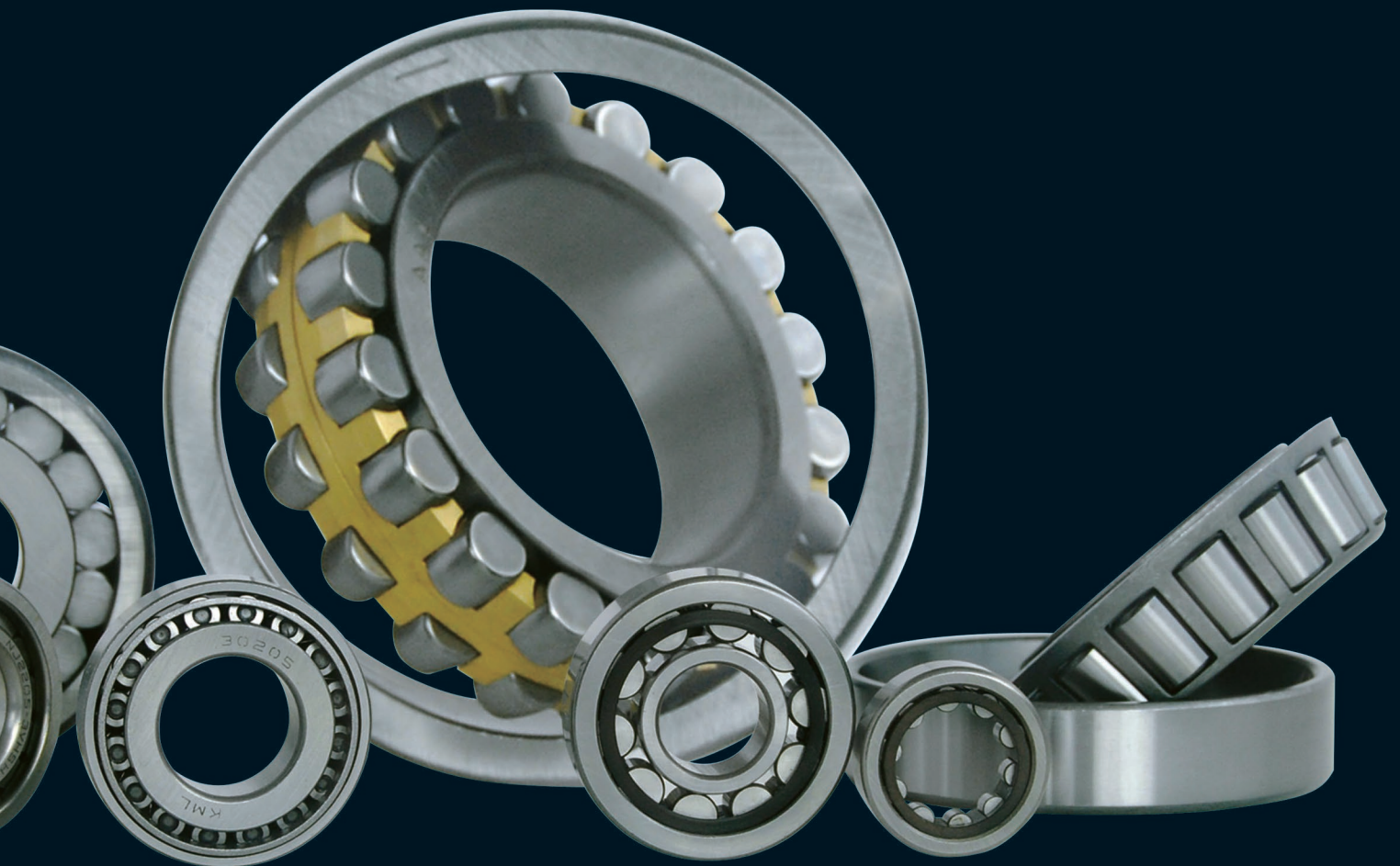




Roller Bearings C2013



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***K*keep *M*Moving *L*Long**



WARRANTY

Any bearing, which if properly selected, installed and used, shows defect upon **KML** laboratory analysis, due to faulty workmanship and/or material, shall be replaced free of charge provided such defect occurs within one year of delivery date.

Claims for labour or incidental damage shall not be allowed.

This warranty is in lieu of all warranties of merchantability, fitness for purpose, or all other warranties, expressed or implied.

KML shall not be liable for any special, indirect, or consequential damages. The remedies set forth herein are exclusive, and the liability of **KML** with respect to any contract or sale or anything done in connection therewith, in contract, in tort, under any warranty, or otherwise, shall not exceed the price of the bearing on which such liability is based.

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November.2013

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KML has always been adhering to the customer-centric philosophy since its establishment. With “Good quality, R&D, Global marketing, JIT service” as the core competitiveness, **KML** provided customers with one-stop service supported by effective management, strong technical force, advanced production facilities and constant quality control. The concept of the brand, **KML**, was incubated in Dortmund, Germany in 1980s. **KML** Company was officially established in 1981 in Hong Kong and gradually expanded into more than 70 countries and regions. **KML** now owns three subsidiaries in United States, Canada and China.

KML products are widely used in automobile, motorcycle, appliances, agricultural machinery, medicine, food and beverage processing, mining, energy, engineering, furniture industries etc.

To better meet customers’ diverse needs, **KML** strives to integrate optimal resources from bearing manufacturers in China, India and other parts of the world to form a highly-performed supply chain.

KML makes all efforts to help its global distributors and users gain maximum benefits and sustainable development by selling and using **KML** bearings, which makes **KML** a trusted brand.

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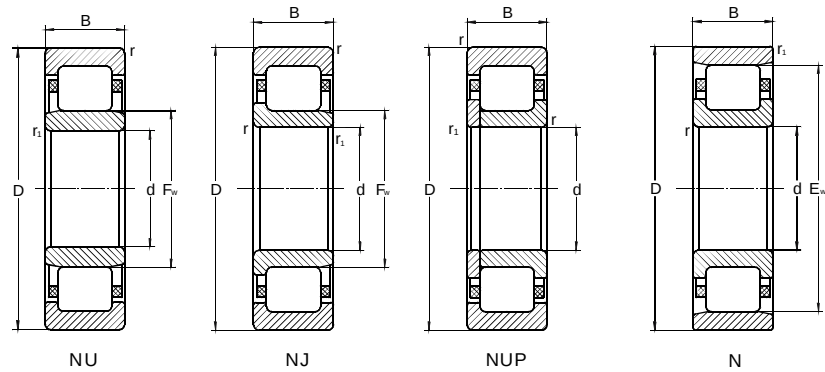
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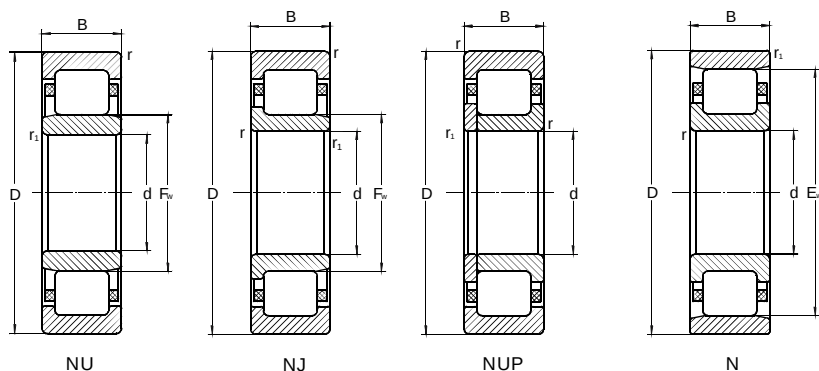
Single Row NU, NJ, NUP, N Series



KML No.				Boundary dimensions mm							Basic load ratings KN		Limiting speeds RPM		Mass Kg
													Lubrication		
NU	NJ	NUP	N	d	D	B	rmin	r ₁ min	Fw	Ew	Dynamic Cr	Static Cor	Grease	Oil	
NU202E	NJ	-	-	15	35	11	0.6	0.3	19.3	-	12.5	10.2	18000	22000	0.0487
NU203E	NJ	NUP	N	17	40	12	0.6	0.3	22.1	35.1	17.2	17.3	16000	19000	0.068
NU2203E	NJ	NUP	-		40	16	0.6	0.3	22.1	-	23.8	21.6	16000	19000	0.092
NU303E	NJ	NUP	N		47	14	1.0	0.6	24.2	40.2	24.6	20.4	14000	17000	0.12
NU204E	NJ	NUP	N	20	47	14	1	0.6	26.5	41.5	25.7	22.6	15000	18000	0.122
NU2204E	NJ	NUP	-		47	18	1	0.6	26.5	-	30.5	28.3	14000	16000	0.158
NU304E	NJ	NUP	-		52	15	1.1	0.6	27.5	45.5	31.5	26.9	13000	15000	0.176
NU2304E	NJ	NUP	-		52	21	1.1	0.6	27.5	-	42	39	12000	14000	0.242
NU1005	NJ	NUP	N	25	47	12	0.6	0.3	30.5	41.5	15.1	14.1	16000	19000	0.092
NU205E	NJ	NUP	N		52	15	1	0.6	31.5	46.5	29.3	27.7	13000	15000	0.151
NU2205E	NJ	NUP	-		52	18	1	0.6	31.5	-	35	34.5	11000	13000	0.186
NU305E	NJ	NUP	N		62	17	1.1	1.1	34	54	41.5	37.5	11000	13000	0.275
NU2305E	NJ	NUP	-		62	24	1.1	1.1	34	-	57	56	9700	11000	0.386
NU1006	NJ	NUP	N	30	55	13	1	0.6	36.5	48.5	19.7	19.6	14000	16000	0.130
NU206E	NJ	NUP	N		62	16	1	0.6	37.5	55.5	39	37.5	11000	13000	0.226
NU2206E	NJ	NUP	-		62	20	1	0.6	37.5	-	49	50	9700	11000	0.297
NU306E	NJ	NUP	N		72	19	1.1	1.1	40.5	62.5	53	50	9300	11000	0.398
NU2306E	NJ	NUP	-		72	27	1.1	1.1	40.5	-	74.5	77.5	8300	9700	0.58
NU1007	NJ	NUP	N	35	62	14	1	0.6	42	55	22.6	23.2	12000	15000	0.179
NU207E	NJ	NUP	N		72	17	1.1	0.6	44	64	50.5	50	9500	11000	0.327
NU2207E	NJ	NUP	-		72	23	1.1	0.6	44	-	61.5	65.5	8500	10000	0.455
NU307E	NJ	NUP	N		80	21	1.5	1.1	46.2	70.2	71	71	8100	9600	0.545
NU2307E	NJ	NUP	-		80	31	1.5	1.1	46.2	-	99	109	7200	8500	0.780
NU1008	NJ	NUP	N	40	68	15	1	0.6	47	61	27.3	29	11000	13000	0.220
NU208E	NJ	NUP	N		80	18	1.1	1.1	49.5	71.5	55.5	55.5	8500	10000	0.426
NU2208E	NJ	NUP	-		80	23	1.1	1.1	49.5	-	72.5	77.5	7600	8900	0.552
NU308E	NJ	NUP	N		90	23	1.5	1.5	52	80	83	81.5	7200	8500	0.754
NU2308E	NJ	NUP	-		90	33	1.5	1.5	52	-	114	122	6400	7500	1.060
NU1009	NJ	NUP	N	45	75	16	1	0.6	52.5	67.5	31	34	9900	12000	0.280
NU209E	NJ	NUP	N		85	19	1.1	1.1	54.5	76.5	63	66.5	7600	9000	0.495
NU2209E	NJ	NUP	-		85	23	1.1	1.1	54.5	-	76	84.5	6800	8000	0.600
NU309E	NJ	NUP	N		100	25	1.5	1.5	58.5	88.5	97.5	98.5	6500	7600	0.996
NU2309E	NJ	NUP	-		100	36	1.5	1.5	58.5	-	137	153	5700	6800	1.41
NU1010	NJ	NUP	N	50	80	16	1	0.6	57.5	72.5	32	36	8900	11000	0.295
NU210E	NJ	NUP	N		90	20	1.1	1.1	59.5	81.5	66	72	6900	8100	0.540
NU2210	NJ	NUP	-		90	23	1.1	1.1	59.5	-	79.5	91.5	6200	7300	0.652
NU310E	NJ	NUP	N		110	27	2	2	65	97	110	113	5900	6900	1.3
NU2310E	NJ	NUP	-		110	40	2	2	65	-	163	187	5200	6100	1.9

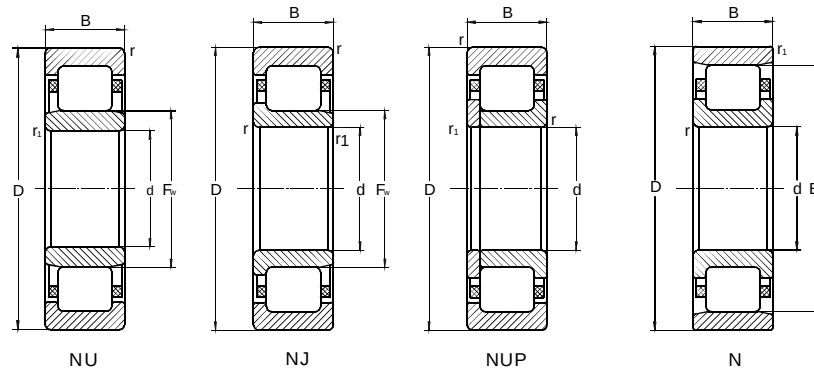


Single Row NU, NJ, NUP, N Series



KML No.				Boundary dimensions mm							Basic load ratings KN		Limiting speeds RPM		Mass Kg
													Lubrication		
NU	NJ	NUP	N	d	D	B	rmin	r ₁ min	Fw	Ew	Dynamic Cr	Static Cor	Grease	Oil	
NU1011	NJ	NUP	N	55	90	18	1.1	1	64.5	80.5	37.5	44	8200	9700	0.442
NU211E	NJ	NUP	N		100	21	1.5	1.1	66	90	82.5	93	6300	7400	0.718
NU2211E	NJ	NUP	-		100	25	1.5	1.1	66	-	97	114	5600	6600	0.968
NU311E	NJ	NUP	N		120	29	2	2	70.5	104.5	137	143	5300	6300	1.65
NU2311E	NJ	NUP	-		120	43	2	2	70.5	-	201	233	4700	5600	2.37
NU1012	NJ	NUP	N	60	95	18	1.1	1	69.5	85.5	40	48.5	7500	8800	0.474
NU212E	NJ	NUP	N		110	22	1.5	1.5	72	-	97.5	107	5800	6800	0.923
NU2212E	NJ	NUP	-		110	28	1.5	1.5	72	-	131	157	5200	6100	1.21
NU312E	NJ	NUP	N		130	31	2.1	2.1	77	113	150	157	4900	5800	2.05
NU2312	NJ	NUP	-		130	46	2.1	2.1	77	-	222	262	4800	5700	2.96
NU1013	NJ	NUP	N	65	100	18	1.1	1	74.5	90.5	41	51	7000	8200	0.485
NU213E	NJ	NUP	N		120	23	1.5	1.5	78.5	105.6	84	94.5	5900	7000	1.21
NU2213E	NJ	NUP	-		120	31	1.5	1.5	78.5	-	149	181	4800	5600	1.6
NU313E	NJ	NUP	N		140	33	2.1	2.1	82.5	121.5	181	191	4600	5400	2.54
NU2313E	NJ	NUP	-		140	48	2.1	2.1	82.5	-	248	287	4100	4800	3.48
NU1014	NJ	NUP	N	70	110	20	1.1	1	80	100	58.5	70.5	6500	7600	0.699
NU214E	NJ	NUP	N		125	24	1.5	1.5	83.5	110.5	119	137	5000	5900	1.3
NU2214E	NJ	NUP	-		125	31	1.5	1.5	83.5	-	156	194	4500	5200	1.7
NU314E	NJ	NUP	N		150	35	2.1	2.1	89	130	205	222	4200	5000	3.1
NU2314E	NJ	NUP	-		150	51	2.1	2.1	89	-	274	325	3800	4400	4.25
NU1015	NJ	NUP	N	75	115	20	1.1	1	85	105	60	74.5	6100	7100	0.738
NU215E	NJ	NUP	N		130	25	1.5	1.5	88.5	116.5	130	156	4700	5500	1.41
NU2215E	NJ	NUP	-		130	31	1.5	1.5	88.5	-	162	207	4200	4900	1.79
NU315E	NJ	NUP	N		160	37	2.1	2.1	95	139.5	240	263	4000	4700	3.74
NU2315E	NJ	NUP	-		160	55	2.1	2.1	95	-	330	395	3500	4100	5.25
NU1016	NJ	NUP	N	80	125	22	1.1	1	91.5	113.5	72.5	90.5	5700	6700	0.98
NU216E	NJ	NUP	N		140	26	2	2	95.3	125.3	139	167	4400	5100	1.67
NU2216E	NJ	NUP	-		140	33	2	2	95.3	-	186	243	3900	4600	2.12
NU316E	NJ	NUP	N		170	39	2.1	2.1	101	147	256	282	3700	4400	4.22
NU2316E	NJ	NUP	-		170	58	2.1	2.1	101	-	355	430	3300	3900	6.25
NU1017	NJ	NUP	N	85	130	22	1.1	1	96.5	118.5	74.5	95.5	5400	6300	1.03
NU217E	NJ	NUP	N		150	28	2	2	100.5	133.8	167	199	4100	4800	2.11
NU2217E	NJ	NUP	-		150	36	2	2	100.5	-	217	279	3700	4300	2.68
NU317E	NJ	NUP	N		180	41	3	3	108	156	291	330	3500	4100	4.81
NU2317E	NJ	NUP	-		180	60	3	3	108	-	395	485	3100	3700	7.16
NU1018	NJ	NUP	N	90	140	24	1.5	1.1	103	127	88	114	5100	5900	1.33
NU218E	NJ	NUP	N		160	30	2	2	107	143	182	217	3900	4600	2.44
NU2218E	NJ	NUP	-		160	40	2	2	107	-	242	315	3500	4100	3.33
NU318E	NJ	NUP	N		190	43	3	3	113.5	165	315	355	3300	3900	5.72
NU2318E	NJ	NUP	-		190	64	3	3	113.5	-	435	535	2900	3400	8.56

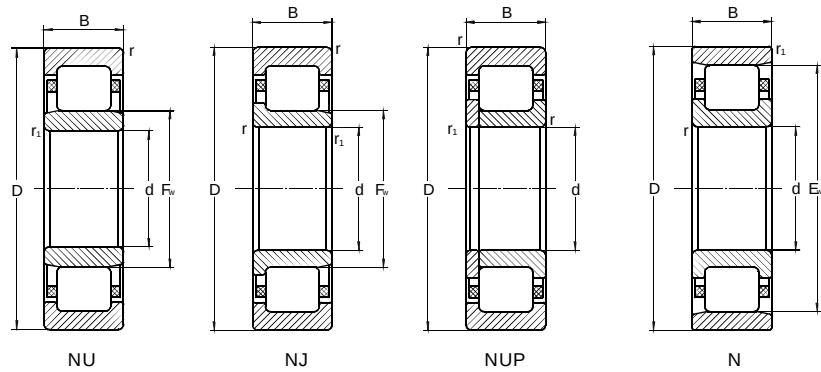
Single Row NU, NJ, NUP, N Series



KML No.				Boundary dimensions mm							Basic load ratings KN		Limiting speeds RPM		Mass Kg
													Lubrication		
NU	NJ	NUP	N	d	D	B	rmin	r min	Fw	Ew	Dynamic Cr	Static Cor	Grease	Oil	
NU1019	NJ	NUP	N	95	145	24	1.5	1.1	108	132	90.5	120	4800	5600	1.40
NU219E	NJ	NUP	N		170	32	2.1	2.1	112.5	151.5	220	265	3600	4300	3.02
NU2219E	NJ	NUP	-		170	43	2.1	2.1	112.5	-	286	370	3300	3800	4.14
NU319E	NJ	NUP	N		200	45	3	3	121.5	173.5	335	385	3100	3600	6.13
NU2319E	NJ	NUP	-		200	67	3	3	121.5	-	460	585	2700	3200	9.80
NU1020	NJ	NUP	N	100	150	24	1.5	1.1	113	137	93	126	4600	5400	1.45
NU220E	NJ	NUP	N		180	34	2.1	2.1	119	163	249	305	3500	4100	3.66
NU2220E	NJ	NUP	-		180	46	2.1	2.1	119	-	335	445	3100	3600	5.01
NU320E	NJ	NUP	N		215	47	3	3	127.5	185.5	380	425	2900	3500	8.57
NU2320E	NJ	NUP	-		215	73	3	3	127.5	-	570	715	2600	3100	12.8
NU1021	NJ	NUP	N	105	160	26	2	1.1	119.5	145.5	105	142	4300	5100	1.84
NU221	NJ	NUP	N		190	36	2.1	2.1	126.8	168.8	201	241	3600	4300	3.95
NU1022	NJ	NUP	N	110	170	28	2	1.1	125	155	131	174	4100	4800	2.33
NU222E	NJ	NUP	N		200	38	2.1	2.1	132.5	178.5	293	365	3100	3700	4.27
NU2222E	NJ	NUP	-		200	53	2.1	2.1	132.5	-	385	515	2800	3300	7.40
NU322E	NJ	NUP	N		240	50	3	3	143	207	450	525	2700	3100	11.1
NU2322E	NJ	NUP	-		240	80	3	3	143	-	675	880	2400	2800	19.4
NU1024	NJ	NUP	N	120	180	28	2	1.1	135	165	139	191	3800	4400	2.44
NU224E	NJ	NUP	N		215	40	2.1	2.1	143.5	191.5	335	420	2900	3400	5.97
NU2224E	NJ	NUP	-		215	58	2.1	2.1	143.5	-	450	620	2600	3000	9.18
NU324E	NJ	NUP	N		260	55	3	3	154	226	530	610	2400	2800	13.9
NU2324E	NJ	NUP	-		260	86	3	3	154	-	795	1030	2200	2500	26.1
NU1026	NJ	NUP	N	130	200	33	2	1.1	148	182	172	238	3400	4000	3.69
NU226E	NJ	NUP	N		230	40	3	3	153.5	204	365	455	2600	3100	6.90
NU2226E	NJ	NUP	-		230	64	3	3	153.5	-	530	735	2300	2700	11.8
NU326E	NJ	NUP	N		280	58	4	4	167	243	615	735	2200	2600	19.4
NU2326E	NJ	NUP	-		280	93	4	4	167	-	920	1230	2000	2300	30.9
NU1028	NJ	NUP	N	140	210	33	2	1.1	158	192	176	250	3200	3800	4.05
NU228E	NJ	NUP	N		250	42	3	3	169	221	395	515	2400	2800	8.73
NU2228E	NJ	NUP	-		250	68	3	3	169	-	575	835	2100	2500	15.8
NU328E	NJ	NUP	N		300	62	4	4	180	260	665	795	2100	2400	23.2
NU2328E	NJ	NUP	-		300	102	4	4	180	-	1020	1380	1800	2100	38.7
NU1030	NJ	NUP	N	150	225	35	2.1	1.5	169.5	205.5	202	294	3000	3500	4.77
NU230E	NJ	NUP	N		270	45	3	3	182	238	450	595	2200	2600	11.0
NU2230E	NJ	NUP	-		270	73	3	3	182	-	660	980	2000	2400	19.7
NU330E	NJ	NUP	N		320	65	4	4	193	277	760	920	1900	2300	28.4
NU2330E	NJ	NUP	-		320	108	4	4	193	-	1160	1600	1700	2000	47.2



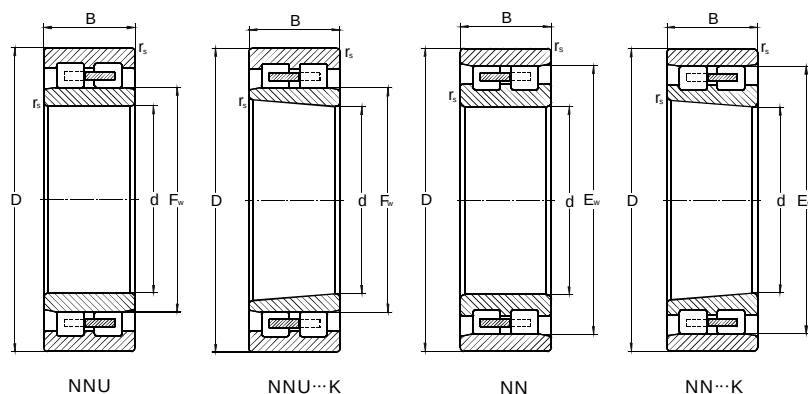
Single Row NU, NJ, NUP, N Series



KML No.				Boundary dimensions mm							Basic load ratings kN		Limiting speeds RPM		Mass Kg
													Lubrication		
NU	NJ	NUP	N	d	D	B	r _{min}	r ₁ min	F _w	E _w	Dynamic C _r	Static C _{0r}	Grease	Oil	
NU1032	NJ	NUP	N	160	240	38	2.1	1.5	180	220	238	340	2800	3300	5.90
NU232E	NJ	NUP	N		290	48	3	3	195	259	500	665	2100	2400	15.6
NU2232E	NJ	NUP	-		290	80	3	3	193	-	810	1190	1900	2200	25.1
NU332E	NJ	NUP	N		340	68	4	4	204	292	860	1050	1800	2100	34.0
NU1034	NJ	NUP	N	170	260	42	2.1	2.1	193	237	278	400	2600	3000	7.88
NU234E	NJ	NUP	N		310	52	4	4	207	272	605	800	2000	2300	19.6
NU2234E	NJ	NUP	-		310	86	4	4	205	-	965	1410	1800	2100	31.0
NU334	NJ	NUP	N		360	72	4	4	220	310	795	1010	1800	2200	37.0
NU1036	NJ	NUP	N	180	280	46	2.1	2.1	205	255	340	485	2400	2900	10.3
NU236E	NJ	NUP	N		320	52	4	4	217	282	625	850	1800	2200	20.4
NU2236E	NJ	NUP	-		320	86	4	4	215	-	1010	1510	1600	1900	31.9
NU1038	NJ	NUP	N	190	290	46	2.1	2.1	215	265	350	510	2300	2700	10.7
NU238E	NJ	NUP	N		340	55	4	4	230	299	695	955	1700	2000	24.2
NU2238E	NJ	NUP	-		340	92	4	4	228	-	1100	1670	1500	1800	39.5
NU1040	NJ	NUP	N	200	310	51	2.1	2.1	229	281	390	580	2200	2600	13.9
NU240E	NJ	NUP	N		360	58	4	4	243	316	765	1060	1600	1900	28.1
NU2240E	NJ	NUP	-		360	98	4	4	241	-	1220	1870	1500	1700	47.8
NU1044	NJ	NUP	N	220	340	56	3	3	250	310	500	750	2000	2300	18.2
NU1048	NJ	NUP	N	240	360	56	3	3	270	330	530	820	1800	2100	19.6
NU1052	NJ	NUP	N	260	400	65	4	4	296	364	645	1000	1600	1900	29.1
NU252	NJ	NUP	N		480	80	5	5	320	420	1150	1660	1300	1600	66.9
NU1056	NJ	NUP	N	280	420	65	4	4	316	384	660	1050	1500	1800	30.9
NU260	NJ	NUP	-	300	540	85	5	5	364	476	1400	2070	1100	1300	88.2

Double Row Series

NNU, NNU...K,
NN, NN...K Series



KML No.				Boundary dimensions mm						Basic load ratings KN		Limiting speeds RPM		Mass Kg		Mass Kg	
												Lubrication					
NNU		NN		d	D	B	r3 min	Fw	Ew	Dynamic Cr	Static Cor	Grease	Oil	Cylindrical bore	Tapered bore	Cylindrical bore	Tapered bore
Cylindrical bore	Tapered bore	Cylindrical bore	Tapered bore														
NNU4940	NNU4940K	NN4940	NN4940K	200	280	80	2.1	225	261	555	1180	2100	2400	14.7	14.0	14.0	13.3
-	-	NN3040	NN3040K		310	82	2.1	-	282	655	1170	1900	2300	-	-	21.6	20.8
NNU4944	NNU4944K	NN4944	NN4944K	220	300	80	2.1	245	281	585	1300	1900	2200	15.9	15.2	15.2	14.5
-	-	NN3044	NN3044K		340	90	3	-	310	815	1480	1700	2100	-	-	29.3	28.2
NNU4948	NNU4948K	NN4948	NN4948K	240	320	80	2.1	265	301	610	1410	1700	2000	17.2	16.4	16.4	15.6
-	-	NN3048	NN3048K		360	92	3	-	330	855	1600	1600	1900	-	-	32.8	31.6
NNU4952	NNU4952K	NN4952	NN4952K	260	360	100	2.1	292	336	900	2070	1600	1800	29.6	28.3	28.3	27.0
-	-	NN3052	NN3052K		400	104	4	-	364	1060	1990	1500	1700	-	-	47.4	45.8
NNU4956	NNU4956K	NN4956	NN4956K	280	380	100	2.1	312	356	925	2200	1400	1700	31.6	30.2	30.2	28.8
-	-	NN3056	NN3056K		420	106	4	-	384	1080	2080	1300	1600	-	-	51.1	49.3
NNU4960	NNU4960K	NN4960	NN4960K	300	420	118	3	339	391	1200	2800	1300	1500	48.6	46.4	46.4	44.2
-	-	NN3060	NN3060K		460	118	4	-	418	1330	2560	1200	1500	-	-	70.8	68.6
NNU4964	NNU4964K	NN4964	NN4964K	320	440	118	3	359	411	1240	2970	1200	1400	51.4	49.1	49.0	46.7
-	-	NN3064	NN3064K		480	121	4	-	438	1350	2670	1100	1300	-	-	76.2	73.8
NNU4968	NNU4968K	-	-	340	460	118	3	379	-	1280	3150	1100	1300	54.2	51.7	-	-
-	-	NN3068	NN3068K		520	133	5	-	473	1620	3200	1100	1300	-	-	102	98.5
NNU4972	NNU4972K	-	-	360	480	118	3	398	-	1290	3250	1100	1300	57.0	54.4	-	-
-	-	NN3072	NN3072K		540	134	5	-	493	1650	3300	1000	1200	-	-	107	103
NNU4976	NNU4976K	-	-	380	520	140	4	425	-	1630	4050	1000	1200	84.5	80.6	-	-
-	-	NN3076	NN3076K		560	135	5	-	512	1690	3450	940	1100	-	-	113	109
NNU4980	NNU4980K	-	-	400	540	140	4	445	-	1690	4300	940	1100	88.2	84.1	-	-
-	-	NN3080	NN3080K		600	148	5	-	547	2040	4150	880	1000	-	-	146	141
NNU4984	NNU4984K	-	-	420	560	140	4	465	-	1740	4500	900	1100	92.0	87.7	-	-
-	-	NN3084	NN3084K		620	150	5	-	567	2080	4300	840	990	-	-	154	148
NNU4988	NNU4988K	-	-	440	600	160	4	492	-	2150	5550	850	1000	127	121	-	-
-	-	NN3088	NN3088K		650	157	6	-	596	2420	5100	800	940	-	-	178	172
NNU4992	NNU4992K	-	-	460	620	160	4	512	-	2220	5850	800	950	132	126	-	-
-	-	NN3092	NN3092K		680	163	6	-	622	2550	5350	750	890	-	-	202	195
NNU4996	NNU4996K	-	-	480	650	170	5	534	-	2280	5900	770	910	156	149	-	-

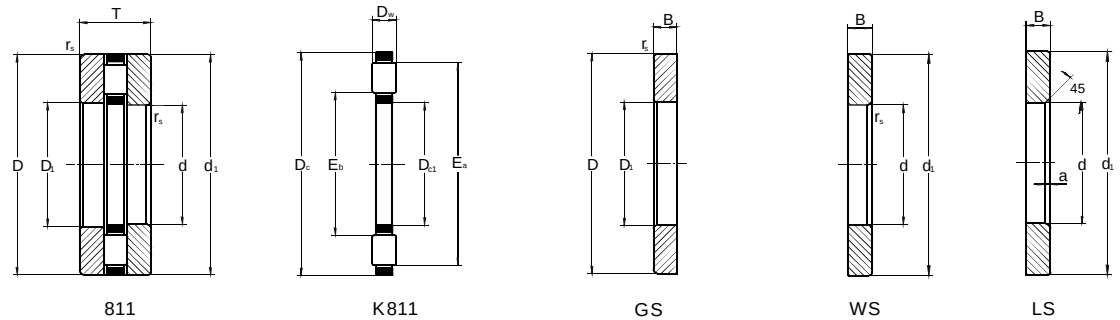


Thrust Cylindrical Roller Bearings And Cage Assemblies

811 Series

Thrust bearing washers

K811, GS,WS,LS Series

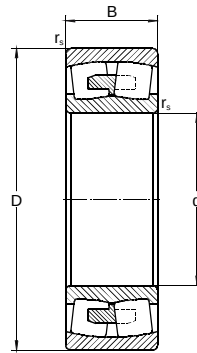


Thrust cylindrical roller bearings		Thrust cylindrical roller bearing and cage assemblies		Axial bearing washers				Boundary dimensions mm								Basic load ratings N		Limiting Speeds RPM
Complete bearings	Mass kg	KML No.	Mass kg	Housing locating washer	Shaft locating washer	Bearing washer	Mass kg	Dc ₁	D ₁	Dc _D	d ₁	T	Dw	B	Dynamic Cr	Static Cor	Oil	
81102 TN	0.024	K81102TN	0.006	GS81102	WS81102	LS1528	0.008	15	16	28	28	9	3.5	2.75	14400	28500	11000	
81103 TN	0.027	K81103TN	0.009	GS81103	WS81103	LS1730	0.009	17	18	30	30	9	3.5	2.75	15900	33500	10000	
81104 TN	0.037	K81104TN	0.013	GS81104	WS81104	LS2035	0.012	20	21	35	35	10	4.5	2.75	24900	53000	8500	
81105 TN	0.053	K81105TN	0.015	GS81105	WS81105	LS2542	0.019	25	26	42	42	11	5	3	33500	76000	7000	
81106 TN	0.057	K81106TN	0.017	GS81106	WS81106	LS3047	0.020	30	32	47	47	11	5	3	35500	86000	6000	
81107 TN	0.073	K81107TN	0.019	GS81107	WS81107	LS3552	0.027	35	37	52	52	12	5	3.5	39000	101000	5500	
81108 TN	0.105	K81108TN	0.031	GS81108	WS81108	LS4060	0.037	40	42	60	60	13	6	3.5	56000	148000	4800	
81109 TN	0.130	K81109TN	0.035	GS81109	WS81109	LS4565	0.047	45	47	65	65	14	6	4	59000	163000	4400	
81110 TN	0.140	K81110TN	0.038	GS81110	WS81110	LS5070	0.051	50	52	70	70	14	6	4	61000	177000	4000	
81111 TN	0.218	K81111TN	0.045	GS81111	WS81111	LS5578	0.082	55	57	78	78	16	6	5	90000	300000	3600	
81112 TN	0.266	K81112TN	0.082	GS81112	WS81112	LS6085	0.092	60	62	85	85	17	7.5	4.75	103000	315000	3300	
81113 TN	0.310	K81113TN	0.090	GS81113	WS81113	LS6590	0.110	65	67	90	90	18	7.5	5.25	107000	340000	3100	
81114 TN	0.332	K81114TN	0.092	GS81114	WS81114	LS7095	0.120	70	72	95	95	18	7.5	5.25	111000	365000	2900	
81115 TN	0.393	K81115TN	0.096	GS81115	WS81115	LS75100	0.136	75	77	100	100	19	7.5	5.75	105000	340000	2700	
81116 TN	0.400	K81116TN	0.095	GS81116	WS81116	LS80105	0.144	80	82	105	105	19	7.5	5.75	106000	350000	2600	
81117 TN	0.420	K81117TN	0.118	GS81117	WS81117	LS85110	0.151	85	87	110	110	19	7.5	5.75	112000	385000	2500	
81118 TN	0.620	K81118TN	0.150	GS81118	WS81118	LS90120	0.225	90	92	120	120	22	9	6.5	141000	465000	2300	
81120 TN	0.950	K81120TN	0.250	GS81120	WS81120	LS100135	0.350	100	102	135	135	25	11	7	199000	650000	2000	
81122	1.095	K81122	0.325	GS81122	WS81122	LS110145	0.385	110	112	145	145	25	11	7	195000	650000	1900	
81124	1.170	K81124	0.340	GS81124	WS81124	LS120155	0.415	120	122	155	155	25	11	7	203000	700000	1700	
81126	1.700	K81126	0.414	GS81126	WS81126	LS130170	0.643	130	132	170	170	30	12	9	233000	810000	1600	
81128	1.946	K81128	0.448	GS81128	WS81128	LS140180	0.749	140	142	180	178	31	12	9.5	242000	870000	1500	
81130	2.066	K81130	0.474	GS81130	WS81130	LS150190	0.796	150	152	190	188	31	12	9.5	250000	930000	1400	
81132	2.189	K81132	0.505	GS81132	WS81132	LS160200	0.842	160	162	200	198	31	12	9.5	260000	990000	1300	
81134	2.950	K81134	0.750	GS81134	WS81134	-	1.100	170	172	215	213	34	14	10	325000	1220000	1200	
81136	3.040	K81136	0.800	GS81136	WS81136	-	1.120	180	183	225	222	34	14	10	340000	1300000	1200	
81138	3.840	K81138	0.940	GS81138	WS81138	-	1.450	190	193	240	237	37	15	11	385000	1500000	1100	
81140	4.000	K81140	0.980	GS81140	WS81140	-	1.510	200	203	250	247	37	15	11	395000	1550000	1100	
81144	4.500	K81144	1.320	GS81144	WS81144	-	1.590	220	223	270	267	37	15	11	420000	1730000	1000	
81148	7.250	K81148	2.110	GS81148	WS81148	-	2.570	240	243	300	297	45	18	13.5	600000	2500000	900	

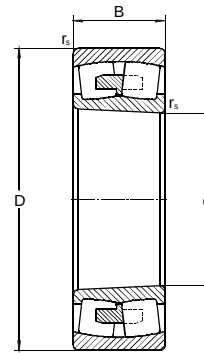
TN:Max. working temperature for plastic mold cage. 120°C constantly running, 150°C temporarily running, 180°C instantaneously running.

When using grease lubrication, the revolution allowable value is 25% of that shown in the above table.

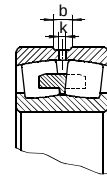
21300, 22200, 22300, 23000, 23100, 23200, 24000, 24100 Series



Cylindrical bore



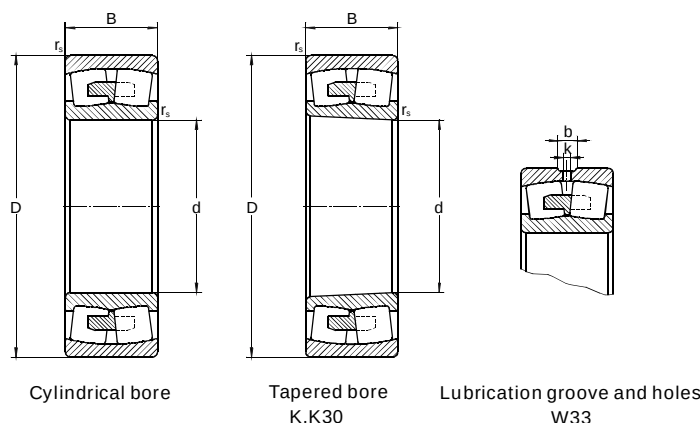
Tapered bore
K,K30



Lubrication groove and holes
W33

KML No.		Boundary dimensions mm				Lubrication groove & holes mm		Basic load ratings KN		Limiting speeds RPM		Mass Kg
										Lubrication		
Cylindrical bore	Tapered bore	d	D	B	r _s min	b	k	Dynamic C _r	Static C _{0r}	Grease	Oil	
21304	-	20	52	15	1.1	-	-	30.8	31.2	6000	7500	0.17
22205	22205K	25	52	18	1	5.5	3	38.9	40.8	8000	10000	0.19
21305	-		62	17	1.1	-	-	41.5	44.2	5300	6700	0.28
22206	22206K	30	62	20	1	5.5	3	33.5	38.2	6700	8500	0.29
21306	-		72	19	1.1	-	-	55.8	62	4500	6000	0.41
22207	22207K	35	72	23	1.1	5.5	3	45.2	59.5	5600	7000	0.43
21307	21307K		80	21	1.5	-	-	63.5	73.2	4000	5300	0.54
22208	22208K	40	80	23	1.1	5.5	3	78.5	90.8	5000	6300	0.52
21308	21308K		90	23	1.5	-	-	86.2	90.4	3600	4500	0.74
22308	22308K		90	33	1.5	5.5	3	73.5	90.5	4000	5000	1.04
22209	22209K	45	85	23	1.1	5.5	3	80.5	95.2	4500	6000	0.58
21309	21309K		100	25	1.5	-	-	102.6	110.4	3200	4000	1.02
22309	22309K		100	36	1.5	5.5	3	142	170	4000	5300	1.38
22210	22210K	50	90	23	1.1	5.5	3	83.8	102	4300	5300	0.63
21310	21310K		110	27	2	-	-	120	140	2800	3800	1.3
22310	22310K		110	40	2	5.5	3	178	212	3800	4800	1.79
22211	22211K	55	100	25	1.5	5.5	3	106	126	3800	5000	0.85
21311	21311K		120	29	2	-	-	142	170	2600	3400	1.65
22311	22311K		120	43	2	5.5	3	210	252	3400	4300	2.31
22212	22212K	60	110	28	1.5	5.5	3	118.3	145.8	3600	4500	1.2
21312	21312K		130	31	2.1	-	-	162	195	2400	3200	2.08
22312	22312K		130	46	2.1	5.5	3	244.2	295.6	3200	4000	2.92
22213	22213K	65	120	31	1.5	5.5	3	151	193.5	3200	4000	1.51
21313	21313K		140	33	2.1	-	-	182	228	2200	3000	2.57
22313	22313K		140	48	2.1	5.5	3	265	320	3000	3800	3.51
22214	22214K	70	125	31	1.5	5.5	3	151	195	3000	3800	1.63
21314	21314K		150	35	2.1	-	-	212	268	2000	2800	3.11
22314	22314K		150	51	2.1	8.3	4.5	300	362	2800	3400	4.32
22215	22215K	75	130	31	1.5	5.5	3	162.7	214.5	3000	3800	1.69
21315	21315K		160	37	2.1	-	-	238	302	1900	2600	3.76
22315	22315K		160	55	2.1	8.3	4.5	348	446.7	2600	3200	5.89
22216	22216K	80	140	33	2	5.5	3	174.4	233.8	2800	3400	2.26
21316	21316K		170	39	2.1	-	-	260	332	1800	2400	4.47
22316	22316K		170	58	2.1	8.3	4.5	391	507	2400	3000	6.32
22217	22217K	85	150	36	2	5.5	3	212.8	282.3	2600	3200	2.87
21317	21317K		180	41	3	-	-	298	385	1700	2200	5.23
22317	22317K		180	60	3	8.3	4.5	432	560	2200	2800	7.27
22218	22218K	90	160	40	2	5.5	3	248	337	2400	3000	3.67
21318	21318K		190	43	3	-	-	320	420	1600	2200	6.17
22318	22318K		190	64	3	11.1	6	496	640	2200	2600	8.63

[Remark] When there is lubrication groove and holes on the outer ring, suffix "W33" is added to bearings number.

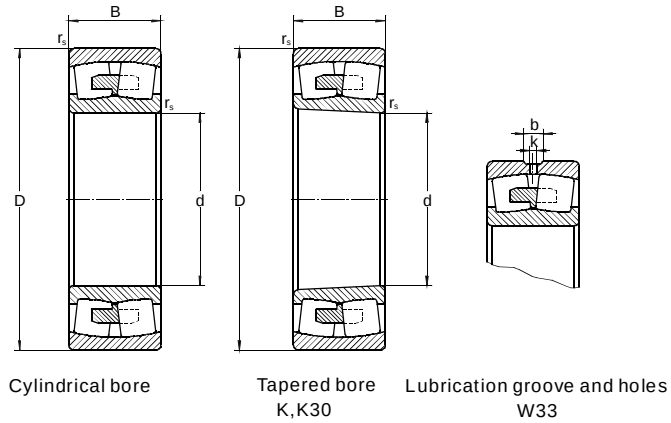

**21300, 22200, 22300, 23000, 23100, 23200,
24000, 24100 Series**


Cylindrical bore

Tapered bore
K,K30Lubrication groove and holes
W33

KML No.		Boundary dimensions mm				Lubricantion groove & holes mm		Basic load ratings KN		Limiting speeds RPM		Mass Kg
										Lubrication		
Cylindrical bore	Tapered bore	d	D	B	r,min	b	k	Dynamic Cr	Static Cor	Grease	Oil	
22219	22219K	95	170	43	2.1	8.3	4.5	282.7	390.3	2200	2800	4.57
21319	21319K		200	45	3	-	-	355	485	1700	2200	7.15
22319	22319K		200	67	3	11.1	6	530	705	2000	2600	9.97
23120	23120K	100	165	52	2	5.5	3	326	494	1700	2200	4.43
22220	22220K		180	46	2.1	8.3	4.5	316	435	2200	2600	5.01
23220	23220K		180	60.3	2.1	8.3	4.5	420	630	1600	2000	6.52
22320	22320K		215	73	3	11.1	6	618	832	1900	2400	12.8
23022	23022K	110	170	45	2	-	-	195	410	1400	1800	3.95
23122	23122K		180	56	2	8.3	4.5	376	578.5	1600	2000	5.58
24122	24122K30		180	69	2	5.5	3	458	775	1600	2000	6.63
22222	22222K		200	53	2.1	8.3	4.5	410	588	1900	2400	7.32
23222	23222K		200	69.8	2.1	8.3	4.5	520	800	1500	1900	9.46
21322	21322K		240	50	3	-	-	460	635	1400	1800	11.8
22322	22322K		240	80	3	13.9	7.5	715	968	1700	2200	17.5
23024	23024K	120	180	46	3	5.5	3	212	470	1200	1600	4.3
24024	24024K30		180	60	2	5.5	3	380	675	1500	2000	5.05
23124	23124K		200	62	2	8.3	4.5	457	725	1400	1800	7.85
24124	24124K30		200	80	2	5.5	3	575	998	1400	1800	9.65
22224	22224K		215	58	2.1	11.1	6	395.7	690	1700	2200	9.14
23224	23224K		215	76	2.1	8.3	4.5	610	955	1300	1700	11.7
22324	22324K		260	86	3	13.9	7.5	845	1160	1500	1900	22.2
23026	23026K	130	200	52	2	8.3	4.5	270	608	1100	1500	6.12
24026	24026K30		200	69	2	5.5	3	472	852	1400	1800	7.55
23126	23126K		210	64	2	8.3	4.5	482	802	1300	1700	8.49
24126	24126K30		210	80	2	5.5	3	585	1030	1300	1700	10.3
22226	22226K		230	64	3	11.1	6	562	832	1600	2000	11.2
23226	23226K		230	80	3	8.3	4.5	678	1080	1200	1600	13.8
22326	22326K		280	93	4	16.7	9	965	1340	1400	1800	27.5
23028	23028K	140	210	53	2	8.3	4.5	285	635	950	1300	6.3
24028	24028K30		210	69	2	5.5	3	488	895	1300	1700	8.01
23128	23128K		225	68	2.1	8.3	4.5	538	905	1200	1600	10.2
24128	24128K30		225	85	2.1	8.3	4.5	670	1200	1200	1600	12.5
22228	22228K		250	68	3	11.1	6	640	955	1400	1700	14.48
23228	23228K		250	88	3	11.1	6	812	1300	1100	1500	18.1
22328	22328K		300	102	4	16.7	9	1130	1610	1300	1700	34.6
23030	23030K	150	225	56	2.1	8.3	4.5	328	768	900	1200	8.19
24030	24030K30		225	75	2.1	5.5	3	570	1070	1200	1500	10.1
23130	23130K		250	80	2.1	11.1	6	738	1250	1100	1400	15.7
24130	24130K30		250	100	2.1	8.3	4.5	890	1600	1100	1400	19
22230	22230K		270	73	3	13.9	7.5	750	1130	1300	1600	18
23230	23230K		270	96	3	11.1	6	948	1540	1100	1400	23.2
22330	22330K		320	108	4	16.7	9	1207	1850	1200	1500	42

[Remark] When there is lubrication groove and holes on the outer ring, suffix "W33" is added to bearings number.

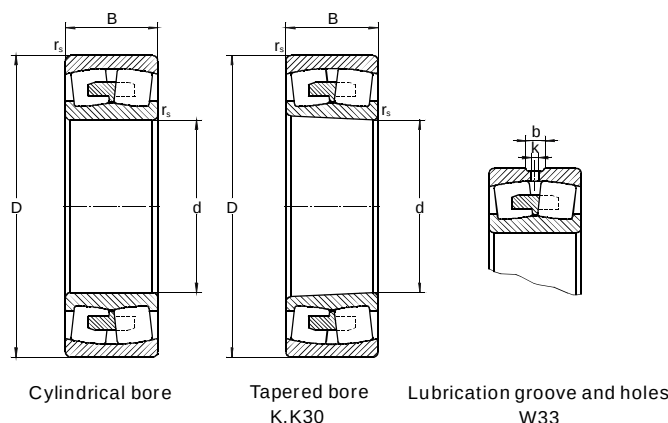
**21300, 22200, 22300, 23000, 23100, 23200,
24000, 24100 Series**


KML No.		Boundary dimensions mm				Lubricantion groove & holes mm		Basic load ratings K N		Limiting speeds RPM		Mas Kg
										Lubrication		
Cylindrical bore	Tapered bore	d	D	B	r.min	b	k	Dynamic Cr	Static Cor	Grease	Oil	
23032	23032K	160	240	60	2.1	11.1	6	368	825	850	1100	9.6
24032	24032K30		240	80	2.1	8.3	4.5	652	1230	1100	1400	12.2
23132	23132K		270	86	2.1	13.9	7.5	845	1440	1000	1300	19.8
24132	24132K30		270	86	2.1	8.3	4.5	1040	1880	1000	1300	24.4
22232	22232K		290	80	3	13.9	7.5	920.8	1290	1200	1500	22.95
23232	23232K		290	104	3	13.9	7.5	1090	1780	1100	1400	29.4
22332	22332K		340	114	4	16.7	9	1040	1700	800	1000	51
23034	23034K	170	260	67	2.1	11.1	6	445	1010	800	1000	13
24034	24034K30		260	90	2.1	8.3	4.5	792	1520	1000	1300	16.7
23134	23134K		280	88	2.1	13.9	7.5	900	1550	1000	1300	21.1
24134	24134K30		280	109	2.1	8.3	4.5	1070	1930	1000	1300	25.5
22234	22234K		310	86	4	16.7	9	975	1500	1100	1400	28.1
23234	23234K		310	110	4	13.9	7.5	1200	2030	900	1200	35.7
22334	22334K		360	120	4	16.7	9	1150	2060	750	950	60
23036	23036K	180	280	74	2.1	13.9	7.5	540	1230	750	950	17.6
24036	24036K30		280	100	2.1	8.3	4.5	928	1820	950	1200	22.1
23136	23136K		300	96	3	13.9	7.5	1050	1830	900	1200	26.9
24136	24136K30		300	118	3	11.1	6	1210	2200	900	1200	32
22236	22236K		320	86	4	16.7	9	1010	1590	1100	1300	29.4
23236	23236K		320	112	4	13.9	7.5	1280	2170	850	1100	37.9
22336	22336K		380	126	4	22.3	12	1260	2270	700	900	70
23038	23038K	190	290	75	2.1	13.9	7.5	555	1230	700	900	20
24038	24038K30		290	100	2.1	8.3	4.5	975	1910	900	1200	23
23138	23138K		320	104	3	13.9	7.5	1200	2120	850	1100	33.6
24138	24138K30		320	128	3	11.1	6	1410	2590	850	1100	40.2
22238	22238K		340	92	4	16.7	9	1595	2490	800	1100	36.2
23238	23238K		340	120	4	16.7	9	1450	2490	800	1100	46.1
22338	22338K		400	132	5	22.3	12	1390	2530	670	850	81
23040	23040K	200	310	82	2.1	13.9	7.5	580	1310	670	850	24
24040	24040K30		310	109	2.1	11.1	6	1120	2220	850	1100	29.3
23140	23140K		340	112	3	16.7	9	1380	2460	800	1000	41.6
24140	24140K30		340	140	3	11.1	6	1580	2950	800	1000	49.9
22240	22240K		360	98	4	16.7	9	1771	2810	750	1000	43.9
23240	23240K		360	128	4	16.7	9	1610	2790	750	1000	55.4
22340	22340K		420	138	5	22.3	12	1490	2720	630	800	94

[Remark] When there is lubrication groove and holes on the outer ring, suffix "W33" is added to bearings number.



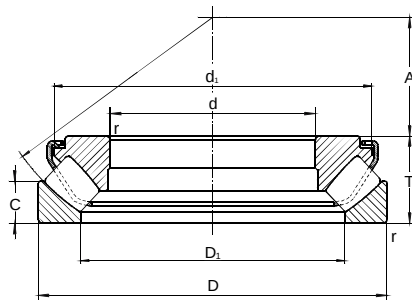
**21300, 22200, 22300, 23000, 23100, 23200,
24000, 24100 Series**



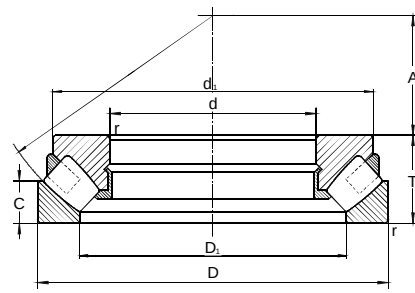
KML No.		Boundary dimensions mm				Lubricantion groove & holes mm		Basic load ratings KN		Limiting speeds RPM		Mass Kg
										Lubrication		
Cylindrical bore	Tapered bore	d	D	B	r ₃ min	b	k	Dynamic Cr	Static Cor	Grease	Oil	
23044	23044K	220	340	90	3	13.9	7.5	760	1810	600	750	28.8
24044	24044K30		340	118	3	11.1	6	1330	2680	750	1000	38.1
23144	23144K		370	120	4	16.7	9	1570	2820	700	950	51.5
22244	22244K		400	108	4	16.7	9	2287	3220	630	800	58.4
23244	23244K		400	144	4	16.7	9	2070	3620	670	900	78.5
22344	22344K		460	145	5	22.3	12	1690	3200	560	700	120
23048	23048K	240	360	92	3	13.9	7.5	792	2060	530	670	35.5
24048	24048K30		360	118	3	11.1	6	1400	2850	700	950	40.8
23148	23148K		400	128	4	16.7	9	1790	3220	670	850	63.7
23248	23248K		440	160	4	22.3	12	2340	3990	730	970	110
23052	23052K	260	400	104	4	16.7	9	1000	2450	500	630	51.5
24052	24052K30		400	140	4	11.1	6	1790	3740	630	850	62.4
23152	23152K		440	144	4	16.7	9	2210	4070	600	800	88.2
24152	24152K		440	180	4	13.9	7.5	2360	4170	640	860	111
23252	23252K		480	174	5	22.3	12	2750	4640	640	860	144
23056	23056K	280	420	106	4	16.7	9	1430	2860	710	950	54.5
24056	24056K		420	140	4	11.1	6	1740	3420	640	850	68.5
23156	23156K		460	146	5	16.7	9	2140	4280	660	880	100
22356	22356K		580	175	6	22.3	12	3150	4910	530	710	229
23060	23060K	300	460	118	4	16.7	9	1750	3480	630	840	75.8
24160	24160K		500	200	5	13.9	6	2990	5520	530	710	157
22260	22260K		540	140	5	22.3	12	2690	4330	550	740	136
23064	23064K	320	480	121	4	16.7	9	1830	3740	590	790	77.1
24164	24164K		540	218	5	16.7	9	3200	5990	480	640	197
23264	23264K		580	208	5	22.3	12	3630	6550	500	670	229
23068	23068K	340	520	133	5	22.3	12	2130	4330	530	710	101
24168	24168K		580	243	5	16.7	9	4060	7620	440	580	260
23268	23268K		620	224	6	22.3	12	4090	7560	450	600	291
23072	23072K	360	540	134	5	22.3	12	2280	4800	500	660	107
24172	24172K		600	243	5	16.7	9	4080	7690	450	600	275
23076	23076K	380	560	135	5	22.3	12	2320	4970	470	630	113
23176	23176K		620	194	5	22.3	12	3590	7320	420	560	226
23080	23080K	400	600	148	5	22.3	9	2710	5790	420	560	143
24180	24180K		650	250	6	22.3	12	4640	9140	390	530	407
23084	23084K	420	620	150	5	22.3	12	2800	6120	400	530	155
23284	23284K		760	272	7.5	22.3	12	6500	11500	320	430	537
23088	23088K	440	650	157	6	22.3	12	3030	6540	370	500	177
23188	23188K		720	226	6	22.3	12	5040	9600	330	440	378
23092	23092K	460	680	163	6	22.3	12	3240	7170	340	460	204
23192	23192K		760	240	7.5	22.3	12	5180	10800	310	410	420
23096	23096K	480	700	165	6	22.3	12	3350	7540	320	430	208
23196	23196K		790	248	7.5	22.3	12	5440	11500	280	380	470

[Remark] When there is lubrication groove and holes on the outer ring, suffix "W33" is added to bearings number.

Spherical Roller Thrust Bearings 29200, 29300, 29400 Series



Steel cage

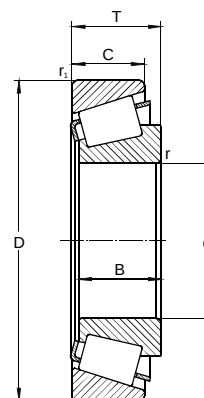


Solid brass cage

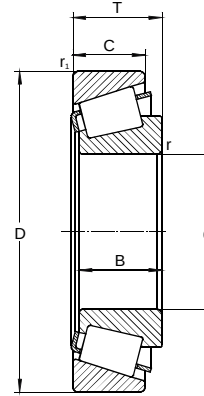
KML No.	Boundary dimensions mm								Basic load ratings K N		Limiting speeds RPM	Mass Kg
	d	D	T	r min	D1	d1	C	A	Dynamic Cr	Static Cor	Lubrication	
											Oil	
29412	60	130	42	1.5	89	123	20	38	283	805	2600	2.78
29413	65	140	45	2	96	133	21	42	330	945	2400	3.44
29414	70	150	48	2	103	142	23	44	365	1040	2200	4.19
29415	75	160	51	2	109	152	24	47	415	1190	2100	5.07
29416	80	170	54	2.1	117	162	26	50	460	1380	1900	6.09
29317	85	150	39	1.5	114	143.5	19	50	265	820	2300	2.94
29417		180	58	2.1	125	170	28	54	490	1480	1800	7.2
29318	90	155	39	1.5	117	148.5	19	52	285	915	2300	3.08
29418		190	60	2.1	132	180	29	56	545	1680	1700	8.38
29320	100	170	42	1.5	129	163	20.8	58	345	1160	2100	3.94
29420		210	67	3	146	200	32	62	685	2130	1500	11.5
29322	110	190	48	2	143	182	23	64	445	1500	1800	5.78
29422		230	73	3	162	220	35	69	845	2620	1400	15
29324	120	210	54	2.1	159	200	26	70	535	1770	1600	7.92
29424		250	78	4	174	236	37	74	975	3050	1300	18.6
29326	130	225	58	2.1	171	215	28	76	615	2100	1500	9.76
29426		270	85	4	189	255	41	81	1080	3550	1200	23.7
29328	140	240	60	2.1	183	230	29	82	685	2360	1400	11.4
29428		280	85	4	199	268	41	86	1110	3750	1200	25.2
29230	150	215	39	1.5	178	208	19	82	340	1340	1800	4.56
29330		250	60	2.1	194	240	29	87	675	2390	1400	12
29430		300	90	4	214	285	44	92	1280	4350	1100	30.5
29232	160	225	39	1.5	188	219	19	86	360	1460	1700	4.88
29332		270	67	3	208	260	32	92	820	2860	1300	15.9
29432		320	95	5	229	306	45	99	1500	5150	1000	37
29234	170	240	42	1.5	198	233	20	92	425	1770	1600	6.02
29334		280	67	3	216	270	32	96	855	3050	1200	16.6
29434		340	103	5	243	324	50	104	1660	5750	940	45
29236	180	250	42	1.5	208	243	20	97	450	1920	1600	6.27
29336		300	73	3	232	290	35	103	995	3600	1100	21.2
29436		360	109	5	255	342	52	110	1840	6200	890	52.9
29238	190	270	48	2	223	262	24	104	530	2230	1400	8.8
29338		320	78	4	246	308	38	110	1150	4250	1100	26
29438		380	115	5	271	360	55	117	2010	6800	840	62
29240	200	280	48	2	236	271	24	108	535	2300	1400	9.14
29340		340	85	4	261	325	41	116	1280	4600	980	31.9
29440		400	122	5	286	380	59	122	2230	7650	790	73.3
29244	220	300	48	2	254	292	24	117	555	2480	1300	9.94
29344		360	85	4	280	345	41	125	1390	5200	940	34.5
29444		420	122	6	303	400	58	132	2300	8100	760	77.8



Metric Size



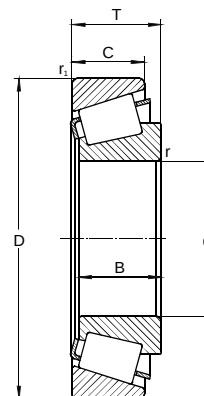
KML No.	Boundary dimensions mm							Basic load ratings KN		Limiting speeds RPM		Mass Kg
										Lubrication		
	d	D	T	B	C	r min	r ₁ min	Dynamic C _r	Static C _{0r}	Grease	Oil	
30302	15	42	14.25	13	11	1	1	23.2	20.8	9900	13000	0.098
30203	17	40	13.25	12	11	1	1	20.5	20.3	9900	13000	0.08
32203		40	17.25	16	14	1	1	27.3	28.3	9900	13000	0.102
30303		47	15.25	14	12	1	1	28.9	26.3	9900	12000	0.134
32004X	20	42	15	15	12	0.6	0.6	24.9	27.9	9500	13000	0.097
30204		47	15.25	14	12	1	1	28.2	28.7	8800	12000	0.127
32204		47	19.25	18	15	1	1	36.5	39.5	8800	12000	0.16
30304		52	16.25	15	13	1.5	1.5	35.5	34.0	8000	11000	0.169
32304		52	22.25	21	18	1.5	1.5	46.5	48.5	8000	11000	0.245
320/22X	22	44	15	15	11.5	0.6	0.6	27	31.5	8900	12000	0.106
32005X	25	47	15	15	11.5	0.6	0.6	27.8	33.5	7900	11000	0.114
33005		47	17	17	14	0.6	0.6	32.5	40.5	8000	11000	0.13
30205		52	16.25	15	13	1	1	31.5	34	7300	9800	0.154
32205		52	19.25	18	16	1	1	42	47	7300	9800	0.187
33205		52	22	22	18	1	1	47.5	57.5	7300	9800	0.217
30305		62	18.25	17	15	1.5	1.5	48.5	47.5	6700	8900	0.272
31305		62	18.25	17	13	1.5	1.5	40.7	46	5600	7500	0.284
32305		62	25.25	24	20	1.5	1.5	61.5	64.5	6700	8900	0.381
320/28X	28	52	16	16	12	1	1	33	40.5	7300	9700	0.146
32006X	30	55	17	17	13	1	1	37.5	46	6900	9200	0.166
33006		55	20	20	16	1	1	42.5	54	6900	9200	0.201
30206		62	17.25	16	14	1	1	43.5	48.0	6300	8400	0.241
32206		62	21.25	20	17	1	1	54.5	64	6300	8400	0.301
33206		62	25	25	19.5	1	1	65	77	6300	8400	0.344
30306		72	20.75	19	16	1.5	1.5	60	61	5700	7600	0.408
31306		72	20.75	19	14	1.5	1.5	47.3	50	5000	6700	0.398
32306		72	28.75	27	23	1.5	1.5	81	90	5700	7600	0.583
320/32X	32	58	17	17	13	1	1	37	46.5	6600	8700	0.181
332/32		65	26	26	20.5	1	1	70.5	85	6000	8000	0.395
323/32C		75	29.75	28	23	1.5	1.5	84	102	5200	6900	0.659
32007X	35	62	18	18	14	1	1	41.5	52.5	6100	8100	0.224
33007		62	21	21	17	1	1	50.5	66.5	6100	8100	0.263
30207		72	18.25	17	15	1.5	1.5	55.5	61.5	5500	7400	0.344
32207		72	24.25	23	19	1.5	1.5	72.5	87	5500	7400	0.457
33207		72	28	28	22	1.5	1.5	87.5	109	5500	7400	0.531
30307		80	22.75	21	18	2	1.5	75	77	5000	6600	0.54
31307		80	22.75	21	15	2	1.5	61.6	67	4500	6000	0.53
32307		80	32.75	31	25	2	1.5	101	115	5000	6600	0.787
32008X	40	68	19	19	14.5	1	1	50	65.5	5300	7100	0.273
33008		68	22	22	18	1	1	59.5	82.5	5300	7100	0.312
33108		75	26	26	20.5	1.5	1.5	79.5	103	5200	6900	0.494
30208		80	19.75	18	16	1.5	1.5	61	67	4900	6600	0.435
32208		80	24.75	23	19	1.5	1.5	79.5	93.5	4900	6600	0.558
33208		80	32	32	25	1.5	1.5	103	132	4900	6600	0.728

Metric Size


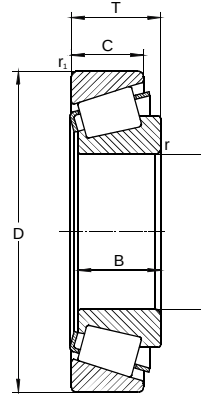
KML No.	Boundary dimensions mm							Basic load ratings KN		Limiting speeds RPM		Mass Kg
										Lubrication		
	d	D	T	B	C	r min	r ₁ min	Dynamic C _r	Static C _{0r}	Grease	Oil	
30308	40	90	25.25	23	20	2	1.5	91.5	102	4400	5900	0.769
31308		90	25.25	23	17	2	1.5	81	96	4000	5300	0.738
32308		90	35.25	33	27	2	1.5	122	150	4400	5900	1.08
32009X	45	75	20	20	15.5	1	1	57.5	76.5	4800	6400	0.346
33009		75	24	24	19	1	1	66	93.5	4800	6400	0.398
33109		80	26	26	20.5	1.5	1.5	84.5	115	4700	6200	0.542
30209		85	20.75	19	16	1.5	1.5	67.5	78.5	4400	5900	0.495
32209		85	24.75	23	19	1.5	1.5	82	100	4400	5900	0.607
33209		85	32	32	25	1.5	1.5	107	141	4400	5900	0.783
30309		100	27.25	25	22	2	1.5	111	126	4000	5300	1.01
31309		100	27.25	25	18	2	1.5	91	102	3400	4500	0.95
32309		100	38.25	36	30	2	1.5	145	191	3600	4800	1.46
32910		50	72	15	15	12	0.6	0.6	35.5	57.0	4700	6300
32010X	80		20	20	15.5	1	1	62.5	88	4400	5800	0.366
33010	80		24	24	19	1	1	69.5	103	4400	5800	0.433
33110	85		26	26	20	1.5	1.5	86.5	121	4200	5600	0.58
30210	90		21.75	20	17	1.5	1.5	77	93	4000	5300	0.563
32210	90		24.75	23	19	1.5	1.5	87.5	109	4000	5300	0.648
33210	90		32	32	24.5	1.5	1.5	115	158	4000	5300	0.852
30310	110		29.25	27	23	2.5	2	133	152	3600	4800	1.31
31310	110		29.25	27	19	2.5	2	106	120	3200	4300	1.2
32310	110		42.25	40	33	2.5	2	184	232	3600	4800	1.92
32911	55	80	17	17	14	1	1	44.5	73.5	4300	5700	0.274
32011X		90	23	23	17.5	1.5	1.5	80.5	118	4000	5400	0.563
33011		90	27	27	21	1.5	1.5	91.5	138	4000	5400	0.643
33111		95	30	30	23	1.5	1.5	111	155	3900	5200	0.846
30211		100	22.75	21	18	2	1.5	93	111	3600	4900	0.74
32211		100	26.75	25	21	2	1.5	108	134	3600	4900	0.876
33211		100	35	35	27	2	1.5	138	188	3600	4900	1.15
30311		120	31.5	29	25	2.5	2	155	179	3300	4400	1.66
31311		120	31.5	29	21	2.5	2	130	158	2800	3800	1.59
32311		120	45.5	43	35	2.5	2	215	275	3300	4400	2.44
32912	60	85	17	17	14	1	1	46	78	4000	5300	0.294
32012X		95	23	23	17.5	1.5	1.5	82	123	3700	4900	0.576
33012		95	27	27	21	1.5	1.5	93.5	145	3700	4900	0.684
33112		100	30	30	23	1.5	1.5	113	164	3600	4700	0.912
30212		110	23.75	22	19	2	1.5	105	125	3400	4500	0.949
32212		110	29.75	28	24	2	1.5	130	164	3400	4500	1.18
33212		110	38	38	29	2	1.5	167	234	3400	4500	1.55
30312		130	33.5	31	26	3	2.5	180	210	3000	4000	2.06
31312		130	33.5	31	22	3	2.5	145	176	2600	3600	1.9
32312		130	48.5	46	37	3	2.5	244	315	3000	4000	3.02



Metric Size



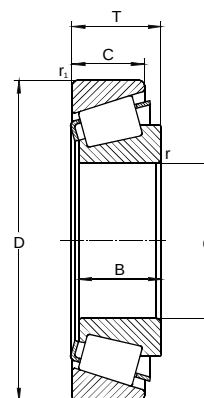
KML No.	Boundary dimensions mm							Basic load ratings KN		Limiting speeds RPM		Mass Kg
										Lubrication		
	d	D	T	B	C	r min	r ₁ min	Dynamic C _r	Static C _{0r}	Grease	Oil	
32913	65	90	17	17	14	1	1	48.5	85.0	3700	4900	0.315
32013X		100	23	23	17.5	1.5	1.5	83	128	3400	4600	0.63
33013		100	27	27	21	1.5	1.5	97.5	156	3400	4600	0.732
33113		110	34	34	26.5	1.5	1.5	144	211	3300	4400	1.28
30213		120	24.75	23	20	2	1.5	123	148	3100	4200	1.18
32213		120	32.75	31	27	2	1.5	159	206	3100	4200	1.58
33213		120	41	41	32	2	1.5	195	265	3100	4200	1.98
30313		140	36	33	28	3	2.5	203	238	2800	3700	2.55
31313		140	36	33	23	3	2.5	165	202	2200	3200	2.42
32313		140	51	48	39	3	2.5	273	350	2800	3700	3.66
32914	70	100	20	20	16	1	1	68.5	110	3400	4600	0.487
32014X		110	25	25	19	1.5	1.5	105	160	3200	4200	0.848
33014		110	31	31	25.5	1.5	1.5	127	204	3200	4200	1.07
30214		125	26.25	24	21	2	1.5	131	162	2900	3900	1.26
32214		125	33.25	31	27	2	1.5	166	220	2900	3900	1.68
33214		125	41	41	32	2	1.5	201	282	2900	3900	2.1
30314		150	38	35	30	3	2.5	230	272	2600	3500	3.06
32314		150	54	51	42	3	2.5	310	405	2600	3500	4.46
31314		150	38	35	25	3	2.5	218	274	2400	3400	2.92
32915	75	105	20	20	16	1	1	69.5	114	3200	4300	0.511
32015X		115	25	25	19	1.5	1.5	106	167	3000	4000	0.909
33115		125	37	29	37	2	1.5	176	265	2800	3800	1.78
30215		130	27.25	25	22	2	1.5	137	186	2800	3800	1.41
32215		130	33.25	31	27	2	1.5	168	224	2700	3600	1.74
33215		130	41	41	31	2	1.5	208	298	2700	3600	2.2
30315		160	40	37	31	3	2.5	255	305	2400	3200	3.57
31315		160	40	37	26	3	2.5	209	245	1900	2800	3.47
32315		160	58	55	45	3	2.5	355	470	2400	3200	5.35
32916	80	110	20	20	16	1	1	72.0	121	3000	4000	0.54
32016X		125	29	29	22	1.5	1.5	139	216	2800	3700	1.28
33016		125	36	36	29.5	1.5	1.5	173	284	2800	3700	1.6
30216		140	28.25	26	22	2.5	2	160	213	2400	3400	1.72
32216		140	35.25	33	28	2.5	2	199	265	2500	3400	2.18
33216		140	46	46	35	2.5	2	250	365	2500	3400	2.92
30316		170	42.5	39	33	3	2.5	291	350	2300	3000	4.41
31316		170	42.5	39	27	3	2.5	224	265	1900	2800	4.11
32316		170	61.5	58	48	3	2.5	395	525	2300	3000	6.41

Metric Size


KML No.	Boundary dimensions mm							Basic load ratings KN		Limiting speeds RPM		Mass Kg
										Lubrication		
	d	D	T	B	C	r min	r ₁ min	Dynamic C _r	Static C _{or}	Grease	Oil	
32917	85	120	23	23	18	1.5	1.5	94.0	157	2800	3800	0.773
32017X		130	29	29	22	1.5	1.5	142	224	2600	3500	1.35
30217		150	30.5	28	24	2.5	2	183	232	2400	3200	2.14
32217		150	38.5	36	30	2.5	2	224	300	2400	3200	2.75
33217		150	49	49	37	2.5	2	284	420	2400	3200	3.58
30317		180	44.5	41	34	4	3	305	365	2100	2900	5.2
31317		180	44.5	41	28	4	3	242	285	1800	2600	4.85
32317		180	63.5	60	49	4	3	405	525	2100	2900	7.15
32918	90	125	23	23	18	1.5	1.5	97.5	168	2700	3600	0.817
32018X		140	32	32	24	2	1.5	168	270	2500	3300	1.79
30218		160	32.5	30	26	2.5	2	208	267	2200	3000	2.66
32218		160	42.5	40	34	2.5	2	262	360	2200	3000	3.49
30318		190	46.5	43	36	4	3	335	405	2000	2700	6.03
31318		190	46.5	43	30	4	3	264	315	1700	2400	5.66
32318		190	67.5	64	53	4	3	450	595	2000	2700	8.57
33118		150	45	45	35	2.5	2	251	390	2000	3000	3.18
32919	95	130	23	23	18	1.5	1.5	101	178	2500	3400	0.851
32019X		145	32	32	24	2	1.5	171	280	2300	3100	1.83
33019		145	39	39	32.5	2	1.5	219	375	2300	3100	2.27
30219		170	34.5	32	27	3	2.5	226	226	2100	2800	3.07
32219		170	45.5	43	37	3	2.5	299	415	2100	2800	4.3
30319		200	49.5	45	38	4	3	365	445	1900	2500	6.98
31319		200	49.5	45	32	4	3	292	355	1700	2400	6.47
32319		200	71.5	67	55	4	3	505	670	1900	2500	10.1
32920	100	140	25	25	20	1.5	1.5	121	206	2400	3200	1.14
32020X		150	32	32	24	2	1.5	170	281	2200	3000	1.91
30220		180	37	34	29	3	2.5	258	335	2000	2700	3.78
32220		180	49	46	39	3	2.5	330	465	2000	2700	5.12
30320		215	51.5	47	39	4	3	410	500	1800	2400	8.56
31320		215	56.5	51	35	4	3	355	435	1800	2400	8.67
32320		215	77.5	73	60	4	3	570	770	1800	2400	12.7
32921	105	145	25	25	20	1.5	1.5	126	219	2300	3000	1.20
32021X		160	35	35	26	2.5	2	201	335	2100	2800	2.42
30221		190	39	36	30	3	2.5	287	380	1900	2500	4.39
32221		190	53	50	43	3	2.5	380	540	1900	2500	6.25
30321		225	53.5	49	41	4	3	435	530	1700	2300	9.79
31321		225	58	53	36	4	3	380	470	1700	2300	9.68
32321		225	81.5	77	63	4	3	610	825	1700	2300	14.5
32922	110	150	25	25	20	1.5	1.5	127	226	2200	2900	1.24
32022X		170	38	38	29	2.5	2	236	390	2000	2700	3.07
33022		170	47	47	37	2.5	2	288	500	2000	2700	3.8
30222		200	41	38	32	3	2.5	325	435	1800	2400	5.18

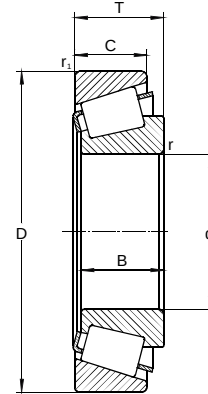


Metric Size



KML No.	Boundary dimensions mm							Basic load ratings KN		Limiting speeds RPM		Mass Kg
										Lubrication		
	d	D	T	B	C	r min	r ₁ min	Dynamic C _r	Static C _{or}	Grease	Oil	
32222	110	200	56	53	46	3	2.5	420	605	1800	2400	7.43
30322		240	54.5	50	42	4	3	480	590	1600	2200	11.4
31322		240	63	57	38	4	3	430	535	1600	2200	11.9
32322		240	84.5	80	65	4	3	705	970	1600	2200	18
32924	120	165	29	29	23	1.5	1.5	162	294	2000	2600	1.77
32024X		180	38	38	29	2.5	2	245	420	1800	2500	3.25
30224		215	43.5	40	34	3	2.5	345	470	1700	2200	6.23
32224		215	61.5	58	50	3	2.5	460	680	1700	2200	9.08
30324		260	59.5	55	46	4	3	560	695	1500	2000	14.2
31324		260	68	62	42	4	3	515	655	1500	2000	15.4
32324		260	90.5	86	69	4	3	815	1130	1500	2000	22.4
32926	130	180	32	32	25	2	1.5	194	350	1800	2400	2.36
32026X		200	45	45	34	2.5	2	320	545	1700	2200	4.96
30226		230	43.75	40	34	4	3	375	505	1500	2000	7.25
32226		230	67.75	64	54	4	3	530	815	1500	2000	11.2
30326		280	63.75	58	49	5	4	650	830	1400	1800	17.4
31326		280	72	66	44	5	4	600	780	1400	1800	19
32928	140	190	32	32	25	2	1.5	200	375	1700	2200	2.51
32028X		210	45	45	34	2.5	2	330	580	1600	2100	5.28
30228		250	45.75	42	36	4	3	420	570	1400	1900	9.26
32228		250	71.75	68	58	4	3	610	920	1400	1900	14.1
30328		300	67.75	62	53	5	4	735	950	1300	1700	21.2
31328		300	77	70	47	5	4	685	905	1300	1700	23
32930	150	210	38	38	30	2.5	2	268	490	1600	2100	3.92
30230		270	49	45	38	4	3	450	605	1300	1700	11.2
32230		270	77	73	60	4	3	700	1070	1300	1700	18.2
30330		320	72	65	55	5	4	825	1070	1200	1600	25.5
31330		320	82	75	50	5	4	775	1030	1200	1600	27.7
32932	160	220	38	38	30	2.5	2	276	520	1500	1900	4.15
30232		290	52	48	40	4	3	525	720	1200	1600	12.9
32232		290	84	80	67	4	3	890	1420	1200	1600	23.5
30332		340	75	68	58	5	4	915	1200	1100	1500	29.9
30234	170	310	57	52	43	5	4	616	845	1100	1500	17
32234		310	91	86	71	5	4	1000	1600	1100	1500	28.7
30334		360	80	72	62	5	4	1010	1320	1000	1400	35.3
32936	180	250	45	45	34	2.5	2	350	700	1300	1700	6.54
30236		320	57	52	43	5	4	630	890	1100	1400	17.7
32236		320	91	86	71	5	4	1030	1690	1100	1400	30.7
32938	190	260	45	45	34	2.5	2	355	710	1200	1600	6.77
30238		340	60	55	46	5	4	715	1000	1000	1300	20.8
32238		340	97	92	75	5	4	1150	1850	1000	1300	36.1
30240	200	360	64	58	48	5	4	785	1110	950	1300	25.4
32240		360	104	98	82	5	4	1320	2130	950	1300	43.6
32044X	220	340	76	76	57	4	3	897	1660	900	1300	25
32948	240	320	51	51	39	3	2.5	490	1000	940	1200	10.9

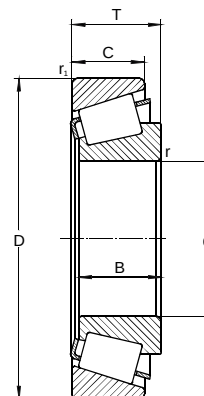
Inch Size



KML No.		Boundary dimensions mm							Mass Kg
Cone	Cup	d	D	T	B	C	r min	r ₁ min	
368	362	50.8	90	20	22.225	15.875	1.5	2.0	0.526
368A	362A	50.8	88.9	20.638	22.225	16.513	3.5	1.3	0.516
385	382	50	98.425	21	21.946	17.826	2.3	0.8	0.749
387A	382A	57.15	96.838	21	21.946	15.875	3.5	0.8	0.581
387AS	382S	57.15	96.838	21	21.946	15.875	5	0.8	0.576
395	394A	63.5	110	22	21.996	18.824	3.5	1.3	0.847
418	414	38.1	88.5	26.988	29.083	22.225	3.5	1.5	0.841
462	453X	57.15	104.775	30.16	29.317	24.605	2.3	3.3	1.04
482	472	69.85	120	29.794	29.007	24.237	3.5	2	1.3
484	472	70	120	29.794	29.007	24.237	2	2	1.3
528	522	47.625	101.6	34.925	36.068	26.988	3.5	3.3	1.3
535	532X	44.45	107.95	36.512	36.957	28.575	3.5	3.3	1.726
535	532A	44.45	111.125	38.1	36.957	30.162	3.5	3.3	1.898
567	563	73.025	127	36.512	36.17	28.575	3.5	3.3	1.81
575	572	76.2	139.992	36.512	36.098	28.575	3.5	3.3	2.442
580	572	82.55	139.992	36.512	36.098	28.575	3.5	3.3	2.22
595	592A	82.55	152.4	39.688	36.322	30.162	3.5	3.3	3.04
598A	593X	92.075	150	35.992	36.322	27	6.4	3.0	2.33
663	653	82.55	146.05	41.275	41.275	31.75	3.5	3.3	2.62
665	653	85.275	146.05	41.275	41.275	31.75	3.5	3.3	4.79
677	672	85.725	168.275	41.275	41.275	30.162	3.5	3.3	4.18
749	742	85.026	150.089	44.45	46.672	35.512	3.5	3.3	3.17
799	792	128.588	206.375	47.672	47.672	34.925	3.3	3.3	4.92
1380	1328	22.225	52.388	23.178	20.162	14.288	1.5	1.5	0.198
1755	1729	22.225	56.896	19.386	19.837	15.875	1.3	0.8	0.254
1988	1922	28.575	57.15	19.845	19.355	15.875	3.5	1.5	0.217
2580	2520	31.75	66.421	25.4	25.357	20.638	0.8	3.3	0.41
2582	2523	31.750	69.85	23.812	25.357	19.05	3.5	1.3	0.449
2682	2631	26.162	66.421	23.812	25.433	19.05	1.5	1.3	0.436
2776	2720	38.1	76.2	23.812	25.654	19.05	4.3	3.3	0.488
2780	2729	36.487	76.2	23.812	25.654	19.05	1.5	0.8	0.52
2785	2733	33.338	75.26	23.812	25.654	19.05	3.5	3.3	0.528
2788	2720	38.1	76.2	23.812	25.654	19.05	3.5	3.3	0.492
2878	2820	34.925	73.025	22.225	23.812	17.462	0.8	3.3	0.434
3379	3320	34.925	80.167	29.37	30.391	23.812	3.5	3.3	0.732
3775	3720	50.8	93.264	30.162	30.302	23.812	0.8	3.3	0.859
3780	3727	50.8	93.662	30.162	30.302	23.812	3.5	3.3	0.867
3781	3730	49.212	93.264	30.162	30.302	23.812	3.5	0.8	0.833
3789	3720	50.8	93.264	30.162	30.302	23.812	3.5	3.3	0.868
3872	3820	34.925	85.725	30.162	30.162	23.812	3.5	3.3	1.045
3872A	3821	34.925	85.725	30.162	30.162	23.812	0.8	1.3	1.056

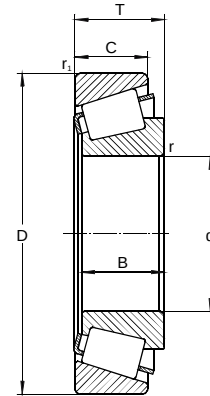


Inch Size



KML No.		Boundary dimensions mm							Mass Kg
Cone	Cup	d	D	T	B	C	r min	r ₁ min	
3982	3920	63.5	112.712	30.162	30.048	23.812	3.5	3.3	1.17
3984	3925	66.675	112.712	30.162	30.048	23.812	3.5	0.8	1.19
4388	4335	41.275	90.488	39.688	40.386	33.338	3.5	3.3	1.22
A6075	A6157	19.05	39.992	12.014	11.153	9.525	1.0	1.3	0.066
9278	9220	68.262	161.925	49.212	46.038	31.75	3.5	3.3	4.54
03062	03162	15.875	41.275	14.288	14.681	11.112	1.3	2.0	0.096
07097	07196	25	50.005	13.945	14.26	9.525	1.5	1.0	0.12
07100	07196	25.4	50.005	13.495	14.26	9.525	1	1	0.119
07100S	07204	25.4	51.994	15.011	14.26	12.7	1.5	1.3	0.145
09067	09194	19.05	49.225	23.020	19.05	17.462	1.3	3.5	0.197
09074	09195	19.05	49.225	19.845	21.539	14.288	1.5	1.3	0.189
09081	09196	20.625	49.225	23.02	21.539	17.462	1.5	1.5	0.2
11162	11300	41.275	76.2	18.009	17.387	14.288	1.5	1.5	0.341
11590	11520	15.875	42.862	14.288	14.288	9.525	1.5	1.5	0.1
LM11749	LM11710	17.462	39.878	13.843	14.605	10.668	1.3	1.3	0.083
LM11949	LM11910	19.05	45.237	15.494	16.637	12.065	1.3	1.3	0.124
12168	12303	42.862	76.992	17.462	17.145	11.908	1.5	1.5	0.326
M12649	M12610	21.43	50.005	17.526	18.288	13.97	1.3	1.3	0.169
LM12748	LM12710	21.43	45.237	15.494	16.637	12.065	1.3	1.3	0.121
LM12749	LM12710	21.986	45.237	15.494	16.637	12.065	1.3	1.3	0.116
LM12749	LM12711	21.986	45.237	15.494	16.637	12.065	1.3	1.3	0.116
13686	13620	38.1	69.012	19.05	26.195	15.083	1.5	0.8	0.876
14124	14274	31.75	69.012	19.845	19.583	15.875	0.8	3.3	0.353
14125A	14276	31.75	69.012	19.845	19.583	15.875	3.5	1.3	0.36
14137A	14277	34.925	69.012	22.385	19.583	18.415	1.5	2.3	0.348
15100	15243	25.4	61.912	19.05	20.638	14.288	3.5	2.0	0.274
15101	15245	25.4	62	19.05	20.638	14.288	0.8	1.3	0.30
15103S	15243	26.162	61.912	19.05	19.939	14.288	0.8	2.0	0.28
15123	15245	31.75	62	18.161	19.05	14.288	Spec	1.3	0.244
15590	15520	28.575	57.15	17.462	17.462	13.945	3.5	1.5	0.196
16137	16282	34.925	72	19	20.638	14.495	3.5	1.5	0.36
J16154	J16285	39	72.014	21.4	20.638	16.637	3.5	0.4	0.35
17887	17831	45.23	79.985	19.842	20.638	15.08	2.0	1.3	0.41
18590	18520	41.275	73.025	16.667	17.462	12.70	3.5	1.5	0.275
18790	18720	50.8	85	17.462	17.462	13.495	3.5	1.5	0.374
21075	21212	19.05	53.975	22.225	21.839	15.875	1.5	2.3	0.258
24780	24720	41.275	76.2	22.225	23.02	17.462	3.5	0.8	0.474
25570	25519	36.512	82.55	23.812	25.4	19.05	3.5	2.0	0.648
25572	25520	38.1	82.931	23.812	25.4	19.05	0.8	0.8	0.642
25577	25521	42.875	83.058	23.812	25.4	19.05	3.5	3.3	0.576
25580	25520	44.45	82.931	23.812	25.4	19.05	3.5	0.8	0.561

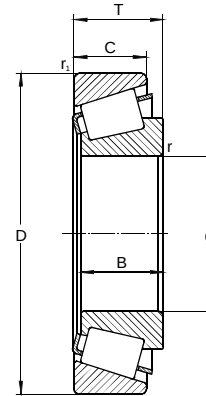
Inch Size



KML No.		Boundary dimensions mm							Mass Kg
Cone	Cup	d	D	T	B	C	r min	r ₁ min	
25582	25523	44.45	82.931	26.988	25.4	22.225	5.0	2.3	0.601
25590	25520	45.618	82.931	23.812	25.4	19.05	3.5	0.8	0.544
25590	25523	45.618	82.931	26.988	25.4	22.225	3.5	2.3	0.603
25877	25820	34.925	73.025	23.812	24.608	19.05	1.5	2.3	0.465
25877	25821	34.925	73.025	23.812	24.608	19.05	1.5	0.8	0.471
26877	26820	36.512	81.167	25.4	25.4	20.638	0.8	3.3	0.631
26882	26822	41.275	79.375	23.812	25.4	19.05	3.5	0.8	0.530
26882	26823	41.275	76.2	25.4	25.4	20.638	3.5	1.5	0.485
27690	27620	83.345	125.412	25.4	25.4	19.845	3.5	1.5	1.075
28580	28521	50.8	92.075	24.608	25.4	19.845	3.5	0.8	0.697
28678	28622B	50.8	97.63	24.608	24.608	19.446	3.5	0.8	0.865
28985	28920	60.325	101.6	25.4	25.4	19.845	3.5	3.3	0.801
29580	29520	60	107.95	25.4	25.4	19.05	3.5	3.3	1.003
29586	29522	63.5	107.95	25.4	25.4	19.05	1.5	0.8	0.945
29590	29520	66.675	107.95	25.4	25.4	19.05	3.5	3.3	0.844
29685	29620	73.025	112.712	25.4	25.4	19.05	3.5	3.3	0.861
LM29748	LM29710	38.1	65.088	18.034	18.288	13.97	Spec	1.3	0.236
LM29749	LM29711	38.1	65.088	19.812	18.288	15.748	2.4	1.3	0.238
33275	33462	69.85	117.474	30.162	30.162	23.812	3.5	3.3	1.25
33281	33472	71.438	120	29.794	30.162	23.444	3.5	0.8	1.33
33889	33821	50.8	95.25	27.783	28.575	22.225	3.5	2.3	0.862
37431	37625	109.538	158.75	23.02	21.438	15.875	3.5	3.3	1.329
39581	39520	57.15	112.712	30.162	30.162	23.812	8	3.3	1.38
42381	42584	96.838	148.43	28.575	28.971	21.433	3.5	3.0	1.683
L44643	L44610	25.4	50.292	14.224	14.732	10.668	1.3	1.3	0.124
L44649	L44610	26.988	50.292	14.224	14.732	10.668	3.5	1.3	0.115
L45449	L45410	29	50.292	14.224	14.732	10.668	3.5	1.3	0.11
LM48548	LM48510	34.925	65.088	18.034	18.288	13.97	Spec	1.3	0.264
LM48548	LM48511A	34.925	65.088	21.082	18.288	17.018	Spec	1.5	0.29
57410S	LM29710S	38.1	65.088	18.034	21.139	13.97	Spec	1.3	0.242
LM67048	LM67010	31.75	59.131	15.875	16.764	11.811	Spec	1.3	0.18
L68149	LM68110	34.988	59.131	15.875	16.764	11.938	Spec	1.3	0.167
L68149	LM68111	34.988	59.974	15.875	16.764	11.938	Spec	1.3	0.174
JL69349	JL69310	37.987	62.975	17	17	13.5	Spec	1.3	0.194
72187	72487	47.625	123.825	36.512	32.791	25.4	3.5	3.3	2.151
74550A	74850	139.7	215.9	47.625	47.625	34.925	6.4	3.3	5.99
78215C	78551	53.975	140.03	36.512	33.236	23.52	3.5	2.3	2.71
LM78349	LM78310A	35	62	16.7	17	13.6	Spec	1.5	0.211



Inch Size

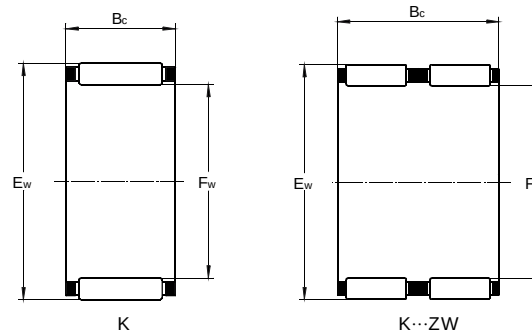


KML No.		Boundary dimensions mm							Mass Kg
Cone	Cup	d	D	T	B	C	r min	r ₁ min	
M84249	M84210	25.4	59.53	23.368	23.114	18.288	0.8	1.5	0.33
M84548	M84510	25.4	57.15	19.431	19.431	14.732	1.5	1.5	0.337
M86649	M86610	30.162	64.292	21.433	21.433	16.67	1.5	1.5	0.341
M88047	M88010	33.338	68.262	22.225	22.225	17.462	5.5	1.5	0.372
M88048	M88010	33.338	68.262	22.225	22.225	17.462	0.8	1.5	0.379
HM88542	HM88510	31.75	73.025	29.37	27.783	23.02	1.3	3.3	0.621
HM88649	HM88610	34.925	72.233	25.4	25.4	19.842	2.3	2.3	0.485
HM89449	HM89410	36.512	76.2	29.37	28.575	23.02	3.5	3.3	0.625
LM102949	LM102910	45.242	73.431	19.588	19.812	15.748	3.5	0.8	0.321
LM104949	LM104911	50.8	82.55	21.59	22.225	16.51	3.5	1.3	0.429
JLM104948	LM104911	50	82.55	21.16	21.5	16.51	3.0	1.3	0.424
JLM104948	JLM104910	50	82	21.5	21.5	17	3	0.5	0.420
M201047	M201011	39.688	73.025	25.654	22.098	21.336	2.4	2.4	0.439
JH211749	JM211710	65	120	39	38.5	32	3	2.5	1.874
HM212047	HM212010	63.5	122.238	38.1	38.354	29.718	7.0	1.5	1.85
HM212049	HM211011	66.675	122.238	38.1	38.354	29.718	3.5	3.3	1.85
HM218248	HM218210	89.975	146.975	40	40	32.5	7	3.5	2.520
HM220149	HM220110	100	157	42	42	34	8	3.5	2.820
LM300849	LM300811	40.988	67.975	17.5	18	13.5	Spec	1.5	0.234
LM501349	LM501310	41.275	73.431	19.558	19.812	14.732	3.5	0.8	0.327
LM501349	LM501314	41.275	73.431	21.43	19.812	16.604	3.5	0.8	0.350
JLM506849	JLM506810	55	90	23	23	18.5	1.5	0.5	0.576
HM518445	HM518410	88.9	152.4	39.688	39.688	30.163	3.5	3.3	2.840
LM603049	LM603011	45.242	77.788	19.842	19.842	15.08	3.5	0.8	0.358
LM603049	LM603012	45.242	77.788	21.430	19.842	16.667	3.5	0.8	0.373
LM603049	LM603014	45.242	79.974	19.842	19.842	15.08	3.5	0.8	0.391
JM716649	JM716610	85	130	30	29	24	3.0	2.5	1.704
JM720249	JM720210	100	155	36	35	28	3.0	2.5	2.452
HM801346	HM801310	38.1	82.55	29.37	28.575	23.02	0.8	3.3	0.806
HM803145	HM803110	41.275	88.9	30.162	29.37	23.02	0.8	3.3	0.892
HM807048	HM807010	54.5	104.775	36.512	36.512	28.575	3.5	3.3	1.38
HM813843	HM813810	61.912	127	36.512	36.512	26.988	3.5	3.3	2.15
JL819349	JL819310	95	135	20	20	14	5.0	2.0	0.838



Needle Roller and Cage Assemblies

K , K...ZW Series



KML No.	Shaft diameter mm	Boundary dimensions mm			Basic load ratings N		Limiting speeds RPM	Mass g
							Lubrication	
		Fw	Ew	Bc	Dynamic Cr	Static Cor	Oil	
K5 x 8 x 8 TN	5	5	8	8	2300	1880	37000	0.7
K5 x 8 x 10 TN		5	8	10	2800	2450	37000	0.9
K6 x 9 x 8 TN	6	6	9	8	2560	2240	35000	0.8
K6 x 9 x 10 TN		6	9	10	3300	3100	35000	1
K6 x 10 x 13 TN		6	10	13	3500	2800	33000	1.3
K7 x 10 x 8 TN	7	7	10	8	2750	2550	32000	0.9
K7 x 10 x 10 TN		7	10	10	3350	3400	32000	1.1
K8 x 11 x 10 TN	8	8	11	10	3830	3950	30000	1.7
K8 x 11 x 13 TN		8	11	13	5000	5700	30000	1.8
K8 x 12 x 10 TN		8	12	10	4900	4600	30000	1.3
K9 x 12 x 10 TN	9	9	12	10	4200	4700	30000	1.5
K9 x 12 x 13 TN		9	12	13	5500	6700	30000	1.9
K10 x 13 x 10 TN	10	10	13	10	4500	5250	27000	1.6
K10 x 13 x 13 TN		10	13	13	6000	7600	27000	2.1
K10 x 14 x 10 TN		10	14	10	7000	7900	27000	2.9
K10 x 14 x 13 TN		10	14	13	8000	9100	26000	4.3
K10 x 16 x 12 TN		10	16	12	7000	9300	27000	3.7
K12 x 15 x 10 TN	12	12	15	10	4320	5730	25000	1.9
K12 x 15 x 13 TN		12	15	13	6000	8100	25000	2.4
K12 x 16 x 13 TN		12	16	13	7900	9200	25000	3.8
K12 x 17 x 13 TN		12	17	13	9300	10000	24000	4.4
K12 x 18 x 12 TN		12	18	12	9800	8000	24000	5
K12 x 15 x 20 TN		12	15	20	8200	12000	25000	3.8
K14 x 18 x 10	14	14	18	10	6800	8300	23000	4.8
K14 x 18 x 13		14	18	13	8100	9800	23000	6.3
K14 x 18 x 15		14	18	15	10000	13000	23000	7.3
K14 x 18 x 17		14	18	17	10500	13900	23000	8.1
K14 x 20 x 12		14	20	12	9900	10500	22000	8.6
K15 x 19 x 10	15	15	19	10	7200	9000	22000	5.1
K15 x 19 x 13		15	19	13	8300	9800	22000	7
K15 x 19 x 17		15	19	17	10300	15000	22000	8.8
K15 x 20 x 13		15	20	13	9700	11000	22000	8.9
K15 x 21 x 15		15	21	15	13800	16000	22000	13
K15 x 21 x 21		15	21	21	18000	24000	22000	18.2
K16 x 20 x 10	16	16	20	10	7600	9700	22000	5.7
K16 x 20 x 13		16	20	13	8700	11300	22000	7.1
K16 x 20 x 17		16	20	17	11200	16300	22000	9.2
K16 x 22 x 12		16	22	12	11000	12000	21000	10.4
K16 x 22 x 13		16	22	13	12000	13400	21000	11.9
K16 x 22 x 16		16	22	16	14300	17000	21000	13.7
K16 x 22 x 20		16	22	20	18000	22300	21000	16.7
K16 x 24 x 20		16	24	20	21100	23000	20000	24.9

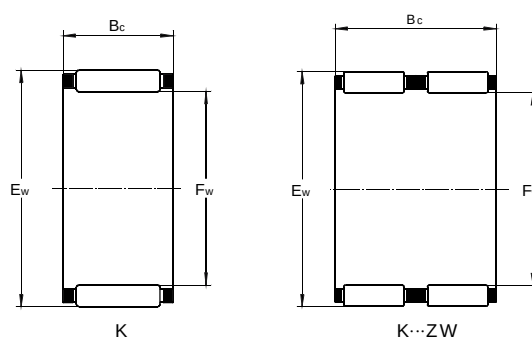
TN:Max.working temperature for plastic mold cage.

120°C constantly running, 150°C temporarily running, 180°C instantaneously running

When using grease lubrication, the revolution allowable value is 60% of that shown in the above table.

Needle Roller and Cage Assemblies

K , K...ZW Series



KML No.	Shaft diameter mm	Boundary dimensions mm			Basic load ratings N		Limiting speeds RPM	Mass g
							Lubrication	
		Fw	Ew	Bc	Dynamic Cr	Static Cor	Oil	
K17 x 21 x 10	17	17	21	10	7900	10100	21000	5.6
K17 x 21 x 13		17	21	13	10000	14100	21000	7.5
K17 x 21 x 17		17	21	17	12000	17400	21000	9.5
K18 x 22 x 10	18	18	22	10	8200	9900	20000	6.1
K18 x 22 x 13		18	22	13	9000	12100	20000	7.7
K18 x 22 x 17		18	22	17	11900	17600	20000	10.8
K18 x 24 x 12		18	24	12	11200	12900	20000	11.6
K18 x 24 x 13		18	24	13	12900	14900	20000	12.6
K18 x 24 x 20		18	24	20	20000	26500	20000	19
K18 x 25 x 14		18	25	14	16500	18800	20000	14.9
K18 x 25 x 22		18	25	22	22900	28400	20000	24.3
K18 x 28 x 16		18	28	16	19000	18400	19000	24
K19 x 23 x 13	19	19	23	13	9300	13000	20000	8.2
K19 x 23 x 17		19	23	17	12000	18600	20000	11.1
K20 x 24 x 10	20	20	24	10	8700	12100	19000	6.5
K20 x 24 x 13		20	24	13	9600	13800	19000	8.9
K20 x 24 x 17		20	24	17	12400	20000	19000	11.2
K20 x 26 x 12		20	26	12	13100	15700	19000	13.2
K20 x 26 x 17		20	26	17	18700	25500	19000	18.2
K20 x 26 x 20		20	26	20	20600	28500	19000	22
K20 x 28 x 20		20	28	20	23400	28000	18000	26.8
K20 x 28 x 25		20	28	25	30000	28500	18000	36.2
K20 x 30 x 30		20	30	30	35000	41000	18000	56
K21 x 25 x 13	21	21	25	13	9600	14500	19000	9
K21 x 25 x 17		21	25	17	12800	21000	19000	12
K22 x 26 x 10	22	22	26	10	8700	12900	18000	7.1
K22 x 26 x 13		22	26	13	10000	15400	18000	9.4
K22 x 26 x 17		22	26	17	13100	22100	18000	12.1
K22 x 28 x 17		22	28	17	19000	26500	18000	19.7
K22 x 29 x 16		22	29	16	19500	25000	17000	22.2
K22 x 30 x 15 TN		22	30	15	19600	22900	17000	14.4
K22 x 32 x 24		22	32	24	33500	39500	16000	43.4
K23 x 35 x 16 TN	23	23	35	16	24000	23400	15000	30
K24 x 28 x 10	24	24	28	10	9400	14300	17000	8.1
K24 x 28 x 13		24	28	13	10500	17000	17000	10.1
K24 x 28 x 17		24	28	17	14000	24500	17000	13.2
K24 x 29 x 13		24	29	13	13100	19100	16000	13.5
K24 x 30 x 17		24	30	17	19000	27000	16000	21.5
K24 x 30 x 31		24	30	31	27000	43000	16000	39.1

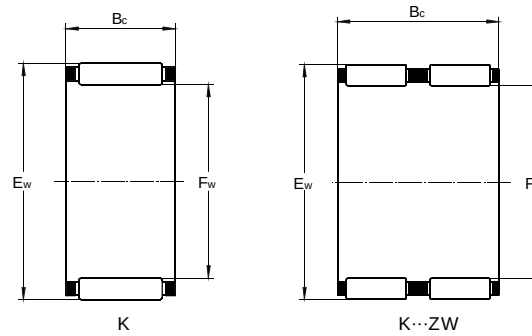
TN:Max.working temperature for plastic mold cage.

120°C constantly running, 150°C temporarily running, 180°C instantaneously running

When using grease lubrication, the revolution allowable value is 60% of that shown in the above table.

Needle Roller and Cage Assemblies

K , K...ZW Series



KML No.	Shaft diameter mm	Boundary dimensions mm			Basic load ratings N		Limiting speeds RPM	Mass g
		Fw	Ew	Bc	Dynamic Cr	Static Cor	Lubrication Oil	
K25 x 29 x 10	25	25	29	10	9700	14900	16000	8.3
K25 x 29 x 13		25	29	13	10800	17900	16000	10.4
K25 x 29 x 17		25	29	17	14500	25500	16000	13.7
K25 x 30 x 20		25	30	20	21100	28000	16000	20.5
K25 x 31 x 17		25	31	17	19000	28000	16000	21.8
K25 x 31 x 21		25	31	21	24100	37500	16000	26.2
K25 x 32 x 16		25	32	16	20500	27500	15000	24.5
K25 x 33 x 20		25	33	20	28000	37500	15000	32
K25 x 33 x 24		25	33	24	33900	46500	15000	38.7
K25 x 35 x 30		25	35	30	46500	61500	14000	65.5
K25 x 30 x 26 ZW		25	30	26	21000	35000	14000	27
K26 x 30 x 10	26	26	30	10	9500	15500	16000	9
K26 x 30 x 13		26	30	13	11100	18700	16000	11.4
K26 x 30 x 17		26	30	17	14700	27000	16000	15
K26 x 31 x 13		26	31	13	12400	18400	15000	9.9
K28 x 33 x 13	28	28	33	13	14800	23600	14000	15.2
K28 x 33 x 17		28	33	17	19100	33000	14000	19.5
K28 x 33 x 27 TN		28	33	27	22800	40500	14000	19
K28 x 34 x 17		28	34	17	21300	35000	14000	24.2
K28 x 35 x 16		28	35	16	21000	29000	14000	26
K28 x 35 x 18		28	35	18	23500	33500	14000	31
K28 x 35 x 27		28	35	27	34500	54500	14000	47
K28 x 40 x 18		28	40	18	33000	36500	12000	50
K28 x 40 x 25		28	40	25	45000	54500	12000	71
K30 x 34 x 13	30	30	34	13	11800	21200	13000	14.6
K30 x 35 x 13		30	35	13	15100	25000	13000	16.3
K30 x 35 x 17		30	35	17	19100	33500	13000	21.3
K30 x 35 x 27		30	35	27	30000	58500	13000	33.3
K30 x 37 x 16		30	37	16	22500	33000	13000	26.4
K32 x 37 x 13	32	32	37	13	15000	25000	12000	18.3
K32 x 37 x 17		32	37	17	19400	35000	12000	22.4
K32 x 37 x 27		32	37	27	29500	59500	12000	36.7
K32 x 38 x 20		32	38	20	26000	44500	12000	31
K32 x 39 x 16		32	39	16	23500	35000	12000	36.7
K32 x 40 x 36		32	40	36	53500	91500	12000	73
K32 x 46 x 32		32	46	32	65500	82500	11000	119
K35 x 40 x 13	35	35	40	13	15800	27500	11000	18.8
K35 x 40 x 17		35	40	17	20300	38000	11000	25.3
K35 x 40 x 27 TN		35	40	27	24500	48000	11000	23.4
K35 x 42 x 16		35	42	16	23900	37000	11000	34

TN:Max.working temperature for plastic mold cage.

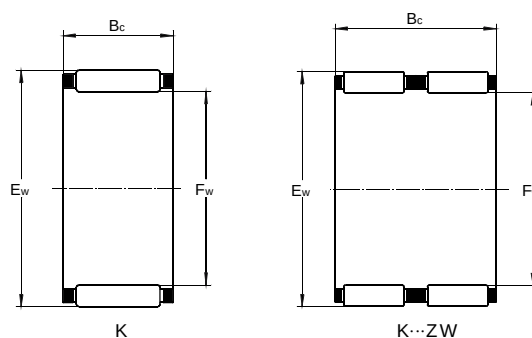
120℃ constantly running, 150℃ temporarily running, 180℃ instantaneously running

When using grease lubrication, the revolution allowable value is 60% of that shown in the above table.



Needle Roller and Cage Assemblies

K , K...ZW Series



KML No.	Shaft diameter mm	Boundary dimensions mm			Basic load ratings N		Limiting speeds RPM	Mass g
							Lubrication	
		Fw	Ew	Bc	Dynamic Cr	Static Cor	Oil	
K35 x 42 x 18	35	35	42	18	27000	42500	11000	39.2
K35 x 42 x 30		35	42	30	38500	67500	11000	62.4
K35 x 43 x 18		35	43	18	28000	41500	11000	38
K35 x 45 x 20		35	45	20	36500	49500	10000	55.5
K35 x 45 x 30		35	45	30	52500	78500	10000	80
K35 x 45 x 49		35	45	49	81500	13400	10000	120
K35 x 40 x 30 ZW		35	40	30	31500	65500	11000	48
K36 x 42 x 16	36	36	42	16	24000	42000	11000	50
K37 x 42 x 17	37	37	42	17	21900	42500	10000	25.8
K37 x 42 x 27		37	42	27	31500	67500	10000	40.7
K37 x 45 x 26		37	45	26	43500	73500	10000	60.5
K38 x 43 x 17	38	38	43	17	20000	38000	10000	26.9
K38 x 46 x 20		38	46	20	35000	56500	10000	46
K38 x 46 x 32		38	46	32	54500	98500	10000	72.7
K39 x 44 x 24	39	39	44	24	28000	58500	10000	38
K39 x 44 x 26 ZW		39	44	26	27000	55500	10000	29.5
K40 x 45 x 27	40	40	45	27	32500	72500	10000	46
K40 x 46 x 17		40	46	17	24500	44500	9000	30
K40 x 47 x 18		40	47	18	29000	49500	9000	45.2
K40 x 47 x 20		40	47	20	32000	56500	9000	42
K40 x 48 x 20		40	48	20	35500	58500	9000	57.7
K40 x 45 x 30 ZW		40	45	30	26000	53500	9000	48
K42 x 47 x 13	42	42	47	13	17300	33000	9000	22.5
K42 x 47 x 17		42	47	17	21100	42500	9000	31.1
K42 x 47 x 27		42	47	27	33000	74500	9000	46.6
K42 x 50 x 20		42	50	20	34500	56500	9000	54
K42 x 47 x 30 ZW		42	47	30	31000	75500	9000	54
K43 x 48 x 17	43	43	48	17	21000	42500	9000	29.3
K43 x 48 x 27		43	48	27	33000	74500	9000	45.7
K43 x 50 x 18		43	50	18	30500	53500	9000	48.5
K45 x 50 x 17	45	45	50	17	22000	45000	8000	25.5
K45 x 50 x 27		45	50	27	34000	79500	8000	50
K45 x 50 x 32 TN		45	50	32	38000	90500	8000	45
K45 x 52 x 18		45	52	18	31000	56500	8000	51
K45 x 52 x 21 TN		45	52	21	39500	57500	8000	32.9
K45 x 53 x 20		45	53	20	38500	66500	8000	62.2
K45 x 53 x 21		45	53	21	38000	66500	8000	65
K45 x 53 x 22		45	53	22	42000	66500	8000	68.4
K45 x 53 x 28		45	53	28	51500	97500	8000	78
K45 x 59 x 18 TN		45	59	18	43500	53500	7000	60.5
K45 x 59 x 32		45	59	32	72500	101500	7000	145.5
K45 x 59 x 36		45	59	36	75500	108500	7000	195

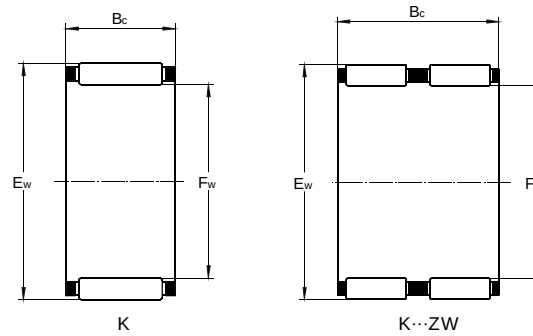
TN:Max.working temperature for plastic mold cage.

120°C constantly running, 150°C temporarily running, 180°C instantaneously running

When using grease lubrication, the revolution allowable value is 60% of that shown in the above table.

Needle Roller and Cage Assemblies

K , K...ZW Series



KML No.	Shaft diameter mm	Boundary dimensions mm			Basic load ratings N		Limiting speeds RPM	Mass g
		Fw	Ew	Bc	Dynamic Cr	Static Cor	Lubrication Oil	
K47 x 52 x 17	47	47	52	17	22800	48500	8000	32
K47 x 52 x 27		47	52	27	34500	82500	8000	50.7
K47 x 53 x 25		47	53	25	38000	81500	8000	53
K47 x 55 x 28		47	55	28	52500	99500	7500	62.4
K48 x 54 x 19	48	48	54	19	30000	60500	7500	44
K50 x 55 x 13.5	50	50	55	13.5	17500	36000	7500	31
K50 x 55 x 17		50	55	17	21400	46500	7500	35
K50 x 55 x 20		50	55	20	26000	59500	7500	39.4
K50 x 55 x 30		50	55	30	38500	96500	7500	59.4
K50 x 57 x 18		50	57	18	33000	62500	7000	53.4
K50 x 58 x 20		50	58	20	35000	61500	7000	64.9
K50 x 58 x 25		50	58	25	43500	80500	7000	81
K52 x 57 x 12	52	52	57	12	17500	36000	7000	24
K55 x 60 x 20	55	55	60	20	28000	65500	6500	43.4
K55 x 60 x 30		55	60	30	40500	10300	6500	68.6
K55 x 62 x 18		55	62	18	35000	69500	6500	58.4
K55 x 63 x 20		55	63	20	39500	73500	6500	73.3
K55 x 63 x 25		55	63	25	49500	99500	6500	88
K55 x 63 x 32		55	63	32	61500	129500	6500	117
K55 x 60 x 40 ZW		55	60	40	48000	132000	6500	96.5
K56 x 61 x 20	56	56	61	20	27000	64500	6500	45
K58 x 63 x 17	58	58	63	17	21500	63500	6000	42
K58 x 64 x 19		58	64	19	24500	77500	6000	53
K58 x 65 x 18		58	65	18	34500	69500	6000	52
K58 x 65 x 38ZW		58	65	38	48500	106500	6000	106
K60 x 65 x 20	60	60	65	20	29000	71500	6000	50.5
K60 x 65 x 30		60	65	30	42000	115500	6000	71.2
K60 x 68 x 20		60	68	20	43000	84500	5500	79
K60 x 68 x 23		60	68	23	49000	100500	5500	94
K60 x 68 x 25		60	68	25	52500	110500	5500	97
K60 x 68 x 27		60	68	27	59000	120500	6000	98
K60 x 75 x 42		60	75	42	11300	19200	5500	240
K60 x 66 x 33 ZW		60	66	33	45500	111500	6000	104
K60 x 66 x 40 ZW		60	66	40	57500	150500	5500	116
K60 x 68 x 30 ZW		60	68	30	44000	87500	5500	136
K60 x 68 x 34 ZW		60	68	34	47500	95500	5500	140
K62 x 70 x 40 ZW	62	62	70	40	65500	145500	5500	147.5
K63 x 70 x 21	63	63	70	21	45000	100500	5500	75
K64 x 70 x 16	64	64	70	16	27500	59500	5500	53

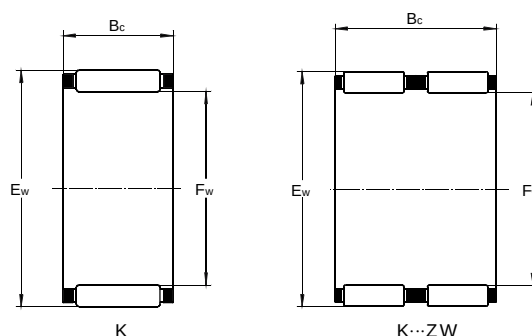
TN:Max.working temperature for plastic mold cage.

120℃ constantly running, 150℃ temporarily running, 180℃ instantaneously running

When using grease lubrication, the revolution allowable value is 60% of that shown in the above table.

Needle Roller and Cage Assemblies

K , K...ZW Series



KML No.	Shaft diameter mm	Boundary dimensions mm			Basic load ratings N		Limiting speeds RPM	Mass g
							Lubrication	
		Fw	Ew	Bc	Dynamic Cr	Static Cor	Oil	
K65 x 70 x 20	65	65	70	20	30000	76500	5500	49
K65 x 70 x 30		65	70	30	43500	123500	5500	83
K65 x 73 x 23		65	73	23	45500	93500	5000	100
K65 x 73 x 30		65	73	30	56500	122500	5000	126
K68 x 74 x 20	68	68	74	20	35000	83500	5000	65
K68 x 74 x 30		68	74	30	46000	117500	5000	97
K68 x 74 x 35 ZW		68	74	35	48000	124500	5000	116
K70 x 76 x 20	70	70	76	20	35500	85500	4500	70
K70 x 76 x 30		70	76	30	51500	138500	4500	100
K70 x 78 x 25		70	78	25	51500	111500	4500	115
K70 x 78 x 30		70	78	30	59500	134500	4500	136
K70 x 80 x 30		70	80	30	72500	147500	4500	150
K70 x 78 x 46 ZW		70	78	46	77500	18800	4500	230
K72 x 80 x 20	72	72	80	20	41000	84500	4500	94
K73 x 79 x 20	73	73	79	20	36500	99500	4500	69
K75 x 81 x 20	75	75	81	20	37000	93500	4500	72
K75 x 81 x 30		75	81	30	51500	142000	4500	106
K75 x 83 x 23		75	83	23	49500	108000	4000	113
K75 x 83 x 30		75	83	30	61500	142000	4000	147
K75 x 83 x 35 ZW		75	83	35	62500	146500	4000	165
K75 x 83 x 40 ZW		75	83	40	72500	176500	4000	190
K80 x 86 x 20	80	80	86	20	38000	97500	4000	76
K80 x 86 x 30		80	86	30	55500	158500	4000	114
K80 x 88 x 30		80	88	30	71500	178500	4000	141
K80 x 88 x 40 ZW		80	88	40	75500	191500	4000	204
K80 x 88 x 46 ZW		80	88	46	87500	23000	4000	235
K85 x 92 x 20	85	85	92	20	44000	107500	3500	96
K90 x 97 x 20	90	90	97	20	44500	112500	3000	103
K90 x 98 x 27		90	98	27	60500	149500	3000	150
K90 x 98 x 30		90	98	30	67500	171500	3000	172
K95 x 103 x 30	95	95	103	30	68500	179500	2900	177
K95 x 103 x 40 ZW		95	103	40	82500	227500	2900	250
K100 x 107 x 21	100	100	107	21	47500	126500	2700	120
K100 x 108 x 27		100	108	27	56500	142500	2700	176
K100 x 108 x 30		100	108	30	70500	187500	2700	190
K105 x 112 x 21	105	105	112	21	47000	126500	2500	123
K105 x 113 x 30		105	113	30	71500	196500	2500	198
K110 x 117 x 24	110	110	117	24	55500	157500	2300	146
K110 x 118 x 30		110	118	30	77500	218500	2300	217

TN:Max.working temperature for plastic mold cage.

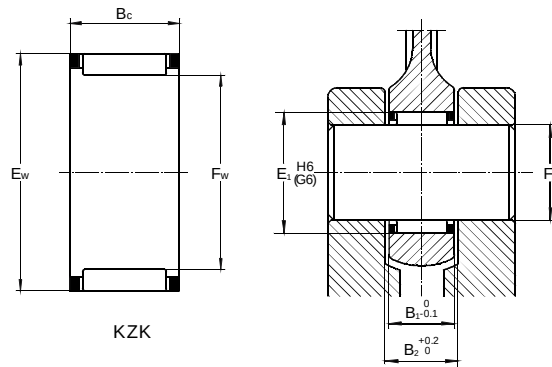
120℃ constantly running, 150℃ temporarily running, 180℃ instantaneously running

When using grease lubrication, the revolution allowable value is 60% of that shown in the above table.

Needle Roller and Cage Assemblies

KZK Series

For crank pin bearing arrangements



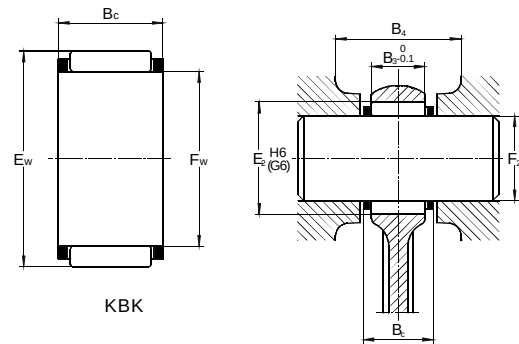
KML No.	crank pin diameter mm	Boundary dimensions mm			Basic load ratings N		Mass g
		Fw	Ew	Bc	Dynamic Cr	Static Cor	
KZK12 x 16 x 10	12	12	16	10	6100	6900	3.5
KZK12 x 17 x 10		12	17	10	7020	7020	5
KZK14 x 18 x 10	14	14	18	10	7100	8500	4
KZK14.4 x 20.4 x 10		14.4	20.4	10	8100	7800	6.5
KZK16 x 21 x 10	16	16	21	10	8800	9800	5.8
KZK16 x 22 x 12		16	22	12	11000	11900	9.5
KZK18 x 24 x 12	18	18	24	12	11600	13100	10
KZK18 x 24 x 15		18	24	15	13200	15500	14
KZK20 x 26 x 12	20	20	26	12	10100	12500	9.6
KZK20 x 26 x 17		20	26	17	12700	17600	17
KZK22 x 28 x 13	22	22	28	13	11900	16500	12
KZK22 x 28 x 16		22	28	16	14400	20100	18
KZK22 x 29 x 15		22	29	15	17800	21800	15.2
KZK22 x 29 x 16		22	29	16	17800	21800	19
KZK25 x 32 x 16	25	25	32	16	18200	23100	22.7
KZK28 x 35 x 16	28	28	35	16	18900	23000	27
KZK30 x 37 x 16	30	30	37	16	21500	30500	29
KZK35 x 42 x 20	35	35	42	20	26000	40200	10
KZK40 x 48 x 20	40	40	48	20	32500	51000	54



Needle Roller and Cage Assemblies

KBK Series

For crank piston pin bearing arrangement



KML No.	Piston Pin diameter mm	Boundary dimensions mm			Basic load ratings N		Mass g
		Fw	Ew	Bc	Dynamic Cr	Static Cor	
KBK9 x 13 x 12.5	9	9	13	12.5	5300	5700	4.9
KBK10 x 13 x 14.5	10	10	13	14.5	5400	6600	5.1
KBK10 x 14 x 13		10	14	13	5600	6200	5.4
KBK12 x 15 x 13	12	12	15	13	5500	7300	4.6
KBK12 x 15 x 15		12	15	15	5900	7800	5.6
KBK12 x 15 x 17.5		12	15	17.5	7000	10000	6.5
KBK12 x 16 x 13		12	16	13	6300	7600	6.7
KBK12 x 16 x 16		12	16	16	7800	9300	8.5
KBK13 x 17 x 14.5	13	13	17	14.5	8300	10200	7.1
KBK13 x 17 x 17.5		13	17	17.5	9500	12100	8.6
KBK14 x 18 x 13	14	14	18	13	7300	8700	7.6
KBK14 x 18 x 14.5		14	18	14.5	7400	8800	8
KBK14 x 18 x 17		14	18	17	8900	9800	10.1
KBK14 x 18 x 21		14	18	21	10500	12400	13
KBK15 x 19 x 20	15	15	19	20	11300	15500	12.9
KBK15 x 20 x 24		15	20	24	14100	20000	18.6
KBK16 x 20 x 20	16	16	20	20	12900	17600	13.4
KBK16 x 20 x 22		16	20	22	13000	18700	15
KBK18 x 22 x 22	18	18	22	22	11500	17700	16.9
KBK18 x 22 x 24		18	22	24	12000	20000	18.4
KBK18 x 22 x 25		18	22	25	12700	20100	19.1
KBK20 x 24 x 30	20	20	24	30	14900	25500	22.1
KBK20 x 25 x 22		20	25	22	15200	22300	19.5

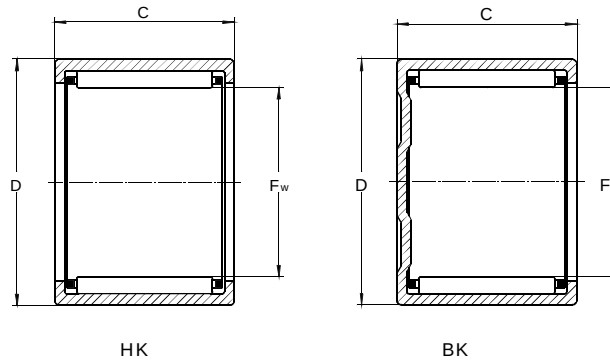
Drawn Cup Needle Roller Bearings

HK series

with open end

BK series

with closed end



KML No.	Mass g	KML No.	Mass g	Shaft diameter mm	Boundary dimensions mm			Basic load ratings N		Limiting speeds RPM
					Fw	D	C	Dynamic Cr	Static Cor	Lubrication Oil
HK0408TN	1.6	BK0408TN	1.8	4	4	8	8	1540	1070	40000
HK0509	2	BK0509	2.1	5	5	9	9	2200	1790	36000
HK0607	1.8	-	-	6	6	10	7	1600	1400	30000
HK0608	2.1	BK0608	2.2		6	10	8	1830	1550	32000
HK0609	2.2	BK0609	2.6		6	10	9	2650	2400	30000
HK0611	2.3	-	-		6	10	11	1700	1500	29000
HK0708	-	-	-	7	7	11	8	2800	2150	27000
HK0709	2.3	BK0709	2.9		7	11	9	2800	2150	27000
HK0808	2.7	BK0808	3	8	8	12	8	2550	2400	21000
HK0810	3	BK0810	3.4		8	12	10	3700	3450	21000
HK0908	3	BK0908	3.4	9	9	13	8	3650	4050	25000
HK0910	4	BK0910	4.3		9	13	10	4050	4250	25000
HK0911	4.1	-	-		9	13	11	4300	4700	25000
HK0912	4.6	BK0912	4.9		9	13	12	5000	6000	25000
HK1010	4.1	BK1010	4.3	10	10	14	10	3900	4800	19000
HK1012	4.8	BK1012	5		10	14	12	5000	6300	19000
HK1015	6	BK1015	6.2		10	14	15	6700	7800	19000
HK1208	3.3	-	-	12	12	16	8	7200	8000	19000
HK1210	4.6	BK1210	5.2		12	16	10	4150	5800	19000
HK1212	5.6	BK1212	6.2		12	16	12	3800	5100	15000
HK1311	8.5	-	-	13	13	19	11	6300	6300	14000
HK1312	8.9	BK1312	11.2		13	19	12	6200	7100	17000
HK1410	8.3	BK1410	12.1	14	14	20	10	6700	7000	16000
HK1412	10.5	-	-		14	20	12	6800	7500	16000
HK1416	13.9	-	-		14	20	16	7300	9000	14000
HK1418	-	-	-		14	20	18	-	-	14000
HK1512	11.1	BK1512	12.7	15	15	21	12	7000	8400	14000
HK1514	12.7	-	-		15	21	14	8500	10400	13000
HK1515	14.2	BK1515	-		15	21	15	9100	11400	13000
HK1516	15	BK1516	16.5		15	21	16	9800	11400	14000
HK1522	20.4	BK1522	22		15	21	22	10400	16500	14000
HK1612	11.7	BK1612	13.8	16	16	22	12	7100	9200	14000
HK1614	14.4	-	-		16	22	14	8800	9900	12000
HK1616	15.8	BK1616	17.6		16	22	16	10100	14300	14000
HK1617	18	-	-		16	22	17	12900	17200	12000
HK1622	21.7	BK1622	23.4		16	22	22	11100	17400	14000
HK1712	12.2	BK1712	14.5	17	17	23	12	6900	9300	13000
HK1714	14	-	-		17	23	14	6800	10200	10000
HK1716	15.9	-	-		17	23	16	8500	12500	10000
HK1718	19	-	-		17	23	18	9500	10600	10000
HK1722	17	-	-		17	23	22	-	-	-



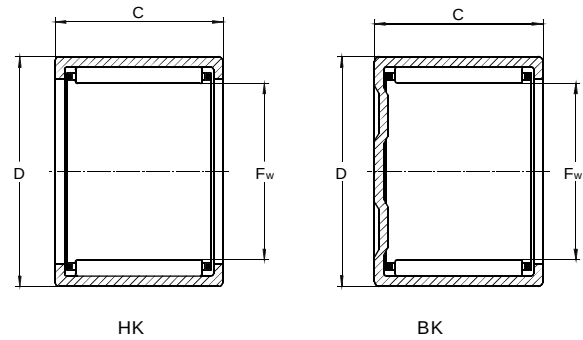
Drawn Cup Needle Roller Bearings

HK series

with open end

BK series

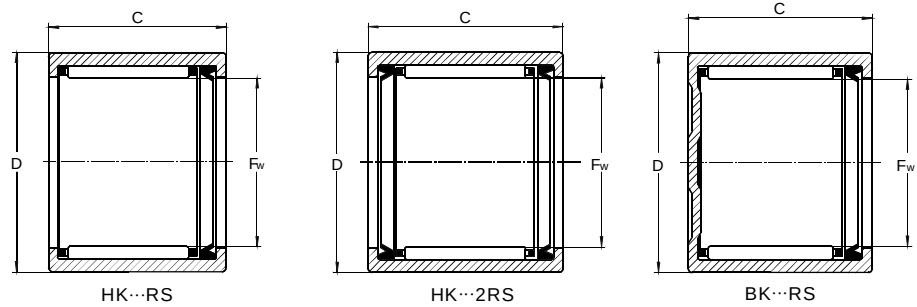
with closed end



KML No.	Mass g	KML No.	Mass g	Shaft diameter mm	Boundary dimensions mm			Basic load ratings N		Limiting speeds RPM
					Fw	D	C	Dynamic Cr	Static Cor	Lubrication
										Oil
HK1812	13.1	BK1812	14.9	18	18	24	12	7100	9900	12000
HK1816	17.5	BK1816	19.9		18	24	16	10650	15300	12000
HK2010	11.8	BK2010	14	20	20	26	10	5900	7200	10000
HK2012	14.1	BK2012	16.7		20	26	12	7600	10100	10000
HK2014	15.7	-	-		20	26	14	9700	18100	9000
HK2016	19.3	BK2016	22.3		20	26	16	11700	29100	10000
HK2020	24.1	BK2020	27.1		20	26	20	13700	24000	10000
HK2025	28	-	-		20	26	25	9100	14800	9900
HK2030	34.7	BK2030	37.4		20	26	30	21800	40000	10100
HK2210	12.3	-	-	22	22	28	10	7200	9500	10010
HK2212	15	BK2212	18.1		22	28	12	8100	10400	10010
HK2216	20.9	BK2216	24.3		22	28	16	11400	18100	10010
HK2220	26.2	BK2220	29.9		22	28	20	14500	25000	10010
HK2230	32	-	-		22	28	30	17500	30400	9000
HK2512	20	BK2512	23.2	25	25	32	12	10000	14200	9000
HK2514	21.9	-	-		25	32	14	13600	18700	9000
HK2516	27.3	BK2516	31		25	32	16	13600	20000	9000
HK2518	28.2	-	-		25	32	18	17500	25800	9000
HK2520	34.1	BK2520	38.7		25	32	20	17900	30000	9000
HK2525	40	-	-		25	32	25	22200	36700	9000
HK2526	44.8	BK2526	49		25	32	26	22500	42000	9000
HK2538	64.7	BK2538	69		25	32	38	30000	58000	9000
HK2816	30.1	BK2816	30.1	28	28	35	16	15400	22500	8700
HK2818	31.7	-	-		28	35	18	18500	29300	8700
HK2820	37.6	BK2820	43		28	35	20	18900	32000	8700
HK3012	24	BK3012	27.9	30	30	37	12	10100	16200	8100
HK3016	32	BK3016	37.1		30	37	16	15200	27000	8100
HK3020	40.1	BK3020	46.5		30	37	20	19700	33500	8100
HK3026	52.9	BK3026	59.4		30	37	26	24000	50000	8100
HK3038	76.1	BK3038	82.5		30	37	38	32500	74000	8100
HK3512	27.7	BK3512	32.9	35	35	42	12	12100	19300	7100
HK3516	36.9	BK3516	43.8		35	42	16	15700	27500	7100
HK3520	46.1	BK3520	54.8		35	42	20	20800	41000	7100
HK4012	31.1	BK4012	38.2	40	40	47	12	14000	24300	6300
HK4020	51.8	BK4020	62		40	47	20	25500	52000	6300
HK4512	34.8	BK4512	45	45	45	52	12	12900	22500	5800
HK4516	46.2	BK4516	56		45	52	16	19300	38000	5800
HK4520	56	BK4520	72		45	52	20	22000	51000	5800
HK5020	72	BK 5020	87.3	50	50	58	20	28000	60000	5300
HK5025	90.1	BK5025	109		50	58	25	34500	80000	5300
HK5520	78	BK5520	93.8	55	55	63	20	29500	59900	4600
HK5528	111	BK5528	132		55	63	28	39090	98000	4600
HK6012	49.2	BK6012	77	60	60	68	12	12400	29000	4100
HK6020	86	BK6020	105		60	68	20	30500	72000	4100
HK6032	136	BK6032	164		60	68	32	50000	131000	4100

Drawn Cup Needle Roller Bearings

HK...RS, HK...2RS, BK...RS Series



KML No.	Mass g	KML No.	Mass g	Shaft diameter mm	Boundary dimensions mm			Basic load ratings N		Limiting speed RPM
					Fw	D	C	Dynamic Cr	Static Cor	Lubrication Oil
HK0810 RS	2.9	-	-	8	8	12	10	2250	2100	19000
HK0812 2RS	3.5	-	-		8	12	12	2250	2100	19000
HK1012 RS	4.2	-	-	10	10	14	12	4100	5000	19000
HK1014 2RS	5.2	-	-		10	14	14	4100	5000	15000
HK1214 RS	10.7	-	-	12	12	18	14	6100	7000	15000
HK1216 2RS	11.5	-	-		12	18	16	6100	7000	12000
HK1414 RS	12	BK1414 RS	14.1	14	14	20	14	6100	7500	13000
HK1416 2RS	14	-	-		14	20	16	6100	7500	11000
HK1514 RS	12.6	BK1514 RS	14.4	15	15	21	14	6800	8800	11000
HK1516 2RS	14.3	-	-		15	21	16	6800	8800	10000
HK1518 RS	16	-	-		15	21	18	9500	11400	10000
HK1520 2RS	18	-	-		15	21	20	9500	11400	10000
HK1614 RS	15.1	BK1614 RS	15.3	16	16	22	14	7200	9200	10000
HK1616 2RS	15.1	-	-		16	22	16	7200	9200	10000
HK1620 2RS	16.8	-	-		16	22	20	9900	12300	10000
HK1625 2RS	-	-	-		16	22	25	9900	12300	10000
HK1814 RS	15.1	-	-	18	18	24	14	7800	9900	13000
HK1816 2RS	17	-	-		18	24	16	7800	9900	9200
HK2012 RS	11.7	-	-	20	20	26	12	9500	11900	9200
HK2016 2RS	18.8	-	-		20	26	16	8000	10100	9000
HK2018 RS	21.4	BK2018 RS	24.4		20	26	18	12700	20100	8200
HK2020 2RS	23.5	-	-		20	26	20	12700	20100	7800
HK2212 RS	14	-	-	22	22	28	12	8310	10000	9000
HK2214 RS	18.3	-	-		22	28	14	9000	12400	7800
HK2216 2RS	20.3	-	-		22	28	16	9000	12400	7800
HK2218 RS	23.5	-	-		22	28	18	10400	20100	7800
HK2220 2RS	25.5	-	-		22	28	20	10400	20100	7800
HK2516 2RS	27.3	-	-	25	25	32	16	9800	13200	6900
HK2518 RS	31	BK2518 RS	35.3		25	32	18	13600	20000	6900
HK2520 2RS	33.1	-	-		25	32	20	13600	20000	6900
HK2524 2RS	39.7	-	-		25	32	24	17900	30000	6900
HK2820 2RS	36.9	-	-	28	28	35	20	11400	22500	5300
HK3016 2RS	28.5	-	-	30	30	37	16	10100	16200	5300
HK3018 RS	36.6	-	-		30	37	18	16200	26000	5300
HK3020 2RS	39.1	-	-		30	37	20	16200	26000	5300
HK3516 2RS	36.4	-	-	35	35	42	16	10100	20300	4900
HK3518 RS	37.4	-	-		35	42	18	16700	30500	4900
HK3520 2RS	41.1	-	-		35	42	20	16700	30500	4900
HK4016 2RS	41.2	-	-	40	40	47	16	11000	21300	4200
HK4018 RS	47.3	-	-		40	47	18	19000	30500	4200
HK4020 2RS	50.2	-	-		40	47	20	19000	30500	4200
HK4518 RS	54.2	-	-	45	45	52	18	20300	41000	3800
HK4520 2RS	57.4	-	-		45	52	20	20300	41000	3800
HK5022 RS	77.2	-	-	50	50	58	22	30000	61000	3200

TN: Max. working temperature for plastic mold cage.

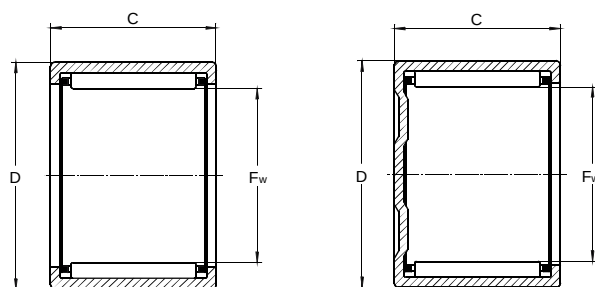
120°C constantly running, 150°C temporarily running, 180°C instantaneously running

When using grease lubrication, the revolution allowable value is 60% of that shown in the above table.



Drawn Cup Needle Roller Bearings

Inch Size



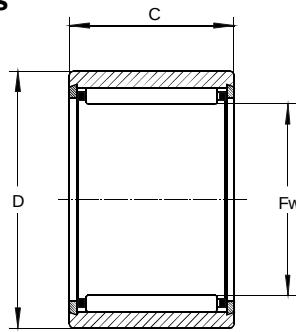
with open end
SCE

with closed end
BCE, SCH

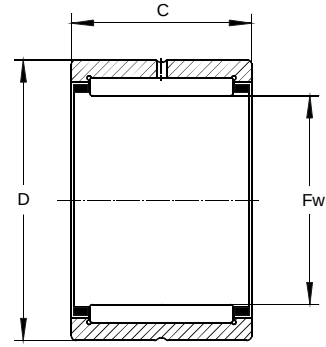
KML No.		Shaft diameter mm	Boundary dimensions mm			Basic load ratings N		Limiting speed RPM	Mass g
			Fw	D	C	Dynamic Cr	Static Cor	Lubrication	
SCE	BCE、SCH							Oil	
SCE24TN	BCE24TN	3.18	3.18	6.35	6.35	1070	740	31500	1
SCE34TN	BCE34TN	4.76	4.76	8.73	6.35	1790	1360	21000	1
SCE44	BCE44	6.35	6.35	11.11	6.35	1600	1200	44000	2
SCE55	BCE55	7.94	7.94	12.7	7.94	2900	2600	35500	4
SCE66	BCE66	9.53	9.53	14.29	9.53	3900	3950	29500	4
SCE68	BCE68		9.53	14.29	12.7	5800	6600	29500	6
-	SCH68		9.53	14.29	12.7	5800	6600	29500	6
SCE78	BCE78	11.11	11.11	15.88	12.7	6400	7800	25000	7
-	SCH78		11.11	17.46	12.7	7900	8200	19600	9
SCE87	BCE87	12.7	12.7	17.46	11.11	5900	7400	22200	6
SCE88	BCE88		12.7	17.462	12.7	6900	9000	22000	7
-	SCH88		12.7	19.05	12.7	8500	9400	17600	10
SCE96	BCE96	14.29	14.29	19.05	9.53	5200	6400	19600	6
-	SCH98		14.29	20.64	12.7	9100	10600	16000	12
SCE1012	BCE1012	15.88	15.88	20.64	19.05	12100	19700	17600	14
SCE108	BCE108		15.88	20.64	12.7	8100	12000	17600	9
-	SCH108		15.88	22.23	12.7	10000	12200	14700	13
SCE1110	BCE1110	17.46	17.46	22.23	15.88	10900	18000	16000	13
-	SCH1110		17.46	23.81	15.88	12800	17200	13600	17
SCE1210	BCE1210	19.05	19.05	25.4	15.88	12800	17500	14700	18
SCE1212	BCE1212		19.05	25.4	19.05	15300	22100	14700	21
SCE1214PP	-		19.05	25.4	22.22	16140	23800	16000	23
SCE1412	BCE1412	22.23	22.23	28.58	19.05	16900	27000	12600	28
SCE1416	BCE1416		22.23	28.58	25.4	22100	38000	12600	34
-	SCH1412		22.23	30.16	19.05	19600	27000	10700	32
-	SCH1416		22.23	30.16	25.4	25500	38500	10700	43
SCE1612	BCE1612	25.4	25.4	31.75	19.05	18500	31500	11000	27
SCE1616PP	-		25.4	31.75	25.4	24800	45500	11000	38
SCE168	BCE168		25.4	31.75	12.7	12600	19100	11000	19
-	SCH1612		25.4	33.34	19.05	20000	28500	9500	36
-	SCH1616		25.4	33.34	25.4	29000	46500	9500	47
SCE1812	BCE1812	28.58	28.58	34.93	19.05	18900	34000	9800	30
SCE1816	-		28.58	34.92	25.4	26000	11100	9800	40
-	SCH1816		28.58	38.1	25.4	31500	46500	8400	63
SCE2016	BCE2016	31.75	31.75	38.1	25.4	27000	55000	8800	45
SCE2020	BCE2020		31.75	38.1	31.75	33500	71000	8800	56
SCE2216	BCE2216	34.93	34.93	41.28	25.4	27500	59000	8000	58
SCE2416	BCE2416	38.1	38.1	47.63	25.4	38500	66000	7400	83
SCE2420	BCE2420		38.1	47.63	31.75	47500	86000	7400	105
SCE2816	BCE2816	44.45	44.45	53.98	25.4	41500	76000	6300	115
SCE3216	BCE3216	50.8	50.8	60.33	25.4	41500	80000	5500	102
SCE3616	BCE3616	57.15	57.15	66.68	25.4	50000	107000	4900	120
SCE4412	BCE4412	69.85	69.85	79.38	19.05	38500	80000	4000	132

Machined Cup Needle Roller Bearings

**NK, NKS, RNA 49
RNA69 Series**



NK (Fw<10mm)
NKS (Fw<12mm)



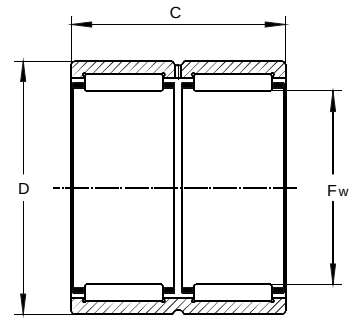
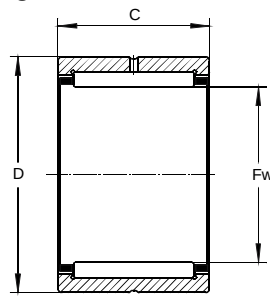
NK (Fw>12mm)
NKS (Fw>14mm)
RNA49, RNA69 (Fw<35mm)

KML No.	Shaft diameter mm	Boundary dimensions mm			Basic load rating N		Limiting speeds RPM	Mass g
		Fw	D	C	Dynamic Cr	Static Cor	Oil	
NK5/10 TN	5	5	10	10	2100	1400	36780	2.9
NK8/12 TN	8	8	15	12	3050	3650	29112	8.3
NK10/12 TN	10	10	17	12	4750	5350	23500	10
NK12/12	12	12	19	12	6050	6400	21640	11.8
NK12/16	12	12	19	16	8200	9800	21640	16.8
NK14/16	14	14	22	16	8260	9600	18322	20.8
NKS14	14	14	25	16	10400	10800	17652	27
RNA4900	14	14	22	13	8060	9000	18322	24.4
NK15/12	15	15	23	12	8600	10070	21004	18.5
NK16/16	16	16	24	16	9030	11900	15522	20.8
NK16/20	16	16	24	20	10400	16800	15522	23.9
RNA4901	16	16	24	13	6400	8900	15522	16.6
RNA6901	16	16	24	22	14000	18600	15522	28.7
NK17/16	17	17	25	16	9000	13500	14163	21.5
NK18/20	18	18	26	20	10500	13800	13628	30.5
NK20/16	20	20	28	16	11500	13400	12716	25.7
NK20/20	20	20	28	20	12400	21800	12716	29.3
RNA4902	20	20	28	13	10800	12800	12716	20.5
RNA6902	20	20	28	23	13000	25000	12716	35.4
NK22/16	22	22	30	16	13500	18000	11527	29.2
RNA4903	22	22	30	13	12000	16800	16300	20.7
RNA6903	22	22	30	23	14000	19900	16300	39.8
NK25/16	25	25	33	16	12900	20400	15000	30
NK25/20	25	25	33	20	16800	28500	15000	38.4
RNA4904	25	25	37	17	11912	16594	14060	50.8
RNA6904	25	25	37	30	26000	43000	14060	97.7
NKS25	25	25	38	20	25800	31000	16300	65
NK26/16	26	26	34	16	15000	23000	16300	30
NK26/20	26	26	34	20	17000	30000	16300	40
NKS28	28	28	42	20	25900	33500	14600	80
NK30/20	30	30	40	20	20600	32000	12066	57.9
NK30/30	30	30	40	30	31500	50000	14500	95
RNA4905	30	30	42	17	13452	20475	12066	57
RNA6905	30	30	42	30	26300	31750	12066	106.5
NK32/20	32	32	42	20	17500	33500	12066	75.4
RNA49/28	32	32	45	17	17400	30050	12000	80
NKS32	32	32	47	22	31000	40000	12100	100
RNA69/28	32	32	45	30	39500	61300	13100	125



Machined Cup Needle Roller Bearings

NK, NKS, RNA 49
RNA69 Series



NK (Fw>12mm)
NKS (Fw.>14mm)
RNA49, RNA69 (Fw<35mm)

RNA69 (Fw>40mm)

KML No.	Shaft diameter mm	Boundary dimensions mm			Basic load ratings N		Limiting speeds RPM	Mass g
							Lubrication	
		Fw	D	C	Dynamic Cr	Static Cor	Oil	
NK35/20	35	35	45	20	13851	26900	12000	70
RNA4906		35	47	17	17000	30500	12000	62.8
RNA6906		35	47	30	35000	67000	12000	116
NK40/20	40	40	50	20	19600	43000	8881	78.9
NK40/30		40	50	30	22200	51350	8881	120
RNA69/32		40	52	36	25500	68500	8881	147
NK42/20	42	42	52	20	23900	45000	10000	83
NK42/30		42	52	30	27000	49000	10000	125
RNA4907		42	55	20	19800	41500	8710	99.3
RNA6907		42	55	36	26000	60500	8710	160
NK43/20	43	43	53	20	25700	75000	10000	84
NK43/30		43	53	30	39000	75000	10000	126
NK45/20	45	45	55	20	19800	46500	7650	81.5
RNA4908	48	48	62	22	31036	63873	8120	132
RNA6908		48	62	40	64000	112000	8120	238
NK50/25	50	50	62	25	28000	67000	8140	167
NK50/35		50	62	35	32000	70100	8140	236
RNA4909	52	52	68	22	37000	69500	7625	163
RNA6909		52	68	40	61500	123500	7625	308
NK55/25	55	55	68	25	30600	60800	7625	167
RNA4910	58	58	72	22	41000	72000	7500	161
RNA6910		58	72	40	68000	135000	7500	296
NK60/25	60	60	72	25	39000	86000	7000	154
RNA4911	63	63	80	25	50600	96580	6340	241
RNA6911		63	80	45	82560	172000	6340	430
RNA4912	68	68	85	25	52800	91050	6100	257
RNA6912		68	85	45	88500	186000	6100	436
RNA4913	72	72	90	25	57500	110500	6100	300
RNA6913		72	90	45	87600	194500	6100	571
RNA4914	80	80	100	30	79000	154000	5130	400
RNA6914		80	100	54	121000	263000	5130	815
RNA6915	85	85	105	54	128000	272000	5130	923
RNA4916	90	90	110	30	81000	170500	4927	496
RNA6916		90	110	54	130500	280600	4927	978
RNA6917	100	100	120	63	161000	337000	4600	1112
RNA4918	105	105	125	35	98500	239000	4000	713
RNA6918		105	125	63	174000	38000	4000	1250
RNA6919	110	110	130	63	196000	400000	3870	1325
RNA4920	115	115	140	40	120000	264000	3710	1006
RNA4922	125	125	150	40	124000	270000	3350	1200
RNA4924	135	135	165	45	174000	386000	2920	1760
RNA4928	160	160	190	50	200000	460000	2900	2350

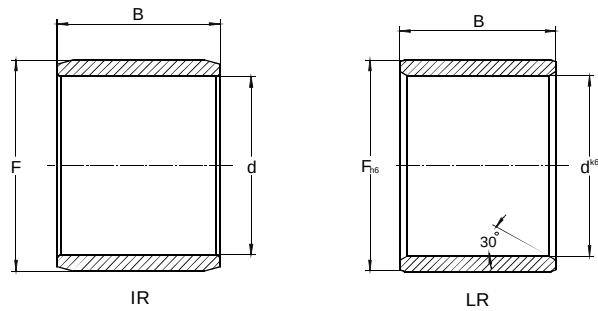
TN: Max. working temperature for plastic mold cage. 120°C constantly running, 150°C temporarily running, 180°C instantaneously running

When using grease lubrication, the revolution allowable value is 60% of that shown in the above table.

Note: Needle Roller Bearing With Inner Ring: NKI, NKIS, NA49, NA69 Series.

Inner Ring

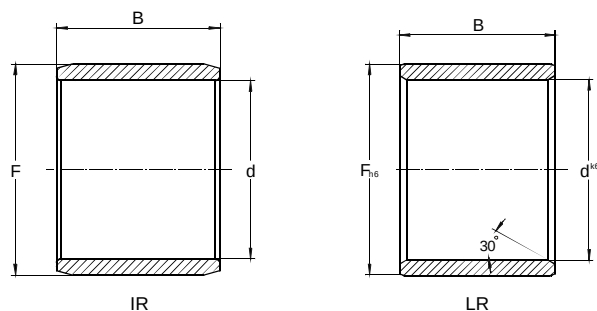
IR,LR Series



KML No.			Shaft diameter mm	Boundary dimensions mm			Mass g
				d	F	B	
IR	-	5 x 8 x 12	5	5	8	12	2.79
IR	-	5 x 8 x 16		5	8	16	3.75
IR	-	6 x 9 x 12	6	6	9	12	3.17
IR	-	6 x 9 x 16		6	9	16	4.3
□ IR	-	6 x 10 x 10		6	10	10	3.7
■ IR	-	6 x 10 x 12		6	10	12	4.6
-	LR	7 x 10 x 10.5	7	7	10	10.5	3.09
IR	-	7 x 10 x 12		7	10	12	3.61
IR	-	7 x 10 x 16		7	10	16	4.9
IR	-	6 x 12 x 10.5C	7.8	7.8	12.2	10.7	
□ IR	-	8 x 12 x 10	8	8	12	10	4.8
-	LR	8 x 12 x 10.5		8	12	10.5	5
■ IR	-	8 x 12 x 12		8	12	12	5.7
-	LR	8 x 12 x 12.5		8	12	12.5	5.6
IR	-	9 x 12 x 12	9	9	12	12	4.5
IR	-	9 x 12 x 16		9	12	16	6.1
-	LR	10 x 13 x 12.5	10	10	13	12.5	5.2
□ IR	-	10 x 14 x 12		10	14	12	7.3
IR	-	10 x 14 x 13		10	14	13	7.4
■ IR	-	10 x 14 x 14		10	14	14	8
IR	-	10 x 14 x 16		10	14	16	9.2
IR	-	10 x 14 x 20		10	14	20	11.6
IR	-	12 x 15 x 12	12	12	15	12	5.8
-	LR	12 x 15 x 12.5		12	15	12.5	6.1
IR	-	12 x 15 x 16		12	15	16	8
-	LR	12 x 15 x 16.5		12	15	16.5	8.1
-	LR	12 x 15 x 22.5		12	15	22.5	10.9
□ IR	-	12 x 16 x 12		12	16	12	7.9
IR	-	12 x 16 x 13		12	16	13	8.7
■ IR	-	12 x 16 x 14		12	16	14	9.5
IR	-	12 x 16 x 16		12	16	16	10.9
IR	-	12 x 16 x 20		12	16	20	13.5
IR	-	12 x 16 x 22		12	16	22	14.9
IR	-	12 x 16 x 12(hole)		12	16	12	
IR	-	12 x 16 x 22.5		12	16	22.5	
IR	-	12 x 17 x 15.5		12	17	15.5	
IR	-	12 x 17 x 22.5		12	17	22.5	
IR	-	14 x 17 x 17	14	14	17	17	10
-	LR	15 x 18 x 12.5	15	15	18	12.5	7.2
IR	-	15 x 18 x 16		15	18	16	9.6
IR	-	15 x 18 x 16.5		15	18	16.5	9.9
IR	-	15 x 19 x 16		15	19	16	12.8
IR	-	15 x 19 x 20		15	19	20	16.4
□ IR	-	15 x 20 x 12		15	20	12	12.1
IR	-	15 x 20 x 13		15	20	13	13.5
■ IR	-	15 x 20 x 14		15	20	14	14.7
IR	-	15 x 20 x 23		15	20	23	24.4



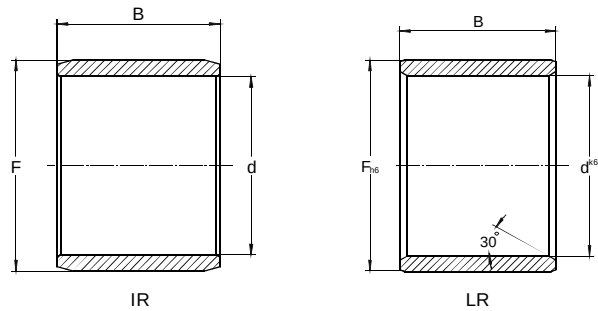
Inner Ring IR,LR Series



KML No.			Shaft diameter mm	Boundary dimensions mm			Mass g
				d	F	B	
IR	-	17 x 20 x 16	17	17	20	16	10.7
-	LR	17 x 20 x 16.5		17	20	16.5	11.1
IR	-	17 x 20 x 20		17	20	20	13.5
-	LR	17 x 20 x 20.5		17	20	20.5	13.8
-	LR	17 x 20 x 30.5		17	20	30.5	20.6
IR	-	17 x 21 x 16		17	21	16	14.3
IR	-	17 x 21 x 20		17	21	20	18
IR	-	17 x 22 x 13		17	22	13	14.9
■ IR	-	17 x 22 x 14		17	22	14	16.4
IR	-	17 x 22 x 16		17	22	16	18.7
IR	-	17 x 22 x 23		17	22	23	27.1
IR	-	17 x 24 x 20		17	24	20	33.6
IR	-	20 x 24 x 16	20	20	24	16	16.5
IR	-	20 x 24 x 20		20	24	20	21.3
-	LR	20 x 25 x 12.5		20	25	12.5	16.3
□ IR	-	20 x 25 x 16		20	25	16	21.1
-	LR	20 x 25 x 16.5		20	25	16.5	21.7
IR	-	20 x 25 x 17		20	25	17	22.4
■ IR	-	20 x 25 x 18		20	25	18	24.3
IR	-	20 x 25 x 20		20	25	20	27.5
-	LR	20 x 25 x 20.5		20	25	20.5	28.2
-	LR	20 x 25 x 26.5		20	25	26.5	36.1
IR	-	20 x 25 x 30		20	25	30	40.9
-	LR	20 x 25 x 38.5		20	25	38.5	52.5
IR	-	20 x 28 x 20		20	28	20	45.2
IR	-	22 x 26 x 16	22	22	26	16	17.5
IR	-	22 x 26 x 20		22	26	20	23.2
IR	-	22 x 28 x 17		22	28	17	29.8
IR	-	22 x 28 x 20		22	28	20	35
-	LR	22 x 28 x 20.5		22	28	20.5	36
IR	-	22 x 28 x 30		22	28	30	54.4
IR	-	25 x 29 x 20	25	25	29	20	25.5
IR	-	25 x 29 x 30		25	29	30	39.3
-	LR	25 x 30 x 12.5		25	30	12.5	20
□ IR	-	25 x 30 x 16		25	30	16	26
-	LR	25 x 30 x 16.5		25	30	16.5	26.7
IR	-	25 x 30 x 17		25	30	17	27.5
■ IR	-	25 x 30 x 18		25	30	18	29.8
IR	-	25 x 30 x 20		25	30	20	32.6
-	LR	25 x 30 x 20.5		25	30	20.5	33.5
-	LR	25 x 30 x 26.5		25	30	26.5	43.3
IR	-	25 x 30 x 30		25	30	30	50.1
IR	-	25 x 30 x 32		25	30	32	53
-	LR	25 x 30 x 38.5		25	30	38.5	63.8
IR	-	25 x 32 x 22		25	32	22	51.7

Inner Ring

IR,LR Series

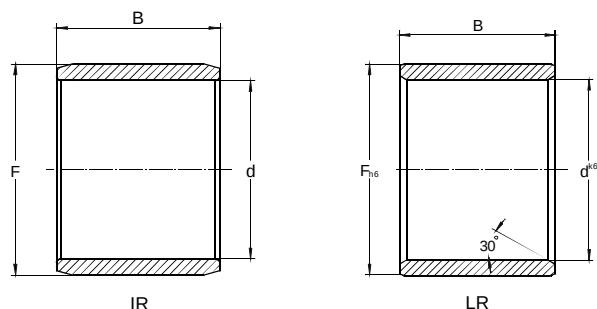


KML No.			Shaft diameter mm	Boundary dimensions mm			Mass g
				d	F	B	
IR	-	28 x 32 x 17	28	28	32	17	24.5
IR	-	28 x 32 x 20		28	32	20	28.4
IR	-	28 x 32 x 30		28	32	30	43.8
IR	-	29 x 32 x 13	29	29	32	13	14.8
-	LR	30 x 35 x 12.5	30	30	35	12.5	23.3
IR	-	30 x 35 x 13		30	35	13	25
IR	-	30 x 35 x 16		30	35	16	30.8
-	LR	30 x 35 x 16.5		30	35	16.5	31.4
IR	-	30 x 35 x 17		30	35	17	32.3
■IR	-	30 x 35 x 18		30	35	18	35.3
IR	-	30 x 35 x 20		30	35	20	40
IR	LR	30 x 35 x 20.5		30	35	20.5	40.7
IR	-	30 x 35 x 26		30	35	26	50.3
IR	-	30 x 35 x 30		30	35	30	58.9
IR	-	30 x 37 x 18		30	37	18	50
IR	-	30 x 37 x 22		30	37	22	60.8
□IR	-	30 x 38 x 20		30	38	20	64.8
IR	-	32 x 37 x 20	32	32	37	20	42
IR	-	32 x 37 x 30		32	37	30	62.7
IR	-	32 x 40 x 20		32	40	20	68
IR	-	32 x 40 x 36		32	40	36	124
IR	-	33 x 37 x 13	33	33	37	13	21.9
IR	-	34 x 42 x 30	34	34	42	20	
-	LR	35 x 40 x 12.5	35	35	40	12.5	27.2
-	LR	35 x 40 x 16.5		35	40	16.5	37.4
IR	-	35 x 40 x 17		35	40	17	38.3
IR	-	35 x 40 x 20		35	40	20	44.4
IR	LR	35 x 40 x 20.5		35	40	20.5	46.1
IR	-	35 x 40 x 30		35	40	30	67.9
□IR	-	35 x 42 x 20		35	42	20	63.9
IR	-	35 x 42 x 20.5		35	42	20.5	66
■IR	-	35 x 42 x 21		35	42	21	67.7
■IR	-	35 x 42 x 23		35	42	23	74
IR	-	35 x 42 x 36		35	42	36	117
IR	-	35 x 43 x 22		35	43	22	82
IR	-	38 x 43 x 20	38	38	43	20	48.1
IR	-	38 x 43 x 30		38	43	30	73.6
-	LR	40 x 45 x 16.5	40	40	45	16.5	41.4
IR	-	40 x 45 x 17		40	45	17	42.5
IR	-	40 x 45 x 20		40	45	20	50.5
IR	LR	40 x 45 x 20.5		40	45	20.5	52.5
IR	-	40 x 45 x 30		40	45	30	77.1
IR	-	40 x 48 x 22		40	48	22	92.3
■IR	-	40 x 48 x 23		40	48	23	97.3



Inner Ring

IR,LR Series



KML No.			Shaft diameter mm	Boundary dimensions mm			Mass g
				D	F	B	
IR	-	40 x 48 x 40	40	40	48	40	170
□ IR	-	40 x 50 x 20		40	50	20	106
IR	-	40 x 50 x 22		40	50	22	118
IR	-	40 x 45 x 22.5		40	45	22.5	
IR	-	42 x 47 x 20	42	42	47	20	53.5
IR	-	42 x 47 x 30		42	47	30	81
-	LR	45 x 50 x 20.5	45	45	50	20.5	58.8
IR	-	45 x 50 x 25		45	50	25	71.1
IR	LR	45 x 50 x 25.5		45	50	25.5	73.7
IR	-	45 x 50 x 35		45	50	35	101
IR	-	45 x 52 x 22		45	52	22	89
■ IR	-	45 x 52 x 23		45	52	23	93
IR	-	45 x 52 x 40		45	52	40	164
□ IR	-	45 x 55 x 20		45	55	20	117
IR	-	45 x 55 x 22		45	55	22	130
IR	-	45 x 50 x 20		45	50	20	
IR	-	45 x 50 x 26		45	50	26	
IR	-	45 x 50 x 40		45	50	40	
IR	-	45.2 x 58 x 36	45.2	45.2	58	36	
IR	-	47 x 60 x 35	47	47	60	35	
□ IR	-	50 x 55 x 20	50	50	55	20	62.6
-	LR	50 x 55 x 20.5		50	55	20.5	64.1
IR	-	50 x 55 x 25		50	55	25	77.8
IR	-	50 x 55 x 35		50	55	35	112
IR	-	50 x 58 x 22		50	58	22	115
■ IR	-	50 x 58 x 23		50	58	23	119
IR	-	50 x 58 x 40		50	58	40	209
□ IR	-	50 x 60 x 20		50	60	20	129
IR	-	50 x 60 x 25		50	60	25	163
IR	-	50 x 60 x 28		50	60	28	183
IR	-	55 x 60 x 25	55	55	60	25	86
IR	-	55 x 60 x 35		55	60	35	121
IR	-	55 x 63 x 25		55	63	25	141
IR	-	55 x 63 x 45		55	63	45	256
IR	-	55 x 65 x 28		55	65	28	198
IR	-	60 x 68 x 25	60	60	68	25	152
IR	-	60 x 68 x 35		60	68	35	213
IR	-	60 x 68 x 45		60	68	45	275
IR	-	60 x 70 x 25		60	70	25	195
IR	-	60 x 70 x 28		60	70	28	216
IR	-	60 x 65 x 41		60	65	41	
IR	-	65 x 72 x 25	65	65	72	25	142
IR	-	65 x 72 x 45		65	72	45	259
IR	-	65 x 73 x 25		65	73	25	164

□ With Oil inlet

■ Without Oil inlet and lead chamfer

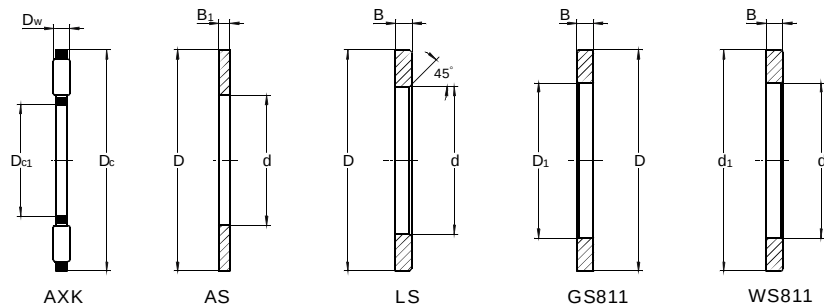
LR series inner ring with larger tolerance and the side faces are not ground.

Thrust Needle Roller Bearings and cage assemblies

AXK Series

Thrust bearing washers

AS, LS, GS811, WS811 Series



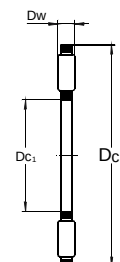
Thrust needle roller and cage assemblies		Thrust bearing washers						Boundary dimensions mm								Basic load ratings N		Limiting Speeds
		Axial bearing washers	Mass g	Bearing washer	Housing locating washer	Shaft locating washer	Mass g	Dc ₁ d	D ₁	Dc D	d ₁	Dw	B ₁	B		Dynamic Cr	Static Cor	Lubrication Oil
AXK0414TN	0.7	AS0414	1	-	-	-	-	4	-	14	-	2	1	-		4380	7500	18000
AXK0515TN	0.8	AS0515	1	-	-	-	-	5	-	15	-	2	1	-		4680	9100	17000
AXK0619TN	1	AS0619	2	LS0619	-	-	4	6	-	19	-	2	1	2.75		6740	15400	16000
AXK0821TN	2	AS0821	2	LS0821	-	-	4	8	-	21	-	2	1	2.75		7750	19000	15000
AXK1024	3	AS1024	3	LS1024	-	WS81102	7	10	-	24	-	2	1	2.75		9150	24500	14000
AXK1226	3	AS1226	3	LS1226	-	WS81103	8	12	-	26	-	2	1	2.75		9860	28600	13000
AXK1528	4	AS1528	3	LS1528	GS81102	WS81104	9	15	16	28	28	2	1	2.75		11200	35500	11000
AXK1730	4	AS1730	4	LS1730	GS81103	WS81105	9	17	18	30	30	2	1	2.75		11800	38600	10000
AXK2035	5	AS2035	5	LS2035	GS81104	WS81106	13	20	21	35	35	2	1	2.75		12900	45600	8500
AXK2542	7	AS2542	7	LS2542	GS81105	WS81107	19	25	26	42	42	2	1	3		13800	57800	7000
AXK3047	8	AS3047	8	LS3047	GS81106	WS81108	22	30	32	47	47	2	1	3		15600	69500	6000
AXK3552	10	AS3552	9	LS3552	GS81107	WS81109	29	35	37	52	52	2	1	3.5		16900	80100	5500
AXK4060	16	AS4060	12	LS4060	GS81108	WS81110	40	40	42	60	60	3	1	3.5		27500	113500	4700
AXK4565	18	AS4565	13	LS4565	GS81109	WS81111	50	45	47	65	65	3	1	4		29050	127600	4300
AXK5070	20	AS5070	14	LS5070	GS81110	WS81112	55	50	52	70	70	3	1	4		31500	13800	3900
AXK5578	28	AS5578	18	LS5578	GS81111	WS81113	88	55	57	78	78	3	1	5		37400	185000	3500
AXK6085	33	AS6085	22	LS6085	GS81112	WS81114	97	60	62	85	85	3	1	4.75		43900	232500	3200
AXK6590	35	AS6590	24	LS6590	GS81113	WS81115	115	65	67	90	90	3	1	5.25		45800	254600	3000
AXK7095	60	AS7095	25	LS7095	GS81114	WS81116	123	70	72	95	95	4	1	5.25		53600	254400	2900
AXK75100	61	AS75100	27	LS75100	GS81115	WS81117	142	75	77	100	100	4	1	5.75		54500	264600	2700
AXK80105	63	AS80105	28	LS80105	GS81116	WS81118	151	80	82	105	105	4	1	5.75		55600	278500	2600
AXK85110	67	AS85110	29	LS85110	GS81117	WS81120	159	85	87	110	110	4	1	5.75		57500	28800	2400
AXK90120	86	AS90120	39	LS90120	GS81118	WS81122	234	90	92	120	120	4	1	6.5		72500	401000	2300
AXK100135	104	AS100135	50	LS100135	GS81120	WS81124	350	100	102	135	135	4	1	7		90500	559500	2000
AXK110145	122	AS110145	55	LS110145	GS81122	WS81126	385	110	112	145	145	4	1	7		96500	617500	1900
AXK120155	131	AS120155	59	LS120155	GS81124	WS81128	415	120	122	155	155	4	1	7		101500	679600	1700
AXK130170	205	AS130170	65	LS130170	GS81126	WS81130	663	130	132	170	170	5	1	9		132400	838900	1600
AXK140180	219	AS140180	79	LS140180	GS81128	WS81132	749	140	142	180	178	5	1	9.5		137200	899600	1500
AXK150190	232	AS150190	84	LS150190	GS81130	-	796	150	152	190	188	5	1	9.5		142800	959000	1400
AXK160200	246	AS160200	89	LS160200	GS81132	-	842	160	162	200	198	5	1	9.5		147600	1015000	1300

TN:Max. working temperature for plastic mold cage. 120°C constantly running, 150°C temporarily running, 180°C instantaneously running.
When using grease lubrication, the revolution allowable value is 25% of that shown in the above table.

NTA Series

Inch size

KML No.	Shaft diameter mm	Boundary dimensions mm			Basic load rating N		Limiting speed RPM	Mass g
		Dc	Dc	Dw	Dynamic Cr	Static Cor	Lubrication	
							Oil	
NTA 512	7.92	7.92	19.5	1.984	4600	4100	7000	2
NTA 1423	22.22	22.22	36.5	1.984	10400	40800	5000	5
NTA 3244	50.8	50.8	69.85	1.984	19500	115130	5600	8

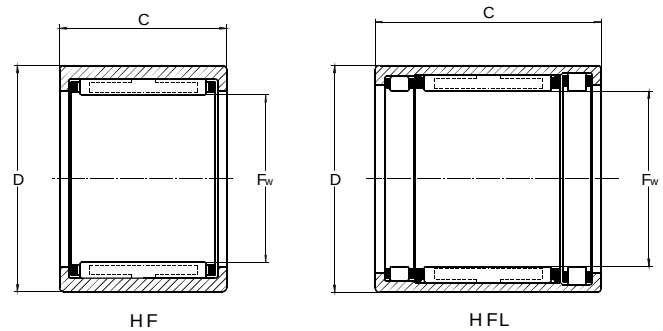




Drawn Cup Needle Roller Clutches

HF,HFL Series

Needle roller clutches/clutch and bearing assemblies



KML No.	Shaft diameter mm	Boundary dimensions mm				Driving torque Nm	Limiting speed RPM		Mass g
							Lubrication		
		Fw	D	C	r _s min		Grease	Oil	
HF0406	4	4	8	6	0.3	0.34	34000	14000	1
HF0612	6	6	10	12	0.3	1.76	23000	13000	3
HF0812	8	8	12	12	0.3	3.15	17000	12000	3.5
HF1012	10	10	14	12	0.3	5.3	14000	11000	4
HF1216	12	12	18	16	0.3	12.2	11000	8000	10.5
HF1416	14	14	20	16	0.3	17.3	9500	8000	13
HF1616	16	16	22	16	0.3	20.5	8500	7500	14
HF1816	18	18	24	16	0.3	24.1	7500	7500	15.5
HF2016	20	20	26	16	0.3	28.5	7000	6500	17
HF2520	25	25	32	20	0.3	66	5500	5500	30.9
HF3020	30	30	37	20	0.3	90	4500	4500	36
HF3520	35	35	42	20	0.3	121	3900	3900	40

KML No.	Shaft diameter mm	Boundary dimensions mm				Driving torque Nm	Limiting speed RPM		Mass g
							Lubrication		
		Fw	D	C	r _s min		Grease	Oil	
HFL0822	8	8	12	22	0.3	3.15	17000	12000	6.3
HFL1226	12	12	18	26	0.3	12.2	11000	8000	18
HFL1426	14	14	20	26	0.3	17.3	9500	8000	20.3
HFL1626	16	16	22	26	0.3	20.5	8500	7500	22
HFL1826	18	18	24	26	0.3	24.1	7500	7500	24.4
HFL2026	20	20	26	26	0.3	28.5	7000	6500	27
HFL2530	25	25	32	30	0.3	66	5500	5500	44
HFL3030	30	30	37	30	0.3	90	4500	4500	51
HFL3530	35	35	42	30	0.3	121	3900	3900	58

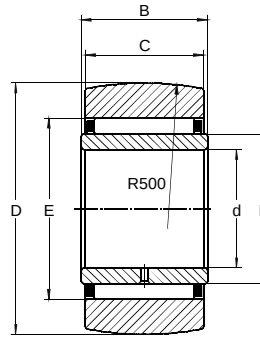
Yoke Type Track Rollers

STO Series

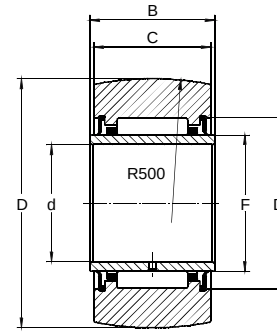
Without axial guidance, open

NA22...2RS Series

With axial guidance, sealed



STO



NA22...2RS

KML No.	Mass g	Shaft diameter mm	Boundary dimensions mm						Basic load rating N				Limiting speed RPM
			D	d	F	B	C	E	Dynamic Cr	Static Cor	Track roller		Lubrication
With IR											Dynamic CW	Static Cow	Grease
STO 6TN	17	19	19	6	10	10	9.8	13	4700	5450	3750	4500	20000
STO 8TN	26	24	24	8	12	10	9.8	15	4800	6000	4200	5500	16000
STO 10	49	30	30	10	14	12	11.8	20	10200	10500	8400	9200	11000
STO 12	57	32	32	12	16	12	11.8	22	11300	12300	8900	10100	9000
STO 15	63	35	35	15	20	12	11.8	26	13200	16000	9100	10700	6500
STO 17	107	40	40	17	22	16	15.8	29	19800	25300	14300	17700	5500
STO 20	152	47	47	20	25	16	15.8	32	20800	27800	16200	21500	4700
STO 25	177	52	52	25	30	16	15.8	37	23000	33400	16500	22900	3600
STO 30	308	62	62	30	38	20	19.8	46	35200	56700	23300	35000	2500
STO 35	441	72	72	35	42	20	19.8	50	35800	58800	26000	41000	2200
STO 40	530	80	80	40	50	20	19.8	58	35200	61800	24000	39000	1700
STO 45	576	85	85	45	55	20	19.8	63	38900	73900	25500	43000	1500
STO 50	617	90	90	50	60	20	19.8	68	43300	84800	26000	46500	1300

KML No.	Mass g	Shaft diameter mm	Boundary dimensions mm						Basic load rating N				Limiting speed RPM
			D	d	F	B	C	D ₁	Dynamic Cr	Static Cor	Track roller		Lubrication
With IR											Dynamic CW	Static Cow	Grease
NA22/6 2RS	22	6	19	6	10	12	11.8	16	5000	4350	3900	3700	18000
NA22/8 2RS	34	8	24	8	12	12	11.8	18	5500	5200	4800	4800	14000
NA2200 2RS	60	10	30	10	14	14	13.8	20	7600	8100	7000	8000	11000
NA22012RS	67	12	32	12	16	14	13.8	22	8500	9700	7500	9000	9500
NA2202 2RS	75	15	35	15	20	14	13.8	26	9600	12000	7600	9600	7000
NA2203 2RS	112	17	40	17	22	16	15.8	28	12000	16500	9900	13800	6000
NA2204 2RS	177	20	47	20	25	18	17.8	33	18500	21900	15200	18300	4600
NA2205 2RS	209	25	52	25	30	18	17.8	38	20100	26000	15700	20000	3500
NA2206 2RS	324	30	62	30	35	20	19.8	43	23000	28000	18300	25500	2800
NA2207 2RS	505	35	72	35	42	23	22.7	50	29800	46300	23000	35500	2200
NA2208 2RS	628	40	80	40	48	23	22.7	57	38200	57700	27500	40500	1700
NA2209 2RS	655	45	85	45	52	23	22.7	62	40300	63800	28500	43000	1600
NA2210 2RS	690	50	90	50	58	23	22.7	68	66000	26000	28000	42500	1300

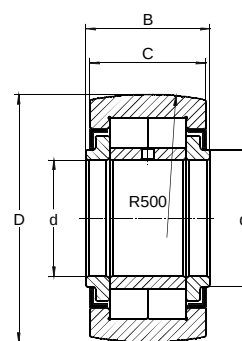
TN: Max. working temperature for plastic mold cage. 120°C constantly running, 150°C temporarily running, 180°C instantaneously running.
When using oil lubrication, the revolution allowable value add 30% of that shown in the above table.



Yoke Type Track Rollers

NUTR Series

With axial guidance



NUTR

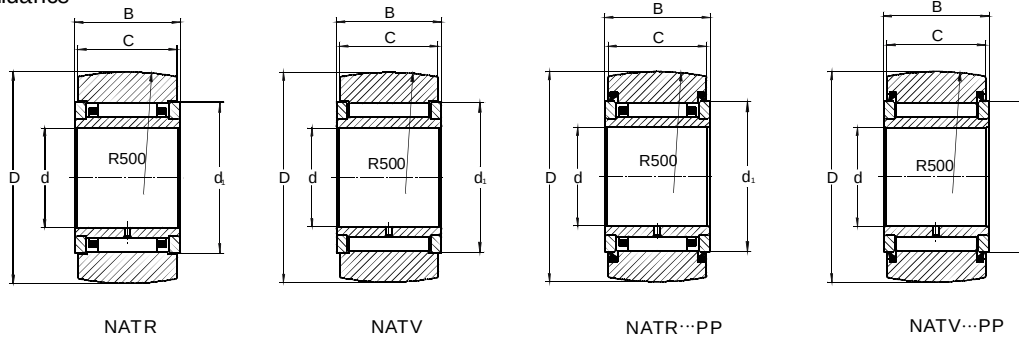
KML No.	Mass g	Shaft diameter mm	Boundary dimensions mm					Basic load ratings N		Limiting speed RPM ⁽¹⁾
			d	D	B	C	d ₁	Dynamic Cr	Static Cor	
With IR										Lubrication Grease
NUTR15	99	35	15	35	19	18	20	20500	24500	6500
NUTR17	147	40	17	40	21	20	22	21800	28500	5500
NUTR15 42	158	42	15	42	19	18	20	20500	24500	6500
NUTR17 47	220	47	17	47	21	20	22	21800	28500	5500
NUTR20	245	47	20	47	25	24	27	36900	48900	4200
NUTR20 52	321	52	20	52	25	24	27	36900	48900	4200
NUTR25	281	52	25	52	25	24	31	40800	58500	3400
NUTR25 62	450	62	25	62	25	24	31	40800	58500	3400
NUTR30	465	62	30	62	29	28	38	56800	77500	2600
NUTR30 72	697	72	30	72	29	28	38	56800	77500	2600
NUTR35	630	72	35	72	29	28	44	63000	91000	2100
NUTR35 80	836	80	35	80	29	28	44	63000	91000	2100
NUTR40	816	80	40	80	32	30	51	87900	108000	1600
NUTR3080	-	80	30	80	31	30	44	56800	77500	2500
NUTR45	883	85	45	85	32	30	55	93600	119000	1400
NUTR40 90	1129	90	40	90	32	30	51	87900	108000	1600
NUTR50	950	90	50	90	32	30	60	98900	140000	1300
NUTR45 100	1396	100	45	100	32	30	55	93600	119000	1400
NUTR50 110	1690	110	50	110	32	30	60	98900	14000	1300

(1) 80% in case of sealed bearings
130% of this value is allowable in case of oil lubrication

Yoke Type Track Rollers

NATR, NATV, NATR...PP, NATV...PP Series

With axial guidance



KML No.	Mass g	KML No.	Mass g	Shaft diameter mm	Boundary dimensions mm					Basic load ratings N		Limiting speed RPM ⁽¹⁾
					d	D	B	C	d ₁	Dynamic C _r	Static C _{0r}	
NATR5	14	NATR5PP	14	16	5	16	12	11	12	3050	3000	22000
NATV5	15	NATV5PP	15		5	16	12	11	12	4500	6300	8500
NATR6	20	NATR6PP	20	19	6	19	12	11	14	3600	36500	20000
NATV6	21	NATV6PP	21		6	19	12	11	14	5700	8700	7000
NATR8	41	NATR8PP	41	24	8	24	15	14	19	4500	5400	5000
NATV8	42	NATV8PP	42		8	24	15	14	19	8600	12000	5500
NATR10	64	NATR10PP	64	30	10	30	15	14	23	6100	7800	11000
NATV10	65	NATV10PP	65		10	30	15	14	23	10900	17000	4500
NATR12	71	NATR12PP	71	32	12	32	15	14	25	6600	9800	9000
NATV12	72	NATV12PP	72		12	32	15	14	25	11800	19000	3900
NATR15	103	NATR15PP	103	35	15	35	19	18	27	10500	17500	7000
NATV15	105	NATV15PP	105		15	35	19	18	27	16000	32500	3400
NATR17	144	NATR17PP	144	40	17	40	21	20	32	11800	19400	6000
NATV17	152	NATV17PP	152		17	40	21	20	32	19600	37000	2900
NATR20	246	NATR20PP	246	47	20	47	25	24	37	17500	29800	4900
NATV20	254	NATV20PP	254		20	47	25	24	37	25800	57000	2600
NATR25	275	NATR25PP	275	52	25	52	25	24	42	19500	36500	3600
NATV25	285	NATV25PP	285		25	52	25	24	42	29000	69600	2100
NATR30	470	NATR30PP	470	62	30	62	29	28	51	31000	57500	2600
NATV30	481	NATV30PP	481		30	62	29	28	51	45500	104000	1700
NATR35	635	NATR35PP	635	72	35	72	29	28	58	34500	67500	2000
NATR35	647	NATR35PP	647		35	72	29	28	58	50800	109500	1400
NATV40	805	NATV40PP	805	80	40	80	32	30	66	47000	91500	1700
NATV40	890	NATV40PP	890		40	80	32	30	66	64000	139000	1300
NATR45	910	NATR45PP	910	85	45	82	32	30	72	49100	98000	1500
NATR45	910	NATR45PP	910		45	82	32	30	72	49100	98000	1500
NATR50	960	NATR50PP	960	90	50	90	32	30	76	50500	10600	1300
NATV50	990	NATV50PP	990		50	90	32	30	76	69500	187000	1000

(1) 80% in case of sealed bearings
130% of this value is allowable in case of oil lubrication

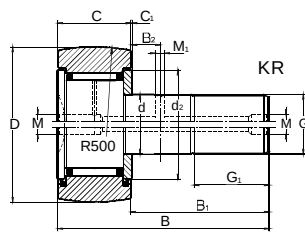


Stud Type Track Rollers

KR, KR...PP

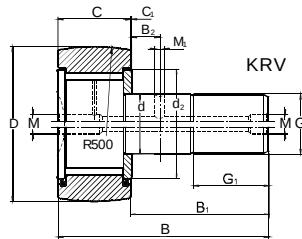
KRV, KRV...PP

NUKR Series



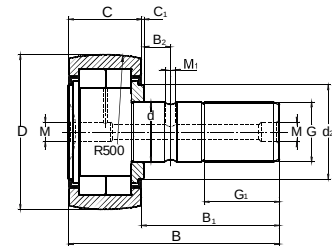
KR...PP

KR KR...PP



KRV...PP

KRV KRV...PP



NUKR

KML No.		Mass g	Bearing designation and approx Mass mm												Nut tightening torque MA Nm	Basic load rating N						Limiting speed RPM Grease	
			D	d	C	B	B1	B2	G	G1	M	M1	C1	d2		Dynamic Cr	Static Cor	Track roller		Fr perm	For perm		
																		Dynamic Cw	Static Cw			N	
KR 16	KR 16 PP	18	16	6	11	28	16	-	M6	8	45)	-	0.6	12	2.5	3650	3540	3020	3100	-	-	18000	12000
KRV 16	KRV 16 PP	20														6000	8000	4610	6000	-	-	7200	7200
KR 19	KR 19 PP	28	19	8	11	32	20	-	M8	10	45)	-	0.6	14	6.8	3820	4160	3220	3100	-	-	16000	11300
KRV 19	KRV 19 PP	32														6300	9800	5000	6900	-	-	6000	6000
KR 22	KR 22 PP	44	22	10	12	36	23	-	M10x1	12	4	-	0.6	17	12.5	4770	5010	3450	4020	-	-	10000	9000
KRV 22	KRV 22 PP	45														6200	9900	5300	7100	-	-	4500	4500
KR 26	KR 26 PP	58	26	10	12	36	23	-	M10x1	12	4	-	0.6	17	12.5	4100	5500	4100	5200	-	-	10000	9100
KRV 26	KRV 26 PP	61														6600	9900	5320	8900	-	-	4300	4300
KR 30	KR 30 PP	87	30	12	14	40	25	6	M12x1.5	13	6	3	0.6	23	18.2	6140	7700	5820	6400	-	-	9000	6300
KRV 30	KRV 30 PP	89														9200	10100	7500	10600	-	-	3200	3200
KR 32	KR 32 PP	98	32	12	14	40	25	6	M12x1.5	13	6	3	0.6	23	18.2	6100	8700	5100	7001	-	-	9000	6300
KRV 32	KRV 32 PP	100														8220	12600	8000	11800	-	-	3220	3220
KR 35	KR 35 PP	169	35	16	18	52	32.5	8	M16x1.5	17	6	3	0.8	27	45.8	9900	15000	7900	10100	-	-	5800	5800
KRV 35	KRV 35 PP	171														10300	24000	9800	16000	-	-	2800	2800
NUKR 35	-	164														15100	19980	10120	16300	8300	16400	4320	-
KR 40	KR 40 PP	247	40	18	20	58	36.5	8	M18x1.5	19	6	3	0.8	32	68.7	9290	11400	8100	11500	-	-	4200	4200
KRV 40	KRV 40 PP	249														11200	23500	10800	18500	-	-	2100	2100
NUKR 40	-	242														13800	18000	12500	18800	13200	22800	4200	-
KR 47	KR 47 PP	386	47	20	24	66	40.5	9	M20x1.5	21	8	4	0.8	37	101	12500	22000	10500	20500	-	-	3900	3900
KRV 47	KRV 47 PP	390														16000	41000	16600	32000	-	-	1800	1800
NUKR 47	-	380														30200	40000	18900	28500	10500	30000	3200	-
KR 52	KR 52 PP	461	52	20	24	66	40.5	9	M20x1.5	21	8	4	0.8	37	101	10500	21000	10800	22500	-	-	3990	3990
KRV 52	KRV 52 PP	465														22000	39000	10500	38100	-	-	1800	1800
NUKR 52	-	450														37500	49300	15001	22503	10400	30500	1990	-
KR 62	KR 62 PP	790	62	24	29	80	49.5	11	M24x1.5	25	8	4	0.8	44	205	20500	33000	16500	31500	-	-	2100	2100
KRV 62	KRV 62 PP	802														31700	61000	29600	56000	-	-	1300	1300
NUKR 62	-	795														41000	59300	40500	51000	18800	39500	1300	-
KR 72	KR 72 PP	1040	72	24	29	80	49.5	11	M24x1.5	25	8	4	0.8	44	205	41500	50300	25000	50890	-	-	2800	2800
KRV 72	KRV 72 PP	1045														31500	71000	27000	75000	-	-	1200	1200
NUKR 72	-	1200														45000	63000	35000	41000	23500	51000	1020	-
KR 80	KR 80 PP	1550	80	30	35	100	63	15	M30x1.5	32	8	4	1	53	351	40800	75300	24500	57000	-	-	2030	2030
KRV 80	KRV 80 PP	1561														46000	102000	39900	100600	-	-	1000	1000
NUKR 80	-	1800														75000	103600	50200	71000	34900	72000	1200	-
KR 85	KR 85 PP	1740	85	30	35	100	63	15	M30x1.5	32	8	4	1	53	351	38700	64300	29900	69000	-	-	1840	1840
KR 90	KR 90 PP	1950	90	30	35	100	63	15	M30x1.5	32	8	4	1	53	351	38700	64300	29900	69000	-	-	1840	1840
KRV 90	-	1970														48970	102300	38800	100000	-	-	1600	-

130% of this value is allowable in case of oil lubrication
Oil hole is only on the end face of the bolt



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