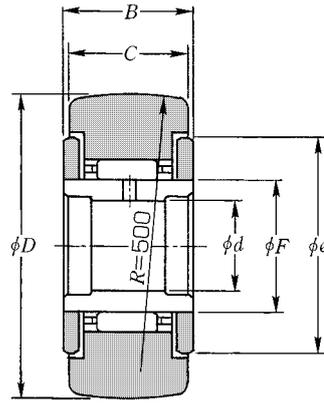
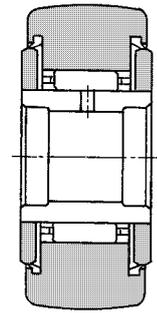


Metric series	Inch series
with cage	Full-complement roller
without inner ring	with inner ring
without seal	with seal

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.