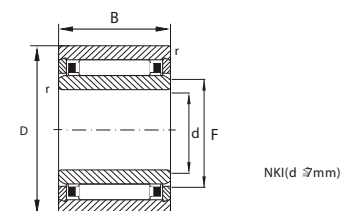


NEEDLE ROLLER BEARING WITH INNER RING



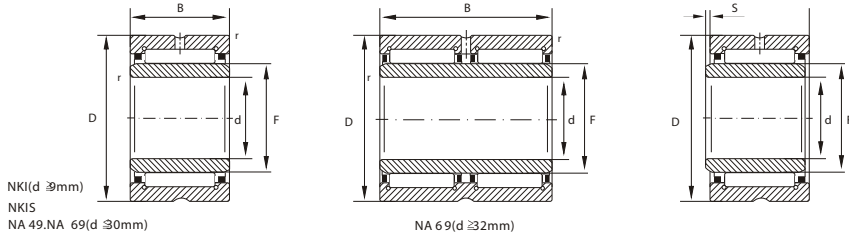
Shaft Diameter (mm)	Principal dimensions (mm)					Bearing Number				Basic Load Rating (kN)			Limiting Speed r/min	Rotating Speed r/min	
	d	F	D	B	r min	NKI	NA 49	NA 69	NKIS	Weight _{ISO} g	Dynamic C	Static C ₀			
5	5	8	15	12	0.3	1.5	+ NKI 5/12 TN	-	-	-	11.5	3.95	4.1	32000	38000
	5	8	15	16	0.3	2.0	+ NKI 5/16 TN	-	-	-	15.3	5.10	5.8	32000	37000
6	6	9	16	12	0.3	1.5	+ NKI 6/12 TN	-	-	-	13.5	4.50	5.0	30000	33000
	6	9	16	16	0.3	2.0	+ NKI 6/16 TN	-	-	-	17.4	5.90	7.1	30000	33000
7	7	10	17	12	0.3	1.5	+ NKI 7/12 TN	-	-	-	13.7	4.75	5.5	29000	30000
	7	10	17	16	0.3	2.0	+ NKI 7/16 TN	-	-	-	18.2	6.20	7.8	29000	30000
9	9	12	19	12	0.3	1.5	NKI 9/12	-	-	-	16.6	6.40	7.1	27000	24000
	9	12	19	16	0.3	2.0	NKI 9/16	-	-	-	21.9	9.00	11.0	27000	23000
10	10	14	22	16	0.3	0.5	NKI 10/16	-	-	-	29.4	10.10	11.5	25000	19000
	10	14	22	20	0.3	0.5	NKI 10/20	-	-	-	37.1	12.80	15.6	25000	19000
12	10	14	22	13	0.3	0.5	-	NA 4900	-	-	23.0	8.50	9.2	25000	20000
	12	16	24	16	0.3	0.5	NK 12/16	-	-	-	33.3	11.30	13.9	24000	17000
12	12	16	24	20	0.3	0.5	NK 12/20	-	-	-	41.9	14.40	18.8	24000	17000
	12	16	24	13	0.3	0.5	-	NA 4901	-	-	26.0	9.40	10.9	24000	17000
15	12	16	24	22	0.3	1.0	-	-	NA 6901	-	46.0	16.00	21.6	24000	16000
	15	19	27	16	0.3	0.5	NK 15/16	-	-	-	38.8	13.00	17.4	22000	14000
15	15	19	27	20	0.3	0.5	NK 15/20	-	-	-	48.7	16.50	23.6	22000	14000
	15	20	28	13	0.3	0.5	-	NA 4902	-	-	34.0	10.60	13.6	22000	14000
15	15	20	28	23	0.3	1.0	-	-	NA 6902	-	63.6	17.30	25.5	22000	13000
	15	22	35	20	0.6	0.5	-	-	-	NKIS 15	92.0	24.50	28.0	20000	11000
17	17	21	29	16	0.3	0.5	NK 17/16	-	-	-	42.4	13.50	18.7	21000	13000
	17	21	29	20	0.3	0.5	NK 17/20	-	-	-	53.4	17.10	25.5	21000	13000
17	17	22	30	13	0.3	0.5	-	NA 4903	-	-	37.0	11.00	14.6	21000	12000
	17	22	30	23	0.3	1.0	-	-	NA 6903	-	72.0	18.60	29.0	21000	11000
17	24	37	20	0.6	0.5	-	-	-	NKIS 17	98.0	26.00	31.0	18000	10000	

TN = Plastic cage, Limiting working temperature: +120°C (Continuous working)

-With rib, without oil hole and oil groove

*) Allowed axial displacement of inner ring relative to outer ring

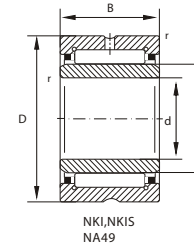
NEEDLE ROLLER BEARING WITH INNER RING



Shaft Diameter (mm)	Principal dimensions (mm)					Bearing Number				Basic Load Rating (kN)		Limiting Speed r/min	Rotating Speed r/min		
	d	F	D	B	r s ¹	NKI	NA 49	NA 69	NKIS	Weight g	Dynamic C			Static C ₀	
20	20	24	32	16	0.3	0.5	NKI 20/16	-	-	-	49	15.0	22.3	19000	12000
	20	24	32	20	0.3	0.5	NKI 20/20	-	-	-	61	19.0	30.5	19000	12000
	20	25	37	17	0.3	0.8	-	NA 4904	-	-	75	21.0	25.5	17000	11000
	20	25	37	30	0.3	1.0	-	-	NA 6904	-	141	36.0	51.0	17000	10000
22	20	28	42	20	0.6	0.5	-	-	-	NKIS 20	129	28.5	36.5	16000	9000
	22	26	34	16	0.3	0.5	NKI 22/16	-	-	-	52	15.3	23.6	18000	11000
	22	26	34	20	0.3	0.5	NKI 22/20	-	-	-	65	19.4	32.0	18000	11000
	22	28	39	17	0.3	0.8	-	NA 49/22	-	-	80	22.8	29.5	16000	9500
25	22	28	39	30	0.3	0.5	-	-	NA 69/22	-	150	37.5	55.0	16000	9000
	25	29	38	20	0.3	1.0	NKI 25/20	-	-	-	79	21.9	34.0	16000	10000
	25	29	38	30	0.3	1.5	NKI 25/30	-	-	-	124	32.5	57.0	16000	9500
	25	30	42	17	0.3	0.8	-	NA 4905	-	-	88	23.6	31.5	15000	9500
28	25	30	42	30	0.3	1.0	-	-	NA 6905	-	161	39.0	59.0	15000	9000
	25	32	47	22	0.6	1.0	-	-	-	NKIS 25	162	33.5	43.5	14000	8500
	28	32	42	20	0.3	1.0	NKI 28/20	-	-	-	96	23.1	37.5	14000	9000
	28	32	42	30	0.3	1.5	NKI 28/30	-	-	-	146	34.5	63.0	14000	9000
30	28	32	45	17	0.3	0.8	-	NA 49/28	-	-	97	24.4	33.5	13000	8500
	28	32	45	30	0.3	1.0	-	-	NA 69/28	-	182	40.5	63.0	13000	8500
	30	35	45	20	0.3	0.5	NKI 30/20	-	-	-	112	24.3	41.5	13000	8500
	30	35	45	30	0.3	1.0	NKI 30/30	-	-	-	170	36.5	69.0	13000	8000
32	30	35	47	17	0.3	0.8	-	NA 4906	-	-	101	25.0	35.5	13000	8000
	30	35	47	30	0.3	1.0	-	-	NA 6906	-	192	43.5	71.0	13000	7500
	30	37	52	22	0.6	1.0	-	-	-	NKIS 30	184	36.5	50.0	12000	7500
	32	37	47	20	0.3	0.5	NKI 32/20	-	-	-	118	24.9	43.5	12000	8000
35	32	37	47	30	0.3	1.0	NKI 32/30	-	-	-	180	37.0	73.0	12000	8000
	32	40	52	20	0.6	0.8	-	NA 49/32	-	-	158	30.5	47.5	12000	7000
	32	40	52	36	0.6	0.5	-	-	NA 69/32	-	288	47.0	82.0	12000	7000
	35	40	50	20	0.3	0.5	NKI 35/20	-	-	-	127	26.0	47.0	12000	7500
35	35	40	50	30	0.3	1.0	NKI 35/30	-	-	-	193	39.0	79.0	12000	7500
	35	42	55	20	0.6	0.8	-	NA 4907	-	-	170	31.5	50.0	11000	7000
	35	42	55	36	0.6	0.5	-	-	NA 6907	-	310	48.0	86.0	11000	7000
	35	43	58	22	0.6	0.5	-	-	-	NKIS 35	220	39.0	57.0	11000	6500

¹) Allowed axial displacement of inner ring relative to outer ring

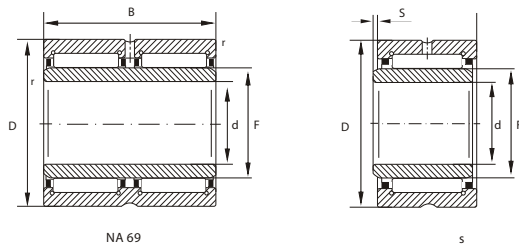
NEEDLE ROLLER BEARING WITH INNER RING



Shaft Diameter (mm)	Principal dimensions (mm)					Bearing Number				Basic Load Rating (kN)		Limiting Speed r/min	Rotating Speed r/min		
	d	F	D	B	r s ¹	NKI	NA 49	NA 69	NKIS	Weight g	Dynamic C			Static C ₀	
38	38	43	53	20	0.3	0.5	NKI 38/20	-	-	-	136	27	51	11000	7000
	38	43	53	30	0.3	1.0	NKI 38/30	-	-	-	207	10	85	11000	7000
	40	45	55	20	0.3	0.5	NKI 40/20	-	-	-	142	27	53	10000	7000
	40	45	55	30	0.3	1.0	NKI 40/30	-	-	-	216	41	88	10000	6500
40	40	48	62	22	0.6	1.0	-	NA 4908	-	-	230	43	67	9500	6000
	40	48	62	40	0.6	0.5	-	-	NA 6908	-	430	66	116	9500	6000
	40	50	65	22	1.0	0.5	-	-	-	NKIS 40	281	42	67	9500	5500
	42	47	57	20	0.3	0.5	NKI 42/20	-	-	-	148	28	56	10000	6500
42	42	47	57	30	0.3	1.0	NKI 42/30	-	-	-	222	43	94	10000	6500
	45	50	62	25	0.6	1.5	NKI 45/25	-	-	-	229	38	74	9000	6500
	45	50	62	35	0.6	2.0	NKI 45/35	-	-	-	322	50	106	9000	6000
	45	52	68	22	0.6	1.0	-	NA 4909	-	-	271	45	73	8500	5500
45	45	52	68	40	0.6	0.5	-	-	NA 6909	-	495	69	127	8500	5500
	45	55	72	22	1.0	0.5	-	-	-	NKIS 45	336	45	74	8500	5500
	50	55	68	25	0.6	1.5	NKI 50/25	-	-	-	270	40	82	8500	6000
	50	55	68	35	0.6	2.0	NKI 50/35	-	-	-	379	53	118	8500	6000
50	50	58	72	22	0.6	1.0	-	NA 4910	-	-	274	47	80	8000	5000
	50	58	72	40	0.6	0.5	-	-	NA 6910	-	515	73	139	8000	4900
	50	60	80	28	1.1	2.0	-	-	-	NKIS 50	518	63	98	7500	5000
	55	55	60	28	1.1	2.0	-	-	-	-	518	63	98	7500	5000
55	55	60	72	25	0.6	1.5	NKI 55/25	-	-	-	272	42	90	7500	5500
	55	60	72	35	0.6	2.0	NKI 55/35	-	-	-	379	56	130	7500	5500
	55	63	80	25	1.0	1.5	-	NA 4911	-	-	393	58	100	7500	4700
	55	63	80	45	1.0	1.5	-	-	NA 6911	-	780	90	176	7500	4700
60	55	65	85	28	1.1	2.0	-	-	-	NKIS 55	558	67	108	7000	4700
	60	68	82	25	0.6	1.0	NKI 60/25	-	-	-	394	43	89	7000	4900
	60	68	82	35	0.6	1.0	NKI 60/35	-	-	-	563	62	139	7000	4800
	60	68	85	25	1.0	1.5	-	NA 4912	-	-	426	60	108	7000	4300
60	60	68	85	45	1.0	1.5	-	-	NA 6912	-	808	94	191	7000	4300
	60	70	90	28	1.1	2.0	-	-	-	NKIS 60	560	68	113	6500	4500
	65	73	90	25	1.0	1.0	NKI 65/25	-	-	-	467	53	100	6500	4600
	65	73	90	35	1.0	1.0	NKI 65/35	-	-	-	659	75	156	6500	4400
65	65	72	90	25	1.0	1.5	-	NA 4913	-	-	456	61	112	6500	4100
	65	72	90	45	1.0	1.5	-	-	NA 6913	-	833	95	198	6500	4100
	65	75	95	28	1.1	2.0	-	-	-	NKIS 65	641	71	123	6500	4200

¹) Allowed axial displacement of inner ring relative to outer ring

NEEDLE ROLLER BEARING WITH INNER RING



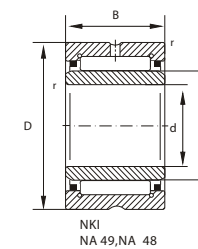
NA 69

s

Shaft Diameter (mm)	Principal dimensions (mm)						Bearing Number			Basic Load Rating (kN)		Limiting Speed r/min	Rotating Speed r/min	
	d	F	D	B	r	s ¹⁾	NKI	NA 49	NA 69	Weight ≈ g	Dynamic C			Static C ₀
70	70	80	95	25	1.0	0.8	NKI 70/25	-	-	521	56	119	6000	4100
70	80	95	35	1.0	0.8		NKI 70/35	-	-	737	78	184	6000	4000
70	80	100	30	1.0	1.5		-	NA 4914	-	728	84	156	6000	3800
70	80	100	54	1.0	1.0		-	-	NA 6914	1340	128	265	6000	3800
75	75	85	105	25	1.0	1.0	NKI 75/25	-	-	641	69	123	5500	3900
75	85	105	35	1.0	1.0		NKI 75/35	-	-	908	98	193	5500	3800
75	85	105	30	1.0	1.5		-	NA 4915	-	775	86	162	5500	3600
75	85	105	54	1.0	1.0		-	-	NA 6915	1450	130	275	5500	3500
80	80	90	110	25	1.0	1.0	NKI 80/25	-	-	677	72	132	5000	3700
80	90	110	35	1.0	1.0		NKI 80/35	-	-	959	103	208	5000	3600
80	90	110	30	1.0	1.5		-	NA 4916	-	878	89	174	5000	3400
80	90	110	54	1.0	1.0		-	-	NA 6916	1522	135	300	5000	3200
85	85	95	115	26	1.0	1.5	NKI 85/26	-	-	743	73	137	4900	3600
85	95	115	36	1.0	1.5		NKI 85/36	-	-	1040	107	223	4900	3400
85	100	120	35	1.1	1.0		-	NA 4917	-	1250	111	237	4800	3100
85	100	120	63	1.1	1.0		-	-	NA 6917	2200	166	400	4800	2800
90	90	100	120	26	1.0	1.5	NKI 90/26	-	-	778	76	146	4700	3500
90	100	120	36	1.0	1.5		NKI 90/36	-	-	1090	111	237	4700	3300
90	105	125	35	1.1	1.0		-	NA 4918	-	1312	114	250	4600	3000
90	105	125	63	1.1	1.0		-	-	NA 6918	2310	172	425	4600	2600
95	95	105	125	26	1.0	1.5	NKI 95/26	-	-	816	78	155	4500	3300
95	105	125	36	1.0	1.5		NKI 95/36	-	-	1145	114	250	4500	3200
95	110	130	35	1.1	1.0		-	NA 4919	-	1371	116	260	4400	2800
95	110	130	63	1.1	1.0		-	-	NA 6919	2500	174	440	4400	2500

¹⁾ Allowed axial displacement of inner ring relative to outer ring

NEEDLE ROLLER BEARING WITH INNER RING



NKI
NA 49, NA 48

Shaft Diameter (mm)	Principal dimensions (mm)						Bearing Number			Basic Load Rating (kN)		Limiting Speed r/min	Rotating Speed r/min	
	d	F	D	B	r	s ¹⁾	NKI	NA 49	NA 48	Weight ≈ g	Dynamic C			Static C ₀
100	100	110	130	30	1.1	1.5	NKI 100/30	-	-	990	98	210	4300	3100
100	110	130	40	1.1	2.0		NKI 100/40	-	-	1330	127	290	4300	3000
100	115	140	40	1.1	2.0		-	NA 4920	-	1900	128	270	4100	2900
110	110	125	150	40	1.1	2.0	-	NA 4922	-	2070	132	290	3800	2600
110	120	140	30	1.0	0.8		-	-	NA 4822	1080	94	216	3900	2700
120	120	135	165	45	1.1	2.0	-	NA 4924	-	2860	181	390	3400	2300
120	130	150	30	1.0	0.8		-	-	NA 4824	1170	99	239	3600	2400
130	130	150	180	50	1.5	1.5	-	NA 4926	-	3900	203	470	3200	2000
130	145	165	35	1.1	1.0		-	-	NA 4826	1810	118	310	3300	2100
140	140	160	190	50	1.5	1.5	-	NA 4928	-	4150	209	500	3000	1800
140	155	175	35	1.1	1.0		-	-	NA 4828	1920	120	325	3100	2000
150	150	165	190	40	1.1	1.5	-	-	NA 4830	2720	152	400	2900	1800
160	160	175	200	40	1.1	1.5	-	-	NA 4832	2890	160	435	2700	1700
170	170	185	215	45	1.1	1.5	-	-	NA 4834	3960	185	510	2500	1600
180	180	195	225	45	1.1	1.5	-	-	NA 4836	4200	194	550	2400	1500
190	190	210	240	50	1.5	1.5	-	-	NA 4838	5610	227	690	2300	1300

¹⁾ Allowed axial displacement of inner ring relative to outer ring