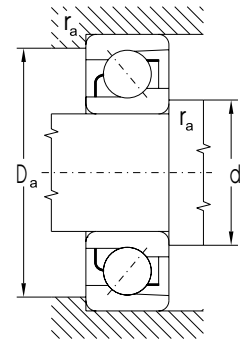
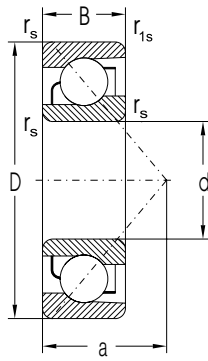


# Single Row Angular Contact Ball Bearings

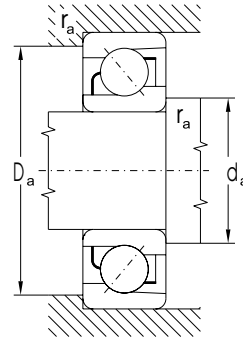
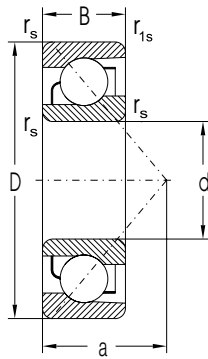
d = 10 to 50 mm



Dimensions						Basic Load Rating		Limiting Speed for Lubrication with		Bearing Designation	Abutment and Fillet Dimensions				Weight
d	D	B	r <sub>s</sub> min	r <sub>1s</sub> min	a	C <sub>r</sub>	C <sub>or</sub>	Grease	Oil		d	d <sub>a</sub> min	D <sub>a</sub> max	r <sub>a</sub> max	
mm						kN		min <sup>-1</sup>			mm				kg
10	30	9.0	0.60	0.30	13.0	6.963	3.290	21000	28000	<b>7200BETNG</b>	10	14.5	25.5	0.6	0.0300
12	32	10.0	0.60	0.30	14.0	7.530	3.778	19000	26000	<b>7201BETNG</b>	12	16.5	27.5	0.6	0.0370
15	35	11.0	0.60	0.30	12.0	8.970	4.875	17000	20000	<b>7202AA</b>	15	19.0	31.0	0.6	0.0500
	35	11.0	0.60	0.30	16.0	8.040	4.368	17000	20000	<b>7202B</b>		19.0	31.0	0.6	0.0500
	35	11.0	0.60	0.30	16.0	8.520	4.765	17000	20000	<b>7202BETNG</b>		19.0	31.0	0.6	0.0430
	42	13.0	1.00	0.60	18.0	13.034	6.575	14000	17000	<b>7302BETNG</b>		21.0	36.0	1.0	0.0800
17	40	12.0	0.60	0.30	13.0	10.400	6.190	15000	18000	<b>7203AA</b>	17	21.0	36.0	0.6	0.0700
	40	12.0	0.60	0.30	18.0	11.000	6.070	17000	20000	<b>7203BETNG</b>		21.0	36.0	0.6	0.0700
	47	14.0	1.00	0.60	15.0	15.115	7.890	12600	15000	<b>7303AA</b>		23.0	41.0	1.0	0.1200
	47	14.0	1.00	0.60	20.0	13.795	7.200	12600	15000	<b>7303B</b>		23.0	41.0	1.0	0.1200
	47	14.0	1.00	0.60	20.0	14.798	8.000	12600	15000	<b>7303BETNG</b>		23.0	41.0	1.0	0.1070
20	47	14.0	1.00	0.60	15.0	14.858	8.535	12600	15000	<b>7204AA</b>	20	25.0	42.0	1.0	0.1100
	47	14.0	1.00	0.60	21.0	13.307	7.645	12600	15000	<b>7204B</b>		25.0	42.0	1.0	0.1100
	47	14.0	1.00	0.60	21.0	15.080	8.645	12600	15000	<b>7204BETNG</b>		25.0	42.0	1.0	0.1000
	52	15.0	1.10	0.60	23.0	17.400	9.620	12600	15000	<b>7304B</b>		26.0	45.0	1.0	0.1500
	52	15.0	1.10	0.60	23.0	18.800	10.400	13000	16000	<b>7304BETNG</b>		26.0	45.0	1.0	0.1430
25	52	15.0	1.00	0.60	17.0	16.200	10.600	10600	12600	<b>7205AA</b>	25	30.0	47.0	1.0	0.1350
	52	15.0	1.00	0.60	24.0	15.800	9.810	12600	15000	<b>7205BETNG</b>		30.0	47.0	1.0	0.1350
	62	17.0	1.10	0.60	27.0	24.380	14.570	9400	11000	<b>7305B</b>		31.0	55.0	1.0	0.2400
	62	17.0	1.10	0.60	19.0	25.600	13.900	9400	11000	<b>7305AMB</b>		31.0	55.0	1.0	0.2640
30	62	16.0	1.00	0.60	27.0	20.700	13.600	9400	11000	<b>7206B</b>	30	36.0	56.0	1.0	0.2000
	62	16.0	1.00	0.60	27.0	22.400	14.700	10600	12000	<b>7206BETNG</b>		35.0	56.0	1.0	0.1900
35	80	21.0	1.50	1.00	35.0	36.650	24.100	7100	8400	<b>7307B</b>	35	42.0	71.0	1.5	0.4800
40	80	18.0	1.10	0.60	23.0	37.600	26.600	7100	8400	<b>7208AA</b>	40	47.0	73.0	1.0	0.3700
	80	18.0	1.10	0.60	34.0	36.900	24.600	7900	9400	<b>7208BETNG</b>		47.0	73.0	1.0	0.3700
	90	23.0	1.50	1.00	27.2	48.200	33.600	6300	7500	<b>7308AA</b>		47.0	81.0	1.5	0.6600
	90	23.0	1.50	1.00	39.0	44.700	30.400	7100	8400	<b>7308BETNG</b>		47.0	81.0	1.5	0.6600
45	85	19.0	1.10	0.60	25.5	39.800	29.300	6300	7500	<b>7209AA</b>	45	52.0	78.0	1.0	0.4250
	85	19.0	1.10	0.60	37.0	38.300	27.100	7500	8900	<b>7209BETNG</b>		52.0	78.0	1.0	0.4250
	100	25.0	1.50	1.00	43.0	58.300	40.386	5600	6700	<b>7309B</b>		52.0	91.0	1.5	0.8800
50	90	20.0	1.10	0.60	27.0	42.429	32.400	6000	7100	<b>7210AA</b>	50	57.0	83.0	1.0	0.4800
	90	20.0	1.10	0.60	39.0	39.800	29.900	6700	7900	<b>7210BETNG</b>		57.0	83.0	1.0	0.4800

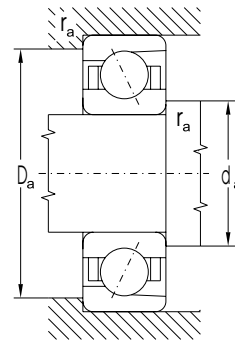
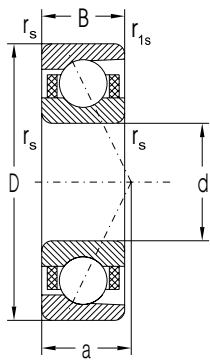
# Single Row Angular Contact Ball Bearings

d = 55 to 75 mm



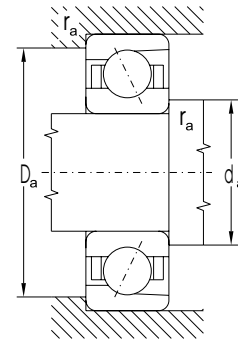
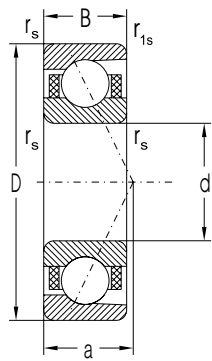
Dimensions						Basic Load Rating		Limiting Speed for Lubrication with		Bearing Designation	Abutment and Fillet Dimensions				Weight
d	D	B	r <sub>s</sub> min	r <sub>1s</sub> min	a	C <sub>r</sub>	C <sub>0r</sub>	Grease	Oil		d	d <sub>a</sub> min	D <sub>a</sub> max	r <sub>a</sub> max	
mm						kN		min <sup>-1</sup>			mm				kg
55	100	21.0	1.50	1.00	29.5	52.628	40.460	5300	6300	<b>7211AA</b>	55	62	91	1.5	0.6300
	120	29.0	2.00	1.00	51.0	78.742	56.380	4700	5600	<b>7311B</b>	65	110	2.0	1.4500	
60	110	22.0	1.50	1.00	32.0	63.400	50.625	5000	6000	<b>7212AA</b>	60	67	101	1.5	0.8000
65	120	23.0	1.50	1.00	34.0	70.800	59.600	4500	5300	<b>7213AA</b>	65	72	111	1.5	1.0000
	140	33.0	2.10	1.10	41.0	110.000	84.100	4000	4700	<b>7313AA</b>	76	128	2.0	2.7100	
70	125	24.0	1.50	1.00	53.0	69.400	57.300	4200	5000	<b>7214B</b>	70	77	116	1.5	1.1000
	150	35.0	2.10	1.10	44.5	123.000	96.200	3800	4500	<b>7314AA</b>	81	138	2.0	3.1600	
75	130	25.0	1.50	1.00	56.0	71.000	61.900	4200	5000	<b>7215B</b>	75	82	121	1.5	1.2100
	160	37.0	2.10	1.10	47.0	142.485	107.625	3300	4000	<b>7315AA</b>	86	148	2.0	3.8800	
	160	37.0	2.10	1.10	68.0	127.615	96.415	3300	4000	<b>7315B</b>	86	148	2.0	3.8800	

**Single Row Angular Contact Ball Bearings**  
for High Rotational Speed  $d = 7$  to  $40$  mm



Dimensions						Basic Load Rating		Limiting Speed for Lubrication with		Bearing Designation	Abutment and Fillet Dimensions				Weight
d	D	B	r <sub>s</sub> min	r <sub>1s</sub> min	a	C <sub>r</sub>	C <sub>or</sub>	Grease	Oil		d	d <sub>a</sub> min	D <sub>a</sub> max	r <sub>a</sub> max	
mm						kN		min <sup>-1</sup>			mm				kg
7	22	7.0	0.30	0.15	5.0	2.220	0.900	94000	140000	<b>A727CBTA</b>	7	9.2	19.5	0.3	0.0134
9	26	8.0	0.60	0.30	5.5	3.650	1.640	71000	106000	<b>A729CBTA</b>	9	12.0	22.5	0.6	0.0197
10	30	9.0	0.60	0.30	6.0	5.000	2.290	60000	89000	<b>B7200CBTB</b>	10	14.0	26.0	0.6	0.0270
	30	9.0	0.60	0.30	6.5	6.670	2.900	42000	63000	<b>B7200CATB</b>		14.0	26.0	0.6	0.0280
12	32	10.0	0.60	0.30	7.0	5.480	2.655	56000	84000	<b>B7201CBTB</b>	12	16.0	28.0	0.6	0.0350
	32	10.0	0.60	0.30	7.5	7.430	3.465	38000	56000	<b>B7201CATB</b>		16.0	28.0	0.6	0.0360
	32	10.0	0.60	0.30	10.5	7.045	3.210	33000	50000	<b>AC7201ATA</b>		16.0	28.0	0.6	0.3060
15	35	11.0	0.60	0.30	7.5	6.480	3.450	50000	75000	<b>B7202CBTB</b>	15	19.0	31.0	0.6	0.0420
	35	11.0	0.60	0.30	8.0	8.265	4.180	33000	50000	<b>B7202CATB</b>		19.0	31.0	0.6	0.0420
17	35	10.0	0.60	0.15	9.0	6.240	3.470	30000	45000	<b>A7003CTA</b>	17	19.0	33.0	0.3	0.0390
	40	12.0	0.60	0.30	8.5	7.830	4.250	45000	67000	<b>B7203CBTB</b>		21.0	36.0	0.6	0.0600
	40	12.0	0.60	0.30	9.0	10.206	5.290	28000	42000	<b>B7203CATB</b>		21.0	36.0	0.6	0.0610
20	42	12.0	0.60	0.30	10.0	9.830	5.450	28000	42000	<b>A7004CTA</b>	20	24.0	38.0	0.6	0.0680
	47	14.0	1.00	0.60	10.0	9.600	5.540	40000	60000	<b>B7204CBTB</b>		25.0	42.0	1.0	0.0980
	47	14.0	1.00	0.60	10.5	13.670	7.322	25000	38000	<b>B7204CATB</b>		25.0	42.0	1.0	0.1000
	47	14.0	1.00	0.60	15.0	13.000	6.990	22000	33000	<b>B7204AATB</b>		25.0	42.0	1.0	0.1020
25	47	12.0	0.60	0.30	11.0	11.080	6.870	25000	38000	<b>A7005CTA</b>	25	28.0	43.0	0.6	0.0800
	52	15.0	1.00	0.60	11.0	13.125	7.960	33000	50000	<b>B7205CBTB</b>		30.0	47.0	1.0	0.1190
	52	15.0	1.00	0.60	11.5	14.815	8.630	22000	33000	<b>B7205CATB</b>		30.0	47.0	1.0	0.1220
	52	15.0	1.00	0.60	17.0	13.960	8.155	20000	30000	<b>B7205AATB</b>		30.0	47.0	1.0	0.1240
30	55	13.0	1.00	0.60	12.0	14.400	9.550	22000	30000	<b>A7006CTA</b>	30	34.0	50.0	1.0	0.1160
	62	16.0	1.00	0.60	12.0	16.810	10.720	28000	42000	<b>B7206CBTB</b>		35.0	57.0	1.0	0.1840
	62	16.0	1.00	0.60	13.0	20.570	12.420	20000	30000	<b>B7206CATB</b>		35.0	57.0	1.0	0.1890
	62	16.0	1.00	0.60	19.0	19.420	11.580	17000	25000	<b>B7206AATB</b>		35.0	57.0	1.0	0.1920
35	62	14.0	1.00	0.60	14.0	18.290	12.700	17000	25000	<b>A7007CTA</b>	35	39.5	57.0	1.0	0.1550
	62	14.0	1.00	0.60	18.5	17.300	12.050	9400	11000	<b>B7007AATB</b>		39.5	57.0	1.0	0.1480
	72	17.0	1.10	0.60	13.0	21.015	14.345	25000	38000	<b>B7207CBTB</b>		42.0	65.0	1.0	0.2680
	72	17.0	1.10	0.60	14.0	28.935	18.600	16000	24000	<b>B7207CATB</b>		42.0	65.0	1.0	0.2750
	72	17.0	1.10	0.60	15.0	30.660	20.295	16000	24000	<b>B7207CAMB</b>		42.0	65.0	1.0	0.3230
40	68	15.0	1.00	0.60	20.5	18.560	14.135	8400	10000	<b>B7008AATB</b>	40	47.0	61.0	1.0	0.1850
	80	18.0	1.10	0.60	14.0	24.500	17.300	22000	33000	<b>B7208CBTB</b>		47.0	73.0	1.0	0.3370
	80	18.0	1.10	0.60	15.50	36.730	23.775	13000	20000	<b>B7208CATB</b>		47.0	73.0	1.0	0.3470

**Single Row Angular Contact Ball Bearings**  
for High Rotational Speed  $d = 45$  to  $130$  mm



Dimensions						Basic Load Rating		Limiting Speed for Lubrication with		Bearing Designation	Abutment and Fillet Dimensions				Weight ~
d	D	B	r <sub>s</sub> min	r <sub>1s</sub> min	a	C <sub>r</sub>	C <sub>or</sub>	Grease	Oil		d	d <sub>a</sub> min	D <sub>a</sub> max	r <sub>a</sub> max	
mm						kN		min <sup>-1</sup>			mm				kg
45	75	16.0	1.00	0.60	16.0	23.410	18.140	13000	20000	<b>A7009CTA</b>	45	49	70	1.0	0.2420
	85	19.0	1.10	0.60	15.0	28.295	20.310	20000	30000	<b>B7209CBTB</b>	52	78	1.0	0.3810	
	85	19.0	1.10	0.60	16.5	36.855	24.645	12600	19000	<b>B7209CATB</b>	52	78	1.0	0.3910	
	100	25.0	1.50	1.00	28.0	60.330	38.775	5600	6700	<b>B7309CATB</b>	54	91	1.5	0.7710	
50	80	16.0	1.0	0.60	20.0	22.660	18.520	9500	11000	<b>B7010AATB</b>	50	57	73	1.0	0.4310
	90	20.0	1.10	0.60	16.0	32.330	23.560	18000	27000	<b>B7210CBTB</b>	57	83	1.0	0.4430	
	90	20.0	1.10	0.60	17.5	38.990	27.260	12000	18000	<b>B7210CATB</b>	57	83	1.0	0.4430	
	90	20.0	1.10	0.60	26.0	36.560	25.920	10600	16000	<b>B7210AATB</b>	57	83	1.0	0.4470	
55	90	18.0	1.10	0.60	26.5	30.990	25.380	6300	7500	<b>B7011AATB</b>	55	62	83	1.0	0.3950
	100	21.0	1.50	1.00	17.0	38.460	29.120	17000	25000	<b>B7211CBTB</b>	62	91	1.5	0.5670	
	100	21.0	1.50	1.00	18.5	48.200	34.500	11000	17000	<b>B7211CATB</b>	62	91	1.5	0.5820	
60	110	22.0	1.50	1.00	18.0	42.980	33.800	15000	22000	<b>B7212CBTB</b>	60	67	101	1.5	0.7350
	110	22.0	1.50	1.00	20.0	58.260	42.600	10000	15000	<b>B7212CATB</b>	67	101	1.5	0.7540	
	110	22.0	1.50	1.00	32.0	54.820	39.960	8900	13000	<b>B7212AATB</b>	67	101	1.5	0.7590	
65	120	23.0	1.50	1.00	21.5	70.500	54.780	8900	13000	<b>B7213CATB</b>	65	72	111	1.5	0.9940
70	110	20.0	1.10	0.60	32.0	41.153	36.460	7900	12000	<b>B7014AATB</b>	70	75	103	1.0	0.5970
	125	24.0	1.50	1.00	20.5	58.560	47.660	12600	19000	<b>B7214CBTB</b>	77	116	1.5	1.0400	
	125	24.0	1.50	1.00	22.5	76.650	60.135	7900	12000	<b>B7214CATB</b>	77	116	1.5	1.0700	
75	130	25.0	1.50	1.00	23.5	76.530	61.390	7500	11000	<b>B7215CATB</b>	75	82	121	1.5	1.1600
	130	25.0	1.50	1.00	37.5	71.525	58.325	6700	10000	<b>B7215AATB</b>	82	121	1.5	1.2600	
	130	25.0	1.50	1.00	37.5	74.900	62.490	6700	10000	<b>B7215AAMB</b>	82	121	1.5	1.3900	
80	125	22.0	1.10	0.60	22.0	55.360	50.013	7500	11000	<b>B7016CATB</b>	80	85	118	1.0	0.8410
	125	22.0	1.10	0.60	36.0	53.440	49.440	6700	10000	<b>B7016AATB</b>	85	118	1.0	0.8480	
	140	26.0	2.00	1.00	24.5	89.500	73.050	6700	10000	<b>B7216CATB</b>	90	130	2.0	1.4100	
	140	26.0	2.00	1.00	40.0	84.070	68.040	6300	9400	<b>B7216AATB</b>	90	130	2.0	1.4200	
85	130	22.0	1.10	0.60	37.0	54.440	52.690	6300	9400	<b>B7017AATA</b>	85	90	123	1.0	0.9120
	130	22.0	1.10	0.60	37.0	56.240	55.330	6300	9400	<b>B7017AAMB</b>	90	123	1.0	1.0600	
	150	28.0	2.00	1.00	26.5	100.520	86.080	6300	9400	<b>B7217CATB</b>	95	140	2.0	1.8000	
	150	28.0	2.00	1.00	42.5	94.260	80.670	6000	8900	<b>B7217AATB</b>	95	140	2.0	1.8200	
90	140	24.0	1.50	1.00	24.0	67.630	62.470	6300	9400	<b>B7018CATB</b>	90	96	132	1.5	1.1500
	140	24.0	1.50	1.00	40.0	65.290	61.755	4000	4700	<b>B7018AATB</b>	98	130	1.5	1.1600	
100	180	34.0	2.10	1.10	51.0	141.100	120.960	5300	7900	<b>B7220AATB</b>	100	112	168	2.0	3.3200
120	180	28.0	2.00	1.00	30.0	101.100	103.660	5000	7500	<b>B7024CATB</b>	120	128	171	2.0	2.1000
	180	28.0	2.00	1.00	50.5	96.100	101.280	3000	3500	<b>B7024AATB</b>	132	168	2.0	2.0900	
130	165	11.0	1.00	0.50	41.5	13.475	19.100	3200	3800	<b>B70826AAMB</b>	130	138	158	2.0	0.6350