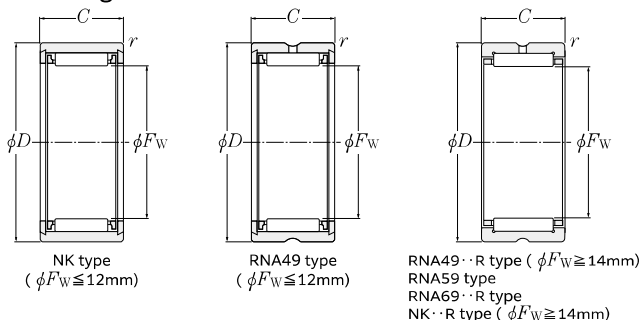


Needle Roller Bearings

NTN

Machined-ring needle roller bearings
without an inner ring

RNA49 type
RNA59 type
RNA69 type
NK type



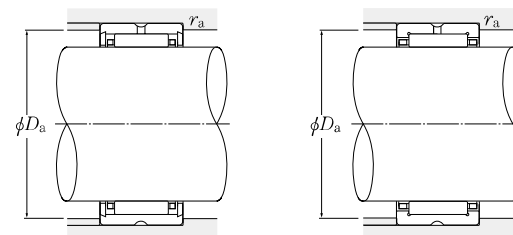
F_w 5 ~ 16mm

Boundary dimensions				Basic load rating		Fatigue load limit N C_u	Allowable speed		Number	Installation-related dimensions mm D_a $r_{as}^{(2)}$ Max. Max.		Mass kg (approx.)
F_w	D	C	$r_s \text{ min}^{(1)}$	dynamic C_r	static C_{0r}		min ⁻¹ Grease lubrication	Oil lubrication				
5	$^{+0.018}_{+0.010}$	10	10	0.15	2 640	2 190	267	27 000	40 000	NK5/10T2	6.5 0.15	0.0031
		10	12	0.15	2 720	2 250	275	27 000	40 000	NK5/12T2	6.5 0.15	0.0037
6	$^{+0.018}_{+0.010}$	12	10	0.15	2 660	2 280	278	25 000	37 000	NK6/10T2	7.5 0.15	0.0047
		12	12	0.15	3 400	3 150	380	25 000	37 000	NK6/12T2	7.5 0.15	0.0057
7		13	10	0.15	2 670	2 350	286	23 000	34 000	RNA495T2	8.5 0.15	0.0055
	$^{+0.022}_{+0.013}$	14	10	0.3	2 670	2 350	286	23 000	34 000	NK7/10T2	8.5 0.3	0.0069
		14	12	0.3	3 400	3 200	390	23 000	34 000	NK7/12T2	8.5 0.3	0.0082
8		15	10	0.15	3 150	3 000	365	21 000	32 000	RNA496T2T	9.5 0.15	0.0073
	$^{+0.022}_{+0.013}$	15	12	0.3	4 000	4 100	500	21 000	32 000	NK8/12T2	9.5 0.3	0.0087
		15	16	0.3	4 850	5 200	635	21 000	32 000	NK8/16	9.5 0.3	0.012
9		16	12	0.3	4 550	5 000	615	20 000	30 000	NK9/12T2	10.5 0.3	0.010
	$^{+0.022}_{+0.013}$	16	16	0.3	5 500	6 400	780	20 000	30 000	NK9/16T2	10.5 0.3	0.013
		17	10	0.15	3 600	3 650	445	20 000	30 000	RNA497	10.5 0.15	0.0095
10		17	12	0.3	4 550	5 100	620	19 000	28 000	NK10/12T2	11.5 0.3	0.010
	$^{+0.022}_{+0.013}$	17	16	0.3	5 450	6 450	790	19 000	28 000	8E-NK10/16CT	11.5 0.3	0.013
		19	11	0.15	5 250	5 150	630	19 000	28 000	RNA498CT	12 0.15	0.013
12		19	12	0.3	5 000	6 100	740	17 000	26 000	NK12/12	13.5 0.3	0.013
	$^{+0.027}_{+0.016}$	19	16	0.3	6 000	7 700	940	17 000	26 000	NK12/16	13.5 0.3	0.016
		20	11	0.3	4 850	4 900	600	17 000	26 000	RNA499	14 0.3	0.013
14		22	13	0.3	8 600	9 200	1 120	16 000	24 000	RNA4900R	20 0.3	0.017
	$^{+0.027}_{+0.016}$	22	16	0.3	10 300	11 500	1 400	16 000	24 000	NK14/16RCT	20 0.3	0.021
		22	20	0.3	13 000	15 600	1 900	16 000	24 000	NK14/20R	20 0.3	0.026
15		23	16	0.3	10 900	12 700	1 550	15 000	23 000	NK15/16R	21 0.3	0.022
	$^{+0.027}_{+0.016}$	23	20	0.3	13 800	17 200	2 100	15 000	23 000	NK15/20R	21 0.3	0.027
16		24	13	0.3	9 550	10 900	1 330	15 000	23 000	RNA4901R	22 0.3	0.017
	$^{+0.027}_{+0.016}$	24	16	0.3	12 200	14 900	1 820	15 000	23 000	NK16/16R	22 0.3	0.022
		24	20	0.3	14 600	18 800	2 290	15 000	23 000	NK16/20R	22 0.3	0.028
		24	22	0.3	15 400	20 000	2 440	15 000	23 000	RNA6901R	22 0.3	0.031

- 1) Smallest allowable dimension for chamfer dimension r_s .
2) Largest allowable dimension for fillet radius r_a of housing and shaft.

Needle Roller Bearings

NTN



F_w 17 ~ 28mm

Boundary dimensions				Basic load rating		Fatigue load limit N C_u	Allowable speed		Number	Installation-related dimensions mm D_a $r_{as}^{(2)}$ Max. Max.		Mass kg (approx.)
F_w	D	C	$r_s \text{ min}^{(1)}$	dynamic C_r	static C_{0r}		min ⁻¹ Grease lubrication	Oil lubrication				
17	$^{+0.027}_{+0.016}$	25	16	0.3	12 100	15 000	1 830	15 000	22 000	NK17/16R	23 0.3	0.024
		25	20	0.3	15 400	20 400	2 490	15 000	22 000	NK17/20R	23 0.3	0.030
18	$^{+0.027}_{+0.016}$	26	16	0.3	12 700	16 200	1 980	14 000	21 000	NK18/16R	24 0.3	0.025
		26	20	0.3	16 100	22 000	2 690	14 000	21 000	NK18/20RCT	24 0.3	0.031
19	$^{+0.033}_{+0.020}$	27	16	0.3	13 300	17 400	2 120	14 000	21 000	NK19/16R	25 0.3	0.026
		27	20	0.3	16 000	22 200	2 700	14 000	21 000	NK19/20R	25 0.3	0.032
20		28	13	0.3	10 300	12 800	1 560	13 000	20 000	RNA4902R	26 0.3	0.022
		28	16	0.3	13 200	17 500	2 140	13 000	20 000	NK20/16RCT	26 0.3	0.027
	$^{+0.033}_{+0.020}$	28	18	0.3	14 100	19 100	2 330	13 000	20 000	RNA5902CT	26 0.3	0.033
		28	20	0.3	16 700	23 800	2 900	13 000	20 000	NK20/20R	26 0.3	0.034
		28	23	0.3	17 600	25 300	3 100	13 000	20 000	RNA6902R	26 0.3	0.040
21	$^{+0.033}_{+0.020}$	29	16	0.3	13 700	18 700	2 280	13 000	19 000	NK21/16R	27 0.3	0.028
		29	20	0.3	17 400	25 400	3 100	13 000	19 000	NK21/20R	27 0.3	0.035
22		30	16	0.3	14 200	19 900	2 430	12 000	18 000	NK22/16R	28 0.3	0.034
		30	20	0.3	18 000	27 000	3 300	12 000	18 000	NK22/20R	28 0.3	0.037
	$^{+0.033}_{+0.020}$	30	13	0.3	11 200	14 600	1 780	12 000	18 000	RNA4903R	28 0.3	0.022
		30	18	0.3	15 200	21 700	2 650	12 000	18 000	RNA5903	28 0.3	0.035
		30	23	0.3	18 200	27 200	3 300	12 000	18 000	RNA6903R	28 0.3	0.042
24	$^{+0.033}_{+0.020}$	32	16	0.3	15 200	22 300	2 720	11 000	17 000	NK24/16R	30 0.3	0.032
		32	20	0.3	18 600	28 800	3 500	11 000	17 000	NK24/20R	30 0.3	0.040
25		33	16	0.3	15 100	22 400	2 730	11 000	16 000	NK25/16R	31 0.3	0.033
		33	20	0.3	19 200	30 500	3 700	11 000	16 000	NK25/20RCT	31 0.3	0.042
	$^{+0.033}_{+0.020}$	37	17	0.3	21 300	25 500	3 100	11 000	16 000	RNA4904RCT	35 0.3	0.052
		37	23	0.3	28 400	37 000	4 500	11 000	16 000	RNA5904	35 0.3	0.084
		37	30	0.3	36 500	50 500	6 150	11 000	16 000	RNA6904R	35 0.3	0.100
26	$^{+0.033}_{+0.020}$	34	16	0.3	15 600	23 600	2 880	10 000	15 000	8E-NK26/16RCT	32 0.3	0.034
		34	20	0.3	19 100	30 500	3 700	10 000	15 000	NK26/20R	32 0.3	0.042
28	$^{+0.033}_{+0.020}$	37	20	0.3	22 300	34 000	4 150	9 500	14 000	NK28/20R	35 0.3	0.052
		37	30	0.3	26 700	48 000	5 850	9 500	14 000	NK28/30RCT	35 0.3	0.082

- 1) Smallest allowable dimension for chamfer dimension r_s .
2) Largest allowable dimension for fillet radius r_a of housing and shaft.