

ANGULAR CONTACT BALL BEARINGS

12



ANGULAR CONTACT BALL BEARINGS

13

TYPE CODE: 7



BORE DIAMETER DESIGNATION

5 X -- = mm
5 X 08 = 40 mm
5 X 12 = 60 mm

7

0

12

C

DB

P5

7

2

08

BM

DF

SIZE DESIGNATIONS

0=70xx
2=72xx
3=73xx
4=74xx

MOUNTING

/DB: Mount in sets, back to back
/DF: Mount in sets, face to face
/DT: Mount in sets, tandem

TOLERANCE CLASS

/P0: Equal grade ABEC 1, omissible
/P6: Equal grade ABEC 3
/P5: Equal grade ABEC 5
/P4: Equal grade ABEC 7
/P2: Equal tolerance class ABEC9

DESIGNS, TYPES AND FEATURES

/C: Normal contact angle $\alpha = 15^\circ$
/AC: Normal contact angle $\alpha = 25^\circ$
/A: Normal contact angle $\alpha = 30^\circ$
/B: Normal contact angle $\alpha = 40^\circ$
/M: Brass solid retainer
/TN: Glass-fiber reinforced nylon cage

ANGULAR CONTACT BALL BEARINGS



14

Principal dimensions(mm)				Kg	Bearing Number	Basic Load Rating (kN)		Limiting Speed(rpm)	
d	D	B	r _{min}	Weight		Dynamic Cr	Static Cor	Grease	Oil
17	35	10	0.15	0.040	7003C	6.93	3.94	29000	39000
	35	10	0.15	0.031	7003A	6.44	3.70	20000	27000
	40	12	0.30	0.067	7203C	10.08	5.52	28000	36000
	40	12	0.30	0.060	7203A	10.80	6.34	18000	25000
	40	12	0.30	0.062	7203B	9.90	5.86	16000	21000
	47	14	1.00	0.109	7303C	15.70	8.25	26000	35000
20	47	14	0.60	0.111	7303A	14.31	8.30	17000	23000
	47	14	0.60	0.113	7303B	13.32	7.68	14000	19000
	42	12	0.30	0.071	7004C	9.45	5.81	26000	34000
	42	12	0.30	0.063	7004A	8.73	5.38	18000	24000
	47	14	0.60	0.113	7204C	13.14	7.82	24000	32000
	47	14	0.60	0.100	7204A	13.05	8.06	16000	22000
25	47	14	0.60	0.104	7204B	11.97	7.39	14000	19000
	52	15	1.10	0.140	7304C	18.50	9.95	23000	31000
	52	15	0.60	0.140	7304A	16.83	9.98	15000	20000
	52	15	0.60	0.144	7304B	15.57	9.26	12000	17000
	47	12	0.30	0.083	7005C	10.53	7.15	22000	29000
	47	12	0.30	0.074	7005A	9.63	6.58	15000	20000
30	52	15	0.60	0.139	7205C	14.94	9.79	20000	27000
	52	15	0.60	0.126	7205A	14.58	9.89	13000	18000
	52	15	0.60	0.129	7205B	13.32	9.02	11000	15000
	62	17	1.10	0.222	7305C	26.40	15.30	19000	26000
	62	17	0.60	0.230	7305A	23.76	15.17	12000	16000
	62	17	0.60	0.236	7305B	21.96	14.02	10000	14000
35	55	13	0.60	0.130	7006C	13.59	9.89	19000	25000
	55	13	0.60	0.111	7006A	12.51	9.07	12000	17000
	62	16	0.60	0.218	7206C	20.70	14.11	17000	23000
	62	16	0.60	0.191	7206A	20.25	14.21	11000	15000
	62	16	0.60	0.197	7206B	18.45	12.96	10000	13000
	72	19	1.10	0.330	7306C	32.50	20.30	16000	22000
40	72	19	0.60	0.341	7306A	30.15	21.41	10000	14000
	72	19	0.60	0.349	7306B	27.90	19.68	9100	12000
	62	14	0.60	0.169	7007C	17.19	13.15	16000	22000
	62	14	0.60	0.148	7007A	15.75	12.10	11000	15000
	72	17	0.60	0.316	7207C	27.45	19.10	15000	20000
	72	17	0.60	0.284	7207A	26.73	19.30	10000	13000
45	72	17	0.60	0.289	7207B	24.39	17.66	8800	11000
	80	21	1.00	0.440	7307C	40.50	25.80	14000	19000
	80	21	1.00	0.459	7307A	36.00	25.25	9300	12000
	80	21	1.00	0.469	7307B	32.95	23.23	8000	10000

ANGULAR CONTACT BALL BEARINGS



15

Principal dimensions(mm)				Kg	Bearing Number	Basic Load Rating (kN)		Limiting Speed(rpm)	
d	D	B	r _{min}	Weight		Dynamic Cr	Static Cor	Grease	Oil
40	68	15	0.60	0.209	7008C	18.54	15.26	14000	20000
	68	15	0.60	0.186	7008A	16.92	14.02	10000	13000
	80	18	0.60	0.413	7208C	32.85	24.19	13000	18000
	80	18	0.60	0.370	7208A	31.95	24.10	9100	12000
	80	18	0.60	0.378	7208B	28.80	22.08	7900	10000
	90	23	1.50	0.606	7308C	49.50	32.50	13000	17000
45	90	23	1.00	0.628	7308A	44.10	31.68	8200	11000
	90	23	1.00	0.643	7308B	40.50	29.28	7000	9400
	75	16	0.60	0.268	7009C	21.96	18.53	13000	18000
	85	19	0.60	0.405	7209A	35.55	27.55	8300	11000
	85	19	0.60	0.415	7209B	32.40	25.15	7000	9400
	100	25	1.50	0.830	7309C	64.00	43.00	11000	15000
50	100	25	1.00	0.840	7309A	57.15	41.76	7400	9500
	100	25	1.00	0.861	7309B	52.65	38.40	6300	8500
	80	16	0.60	0.285	7010C	23.40	20.74	12000	16000
	80	16	0.60	0.255	7010A	21.33	19.30	8200	10000
	90	20	0.60	0.519	7210C	38.70	30.24	11000	14000
	90	20	0.60	0.457	7210A	37.35	30.24	7500	9500
55	90	20	0.60	0.468	7210B	33.75	27.46	6400	8600
	110	27	2.00	1.050	7310C	75.00	51.50	10000	14000
	110	27	1.00	1.091	7310A	66.60	49.92	6700	8900
	110	27	1.00	1.110	7310B	61.20	46.08	5700	7700
	90	18	0.60	0.421	7011C	30.60	27.46	11000	14000
	90	18	0.60	0.388	7011A	27.90	25.25	7500	10000
60	100	21	1.00	0.679	7211C	47.70	38.40	10000	13000
	100	21	1.00	0.604	7211A	45.90	37.92	6700	9000
	100	21	1.00	0.617	7211B	41.85	34.56	5800	7800
	120	29	2.00	1.340	7311C	87.00	60.50	9400	13000
	120	29	1.00	1.400	7311A	77.40	59.04	6100	8200
	120	29	1.00	1.441	7311B	71.10	54.24	5200	6900
65	95	18	0.60	0.449	7012C	31.50	29.28	10000	13000
	95	18	0.60	0.406	7012A	28.80	26.98	6800	9100
	110	22	1.00	0.878	7212C	57.60	47.52	9200	12000
	110	22	1.00	0.787	7212A	55.35	47.04	6300	8400
	110	22	1.00	0.804	7212B	50.40	42.72	5400	7200
	130	31	2.10	1.680	7312C	99.00	70.50	8700	12000
70	130	31	1.10	1.729	7312A	88.20	68.64	5600	7500
	130	31	1.10	1.769	7312B	81.00	63.36	4800	6500
	100	18	0.60	0.483	7013C	33.30	33.12	9400	12000

ANGULAR CONTACT BALL BEARINGS



16

Principal dimensions(mm)				Kg	Bearing Number	Basic Load Rating (kN)		Limiting Speed(rpm)	
d	D	B	r _{min}	Weight		Dynamic Cr	Static Cor	Grease	Oil
65	100	18	0.6	0.445	7013A	30.15	30.24	6400	8600
	120	23	1.0	1.130	7213C	63.00	52.80	8600	11000
	120	23	1.0	1.020	7213A	63.45	55.68	5800	7700
	120	23	1.0	1.040	7213B	57.15	50.40	4900	6700
	140	33	2.1	2.060	7313C	112.00	80.50	8100	11000
70	140	33	1.1	2.110	7313A	99.90	78.72	5200	6900
	140	33	1.1	2.160	7313B	91.80	72.48	4500	6000
	110	20	0.6	0.688	7014C	42.30	41.28	8700	11000
	110	20	0.6	0.615	7014A	38.25	37.92	5900	7900
	125	24	1.0	1.230	7214C	68.40	57.60	7900	10000
75	125	24	1.0	1.100	7214A	68.85	60.96	5400	7200
	125	24	1.0	1.130	7214B	62.10	55.68	4700	6200
	150	35	2.1	2.500	7314C	126.00	92.00	7500	10000
	150	35	1.1	2.590	7314A	112.50	89.76	4800	6500
	150	35	1.1	2.640	7314B	102.60	82.56	4200	5500
80	115	20	0.6	0.739	7015C	43.20	43.68	8200	10000
	115	20	0.6	0.652	7015A	39.15	39.84	5500	7400
	130	25	1.0	1.351	7215C	71.55	62.88	7400	9500
	130	25	1.0	1.181	7215A	71.10	65.76	5000	6700
	130	25	1.0	1.211	7215B	64.35	59.52	4300	5700
85	160	37	2.1	3.090	7315C	137.00	104.00	7000	9300
	160	37	1.1	3.121	7315A	122.40	101.76	4600	6000
	160	37	1.1	3.181	7315B	112.50	93.60	3900	5100
	125	22	0.6	0.958	7016C	52.92	53.28	7600	10000
	125	22	0.6	0.872	7016A	48.15	48.48	5200	6900
90	140	26	1.0	1.622	7216C	83.70	74.40	6900	9200
	140	26	1.0	1.452	7216A	80.10	72.96	4800	6300
	140	26	1.0	1.482	7216B	72.45	66.72	4100	5400
	170	39	2.1	3.550	7316C	149.00	117.00	6500	8700
	170	39	1.1	3.702	7316A	132.30	114.24	4300	5600
95	170	39	1.1	3.782	7316B	121.50	104.64	3600	4800
	130	22	0.6	1.005	7017C	54.00	56.16	7200	9500
	130	22	0.6	0.909	7017A	49.05	51.36	4800	6600
	150	28	1.0	2.036	7217C	93.60	86.88	6600	8600
	150	28	1.0	1.825	7217A	89.55	84.96	4500	5900
100	150	28	1.0	1.865	7217B	81.00	77.28	3800	5000
	180	41	3.0	4.180	7317C	161.00	130.00	6200	8200
	180	41	1.1	4.326	7317A	143.10	127.68	4000	5300
	180	41	1.1	4.415	7317B	131.40	117.12	3400	4600
	140	24	1.0	1.332	7018C	64.35	66.24	6700	9000

ANGULAR CONTACT BALL BEARINGS



17

Principal dimensions(mm)				Kg	Bearing Number	Basic Load Rating (kN)		Limiting Speed(rpm)	
d	D	B	r _{min}	Weight		Dynamic Cr	Static Cor	Grease	Oil
90	140	24	1.0	1.183	7018A	58.50	60.96	4700	6200
	160	30	1.0	2.501	7218C	110.70	100.80	6200	8200
	160	30	1.0	2.243	7218A	106.20	98.88	4200	5600
	160	30	1.0	2.285	7218B	96.30	90.24	3600	4800
	190	43	3.0	4.880	7318C	183.00	158.00	5800	7800
95	190	43	1.1	5.054	7318A	153.90	141.12	3800	5000
	190	43	1.1	5.164	7318B	140.40	129.60	3200	4300
	145	24	1.0	1.411	7019C	66.15	70.08	6500	8600
	145	24	1.0	1.422	7019A	60.30	64.32	4400	5800
	170	32	1.1	3.041	7219C	125.10	115.20	5800	7700
100	170	32	1.1	2.673	7219A	119.70	113.28	3900	5200
	170	32	1.1	2.733	7219B	108.90	102.72	3300	4500
	200	45	3.0	5.650	7319C	166.00	174.00	5500	7300
	200	45	1.1	5.822	7319A	164.70	155.52	3500	4800
	200	45	1.1	5.974	7319B	150.30	143.04	3000	4000
105	150	24	1.0	1.455	7020C	67.95	73.92	6100	8200
	150	24	1.0	1.473	7020A	61.65	67.68	4200	5500
	180	34	1.1	3.643	7220C	130.50	121.92	5500	7300
	180	34	1.1	3.211	7220A	129.60	120.96	3700	4900
	180	34	1.1	3.272	7220B	117.00	109.44	3200	4300
110	215	47	3.0	6.900	7320C	222.00	207.00	5200	6900
	215	47	1.1	7.284	7320A	186.30	185.28	3300	4500
	215	47	1.1	7.423	7320B	171.00	170.88	2900	3800