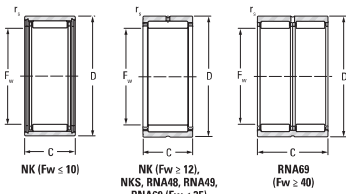




## NEEDLE ROLLER BEARINGS

### NEEDLE ROLLER BEARINGS WITHOUT INNER RINGS

METRIC SERIES  
NK, NKS, RNA48, RNA49  
RNA69 SERIES



Shaft Dia. mm in	F <sub>w</sub> mm in	D mm in	C mm in	r <sub>a, min.</sub> mm in	Bearing Designation	Load Ratings		Fatigue Load Limit C <sub>10</sub> kN lbf	Speed Ratings		Approx. Wt. kg lbf
						Dynamic C kN lbf	Static C <sub>0</sub> kN lbf		Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	
5 0.1969	5 0.1969	10 0.394	0.394	0.2	NK5/10TN	2.19 490	1.71 384	0.269	31600	47000	0.004 0.009
6 0.2362	5 0.1969	10 0.394	0.394	0.2	NK5/12TN	3.04 683	2.63 591	0.460	31600	47000	0.004 0.009
	6 0.2362	12 0.4724	0.394	0.2	NK6/10	3.19 717	2.5 552	0.420	29000	44000	0.005 0.011
7 0.2756	6 0.2362	12 0.4724	0.472	0.2	NK6/12TN	3.67 809	2.74 616	0.420	29000	44000	0.006 0.013
	7 0.2756	10 0.394	0.394	0.3	NK7/10TN	2.74 616	2.44 543	0.370	28000	42000	0.007 0.015
8 0.315	7 0.2756	12 0.4724	0.472	0.3	NK7/12TN	3.4 754	3.22 724	0.480	28000	42000	0.009 0.020
	8 0.315	10 0.394	0.472	0.2	NK8/12	4.57 1030	4.29 950	0.740	26000	41000	0.011 0.024
8 0.315	8 0.315	12 0.4724	0.472	0.3	NK8/12ASR1	4.57 1030	4.89 1100	0.740	26000	41000	0.011 0.024
	8 0.315	15 0.5905	0.472	0.3	NK8/16	5.22 1170	5.78 1300	0.880	26000	41000	0.013 0.029
9 0.3543	8 0.315	12 0.4724	0.472	0.2	NK9/12	4.27 950	4.6 1030	0.700	26000	40000	0.012 0.026
	9 0.3543	16 0.6299	0.472	0.3	NK9/16	5.57 1250	6.47 1450	0.980	26000	40000	0.015 0.033
10 0.3937	10 0.3937	17 0.6888	0.472	0.3	NK10/17	5.4 1210	6.43 1450	0.980	25000	39000	0.013 0.029
	10 0.3937	19 0.635	0.472	0.3	NK10/18TN	6.3 1410	6.27 1410	0.940	25000	39000	0.015 0.033
12 0.4724	12 0.4724	17 0.448	0.472	0.3	NK12/17A	6.06 1340	7.6 1710	1.15	19000	30000	0.013 0.029
	12 0.4724	19 0.448	0.472	0.3	NK12/16	5.78 1300	6.03 2050	1.49	24000	37000	0.018 0.040
14 0.5512	14 0.5512	22 0.8691	0.512	0.3	RNA4900	5.39 2110	10.3 2320	1.55	16000	24000	0.018 0.040
	14 0.5512	22 0.8691	0.512	0.3	NK14/16A	12.4 2790	16.8 3750	2.25	16000	24000	0.023 0.051
14 0.5512	14 0.5512	20 0.787	0.512	0.3	NK14/20A	14.2 3300	18.4 4140	2.80	16000	24000	0.028 0.060
	15 0.5906	15 0.5906	0.512	0.3	NK15/16A	12.4 2790	15 3370	2.30	15000	24000	0.024 0.053
16 0.6299	15 0.5906	20 0.787	0.512	0.3	NK15/20A	14.2 3300	18.6 4140	2.95	15000	24000	0.031 0.069
	16 0.6299	24 0.9449	0.512	0.2	RNA4901	16.5 2360	12.3 2770	1.85	18000	28000	0.020 0.044
16 0.6299	16 0.6299	24 0.9449	0.512	0.3	NK16/16A	13 2920	16.2 3640	2.50	18000	28000	0.025 0.055

## Heavy-Duty Needle Roller Bearings

Shaft Dia. mm in	F <sub>w</sub> mm in	D mm in	C mm in	r <sub>a, min.</sub> mm in	Bearing Designation	Load Ratings		Fatigue Load Limit C <sub>10</sub> kN	Speed Ratings		Approx. Wt. kg lbf
						Dynamic C kN lbf	Static C <sub>0</sub> kN lbf		Grease min <sup>-1</sup>	Oil min <sup>-1</sup>	
16 0.6299	16 0.6299	24 0.9449	24 0.9449	0.3	NK16/20A	15.4 3460	20.2 4540	3.20	18000	28000	0.036 0.079
	16 0.6299	24 0.9449	22 0.866	0.3	RNA4901	16.1 3620	21.3 4750	3.30	18000	28000	0.036 0.079
17 0.6693	17 0.6693	25 0.9843	25 0.9843	0.3	NK17/16A	13.6 3000	17.6 3900	2.70	17000	27000	0.027 0.060
	17 0.6693	25 0.9843	20 0.787	0.3	NK17/20A	15.4 3460	20.4 4550	3.25	17000	27000	0.034 0.075
18 0.7087	18 0.7087	26 1.0238	26 1.0238	0.3	NK18/16A	13.6 3000	17.7 3900	2.70	16000	25000	0.029 0.062
	18 0.7087	26 1.0238	20 0.787	0.3	NK18/20A	16.1 3620	22.0 4950	3.50	16000	25000	0.035 0.077
18 0.7087	18 0.7087	30 1.1811	16 0.63	0.3	NK18/30A	15.9 3570	16.2 3640	2.45	17000	26000	0.045 0.099
	19 0.748	19 0.748	18 0.7087	0.3	NK19/18A	14.1 3170	19.0 4270	2.90	15000	24000	0.029 0.064
19 0.748	19 0.748	27 1.063	20 0.83	0.3	NK19/20A	18.8 4230	23.6 5310	3.75	15000	24000	0.037 0.082
	20 0.7874	20 0.7874	17 0.572	0.3	RNA4902	11.8 2660	15.3 3440	2.35	14000	22000	0.023 0.051
20 0.7874	20 0.7874	28 1.1024	16 0.63	0.3	NK20/16A	16.1 3700	19.1 4250	2.90	14000	22000	0.030 0.066
	20 0.7874	28 1.1024	20 0.787	0.3	NK20/20A	17.5 3920	25.3 5600	4.00	14000	22000	0.038 0.084
20 0.7874	20 0.7874	28 1.1024	23 0.906	0.3	RNA4903A	16.4 4140	26.8 5950	4.20	14000	22000	0.042 0.093
	20 0.7874	32 1.2598	20 0.787	0.6	NK20A	24.4 5400	26.7 5900	4.30	15000	24000	0.058 0.128
21 0.8268	21 0.8268	29 1.1417	16 0.63	0.3	NK21/16A	16.3 3640	21.8 4850	3.30	14000	21000	0.032 0.071
	21 0.8268	29 1.1417	20 0.787	0.3	NK21/20A	18.1 4070	25.9 5750	4.25	14000	21000	0.040 0.088
22 0.8661	22 0.8661	30 1.1811	17 0.63	0.3	RNA4903	12.2 2740	16.4 3640	2.50	13000	20000	0.025 0.055
	22 0.8661	30 1.1811	16 0.63	0.3	NK22/16A	16.2 3620	21.7 4800	3.30	13000	20000	0.033 0.073
22 0.8661	22 0.8661	30 1.1811	20 0.787	0.3	NK22/20A	18 4060	27 6070	4.30	13000	20000	0.041 0.090
	22 0.8661	30 1.1811	23 0.906	0.3	RNA4903A	15.8 4150	30.6 6800	4.75	13000	20000	0.056 0.123
22 0.8661	22 0.8661	35 1.378	20 0.787	0.6	NK22A	22.9 5100	27.1 6000	4.30	14000	21000	0.069 0.152
	24 0.9449	24 0.9449	18 0.7087	0.3	NK24/16A	16.2 3640	24.3 5400	3.70	12000	18000	0.039 0.087
24 0.9449	24 0.9449	32 1.2598	20 0.787	0.3	NK24/20A	19.4 4340	30.3 6810	4.80	12000	18000	0.045 0.099
	24 0.9449	37 1.4567	20 0.787	0.6	NK24A	25.1 5590	32.8 7370	5.30	13000	20000	0.073 0.161
25 0.9843	25 0.9843	33 1.2992	18 0.63	0.3	NK25/16A	16.1 3620	24.4 5400	3.75	11000	17000	0.037 0.082
	25 0.9843	33 1.2992	20 0.787	0.3	NK25/20A	18.1 4060	30.4 6830	4.80	11000	17000	0.047 0.104
25 0.9843	25 0.9843	37 1.4567	17 0.63	0.3	RNA4904	21.3 4750	25.5 5700	3.95	12000	18000	0.061 0.134
	25 0.9843	37 1.4567	30 1.181	0.3	RNA4904A	36.6 8200	51.0 11500	7.95	12000	18000	0.091 0.201

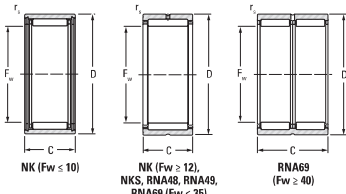
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## NEEDLE ROLLER BEARINGS

### NEEDLE ROLLER BEARINGS WITHOUT INNER RINGS

METRIC SERIES  
NK, NKS, RNA48, RNA49,  
RNA69 SERIES



Shaft Dia. mm in	F <sub>in</sub> mm in	D mm in	C mm in	r <sub>a, max.</sub> mm in	Bearing Designation	Load Ratings			Speed Ratings		Approx. Wt. kg lbs
						Dynamic C	Static C <sub>0</sub>	Fatigue Load Limit C <sub>e</sub>	Gross mm <sup>2</sup>	Oil	
25 0.9843	25 0.9843	38 1.4961	20 0.787	0.3 0.024	NK325A	29.1 6540	33 7420	5.39	12600	18000	0.276 0.158
28 1.0928	28 1.0928	34 1.3386	18 0.709	0.3 0.012	NK2616A	16.6 3730	25.7 5780	3.95	11000	17000	0.239 0.136
28 1.0928	28 1.0928	34 1.3386	20 0.787	0.3 0.012	NK2820A	18.7 4200	32 7150	5.05	11000	17000	0.268 0.152
28 1.1024	28 1.1024	37 1.4567	20 0.787	0.3 0.012	NK2820A	22.6 5080	34.1 7730	5.50	10000	16000	0.357 0.198
28 1.1024	28 1.1024	37 1.4567	30 1.181	0.3 0.012	NK2830A	29 6520	53.8 12100	8.30	10000	16000	0.488 0.274
28 1.1024	28 1.1024	39 1.5354	17 0.669	0.3 0.012	RNA49/22	23.3 5240	29.6 6630	4.55	10000	16000	0.299 0.169
28 1.1024	28 1.1024	39 1.5354	30 1.181	0.3 0.012	RNA49/22A	30.6 6880	50.7 11400	3.95	10000	16000	0.397 0.226
28 1.1024	28 1.1024	42 1.6535	20 0.787	0.3 0.024	NKS32A	30.3 6810	38.4 8630	6.15	11000	16000	0.404 0.227
29 1.1417	29 1.1417	38 1.4961	20 0.787	0.3 0.012	NK2920A	23.4 5200	36.4 8180	5.80	9800	15000	0.269 0.150
29 1.1417	29 1.1417	38 1.4961	30 1.181	0.3 0.012	NK2930A	28.6 6370	56.4 12500	8.70	9700	15000	0.390 0.219
30 1.1811	30 1.1811	40 1.5748	20 0.787	0.3 0.012	NK3020A	24.2 5440	38.3 8610	6.10	9500	15000	0.271 0.157
30 1.1811	30 1.1811	40 1.5748	30 1.181	0.3 0.012	NK3030A	34.7 7800	61 13700	9.45	9500	15000	0.407 0.236
30 1.1811	30 1.1811	42 1.6535	17 0.669	0.3 0.012	RNA49/05	24.3 5460	31.7 7130	4.90	9700	15000	0.271 0.157
30 1.1811	30 1.1811	42 1.6535	30 1.181	0.3 0.012	RNA49/05A	30.7 6920	50.6 11400	5.39	9700	15000	0.377 0.213
30 1.1811	30 1.1811	45 1.7717	22 0.866	0.3 0.024	NKS30A	34.3 7710	42.8 9620	6.85	9900	15000	0.414 0.231
32 1.2598	32 1.2598	42 1.6535	20 0.787	0.3 0.012	NK3220A	24.8 5580	40.4 9080	6.45	8800	14000	0.274 0.163
32 1.2598	32 1.2598	42 1.6535	30 1.181	0.3 0.012	NK3230A	35.6 7900	64.3 14300	9.95	8800	14000	0.412 0.237
32 1.2598	32 1.2598	45 1.7717	17 0.669	0.3 0.012	RNA49/28	25.1 5640	33.8 7600	5.20	9000	14000	0.280 0.176
32 1.2598	32 1.2598	45 1.7717	30 1.181	0.3 0.012	RNA49/28A	43.2 9710	62.5 14100	9.75	9100	14000	0.440 0.269
32 1.2598	32 1.2598	47 1.8504	22 0.866	0.3 0.024	NKS32A	38 8500	60.2 13400	7.40	9200	14000	0.329 0.185
35 1.378	35 1.378	47 1.7717	20 0.787	0.3 0.012	NKS3520A	28.1 6310	44.4 9980	7.05	8900	12000	0.281 0.179
35 1.378	35 1.378	47 1.7717	30 1.181	0.3 0.012	NKS3530A	37.4 8410	70.6 15900	11.0	8900	12000	0.322 0.189

## Heavy-Duty Needle Roller Bearings

Shaft Dia. mm in	F <sub>in</sub> mm in	D mm in	C mm in	r <sub>a, max.</sub> mm in	Bearing Designation	Load Ratings		Fatigue Load Limit C <sub>e</sub>	Speed Ratings		Approx. Wt. kg lbs
						Dynamic C	Static C <sub>0</sub>		Gross mm <sup>2</sup>	Oil	
35 1.378	35 1.378	47 1.8504	18 0.709	0.3 0.012	RNA49/06	20.0 4520	30 6690	5.55	8200	13000	0.281 0.179
	35 1.378	47 1.8504	30 1.181	0.3 0.012	RNA49/06A	42.6 9580	68.2 15300	10.6	8200	13000	0.418 0.236
	35 1.378	50 1.9685	22 0.866	0.3 0.024	NKS35A	37.5 8430	49.9 11200	8.00	8400	13000	0.310 0.187
37 1.4567	37 1.4567	47 1.8504	20 0.787	0.3 0.012	NK3720A	26.6 5900	46.4 10400	7.40	7600	12000	0.284 0.165
37 1.4567	37 1.4567	47 1.8504	30 1.181	0.3 0.012	NK3730A	38.2 8500	73.9 16600	11.5	7600	12000	0.328 0.192
37 1.4567	37 1.4567	52 2.0472	22 0.866	0.3 0.024	NKS37A	39 8770	53.4 12000	8.55	7800	12000	0.324 0.195
38 1.4961	38 1.4961	48 1.8898	20 0.787	0.3 0.012	NK3820A	21.7 4880	40.9 9190	6.40	7300	11000	0.267 0.152
	38 1.4961	48 1.8898	30 1.181	0.3 0.012	NK3830A	31.9 7170	67 15100	10.4	7300	11000	0.321 0.189
40 1.5748	40 1.5748	50 1.9685	20 0.787	0.3 0.012	NK4020A	27.8 6190	51.9 11500	8.05	7000	11000	0.289 0.166
	40 1.5748	50 1.9685	30 1.181	0.3 0.012	NK4030A	40 8960	61.2 13700	12.4	7000	11000	0.327 0.192
	40 1.5748	52 2.0472	20 0.787	0.3 0.024	RNA49/32	32 7190	49.3 11000	7.85	7100	11000	0.300 0.170
	40 1.5748	52 2.0472	36 1.417	0.3 0.024	RNA49/32A	48.6 10900	84.5 19000	26.1	7100	11000	0.435 0.248
	40 1.5748	55 2.1654	22 0.866	0.3 0.024	NKS40A	46.3 10300	57 12800	9.15	7200	11000	0.340 0.193
42 1.6535	42 1.6535	52 2.0472	20 0.787	0.3 0.012	NK4220A	28.3 6300	52.4 11600	8.35	6600	10000	0.285 0.167
	42 1.6535	52 2.0472	30 1.181	0.3 0.012	NK4230A	40.7 9100	62.5 13900	13.0	6600	10000	0.341 0.191
	42 1.6535	55 2.1654	20 0.787	0.3 0.024	RNA49/07	32.8 7370	51.7 11600	8.25	6700	10000	0.314 0.181
	42 1.6535	55 2.1654	36 1.417	0.3 0.024	RNA49/07A	48.9 11200	88.7 19900	13.7	6700	10000	0.418 0.238
43 1.6929	43 1.6929	53 2.0866	20 0.787	0.3 0.012	NK4320A	29 6500	54.4 12200	8.85	6400	9900	0.286 0.164
	43 1.6929	53 2.0866	30 1.181	0.3 0.012	NK4330A	41.6 9300	68.6 15300	13.4	6400	9900	0.324 0.195
	43 1.6929	58 2.2832	22 0.866	0.3 0.024	NKS43A	41.6 9300	60.7 13600	9.75	6700	10000	0.350 0.200
45 1.7717	45 1.7717	55 2.1654	20 0.787	0.3 0.012	NK4520A	29.5 6600	56.4 12500	9.00	6100	9400	0.300 0.170
	45 1.7717	55 2.1654	30 1.181	0.3 0.012	NK4530A	42.3 9510	68.8 20200	13.9	6100	9400	0.351 0.203
47 1.8504	47 1.8504	60 2.3622	22 0.866	0.3 0.024	NKS45A	43 9610	64.2 14400	10.3	6400	9800	0.356 0.204
	47 1.8504	60 2.3622	30 1.181	0.3 0.012	NK4730A	39 8740	58.5 13200	9.30	5900	9000	0.304 0.179
	47 1.8504	62 2.4409	20 0.787	0.3 0.024	NK4720A	43 9610	63.1 14000	14.4	5900	9000	0.358 0.206
48 1.8898	48 1.8898	62 2.4409	22 0.866	0.3 0.024	RNA49/08	44.2 9840	67.8 15000	10.9	5900	9100	0.354 0.204
	48 1.8898	62 2.4409	40 1.575	0.3 0.024	RNA49/08A	70.8 15900	124 27900	19.8	5900	9100	0.500 0.281
50 1.9685	50 1.9685	62 2.4409	25 0.984	0.3 0.012	NKS/025A	40.7 9100	73.3 16300	12.5	5500	8500	0.321 0.177

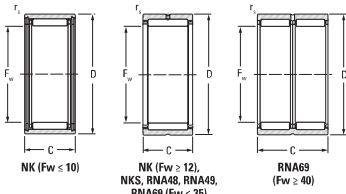
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## NEEDLE ROLLER BEARINGS

### NEEDLE ROLLER BEARINGS WITHOUT INNER RINGS

METRIC SERIES  
NK, NKS, RNA48, RNA49,  
RNA69 SERIES



Shaft Dia. mm in	F <sub>sw</sub> mm in	D mm in	C mm in	r <sub>max</sub> mm in	Bearing Designation	Load Ratings		Fatigue Load Limit C <sub>10</sub> kN lbf	Speed Ratings		Approx. Wt. kg lbf
						Dynamic C	Static C <sub>0</sub>		Grease	Oil	
50 1.9685	50 1.9685	62 2.4493	35 1.378	0.6 0.024	NK5035A	55 12400	117 26300	18.2	5500	8500	0.242 0.534
52 2.0472	52 2.0472	68 2.6772	35 1.378	0.6 0.024	NK5235A	45.5 10200	71.3 15800	11.4	5700	8700	0.178 0.393
55 2.1654	55 2.1654	68 2.6772	25 0.984	0.6 0.024	NK5525A	46.5 10400	87.3 19600	13.9	5000	7800	0.207 0.456
58 2.2835	58 2.2835	72 2.8346	22 0.869	0.6 0.024	NK5822A	48.2 10800	91.7 20600	15.5	4200	6500	0.257 0.567
60 2.3622	60 2.3622	72 2.8346	25 0.984	0.6 0.024	NK6025A	59.9 13500	139 31200	21.5	4400	7000	0.286 0.631
63 2.4803	63 2.4803	80 3.1496	28 1.102	1.1 0.043	NK6328A	66.9 15000	153 34000	16.5	4800	7300	0.317 0.703
65 2.5591	65 2.5591	80 3.1496	25 0.984	0.6 0.024	NK6525A	62 13900	107 24000	17.1	4500	6900	0.285 0.628
68 2.6772	68 2.6772	82 3.2283	25 0.984	0.6 0.024	NK6825A	62 13900	107 24000	17.1	4500	6900	0.285 0.628
70 2.7559	70 2.7559	85 3.3465	25 0.984	0.6 0.024	NK7025A	62 13900	107 24000	17.1	4500	6900	0.285 0.628

## Heavy-Duty Needle Roller Bearings

Shaft Dia. mm in	F <sub>sw</sub> mm in	D mm in	C mm in	r <sub>max</sub> mm in	Bearing Designation	Load Ratings		Fatigue Load Limit C <sub>10</sub> kN lbf	Speed Ratings		Approx. Wt. kg lbf
						Dynamic C	Static C <sub>0</sub>		Grease	Oil	
70 2.7559	70 2.7559	85 3.3465	25 0.984	0.6 0.024	NK7025A	62 14000	107 24000	17.1	4500	6900	0.285 0.628
72 2.8346	72 2.8346	90 3.5433	25 0.984	0.6 0.024	NK7225A	62 14000	107 24000	17.1	4500	6900	0.285 0.628
73 2.874	73 2.874	90 3.5433	25 0.984	0.6 0.024	NK7325A	62 14000	107 24000	17.1	4500	6900	0.285 0.628
75 2.9528	75 2.9528	92 3.622	25 0.984	0.6 0.024	NK7525A	62 14000	107 24000	17.1	4500	6900	0.285 0.628
80 3.1496	80 3.1496	95 3.7492	25 0.984	0.6 0.024	NK8025A	62 14000	107 24000	17.1	4500	6900	0.285 0.628
85 3.3465	85 3.3465	105 4.1339	25 0.984	0.6 0.024	NK8525A	62 14000	107 24000	17.1	4500	6900	0.285 0.628
90 3.5433	90 3.5433	110 4.3307	25 0.984	0.6 0.024	NK9025A	62 14000	107 24000	17.1	4500	6900	0.285 0.628
95 3.7492	95 3.7492	115 4.5275	25 0.984	0.6 0.024	NK9525A	62 14000	107 24000	17.1	4500	6900	0.285 0.628
100 3.937	100 3.937	120 4.7244	25 0.984	0.6 0.024	NK10025A	62 14000	107 24000	17.1	4500	6900	0.285 0.628
105 4.1339	105 4.1339	125 4.9213	25 0.984	0.6 0.024	NK10525A	62 14000	107 24000	17.1	4500	6900	0.285 0.628

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