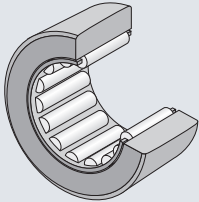
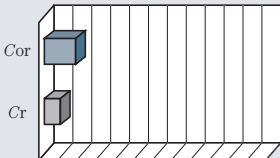
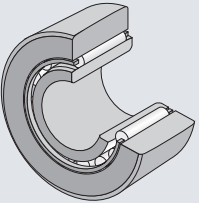
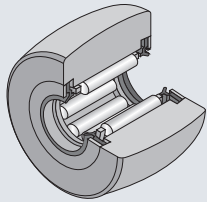
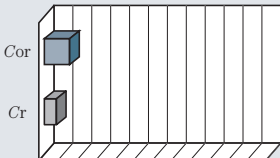
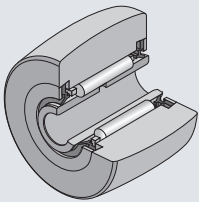
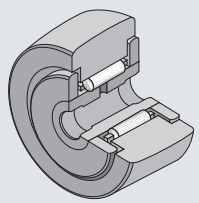
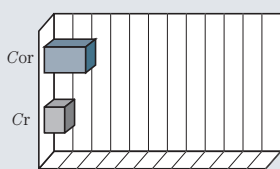
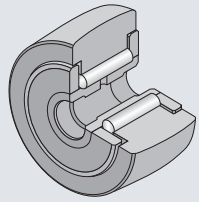
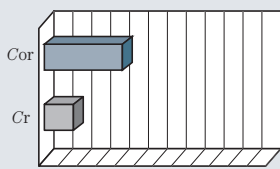
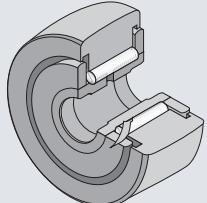
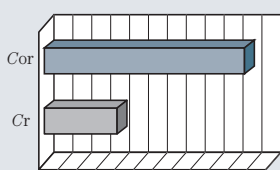


Roller Followers (Yoke Type Track Rollers)

NTN Yoke Type Track Rollers are the rolling mechanisms whose outer ring rolls on a track. For example, these track rollers are applied to eccentric roller, guide roller, rocker arm roller, cam roller and pressure roller. For that, the outer ring is designed to a wall thickness so as to be resistible to high load and shock

load. Both spherical outer surface (rolling surface) and cylindrical outer surface are available for the outer ring. The spherical outer ring can withstand edge-load acting on the contact surface between the track and the track roller, while the cylindrical outer ring (Tail code: **X**) has track load capacity greater than the spherical outer ring.

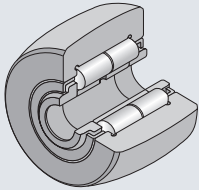
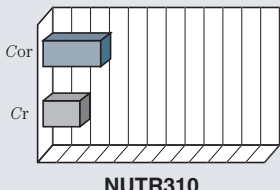
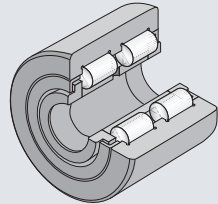
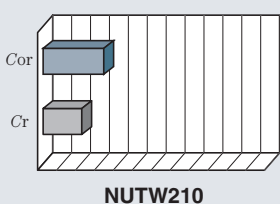
Bearing type	Applicable shaft diameter (mm)	Load capacity	Composition of bearing number
RNAB2 	$\phi 7 - \phi 60$	 NAB210	RNAB 2 02 Dimension code Dimension series code Type code
NAB2 	$\phi 6 - \phi 50$		NAB 2 06 X Suffix Dimension code Dimension series code Type code
RNA22 	$\phi 10 - \phi 58$	 NA2210LL	RNA 22 / 6 LL / 3AS Suffix LL: Seal 3AS: Grease Dimension code Dimension series code Type code
NA22 	$\phi 6 - \phi 50$		NA 22 06 X LL / 3AS Suffix X: Cylinder outer diameter LL: Seal 3AS: Grease Dimension code Dimension series code Type code
NATR 	$\phi 5 - \phi 50$	 NATR50	NATR 30 X LL / 3AS Suffix X: Cylinder outer diameter LL: Seal 3AS: Grease Dimension code Type code
NATV 	$\phi 5 - \phi 50$	 NATV50	NATV 25 LL / 3AS Suffix LL: Seal 3AS: Grease Dimension code Type code
NACV 	$\phi 6.35 - \phi 57.15$	 NACV80	NACV 32 X LL / 3AS Suffix X: Cylinder outer diameter LL: Seal 3AS: Grease Dimension code Type code

Listed load capacity values are based on basic bearing bore diameter of $\phi 50$ ($\phi 44.45$ for Type NACV).

Continued onto next page→

Track roller components	Features
Inscribed circle diameter: $\phi 20$ Type with cage Inner ring: w/o inner ring Outer profile: Spherical	<ul style="list-style-type: none"> ● Inner ring (NAB2 type only) is separable from outer ring, needle rollers, and cage. ● The cage guides needle rollers. ● Use a shaft (pin) with a flange or a thrust washer to guide the outer ring. ● The accuracy and hardness of the shaft (pin) impact the performance of the RNAB2 type without inner ring. Please refer to the sections "Raceway surface accuracy" and "Material and hardness of raceway surface" (Page A-40).
Inscribed circle diameter: $\phi 30$ Type with cage Inner ring: w/ inner ring Outer profile: Cylindrical	
Inscribed circle diameter: $\phi 6$ Type with cage Inner ring: w/o inner ring Outer profile: Spherical Seal: w/ seal Grease: Prefilled	<ul style="list-style-type: none"> ● The needle rollers and the cage are retained in the outer ring by a steel-plate-reinforced synthetic rubber seal. ● The cage guides needle rollers. ● Use a shaft (pin) with a flange or a thrust washer to guide the outer ring. ● The accuracy and hardness of the shaft (pin) impact the performance of the RNA22 type without inner ring. Please refer to the sections "Raceway surface accuracy" and "Material and hardness of raceway surface" (Page A-40).
Inscribed circle diameter: $\phi 30$ Type with cage Inner ring: w/ inner ring Outer profile: Cylindrical Seal: w/ seal Grease: Prefilled	
Inscribed circle diameter: $\phi 30$ Type with cage Outer profile: Cylindrical Seal: w/ seal Grease: Prefilled	<ul style="list-style-type: none"> ● Needle rollers guided by cage. ● Outer ring is guided in axial direction by thrust washer press-fit into inner ring. ● Labyrinth is formed between the outer ring and the thrust washer.
Inscribed circle diameter: $\phi 25$ Full complement roller type Outer profile: Spherical Seal: w/ seal Grease: Prefilled	<ul style="list-style-type: none"> ● Outer ring is guided in axial direction by thrust washer press-fit into inner ring. ● High load rating due to the full complement of needle rollers. ● Lower allowable running speed than bearing with cage. ● Labyrinth is formed between the outer ring and the thrust washer.
Inscribed circle diameter: $\phi 15.875$ Full complement roller type Outer profile: Cylindrical Seal: w/ seal Grease: Prefilled	

Continued from previous page

Bearing type	Applicable shaft diameter (mm)	Load capacity	Composition of bearing number
 <p>NUTR</p>	$\phi 15 - \phi 50$	 <p>NUTR310</p>	<p>NUTR 3 10 / 3AS</p> <ul style="list-style-type: none"> Suffix: 3AS: Grease Dimension code: 10 Dimension series code: 3 Type code: NUTR
 <p>NUTW</p>	$\phi 15 - \phi 50$	 <p>NUTW210</p>	<p>NUTW 2 05 X / 3AS</p> <ul style="list-style-type: none"> Suffix: X: Cylinder outer diameter, 3AS: Grease Dimension code: 05 Dimension series code: 2 Type code: NUTW

Bearing Tolerances

The dimensional accuracy, and profile accuracy and running accuracy about the bearing bore diameter (d), cylindrical roller outside diameter (D), outer ring width (C), and inner ring width (B) of the **Types NAB2 and NA22** are as listed in **Table 4.3** in Sec. 4 “**Bearing accuracy**” (page A-26) (JIS Accuracy Class 0). The accuracies, and tolerances of assembled inner ring width (B), and spherical outside surface diameter (D) of the Type NACV, as well as the dimensional tolerances of roller set bore diameter (F_w) of the **Types RNAB2 and RNA22** are listed in the relevant dimension table.

and the end face of side plate in precise contact with one another.

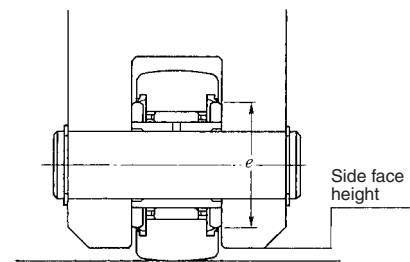


Fig.1

Radial internal clearance and bearing fits

The tolerance class of a shaft to which a bearing having inner ring is installed shall be g6 (h6): when the shaft is directly used as a raceway surface (Types **RNAB2** and **RNA22**), the tolerance class of the shaft shall be k5 (k6). In general, the outer ring is not fitted in a housing. Mounting relations

- (2) Where the roller follower is mounted, locate the inner ring oil hole within the non-load area (load free side). (**Fig. 2**)
If the oil hole locates within the load area, it would cause shorter life.

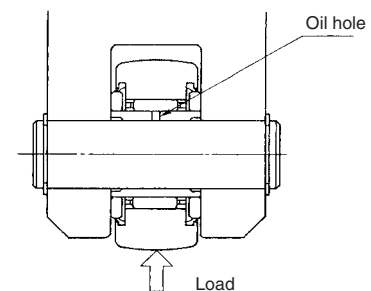


Fig.2

Table 1 Radial internal clearance

Unit: μm

Nominal roller inscribed circle dia. F_w (mm)	Clearance							
	C2		Ordinary		C3		C4	
over Incl.	min	max	min	max	min	max	min	max
3 6	0	10	3	17	15	30	20	40
6 10	0	12	5	20	15	30	25	45
10 18	0	15	5	25	15	35	30	55
18 30	0	20	10	30	20	40	40	65
30 50	0	25	10	40	25	55	50	80
50 80	0	30	15	50	30	65	60	100
80 100	0	35	20	55	35	75	70	115

Installation

- (1) The side face height in the roller follower mount must be made larger than “ e ” dimension described in applicable Dimensions Table. (**Fig.1**) In mounting, chamfer the mounting surface at R as small as possible (around $0.5 \times 45^\circ$) and bring the inner ring

- (3) The **Types RNAB2, NAB2, RNA22** and **NA22** feature separable configuration. Their outer ring is guided by a flange or thrust washer mounted onto the shaft (pin). Therefore, the guide surface needs to be finished at quality better than that obtained from turning; also, burrs must be thoroughly removed to achieve much smoother surface. Therefore, the guide surface must be finished more precisely than by lathe-turning and deburred completely for surface

Track roller components	Features
Inscribed circle diameter : $\phi 50$ Double-row cylindrical Full-complement roller type Labyrinth seal Outer profile spherical Grease: Prefilled	<ul style="list-style-type: none"> • High load rating, best-suited to applications subjected to high load and shock load. • A steel plate is press-fit into the outer ring to form a labyrinth with the side plates on both sides of the inner ring, and the side plates are held so as not to separate from one another and make a good seal. • The inner ring and the side plates are tightened together in axial direction to prevent axial movement. • The outer ring is guided in axial direction by the outer ring ribs and the end faces of cylindrical rollers. Type NUTW provides the following additional features. • The highest load rating of all roller follower types. • Due to the outer ring with inner rib, this type is good for axial and moment loads and runs smoothly depending on actual operating conditions. • Good lubrication and longer life can be expected due to increase grease fill volume.
Inscribed circle diameter : $\phi 25$ Double-row cylindrical Full-complement roller type with center rib Labyrinth seal Outer profile : spherical Grease: Prefilled	

smoothing. In addition, when the guide surface is not hardened the outer ring must be guided at A -dimension shown in Fig.3. When it is hardened, even a little smaller guide surface can be used.

During assembly of the **Types RNA22 and NA22**, be very carefully not to curl the lip of seal or damage the seal.

$$A \geq \frac{1}{2}(D+e)$$

For D and e dimensions refer to applicable Dimensions Table.

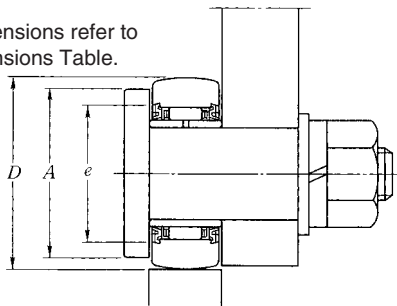


Fig.3

Lubricant feeding and replenishing into the bearing are done through an oil hole provided on the inner ring. In this case, the inner ring must be fitted so the oil hole locates within non-load area. For the full complement roller type roller followers **NATV, NACV, NUTR** and **NUTW** with no cage, it is necessary to shorten the grease replenishing interval.

Further, a roller follower with cage and without seal is not filled up with lubrication grease. When needing a follower with grease-filled cage, feel free to contact NTN.

Note that NTN offers its unique bearing products prefilled with solid grease: these bearings feature minimized of lubricant leakage.

If low dust-emission characteristics in the atmosphere is necessary, NTN will offer bearings prefilled with low dust-emission grease. For more information, contact NTNEngineering.

The outer ring outer surface of bearing and the track surface must both be lubricated. Lack of lubrication for these surfaces can lead to premature bearing failure.

Track load capacity

Refer to the track load capacity data in page B-181.

Outer ring strength

Refer to the outer ring strength data in page B-182.

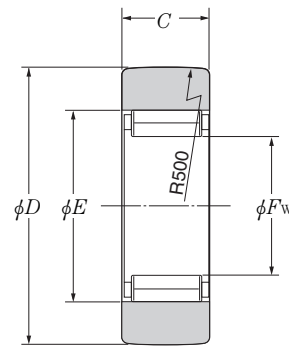
Where any of NTN roller followers was stub-mounted, non-uniform load (bias load) could act on the bearing, inversely affected by fitting loose arising from further continued running. Good care must be exercised of such fitting loose, for stable running of the equipment.

Lubrication

The types having a synthetic rubber seal (suffix LL) and the full complement roller type are prefilled with lithium soap grease, thereby these bearing types can be used in a temperature range of -20 to +120°C or can be continuously used at a temperature of 100°C or lower. When a bearing is always used a temperature of 0°C or lower, use of a bearing prefilled with cold temperature grease. For more information, contact NTN Engineering.

Metric series	Inch series
with cage	Full-complement roller
without inner ring	with inner ring
without seal	with seal

RNAB2 type RNAB2··X type



RNAB2 type

D 16~90mm

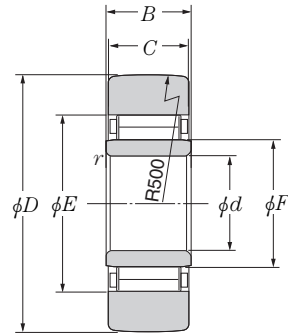
OD ¹⁾ mm D 0 -0.05	Dimensions mm			Basic load ratings		Track load capacity	
	F_w	C	E	dynamic C_r	static C_{or}	Spherical outer ring N kgf	Cylindrical outer ring N kgf
16	7 +0.022 +0.013	7.8	10	2 820 287	2 520 257	1 080 110	2 320 237
19	10 +0.022 +0.013	9.8	13	4 700 480	5 350 550	1 370 140	3 570 364
24	12 +0.027 +0.016	9.8	15	5 200 530	6 400 655	1 890 193	4 500 459
30	14 +0.027 +0.016	11.8	20	9 700 990	9 550 975	2 600 265	6 910 705
32	16 +0.027 +0.016	11.8	22	12 100 1 230	13 100 1 330	2 850 291	7 360 751
35	20 +0.033 +0.020	11.8	26	13 300 1 360	15 700 1 610	3 210 327	8 060 822
40	22 +0.033 +0.020	15.8	29	19 500 1 980	23 800 2 430	3 820 390	12 700 1 290
47	25 +0.033 +0.020	15.8	32	20 300 2 070	25 900 2 640	4 760 485	14 800 1 510
52	30 +0.033 +0.020	15.8	37	22 700 2 320	32 000 3 250	5 470 558	16 400 1 670
62	38 +0.041 +0.025	19.8	46	35 000 3 550	54 000 5 500	6 920 706	23 500 2 400
72	42 +0.041 +0.025	19.8	50	35 000 3 550	56 000 5 700	8 400 857	27 400 2 790
80	50 +0.041 +0.025	19.8	58	39 500 4 050	69 500 7 100	9 660 985	28 600 2 920
85	55 +0.049 +0.030	19.8	63	40 000 4 100	72 500 7 400	10 600 1 080	30 500 3 110
90	60 +0.049 +0.030	19.8	68	41 500 4 250	78 000 8 000	11 400 1 160	32 300 3 290

Note:1) JIS Class 0 is the dimensional tolerance of the outside diameter D of the outer rings of the RNAB2··X type whose outside surface form is cylindrical.

Limiting speed min ⁻¹		Roller Follower number		Mass kg (approx.)	OD ¹⁾ mm <i>D</i> 0 -0.05
Grease lubrication	Oil lubrication	Spherical outer ring	Cylindrical outer ring		
21 000	27 000	RNAB 2/5T2	RNAB 2/5XT2	0.0085	16
15 000	20 000	RNAB 2/6T2	RNAB 2/6XT2	0.013	19
12 000	16 000	RNAB 2/8	RNAB 2/8X	0.021	24
11 000	14 000	RNAB 200	RNAB 200X	0.042	30
9 500	12 500	RNAB 201	RNAB 201X	0.049	32
7 500	10 000	RNAB 202	RNAB 202X	0.05	35
6 800	9 000	RNAB 203	RNAB 203X	0.088	40
6 000	8 000	RNAB 204	RNAB 204X	0.13	47
5 000	6 500	RNAB 205	RNAB 205X	0.15	52
4 000	5 500	RNAB 206	RNAB 206X	0.255	62
3 500	4 600	RNAB 207	RNAB 207X	0.375	72
3 000	4 000	RNAB 208	RNAB 208X	0.42	80
2 700	3 600	RNAB 209	RNAB 209X	0.435	85
2 500	3 300	RNAB 210	RNAB 210X	0.481	90

Metric series	Inch series
with cage	Full-complement roller
without inner ring	with inner ring
without seal	with seal

NAB2 type NAB2··X type



NAB2 type

D 19~90mm

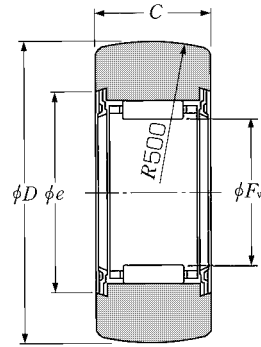
OD ¹⁾ mm <i>D</i> 0 -0.05	Dimensions mm						Basic load ratings		Track load capacity	
	<i>d</i>	<i>B</i>	<i>C</i>	<i>E</i>	<i>F</i>	<i>r</i> 's min ²⁾	dynamic <i>C_r</i>	static <i>C_{0r}</i>	Spherical outer ring N kgf	Cylindrical outer ring N kgf
19	6	10	9.8	13	10	0.5	4 700 480	5 350 550	1 370 140	3 570 364
24	8	10	9.8	15	12	0.5	5 200 530	6 400 655	1 890 193	4 500 459
30	10	12	11.8	20	14	0.5	9 700 990	9 550 975	2 600 265	6 910 705
32	12	12	11.8	22	16	0.5	12 100 1 230	13 100 1 330	2 850 291	7 360 751
35	15	12	11.8	26	20	0.5	13 300 1 360	15 700 1 610	3 210 327	8 060 822
40	17	16	15.8	29	22	0.5	19 500 1 980	23 800 2 430	3 820 390	12 700 1 290
47	20	16	15.8	32	25	0.5	20 300 2 070	25 900 2 640	4 760 485	14 800 1 510
52	25	16	15.8	37	30	0.5	22 700 2 320	32 000 3 250	5 470 558	16 400 1 670
62	30	20	19.8	46	38	1	35 000 3 550	54 000 5 500	6 920 706	23 500 2 400
72	35	20	19.8	50	42	1	35 000 3 550	56 000 5 700	8 400 857	27 400 2 790
80	40	20	19.8	58	50	1.5	39 500 4 050	69 500 7 100	9 660 985	28 600 2 920
85	45	20	19.8	63	55	1.5	40 000 4 100	72 500 7 400	10 600 1080	30 500 3 110
90	50	20	19.8	68	60	1.5	41 500 4 250	78 000 8 000	11 400 1160	32 300 3 290

Notes:1) JIS Class 0 is the dimensional tolerance of the outside diameter *D* of the outer rings of the NAB2··X type whose outside surface form is cylindrical.
2) The minimum value of chamfer dimension *r*.

Limiting speed min ⁻¹		Roller Follower number		Mass	OD ¹⁾ mm <i>D</i> 0 -0.05
Grease lubrication	Oil lubrication	Spherical outer ring	Cylindrical outer ring	kg (approx.)	
15 000	20 000	NAB 2/6T2	NAB 2/6XT2	0.017	19
12 000	16 000	NAB 2/8	NAB 2/8X	0.026	24
11 000	14 000	NAB 200	NAB 200X	0.049	30
9 500	12 500	NAB 201	NAB 201X	0.057	32
7 500	10 000	NAB 202	NAB 202X	0.062	35
6 800	9 000	NAB 203	NAB 203X	0.107	40
6 000	8 000	NAB 204	NAB 204X	0.151	47
5 000	6 500	NAB 205	NAB 205X	0.174	52
4 000	5 500	NAB 206	NAB 206X	0.32	62
3 500	4 600	NAB 207	NAB 207X	0.439	72
3 000	4 000	NAB 208	NAB 208X	0.526	80
2 700	3 600	NAB 209	NAB 209X	0.551	85
2 500	3 300	NAB 210	NAB 210X	0.61	90

Metric series	Inch series
with cage	Full-complement roller
without inner ring	with inner ring
without seal	with seal

RNA22··LL type RNA22··XLL type



RNA22··LL type

D 19~90mm

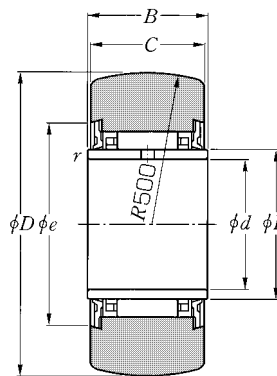
OD ¹⁾ mm <i>D</i> 0 -0.05	Dimensions mm			Basic load ratings		Track load capacity	
	<i>F_w</i>	<i>C</i>	<i>E</i>	dynamic <i>C_r</i>	static <i>C_{0r}</i>	Spherical outer ring N kgf	Cylindrical outer ring N kgf
19	10 +0.022 +0.013	11.8	16	4 550 460	4 250 435	1 380 141	4 400 445
24	12 +0.027 +0.016	11.8	18	5 150 525	5 250 535	1 900 193	5 500 565
30	14 +0.027 +0.016	13.8	20	7 550 770	9 000 915	2 620 267	7 550 770
32	16 +0.027 +0.016	13.8	22	8 100 830	10 300 1 050	2 860 291	8 050 820
35	20 +0.033 +0.020	13.8	26	9 850 1 010	14 100 1 440	3 200 325	8 800 900
40	22 +0.033 +0.020	15.8	28	10 400 1 060	15 600 1 590	3 850 390	10 900 1 110
47	25 +0.033 +0.020	17.8	33	16 900 1 730	22 900 2 340	4 700 480	14 800 1 510
52	30 +0.033 +0.020	17.8	38	17 900 1 820	25 900 2 640	5 550 565	16 400 1 670
62	35 +0.041 +0.025	19.8	43	21 400 2 190	34 500 3 500	6 950 710	22 200 2 260
72	42 +0.041 +0.025	22.7	50	26 300 2 690	47 500 4 850	8 050 820	28 700 2 930
80	48 +0.041 +0.025	22.7	57	28 400 2 900	55 000 5 600	9 800 1 000	32 000 3 250
85	52 +0.049 +0.030	22.7	62	29 300 2 990	58 500 5 950	10 400 1 060	34 000 3 450
90	58 +0.049 +0.030	22.7	68	31 000 3 200	66 000 6 700	11 400 1 160	36 000 3 650

Note:1) JIS Class 0 is the dimensional tolerance of the outside diameter *D* of the outer rings of the RNA22··XLL type whose outside surface form is cylindrical.

Limiting speed min ⁻¹	Roller Follower number		Mass kg (approx.)	OD ¹⁾ mm <i>D</i> 0 -0.05
	Spherical outer ring	Cylindrical outer ring		
10 000	RNA22/6LL/3AS	RNA22/6XLL/3AS	0.018	19
10 000	RNA22/8LL/3AS	RNA22/8XLL/3AS	0.027	24
10 000	RNA2200LL/3AS	RNA2200XLL/3AS	0.052	30
9 500	RNA2201LL/3AS	RNA2201XLL/3AS	0.057	32
7 500	RNA2202LL/3AS	RNA2202XLL/3AS	0.060	35
7 000	RNA2203LL/3AS	RNA2203XLL/3AS	0.094	40
6 000	RNA2204LL/3AS	RNA2204XLL/3AS	0.152	47
5 000	RNA2205LL/3AS	RNA2205XLL/3AS	0.179	52
4 300	RNA2206LL/3AS	RNA2206XLL/3AS	0.284	62
3 600	RNA2207LL/3AS	RNA2207XLL/3AS	0.432	72
3 100	RNA2208LL/3AS	RNA2208XLL/3AS	0.530	80
2 900	RNA2209LL/3AS	RNA2209XLL/3AS	0.545	85
2 600	RNA2210LL/3AS	RNA2210XLL/3AS	0.563	90

Metric series	Inch series
with cage	Full-complement roller
without inner ring	with inner ring
without seal	with seal

NA22··LL type
NA22··XLL type



NA22··LL type

D 19~90mm

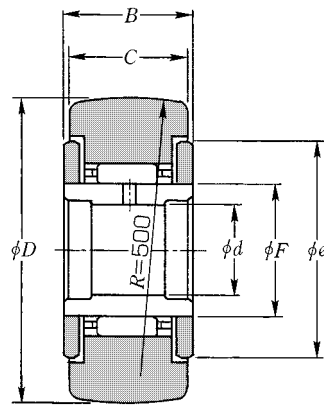
OD ¹⁾ mm D 0 -0.05	Dimensions mm						Basic load ratings		Track load capacity	
	d	B	C	e	F	r 's min ²⁾	dynamic C_r	static C_{or}	Spherical outer ring N kgf	Cylindrical outer ring N kgf
19	6	12	11.8	16	10	0.3	4 550 460	4 250 435	1 380 141	4 400 445
24	8	12	11.8	18	12	0.3	5 150 525	5 250 535	1 900 193	5 500 565
30	10	14	13.8	20	14	0.3	7 550 770	9 000 915	2 620 267	7 550 770
32	12	14	13.8	22	16	0.3	8 100 830	10 300 1 050	2 860 291	8 050 820
35	15	14	13.8	26	20	0.3	9 850 1 010	14 100 1 440	3 200 325	8 800 900
40	17	16	15.8	28	22	0.3	10 400 1 060	15 600 1 590	3 850 390	10 900 1 110
47	20	18	17.8	33	25	0.3	16 900 1 730	22 900 2 340	4 700 480	14 800 1 510
52	25	18	17.8	38	30	0.3	17 900 1 820	25 900 2 640	5 550 565	16 400 1 670
62	30	20	19.8	43	35	0.3	21 400 2 190	34 500 3 500	6 950 710	22 200 2 260
72	35	23	22.7	50	42	0.6	26 300 2 690	47 500 4 850	8 050 820	28 700 2 930
80	40	23	22.7	57	48	0.6	28 400 2 900	55 000 5 600	9 800 1 000	32 000 3 250
85	45	23	22.7	62	52	0.6	29 300 2 990	58 500 5 950	10 400 1 060	34 000 3 450
90	50	23	22.7	68	58	0.6	31 000 3 200	66 000 6 700	11 400 1 160	36 000 3 650

Notes:1) JIS Class 0 is the dimensional tolerance of the outside diameter D of the outer rings of the NA22··XLL type whose outside surface form is cylindrical.
2) The minimum value of chamfering dimension r .

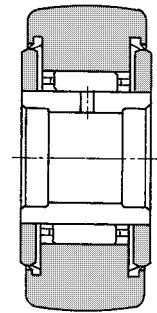
Limiting speed min ⁻¹	Roller Follower number		Mass kg (approx.)	OD ¹⁾ mm <i>D</i> 0 -0.05
	Spherical outer ring	Cylindrical outer ring		
10 000	NA22/6LL/3AS	NA22/6XLL/3AS	0.023	19
10 000	NA22/8LL/3AS	NA22/8XLL/3AS	0.035	24
10 000	NA2200LL/3AS	NA2200XLL/3AS	0.060	30
9 500	NA2201LL/3AS	NA2201XLL/3AS	0.067	32
7 500	NA2202LL/3AS	NA2202XLL/3AS	0.075	35
7 000	NA2203LL/3AS	NA2203XLL/3AS	0.113	40
6 000	NA2204LL/3AS	NA2204XLL/3AS	0.176	47
5 000	NA2205LL/3AS	NA2205XLL/3AS	0.209	52
4 300	NA2206LL/3AS	NA2206XLL/3AS	0.322	62
3 600	NA2207LL/3AS	NA2207XLL/3AS	0.506	72
3 100	NA2208LL/3AS	NA2208XLL/3AS	0.623	80
2 900	NA2209LL/3AS	NA2209XLL/3AS	0.638	85
2 600	NA2210LL/3AS	NA2210XLL/3AS	0.682	90

Metric series	Inch series
with cage	Full-complement roller
without inner ring	with inner ring
without seal	with seal

NATR type
NATR··X type
NATR··LL type
NATR··XLL type



NATR type
(with cage)



NATR··LL type
(sealed, with cage)

D 16~90mm

OD ¹⁾ mm <i>D</i> 0 -0.05	Dimensions mm						Basic load ratings		Track load capacity	
	<i>d</i>	<i>B</i>	<i>C</i>	<i>e</i>	<i>F</i>	dynamic <i>C_r</i>	static N kgf <i>C_{or}</i>	Spherical outer ring N kgf	Cylindrical outer ring	
16	5	12 ⁰ -0.180	11	12	8	4 050 415	4 200 430	1 080 110	3 400 350	
19	6	12 ⁰ -0.180	11	14	10	4 750 480	5 400 555	1 380 141	4 050 415	
24	8	15 ⁰ -0.180	14	19	12	6 900 705	7 700 785	1 900 193	6 650 680	
30	10	15 ⁰ -0.180	14	23	15	7 850 800	9 650 985	2 620 267	7 700 785	
32	12	15 ⁰ -0.180	14	25	17	8 050 820	10 300 1 050	2 860 291	8 200 835	
35	15	19 ⁰ -0.210	18	27	20	13 300 1 360	2 0800 2 120	3 200 325	11 900 1 220	
40	17	21 ⁰ -0.210	20	32	22	14 000 1 430	22 800 2 330	3 850 390	14 500 1 480	
47	20	25 ⁰ -0.210	24	37	25	20 700 2 110	33 500 3 450	4 700 480	21 000 2 150	
52	25	25 ⁰ -0.210	24	42	30	22 800 2 320	40 500 4 100	5 500 565	23 300 2 370	
62	30	29 ⁰ -0.210	28	51	38	36 000 3 650	66 000 6 750	6 950 710	33 000 3 350	
72	35	29 ⁰ -0.210	28	58	44.5	39 000 3 950	77 000 7 850	8 050 820	37 000 3 750	
80	40	32 ⁰ -0.250	30	66	50	49 500 5 050	92 500 9 400	9 800 1 000	44 500 4 500	
85	45	32 ⁰ -0.250	30	71	55	51 500 5 250	100 000 10 200	10 400 1 060	47 000 4 800	
90	50	32 ⁰ -0.250	30	76	60	53 000 5 450	108 000 11 000	11 400 1 160	50 000 5 100	

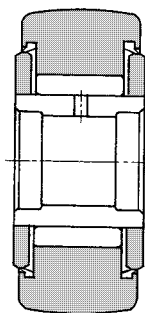
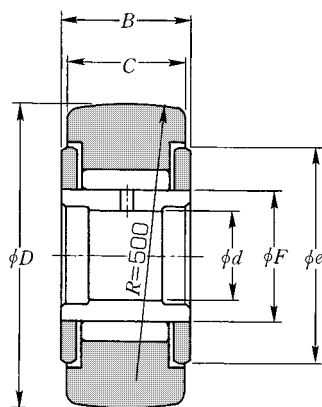
Note: 1) JIS Class 0 is the dimensional tolerance of the outside diameter *D* of the outer rings of the NATR··X and NATR··XLL types whose outside surface form is cylindrical.

Limiting speed min ⁻¹		Roller Follower number				Mass kg (approx.)	OD ¹⁾ mm D 0 -0.05
Grease lubrication	Oil lubrication	Without seal		With seal			
		Spherical outer ring	Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring		
*19 000	*25 000	NATR5	NATR5X	NATR5LL/3AS	NATR5XLL/3AS	0.018	16
*15 000	*20 000	NATR6	NATR6X	NATR6LL/3AS	NATR6XLL/3AS	0.025	19
*12 000	*16 000	NATR8	NATR8X	NATR8LL/3AS	NATR8XLL/3AS	0.042	24
10 000	*13 000	NATR10	NATR10X	NATR10LL/3AS	NATR10XLL/3AS	0.061	30
9 000	*12 000	NATR12CT	NATR12XCT	NATR12CLLT/3AS	NATR12XCLLT/3AS	0.069	32
7 500	10 000	NATR15	NATR15X	NATR15LL/3AS	NATR15XLL/3AS	0.098	35
7 000	9 000	NATR17	NATR17X	NATR17LL/3AS	NATR17XLL/3AS	0.140	40
6 000	8 000	NATR20	NATR20X	NATR20LL/3AS	NATR20XLL/3AS	0.246	47
5 000	6 500	NATR25	NATR25X	NATR25LL/3AS	NATR25XLL/3AS	0.275	52
4 000	5 500	NATR30	NATR30X	NATR30LL/3AS	NATR30XLL/3AS	0.470	62
3 300	4 500	NATR35	NATR35X	NATR35LL/3AS	NATR35XLL/3AS	0.635	72
3 000	4 000	NATR40	NATR40X	NATR40LL/3AS	NATR40XLL/3AS	0.875	80
2 700	3 600	NATR45	NATR45X	NATR45LL/3AS	NATR45XLL/3AS	0.910	85
2 500	3 300	NATR50	NATR50X	NATR50LL/3AS	NATR50XLL/3AS	0.960	90

Remark: The limiting speed of roller followers incorporating a seal (those marked with an asterisk) is approximately 10,000 min⁻¹.

Metric series	Inch series
with cage	Full-complement roller
without inner ring	with inner ring
without seal	with seal

NATV type
NATV··X type
NATV··LL type
NATV··XLL type



NATV type
(Full-complement roller type)

NATV··LL type
(Full-complement roller type, sealed)

D 16~90mm

OD ¹⁾ mm D 0 -0.05	Dimensions mm					Basic load ratings		Track load capacity	
	d	B	C	e	F	dynamic N kgf	static N kgf	Spherical outer ring N kgf	Cylindrical outer ring N kgf
16	5	12 ⁰ -0.180	11	12	8	6 500 665	9 350 955	1 080 110	3 400 350
19	6	12 ⁰ -0.180	11	14	10	7 450 760	11 700 1 190	1 380 141	4 050 415
24	8	15 ⁰ -0.180	14	19	12	10 700 1 090	16 200 1 650	1 900 193	6 650 680
30	10	15 ⁰ -0.180	14	23	15	12 000 1 230	20 300 2 070	2 620 267	7 700 785
32	12	15 ⁰ -0.180	14	25	17	13 000 1 330	23 000 2 350	2 860 291	8 200 835
35	15	19 ⁰ -0.210	18	27	20	18 400 1 870	38 000 3 900	3 200 325	11 900 1 220
40	17	21 ⁰ -0.210	20	32	22	19 400 1 980	42 000 4 250	3 850 390	14 500 1 480
47	20	25 ⁰ -0.210	24	37	25	28 800 2 940	61 000 6 250	4 700 480	21 000 2 150
52	25	25 ⁰ -0.210	24	42	30	31 500 3 200	73 500 7 500	5 500 565	23 300 2 370
62	30	29 ⁰ -0.210	28	51	38	47 500 4 850	115 000 11 700	6 950 710	33 000 3 350
72	35	29 ⁰ -0.210	28	58	44.5	52 000 5 300	134 000 13 600	8 050 820	37 000 3 750
80	40	32 ⁰ -0.250	30	66	50	68 500 7 000	171 000 17 500	9 800 1 000	44 500 4 500
90	50	32 ⁰ -0.250	30	76	60	76 000 7 750	205 000 20 900	11 400 1 160	50 000 5 100

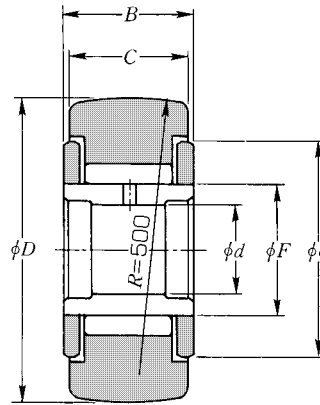
Note:1) JIS Class 0 is the dimensional tolerance of the outside diameter D of the outer rings of the NATV··X and NATV··XLL types whose outside surface form is cylindrical.

Limiting speed min ⁻¹		Roller Follower number				Mass kg (approx.)	OD ¹⁾ mm D 0 -0.05
Grease lubrication	Oil lubrication	Without seal		With seal			
		Spherical outer ring	Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring		
*13 000	*16 000	NATV5/3AS	NATV5X/3AS	NATV5LL/3AS	NATV5XLL/3AS	0.020	16
10 000	*13 000	NATV6/3AS	NATV6X/3AS	NATV6LL/3AS	NATV6XLL/3AS	0.027	19
8 500	*11 000	NATV8/3AS	NATV8X/3AS	NATV8LL/3AS	NATV8XLL/3AS	0.044	24
6 500	8 500	NATV10/3AS	NATV10X/3AS	NATV10LL/3AS	NATV10XLL/3AS	0.065	30
6 000	7 500	NATV12/3AS	NATV12X/3AS	NATV12LL/3AS	NATV12XLL/3AS	0.074	32
5 000	6 500	NATV15/3AS	NATV15X/3AS	NATV15LL/3AS	NATV15XLL/3AS	0.102	35
4 500	6 000	NATV17/3AS	NATV17X/3AS	NATV17LL/3AS	NATV17XLL/3AS	0.145	40
4 000	5 000	NATV20/3AS	NATV20X/3AS	NATV20LL/3AS	NATV20XLL/3AS	0.254	47
3 300	4 500	NATV25/3AS	NATV25X/3AS	NATV25LL/3AS	NATV25XLL/3AS	0.285	52
2 600	3 500	NATV30/3AS	NATV30X/3AS	NATV30LL/3AS	NATV30XLL/3AS	0.481	62
2 200	2 900	NATV35/3AS	NATV35X/3AS	NATV35LL/3AS	NATV35XLL/3AS	0.647	72
2 000	2 600	NATV40/3AS	NATV40X/3AS	NATV40LL/3AS	NATV40XLL/3AS	0.890	80
1 600	2 100	NATV50/3AS	NATV50X/3AS	NATV50LL/3AS	NATV50XLL/3AS	0.990	90

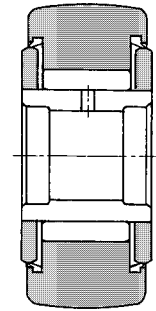
Note: The limiting speed of roller followers incorporating a seal (those marked with an asterisk) is approximately 10,000 min⁻¹.

Metric series	Inch series
with cage	Full-complement roller
without inner ring	with inner ring
without seal	with seal

NACV type
NACV··X type
NACV··LL type
NACV··XLL type



NACV type
(Full-complement roller type)



NACV··LL type
(Full-complement roller type, sealed)

D 19.050~152.400mm

OD ¹⁾ mm(1/25.4mm) D 0 -0.05	Dimensions mm (1/25.4mm)					Basic load ratings	
	d	B _{-0.250} ⁰	C _{-0.130} ⁰	e	F	dynamic C _r	static C _{0r}
19.050 (3/4)	6.350 (1/4) +0.005/-0.010	14.288 (9/16)	12.700 (1/2)	15.5	11	8 050 825	13 300 1 360
22.225 (7/8)	6.350 (1/4) +0.005/-0.010	14.288 (9/16)	12.700 (1/2)	15.5	11	8 050 825	13 300 1 360
25.400 (1)	7.938 (5/16) +0.005/-0.010	17.462 (1 1/16)	15.875 (5/8)	19.5	14	11 700 1 190	18 900 1 920
28.575 (1 1/8)	7.938 (5/16) +0.005/-0.010	17.462 (1 1/16)	15.875 (5/8)	19.5	14	11 700 1 190	18 900 1 920
31.750 (1 1/4)	9.525 (3/8) +0.005/-0.010	20.638 (1 3/16)	19.050 (3/4)	25	18.47	17 700 1 810	35 000 3 600
34.925 (1 3/8)	9.525 (3/8) +0.005/-0.010	20.638 (1 3/16)	19.050 (3/4)	25	18.47	17 700 1 810	35 000 3 600
38.100 (1 1/2)	11.112 (7/16) +0.005/-0.010	23.812 (1 5/16)	22.225 (7/8)	27	21	21 100 2 150	45 500 4 650
41.275 (1 5/8)	11.112 (7/16) +0.005/-0.010	23.812 (1 5/16)	22.225 (7/8)	27	21	21 100 2 150	45 500 4 650
44.450 (1 3/4)	12.700 (1/2) +0.005/-0.010	26.988 (1 1/16)	25.400 (1)	27	24.65	28 400 2 900	60 500 6 150
47.625 (1 7/8)	12.700 (1/2) +0.005/-0.010	26.988 (1 1/16)	25.400 (1)	27	24.65	28 400 2 900	60 500 6 150
50.800 (2)	15.875 (5/8) +0.005/-0.010	33.338 (1 5/16)	31.750 (1 1/4)	36.5	26.71	41 000 4 200	87 500 8 950
57.150 (2 1/4)	15.875 (5/8) +0.005/-0.010	33.338 (1 5/16)	31.750 (1 1/4)	36.5	26.71	41 000 4 200	87 500 8 950
63.500 (2 1/2)	19.050 (3/4) +0.005/-0.010	39.688 (1 9/16)	38.100 (1 1/2)	44	31.15	54 500 5 600	119 000 12 200
69.850 (2 3/4)	19.050 (3/4) +0.005/-0.010	39.688 (1 9/16)	38.100 (1 1/2)	44	31.15	54 500 5 600	119 000 12 200
76.200 (3)	25.400 (1) +0.002/-0.013	46.038 (1 13/16)	44.450 (1 3/4)	53	36.85	76 500 7 800	177 000 18 000
82.550 (3 1/4)	25.400 (1) +0.002/-0.013	46.038 (1 13/16)	44.450 (1 3/4)	53	36.85	76 500 7 800	177 000 18 000
88.900 (3 1/2)	28.575 (1 1/8) +0.002/-0.013	52.388 (2 1/16)	50.800 (2)	60	44.5	84 500 8 650	214 000 21 800
101.600 (4)	31.750 (1 1/4) +0.002/-0.013	58.738 (2 5/16)	57.150 (2 1/4)	63	44.5	106 000 10 800	244 000 24 900
127.000 (5)	44.450 (1 3/4) +0.002/-0.013	73.025 (2 7/8)	69.850 (2 3/4)	89	68.7	189 000 19 300	520 000 53 000
152.400 (6)	57.150 (2 1/4) +0.002/-0.013	85.725 (3 3/8)	82.550 (3 1/4)	110	81.35	260 000 26 500	675 000 68 500

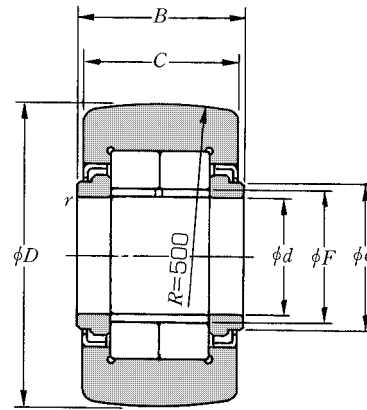
Note: 1. $_{-0.025}^0$ is the dimensional tolerance of the outside diameter D of the outer rings of the NACV··X and NACV··XLL types whose outside surface form is cylindrical

Track load capacity		Limiting speed		Roller Follower number				Mass	OD ¹⁾ mm(¹ / _{25.4} mm) D 0 -0.05
N kgf		min ⁻¹		Without seal		With seal			
Spherical outer ring	Cylindrical outer ring	Grease lubrication	Oil lubrication	Spherical outer ring	Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring	kg (approx.)	
1 380 140	4 600 470	9 000	*11 000	NACV12/3AS	NACV12X/3AS	NACV12LL/3AS	NACV12XLL/3AS	0.027	19.050 (³ / ₄)
1 710 174	5 350 545	9 000	*11 000	NACV14/3AS	NACV14X/3AS	NACV14LL/3AS	NACV14XLL/3AS	0.036	22.225 (⁷ / ₈)
2 060 210	7 400 755	7 100	9 200	NACV16/3AS	NACV16X/3AS	NACV16LL/3AS	NACV16XLL/3AS	0.059	25.400 (1)
2 430 248	8 350 850	7 100	9 200	NACV18/3AS	NACV18X/3AS	NACV18LL/3AS	NACV18XLL/3AS	0.073	28.575 (1 ¹ / ₈)
2 840 290	11 400 1 160	5 400	7 000	NACV20/3AS	NACV20X/3AS	NACV20LL/3AS	NACV20XLL/3AS	0.109	31.750 (1 ¹ / ₄)
3 250 330	12 500 1 280	5 400	7 000	NACV22/3AS	NACV22X/3AS	NACV22LL/3AS	NACV22XLL/3AS	0.132	34.925 (1 ³ / ₈)
3 600 365	16 300 1 660	4 800	6 200	NACV24/3AS	NACV24X/3AS	NACV24LL/3AS	NACV24XLL/3AS	0.177	38.100 (1 ¹ / ₂)
4 050 410	17 600 1 800	4 800	6 200	NACV26/3AS	NACV26X/3AS	NACV26LL/3AS	NACV26XLL/3AS	0.218	41.275 (1 ⁵ / ₈)
4 400 450	21 600 2 200	4 100	5 300	NACV28/3AS	NACV28X/3AS	NACV28LL/3AS	NACV28XLL/3AS	0.281	44.450 (1 ³ / ₄)
4 850 495	23 200 2 360	4 100	5 300	NACV30/3AS	NACV30X/3AS	NACV30LL/3AS	NACV30XLL/3AS	0.327	47.625 (1 ⁷ / ₈)
5 300 540	31 000 3 150	3 700	4 800	NACV32/3AS	NACV32X/3AS	NACV32LL/3AS	NACV32XLL/3AS	0.454	50.800 (2)
6 200 635	35 000 3 550	3 700	4 800	NACV36/3AS	NACV36X/3AS	NACV36LL/3AS	NACV36XLL/3AS	0.585	57.150 (2 ¹ / ₄)
7 200 735	44 500 4 550	3 200	4 100	NACV40/3AS	NACV40X/3AS	NACV40LL/3AS	NACV40XLL/3AS	0.902	63.500 (2 ¹ / ₂)
8 250 840	49 000 5 000	3 200	4 100	NACV44/3AS	NACV44X/3AS	NACV44LL/3AS	NACV44XLL/3AS	1.05	69.850 (2 ³ / ₄)
9 150 935	64 000 6 500	2 700	3 500	NACV48/3AS	NACV48X/3AS	NACV48LL/3AS	NACV48XLL/3AS	1.39	76.200 (3)
10 000 1 020	69 000 7 050	2 700	3 500	NACV52/3AS	NACV52X/3AS	NACV52LL/3AS	NACV52XLL/3AS	1.66	82.550 (3 ¹ / ₄)
11 100 1 130	86 000 8 800	2 200	2 800	NACV56/3AS	NACV56X/3AS	NACV56LL/3AS	NACV56XLL/3AS	2.19	88.900 (3 ¹ / ₂)
13 200 1 350	112 500 11 500	2 200	2 800	NACV64/3AS	NACV64X/3AS	NACV64LL/3AS	NACV64XLL/3AS	3.22	101.600 (4)
17 900 1 830	165 500 16 900	1 500	1 900	NACV80/3AS	NACV80X/3AS	NACV80LL/3AS	NACV80XLL/3AS	6.08	127.000 (5)
22 100 2 250	239 500 24 400	1 200	1 500	NACV96/3AS	NACV96X/3AS	NACV96LL/3AS	NACV96XLL/3AS	10.0	152.400 (6)

Note: The limiting speed of roller followers incorporating a seal (those marked with an asterisk) is approximately 10,000 min⁻¹.

Metric series	Inch series
with cage	Full-complement roller
without inner ring	with inner ring
without shield	with shield

NUTR2 type
NUTR2··X type
NUTR3 type
NUTR3··X type



NUTR2 type
NUTR3 type

D 35~110mm

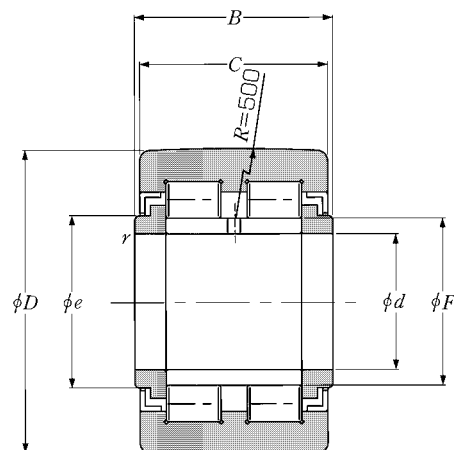
OD ¹⁾ mm <i>D</i> 0 -0.05	Dimensions mm						Basic load ratings		Track load capacity		
	<i>d</i>	<i>B</i>	<i>C</i>	<i>e</i>	<i>F</i>	<i>r</i> 's min ²⁾	dynamic <i>C_r</i>	static <i>C_{0r}</i>	Spherical outer ring	Cylindrical outer ring	
35	15	19	$0_{-0.210}$	18	20	19	0.3	22 300	25 700	3 200	11 900
								2 280	2 620	325	1 220
40	17	21	$0_{-0.210}$	20	22	21.5	0.3	24 100	29 100	3 850	14 500
								2 450	2 970	390	1 480
42	15	19	$0_{-0.210}$	18	20	19	0.3	22 300	25 700	4 100	14 300
								2 280	2 620	415	1 460
47	17	21	$0_{-0.210}$	20	22	21.5	0.3	24 100	29 100	4 700	17 000
	20	25	$0_{-0.210}$	24	27	25.5	0.3	2 450	2 970	480	1 740
52	20	25	$0_{-0.210}$	24	27	25.5	0.3	38 500	48 000	4 700	21 000
	25	25	$0_{-0.210}$	24	31	30	0.3	3 950	4 900	480	2 150
52	20	25	$0_{-0.210}$	24	27	25.5	0.3	38 500	48 000	5 550	23 300
	25	25	$0_{-0.210}$	24	31	30	0.3	3 950	4 900	565	2 370
62	25	25	$0_{-0.210}$	24	31	30	0.3	42 500	57 500	5 550	23 300
	30	29	$0_{-0.210}$	28	38	35	0.3	4 350	5 850	565	2 370
62	25	25	$0_{-0.210}$	24	31	30	0.3	42 500	57 500	6 950	27 800
	30	29	$0_{-0.210}$	28	38	35	0.3	4 350	5 850	710	2 830
72	30	29	$0_{-0.210}$	28	38	35	0.3	56 500	72 500	6 950	33 000
	35	29	$0_{-0.210}$	28	44	41.5	0.6	5 750	7 400	710	3 350
72	30	29	$0_{-0.210}$	28	38	35	0.3	56 500	72 500	8 050	38 500
	35	29	$0_{-0.210}$	28	44	41.5	0.6	5 750	7 400	820	3 900
80	35	29	$0_{-0.210}$	28	44	41.5	0.6	62 000	85 500	8 050	37 000
	40	32	$0_{-0.250}$	30	51	47.5	0.6	6 350	8 700	820	3 750
80	35	29	$0_{-0.210}$	28	44	41.5	0.6	62 000	85 500	9 800	41 000
	40	32	$0_{-0.250}$	30	51	47.5	0.6	6 350	8 700	1 000	4 150
85	45	32	$0_{-0.250}$	30	55	52.5	0.6	87 000	125 000	9 800	44 500
								8 850	12 700	1 000	4 500
85	45	32	$0_{-0.250}$	30	55	52.5	0.6	92 000	137 000	9 800	44 500
								9 350	14 000	1 060	4 800
90	40	32	$0_{-0.250}$	30	51	47.5	0.6	92 000	137 000	11 400	50 000
	50	32	$0_{-0.250}$	30	60	57	0.6	8 850	12 700	1 160	5 100
90	40	32	$0_{-0.250}$	30	51	47.5	0.6	96 500	150 000	11 400	50 000
	50	32	$0_{-0.250}$	30	60	57	0.6	9 800	15 300	1 160	5 100
100	45	32	$0_{-0.250}$	30	55	52.5	0.6	92 000	137 000	13 000	55 500
								9 350	14 000	1 330	5 650
110	50	32	$0_{-0.250}$	30	60	57	0.6	96 500	150 000	14 700	61 000
								9 800	15 300	1 500	6 200

Notes:1) JIS Class 0 is the dimensional tolerance of the outside diameter *D* of the outer rings of the NUTR2··X and NUTR3··X types whose outside surface form is cylindrical.
 2) The minimum value of chamfer dimension *r*.

Limiting speed min ⁻¹	Roller Follower number		Mass kg (approx.)	OD ¹⁾ mm <i>D</i> 0 -0.05
	Spherical outer ring	Cylindrical outer ring		
5 500	NUTR202/3AS	NUTR202X/3AS	0.100	35
4 700	NUTR203/3AS	NUTR203X/3AS	0.147	40
5 500	NUTR302/3AS	NUTR302X/3AS	0.160	42
4 700	NUTR303/3AS	NUTR303X/3AS	0.222	47
4 000	NUTR204/3AS	NUTR204X/3AS	0.245	
4 000	NUTR304/3AS	NUTR304X/3AS	0.321	52
3 300	NUTR205/3AS	NUTR205X/3AS	0.281	
3 300	NUTR305/3AS	NUTR305X/3AS	0.450	62
2 900	NUTR206/3AS	NUTR206X/3AS	0.466	
2 900	NUTR306/3AS	NUTR306X/3AS	0.697	72
2 400	NUTR207/3AS	NUTR207X/3AS	0.630	
2 400	NUTR307/3AS	NUTR307X/3AS	0.840	80
2 100	NUTR208/3AS	NUTR208X/3AS	0.817	
1 900	NUTR209/3AS	NUTR209X/3AS	0.883	85
2 100	NUTR308/3AS	NUTR308X/3AS	1.13	90
1 800	NUTR210/3AS	NUTR210X/3AS	0.950	
1 900	NUTR309/3AS	NUTR309X/3AS	1.40	100
1 800	NUTR310/3AS	NUTR310X/3AS	1.69	110

Metric series	Inch series
with cage	Full-complement roller
without inner ring	with inner ring
without shield	with shield

NUTW type
NUTW··X type



NUTW2 type

D 35~90mm

OD ¹⁾ mm D 0 -0.05	Dimensions mm						Basic load ratings		Track load capacity	
	d	B	C	e	F	r's min ²⁾	dynamic C _r	static C _{or}	Spherical outer ring N kgf	Cylindrical outer ring N kgf
35	15	22 _{-0.210} ⁰	21	20	19	0.3	24 100 2 460	28 300 2 880	3 200 325	14 200 1 450
40	17	24 _{-0.210} ⁰	23	22	21.5	0.3	26 000 2 650	32 000 3 250	3 850 390	17 100 1 740
47	20	29 _{-0.210} ⁰	28	27	25.5	0.3	40 500 4 150	51 500 5 250	4 700 480	25 100 2 560
52	25	29 _{-0.210} ⁰	28	31	30	0.3	45 000 4 600	61 500 6 250	5 550 565	27 700 2 830
62	30	35 _{-0.210} ⁰	34	38	35	0.3	59 500 6 050	77 000 7 900	6 950 710	41 000 4 200
72	35	35 _{-0.210} ⁰	34	44	41.5	0.6	65 000 6 650	91 000 9 250	8 050 820	46 000 4 700
80	40	38 _{-0.250} ⁰	36	51	47.5	0.6	90 500 9 250	131 000 13 400	9 800 1 000	54 500 5 550
85	45	38 _{-0.250} ⁰	36	55	52.5	0.6	95 500 9 750	144 000 14 700	10 400 1 060	58 000 5 900
90	50	38 _{-0.250} ⁰	36	60	57	0.6	100 000 10 200	158 000 16 100	11 400 1 160	61 500 6 250

Notes:1) The bearing numbers of bearings whose outer ring surface is cylindrical have the suffix "X" JIS Class 0 is the dimensional tolerance of the outside diameter *D* of the outer rings of the bearings whose outside surface form is cylindrical. Example: NUTW203X

2) The minimum value of chamfer dimension *r*.

Limiting speed min ⁻¹	Roller Follower number		Mass kg (approx.)	OD ¹⁾ mm <i>D</i> 0 -0.05
	Spherical outer ring	Cylindrical outer ring		
5500	NUTW202/3AS	NUTW202X/3AS	0.115	35
4700	NUTW203/3AS	NUTW203X/3AS	0.167	40
4000	NUTW204/3AS	NUTW204X/3AS	0.280	47
3300	NUTW205/3AS	NUTW205X/3AS	0.322	52
2900	NUTW206/3AS	NUTW206X/3AS	0.549	62
2400	NUTW207/3AS	NUTW207X/3AS	0.747	72
2100	NUTW208/3AS	NUTW208X/3AS	0.953	80
1900	NUTW209/3AS	NUTW209X/3AS	1.03	85
1800	NUTW210/3AS	NUTW210X/3AS	1.11	90