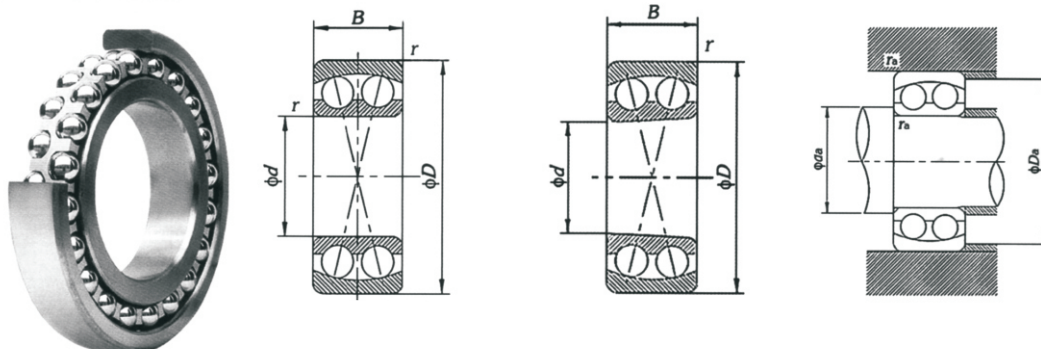


# Self-aligning ball bearings

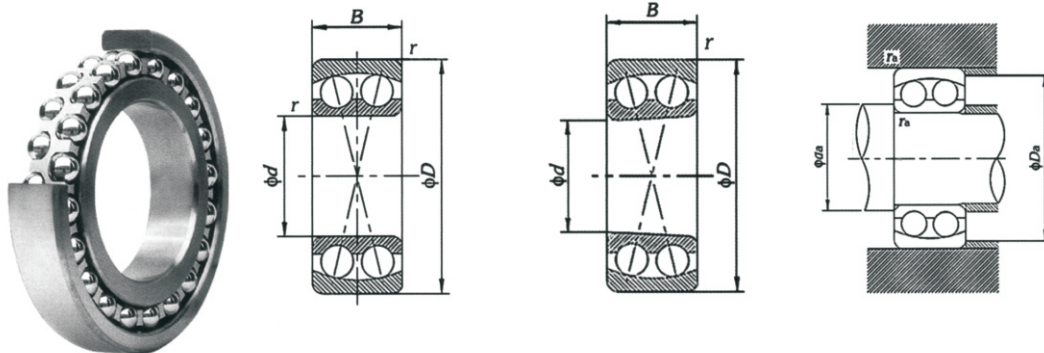
$d$  10 ~ 30 mm



Boundary dimensions (mm)				Basic load ratings (kN)		Limiting speeds (r/min)		Bearing No.		Mounting dimensions (mm)			Mass (kg)
d	D	B	r min.	Cr	Cor	Grease lub.	Oil lub.	Cylindrical-bore	Tapered-bore	da min.	Da max.	ra max.	
10	30	9	0.6	4.22	1.32	15000	19000	<b>1200</b>	<b>1200K</b>	14	26	0.6	0.035
	30	14	0.6	5.48	1.72	15000	19000	<b>2200</b>	—	14	26	0.6	0.05
	35	11	0.6	5.55	1.82	14000	18000	<b>1300</b>	<b>1300K</b>	14	31	0.6	0.06
	35	17	0.6	8.48	2.5	14000	18000	<b>2300</b>	—	14	31	0.6	0.09
12	32	10	0.6	4.28	1.48	14000	18000	<b>1201</b>	<b>1201K</b>	16	28	0.6	0.042
	32	14	0.6	5.68	1.95	14000	18000	<b>2201</b>	—	16	28	0.6	0.06
	37	12	1	7.25	2.35	13000	17000	<b>1301</b>	<b>1301K</b>	17	32	1	0.07
	37	17	1	8.85	2.8	13000	17000	<b>2301</b>	—	17	32	1	0.1
15	35	11	0.6	5.75	2.02	13000	17000	<b>1202</b>	<b>1202K</b>	19	31	0.6	0.051
	35	14	0.6	5.88	2.15	13000	17000	<b>2202</b>	<b>2202K</b>	19	31	0.6	0.06
	42	13	1	7.3	2.65	12000	16000	<b>1302</b>	<b>1302K</b>	20	37	1	0.1
	42	17	1	9.22	3.25	12000	16000	<b>2302</b>	—	20	37	1	0.11
17	40	12	0.6	6.08	2.4	12000	16000	<b>1203</b>	<b>1203K</b>	21	36	0.6	0.076
	40	16	0.6	6.92	2.75	12000	16000	<b>2203</b>	<b>2203K</b>	21	36	0.6	0.09
	47	14	1	9.6	3.68	11000	15000	<b>1303</b>	<b>1303K</b>	22	42	1	0.14
	47	19	1	11.2	4.02	11000	15000	<b>2303</b>	—	22	42	1	0.17
20	47	14	1	7.65	3.18	10000	14000	<b>1204</b>	<b>1204K</b>	25	42	1	0.12
	47	18	1	9.62	3.88	10000	14000	<b>2204</b>	<b>2204K</b>	25	42	1	0.15
	52	15	1.1	9.6	4.02	9500	13000	<b>1304</b>	<b>1304K</b>	26.5	45.5	1	0.17
	52	21	1.1	13.8	5.28	9500	13000	<b>2304</b>	<b>2304K</b>	26.5	45.5	1	0.22
25	52	15	1	9.32	4.02	9000	12000	<b>1205</b>	<b>1205K</b>	30	47	1	0.14
	52	18	1	9.62	4.28	9000	12000	<b>2205</b>	<b>2205K</b>	30	47	1	0.19
	62	17	1.1	13.8	5.98	8000	10000	<b>1305</b>	<b>1305K</b>	31.5	55.5	1	0.26
	62	24	1.1	18.8	7.45	8000	10000	<b>2305</b>	<b>2305K</b>	31.5	55.5	1	0.35
30	62	16	1	12.2	5.78	7500	9500	<b>1206</b>	<b>1206K</b>	35	57	1	0.23
	62	20	1	11.8	5.68	7500	9500	<b>2206</b>	<b>2206K</b>	35	57	1	0.26
	72	19	1.1	16.5	7.75	7000	9000	<b>1306</b>	<b>1306K</b>	36.5	65.5	1	0.4
	72	27	1.1	24.2	10	7000	9000	<b>2306</b>	<b>2306K</b>	36.5	65.5	1	0.5

# Self-aligning ball bearings

$d_{35} \sim 65 \text{ mm}$

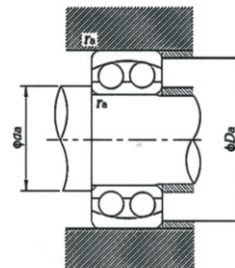
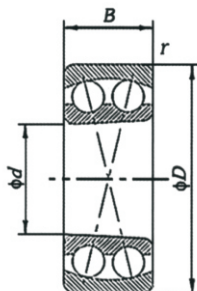
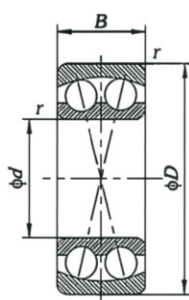


Boundary dimensions (mm)				Basic load ratings (kN)		Limiting speeds (r/min)		Bearing No.		Mounting dimensions (mm)			Mass (kg)
d	D	B	r min.	Cr	Cor	Grease lub.	Oil lub.	Cylindrical-bore	Tapered-bore	da min.	Da max.	ra max.	
35	72	17	1.1	12.2	6.62	6700	8500	<b>1207</b>	<b>1207K</b>	41.5	65.5	1	0.32
	72	23	1.1	16.8	8.32	6700	8500	<b>2207</b>	<b>2207K</b>	41.5	65.5	1	0.44
	80	21	1.5	19.2	9.8	6300	8000	<b>1307</b>	<b>1307K</b>	43	72	1.5	0.54
	80	31	1.5	30.2	12.8	6300	8000	<b>2307</b>	<b>2307K</b>	43	72	1.5	0.68
40	80	18	1.1	14.8	8.52	6300	8000	<b>1208</b>	<b>1208K</b>	46.5	73.5	1	0.41
	80	23	1.1	17.2	9.45	6300	8000	<b>2208</b>	<b>2208K</b>	46.5	73.5	1	0.53
	90	23	1.5	22.8	12.2	5600	7000	<b>1308</b>	<b>1308K</b>	48	82	1.5	0.71
	90	33	1.5	34.5	15.8	5600	7000	<b>2308</b>	<b>2308K</b>	48	82	1.5	0.93
45	85	19	1.1	16.8	9.55	5600	7000	<b>1209</b>	<b>1209K</b>	51.5	78.5	1	0.49
	85	23	1.1	17.8	10.8	5600	7000	<b>2209</b>	<b>2209K</b>	51.5	78.5	1	0.55
	100	25	1.5	29.2	15.8	5000	6300	<b>1309</b>	<b>1309K</b>	53	92	1.5	0.96
	100	36	1.5	41.5	19.5	5000	6300	<b>2309</b>	<b>2309K</b>	53	92	1.5	1.25
50	90	20	1.1	17.5	9.8	5300	6700	<b>1210</b>	<b>1201K</b>	56.5	83.5	1	0.54
	90	23	1.1	17.8	11.2	5300	6700	<b>2210</b>	<b>2201K</b>	56.5	83.5	1	0.68
	110	27	2	33.2	17.5	4800	6000	<b>1310</b>	<b>1301K</b>	59	101	2	1.21
	110	40	2	49.5	23.5	4800	6000	<b>2310</b>	<b>2301K</b>	59	101	2	1.64
55	100	21	1.5	20.5	13.2	4800	6000	<b>1211</b>	<b>1211K</b>	63	92	1.5	0.72
	100	25	1.5	20.5	13.2	4800	6000	<b>2211</b>	<b>2211K</b>	63	92	1.5	0.81
	120	29	2	39.5	22.5	4300	5300	<b>1311</b>	<b>1311K</b>	64	111	2	1.58
	120	43	2	57.8	28	4300	5300	<b>2311</b>	<b>2311K</b>	64	111	2	2.1
60	110	22	1.5	23.2	15.5	4500	5600	<b>1212</b>	<b>1212K</b>	68	102	1.5	0.9
	110	28	1.5	26.2	16.8	4500	5600	<b>2212</b>	<b>2212K</b>	68	102	1.5	1.1
	130	31	2.1	44	26.5	4000	5000	<b>1312</b>	<b>1312K</b>	71	119	2	1.96
	130	46	2.1	66.8	32.8	4000	5000	<b>2312</b>	<b>2312K</b>	71	119	2	2.6
65	120	23	1.5	23.8	17.2	4000	5000	<b>1213</b>	<b>1213K</b>	73	112	1.5	0.92
	120	31	1.5	33.5	21.5	4000	5000	<b>2213</b>	<b>2213K</b>	73	112	1.5	1.5
	140	33	2.1	47.5	29.5	3600	4500	<b>1313</b>	<b>1313K</b>	76	129	2	2.39
	140	48	2.1	73.8	38.5	3600	4500	<b>2313</b>	<b>2313K</b>	76	129	2	3.2



# Self-aligning ball bearings

$d$  70 ~ 100 mm



Boundary dimensions (mm)				Basic load ratings (kN)		Limiting speeds (r/min)		Bearing No.		Mounting dimensions (mm)			Mass (kg)
d	D	B	r min.	Cr	Cor	Grease lub.	Oil lub.	Cylindrical-bore	Tapered-bore	da min.	Da max.	ra max.	
70	125	24	1.5	26.5	18.8	3800	4800	<b>1214</b>	<b>1214K</b>	78	117	1.5	1.29
	125	31	1.5	33.8	22.8	3800	4800	<b>2214</b>	<b>2214K</b>	78	117	1.5	1.62
	150	35	2.1	57.2	35.2	3400	4300	<b>1314</b>	<b>1314K</b>	81	139	2	3
	150	51	2.1	84.2	44.5	3400	4300	<b>2314</b>	<b>2314K</b>	81	139	2	3.9
75	130	25	1.5	29.8	21.5	3600	4500	<b>1215</b>	<b>1215K</b>	83	122	1.5	1.35
	130	31	1.5	34	23.8	3600	4500	<b>2215</b>	<b>2215K</b>	83	122	1.5	1.72
	160	37	2.1	60.8	38.2	3200	4000	<b>1315</b>	<b>1315K</b>	86	149	2	3.6
	160	55	2.1	94.8	50.8	3200	4000	<b>2315</b>	<b>2315K</b>	86	149	2	4.7
80	140	26	2	30.5	23.5	3400	4300	<b>1216</b>	<b>1216K</b>	89	131	2	1.65
	140	33	2	37.5	26.8	3400	4300	<b>2216</b>	<b>2216K</b>	89	131	2	2.19
	170	39	2.1	68	42.2	3000	3800	<b>1316</b>	<b>1316K</b>	91	159	2	4.2
	170	58	2.1	99	54.2	3000	3800	<b>2316</b>	<b>2316K</b>	91	159	2	5.7
85	150	28	2	37.5	28.5	3200	4000	<b>1217</b>	<b>1217K</b>	94	141	2	2.1
	150	36	2	44.8	31.5	3200	4000	<b>2217</b>	<b>2217K</b>	94	141	2	2.53
	180	41	3	75.2	48.5	2800	3600	<b>1317</b>	<b>1317K</b>	98	167	2.5	5
	180	60	3	108	61.2	2800	3600	<b>2317</b>	<b>2317K</b>	98	167	2.5	6.7
90	160	30	2	43.5	31.8	3000	3800	<b>1218</b>	<b>1218K</b>	99	151	2	2.5
	160	40	2	53.8	38	3000	3800	<b>2218</b>	<b>2218K</b>	99	151	2	3.22
	190	43	3	89.5	56.2	2600	3400	<b>1318</b>	<b>1318K</b>	103	177	2.5	6
	190	64	3	110	68.2	2600	3400	<b>2318</b>	<b>2318K</b>	103	177	2.5	7.9
95	170	32	2.1	48.8	36	2800	3600	<b>1219</b>	<b>1219K</b>	106	159	2	3
	170	43	2.1	63.8	45.2	2800	3600	<b>2219</b>	<b>2219K</b>	106	159	2	4.2
	200	45	3	102	63.8	2400	3200	<b>1319</b>	<b>1319K</b>	108	187	2.5	7
	200	67	3	125	76.2	2400	3200	<b>2319</b>	<b>2319K</b>	108	187	2.5	9.2
100	180	34	2.1	52.8	40.5	2600	3400	<b>1220</b>	<b>1220K</b>	111	169	2	3.7
	180	46	2.1	74.8	53.2	2600	3400	<b>2220</b>	<b>2220K</b>	113	202	2.5	5
	215	47	3	110	72.8	2000	2800	<b>1320</b>	<b>1320K</b>	113	202	2.5	8.64
	215	73	3	148	93.5	2000	2800	<b>2320</b>	<b>2320K</b>	113	202	2.5	12.4