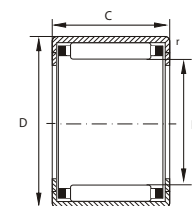


NEEDLE ROLLER BEARINGS WITHOUT INNER RING

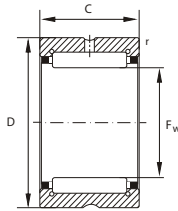


NK(F_w ≤ 10mm)

Shaft Diameter (mm)	Principal dimension (mm)					Bearing Number				Basic Load Rating (kN)		Limiting Speed r/min	Rotating Speed r/min
	F _w	D	C	r min	NK	RNA 49	RNA 69	Weight g	Dynamic C	Static C ₀			
5	5	10	10	0.15	* NK 5/10TN	-	-	3.1	2.3	1.92	37000	65000	
	5	10	12	0.15	* NK 5/12TN	-	-	3.7	3.0	2.65	37000	65000	
6	6	12	10	0.15	* NK 6/10TN	-	-	4.7	2.6	2.28	33000	55000	
	6	12	12	0.15	* NK 6/12TN	-	-	5.7	3.3	3.15	33000	55000	
7	7	14	10	0.30	* NK 7/10TN	-	-	6.9	2.8	2.65	31000	50000	
	7	14	12	0.30	* NK 7/12TN	-	-	8.2	3.6	3.60	31000	49000	
8	8	15	12	0.30	* NK 8/12TN	-	-	8.7	3.9	4.10	29000	43000	
	8	15	16	0.30	* NK 8/16TN	-	-	12.0	5.1	5.80	29000	42000	
9	9	16	12	0.30	* NK 9/12TN	-	-	10.3	4.5	5.00	28000	37000	
	9	16	16	0.30	* NK 9/16TN	-	-	12.8	5.9	7.10	28000	37000	
10	10	17	12	0.30	* NK 10/12TN	-	-	10.1	4.7	5.50	27000	34000	
	10	17	16	0.30	* NK 10/16TN	-	-	13.3	6.2	7.80	27000	33000	
12	12	19	12	0.30	NK 12/12	-	-	12.1	6.4	7.10	25000	26000	
	12	19	16	0.30	NK 12/16	-	-	15.9	9.0	11.00	25000	25000	
14	14	22	16	0.30	NK 14/16	-	-	20.7	10.1	11.50	24000	22000	
	14	22	20	0.30	NK 14/20	-	-	25.5	12.8	15.80	24000	21000	
	14	22	13	0.30	-	RNA 4900	-	16.5	8.5	9.20	25000	21000	
15	15	23	16	0.30	NK 15/16	-	-	21.8	10.7	12.70	23000	20000	
	15	23	20	0.30	NK 15/20	-	-	26.6	13.5	17.40	23000	20000	
16	16	24	16	0.30	NK 16/16	-	-	22.4	11.3	13.90	22000	19000	
	16	24	20	0.30	NK 16/20	-	-	28.4	14.4	18.80	22000	19000	
	16	24	13	0.30	-	RNA 4901	-	17.4	9.4	10.90	24000	18000	
	16	24	22	0.30	-	-	RNA 6901	31.0	16.0	21.60	22000	17000	
17	17	25	16	0.30	NK 17/16	-	-	23.7	11.9	15.00	22000	18000	
	17	25	20	0.30	NK 17/20	-	-	29.8	15.1	20.40	22000	17000	
18	18	26	16	0.30	NK 18/16	-	-	24.9	12.5	16.20	21000	17000	
	18	26	20	0.30	NK 18/20	-	-	31.4	15.8	22.00	21000	17000	
19	19	27	16	0.30	NK 19/16	-	-	26.1	13.0	17.40	21000	16000	
	19	27	20	0.30	NK 19/20	-	-	32.2	16.5	23.60	21000	16000	

TN = Plastic cage, Limiting working temperature: +120 °C (Continuous working)
+With rib, without oil hole and oil groove

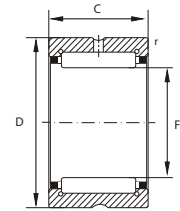
NEEDLE ROLLER BEARINGS WITHOUT INNER RING



NK ($F_w \geq 12\text{mm}$)
NKS
RNA 49, RN A 69 ($F_w \leq 35\text{mm}$)

Shaft Diameter (mm)	Principal dimensions (mm)				Bearing Number				Weight g	Basic Load Rating (kN)		Limiting Speed r/min	Rotating Speed r/min
	F_w	D	C	r min	NK	RNA 49	RNA 69	NKS		Dynamic C	Static C_0		
20	20	28	16	0.3	NK 20/16	-	-	-	27.0	13.0	17.5	20000	15000
	20	28	20	0.3	NK 20/20	-	-	-	33.9	16.4	23.8	20000	15000
	20	28	13	0.3	-	RNA 4902	-	-	21.7	10.6	13.6	22000	14000
	20	28	23	0.3	-	-	RNA 6902	-	39.7	17.3	25.5	20000	14000
	20	32	20	0.6	-	-	-	NKS 20	48.7	23.0	25.0	19000	14000
21	21	29	16	0.3	NK 21/16	-	-	-	28.1	13.5	18.7	20000	15000
	21	29	20	0.3	NK 21/20	-	-	-	35.2	17.1	25.5	20000	14000
22	22	30	16	0.3	NK 22/16	-	-	-	30.0	14.0	19.9	19000	14000
	22	30	20	0.3	NK 22/20	-	-	-	37.0	17.7	27.0	19000	14000
22	22	30	13	0.3	-	RNA 4903	-	-	22.2	11.0	14.6	21000	13000
	22	30	23	0.3	-	-	RNA 6903	-	42.4	18.6	29.0	19000	12000
	22	35	20	0.6	-	-	-	NKS 22	61.5	24.5	28.0	17000	13000
	24	24	32	16	0.3	NK 24/16	-	-	-	31.9	15.0	22.3	18000
24	24	32	20	0.3	NK 24/20	-	-	-	40.0	19.0	30.5	18000	13000
	24	37	20	0.6	-	-	-	NKS 24	65.5	26.0	31.0	16000	12000
25	25	33	16	0.3	NK 25/16	-	-	-	32.6	14.9	22.4	17000	12000
	25	33	20	0.3	NK 25/20	-	-	-	42.0	18.8	30.5	17000	12000
	25	37	17	0.3	-	RNA 4904	-	-	52.3	21.0	25.5	17000	12000
25	25	37	30	0.3	-	-	RNA 6904	-	100.0	36.0	51.0	16000	11000
	25	38	20	0.6	-	-	-	NKS 25	68.1	27.5	33.5	16000	11000
26	26	34	16	0.3	NK 26/16	-	-	-	34.0	15.3	23.6	16000	12000
	26	34	20	0.3	NK 26/20	-	-	-	42.0	19.4	32.0	16000	12000
28	28	37	20	0.3	NK 28/20	-	-	-	52.2	22.0	34.0	15000	11000
	28	37	30	0.3	NK 28/30	-	-	-	82.0	33.0	57.0	15000	11000
	28	39	17	0.3	-	RNA 49/22	-	-	50.2	22.8	29.5	16000	10000
28	28	39	30	0.3	-	-	RNA 69/22	-	98.0	37.5	55.0	15000	10000
	28	42	20	0.6	-	-	-	NKS 28	83.6	28.5	36.5	14000	10000
	29	29	38	20	0.3	NK 29/20	-	-	-	53.7	21.9	34.0	15000
29	29	38	30	0.3	NK 29/30	-	-	-	84.3	32.5	57.0	15000	10000
	30	40	20	0.3	NK 30/20	-	-	-	65.0	22.6	36.0	14000	10000
	30	40	30	0.3	NK 30/30	-	-	-	97.9	33.5	60.0	14000	10000
	30	42	17	0.3	-	RNA 4905	-	-	61.0	23.6	31.5	15000	9500
30	30	42	30	0.3	-	-	RNA 6905	-	112.0	39.0	59.0	14000	9000
	30	45	22	0.6	-	-	-	NKS 30	104.0	32.0	40.0	13000	10000
32	32	42	20	0.3	NK 32/20	-	-	-	68.0	23.1	37.5	13000	10000
	32	42	30	0.3	NK 32/30	-	-	-	102.0	34.5	63.0	13000	9500
	32	45	17	0.3	-	RNA 49/28	-	-	73.2	24.4	33.5	13000	9000
32	32	45	30	0.3	-	-	RNA 69/28	-	735	40.5	63.0	13000	8500
	32	47	22	0.6	-	-	-	NKS 32	110.0	33.5	43.5	12000	9500

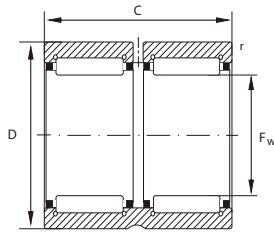
NEEDLE ROLLER BEARINGS WITHOUT INNER RING



NK.NKS
RNA 49
RNA 69 ($F_w \leq 35\text{mm}$)

Shaft Diameter (mm)	Principal dimensions (mm)				Bearing Number				Weight g	Basic Load Rating (kN)		Limiting Speed r/min	Rotating Speed r/min	
	F_w	D	C	r min	NK	RNA 49	RNA 69	NKS		Dynamic C	Static C_0			
35	35	45	20	0.3	NK 35/20	-	-	-	73.8	24	41	12000	9000	
	35	45	30	0.3	NK 35/30	-	-	-	112.0	36	69	12000	9000	
	35	47	17	0.3	-	RNA 4906	-	-	69.4	25	35	13000	8000	
	35	47	30	0.3	-	-	RNA 6906	-	126.0	43	71	12000	7500	
	35	50	22	0.6	-	-	-	NKS 35	118.0	35	47	12000	8500	
37	37	47	20	0.3	NK 37/20	-	-	-	77.0	24	43	12000	8500	
	37	47	30	0.3	NK 37/30	-	-	-	113.0	37	73	12000	8500	
37	37	52	22	0.6	-	-	-	NKS 37	123.0	36	50	11000	8500	
	38	38	48	20	0.3	NK 38/20	-	-	-	79.4	25	45	11000	8500
	38	38	48	30	0.3	NK 38/30	-	-	-	116.0	38	76	11000	8000
40	40	50	20	0.3	NK 40/20	-	-	-	82.7	26	47	11000	8000	
	40	50	30	0.3	NK 40/30	-	-	-	125.0	39	79	11000	8000	
	40	52	20	0.6	-	RNA 49/32	-	-	89.1	30	47	12000	7500	
40	40	52	36	0.6	-	-	RNA 69/32	-	162.0	47	82	11000	7500	
	40	55	22	0.6	-	-	-	NKS 40	129.0	38	54	10000	7500	
42	42	52	20	0.3	NK 42/20	-	-	-	85.8	36	49	10000	8000	
	42	52	30	0.3	NK 42/30	-	-	-	130.0	39	82	10000	7500	
42	42	55	20	0.6	-	RNA 4907	-	-	107.0	31	50	11000	7000	
	42	55	36	0.6	-	-	RNA 6907	-	193.0	48	86	10000	7000	
	43	43	53	20	0.3	NK 43/20	-	-	-	86.0	27	51	10000	7500
43	43	53	30	0.3	NK 43/30	-	-	-	133.0	40	85	10000	7500	
	43	58	22	0.6	-	-	-	NKS 43	139.0	39	57	9500	7500	
45	45	55	20	0.3	NK 45/20	-	-	-	91.5	27	53	10000	7500	
	45	55	30	0.3	NK 45/30	-	-	-	139.0	41	88	10000	7000	
45	45	60	22	0.6	-	-	-	NKS 45	145.0	40	60	9500	7000	
	47	47	57	20	0.3	NK 47/20	-	-	-	94.5	28	56	9500	7000
47	47	57	30	0.3	NK 47/30	-	-	-	142.0	43	94	9500	7000	
	48	48	62	22	0.6	-	RNA 4908	-	140.0	43	67	9500	6000	
48	48	62	40	0.6	-	-	RNA 6908	-	256.0	66	116	9000	6500	
	50	50	62	25	0.6	NK 50/25	-	-	-	158.0	38	74	9000	6500
	50	62	35	0.6	NK 50/35	-	-	-	221.0	50	106	9000	6500	
50	50	65	22	1.0	-	-	-	NKS 50	157.0	42	67	8500	6500	
	52	52	68	22	0.6	-	RNA 4909	-	182.0	45	73	8500	6000	
52	52	68	40	0.6	-	-	RNA 6909	-	338.0	69	127	8000	6000	
	55	55	68	25	0.6	NK 55/25	-	-	-	180.0	40	82	8000	6000
55	55	68	35	0.6	NK 55/35	-	-	-	250.0	53	118	8000	6000	
	55	72	22	1.0	-	-	-	NKS 55	221.0	45	74	7500	6000	
58	58	72	22	0.6	-	RNA 4910	-	-	163.0	47	80	8000	5000	
	58	72	40	0.6	-	-	RNA 6910	-	310.0	73	139	7500	5000	

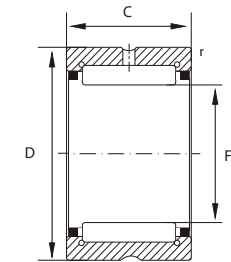
NEEDLE ROLLER BEARINGS WITHOUT INNER RING



RNA 69 ($F_w \geq 40\text{mm}$)

Shaft Diameter (mm)	Principal dimensions (mm)				Bearing Number				Weight \approx g	Basic Load Rating (kN)		Limiting Speed r/min	Rotating Speed r/min
	F_w	D	C	r min	NK	RNA 49	RNA 69	NKS		Dynamic C	Static C_0		
60	60	72	25	0.6	NK 60/25	-	-	-	185	42	90	7500	5500
	60	72	35	0.6	NK 60/35	-	-	-	258	56	130	7500	5500
60	80	28	1.1	-	-	-	NKS 60	335	63	98	7000	5500	
63	63	80	25	1.0	-	RNA 4911	-	-	255	58	100	7500	4900
	63	80	45	1.0	-	-	RNA 6911	-	470	90	176	7000	4900
65	65	78	25	0.6	NK 65/25	-	-	-	221	44	98	7000	5500
	65	78	35	0.6	NK 65/35	-	-	-	310	59	142	7000	5500
65	85	28	1.1	-	-	-	NKS 65	356	67	108	6500	5000	
68	68	82	25	0.6	NK 68/25	-	-	-	241	43	89	6500	5500
	68	82	35	0.6	NK 68/35	-	-	-	338	62	139	6500	5000
68	85	25	1.0	-	-	RNA 4912	-	-	275	60	108	7000	4500
68	85	45	1.0	-	-	-	RNA 6912	-	488	94	191	6500	4500
70	70	85	25	0.6	NK 70/25	-	-	-	260	44	92	6500	5000
	70	85	35	0.6	NK 70/35	-	-	-	370	63	144	6500	5000
70	90	28	1.1	-	-	-	NKS 70	380	68	113	6000	4900	
72	72	90	25	1.0	-	RNA 4913	-	-	312	61	112	6500	4300
	72	90	45	1.0	-	-	RNA 6913	-	580	95	198	6000	4300
73	73	90	25	1.0	NK 73/25	-	-	-	302	53	100	6000	4900
	73	90	35	1.0	NK 73/35	-	-	-	428	75	156	6000	4700
75	75	92	25	1.0	NK 75/25	-	-	-	315	54	104	6000	4800
	75	92	35	1.0	NK 75/35	-	-	-	445	77	162	6000	4600
75	95	28	1.1	-	-	-	NKS 75	402	71	123	6000	4600	
80	80	95	25	1.0	NK 80/25	-	-	-	301	56	119	5500	4400
	80	95	35	1.0	NK 80/35	-	-	-	425	78	184	5500	4300
80	100	30	1.0	-	RNA 4914	-	-	-	460	84	156	6000	4000
80	100	54	1.0	-	-	RNA 6914	-	-	857	128	265	5500	3900
85	85	105	25	1.0	NK 85/25	-	-	-	425	69	123	5000	4200
	85	105	35	1.0	NK 85/35	-	-	-	600	98	193	5000	4000
85	105	30	1.0	-	RNA 4915	-	-	-	489	86	162	5500	3800
85	105	54	1.0	-	-	RNA 6915	-	-	935	130	275	5000	3600
90	90	110	25	1.0	NK 90/25	-	-	-	450	72	132	4900	4000
	90	110	35	1.0	NK 90/35	-	-	-	630	103	208	4900	3800
90	110	30	1.0	-	RNA 4916	-	-	-	516	89	174	5000	3500
90	110	54	1.0	-	-	RNA 6916	-	-	987	135	300	4900	3300
95	95	115	26	1.0	NK 95/26	-	-	-	490	73	137	4700	3900
	95	115	36	1.0	NK 95/36	-	-	-	680	107	223	4700	3700

NEEDLE ROLLER BEARINGS WITHOUT INNER RING



NK
RNA 49, RNA 48

Shaft Diameter (mm)	Principal dimensions (mm)				Bearing Number				Weight \approx g	Basic Load Rating (kN)		Limiting Speed r/min	Rotating Speed r/min
	F_w	D	C	r min	NK	RNA 49	RNA 69	Dynamic C		Static C_0			
100	100	120	26	1.0	NK 100/26	-	-	515	76	146	4500	3700	
	100	120	36	1.0	NK 100/36	-	-	715	111	237	4500	3500	
100	120	35	1.1	-	RNA 4917	-	-	657	111	237	4800	3300	
100	120	63	1.1	-	-	RNA 6917	-	1200	166	400	4500	2900	
105	105	125	26	1.0	NK 105/26	-	-	540	78	155	4300	3600	
	105	125	36	1.0	NK 105/36	-	-	713	114	250	4300	3400	
105	125	35	1.1	-	RNA 4918	-	-	745	114	250	4600	3100	
105	125	63	1.1	-	-	RNA 6918	-	1330	172	425	4300	2700	
110	110	130	30	1.1	NK 110/30	-	-	650	98	210	4100	3300	
	110	130	40	1.1	NK 110/40	-	-	830	127	290	4100	3100	
110	130	35	1.1	-	RNA 4919	-	-	719	116	260	4400	2900	
110	130	63	1.1	-	-	RNA 6919	-	1460	174	440	4100	2600	