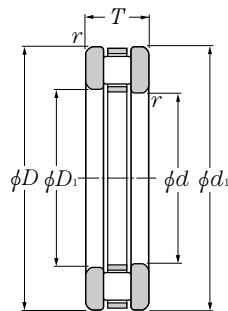
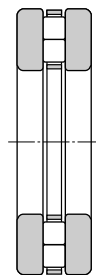


Type 811
Type 812
Type 893
Type 874



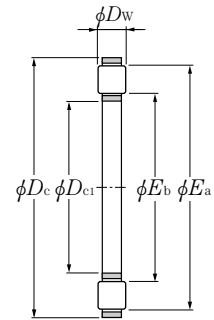
Type 811
Type 812
(Bearing)



Type 893
(Bearing)



Type 874



Type K811, type K812
(Thrust needle roller
and cage assy)

d 10~55mm

Boundary dimensions										Basic load ratings				Limiting speeds	
d	D	d_1 -0.2 -0.5	D_1 +0.5 +0.2	mm						dynamic N	static N	dynamic kgf	static kgf	min ⁻¹	
				T	D_{c1} E11	D_c a13	D_w 0 -0.010	B h11	$r_{s \min}^1)$					grease	oil
10	24	24	10	9	10	24	3.5	2.75	0.3	10 800	21 500	1 110	2 190	3 400	13 000
12	26	26	12	9	12	26	3.5	2.75	0.3	11 500	23 900	1 170	2 430	3 000	12 000
15	28	28	16	9	15	28	3.5	2.75	0.3	12 200	26 800	1 250	2 730	2 800	11 000
17	30	30	18	9	17	30	3.5	2.75	0.3	12 700	29 000	1 300	2 960	2 500	10 000
20	35	35	21	10	20	35	4.5	2.75	0.3	20 200	46 500	2 060	4 700	2 100	8 500
25	42	42	26	11	25	42	5	3	0.6	27 300	68 000	2 790	6 900	1 800	7 000
30	47	47	32	11	30	47	5	3	0.6	27 800	72 500	2 840	7 400	1 500	6 000
	52	52	32	16	30	52	7.5	4.25	0.6	53 000	129 000	5 450	13 100	1 500	6 000
	60	60	32	18	30	60	5.5	6.25	1	54 000	166 000	5 500	16 900	1 300	5 000
35	52	52	37	12	35	52	5	3.5	0.6	31 000	87 000	3 150	8 900	1 400	5 500
	62	62	37	18	35	62	7.5	5.25	1	54 500	139 000	5 550	14 200	1 200	4 900
	68	68	37	20	35	68	6	7	1	66 500	214 000	6 750	21 800	1 200	4 600
40	60	60	42	13	40	60	6	3.5	0.6	43 000	121 000	4 350	12 400	1 200	4 800
	68	68	42	19	40	68	9	5	1	74 500	190 000	7 600	19 400	1 100	4 400
	78	78	42	22	40	78	7	7.5	1	85 000	277 000	8 700	28 300	1 000	4 000
	90	90	42	23	40	90	6.5	8.25	1.1	111 000	435 000	11 400	44 000	900	3 600
45	65	65	47	14	45	65	6	4	0.6	45 500	135 000	4 650	13 800	1 100	4 400
	73	73	47	20	45	73	9	5.5	1	82 000	222 000	8 400	22 600	1 000	4 100
	85	85	47	24	45	85	7.5	8.25	1	102 000	345 000	10 400	35 000	900	3 600
	100	100	47	25	45	100	7	9	1.1	128 000	510 000	13 100	52 000	800	3 200
50	70	70	52	14	50	70	6	4	0.6	48 500	150 000	4 900	15 300	1 000	4 000
	78	78	52	22	50	78	9	6.5	1	85 000	238 000	8 650	24 200	950	3 800
	95	95	52	27	50	95	8	9.5	1.1	125 000	445 000	12 700	45 000	800	3 200
	110	110	52	27	50	110	8	9.5	1.5	168 000	680 000	17 200	69 000	730	2 900
55	78	78	57	16	55	78	6	5	0.6	62 500	215 000	6 350	21 900	900	3 600
	90	90	57	25	55	90	11	7	1	121 000	340 000	12 400	34 500	830	3 300
	105	105	57	30	55	105	9	10.5	1.1	158 000	570 000	16 100	58 000	730	2 900
	120	120	57	29	55	120	8	10.5	1.5	186 000	800 000	19 000	81 500	650	2 600

Note 1) Allowable minimum chamfer dimension r^* .

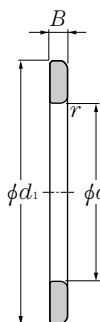
2) The dimensional tolerance for a bearing with a T2 suffix is E12.



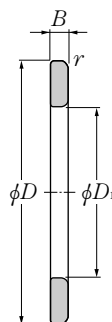
Type K893
(Thrust needle roller
and cage assy)



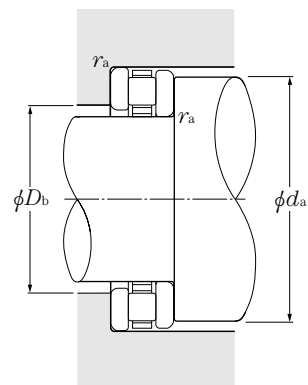
Type K874



WS bearing ring
(Inner ring)

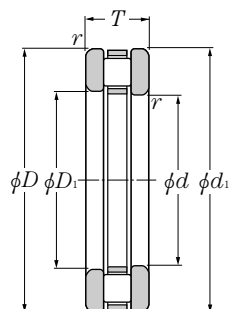


GS bearing ring
(Outer ring)

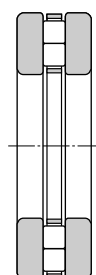


Bearing numbers				Reference dimensions mm		Abutment dimensions mm			Mass		
bearing	thrust cylindrical roller and cage assembly	inner ring	outer ring	E_b	E_a	d_a min	D_b max	r_{as} max	811 812 893 874	kg K811 K812 K893 K874	WS GS
81100T2	K81100T2	WS81100	GS81100	13.5	21.3	21	14	0.3	0.0195	0.0035	0.008
81101T2	K81101T2	WS81101	GS81101	15.5	23.3	23	16	0.3	0.022	0.004	0.009
81102T2	K81102T2	WS81102	GS81102	17.2	25.0	25	18	0.3	0.026	0.006	0.010
81103T2	K81103T2	WS81103	GS81103	19.2	27.0	27	20	0.3	0.030	0.008	0.011
81104T2	K81104T2	WS81104	GS81104	22.4	32.3	32	23	0.3	0.040	0.012	0.014
81105T2	K81105T2	WS81105	GS81105	27.6	38.7	39	28	0.6	0.060	0.018	0.021
81106T2	K81106T2	WS81106	GS81106	33.1	43.9	44	33	0.6	0.070	0.020	0.025
81206T2	K81206T2	WS81206	GS81206	32.8	49.0	48	33	0.6	0.140	0.050	0.045
89306	K89306	WS89306	GS89306	34.0	56.4	56	34	1	0.250	0.046	0.100
81107T2	K81107T2	WS81107	GS81107	38.0	48.9	49	38	0.6	0.090	0.024	0.033
81207T2	K81207T2	WS81207	GS81207	39.8	56.0	56	41	1	0.235	0.065	0.085
89307	K89307	WS89307	GS89307	40.0	64.4	64	40	1	0.360	0.064	0.150
81108T2	K81108T2	WS81108	GS81108	43.2	56.4	56	44	0.6	0.135	0.035	0.044
81208T2	K81208T2	WS81208	GS81208	43.7	62.9	63	44	1	0.265	0.085	0.090
89308	K89308	WS89308	GS89308	46.0	74.4	74	46	1	0.520	0.100	0.210
87408	K87408	WS87408	GS87408	46	87	88	45	1.1	0.78	0.12	0.33
81109T2	K81109T2	WS81109	GS81109	48.4	61.6	61	49	0.6	0.150	0.040	0.055
81209T2	K81209T2	WS81209	GS81209	48.8	68.0	68	49	1	0.310	0.100	0.105
89309	K89309	WS89309	GS89309	50.9	81.3	81	51	1	0.670	0.140	0.270
87409	K87409	WS87409	GS87409	53	96	97	52	1.1	1.05	0.17	0.44
81110T2	K81110T2	WS81110	GS81110	53.2	66.4	66	54	0.6	0.165	0.045	0.060
81210T2	K81210T2	WS81210	GS81210	53.7	73.1	73	54	1	0.385	0.105	0.140
89310	K89310	WS89310	GS89310	58.0	90.4	90	58	1	0.940	0.180	0.380
87410	K87410	WS87410	GS87410	56	106	107	55	1.5	1.38	0.26	0.56
81111T2	K81111T2	WS81111	GS81111	57.8	75.2	75	58	0.6	0.250	0.060	0.095
81211T2	K81211T2	WS81211	GS81211	60.1	83.4	83	61	1	0.610	0.190	0.210
89311	K89311	WS89311	GS89311	63.9	100.3	100	64	1	1.270	0.240	0.520
87411	K87411	WS87411	GS87411	66	116	117	65	1.5	1.77	0.3	0.74

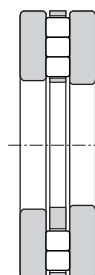
Type 811
Type 812
Type 893
Type 874



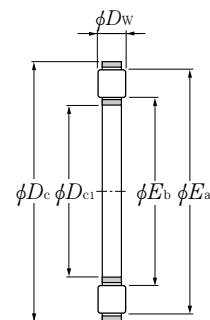
Type 811
Type 812
(Bearing)



Type 893
(Bearing)



Type 874



Type K811, type K812
(Thrust needle roller
and cage assy)

d 60~100mm

Boundary dimensions										Basic load ratings				Limiting speeds	
d	D	d ₁ -0.2 -0.5	D ₁ +0.5 +0.2	T	D _{c1} E11	D _c a13	D _w 0 -0.010	B h11	r _s min ¹⁾	dynamic N	static N	dynamic kgf	static kgf	grease	oil
60	85	85	62	17	60	85	7.5	4.75	1	69 000	215 000	7 000	21 900	830	3 300
	95	95	62	26	60	95	11	7.5	1	126 000	365 000	12 800	37 000	780	3 100
	110	110	62	30	60	110	9	10.5	1.1	162 000	600 000	16 500	61 500	680	2 700
	130	130	62	32	60	130	9	11.5	1.5	223 000	950 000	22 700	97 000	630	2 500
65	90	90	67	18	65	90	7.5	5.25	1	73 000	236 000	7 450	24 100	780	3 100
	100	100	67	27	65	100	11	8	1	130 000	385 000	13 300	39 500	730	2 900
	115	115	67	30	65	115	9	10.5	1.1	167 000	635 000	17 000	64 500	650	2 600
	140	140	68	34	65	140	10	12	2	258 000	1 090 000	26 300	111 000	580	2 300
70	95	95	72	18	70	95	7.5	5.25	1	76 500	257 000	7 800	26 200	730	2 900
	105	105	72	27	70	105	11	8	1	134 000	410 000	13 700	42 000	680	2 700
	125	125	72	34	70	125	10	12	1.1	205 000	790 000	20 900	81 000	600	2 400
	150	150	73	36	70	150	11	12.5	2	315 000	1 330 000	32 000	136 000	550	2 200
75	100	100	77	19	75	100	7.5	5.75	1	78 000	268 000	7 950	27 300	680	2 700
	110	110	77	27	75	110	11	8	1	138 000	435 000	14 100	44 500	650	2 600
	135	135	77	36	75	135	11	12.5	1.5	239 000	920 000	24 400	94 000	550	2 200
	160	160	78	38	75	160	12	13	2	370 000	1 600 000	38 000	163 000	500	2 000
80	105	105	82	19	80	105	7.5	5.75	1	79 500	279 000	8 100	28 400	650	2 600
	115	115	82	28	80	115	11	8.5	1	143 000	460 000	14 500	47 000	630	2 500
	140	140	82	36	80	140	11	12.5	1.5	246 000	970 000	25 100	98 500	530	2 100
	170	170	83	41	80	170	12	14.5	2.1	390 000	1 740 000	40 000	178 000	480	1 900
85	110	110	87	19	85	110	7.5	5.75	1	83 000	300 000	8 450	30 500	630	2 500
	125	125	88	31	85	125	12	9.5	1	169 000	550 000	17 200	56 500	580	2 300
	150	150	88	39	85	150	12	13.5	1.5	281 000	1 100 000	28 700	113 000	500	2 000
	180	180	88	42	85	180	13	14.5	2.1	430 000	1 890 000	44 000	192 000	450	1 800
90	120	120	92	22	90	120	9	6.5	1	112 000	395 000	11 400	40 500	580	2 300
	135	135	93	35	90	135	14	10.5	1.1	213 000	680 000	21 700	69 500	530	2 100
	155	155	93	39	90	155	12	13.5	1.5	289 000	1 160 000	29 500	118 000	480	1 900
	190	190	93	45	90	190	13	16	2.1	450 000	2 060 000	46 000	210 000	430	1 700
100	135	135	102	25	100	135	11	7	1	158 000	555 000	16 100	57 000	500	2 000

Note 1) Allowable minimum chamfer dimension r^* .

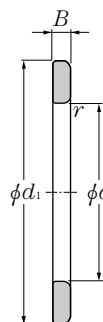
2) The dimensional tolerance for a bearing with a T2 suffix is E12.



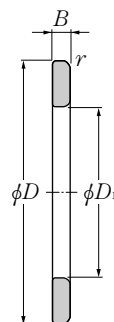
Type K893
(Thrust needle roller
and cage assy)



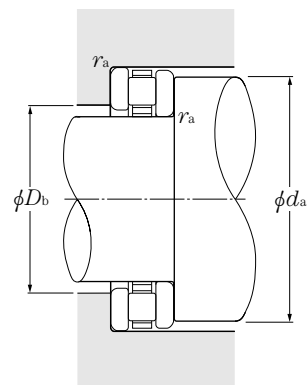
Type K874



WS bearing ring
(Inner ring)



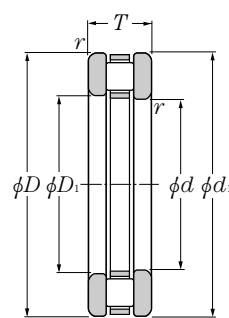
GS bearing ring
(Outer ring)



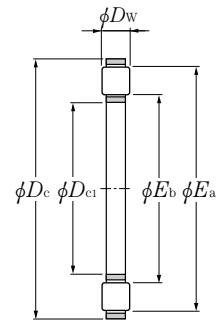
Bearing numbers				Reference dimensions mm		Abutment dimensions mm			Mass		
bearing	thrust cylindrical roller and cage assembly	inner ring	outer ring	E_b	E_a	d_a min	D_b max	r_{as} max	811 812 893 874	kg K811 K812 K893 K874	WS GS
81112T2	K81112T2	WS81112	GS81112	63.7	80.1	80	65	1	0.285	0.083	0.101
81212T2	K81212T2	WS81212	GS81212	64.9	88.4	88	66	1	0.660	0.200	0.230
89312	K89312	WS89312	GS89312	68.9	105.3	105	69	1	1.350	0.250	0.550
87412	K87412	WS87412	GS87412	70	126	127	69	1.5	2.27	0.38	0.94
81113T2	K81113T2	WS81113	GS81113	68.8	85.2	85	70	1	0.340	0.090	0.125
81213T2	K81213T2	WS81213	GS81213	69.9	93.3	93	71	1	0.775	0.215	0.280
89313	K89313	WS89313	GS89313	73.9	110.3	110	74	1	1.430	0.260	0.580
87413	K87413	WS87413	GS87413	74	136	137	73	2	2.75	0.47	1.14
81114T2	K81114T2	WS81114	GS81114	73.7	90.1	90	74	1	0.365	0.097	0.135
81214T2	K81214T2	WS81214	GS81214	75.0	98.4	98	76	1	0.815	0.225	0.295
89314	K89314	WS89314	GS89314	79.8	120.2	120	80	1	1.930	0.340	0.800
87414	K87414	WS87414	GS87414	77	145	146	76	2	3.37	0.65	1.36
81115T2	K81115T2	WS81115	GS81115	78.7	95.1	95	80	1	0.425	0.115	0.155
81215T2	K81215T2	WS81215	GS81215	80.1	103.7	103	81	1	0.860	0.240	0.310
89315	K89315	WS89315	GS89315	84.7	129.2	129	85	1.5	2.410	0.470	0.970
87415	K87415	WS87415	GS87415	81	155	156	80	2	4.02	0.8	1.61
81116T2	K81116T2	WS81116	GS81116	83.7	100.1	100	85	1	0.445	0.119	0.165
81216T2	K81216T2	WS81216	GS81216	84.8	108.4	106	86	1	0.950	0.250	0.350
89316	K89316	WS89316	GS89316	89.8	134.2	134	90	1.5	2.530	0.490	1.020
87416	K87416	WS87416	GS87416	91	165	166	90	2.1	5.32	0.88	2.02
81117T2	K81117T2	WS81117	GS81117	88.7	105.3	105	89	1	0.475	0.125	0.175
81217	K81217	WS81217	GS81217	92.2	116.9	116	92	1	1.280	0.300	0.490
89317	K89317	WS89317	GS89317	95.8	144.2	144	96	1.5	3.140	0.590	1.280
87417	K87417	WS87417	GS87417	94	174	175	93	2.1	5.53	1.03	2.25
81118T2	K81118T2	WS81118	GS81118	94.7	114.3	114	95	1	0.670	0.170	0.250
81218J	K81218J	WS81218	GS81218	97.9	126.7	126	97	1	1.820	0.540	0.640
89318	K89318	WS89318	GS89318	100.8	149.2	149	101	1.5	3.280	0.620	1.330
87418	K87418	WS87418	GS87418	104	183	184	103	2.1	6.65	1.13	2.76
81120T2	K81120T2	WS81120	GS81120	105.1	128.7	128	106	1	1.000	0.300	0.350

Type 811

Type 812



**Type 811
Type 812
(Bearing)**

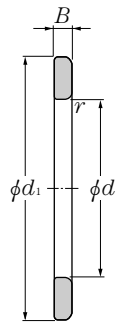


**Type K811, type K812
(Thrust needle roller
and cage assy)**

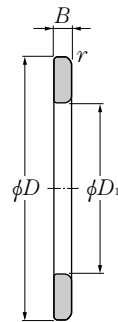
d 100~160mm

Boundary dimensions										Basic load ratings				Limiting speeds	
d	D	d_1 $_{-0.2}^{+0.5}$	D_1 $_{+0.2}^{+0.5}$	T	D_{c1} E11	D_c a13	D_w $_{-0.010}^0$	B h11	$r_{s \min}^1)$	dynamic N	static N	dynamic kgf	static kgf	grease	oil
100	150	150	103	38	100	150	15	11.5	1.1	243 000	795 000	24 800	81 000	480	1 900
	170	170	103	42	100	170	13	14.5	1.5	335 000	1 370 000	34 500	140 000	430	1 700
110	145	145	112	25	110	145	11	7	1	165 000	605 000	16 800	61 500	480	1 900
	160	160	113	38	110	160	15	11.5	1.1	258 000	885 000	26 400	90 000	450	1 800
	190	190	113	48	110	190	15	16.5	2	430 000	1 770 000	44 000	180 000	400	1 600
120	155	155	122	25	120	155	11	7	1	172 000	655 000	17 500	66 500	450	1 800
	170	170	123	39	120	170	15	12	1.1	264 000	930 000	26 900	94 500	430	1 700
130	170	170	132	30	130	170	12	9	1	197 000	755 000	20 100	77 000	400	1 600
	190	187	133	45	130	190	19	13	1.5	360 000	1 210 000	36 500	123 000	380	1 500
140	180	178	142	31	140	180	12	9.5	1	206 000	815 000	21 000	83 000	380	1 500
	200	197	143	46	140	200	19	13.5	1.5	370 000	1 280 000	38 000	130 000	350	1 400
150	190	188	152	31	150	190	12	9.5	1	214 000	870 000	21 800	89 000	350	1 400
160	200	198	162	31	160	200	12	9.5	1	221 000	930 000	22 600	95 000	330	1 300

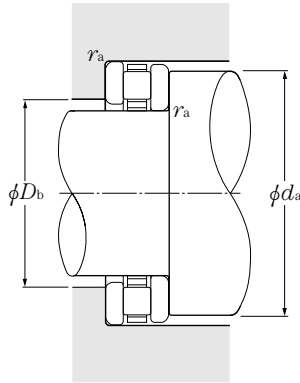
Note 1) Allowable minimum chamfer dimension r^* .



**WS bearing ring
(Inner ring)**



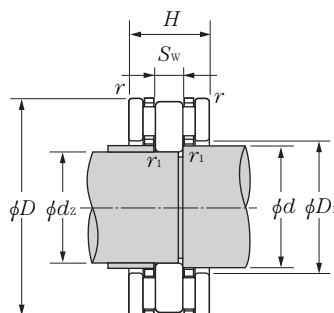
**GS bearing ring
(Outer ring)**



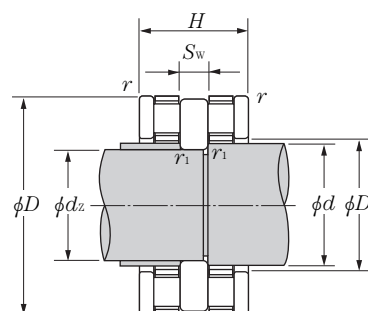
Bearing numbers				Reference dimensions mm		Abutment dimensions mm			Mass		
bearing	thrust cylindrical roller and cage assembly	inner ring	outer ring			d_a min	D_b max	r_{as} max	811 812 893 874	kg K811 K812 K893 K874	WS GS
				E_b	E_a						
81220	K81220	WS81220	GS81220	109.2	140.0	139	109	1	2.240	0.620	0.810
89320	K89320	WS89320	GS89320	110.6	163.0	163	110	1.5	4.190	0.810	1.690
81122T2	K81122T2	WS81122	GS81122	115.0	138.8	138	116	1	1.100	0.325	0.385
81222	K81222	WS81222	GS81222	119.2	150.0	149	119	1	2.450	0.685	0.880
89322	K89322	WS89322	GS89322	122.5	183.0	183	122	2	6.030	1.150	2.440
81124T2	K81124T2	WS81124	GS81124	125.0	148.8	148	126	1	1.170	0.340	0.415
81224	K81224	WS81224	GS81224	129.2	160.0	159	129	1	2.690	0.730	0.980
81126	K81126	WS81126	GS81126	137.7	162.4	162	137	1	1.740	0.415	0.663
81226	K81226	WS81226	GS81226	140.1	179.0	178	140	1.5	4.200	1.140	1.530
81128	K81128	WS81128	GS81128	147.8	172.5	172	147	1	1.950	0.450	0.750
81228	K81228	WS81228	GS81228	150.1	189.0	188	150	1.5	4.570	1.200	1.690
81130	K81130	WS81130	GS81130	157.7	182.4	182	157	1	2.070	0.470	0.800
81132	K81132	WS81132	GS81132	167.8	192.5	192	167	1	2.190	0.500	0.840

Type AXA21

Type ARA821



Type AXA

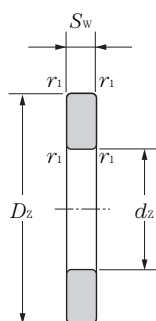


Type ARA

d 15~160mm

Shaft dia. d mm	Boundary dimensions									Type AXA ¹⁾				Type ARA ²⁾			
	d_z	D_z	D_1	D	H	S_w	$r_s \text{ min}^{3)}$	$r_{1s} \text{ min}^{4)}$	dynamic N	Basic load ratings		dynamic kgf	static	Basic load ratings		dynamic N	static
	$+0.5$ $+0.3$	-0.1 -0.2	$+0.5$ $+0.2$		Type AXA Type ARA	h11				static	dynamic			dynamic	static		
15	10	27	16	28	15	18	5.5	0.3	0.3	11 300	36 000	1 150	3 700	12 200	26 800		
17	12	29	18	30	15	18	5.5	0.3	0.3	11 900	39 500	1 220	4 050	12 700	29 000		
20	15	34	21	35	15	20	5.5	0.3	0.3	13 200	46 500	1 340	4 750	20 200	46 500		
25	20	41	26	42	16	22	6	0.6	0.3	14 600	58 000	1 490	5 900	27 300	68 000		
30	25	46	32	47	17	23	7	0.6	0.3	16 300	69 500	1 660	7 100	27 800	72 500		
35	30	51	37	52	19	25	8	0.6	0.3	17 800	81 500	1 820	8 300	31 000	87 000		
40	30	59	42	60	21	27	8	0.6	0.6	27 400	110 000	2 790	11 300	43 000	121 000		
45	35	64	47	65	23	29	9	0.6	0.6	29 800	128 000	3 050	13 100	45 500	135 000		
50	40	69	52	70	24	30	10	0.6	0.6	31 500	143 000	3 250	14 500	48 500	150 000		
55	45	77	57	78	26	32	10	0.6	0.6	38 000	186 000	3 850	19 000	62 500	215 000		
60	50	84	62	85	27	36	11.5	1	0.6	44 500	234 000	4 550	23 900	69 000	215 000		
65	55	89	67	90	28.5	37.5	12	1	0.6	46 500	254 000	4 750	25 900	73 000	236 000		
70	55	94	72	95	31	38	12.5	1	1	53 500	253 000	5 500	25 800	76 500	257 000		
75	60	99	77	100	32	39	12.5	1	1	55 000	266 000	5 650	27 100	78 000	268 000		
80	65	104	82	105	32	39	12.5	1	1	56 500	279 000	5 750	28 400	79 500	279 000		
85	70	109	87	110	34	41	14.5	1	1	57 500	291 000	5 850	29 700	83 000	300 000		
90	75	119	92	120	37	47	16	1	1	70 500	390 000	7 200	39 500	112 000	395 000		
100	85	134	102	135	40	54	18	1	1	90 000	550 000	9 200	56 500	158 000	555 000		
110	95	144	112	145	42	56	20	1	1	93 500	590 000	9 550	60 500	165 000	605 000		
120	100	154	122	155	44	58	22	1	1	99 000	650 000	10 100	66 500	172 000	655 000		
130	110	169	132	170	50	64	22	1	1	140 000	900 000	14 300	92 000	197 000	755 000		
140	120	179	142	180	52	66	23	1	1	145 000	960 000	14 800	97 500	206 000	815 000		
150	130	189	152	190	53	67	24	1	1	149 000	1 020 000	15 200	104 000	214 000	870 000		
160	140	199	162	200	54	68	25	1	1	154 000	1 070 000	15 700	110 000	221 000	930 000		

Note 1) $\frac{\text{AXA21}}{\text{Arrangement bearing}} = \frac{\text{AXK11}}{\text{Thrust needle roller bearing with cage (2)}} + \frac{\text{GS811}}{\text{Outer ring (2)}} + \frac{\text{ZS}}{\text{Central washer (1)}}$ 2) $\frac{\text{ARA21}}{\text{Arrangement bearing}} = \frac{\text{K811}}{\text{Thrust cylindrical roller bearing with cage (2)}} + \frac{\text{GS811}}{\text{Outer ring (2)}} + \frac{\text{ZS}}{\text{Central washer (1)}}$

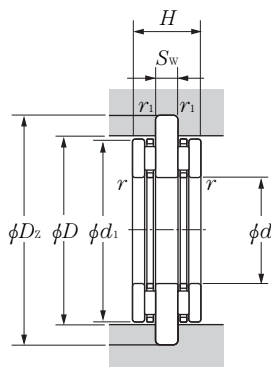


Type ZS

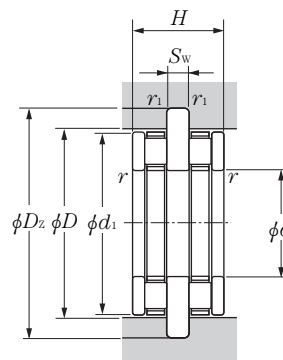
Type ARA ²⁾ Basic load ratings		Limiting speeds		Bearing numbers			Mass kg (approx.)		
dynamic	static	min ⁻¹ grease oil		Type AXA ¹⁾	Type ARA ²⁾	Central washer Type ZS	Type AXA	Type ARA	Central washer Type ZS
kgf C _a	C _{oa}								
1 250	2 730	2 800	11 000	AXA 2102	ARA 82102T2	ZS 1027	0.047	0.053	0.021
1 300	2 960	2 500	10 000	AXA 2103	ARA 82103T2	ZS 1229	0.052	0.061	0.023
2 060	4 700	2 100	8 500	AXA 2104	ARA 82104T2	ZS 1534	0.069	0.083	0.031
2 790	6 900	1 800	7 000	AXA 2105	ARA 82105T2	ZS 2041	0.102	0.124	0.046
2 840	7 400	1 500	6 000	AXA 2106	ARA 82106T2	ZS 2546	0.126	0.152	0.062
3 150	8 900	1 400	5 500	AXA 2107	ARA 82107T2	ZS 3051	0.165	0.195	0.081
4 350	12 400	1 200	4 700	AXA 2108	ARA 82108T2	ZS 3059	0.248	0.307	0.125
4 650	13 800	1 100	4 300	AXA 2109	ARA 82109T2	ZS 3564	0.305	0.346	0.156
4 900	15 300	1 000	3 900	AXA 2110	ARA 82110T2	ZS 4069	0.356	0.4	0.19
6 350	21 900	900	3 500	AXA 2111	ARA 82111T2	ZS 4577	0.485	0.545	0.235
7 000	21 900	800	3 200	AXA 2112	ARA 82112T2	ZS 5084	0.596	0.684	0.316
7 450	24 100	750	3 000	AXA 2113	ARA 82113T2	ZS 5589	0.692	0.79	0.36
7 800	26 200	750	2 900	AXA 2114	ARA 82114T2	ZS 5594	0.828	0.9	0.44
7 950	27 300	700	2 700	AXA 2115	ARA 82115T2	ZS 6099	0.902	1.01	0.47
8 100	28 400	650	2 600	AXA 2116	ARA 82116T2	ZS 65104	0.992	1.06	0.5
8 450	30 500	600	2 400	AXA 2117	ARA 82117T2	ZS 70109	1.09	1.21	0.612
11 400	40 500	600	2 300	AXA 2118	ARA 82118T2	ZS 75119	1.5	1.67	0.828
16 100	57 000	500	2 000	AXA 2120	ARA 82120T2	ZS 85134	2.11	2.48	1.18
16 800	61 500	480	1 900	AXA 2122	ARA 82122T2	ZS 95144	2.44	2.85	1.43
17 500	66 500	430	1 700	AXA 2124	ARA 82124T2	ZS 100154	2.92	3.34	1.83
20 100	77 000	400	1 600	AXA 2126	ARA 82126	ZS 110169	3.95	4.37	2.21
21 000	83 000	380	1 500	AXA 2128	ARA 82128	ZS 120179	4.4	4.85	2.46
21 800	89 000	350	1 400	AXA 2130	ARA 82130	ZS 130189	4.79	5.08	2.74
22 600	95 000	330	1 300	AXA 2132	ARA 82132	ZS 140199	5.21	5.72	3.03

Note 3) Allowable minimum chamfer dimension r^* .4) Allowable minimum chamfer dimension r_1 .

Type AXB21 Type ARA821



Type AXB

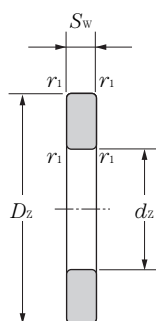


Type ARB

d_z 15~160mm

Shaft dia. <i>d</i> mm	Boundary dimensions									Type AXA ¹⁾				Type ARA ²⁾	
										Basic load ratings				Type ARA ²⁾	
	<i>d</i> _z +0.5 +0.3	<i>D</i> _z -0.1 -0.2	<i>d</i> ₁	<i>d</i> ₁ -0.2 -0.5	<i>H</i> Type AXB Type ARB	<i>S</i> _w h11	<i>r</i> _{s min} ³⁾	<i>r</i> _{1s min} ⁴⁾	dynamic	static	dynamic	static	dynamic	static	
									N		kgf	N			
									<i>C</i> _a	<i>C</i> _{oa}	<i>C</i> _a	<i>C</i> _{oa}	<i>C</i> _a	<i>C</i> _{oa}	
15	15	34	15	28	15	18	5.5	0.3	0.3	11 300	36 000	1 150	3 700	12 200	26 800
20	20	41	20	35	15.5	20.5	6	0.3	0.3	13 200	46 500	1 340	4 750	20 200	46 500
25	25	46	25	42	17	23	7	0.6	0.3	14 600	58 000	1 490	5 900	27 300	68 000
30	30	51	30	47	18	24	8	0.6	0.3	16 300	69 500	1 660	7 100	27 800	72 500
35	35	64	35	52	20	26	9	0.6	0.6	17 800	81 500	1 820	8 300	31 000	87 000
40	40	69	40	60	23	29	10	0.6	0.6	27 400	110 000	2 790	11 300	43 000	121 000
45	45	77	45	65	24	30	10	0.6	0.6	29 800	128 000	3 050	13 100	45 500	135 000
50	50	84	50	70	25.5	31.5	11.5	0.6	0.6	31 500	143 000	3 250	14 500	48 500	150 000
55	55	89	55	78	28	34	12	0.6	0.6	38 000	186 000	3 850	19 000	62 500	215 000
60	60	99	60	85	28	37	12.5	1	1	44 500	234 000	4 550	23 900	69 000	215 000
65	65	104	65	90	29	38	12.5	1	1	46 500	254 000	4 750	25 900	73 000	236 000
70	70	109	70	95	33	40	14.5	1	1	53 500	253 000	5 500	25 800	76 500	257 000
75	75	119	75	100	35.5	42.5	16	1	1	55 000	266 000	5 650	27 100	78 000	268 000
85	85	134	85	110	37.5	44.5	18	1	1	57 500	291 000	5 850	29 700	83 000	300 000
100	100	154	100	135	44	58	22	1	1	90 000	550 000	9 200	56 500	158 000	555 000
110	110	169	110	145	44	58	22	1	1	93 500	590 000	9 550	60 500	165 000	605 000
120	120	179	120	155	45	59	23	1	1	99 000	650 000	10 100	66 500	172 000	655 000
130	130	189	130	170	52	66	24	1	1	140 000	900 000	14 300	92 000	197 000	755 000
140	140	199	140	178	54	68	25	1	1	145 000	960 000	14 800	97 500	206 000	815 000
150	150	214	150	188	56	70	27	1	1	149 000	1 020 000	15 200	104 000	214 000	870 000
160	160	224	160	198	58	72	29	1	1	154 000	1 070 000	15 700	110 000	221 000	930 000

Note 1) $\frac{AXB21}{\text{Arrangement bearing}} = \frac{AXK11}{\text{Thrust needle roller bearing with cage (2)}} + \frac{WS811}{\text{Inner ring (2)}} + \frac{ZS}{\text{Central washer (1)}}$ 2) $\frac{ARB21}{\text{Arrangement bearing}} = \frac{K811}{\text{Thrust cylindrical roller bearing with cage (2)}} + \frac{WS811}{\text{Inner ring (1)}} + \frac{ZS}{\text{Central washer (1)}}$



Type ZS

Type ARA ²⁾ Basic load ratings		Limiting speeds		Bearing numbers			Abutment dimensions Shaft dia. <i>D</i> min	Mass kg (approx.)		
dynamic	static	min ⁻¹ grease	oil	Type AXB ¹⁾	Type ARB ²⁾	Central washer Type ZS		Type AXB	Type ARB	Central washer Type ZS
<i>C_a</i>	<i>C_{oa}</i>									
1 250	2 730	2 800	11 000	AXB 2102	ARB 82102T2	ZS 1534	28.5	0.057	0.063	0.031
2 060	4 700	2 100	8 500	AXB 2104	ARB 82104T2	ZS 2041	35.5	0.084	0.098	0.046
2 790	6 900	1 800	7 000	AXB 2105	ARB 82105T2	ZS 2546	42.5	0.118	0.14	0.062
2 840	7 400	1 500	6 000	AXB 2106	ARB 82106T2	ZS 3051	47.5	0.145	0.171	0.081
3 150	8 900	1 400	5 500	AXB 2107	ARB 82107T2	ZS 3564	53	0.24	0.27	0.156
4 350	12 400	1 200	4 700	AXB 2108	ARB 82108T2	ZS 4069	61	0.314	0.373	0.191
4 650	13 800	1 100	4 300	AXB 2109	ARB 82109T2	ZS 4577	66	0.384	0.425	0.235
4 900	15 300	1 000	3 900	AXB 2110	ARB 82110T2	ZS 5084	71	0.481	0.526	0.316
6 350	21 900	900	3 500	AXB 2111	ARB 82111T2	ZS 5589	79	0.61	0.67	0.36
7 000	21 900	800	3 200	AXB 2112	ARB 82112T2	ZS 6099	86	0.75	0.838	0.47
7 450	24 100	750	3 000	AXB 2113	ARB 82113T2	ZS 65104	91	0.832	0.93	0.5
7 800	26 200	750	2 900	AXB 2114	ARB 82114T2	ZS 70109	96	1	1.07	0.612
7 950	27 300	700	2 700	AXB 2115	ARB 82115T2	ZS 75119	101	1.26	1.37	0.828
8 450	30 500	600	2 400	AXB 2117	ARB 82117T2	ZS 85134	111	1.66	1.78	1.18
16 100	57 000	500	2 000	AXB 2120	ARB 82120T2	ZS 100154	136	2.76	3.13	1.83
16 800	61 500	480	1 900	AXB 2122	ARB 82122T2	ZS 110169	146	3.22	3.63	2.21
17 500	66 500	430	1 700	AXB 2124	ARB 82124T2	ZS 120179	156	3.55	3.97	2.46
20 100	77 000	400	1 600	AXB 2126	ARB 82126	ZS 130189	171	4.48	4.9	2.74
21 000	83 000	380	1 500	AXB 2128	ARB 82128	ZS 140199	181	4.97	5.42	3.03
21 800	89 000	350	1 400	AXB 2130	ARB 82130	ZS 150214	191	5.88	6.37	3.83
22 600	95 000	330	1 300	AXB 2132	ARB 82132	ZS 160224	202	6.53	7.04	4.35

Note 3) Allowable minimum chamfer dimension r^* .
4) Allowable minimum chamfer dimension r_1^* .