

## Angular Contact Ball Bearings

Angular contact ball bearings are non-separable with a contact angle between ball and rings. Balls of angular contact ball bearings are inserted from thin side of outer rings and its ball number is greater than that of deep groove ball bearings. Angular contact ball bearing can accommodate axial loads acting from one direction only and it's suitable for carrying combined loads of axial load and radial load. Paired bearings are used when the load carrying capacity of a single bearing is inadequate or when combined loads act in both directions. Cage in different materials, e.g. sheet steel, brass, glass fiber reinforced polyamide, etc, can be selected by specific bearing design and application conditions.









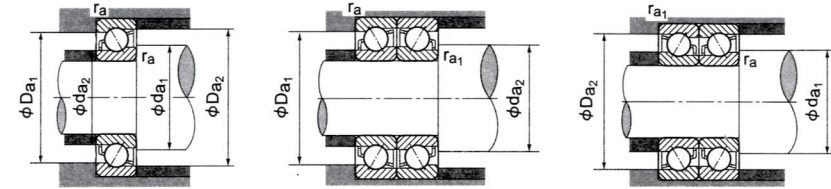
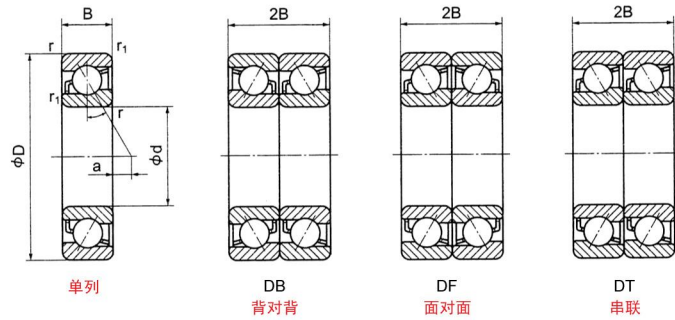








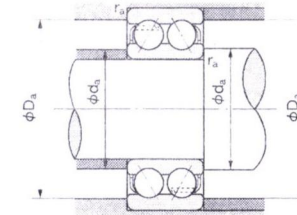
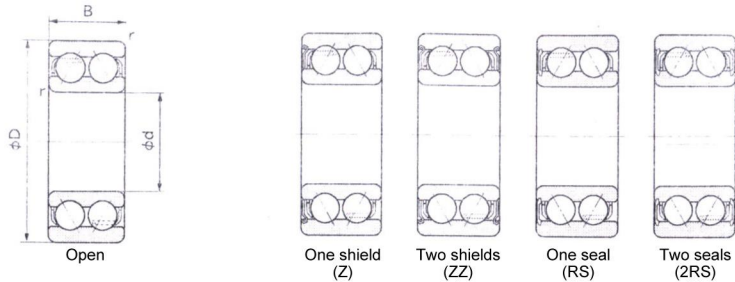
Single arrangement and paired arrangement  
Bore diameter d: 170~200mm



Principal dimensions					Load centerline (mm)	Designation				Basic load rating Dynamic Cr (N)	
d	D	B	r (min)	r1 (min)		Single	Paired			Single	Paired
170	260	42	2.1	1.1	41.1	<b>7034</b>	<b>7034DB</b>	<b>7034DF</b>	<b>7034DT</b>	179000	291000
	260	42	2.1	1.1	3.8	<b>7034C</b>	<b>7034CDB</b>	<b>7034CDF</b>	<b>7034CDT</b>	206000	335000
	310	52	4	1.5	43.3	<b>7234</b>	<b>7234DB</b>	<b>7234DF</b>	<b>7234DT</b>	272000	440000
	310	52	4	1.5	74.7	<b>7234B</b>	<b>7234BDB</b>	<b>7234BDF</b>	<b>7234BDT</b>	254000	410000
	310	52	4	1.5	2.2	<b>7234C</b>	<b>7234CDB</b>	<b>7234CDF</b>	<b>7234CDT</b>	299000	485000
	360	72	4	1.5	40.5	<b>7334</b>	<b>7334DB</b>	<b>7334DF</b>	<b>7334DT</b>	390000	630000
	360	72	4	1.5	75.2	<b>7334B</b>	<b>7334BDB</b>	<b>7334BDF</b>	<b>7334BDT</b>	365000	595000
180	280	46	2.1	1.1	43.4	<b>7036</b>	<b>7036DB</b>	<b>7036DF</b>	<b>7036DT</b>	207000	335000
	280	46	2.1	1.1	3.5	<b>7036C</b>	<b>7036CDB</b>	<b>7036CDF</b>	<b>7036CDT</b>	235000	385000
	320	52	4	1.5	46.2	<b>7236</b>	<b>7236DB</b>	<b>7236DF</b>	<b>7236DT</b>	281000	455000
	320	52	4	1.5	48.9	<b>7236B</b>	<b>7236BDB</b>	<b>7236BDF</b>	<b>7236BDT</b>	262000	425000
	320	52	4	1.5	3.3	<b>7236C</b>	<b>7236CDB</b>	<b>7236CDF</b>	<b>7236CDT</b>	310000	500000
	380	75	4	1.5	43.3	<b>7336</b>	<b>7336DB</b>	<b>7336DF</b>	<b>7336DT</b>	410000	665000
	380	75	4	1.5	80.0	<b>7336B</b>	<b>7336BDB</b>	<b>7336BDF</b>	<b>7336BDT</b>	385000	625000
190	290	46	2.1	1.1	46.3	<b>7038</b>	<b>7038DB</b>	<b>7038DF</b>	<b>7038DT</b>	218000	355000
	290	46	2.1	1.1	4.7	<b>7038C</b>	<b>7038CDB</b>	<b>7038CDF</b>	<b>7038CDT</b>	248000	405000
	340	55	4	1.5	49.0	<b>7238</b>	<b>7238DB</b>	<b>7238DF</b>	<b>7238DT</b>	315000	51000
	340	55	4	1.5	83.7	<b>7238B</b>	<b>7238BDB</b>	<b>7238BDF</b>	<b>7238BDT</b>	294000	475000
	400	78	5	2	46.1	<b>7338</b>	<b>7338DB</b>	<b>7338DF</b>	<b>7338DT</b>	445000	725000
	400	78	5	2	84.8	<b>7338B</b>	<b>7338BDB</b>	<b>7338BDF</b>	<b>7338BDT</b>	420000	680000
	310	51	2.1	1.1	48.1	<b>7040</b>	<b>7040DB</b>	<b>7040DF</b>	<b>7040DT</b>	226000	365000
200	310	51	2.1	1.1	3.9	<b>7040C</b>	<b>7040CDB</b>	<b>7040CDF</b>	<b>7040CDT</b>	274000	445000
	360	58	4	1.5	51.8	<b>7240</b>	<b>7240DB</b>	<b>7240DF</b>	<b>7240DT</b>	335000	550000
	360	58	4	1.5	88.5	<b>7240B</b>	<b>7240BDB</b>	<b>7240BDF</b>	<b>7240BDT</b>	315000	510000
	420	80	5	2	49.5	<b>7340</b>	<b>7340DB</b>	<b>7340DF</b>	<b>7340DT</b>	475000	770000
	420	80	5	2	90.1	<b>7340B</b>	<b>7340BDB</b>	<b>7340BDF</b>	<b>7340BDT</b>	445000	725000

Basic load rating Static Cor (N)	Limiting speed				Abutment and fillet Dimensions, mm						Ref. Weight kg Single	
	Grease		Oil		da1 (min)	da2 (min)	Da1 (max)	Da2 (max)	ra (max)	ra1 (max)		
												Single
210000	420000	2000	1600	2600	2100	179	179	251	254	2	1	7.87
236000	470000	3700	3000	5100	4100	179	179	251	254	2	1	7.87
330000	660000	1800	1400	2400	1900	188	179	292	301	3	1.5	17.4
310000	620000	1600	1300	2200	1700	188	179	292	301	3	1.5	17.4
360000	725000	3300	2600	4600	3700	188	179	292	301	3	1.5	17.4
485000	970000	1600	1300	2200	1700	188	179	342	351	3	1.5	35.7
460000	915000	1400	1100	2000	1600	188	179	342	351	3	1.5	35.7
252000	505000	1900	1500	2500	2000	189	189	271	274	2	1	9.98
290000	580000	3500	2800	4800	3800	189	189	271	274	2	1	9.98
350000	705000	1700	1300	2200	1800	198	189	302	311	3	1.5	19.8
330000	660000	1500	1200	2000	1700	198	189	302	311	3	1.5	19.9
385000	775000	3200	2600	4400	3500	198	189	302	311	3	1.5	19.9
535000	1070000	1400	1200	2000	1600	198	189	362	371	3	1.5	41.3
505000	1010000	1300	1100	1900	1500	198	189	362	371	3	1.5	41.3
277000	555000	1800	1400	2300	1900	199	199	281	284	2	1	10.7
310000	3300	3300	2600	4600	3700	199	199	281	284	2	1	10.7
410000	825000	1600	1300	2200	1700	208	199	322	331	3	1.5	21.5
385000	770000	1400	1100	2000	1600	208	199	322	331	3	1.5	21.5
610000	1220000	1400	1100	1900	1500	212	200	378	390	4	2	47.6
575000	1150000	1300	1000	1800	1400	212	200	378	390	4	2	47.6
277000	565000	1700	1300	2200	1800	209	209	301	304	2	1	13.8
360000	715000	3100	2500	4300	3400	209	209	301	304	2	1	13.8
450000	900000	1500	1200	2000	1600	218	209	342	351	3	1.5	25.5
420000	840000	1300	1000	1900	1500	218	209	342	351	3	1.5	25.5
655000	1310000	1300	1100	1800	1400	222	210	398	410	4	2	53.7
620000	1240000	1200	1000	1700	1300	222	210	398	410	4	2	53.7

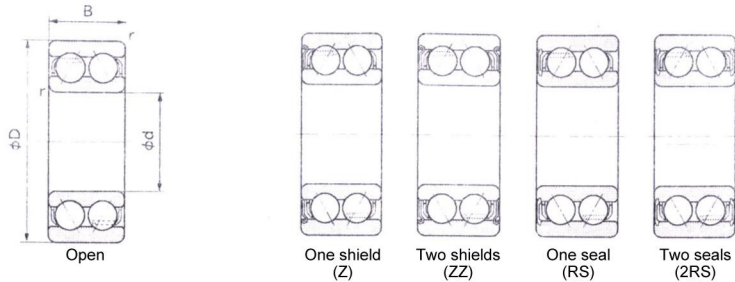
Bore diameter d: 10~50mm



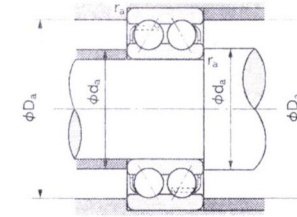
Principal dimensions (mm)				Designation				
d	D	B	r (min)	Open type	Shield type		seal type	
10	30	14.3	0.6	<b>3200</b>	<b>3200-Z</b>	<b>3200-ZZ</b>	<b>3200-RS</b>	<b>3200-2RS</b>
	30	14.3	0.6	<b>3200A</b>	<b>3200A-Z</b>	<b>3200A-ZZ</b>	<b>3200A-RS</b>	<b>3200A-2RS</b>
12	32	15.9	0.6	<b>3201</b>	<b>3201-Z</b>	<b>3201-ZZ</b>	<b>3201-RS</b>	<b>3201-2RS</b>
	32	15.9	0.6	<b>3201A</b>	<b>3201A-Z</b>	<b>3201A-ZZ</b>	<b>3201A-RS</b>	<b>3201A-2RS</b>
15	35	15.9	0.6	<b>3202</b>	<b>3202-Z</b>	<b>3202-ZZ</b>	<b>3202-RS</b>	<b>3202-2RS</b>
	35	15.9	0.6	<b>3202A</b>	<b>3202A-Z</b>	<b>3202A-ZZ</b>	<b>3202A-RS</b>	<b>3202A-2RS</b>
17	40	17.5	0.6	<b>3203</b>	<b>3203-Z</b>	<b>3203-ZZ</b>	<b>3203-RS</b>	<b>3203-2RS</b>
	40	17.5	0.6	<b>3203A</b>	<b>3203A-Z</b>	<b>3203A-ZZ</b>	<b>3203A-RS</b>	<b>3203A-2RS</b>
	47	22.2	1	<b>3303</b>	-	-	-	-
20	47	20.6	1	<b>3204</b>	<b>3204-Z</b>	<b>3204-ZZ</b>	<b>3204-RS</b>	<b>3204-2RS</b>
	47	20.6	1	<b>3204A</b>	<b>3204A-Z</b>	<b>3204A-ZZ</b>	<b>3204A-RS</b>	<b>3204A-2RS</b>
	52	22.2	1.1	<b>3304</b>	-	-	-	-
25	52	20.6	1	<b>3205</b>	<b>3205-Z</b>	<b>3205-ZZ</b>	<b>3205-RS</b>	<b>3205-2RS</b>
	52	20.6	1	<b>3205A</b>	<b>3205A-Z</b>	<b>3205A-ZZ</b>	<b>3205A-RS</b>	<b>3205A-2RS</b>
	62	25.4	1.1	<b>3305</b>	-	-	-	-
30	62	23.8	1	<b>3206</b>	-	-	-	-
	62	23.8	1	-	<b>3206-Z</b>	<b>3206-ZZ</b>	<b>3206-RS</b>	<b>3206-2RS</b>
	62	23.8	1	<b>3206A</b>	-	-	-	-
	62	23.8	1	-	<b>3206A-Z</b>	<b>3206A-ZZ</b>	<b>3206A-RS</b>	<b>3206A-2RS</b>
	72	30.2	1.1	<b>3306</b>	-	-	-	-
35	72	27	1.1	<b>3207</b>	-	-	-	-
	72	27	1.1	-	<b>3207-Z</b>	<b>3207-ZZ</b>	<b>3207-RS</b>	<b>3207-2RS</b>
	72	27	1.1	<b>3207A</b>	-	-	-	-
	72	27	1.1	-	<b>3207A-Z</b>	<b>3207A-ZZ</b>	<b>3207A-RS</b>	<b>3207A-2RS</b>
	80	34.9	1.5	<b>3307</b>	-	-	-	-
40	80	30.2	1.1	<b>3208</b>	-	-	-	-
	80	30.2	1.1	-	<b>3208-Z</b>	<b>3208-ZZ</b>	<b>3208-RS</b>	<b>3208-2RS</b>
	80	30.2	1.1	<b>3208A</b>	-	-	-	-
	80	30.2	1.1	-	<b>3208A-Z</b>	<b>3208A-ZZ</b>	<b>3208A-RS</b>	<b>3208A-2RS</b>
	90	36.5	1.5	<b>3308</b>	-	-	-	-
45	85	30.2	1.1	<b>3209</b>	-	-	-	-
	85	30.2	1.1	-	<b>3209-Z</b>	<b>3209-ZZ</b>	<b>3209-RS</b>	<b>3209-2RS</b>
	85	30.2	1.1	<b>3209A</b>	-	-	-	-
	85	30.2	1.1	-	<b>3209A-Z</b>	<b>3209A-ZZ</b>	<b>3209A-RS</b>	<b>3209A-2RS</b>
	100	39.7	1.5	<b>3309</b>	-	-	-	-
50	90	30.2	1.1	<b>3210</b>	-	-	-	-
	90	30.2	1.1	-	<b>3210-Z</b>	<b>3210-ZZ</b>	<b>3210-RS</b>	<b>3210-2RS</b>
	90	30.2	1.1	<b>3210A</b>	-	-	-	-
	90	30.2	1.1	-	<b>3210A-Z</b>	<b>3210A-ZZ</b>	<b>3210A-RS</b>	<b>3210A-2RS</b>
	110	44.4	2	<b>3310</b>	-	-	-	-

Basic load rating		Limiting speed		Abutment and fillet Dimensions			Ref. Weight (g)	Designation
Dynamic Cr(N)	Static Cor(N)	Grease	Oil	d <sub>a</sub> (min)	D <sub>a</sub> (max)	r <sub>a</sub> (max)		
7300	4000	18000	24000	15	25	0.6	0.050	<b>3200</b>
6950	3800	16000	22000	15	25	0.6	0.050	<b>3200A</b>
10700	5950	16000	22000	17	27	0.6	0.060	<b>3201</b>
10300	5650	15000	20000	17	27	0.6	0.060	<b>3201A</b>
11900	7200	14000	19000	20	30	0.6	0.070	<b>3202</b>
11400	6850	12000	17000	20	30	0.6	0.070	<b>3202A</b>
15000	9250	12000	17000	22	35	0.6	0.090	<b>3203</b>
14200	8800	11000	15000	22	35	0.6	0.090	<b>3203A</b>
23100	12700	10000	14000	23	41	1	0.140	<b>3303</b>
20000	12700	10000	14000	26	41	1	0.120	<b>3204</b>
19000	12100	9500	13000	26	41	1	0.120	<b>3204A</b>
21700	13300	9000	11000	27	45	1	0.230	<b>3304</b>
21800	15100	9500	13000	31	46	1	0.190	<b>3205</b>
20600	14300	8000	11000	31	46	1	0.190	<b>3205A</b>
32000	21600	7300	10000	32	55	1	0.340	<b>3305</b>
30500	21700	8000	11000	36	56	1	0.290	<b>3206</b>
25900	18700	8000	-	36	56	1	0.290	<b>3206Z</b>
28600	20500	7000	9500	36	56	1	0.290	<b>3206A</b>
24400	17700	7000	-	36	56	1	0.290	<b>3206AZ</b>
41500	29000	7000	9500	37	65	1	0.510	<b>3306</b>
40000	29500	7000	9500	42	65	1	0.430	<b>3207</b>
35000	25900	7000	-	42	65	1	0.430	<b>3207Z</b>
38000	27700	6000	8000	42	65	1	0.430	<b>3207A</b>
33000	24500	6000	-	42	65	1	0.430	<b>3207AZ</b>
52000	37000	6300	8500	44	71	1.5	0.790	<b>3307</b>
45500	34000	6000	8000	47	73	1	0.570	<b>3208</b>
40000	30500	6000	-	47	73	1	0.570	<b>3208Z</b>
42500	32500	5300	7200	47	73	1	0.570	<b>3208A</b>
37500	28700	5300	-	47	73	1	0.570	<b>3208AZ</b>
63500	46500	5500	7500	49	81	1.5	1.05	<b>3308</b>
51000	39000	5500	7500	52	78	1	0.620	<b>3209</b>
42500	34500	5500	-	52	78	1	0.620	<b>3209Z</b>
48000	37000	5000	6700	52	78	1	0.620	<b>3209A</b>
40000	32500	5000	-	52	78	1	0.620	<b>3209AZ</b>
76500	56500	5000	6700	54	91	1.5	1.42	<b>3309</b>
54500	44500	5000	6700	57	83	1	0.670	<b>3210</b>
45000	39000	5000	-	57	83	1	0.670	<b>3210Z</b>
51000	42000	4500	6000	57	83	1	0.670	<b>3210A</b>
42000	36500	4500	-	57	83	1	0.670	<b>3210AZ</b>
90000	68000	4500	6000	60	100	2	1.93	<b>3310</b>

Bore diameter d: 55~100mm

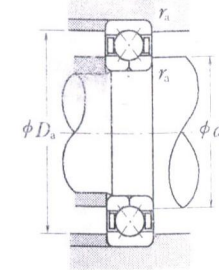
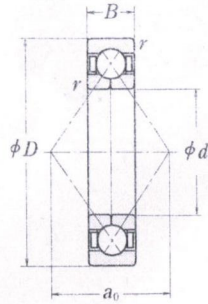


Principal dimensions (mm)				Designation				
d	D	B	r (min)	Open type	Shield type		seal type	
55	100	33.3	1.5	<b>3211</b>	-	-	-	-
	100	33.3	1.5	-	<b>3211-Z</b>	<b>3211-ZZ</b>	<b>3211-RS</b>	<b>3211-2RS</b>
	100	33.3	1.5	<b>3211A</b>	-	-	-	-
	100	33.3	1.5	-	<b>3211A-Z</b>	<b>3211A-ZZ</b>	<b>3211A-RS</b>	<b>3211A-2RS</b>
	120	49.2	2	<b>3311</b>	-	-	-	-
60	110	36.5	1.5	<b>3212</b>	-	-	-	-
	110	36.5	1.5	-	<b>3212-Z</b>	<b>3212-ZZ</b>	<b>3212-RS</b>	<b>3212-2RS</b>
	110	36.5	1.5	<b>3212A</b>	-	-	-	-
	110	36.5	1.5	-	<b>3212A-Z</b>	<b>3212A-ZZ</b>	<b>3212A-RS</b>	<b>3212A-2RS</b>
	130	54	2.1	<b>3312</b>	-	-	-	-
65	120	38.1	1.5	<b>3213</b>	-	-	-	-
	120	38.1	1.5	-	<b>3213-Z</b>	<b>3213-ZZ</b>	<b>3213-RS</b>	<b>3213-2RS</b>
	120	38.1	1.5	<b>3213A</b>	-	-	-	-
	120	38.1	1.5	-	<b>3213A-Z</b>	<b>3213A-ZZ</b>	<b>3213A-RS</b>	<b>3213A-2RS</b>
	140	58.7	2.1	<b>3313</b>	-	-	-	-
70	125	39.7	1.5	<b>3214</b>	-	-	-	-
	125	39.7	1.5	-	<b>3214-Z</b>	<b>3214-ZZ</b>	<b>3214-RS</b>	<b>3214-2RS</b>
	125	39.7	1.5	<b>3214A</b>	-	-	-	-
	125	39.7	1.5	-	<b>3214A-Z</b>	<b>3214A-ZZ</b>	<b>3214A-RS</b>	<b>3214A-2RS</b>
	150	63.5	2.1	<b>3314</b>	-	-	-	-
75	130	41.3	1.5	<b>3215</b>	-	-	-	-
	130	41.3	1.5	-	<b>3215-Z</b>	<b>3215-ZZ</b>	<b>3215-RS</b>	<b>3215-2RS</b>
	130	41.3	1.5	<b>3215A</b>	-	-	-	-
	130	41.3	1.5	-	<b>3215A-Z</b>	<b>3215A-ZZ</b>	<b>3215A-RS</b>	<b>3215A-2RS</b>
	160	68.3	2.1	<b>3315</b>	-	-	-	-
80	140	44.4	2	<b>3216</b>	-	-	-	-
	140	44.4	2	<b>3216A</b>	-	-	-	-
	170	68.3	2.1	<b>3316</b>	-	-	-	-
85	150	49.2	2	<b>3217</b>	-	-	-	-
	150	49.2	2	<b>3217A</b>	-	-	-	-
90	160	52.4	2	<b>3218</b>	-	-	-	-
	160	52.4	2	<b>3218A</b>	-	-	-	-
95	170	55.6	2.1	<b>3219</b>	-	-	-	-
	170	55.6	2.1	<b>3219A</b>	-	-	-	-
100	180	60.3	2.1	<b>3220</b>	-	-	-	-
	180	60.3	2.1	<b>3220A</b>	-	-	-	-



Basic load rating		Limiting speed		Abutment and fillet Dimensions			Ref. Weight (g)	Designation
Dynamic C <sub>r</sub> (N)	Static C <sub>0r</sub> (N)	Grease	Oil	d <sub>a</sub> (min)	D <sub>a</sub> (max)	r <sub>a</sub> (max)		
67500	56500	4500	6300	64	91	1.5	0.960	<b>3211</b>
57500	50500	4500	-	64	91	1.5	0.960	<b>3211Z</b>
63500	53000	4000	5500	64	91	1.5	0.960	<b>3211A</b>
54000	47500	4000	-	64	91	1.5	0.960	<b>3211AZ</b>
112000	86500	4000	5500	65	110	2	2.30	<b>3311</b>
76000	62000	4300	5600	69	101	1.5	1.36	<b>3212</b>
67000	57500	4300	-	69	101	1.5	1.36	<b>3212Z</b>
71500	58500	3800	5000	69	101	1.5	1.36	<b>3212A</b>
63000	54000	3800	-	69	101	1.5	1.36	<b>3212AZ</b>
128000	101000	3800	5000	72	118	2	3.16	<b>3312</b>
89000	77000	3900	5300	74	111	1.5	1.66	<b>3213</b>
78500	71000	3900	-	74	111	1.5	1.66	<b>3213Z</b>
83500	72500	3400	4600	74	111	1.5	1.66	<b>3213A</b>
73500	66500	3400	-	74	111	1.5	1.66	<b>3213AZ</b>
145000	115000	3600	4700	77	128	2	3.86	<b>3313</b>
96500	84500	3800	5000	79	116	1.5	1.82	<b>3214</b>
86000	79000	3800	-	79	116	1.5	1.82	<b>3214Z</b>
90500	79500	3200	4500	79	116	1.5	1.82	<b>3214A</b>
80500	74000	3200	-	79	116	1.5	1.82	<b>3214AZ</b>
163000	132000	3200	4300	82	138	2	4.88	<b>3314</b>
96000	85500	3400	4700	84	121	1.5	1.91	<b>3215</b>
94000	87000	3400	-	84	121	1.5	1.91	<b>3215Z</b>
90000	80500	3200	4300	84	121	1.5	1.91	<b>3215A</b>
88000	81500	3200	-	84	121	1.5	1.91	<b>3215AZ</b>
178000	149000	3000	4000	87	148	2	5.51	<b>3315</b>
104000	94000	3500	4600	90	130	2	2.48	<b>3216</b>
97500	88500	2800	4000	90	130	2	2.48	<b>3216A</b>
192000	167000	2800	4000	92	158	2	6.81	<b>3316</b>
112000	103000	3000	4000	95	140	2	3.40	<b>3217</b>
105000	96500	2600	3800	95	140	2	3.40	<b>3217A</b>
138000	133000	2700	3900	100	150	2	4.28	<b>3218</b>
129000	125000	2500	3500	100	150	2	4.28	<b>3218A</b>
149000	139000	2600	3700	107	158	2	5.02	<b>3219</b>
139000	131000	2400	3200	107	158	2	5.02	<b>3219A</b>
168000	159000	2400	3200	112	168	2	5.78	<b>3220</b>
158000	150000	2200	3000	112	168	2	5.78	<b>3220A</b>

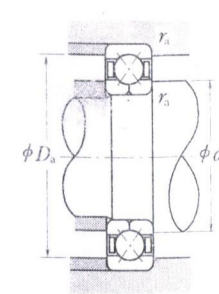
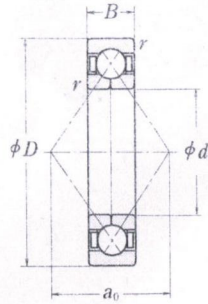
Bore diameter d: 30~95mm



Principal dimensions (mm)				Designation	Basic load rating	
d	D	B	r (min)		Dynamic Cr(N)	Static Cor(N)
30	62	16	1	<b>QJ 206</b>	31000	45000
	72	19	1.1	<b>QJ 306</b>	46000	63000
35	72	17	1.1	<b>QJ 207</b>	41000	61500
	80	21	1.5	<b>QJ 307</b>	55000	80000
40	80	18	1.1	<b>QJ 208</b>	49000	77500
	90	23	1.5	<b>QJ 308</b>	67000	100000
45	85	19	1.1	<b>QJ 209</b>	55000	88500
	100	25	1.5	<b>QJ 309</b>	87500	133000
50	90	20	1.1	<b>QJ 210</b>	57000	97000
	110	27	2	<b>QJ 310</b>	102000	159000
55	100	21	1.5	<b>QJ 211</b>	71000	122000
	120	29	2	<b>QJ 311</b>	118000	187000
60	110	22	1.5	<b>QJ 212</b>	85500	150000
	130	31	2.1	<b>QJ 312</b>	135000	217000
65	120	23	1.5	<b>QJ 213</b>	97500	179000
	140	33	2.1	<b>QJ 313</b>	153000	250000
70	125	24	1.5	<b>QJ 214</b>	106000	197000
	150	35	2.1	<b>QJ 314</b>	172000	285000
75	130	25	1.5	<b>QJ 215</b>	110000	212000
	160	37	2.1	<b>QJ 315</b>	187000	320000
80	125	22	1.1	<b>QJ 1016</b>	77000	167000
	140	26	2	<b>QJ 216</b>	124000	236000
85	170	39	2.1	<b>QJ 316</b>	202000	360000
	130	22	1.1	<b>QJ 1017</b>	79000	176000
90	150	28	2	<b>QJ 217</b>	143000	276000
	180	41	3	<b>QJ 317</b>	218000	405000
95	140	24	1.5	<b>QJ 1018</b>	94000	208000
	160	30	2	<b>QJ 218</b>	164000	320000
95	190	43	3	<b>QJ 318</b>	235000	450000
	145	24	1.5	<b>QJ 1019</b>	96500	220000
95	170	32	2.1	<b>QJ 219</b>	177000	340000
	200	45	3	<b>QJ 319</b>	251000	495000

Limiting speed		Load Center Spacings (mm) a <sub>c</sub>	Abutment and fillet Dimensions			Ref. Weight (g)	Designation
Grease	Oil		d <sub>a</sub> (min)	D <sub>a</sub> (max)	r <sub>a</sub> (max)		
8500	12000	32.2	36	56	1	0.24	<b>QJ 206</b>
8000	11000	35.7	37	65	1	0.42	<b>QJ 306</b>
7500	10000	37.5	42	65	1	0.35	<b>QJ 207</b>
7100	9500	40.3	44	71	1.5	0.57	<b>QJ 307</b>
6700	9000	42.0	47	73	1	0.45	<b>QJ 208</b>
6300	8500	45.5	49	81	1.5	0.78	<b>QJ 308</b>
6300	8500	45.5	52	78	1	0.52	<b>QJ 209</b>
5600	7500	50.8	54	91	1.5	1.05	<b>QJ 309</b>
5600	8000	49.0	57	83	1	0.59	<b>QJ 210</b>
5000	6700	56.0	60	100	2	1.35	<b>QJ 310</b>
5300	7100	54.3	64	91	1.5	0.77	<b>QJ 211</b>
4500	6300	61.3	65	110	2	1.75	<b>QJ 311</b>
4800	6300	29.5	69	101	1.5	0.98	<b>QJ 212</b>
4300	5600	66.8	72	118	2	2.15	<b>QJ 312</b>
4300	6000	64.8	74	111	1.5	1.2	<b>QJ 213</b>
3800	5300	71.8	77	128	2	2.7	<b>QJ 313</b>
4000	5600	68.3	79	116	1.5	1.3	<b>QJ 214</b>
3600	5000	77.0	82	138	2	3.18	<b>QJ 314</b>
3800	5300	71.8	84	121	1.5	1.5	<b>QJ 215</b>
3400	4800	82.3	87	148	2	3.9	<b>QJ 315</b>
3800	5300	71.8	87	118	1	1.05	<b>QJ 1016</b>
3600	5000	77.0	90	130	2	1.85	<b>QJ 216</b>
3200	4300	87.5	92	158	2	4.6	<b>QJ 316</b>
3800	5000	75.3	92	123	1	1.1	<b>QJ 1017</b>
3400	4800	82.3	95	140	2	2.2	<b>QJ 217</b>
3000	4000	92.8	99	166	2.5	5.34	<b>QJ 317</b>
3400	4800	80.5	99	131	1.5	1.45	<b>QJ 1018</b>
3200	4300	87.5	100	150	2	2.75	<b>QJ 218</b>
2800	3800	98.0	104	176	2.5	6.4	<b>QJ 318</b>
3400	4500	84.0	104	136	1.5	4.5	<b>QJ 1019</b>
3000	4000	92.8	107	158	2	3.35	<b>QJ 219</b>
2600	3600	103.3	109	186	2.5	7.4	<b>QJ 319</b>

Bore diameter d: 100~200mm



Principal dimensions (mm)				Designation	Basic load rating	
d	D	B	r (min)		Dynamic Cr(N)	Static Cor(N)
100	150	24	1.5	QJ 1020	98500	232000
	160	34	2.1	QJ 220	199000	390000
	215	47	3	QJ 320	300000	640000
105	160	26	2	QJ 1021	115000	269000
	190	36	2.1	QJ 221	217000	435000
	225	49	3	QJ 321	305000	640000
110	110	28	2	QJ 1022	139000	315000
	200	38	2.1	QJ 222	235000	490000
	240	50	3	QJ 322	320000	710000
120	180	28	2	QJ 1024	147000	350000
	215	40	2.1	QJ 224	265000	585000
	260	55	3	QJ 324	360000	835000
130	200	33	2	QJ 1026	169000	415000
	230	42	3	QJ 226	274000	635000
	280	62	4	QJ 326	400000	970000
140	210	35	2	QJ 1028	172000	435000
	250	45	3	QJ 228	315000	775000
	300	62	4	QJ 328	440000	1110000
150	225	35	2.1	QJ 1030	197000	505000
	270	45	3	QJ 230	360000	925000
	320	65	4	QJ 330	460000	1230000
160	240	38	2.1	QJ 1032	224000	580000
	290	48	3	QJ 232	380000	1010000
	340	68	4	QJ 332	505000	1400000
170	260	42	2.1	QJ 1034	268000	705000
	310	52	4	QJ 234	425000	1180000
	360	72	4	QJ 334	565000	1610000
180	280	46	2.1	QJ 1036	299000	830000
	320	52	4	QJ 236	440000	1270000
	380	75	4	QJ 336	595000	1770000
190	290	46	2.1	QJ 1038	325000	925000
	340	55	4	QJ 238	455000	1360000
	400	78	5	QJ 338	655000	1980000
200	310	51	2.1	QJ 1040	345000	1020000
	360	58	4	QJ 240	490000	1480000
200	420	80	5	QJ 340	690000	2180000

Limiting speed		Load Center Spacings (mm) a <sub>s</sub>	Abutment and fillet Dimensions			Ref. Weight (g)	Designation
Grease	Oil		d <sub>a</sub> (min)	D <sub>a</sub> (max)	r <sub>a</sub> (max)		
3200	4300	87.5	109	141	1.5	1.6	QJ 1020
2800	3800	98.0	112	168	2	4.0	QJ 220
2400	3400	110.3	114	201	2.5	9.3	QJ 320
3000	4000	92.8	115	150	2	2.0	QJ 1021
2600	3600	103.3	117	178	2	4.7	QJ 221
2400	3200	115.5	119	211	2.5	10.5	QJ 321
2800	3800	98.0	120	160	2	2.5	QJ 1022
2600	3400	108.5	122	188	2	5.6	QJ 222
2200	3000	122.5	124	226	2.5	12.5	QJ 322
2600	3600	105.0	130	170	2	2.65	QJ 1024
2400	3200	117.3	132	203	2	6.9	QJ 224
2000	2800	133.0	134	246	2.5	15.4	QJ 324
2400	3200	115.5	140	190	2	4.0	QJ 1026
2200	3000	126.0	144	216	2.5	7.7	QJ 226
1900	2600	143.5	148	262	3	19	QJ 326
2200	3000	122.5	150	200	2	4.3	QJ 1028
2000	2800	136.5	154	236	2.5	9.8	QJ 228
1700	2400	154.0	158	282	3	24	QJ 328
2000	2800	131.3	162	213	2	5.2	QJ 1030
1800	2600	147.0	164	256	2.5	12	QJ 230
1600	2200	164.5	168	302	3	29	QJ 330
1900	2600	140.0	172	228	2	6.4	QJ 1032
1700	2400	157.5	174	276	2.5	15	QJ 232
1500	2000	175.1	178	322	3	31	QJ 332
1800	2400	150.5	182	248	2	8.6	QJ 1034
1600	2200	168.0	188	292	3	19.5	QJ 234
1400	2000	185.6	188	342	3	41	QJ 334
1700	2200	161.0	192	268	2	11	QJ 1036
1500	2000	175.1	198	302	3	20.5	QJ 236
1300	1800	196.1	198	362	3	48	QJ 336
1600	2200	168.0	202	278	2	11.5	QJ 1038
1400	2000	185.6	208	322	3	23	QJ 238
1300	1700	206.6	212	378	4	54.5	QJ 338
1500	2000	178.6	212	298	2	15	QJ 1040
1300	1800	196.1	218	342	3	27	QJ 240
1200	1600	217.1	222	398	4	61.5	QJ 340