165	6	NCF3096-VX	4200	8500			170	360	654	--	546	628	16	205
500	720	167	6	NCF30/500-VX	4300	8700			170	360	676	--	568	650	16	215
530	780	185	6	NCF30/530-VX	5300	10600			150	320	732	--	610	702	16	300
560	820	195	6	NCF30/560-VX	5900	12000			140	300	770	--	642	738	16	345



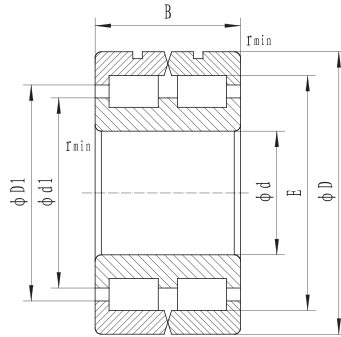


Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)			Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	$r_{min}$		Dynamic $C_r$	Static $C_{or}$		Grease $\text{min}^{-1}$	Oil $\text{min}^{-1}$	E*	F	$d_1$	$D_1$	S**	
25	62	24	1.1	NJG2305-VX-H	73	59		3000	5300	--	31.74	36.7	47.5	2	0.37
30	72	27	1.1	NJG2306-VX-H	100	88		1900	4000	--	38.36	43.5	56	2	0.56
35	80	31	1.5	NJG2307-VX-H	127	111		1600	3400	--	44.75	50.7	65.8	2	0.74
40	90	33	1.5	NJG2308-VX-H	175	155		1400	3000	--	51.15	57.5	75.2	2	1.01
45	100	36	1.5	NJG2309-VX-H	181.5	164		1300	2800	--	56.14	62.5	80.3	3	1.37
50	110	40	2	NJG2310-VX-H	235	220		1100	2400	--	60.72	68.3	89.7	3	1.81
55	120	43	2	NJG2311-VX-H	273	255		1000	2200	--	67.14	75.5	99.3	3	2.28
60	130	46	2.1	NJG2312-VX-H	285	275		950	2000	--	86.7	82	105.8	3	2.88
65	140	48	2.1	NJG2313-VX-H	355	350		900	1900	--	80.71	90	116.5	3.5	3.52
70	150	51	2.1	NJG2314-VX-H	390	390		850	1800	--	84.22	93.5	121.6	3.5	4.33
75	160	55	2.1	NJG231 5-VX-H	465	480		750	1600	--	91.24	101.6	131.5	3.5	5.3
80	170	58	2.1	NJG2316-VX-H	544	565		700	1500	--	98.26	109.5	142.1	3.5	6.32
85	180	60	3	NJG2317-VX-H	573	615		670	1400	--	107	118.2	150.9	4	7.34
90	190	64	3	NJG2318-VX-H	620	650		670	1400	--	105.3	117.5	152.5	4	8.83
100	215	73	3	NJG2320-VX-H	800	850		600	1200	--	119.3	132.7	172.8	4	13
110	240	80	3	NJG2322-VX-H	955	980		560	1100	--	134.3	151.1	199.9	5	17
120	260	86	3	NJG2324-VX-H	1150	1270		530	1000	--	147.4	164.2	213.1	5	22.3
130	280	93	4	NJG2326-VX-H	1300	1420		500	950	--	157.9	176	227.9	5	27.95
140	300	102	4	NJG2328-VX-H	1450	1600		450	850	--	168.5	187.8	243.4	7	34.9
150	320	108	4	NJG2330-VX-H	1685	1950		430	800	--	182.5	203.3	263.5	7	42.1
160	340	114	4	NJG2332-VX-H	1900	2200		400	750	--	266.4	219	284.4	7	49.7
170	360	120	4	NJG2334-VX-H	2100	2400		450	800	--	203.55	226.6	295	7	59.2
180	380	126	4	NJG2336-VX-H	2200	2650		400	700	--	221.7	245	312.9	7	69.1
190	400	132	5	NJG2338-VX-H	2500	3000		400	700	--	224.5	250	326.8	7	80.3
200	420	138	5	NJG2340-VX-H	2850	3400		320	600	--	238.6	265.7	347.2	7	92.1
220	460	145	5	NJG2344-VX-H	3050	3500		300	570	--	266.7	297	388.3	7	111.2
240	500	155	5	NJG2348-VX-H	3350	3900		300	570	--	280.6	312.5	408.5	10	142.3
260	540	165	6	NJG2352-VX-H	4100	4850		270	550	--	315.6	351.6	459.6	10	173.2

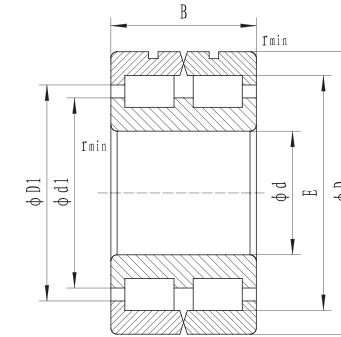


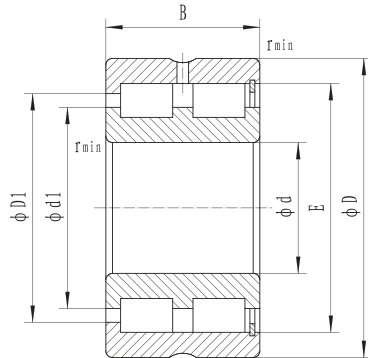


Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)				Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	r <sub>min</sub>		Dynamic Cr	Static Cor			Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	E*	F	d <sub>1</sub>	D <sub>1</sub>	S**	
150	190	40	1.1	<b>NNC4830-VX</b>	233	585			720	1500	178.3	--	165.1	174.2	--	2.9
160	200	40	1.1	<b>NNC4832-VX</b>	242	620			680	1400	186.9	--	173.7	182.8	--	3.1
170	215	45	1.1	<b>NNC4834-VX</b>	264	655			640	1300	201.3	--	186.3	197	--	4.1
180	225	45	1.1	<b>NNC4836-VX</b>	270	695			610	1200	214.1	--	199.1	209.8	--	4.3
190	240	50	1.5	<b>NNC4838-VX</b>	303	750			560	1150	225	--	207.6	220.7	--	5.65
200	250	50	1.5	<b>NNC4840-VX</b>	325	800			550	1100	235.5	--	218.1	231.2	--	5.9
220	270	50	1.5	<b>NNC4844-VX</b>	340	865			500	1000	256.5	--	239.1	252.3	--	6.4
240	300	60	2	<b>NNC4848-VX</b>	510	1290			480	900	281.9	--	259.5	276.7	--	10
260	320	60	2	<b>NNC4852-VX</b>	540	1400			430	820	304.2	--	281.8	298.8	--	11
280	350	69	2	<b>NNC4856-VX</b>	700	1860			400	750	332.4	--	306.8	326.4	--	16
300	380	80	2.1	<b>NNC4860-VX</b>	825	2120			380	700	356.7	--	327.9	349.9	--	23
320	400	80	2.1	<b>NNC4864-VX</b>	855	2280			340	640	379.7	--	350.9	372.9	--	24
340	420	80	2.1	<b>NNC4868-VX</b>	870	2400			320	600	396.9	--	368.1	390.1	--	25.5
360	440	80	2.1	<b>NNC4872-VX</b>	910	2550			300	580	419.8	--	391	413.2	--	27
380	480	100	2.1	<b>NNC4876-VX</b>	1350	3650			280	530	455.8	--	419	447.2	--	45.5
400	500	100	2.1	<b>NNC4880-VX</b>	1370	3750			270	500	501.74	--	433.8	462	--	46.5
420	520	100	2.1	<b>NNC4884-VX</b>	1380	4100			250	470	无	--	458	482	--	49.5
440	540	100	2.1	<b>NNC4888-VX</b>	1500	4200			240	450	无	--	480	504	--	52
460	580	118	3	<b>NNC4892-VX</b>	1650	4600			230	420	无	--	505	531	--	76
480	600	118	3	<b>NNC4896-VX</b>	1700	4800			210	400	无	--	529	555	--	78.5
500	620	118	3	<b>NNC48/500-VX</b>	1750	5000			200	380	无	--	546	571	--	81.5
530	650	118	3	<b>NNC48/530-VX</b>	1800	5550			180	340	无	--	577	603	--	86
60	85	25	1	<b>NNC4912-VX</b>	76.5	134			1700	3400	77.51	--	70.3	73.5	--	0.49
70	100	30	1	<b>NNC4914-VX</b>	105	185			1400	3000	91.87	--	82.5	87.4	--	0.78
80	110	30	1	<b>NNC4916-VX</b>	112	216			1200	2600	100.78	--	91.4	96.2	--	0.88
90	125	35	1.1	<b>NNC4918-VX</b>	155	295			1100	2300	115.2	--	103.9	110.7	--	1.35

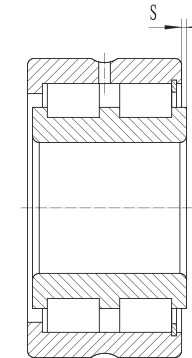


Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)				Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	r <sub>min</sub>		Dynamic Cr	Static Cor			Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	E*	F	d <sub>1</sub>	D <sub>1</sub>	S**	
100	140	40	1.1	<b>NNC4920-VX</b>	195	375			950	2000	129.6	--	116.4	125	--	1.95
110	150	40	1.1	<b>NNC4922-VX</b>	197	420			900	1900	138.2	--	125	133.6	--	2.15
120	165	45	1.1	<b>NNC4924-VX</b>	225	445			800	1700	153.55	--	138.6	148.6	--	2.95
130	180	50	1.5	<b>NNC4926-VX</b>	265	515			750	1600	165.4	--	148.4	160	--	3.95
140	190	50	1.5	<b>NNC4928-VX</b>	275	560			700	1500	175.9	--	159	170.5	--	4.2
150	210	60	2	<b>NNC4930-VX</b>	410	820			680	1400	192.77	--	171.8	187.2	--	6.65
160	220	60	2	<b>NNC4932-VX</b>	430	890			650	1300	206.16	--	184.2	200.3	--	7
170	230	60	2	<b>NNC4934-VX</b>	440	935			600	1200	215.08	--	193.1	209.1	--	7.35
180	250	69	2	<b>NNC4936-VX</b>	575	1220			570	1100	230.5	--	204.9	224.1	--	10.8
190	260	69	2	<b>NNC4938-VX</b>	585	1290			550	1100	240.7	--	215	234.3	--	11.2
200	280	80	2.1	<b>NNC4940-VX</b>	685	1500			530	1000	259.34	--	230.5	252.3	--	15.8
220	300	80	2.1	<b>NNC4944-VX</b>	720	1610			500	950	276.52	--	248	268.5	--	17.2
240	320	80	2.1	<b>NNC4948-VX</b>	745	1762			450	850	299.1	--	270.6	292.3	--	18.5
260	360	100	2.1	<b>NNC4952-VX</b>	1120	2520			400	750	331.33	--	294.5	322.1	--	32
280	380	100	2.1	<b>NNC4956-VX</b>	1120	2710			380	700	353.34	--	316.5	344.6	--	34
300	420	118	3	<b>NNC4960-VX</b>	1650	3750			340	650	385.51	--	340.7	374.3	--	53
320	440	118	3	<b>NNC4964-VX</b>	1710	4100			320	600	412.27	--	367.5	401.1	--	56
340	460	118	3	<b>NNC4968-VX</b>	1800	4390			300	560	430.11	--	385.3	418.9	--	59
360	480	118	3	<b>NNC4972-VX</b>	1800	4650			300	550	448	--	404	436.8	--	62.1
380	520	140	4	<b>NNC4976-VX</b>	2300	5550			260	500	481.35	--	430.2	468.7	--	92.4
400	540	140	4	<b>NNC4980-VX</b>	2350	5800			240	480	501.74	--	450.5	489	--	96.5
420	560	140	4	<b>NNC4984-VX</b>	2430	6000			220	450	--	--	470	512	--	99.5
440	600	160	4	<b>NNC4988-VX</b>	2990	7570			200	430	--	--	503	544	--	137
460	620	160	4	<b>NNC4992-VX</b>	3020	7770			190	400	--	--	512	564	--	140
480	650	170	5	<b>NNC4996-VX</b>	3350	8420			180	360	--	--	537	592	--	165
500	670	170	5	<b>NNC49/500-VX</b>	3350	8850			170	360	--	--	568	611	--	175

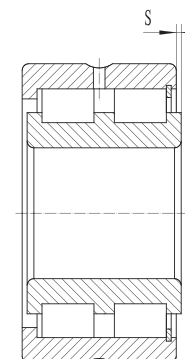
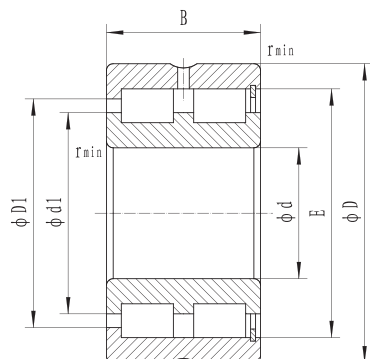




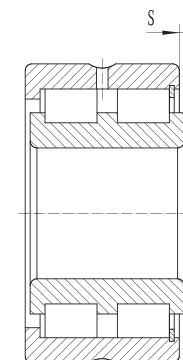
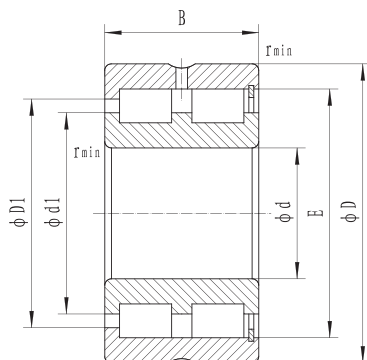
Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)			Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	r <sub>min</sub>		Dynamic C <sub>r</sub>	Static C <sub>or</sub>		Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	E*	F	d <sub>1</sub>	D <sub>1</sub>	S**	
530	710	180	5	<b>NNC49/530-VX</b>	3950	10200		160	340	--	--	588	648	2	200
150	190	40	1.1	<b>NNCF4830-VX</b>	233	585		720	1500	178.3	--	166	173	2	2.7
160	200	40	1.1	<b>NNCF4832-VX</b>	242	620		680	1400	186.9	--	174	182	2	2.9
170	215	45	1.1	<b>NNCF4834-VX</b>	264	655		640	1300	201.3	--	187	196	3	3.9
180	225	45	1.1	<b>NNCF4836-VX</b>	270	695		610	1200	214.1	--	200	209	3	4
190	240	50	1.5	<b>NNCF4838-VX</b>	303	750		560	1150	225	--	209	219	4	5.3
200	250	50	1.5	<b>NNCF4840-VX</b>	325	800		550	1100	235.5	--	220	230	4	5.5
220	270	50	1.5	<b>NNCF4844-VX</b>	340	865		500	1000	256.5	--	241	251	4	5.9
240	300	60	2	<b>NNCF4848-VX</b>	510	1290		480	900	281.9	--	261	275	4	9.1
260	320	60	2	<b>NNCF4852-VX</b>	540	1400		430	820	304.2	--	283	297	4	9.7
280	350	69	2	<b>NNCF4856-VX</b>	700	1860		400	750	332.4	--	309	326	4	15.3
300	380	80	2.1	<b>NNCF4860-VX</b>	825	2120		380	700	356.7	--	329	349	6	21.8
320	400	80	2.1	<b>NNCF4864-VX</b>	855	2280		340	640	379.7	--	352	372	6	22.7
340	420	80	2.1	<b>NNCF4868-VX</b>	870	2400		320	600	396.9	--	369	389	6	25.5
360	440	80	2.1	<b>NNCF4872-VX</b>	910	2550		300	560	419.8	--	392	412	6	27
380	480	100	2.1	<b>NNCF4876-VX</b>	1350	3650		280	530	455.8	--	421	446	6	45.5
400	500	100	2.1	<b>NNCF4880-VX</b>	1370	3750		270	500	470.59	--	435	461	6	46.5
420	520	100	2.1	<b>NNCF4884-VX</b>	1380	4100		250	470	--	--	458	482	6	49.5
440	540	100	2.1	<b>NNCF4888-VX</b>	1500	4200		240	450	--	--	480	504	6	52
460	580	118	3	<b>NNCF4892-VX</b>	1650	4600		230	420	--	--	505	531	7	76
480	600	118	3	<b>NNCF4896-VX</b>	1700	4800		210	400	--	--	529	555	7	78.5
500	620	118	3	<b>NNCF48/500-vX</b>	1750	5000		200	380	--	--	546	571	7	81.5
530	650	118	3	<b>NNCF48/530-VX</b>	1800	5550		180	340	--	--	577	603	7	85
60	85	25	1	<b>NNCF4912-VX</b>	76.5	134		1700	3400	77.51	--	70.5	73.5	1	0.49
70	100	30	1	<b>NNCF4914-VX</b>	105	185		1400	3000	91.87	--	83	87	1	0.78
80	110	30	1	<b>NNCF4916-VX</b>	112	216		1200	2600	97.78	--	91.4	96	1	0.88



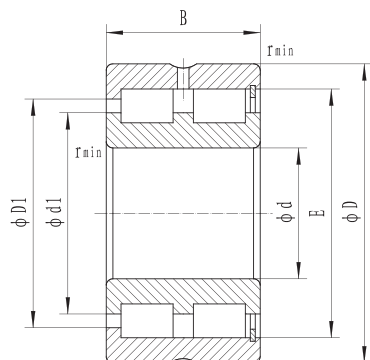




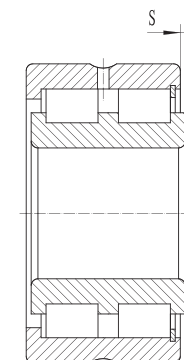
Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)				Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	r <sub>min</sub>		Dynamic Cr	Static Cor			Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	E	F	d <sub>1</sub>	D <sub>1</sub>	S	
90	125	35	1.1	NNCF4918-VX	155	295			1100	2300	113.2	--	103	111	1.5	1.35
100	140	40	1.1	NNCF4920-VX	195	375			950	2000	129.6	--	116	125	2	2
110	150	40	1.1	NNCF4922-VX	197	420			900	1900	138.2	--	124	134	2	2.15
120	165	45	1.1	NNCF4924-VX	225	445			800	1700	153.55	--	138	149	3	2.95
130	180	50	1.5	NNCF4926-VX	265	515			750	1600	165.4	--	148	160	4	3.95
140	190	50	1.5	NNCF4928-VX	275	560			700	1500	175.9	--	159	171	4	4.2
150	210	60	2	NNCF4930-VX	410	820			680	1400	192.77	--	170	187	4	6.65
160	220	60	2	NNCF4932-VX	430	890			650	1300	206.16	--	184	200	4	7
170	230	60	2	NNCF4934-VX	440	935			600	1200	215.08	--	193	209	4	7.35
180	250	69	2	NNCF4936-VX	575	1220			570	1100	230.5	--	205	224	4	10.8
190	260	69	2	NNCF4938-VX	585	1290			550	1100	240.7	--	215	234	4	11.2
200	280	80	2.1	NNCF4940-VX	685	1500			530	1000	259.3	--	230	252	5	15.8
220	300	80	2.1	NNCF4944-VX	720	1610			500	950	276.52	--	247	269	5	17.2
240	320	80	2.1	NNCF4948-VX	745	1762			450	850	299.46	--	270	292	5	18.5
260	360	100	2.1	NNCF4952-VX	1120	2520			400	750	331.33	--	294	322	6	32
280	380	100	2.1	NNCF4956-VX	1120	2710			380	700	353.34	--	316	344	6	34
300	420	118	3	NNCF4960-VX	1650	3750			340	650	385.51	--	340	374	6	53
320	440	118	3	NNCF4964-VX	1710	4100			320	600	412.27	--	368	400	6	56
340	460	118	3	NNCF4968-VX	1800	4390			300	560	430.11	--	386	418	6	59
360	480	118	3	NNCF4972-VX	1800	4650			300	550	448	--	404	436	6	62.1
380	520	140	4	NNCF4976-VX	2300	5550			260	500	481.35	--	431	468	7	92.4
400	540	140	4	NNCF4980-VX	2350	5800			240	480	501.74	--	451	488	7	96.5
420	560	140	4	NNCF4984-VX	2430	6000			220	450	--	--	470	512	7	99.5
440	600	160	4	NNCF4988-VX	2990	7570			200	430	--	--	503	544	7	137
460	620	160	4	NNCF4992-VX	3020	7770			190	400	--	--	512	564	7	140
480	650	170	5	NNCF4996-VX	3350	8420			180	360	--	--	537	592	8	165



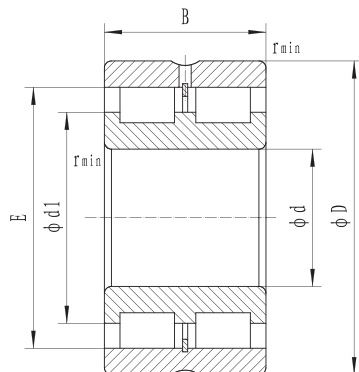
Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)			Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	r <sub>min</sub>		Dynamic C <sub>r</sub>	Static C <sub>or</sub>		Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	E	F	d <sub>1</sub>	D <sub>1</sub>	S	
500	670	170	5	<b>NNCF49/500-VX</b>	3350	8850		170	360	--	--	568	611	8	175
530	710	180	5	<b>NNCF49/530-VX</b>	3950	10200		160	340	--	--	588	648	8	200
25	47	30	0.6	<b>NNCF5005-VX</b>	59.5	64		3800	7000	42.51	--	34.5	39	1	0.23
30	55	34	1	<b>NNCF5006-VX</b>	77.8	83.5		3200	6000	45.3	--	40	45.3	1.5	0.35
35	62	36	1	<b>NNCF5007-VX</b>	95	107		2800	5300	51.3	--	44.9	51.2	1.5	0.46
40	68	38	1	<b>NNCF5008-VX</b>	112	134		2400	4800	57.2	--	50.5	57.2	1.5	0.56
45	75	40	1	<b>NNCF5009-VX</b>	121	149		2000	4300	62.5	--	55.3	62.6	1.5	0.71
50	80	40	1	<b>NNCF5010-VX</b>	150	189		1900	4000	67.6	--	59.1	67.6	1.5	0.76
55	90	46	1.1	<b>NNCF5011-VX</b>	207	275		1600	3400	78.7	--	68.5	78.7	1.5	1.16
60	95	46	1.1	<b>NNCF5012-VX</b>	211	285		1600	3400	86.74	--	71.7	81.9	1.5	1.24
65	100	46	1.1	<b>NNCF5013-VX</b>	220	316		1400	3000	93.09	--	78.1	88.3	1.5	1.32
70	110	54	1.1	<b>NNCF5014-VX</b>	266	350		1300	2800	100.28	--	81.5	95.7	3	1.85
75	115	54	1.1	<b>NNCF5015-VX</b>	274	386		1200	2600	107.9	--	89	102.9	3	1.93
80	125	60	1.1	<b>NNCF5016-VX</b>	290	440		1100	2400	116.99	--	95	111.7	3.5	2.59
85	130	60	1.1	<b>NNCF5017-VX</b>	310	470		1100	2400	121.44	--	99	116.1	3.5	2.72
90	140	67	1.5	<b>NNCF5018-VX</b>	355	550		1000	2200	130.11	--	106.1	124.5	4	3.62
100	150	67	1.5	<b>NNCF5020-VX</b>	375	600		950	2000	139.65	--	115.7	134	4	3.94
110	170	80	2	<b>NNCF5022-VX</b>	484	775		850	1800	156.13	--	127.3	149.3	5	6.32
120	180	80	2	<b>NNCF5024-VX</b>	515	850		800	1700	167.58	--	138.8	160.7	5	6.77
130	200	95	2	<b>NNCF5026-VX</b>	730	1200		700	1500	183.81	--	148.6	175.5	5	10.2
140	210	95	2	<b>NNCF5028-VX</b>	765	1330		670	1400	197.82	--	162.6	189.5	5	11.1
150	225	100	2	<b>NNCF5030-VX</b>	815	1400		630	1300	206.8	--	170	198	6	13.3
160	240	109	2.1	<b>NNCF5032-VX</b>	925	1600		600	1200	224.8	--	184.8	215.8	6	16.2
170	260	122	2.1	<b>NNCF5034-VX</b>	1200	2100		560	1100	243	--	198	232	6	22.5
180	280	136	2.1	<b>NNCF5036-VX</b>	1400	2500		560	1100	260.5	--	212.2	249.4	8	29.9
190	290	136	2.1	<b>NNCF5038-VX</b>	1420	2600		530	1000	270	--	221.8	259	8.2	31.3



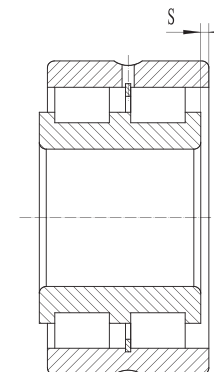
Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)				Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	r <sub>min</sub>		Dynamic C <sub>r</sub>	Static C <sub>0r</sub>			Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	E	F	d <sub>1</sub>	D <sub>1</sub>	S	
200	310	150	2.1	<b>NNCF5040-VX</b>	1650	3000			500	950	288	--	236.6	276.2	8.9	40.4
220	340	160	3	<b>NNCF5044-VX</b>	1950	3600			450	850	312.2	--	254.6	297.8	9	51.6
240	360	160	3	<b>NNCF5048-VX</b>	2000	4000			430	800	335.6	--	277.5	322.1	9	55.2
260	400	190	4	<b>NNCF5052-VX</b>	2750	5000			380	700	373.5	--	304	359.7	11.3	82.6
280	420	190	4	<b>NNCF5056-VX</b>	2800	5250			360	670	389	--	318.3	374.1	11.3	88
300	460	218	4	<b>NNCF5060-VX</b>	3400	6550			320	600	433	--	353.6	413.6	12.5	124
320	480	218	4	<b>NNCF5064-VX</b>	3500	6850			300	560	449	--	369.5	431.5	12.5	128.4
340	520	243	5	<b>NNCF5068-VX</b>	4200	8200			280	530	485	--	396	465.5	14.3	178
360	540	243	5	<b>NNCF5072-VX</b>	4350	8700			260	500	503	--	413.8	481	14	193
380	560	243	5	<b>NNCF5076-VX</b>	4400	8900			240	480	521	--	432	499	14.1	196.5
400	600	272	5	<b>NNCF5080-VX</b>	5400	10500			220	450	558	--	464	536	11	270
150	190	40	1.1	<b>NNCL4830-VX</b>	233	585			720	1500	178.3	--	165.1	--	2	2.8
160	200	40	1.1	<b>NNCL4832-VX</b>	242	620			680	1400	186.9	--	173.7	--	2	3
170	215	45	1.1	<b>NNCL4834-VX</b>	264	655			640	1300	201.3	--	186.3	--	3	3.95
180	225	45	1.1	<b>NNCL4836-VX</b>	270	695			610	1200	214.1	--	199.1	--	3	4.15
190	240	50	1.5	<b>NNCL4838-VX</b>	303	750			560	1150	225	--	207.6	--	4	5.45
200	250	50	1.5	<b>NNCL4840-VX</b>	325	800			550	1100	235.5	--	218.1	--	4	5.7
220	270	50	1.5	<b>NNCL4844-VX</b>	340	865			500	1000	256.5	--	239.1	--	4	6.2
240	300	60	2	<b>NNCL4848-VX</b>	510	1290			480	900	281.9	--	259.5	--	4	9.9
260	320	60	2	<b>NNCL4852-VX</b>	540	1400			430	820	304.2	--	281.8	--	4	10.6
280	350	69	2	<b>NNCL4856-VX</b>	700	1860			400	750	332.4	--	306.8	--	4	15.6
300	380	80	2.1	<b>NNCL4860-VX</b>	825	2120			380	700	356.7	--	327.9	--	6	22
60	85	25	1	<b>NNCL4912-VX</b>	76.5	134			1700	3400	77.51	--	70.3	--	1	0.47
70	100	30	1	<b>NNCL4914-VX</b>	105	185			1400	3000	91.87	--	82.5	--	1	0.75
80	110	30	1	<b>NNCL4916-VX</b>	112	216			1200	2600	100.78	--	91.4	--	1	0.85
90	125	35	1.1	<b>NNCL4918-VX</b>	155	295			1100	2300	115.2	--	103	--	1.5	1.3



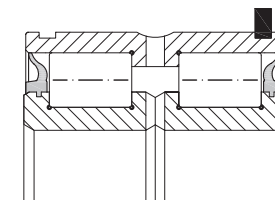
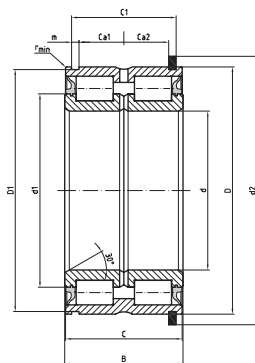




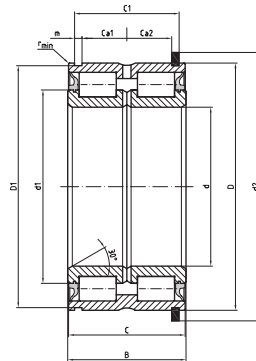
Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (N)		
d	D	B	r <sub>min</sub>		Dynamic C <sub>r</sub>	Static C <sub>0r</sub>	
100	140	40	1.1	<b>NNCL4920-VX</b>	195	375	
110	150	40	1.1	<b>NNCL4922-VX</b>	197	420	
120	165	45	1.1	<b>NNCL4924-VX</b>	225	445	
130	180	50	1.5	<b>NNCL4926-VX</b>	265	515	
140	190	50	1.5	<b>NNCL4928-VX</b>	275	560	
150	210	60	2	<b>NNCL4930-VX</b>	410	820	
160	220	60	2	<b>NNCL4932-VX</b>	430	890	
170	230	60	2	<b>NNCL4934-VX</b>	440	935	
180	250	69	2	<b>NNCL4936-VX</b>	575	1220	
190	260	69	2	<b>NNCL4938-VX</b>	585	1290	
200	280	80	2.1	<b>NNCL4940-VX</b>	685	1500	
220	300	80	2.1	<b>NNCL4944-VX</b>	720	1610	
240	320	80	2.1	<b>NNCL4948-VX</b>	745	1762	
260	360	100	2.1	<b>NNCL4952-VX</b>	1120	2520	
280	380	100	2.1	<b>NNCL4956-VX</b>	1120	2710	
300	420	118	3	<b>NNCL4960-VX</b>	1650	3750	
320	440	118	3	<b>NNCL4964-VX</b>	1710	4100	
340	460	118	3	<b>NNCL4968-VX</b>	1800	4390	
360	480	118	3	<b>NNCL4972-VX</b>	1800	4650	
380	520	140	4	<b>NNCL4976-VX</b>	2300	5550	
400	540	140	4	<b>NNCL4980-VX</b>	2350	5800	
420	560	140	4	<b>NNCL4984-VX</b>	2430	6000	
440	600	160	4	<b>NNCL4988-VX</b>	2990	7570	
460	620	160	4	<b>NNCL4992-VX</b>	3020	7770	
480	650	170	5	<b>NNCL4996-VX</b>	3350	8420	
500	670	170	5	<b>NNCL49 / 500-VX</b>	3350	8850	
530	710	180	5	<b>NNCL49 / 530-VX</b>	3950	10200	



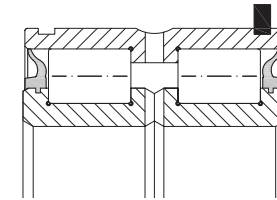
	Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)					Weight (kg)
	Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	E	F	d <sub>1</sub>	D <sub>1</sub>	S	
	950	2000	129.6	--	116.4	--	2	1.9
	900	1900	138.2	--	125	--	2	2.1
	800	1700	153.55	--	138.6	--	3	2.85
	750	1600	165.4	--	149.5	--	4	3.8
	700	1500	175.9	--	160	--	4	4.1
	680	1400	192.77	--	171.8	--	4	6.45
	650	1300	206.16	--	184.2	--	4	6.8
	600	1200	215.08	--	193.1	--	4	7.1
	570	1100	230.5	--	204.9	--	4	10.5
	550	1100	240.7	--	215	--	4	10.9
	530	1000	259.34	--	230.5	--	5	15.3
	500	950	276.52	--	248	--	5	16.7
	450	850	299.46	--	270.6	--	5	17.9
	400	750	331.33	--	294.5	--	6	31.2
	380	700	353.34	--	316.5	--	6	33.1
	340	650	385.51	--	340.7	--	6	51.9
	320	600	412.27	--	367.5	--	6	54.9
	300	560	430.11	--	385.3	--	6	57.8
	300	550	448	--	404	--	6	60.8
	260	500	481.4	--	430.2	--	7	90.5
	240	480	501.74	--	450.5	--	7	94.6
	220	450	--	--	470	--	7	99.5
	200	430	--	--	503	--	7	137
	190	400	--	--	512	--	7	140
	180	360	--	--	537	--	8	165
	170	360	--	--	568	--	8	175
	160	340	--	--	588	--	8	200



Principal Dimensions (mm)								Bearing Designations		Abutment And Fillet Dimensions (mm)				Basic Load Rating		Limiting Speed	Snap Ring	Retaining Ring To	Weight (kg)
d	D	B	C	C <sub>1</sub>	Ca <sub>1</sub>	Ca <sub>2</sub>	D <sub>1~</sub>			d <sub>1~</sub>	d <sub>2~</sub>	m	r (min)	dyn. C <sub>r</sub> (kN)	stat. C <sub>or</sub> (kN)	n <sub>G</sub> (min <sup>-1</sup> )	wre	DIN 471	
20	42	30	29	24.7	21.5	21	40.2	NNF 5004.A.2LS.V		31	47	1.8	0.3	40	49	4000	wre 42	42 × 1.75	0.20
25	47	30	29	24.7	21.5	21	45.2	NNF 5005.A.2LS.V		35.5	52	1.8	0.3	44	58	3600	wre 47	47 × 1.75	0.24
30	55	34	33	28.2	25	24	53	NNF 5006.A.2LS.V		41	60	2.1	0.3	50	67	3000	wre 55	55 × 2	0.37
35	62	36	35	30.2	27	26	60	NNF 5007.A.2LS.V		46.5	67	2.1	0.3	63	88	2600	wre 62	62 × 2	0.48
40	68	38	37	32.2	28	27	65.8	NNF 5008.A.2LS.V		51.5	75	2.7	0.6	76	103	2400	wre 68	68 × 2.5	0.56
45	75	40	39	34.2	30	29	72.8	NNF 5009.A.2LS.V		57.5	82	2.7	0.6	92	130	2200	wre 75	75 × 2.5	0.70
50	80	40	39	34.2	30	29	77.8	NNF 5010.A.2LS.V		62	87	2.7	0.6	97	142	2000	wre 80	80 × 2.5	0.76
55	90	46	45	40.2	35	34	87.4	NNF 5011.A.2LS.V		69	99	3.2	0.6	115	175.5	1800	wre 90	90 × 3	1.18
60	95	46	45	40.2	35	34	92.4	NNF 5012.A.2LS.V		74	104	3.2	0.6	120	189	1700	wre 95	95 × 3	1.26
65	100	46	45	40.2	35	34	97.4	NNF 5013.A.2LS.V		79	109	3.2	0.6	125	203	1600	wre 100	100 × 3	1.33
70	110	54	53	48.2	43	40	107.1	NNF 5014.A.2LS.V		85	119	4.2	0.6	168	265	1400	wre 110	110 × 4	1.87
75	115	54	53	48.2	43	40	112.1	NNF 5015.A.2LS.V		90	124	4.2	0.6	194	300	1400	wre 115	115 × 4	1.96
80	125	60	59	54.2	49	46	122.1	NNF 5016.A.2LS.V		97.5	137	4.2	0.6	203	325	1300	wre 125	125 × 4	2.71
85	130	60	59	54.2	49	46	127.1	NNF 5017.A.2LS.V		104.5	142	4.2	0.6	211	350	1200	wre 130	130 × 4	2.83
90	140	67	66	59.2	54	51	137	NNF 5018.A.2LS.V		109.5	152	4.2	0.6	305	510	1100	wre 140	140 × 4	3.71
95	145	67	66	59.2	54	51	142	NNF 5019.A.2LS.V		114	157	4.2	0.6	315	530	1100	wre 145	145 × 4	3.88
100	150	67	66	59.2	54	51	147	NNF 5020.A.2LS.V		118	162	4.2	0.6	330	550	1000	wre 150	150 × 4	3.95
110	170	80	79	70.2	65	62	167	NNF 5022.A.2LS.V		132	182	4.2	0.6	395	680	900	wre 170	170 × 4	6.57
120	180	80	79	71.2	65	63	176	NNF 5024.A.2LS.V		141.5	196	4.2	0.6	410	740	900	wre 180	180 × 4	7.04
130	200	95	94	83.2	77	75	196	NNF 5026.A.2LS.V		157	216	4.2	0.6	540	960	800	wre 200	200 × 4	10.50
140	210	95	94	83.2	77	73	206	NNF 5028.A.2LS.V		166	226	5.2	0.6	610	1100	750	wre 210	210 × 5	11.10
150	225	100	99	87.2	81	77	221	NNF 5030.A.2LS.V		176	245	5.2	0.6	710	1260	700	wre 225	225 × 5	13.30
160	240	109	108	95.2	89	85	236	NNF 5032.A.2LS.V		189.5	260	5.2	0.6	740	1360	650	wre 240	240 × 5	16.60
170	260	122	121	107.2	99	97	254	NNF 5034.A.2LS.V		201	282	5.2	0.6	960	1750	600	wre 260	260 × 5	22.60
180	280	136	135	118.2	110	108	274	NNF 5036.A.2LS.V		218.5	302	5.2	0.6	1140	2130	550	wre 280	280 × 5	30.10
190	290	136	135	118.2	110	108	284	NNF 5038.A.2LS.V		226	312	5.2	0.6	1160	2210	550	wre 290	290 × 5	31.50
200	310	150	149	128.2	120	116	304	NNF 5040.A.2LS.V		241.5	336	6.3	0.6	1350	2600	550	wre 310	310 × 6	40.80
220	340	160	159	138.2	130	126	334	NNF 5044.A.2LS.V		260.5	366	6.3	1	1570	3050	480	wre 340	340 × 6	52.50
240	360	160	159	138.2	130	126	354	NNF 5048.A.2LS.V		279.5	386	6.3	1	1630	3300	440	wre 360	360 × 6	56.00
260	400	190	189	162.2	154	150	394	NNF 5052.A.2LS.V		305.5	426	6.3	1.1	2380	4700	400	wre 400	400 × 6	84.50
280	420	190	189	163.2	154	149	413	NNF 5056 A-2LS.V		321.5	453	7.3	1.1	2600	5200	380	wre 420	420 × 7	90.00
300	460	218	216	185.2	176	171	453	NNF 5060 A-2LS.V		347.5	493	7.3	1.1	3000	5800	340	wre 460	460 × 7	126.00



Principal Dimensions (mm)								Bearing Designations
d	D	B	C	C <sub>1</sub>	Ca <sub>1</sub>	Ca <sub>2</sub>	D1~	
130	190	80	79	71.2	65	63	186	<b>NNF 130.A.2LS.V</b>
140	200	80	79	71.2	65	63	196	<b>NNF 140.A.2LS.V</b>
150	210	80	79	71.2	65	61	206	<b>NNF 150.A.2LS.V</b>
160	220	80	79	71.2	65	61	216	<b>NNF 160.A.2LS.V</b>
170	230	80	79	71.2	65	61	226	<b>NNF 170.A.2LS.V</b>
180	240	80	79	71.2	65	61	236	<b>NNF 180.A.2LS.V</b>
190	260	80	79	73.2	65	63	254	<b>NNF 190.A.2LS.V</b>
200	270	80	79	73.2	65	63	264	<b>NNF 200.A.2LS.V</b>
220	300	95	94	83.2	75	71	294	<b>NNF 220.A.2LS.V</b>
240	320	95	94	83.2	75	71	314	<b>NNF 240.A.2LS.V</b>
260	340	95	94	83.2	75	71	334	<b>NNF 260.A.2LS.V</b>



Abutment And Fillet Dimensions (mm)				Basic Load Rating		Limiting Speed	Snap Ring	Retaining Ring to	Weight (kg)
d <sub>1~</sub>	d <sub>2~</sub>	m	r (min)	dyn. C <sub>r</sub> (kN)	stat. C <sub>0r</sub> (kN)	n <sub>G</sub> (min-1)	wre	DIN 471	
150.55	160	4.2	0.6	432	795	810	wre 190	190 × 4	7.50
159.95	170	4.2	0.6	445	842	755	wre 200	200 × 4	8.00
174.4	185	5.2	0.6	464	918	710	wre 210	210 × 5	8.40
184.05	196	5.2	0.6	485	973	702	wre 230	230 × 5	8.80
193.9	206	5.2	0.6	492	1034	660	wre 230	230 × 5	9.30
203.1	216	5.2	0.6	501	1082	610	wre 240	240 × 5	9.80
217.55	231	5.2	0.6	523	1135	560	wre 260	260 × 5	12.70
227.15	241	5.2	0.6	545	1215	550	wre 270	270 × 5	13.20
248.7	264	5.2	1	708	1555	485	wre 300	300 × 5	19.50
271.7	287	6.3	1	745	1710	480	wre 320	320 × 6	21.00
292.7	310	6.3	1	842	1995	445	wre 340	340 × 6	22.50

**Typical designs of Four-Row Cylindrical Roller Bearings**

**Cylindrical Bores**

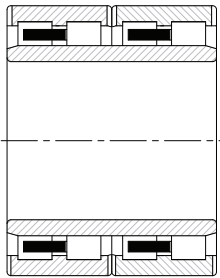


Figure 1

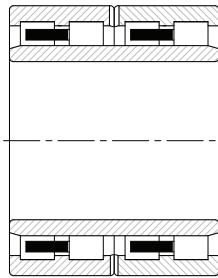


Figure 2

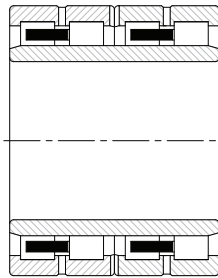


Figure 3

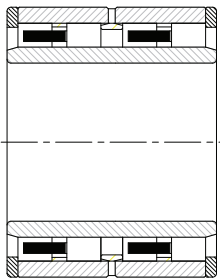


Figure 4

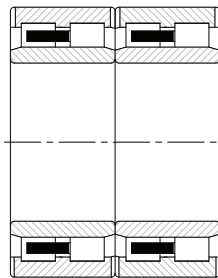


Figure 5

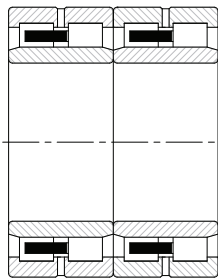


Figure 6

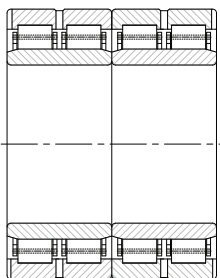


Figure 7

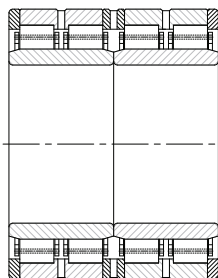


Figure 8

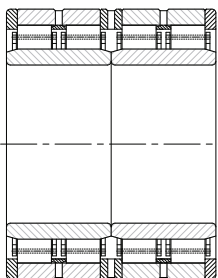


Figure 9

**Tapered Bores**

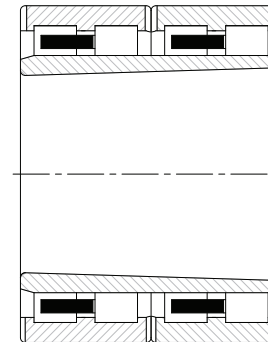


Figure 10

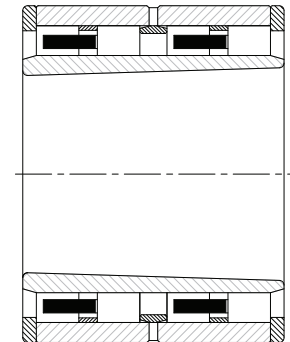


Figure 11

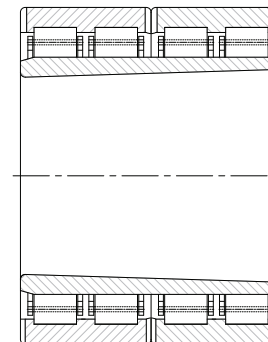


Figure 12

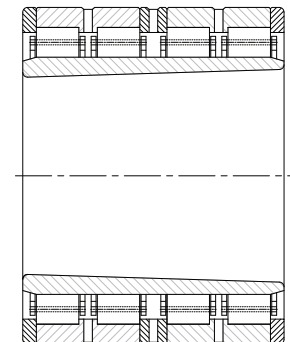
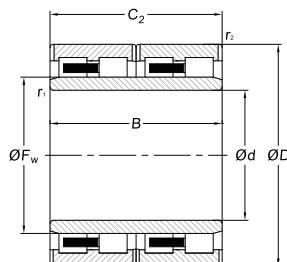


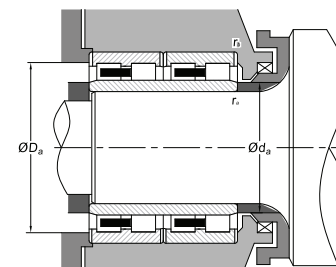
Figure 13



Cylindrical Bore  
d: 100.000~180.000mm



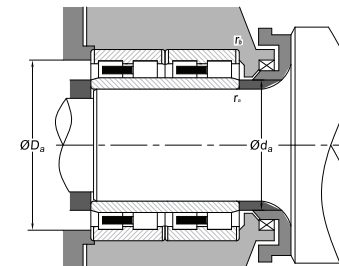
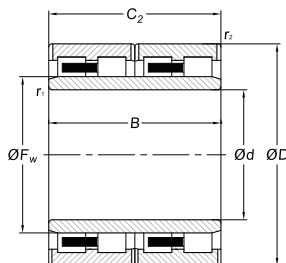
Principal Dimensions (mm)							Bearing Designations	Design①	Basic Load Ratings (kN)		Abutment and Fillet Dimensions (mm)				Weight (kg)
d	D	B	C <sub>2</sub>	F <sub>w</sub>	r <sub>1</sub> (min)	r <sub>2</sub> (min)			Dynamic C <sub>r</sub>	Static C <sub>or</sub>	d <sub>a</sub> (min)	D <sub>a</sub> (max)	r <sub>a</sub> (max)	r <sub>b</sub> (max)	
100	140	104	104	111	1.5	1.1	100RV1401	3	400	820	110	130	1.5	1.0	4.8
110	170	120	120	127	2.0	2.0	110RV1701	1	615	1100	122	157	2.0	2.0	9.9
120	165	87	87	134.5	1.1	1.1	120RV1601	1	365	725	130	155	1.0	1.0	5.4
	180	105	105	136	2.0	2.0	120RV1801	1	530	880	132	167	2.0	2.0	8.9
	215	174	174	147	2.1	2.1	120RV2101	1	1060	1600	134	199	2.0	2.0	26.6
127	174.625	150.812	150.812	139.5	1.5	1.5	127RV1722	1	735	1580	138	163	1.5	1.5	10.5
	203.2	127	127	147.5	2.0	2.0	127RV2001	1	705	1110	139	190	2.0	2.0	15.4
130	200	125	125	149	2.0	2.0	130RV2001	1	700	1190	142	187	2.0	2.0	14.0
	200	104	104	149	2.0	2.0	130RV2003	1	570	950	142	187	2.0	2.0	11.7
140	210	116	116	160	2.0	2.0	140RV2101	1	640	1130	152	196	2.0	2.0	13.9
145	210	155	155	166	1.5	1.5	145RV2101	1	925	1920	157	197	1.5	1.5	17.8
	225	156	156	169	2.0	2.0	145RV2201	1	975	1820	158	211	2.0	2.0	23.0
150	220	150	150	168	2.0	2.0	150RV2201	1	900	1700	163	206	2.0	2.0	20.0
	225	150	150	168.5	1.5	2.1	150RV2203	1	970	1810	162	209	1.5	2.0	20.8
	225	136	136	168.776	2.1	2.1	150RV2204	1	820	1460	165	209	2.0	2.0	18.6
	230	130	130	174	2.1	2.1	150RV2301	1	845	1520	165	214	2.0	2.0	19.6
	230	156	156	174	2.0	2.0	150RV2302	1	965	1810	163	216	2.0	2.0	23.6
159.990	220	180	180	176	2.0	2.0	159RV2201	2	1050	2410	173	206	2.0	2.0	20.6
160	230	130	130	178	2.0	2.0	160RV2301	1	780	1340	173	216	2.0	2.0	16.4
	230	168	168	180	2.0	2.0	160RV2302	1	1040	2200	173	216	2.0	2.0	22.7
	230	180	180	178	2.0	2.0	160RV2303	2	1080	2280	173	216	2.0	2.0	24.2
	240	120	120	183	2.1	2.1	160RV2401	1	745	1320	175	224	2.0	2.0	18.8
	240	170	170	183	2.0	2.0	160RV2402	1	1080	2050	173	226	2.0	2.0	26.6
170	240	145	145	180.016	2.1	2.1	160RV2403	1	920	1600	175	224	2.0	2.0	22.3
	230	120	120	187	2.0	2.0	170RV2301	1	755	1610	183	216	2.0	2.0	14.0
	240	160	160	190	2.0	2.0	170RV2402	1	1000	2130	183	226	2.0	2.0	22.8
	250	168	168	192	2.1	2.1	170RV2501	1	1210	2320	185	234	2.0	2.0	27.4
	250	170	170	192	2.1	2.1	170RV2502	1	1210	2320	185	234	2.0	2.0	27.7
	255	180	180	193	2.1	2.1	170RV2503	1	1310	2500	185	239	2.0	2.0	31.5
180	260	150	150	195	2.1	2.1	170RV2602	1	1030	1840	185	244	2.0	2.0	28.2
	250	156	156	200	2.0	2.0	180RV2501	1	1020	2230	193	236	2.0	2.0	23.4
	260	168	168	202	2.1	2.1	180RV2601	1	1150	2300	195	244	2.0	2.0	29.2
	265	180	180	203	2.1	2.1	180RV2603	1	1230	2420	195	248	2.0	2.0	33.4



Note: ① Designs refer to pages E54 and E55.

Cylindrical Bore

d: 180.000~270.000mm

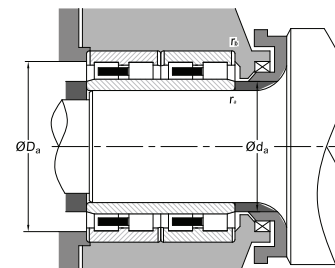
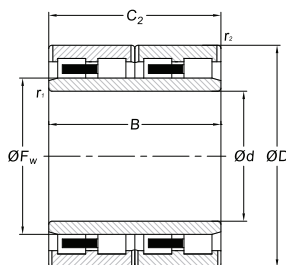


Principal Dimensions (mm)							Bearing Designations	Design ①	Basic Load Ratings (kN)		Abutment and Fillet Dimensions (mm)				Weight (kg)
d	D	B	C <sub>2</sub>	F <sub>w</sub>	r <sub>1</sub> (min)	r <sub>2</sub> (min)			Dynamic C <sub>r</sub>	Static C <sub>0r</sub>	d <sub>a</sub> (min)	D <sub>a</sub> (max)	r <sub>a</sub> (max)	r <sub>b</sub> (max)	
180	280	180	180	205.085	2.1	2.1	<b>180RV2802</b>	3	1410	2490	195	263	2.0	2.0	40.9
190	260	168	168	212	2.0	2.0	<b>190RV2601</b>	1	1140	2600	203	245	2.0	2.0	26.6
	270	200	200	212	2.1	2.1	<b>190RV2701</b>	1	1470	3100	206	253	2.0	2.0	36.0
	270	170	170	213	2.1	2.1	<b>190RV2702</b>	1	1290	2610	206	253	2.0	2.0	30.4
	270	170	170	212	2.0	2.0	<b>190RV2703</b>	1	1290	2610	203	255	2.0	2.0	30.6
	280	200	200	214	2.1	2.1	<b>190RV2801</b>	1	1480	2920	206	263	2.0	2.0	41.3
200	250	200	200	215	1.0	1.0	<b>200RV2521</b>	1	900	2500	210	240	1.0	1.0	22.3
	280	200	200	224	2.1	2.1	<b>200RV2801</b>	1	1410	3200	216	263	2.0	2.0	38.3
	280	200	200	222	2.1	2.1	<b>200RV2802</b>	1	1410	3200	216	263	2.0	2.0	38.6
	280	190	190	223	2.1	2.1	<b>200RV2803</b>	1	1350	3050	216	263	2.0	2.0	36.4
	280	170	170	223	2.1	2.1	<b>200RV2804</b>	1	1150	2460	216	263	2.0	2.0	32.3
	290	192	192	226	2.1	2.1	<b>200RV2901</b>	1	1420	3000	216	273	2.0	2.0	42.3
	310	230	230	229	2.1	2.1	<b>200RV3102</b>	1	1840	3500	216	293	2.0	2.0	63.7
	320	216	216	231	3.0	3.0	<b>200RV3231</b>	4	2120	3900	218	300	2.5	2.5	69.9
210	290	192	192	236	2.1	2.1	<b>210RV2901</b>	1	1400	3350	226	273	2.0	2.0	39.0
219.954	310	183	183	244.5	1.5	1.0	<b>219RV3131</b>	4	1480	3150	233	298	1.5	1.0	45.3
220	310	192	192	247	2.1	2.1	<b>220RV3101</b>	1	1540	3450	236	293	2.0	2.0	46.1
	310	225	225	245	2.1	2.1	<b>220RV3102</b>	1	1740	3900	236	293	2.0	2.0	52.9
	320	210	210	248	2.1	2.1	<b>220RV3201</b>	1	1790	3650	236	302	2.0	2.0	56.0
	320	210	210	246	2.1	2.1	<b>220RV3203</b>	1	1900	3750	236	302	2.0	2.0	57.0
222.250	320.675	241.3	241.3	251	2.1	2.1	<b>222RV3201</b>	2	1990	4350	238	303	2.0	2.0	65.0
230	330	206	206	260	2.1	2.1	<b>230RV3301</b>	1	1760	3900	246	312	2.0	2.0	58.2
	340	260	260	261	3.0	3.0	<b>230RV3401</b>	1	2390	5100	248	320	2.5	2.5	81.0
	365	250	250	266	3.0	3.0	<b>230RV3601</b>	5	2310	4300	248	344	2.5	2.5	98.3
240	330	220	220	270	3.0	3.0	<b>240RV3301</b>	1	1770	4400	259	310	2.5	2.5	57.7
	340	220	220	268	3.0	3.0	<b>240RV3403</b>	1	1890	3900	259	320	2.5	2.5	61.7
	360	220	220	272	3.0	3.0	<b>240RV3601</b>	2	2250	4350	259	340	2.5	2.5	77.8
250	350	220	220	278	3.0	3.0	<b>250RV3501</b>	1	1930	4200	269	330	2.5	2.5	64.8
259.948	368	218	218	290	2.1	1.1	<b>259RV3631</b>	4	2010	4350	277	354	2.0	1.0	76.7
260	355	260	260	286	2.1	2.1	<b>260RV3521</b>	5	2090	5000	277	337	2.0	2.0	74.5
	370	220	220	292	3.0	3.0	<b>260RV3701</b>	1	2050	4450	279	349	2.5	2.5	76.0
	380	280	280	294	3.0	3.0	<b>260RV3801</b>	1	2820	6250	279	359	2.5	2.5	107.0
	400	290	290	296	4.0	4.0	<b>260RV4001</b>	1	3250	6350	282	376	3.0	3.0	133.0
270	380	230	230	298	2.1	2.1	<b>270RV3801</b>	1	2330	5050	287	361	2.0	2.0	83.0

Note: ① Designs refer to pages E54 and E55.

Cylindrical Bore

d: 280.000~380.000mm

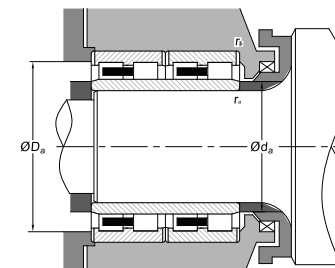
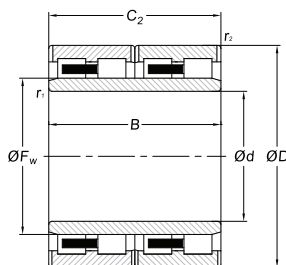


Principal Dimensions (mm)							Bearing Designations	Design ①	Basic Load Ratings (kN)		Abutment and Fillet Dimensions (mm)				Weight (kg)
d	D	B	C <sub>2</sub>	F <sub>w</sub>	r <sub>1</sub> (min)	r <sub>2</sub> (min)			Dynamic C <sub>r</sub>	Static C <sub>0r</sub>	d <sub>a</sub> (min)	D <sub>a</sub> (max)	r <sub>a</sub> (max)	r <sub>b</sub> (max)	
280	390	220	220	312	3.0	3.0	<b>280RV3901</b>	1	2120	4800	299	369	2.5	2.5	80.9
	390	240	240	312	3.0	3.0	<b>280RV3902</b>	1	2360	5500	299	369	2.5	2.5	88.5
	390	275	275	308	3.0	1.1	<b>280RV3903</b>	1	2860	6450	299	375	2.5	1.0	100.0
	400	285	285	316	3.0	3.0	<b>280RV4021</b>	5	3000	6950	299	379	2.5	2.5	117.0
290	390	234	234	320	3.0	3.0	<b>290RV3901</b>	1	2270	5600	310	369	2.5	2.5	79.7
	410	240	240	320	3.0	3.0	<b>290RV4101</b>	1	2570	5450	310	389	2.5	2.5	99.0
	420	300	300	327	3.0	3.0	<b>290RV4201</b>	1	3300	7500	310	398	2.5	2.5	138.0
300	400	300	300	328	2.0	2.0	<b>300RV4021</b>	5	2720	6900	316	383	2.0	2.0	103.0
	420	240	240	332	3.0	3.0	<b>300RV4201</b>	1	2670	5750	320	398	2.5	2.5	101.0
	420	300	300	332	2.0	2.0	<b>300RV4221</b>	5	3200	7200	316	402	2.0	2.0	128.0
310	420	300	300	338	3.0	3.0	<b>310RV4201</b>	1	3300	8050	330	398	2.5	2.5	119.0
	430	240	240	344.5	3.0	3.0	<b>310RV4301</b>	1	2610	5950	330	408	2.5	2.5	107.0
320	450	240	240	358	3.0	3.0	<b>320RV4501</b>	1	2760	6150	340	428	2.5	2.5	120.0
	480	350	350	364	4.0	1.5	<b>320RV4811</b>	8	4850	10500	343	462	3.0	1.5	232.0
330	430	230	230	358	3.0	3.0	<b>330RV4301</b>	1	2340	5850	350	408	2.5	2.5	86.3
	440	200	200	360	3.0	3.0	<b>330RV4401</b>	3	2160	4750	350	418	2.5	2.5	83.8
	460	340	340	365	4.0	4.0	<b>330RV4601</b>	1	3550	8650	353	435	3.0	3.0	174.0
340	450	250	250	371	3.0	3.0	<b>340RV4501</b>	1	2720	6750	361	428	2.5	2.5	108.0
	450	250	250	368	3.0	3.0	<b>340RV4502</b>	3	2720	6750	361	428	2.5	2.5	108.0
	480	350	350	378	4.0	4.0	<b>340RV4801</b>	1	4050	9400	364	454	3.0	3.0	198.0
345	480	350	350	376	3.0	3.0	<b>345RV4821</b>	6	4400	10300	366	457	2.5	2.5	190.0
360	480	290	290	394	3.0	3.0	<b>360RV4801</b>	1	3250	8300	381	457	2.5	2.5	146.0
	510	370	370	400	4.0	4.0	<b>360RV5101</b>	1	4500	10100	384	484	3.0	3.0	234.0
370	480	250	250	401	3.0	3.0	<b>370RV4801</b>	1	2830	7350	391	457	2.5	2.5	116.0
	520	380	380	409	4.0	2.0	<b>370RV5211</b>	1	6000	14400	394	500	3.0	2.0	263.0
	540	400	400	415	4.0	4.0	<b>370RV5401</b>	1	5250	12000	394	513	3.0	3.0	311.0
380	500	290	290	414	3.0	3.0	<b>380RV5001</b>	1	3350	8800	401	477	2.5	2.5	153.0
	520	290	290	418	4.0	4.0	<b>380RV5201</b>	1	3750	8850	404	493	3.0	3.0	181.0
	520	280	280	417	4.0	4.0	<b>380RV5202</b>	1	3650	8450	404	493	3.0	3.0	174.0
	540	340	340	424	5.0	5.0	<b>380RV5431</b>	4	4700	10900	408	509	4.0	4.0	259.0
	540	400	400	424	5.0	5.0	<b>380RV5401</b>	3	5050	12000	408	509	4.0	4.0	280.0
	540	400	400	422	5.0	2.0	<b>380RV5411</b>	8	6000	14400	408	520	4.0	2.0	305.0
	540	400	380	424	5.0	2.0	<b>380RV5412</b>	1	5750	13800	408	520	4.0	2.0	294.0

Note: ① Designs refer to pages E54 and E55.

# Cylindrical Bore

d: 390.000~500.000mm

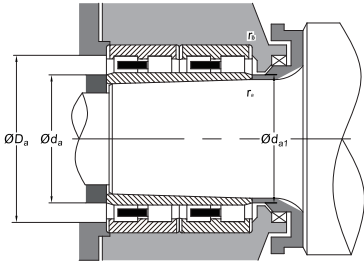
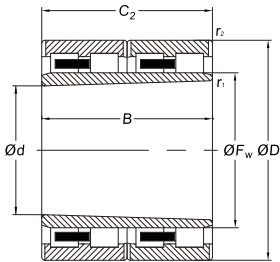


Principal Dimensions (mm)							Bearing Designations	Design①	Basic Load Ratings (kN)		Abutment and Fillet Dimensions (mm)				Weight (kg)
d	D	B	C <sub>2</sub>	F <sub>w</sub>	r <sub>1</sub> (min)	r <sub>2</sub> (min)			Dynamic C <sub>r</sub>	Static C <sub>0r</sub>	d <sub>a</sub> (min)	D <sub>a</sub> (max)	r <sub>a</sub> (max)	r <sub>b</sub> (max)	
390	510	290	290	424	3.0	3.0	390RV5101	1	3400	9000	412	487	2.5	2.5	156.0
	550	400	400	434	5.0	5.0	390RV5521	6	5150	12400	419	519	4.0	4.0	303.0
400	520	250	250	432	4.0	4.0	400RV5202	3	3000	7700	425	493	3.0	3.0	136.0
	550	300	300	441	4.0	4.0	400RV5501	1	4150	9750	425	523	3.0	3.0	212.0
	560	400	400	446	5.0	5.0	400RV5612	8	5650	13600	429	529	4.0	4.0	308.0
	560	410	410	445	5.0	2.0	400RV5613	8M	6550	16500	429	539	4.0	2.0	315.0
	560	400	400	446	5.0	5.0	400RV5621	6	4750	11300	429	529	4.0	4.0	304.0
	560	410	410	445	5.0	2.0	400RV5611	8	6550	16500	429	539	4.0	2.0	315.0
406.400	609.6	304.8	304.8	460	5.0	5.0	406RV6001	1	4650	9150	435	577	4.0	4.0	307.0
410	600	440	440	460	5.0	5.0	410RV6011	8	7350	16600	439	568	4.0	4.0	438.0
420	560	280	280	457	4.0	4.0	420RV5601	1	3800	9250	445	533	3.0	3.0	190.0
	560	400	400	458	4.0	4.0	420RV5602	6	4950	13000	445	533	3.0	3.0	270.0
	600	440	440	470	5.0	2.0	420RV6011	8	7100	17200	449	579	4.0	2.0	419.0
430	591	420	420	476	4.0	4.0	430RV5921	5	5200	13400	455	563	3.0	3.0	347.0
440	620	450	450	487	5.0	5.0	440RV6213	8	7350	17800	470	588	4.0	4.0	430.0
	620	450	450	490	4.0	4.0	440RV6221	5	7450	19000	466	591	3.0	3.0	430.0
450	630	450	450	500	4.0	4.0	450RV6321	5	6950	17500	476	601	3.0	3.0	440.0
460	620	400	400	506	4.0	4.0	460RV6201	1	5500	14700	486	591	3.0	3.0	347.0
	620	400	400	502	4.0	4.0	460RV6211	8	6400	16600	486	591	3.0	3.0	358.0
	620	460	460	502	4.0	4.0	460RV6212	8M	7100	19100	486	591	3.0	3.0	412.0
	650	470	470	509	6.0	3.0	460RV6511	8	8400	20900	496	624	5.0	2.5	514.0
	670	500	500	522	6.0	6.0	460RV6721	7	8900	22700	496	631	5.0	5.0	596.0
480	680	500	500	534	5.0	5.0	480RV6801	7	9000	23100	510	646	4.0	4.0	610.0
	680	500	500	534	5.0	5.0	480RV6811	8	9000	23100	510	646	4.0	4.0	610.0
	700	400	400	538	6.0	6.0	480RV7031	9	7650	17400	517	660	5.0	5.0	538.0
500	670	450	450	540	5.0	5.0	500RV6712	8	8300	22300	531	637	4.0	4.0	464.0
	680	420	405	550	5.0	5.0	500RV6812	8	6700	17600	531	646	4.0	4.0	451.0
	690	510	510	550	5.0	5.0	500RV6913	8M	8850	23900	531	656	4.0	4.0	580.0
	690	510	510	552	5.0	5.0	500RV6921	7	9000	24600	531	656	4.0	4.0	580.0
	700	515	515	554	5.0	5.0	500RV7021	7	9100	23800	531	666	4.0	4.0	622.0
	710	480	480	558	5.0	5.0	500RV7111	8	8500	21200	531	676	4.0	4.0	632.0
	720	530	530	560	6.0	6.0	500RV7211	8	9950	25300	537	680	5.0	5.0	782.0

Note: ① Designs refer to pages E54 and E55.  
The letter "M" indicates bearing for oil mist lubrication.



Tapered Bore  
d: 110.417~633.333mm



Principal Dimensions (mm)							Bearing Designations		Design①	Basic Load Ratings (kN)		Abutment and Fillet Dimensions (mm)					Weight (kg)
d	D	B	C <sub>2</sub>	F <sub>w</sub>	r <sub>1</sub> (min)	r <sub>2</sub> (min)				Dynamic C <sub>r</sub>	Static C <sub>0r</sub>	d <sub>a</sub> (min)	d <sub>a1</sub> (min)	D <sub>a</sub> (max)	r <sub>a</sub> (max)	r <sub>b</sub> (max)	
110.417	180	115	115	136	1.0	1.0	120RVK1801		10	490	840	118	128	171	1.0	1.0	10.0
151.500	230	168	168	180	1.0	1.0	165RVK2331		11	1040	2170	160	174	220	1.0	1.0	23.5
179.750	260	175	168	212	1.1	2.0	193RVK2602		10	1140	2600	190	205	245	1.0	2.0	25.1
180	260	175	168	212	1.1	2.0	194RVK2602		10	1140	2600	191	206	245	1.0	2.0	25.0
181.500	260	168	168	209	1.0	2.0	195RVK2602		10	1140	2600	191	205	245	1.0	2.0	24.2
235.367	360	268	268	278	1.5	1.5	257RVK3631		11	2770	6000	249	272	344	1.5	1.5	92.9
266.250	400	285	285	312	2.0	2.0	290RVK4031		11	3200	7500	281	305	383	2.0	2.0	118.0
356.667	550	400	400	434	5.0	5.0	390RVK5531		12	5450	13300	385	419	519	4.0	4.0	328.0
	550	400	400	431.9	3.0	2.5	390RVK5532		12	5450	13300	378	412	527	2.5	2.0	328.0
412.335	650	488	488	494.5	3.0	4.0	453RVK6521		12	8900	21100	434	476	621	2.5	3.0	603.0
485	740	540	540	580	5.0	5.0	530RVK7431		13	10100	26800	516	561	705	4.0	4.0	823.0
633.333	960	680	680	745.8	7.5	7.5	690RVK9632		13	18100	47000	679	737	909	6.0	6.0	1720.0

Note: ① Designs refer to pages E54 and E55.