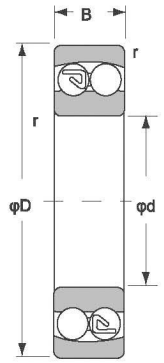
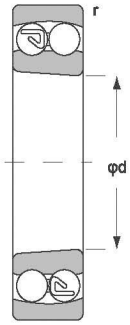
SOLUTION&INNOVATION

Self-Aligning Ball Bearings



Cylindrical bore



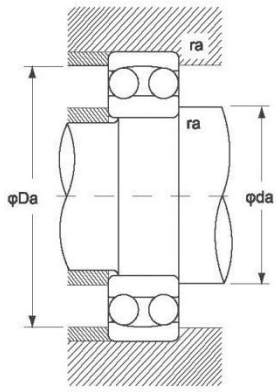
Taper 1:12

Tapered bore

Self-Aligning Ball Bearings Open Type

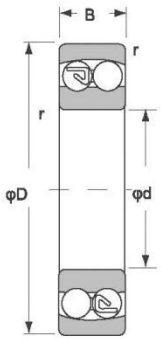
d 5 ~ (35)mm

Boundary Dimensions (mm)				Basic Load Rating (kN)		Limiting Speed (rpm)		Bearing Designation		Shoulder Dimensions (mm)			Cons -tant	Coefficient of axial load			Mass (kg) Approx	
d	D	B	r (min.)	Cr	Cor	Grease	Oil	Cylindrical bore	Tapered bore	da (min.)	Da (max.)	ra (max.)	e	Y1	Y2	Y0	Cylindrical bore	Tapered bore
5	19	6	0.3	2.55	0.48	30000	37000	135	-	7	17	0.3	0.34	1.86	2.87	1.94	0.009	-
6	19	6	0.3	2.50	0.48	30000	37000	126	-	8	17	0.3	0.34	1.86	2.87	1.94	0.009	-
7	22	7	0.3	2.65	0.56	27000	33000	127	-	9	20	0.3	0.35	1.82	2.82	1.91	0.014	-
8	22	7	0.3	2.60	0.56	26000	33000	108	-	10	20	0.3	0.35	1.82	2.82	1.91	0.014	-
9	26	8	0.6	3.80	0.80	23000	29000	129	-	13	22	0.6	0.34	1.86	2.87	1.94	0.022	-
10	30	9	0.6	5.50	1.20	23000	28000	1200	-	14	26	0.6	0.33	1.92	2.97	2.01	0.034	-
	30	14	0.6	7.40	1.60	23000	29000	2200	-	14	26	0.6	0.59	1.07	1.65	1.12	0.047	-
	35	11	0.6	7.25	1.60	20000	24000	1300	-	14	31	0.6	0.34	1.85	2.87	1.94	0.058	-
	35	17	0.6	9.30	2.10	18000	24000	2300	-	14	31	0.6	0.59	1.07	1.66	1.13	0.085	-
12	32	10	0.6	5.60	1.25	21000	26000	1201	-	16	28	0.6	0.33	1.89	2.93	1.98	0.040	-
	32	14	0.6	7.65	1.75	21000	26000	2201	-	16	28	0.6	0.53	1.18	1.83	1.24	0.053	-
	37	12	1	9.40	2.15	18000	22000	1301	-	17	32	1	0.36	1.77	2.74	1.86	0.067	-
	37	17	1	9.70	2.30	16000	22000	2301	-	17	32	1	0.54	1.17	1.81	1.23	0.095	-
15	35	11	0.6	7.45	1.75	18000	22000	1202	-	19	31	0.6	0.33	1.90	2.95	2.00	0.049	-
	35	14	0.6	7.70	1.85	18000	22000	2202	-	19	31	0.6	0.50	1.27	1.97	1.33	0.060	-
	42	13	1	9.55	2.30	16000	20000	1302	-	20	37	1	0.34	1.86	2.88	1.95	0.094	-
	42	17	1	12.1	2.90	14000	20000	2302	-	20	37	1	0.50	1.27	1.96	1.33	0.114	-
17	40	12	0.6	7.90	2.00	16000	20000	1203	-	21	36	0.6	0.31	2.03	3.14	2.12	0.073	-
	40	16	0.6	9.80	2.40	16000	20000	2203	-	21	36	0.6	0.50	1.27	1.96	1.33	0.088	-
	47	14	1	12.5	3.20	14000	17000	1303	-	22	42	1	0.33	1.92	2.97	2.01	0.130	-
	47	19	1	14.5	3.60	13000	18000	2303	-	22	42	1	0.49	1.28	1.98	1.34	0.158	-
20	47	14	1	9.90	2.60	14000	17000	1204	1204K	25	42	1	0.29	2.16	3.35	2.27	0.120	0.118
	47	18	1	12.6	3.30	14000	17000	2204	2204K	25	42	1	0.48	1.31	2.02	1.37	0.140	0.136
	52	15	1.1	12.4	3.30	13000	15000	1304	1304K	26.5	45.5	1	0.30	2.12	3.28	2.22	0.163	0.161
	52	21	1.1	18.0	4.70	11000	15000	2304	2304K	26.5	45.5	1	0.49	1.29	2.00	1.35	0.209	0.205
25	52	15	1	12.1	3.30	12000	14000	1205	1205K	30	47	1	0.28	2.28	3.52	2.39	0.141	0.138
	52	18	1	12.6	3.30	12000	15000	2205	2205K	30	47	1	0.40	1.58	2.45	1.66	0.163	0.158
	62	17	1.1	18.0	5.00	9900	12000	1305	1305K	31.5	55.5	1	0.27	2.31	3.57	2.42	0.257	0.252
	62	24	1.1	24.4	6.60	9400	13000	2305	2305K	31.5	55.5	1	0.46	1.36	2.10	1.42	0.335	0.327
30	62	16	1	15.6	4.65	9900	12000	1206	1206K	35	57	1	0.25	2.55	3.94	2.67	0.220	0.216
	62	20	1	15.6	4.65	10000	12000	2206	2206K	35	57	1	0.35	1.79	2.77	1.87	0.260	0.254
	72	19	1.1	21.3	6.30	8700	11000	1306	1306K	36.5	65.5	1	0.26	2.40	3.72	2.52	0.387	0.381
	72	27	1.1	31.4	8.75	8000	11000	2306	2306K	36.5	65.5	1	0.44	1.44	2.23	1.51	0.500	0.489
35	72	17	1.1	15.8	5.10	8500	10000	1207	1207K	41.5	65.5	1	0.23	2.71	4.20	2.84	0.323	0.317
	72	23	1.1	21.6	6.60	8500	10000	2207	2207K	41.5	65.5	1	0.37	1.71	2.65	1.79	0.403	0.396

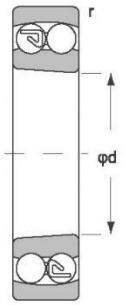


d (35) ~ (80)mm

Boundary Dimensions (mm)				Basic Load Rating (kN)		Limiting Speed (rpm)		Bearing Designation		Shoulder Dimensions (mm)			Cons -tant	Coefficient of axial load			Mass (kg) Approx	
d	D	B	r (min.)	Cr	Cor	Grease	Oil	Cylindrical bore	Tapered bore	da (min.)	Da (max.)	ra (max.)	e	Y1	Y2	Y0	Cylindrical bore	Tapered bore
35	80	21	1.5	25.1	7.85	7600	9300	1307	1307K	43	72	1.5	0.25	2.48	3.84	2.60	0.510	0.502
	80	31	1.5	39.4	11.3	7100	9800	2307	2307K	43	72	1.5	0.45	1.39	2.15	1.46	0.675	0.657
40	80	18	1.1	19.2	6.50	7500	9200	1208	1208K	46.5	73.5	1	0.22	2.83	4.38	2.97	0.417	0.411
	80	23	1.1	22.4	7.40	7600	9300	2208	2208K	46.5	73.5	1	0.33	1.92	2.96	2.01	0.505	0.494
	90	23	1.5	29.5	9.70	6900	8400	1308	1308K	48	82	1.5	0.25	2.57	3.98	2.69	0.715	0.704
	90	33	1.5	44.9	13.5	6200	8600	2308	2308K	48	82	1.5	0.43	1.47	2.27	1.54	0.925	0.903
45	85	19	1.1	21.8	7.35	7000	8500	1209	1209K	51.5	78.5	1	0.21	2.94	4.56	3.09	0.465	0.459
	85	23	1.1	23.3	8.15	7000	8500	2209	2209K	51.5	78.5	1	0.30	2.09	3.23	2.19	0.545	0.533
	100	25	1.5	38.1	12.7	6100	7500	1309	1309K	53	92	1.5	0.25	2.56	3.95	2.68	0.957	0.942
	100	36	1.5	54.4	16.7	5600	7700	2309	2309K	53	92	1.5	0.42	1.51	2.33	1.58	1.23	1.20
50	90	20	1.1	22.7	8.10	6500	7900	1210	1210K	56.5	83.5	1	0.21	3.07	4.76	3.22	0.525	0.515
	90	23	1.1	23.3	8.50	6500	7900	2210	2210K	56.5	83.5	1	0.27	2.33	3.61	2.45	0.590	0.577
	110	27	2	43.4	14.1	5600	6800	1310	1310K	59	101	2	0.23	2.70	4.17	2.83	1.21	1.19
	110	40	2	64.6	20.3	5100	7000	2310	2310K	59	101	2	0.40	1.56	2.41	1.63	1.64	1.60
55	100	21	1.5	26.8	10.0	5800	7100	1211	1211K	63	92	1.5	0.20	3.19	4.94	3.34	0.705	0.693
	100	25	1.5	26.8	10.0	5800	7100	2211	2211K	63	92	1.5	0.27	2.35	3.64	2.47	0.810	0.792
	120	29	2	51.3	17.9	5000	6200	1311	1311K	64	111	2	0.23	2.70	4.18	2.83	1.58	1.56
	120	43	2	75.3	24.0	4600	6400	2311	2311K	64	111	2	0.41	1.53	2.37	1.60	2.10	2.05
60	110	22	1.5	30.2	11.5	5200	6400	1212	1212K	68	102	1.5	0.19	3.37	5.22	3.53	0.900	0.885
	110	28	1.5	34.1	12.6	5300	6500	2212	2212K	68	102	1.5	0.28	2.26	3.49	2.36	1.09	1.07
	130	31	2.1	57.2	20.8	4500	5500	1312	1312K	71	119	2	0.22	2.91	4.50	3.05	1.96	1.93
	130	46	2.1	87.2	28.3	4200	5800	2312	2312K	71	119	2	0.39	1.62	2.51	1.70	2.60	2.53
65	120	23	1.5	31.0	12.5	4800	5800	1213	1213K	73	112	1.5	0.17	3.67	5.68	3.84	1.15	1.13
	120	31	1.5	43.5	16.4	4900	5900	2213	2213K	73	112	1.5	0.28	2.24	3.47	2.35	1.46	1.43
	140	33	2.1	61.7	22.9	4300	5200	1313	1313K	76	129	2	0.23	2.73	4.23	2.86	2.45	2.41
	140	48	2.1	95.8	32.5	3800	5300	2313	2313K	76	129	2	0.38	1.66	2.58	1.74	3.23	3.15
70	125	24	1.5	34.6	13.8	4600	5700	1214	-	78	117	1.5	0.18	3.48	5.38	3.64	1.26	-
	125	31	1.5	43.9	17.1	4600	5600	2214	-	78	117	1.5	0.26	2.42	3.74	2.53	1.52	-
	150	35	2.1	74.0	27.7	4000	4900	1314	-	81	139	2	0.22	2.84	4.40	2.98	2.99	-
	150	51	2.1	89.6	31.7	3600	4900	2314	-	81	139	2	0.35	1.82	2.82	1.91	4.23	-
75	130	25	1.5	38.8	15.7	4300	5300	1215	1215K	83	122	1.5	0.17	3.60	5.58	3.77	1.36	1.34
	130	31	1.5	44.2	17.8	4300	5300	2215	2215K	83	122	1.5	0.25	2.49	3.85	2.61	1.62	1.58
	160	37	2.1	78.9	29.9	4000	4900	1315	1315K	86	149	2	0.23	2.80	4.33	2.93	3.56	3.51
	160	55	2.1	103	36.8	3400	4600	2315	2315K	86	149	2	0.34	1.86	2.88	1.95	5.13	5.01
80	140	26	2	39.8	17.0	4000	4900	1216	1216K	89	131	2	0.16	3.90	6.03	4.08	1.67	1.64

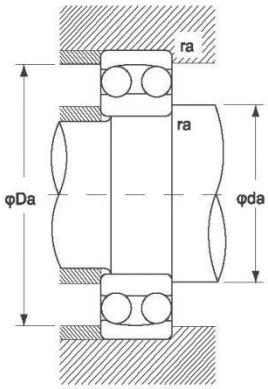


Cylindrical bore



Taper 1:12

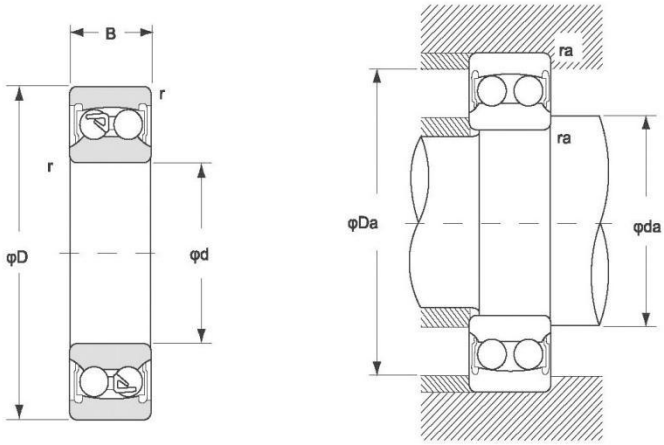
Tapered bore



Self-Aligning Ball Bearings Open Type

d (80) ~ 110mm

Boundary Dimensions (mm)				Basic Load Rating (kN)		Limiting Speed (rpm)		Bearing Designation		Shoulder Dimensions (mm)			Cons -tant	Coefficient of axial load			Mass (kg) Approx	
d	D	B	r (min.)	C_r	C_{or}	Grease	Oil	Cylindrical bore	Tapered bore	d_a (min.)	D_a (max.)	r_a (max.)	e	Y_1	Y_2	Y_0	Cylindrical bore	Tapered bore
80	140	33	2	49.0	19.9	4100	5000	2216	2216K	89	131	2	0.26	2.42	3.75	2.54	2.01	1.97
	170	39	2.1	88.1	33.1	3500	4300	1316	1316K	91	159	2	0.22	2.90	4.49	3.04	4.18	4.12
	170	58	2.1	129	45.7	3100	4300	2316	2316K	91	159	2	0.34	1.87	2.90	1.96	6.10	5.96
85	150	28	2	49.2	20.8	3800	4600	1217	1217K	94	141	2	0.17	3.61	5.59	3.78	2.07	2.04
	150	36	2	58.3	23.6	3800	4600	2217	2217K	94	141	2	0.25	2.49	3.85	2.61	2.52	2.46
	180	41	3	97.3	37.8	3300	4000	1317	1317K	98	167	2.5	0.22	2.93	4.53	3.07	4.98	4.91
	180	60	3	141	51.5	3000	4100	2317	2317K	98	167	2.5	0.35	1.82	2.82	1.91	7.05	6.89
90	160	30	2	56.8	23.4	3500	4300	1218	1218K	99	151	2	0.17	3.69	5.70	3.86	2.52	2.48
	160	40	2	67.7	27.2	3500	4300	2218	2218K	99	151	2	0.26	2.39	3.71	2.51	3.40	3.33
	190	43	3	116	44.4	3100	3800	1318	1318K	103	177	2.5	0.22	2.81	4.35	2.94	5.80	5.71
	190	64	3	153	57.9	2800	3900	2318	2318K	103	177	2.5	0.34	1.84	2.85	1.93	8.44	8.25
95	170	32	2.1	57.0	24.3	3300	4000	1219	1219K	106	159	2	0.17	3.63	5.62	3.80	3.10	3.05
	170	43	2.1	82.7	34.3	3300	4000	2219	2219K	106	159	2	0.26	2.43	3.76	2.55	4.10	4.00
	200	45	3	132	50.8	2900	3600	1319	1319K	108	187	2.5	0.23	2.73	4.23	2.86	6.69	6.59
	200	67	3	166	64.8	2700	3700	2319	2319K	108	187	2.5	0.35	1.82	2.82	1.91	9.79	9.57
100	180	34	2.1	69.0	29.7	3100	3800	1220	1220K	111	169	2	0.17	3.62	5.60	3.79	3.70	3.64
	180	46	2.1	80.9	34.0	3100	3800	2220	2220K	111	169	2	0.24	2.57	3.98	2.70	4.98	4.87
	215	47	3	143	57.3	2800	3400	1320	1320K	113	202	2.5	0.24	2.66	4.11	2.78	8.30	8.19
	215	73	3	183	73.4	2400	3400	2320	2320K	113	202	2.5	0.34	1.84	2.85	1.93	12.4	12.1
105	190	36	2.1	77.0	34.0	2900	3600	1221	-	116	179	2	0.18	3.56	5.51	3.73	4.37	-
	190	50	2.1	94.9	40.1	3000	3600	2221	-	116	179	2	0.26	2.43	3.76	2.55	6.07	-
	225	49	3	149	60.2	2600	3200	1321	-	118	212	2.5	0.23	2.73	4.22	2.86	10.0	-
	225	77	3	187	78.0	2300	3200	2321	-	118	212	2.5	0.36	1.75	2.71	1.83	14.3	-
110	200	38	2.1	80.2	35.2	2800	3400	1222	1222K	121	189	2	0.17	3.64	5.63	3.81	5.15	5.07
	200	53	2.1	120	48.9	2800	3400	2222	2222K	121	189	2	0.26	2.41	3.73	2.53	7.10	6.94
	240	50	3	150	63.2	2400	3000	1322	1322K	123	227	2.5	0.22	2.82	4.37	2.96	11.8	11.7
	240	80	3	200	85.7	2200	3000	2322	2322K	123	227	2.5	0.35	1.82	2.82	1.91	17.3	16.9



Self-Aligning Ball Bearings Sealed Type (With Contact Type Rubber Seals)

d 10 ~ 110mm

Boundary Dimensions (mm)				Basic Load Rating (kN)		Limiting Speed (rpm)	Bearing Designation	Shoulder Dimensions (mm)				Cons -tant	Coefficient of axial load			Mass (kg)
d	D	B	r (min.)	C_r	C_{or}	Grease		d_a (min.)	d_a (max.)	D_a (max.)	r_a (max.)	e	Y_1	Y_2	Y_0	Approx
10	30	14	0.6	5.40	1.20	15000	2200 2RS	13.7	13.7	25	0.6	0.33	1.92	2.97	2.01	0.047
	35	17	0.6	7.25	1.60	13000	2300 2RS	15	15.7	30	0.6	0.34	1.85	2.87	1.94	0.085
12	32	14	0.6	5.60	1.25	14000	2201 2RS	15.2	15.2	27	0.6	0.33	1.89	2.93	1.98	0.053
	37	17	1	9.40	2.15	12000	2301 2RS	16.8	16.8	31	1	0.36	1.77	2.74	1.86	0.095
15	35	14	0.6	7.45	1.75	12000	2202 2RS	18.0	18.0	30	0.6	0.33	1.90	2.95	2.00	0.060
	42	17	1	9.55	2.30	11000	2302 2RS	20.0	20.0	36	1	0.34	1.86	2.88	1.95	0.114
17	40	16	0.6	7.90	2.00	11000	2203 2RS	20.2	20.2	35	0.6	0.31	2.03	3.14	2.12	0.088
	47	19	1	12.50	3.20	9400	2303 2RS	22.1	22.1	41	1	0.33	1.92	2.97	2.01	0.158
20	47	18	1	9.90	2.60	9100	2204 2RS	24.1	24.1	41	1	0.29	2.16	3.35	2.27	0.140
	52	21	1.1	12.4	3.35	8300	2304 2RS	26.2	26.2	45	1	0.30	2.12	3.28	2.22	0.209
25	52	18	1	12.1	3.30	7900	2205 2RS	29.4	29.4	46	1	0.28	2.28	3.52	2.39	0.163
	62	24	1.1	17.6	4.95	6600	2305 2RS	32	33.9	55	1	0.27	2.31	3.57	2.42	0.335
30	62	20	1	15.6	4.65	6600	2206 2RS	35.5	35.5	56	1	0.25	2.55	3.94	2.67	0.260
	72	27	1.1	21.3	6.30	5800	2306 2RS	37	37.8	65	1	0.26	2.40	3.72	2.52	0.500
35	72	23	1.1	15.8	5.10	5700	2207 2RS	40.9	40.9	65	1	0.23	2.71	4.20	2.84	0.403
	80	31	1.5	25.1	7.85	5100	2307 2RS	43.5	45.0	71.5	1.5	0.25	2.48	3.84	2.60	0.675
40	80	23	1.1	19.2	6.50	5000	2208 2RS	47	48.1	73	1	0.22	2.83	4.38	2.97	0.505
	90	33	1.5	29.5	9.70	4600	2308 2RS	48.5	49.6	81.5	1.5	0.25	2.57	3.98	2.69	0.925
45	85	33	1.1	21.8	7.35	4600	2209 2RS	52	52.4	78	1	0.21	2.94	4.56	3.09	0.545
	100	36	1.5	38.1	12.7	4100	2309 2RS	53.5	56.6	91.5	1.5	0.25	2.56	3.95	2.68	1.23
50	90	23	1.1	22.7	8.10	4300	2210 2RS	56.5	56.5	83	1	0.21	3.07	4.76	3.22	0.590
	110	40	2	43.4	14.1	3700	2310 2RS	60	62.5	100	2	0.23	2.70	4.17	2.83	1.64
55	100	25	1.5	26.8	10.0	3900	2211 2RS	63.5	63.5	91.5	1.5	0.20	3.19	4.94	3.34	0.810
	120	43	2	51.3	17.9	3400	2311 2RS	65	65	110	2	0.23	2.70	4.18	2.83	2.10
60	110	28	1.5	30.2	11.5	3500	2212 2RS	68.5	68.5	101.5	1.5	0.19	3.37	5.22	3.53	1.09
	130	46	2.1	57.1	20.8	3000	2312 2RS	72	72	118	2	0.22	2.91	4.50	3.05	2.60
65	120	31	1.5	31.0	12.5	3200	2213 2RS	73.5	75.5	111.5	1.5	0.17	3.67	5.68	3.84	1.46
	140	48	2.1	62.1	22.9	2900	2313 2RS	77	77	128	2	0.23	2.73	4.23	2.86	3.23
70	125	31	1.5	34.6	13.8	3100	2214 2RS	78.5	78.5	116.5	1.5	0.18	3.48	5.38	3.64	1.52
	150	51	2.1	74.1	27.7	2600	2314 2RS	82	82	138	2	0.22	2.84	4.40	2.98	4.23
75	130	31	1.5	38.8	15.7	2900	2215 2RS	83.5	83.5	121.5	1.5	0.17	3.60	5.58	3.77	1.62
	160	55	2.1	81.8	30.5	2600	2315 2RS	87	87	148	2	0.23	2.80	4.33	2.93	5.13
80	140	33	2	39.8	17.0	2700	2216 2RS	90	90	130	2	0.16	3.90	6.03	4.08	2.01
	170	58	2.1	88.4	33.1	2300	2316 2RS	92	92	158	2	0.22	2.90	4.49	3.04	6.10
85	150	36	2	49.2	20.8	2500	2217 2RS	95	95	140	2	0.17	3.61	5.59	3.78	2.52
90	160	40	2	54.1	23.1	2400	2218 2RS	100	100	150	2	0.17	3.69	5.70	3.86	3.40
95	170	43	2.1	60.8	26.8	2200	2219 2RS	107	107	158	2	0.17	3.63	5.62	3.80	4.10
100	180	46	2.1	69.0	29.7	2100	2220 2RS	112	112	168	2	0.17	3.62	5.60	3.79	4.98
105	190	50	2.1	77.0	34.0	2000	2221 2RS	117	117	178	2	0.18	3.56	5.51	3.73	6.07
110	200	53	2.1	80.2	35.2	1900	2222 2RS	122	122	188	2	0.17	3.64	5.63	3.81	7.10