

ANGULAR CONTACT BALL BEARINGS SINGLE/MATCHED MOUNTINGS Bore Diameter 85 – 100 mm

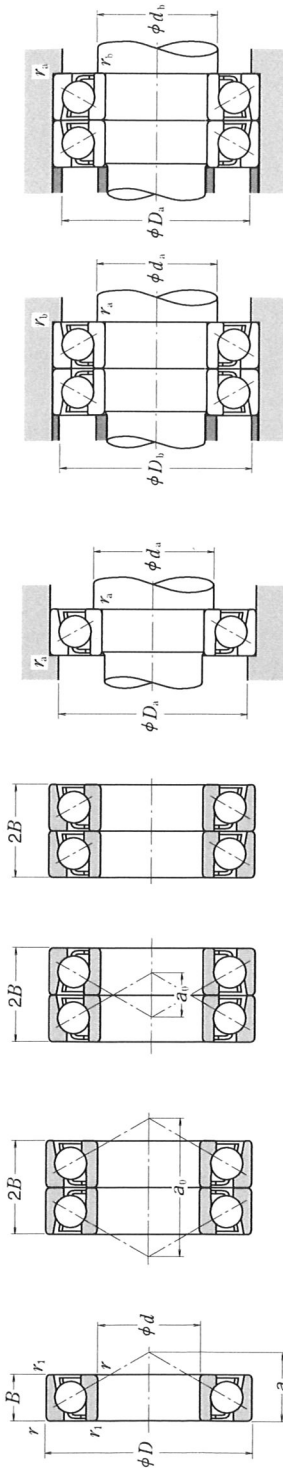
Dynamic Equivalent Load $P = X F_r + Y F_a$

Contact Angle C _{or}	e	Single DT		DB or DF	
		$F_r/F_a > Y$	$F_r/F_a < Y$	$F_r/F_a > Y$	$F_r/F_a < Y$
0°/16°	0.38	1	0	1	1
15°	0.40	1	0	1	1
15°	0.43	1	0	1	1
15°	0.46	1	0	1	1
15°	0.47	1	0	1	1
15°	0.48	1	0	1	1
15°	0.50	1	0	1	1
15°	0.52	1	0	1	1
15°	0.55	1	0	1	1
25°	0.68	1	0	1	1
30°	0.80	1	0	1	1
40°	1.14	1	0	1	1

Static Equivalent Load $P_0 = X_0 F_r + Y_0 F_a$

Contact Angle	Single DT		DB or DF	
	X_0	Y_0	X_0	Y_0
15°	0.5	0.46	1	0.92
25°	0.5	0.38	1	0.76
30°	0.5	0.33	1	0.66
40°	0.5	0.26	1	0.52

*For r , use 2 for DB, DF and 1 for DT



d	D	B	Boundary Dimensions (mm)		Basic Load Ratings (Single)	Factor	Limiting Speeds (1)		Eff. Load Centers (mm)	Abutment and Fillet Dimensions (mm)		Mass (kg)	Bearing Numbers (2)		Basic Load Ratings (Matched)		Limiting Speeds (2) (Matched)		Load Center Spacings (mm)		Abutment and Fillet Dimensions (mm)	
			r _{min}	r _{max}	C ₁₀	f ₀	Grease	Oil		d _a	D _a		Single	Standard	C ₁	C ₂	Grease	Oil	DB	DF	d _h (2)	D _h (2)
85	120	18	1.1	0.6	36 500	16.5	6 700	9 000	32.9	92	113	0.541	7917 A5	(M)	59 500	77 000	5 300	7 500	65.8	29.8	—	115
	120	18	1.1	0.6	39 000	16.5	8 000	11 000	22.7	92	113	0.534	7917 C	(M)	63 000	81 500	6 300	9 000	45.5	9.5	—	115
	130	22	1.1	0.6	56 500	15.9	4 300	5 600	42.0	92	123	0.913	7017 A	W	91 500	112 000	3 400	4 500	84.1	40.1	90	125
	130	22	1.1	0.6	60 000	15.9	7 500	10 000	25.4	92	123	1.01	7017 C	(M)	98 000	117 000	6 000	8 500	50.8	6.8	—	125
	130	28	2	1	103 000	—	3 800	5 300	47.9	95	140	1.83	7217 B	W	167 000	178 000	3 000	4 300	95.8	39.8	91	144
	150	28	2	1	93 000	—	2 800	3 800	63.3	95	140	1.87	7217 B	W	151 000	162 000	2 200	3 000	126.6	70.6	91	144
	150	28	2	1	96 000	—	3 800	5 600	63.3	95	140	1.75	7217 BEA	T85	—	—	3 200	4 500	126.6	70.6	91	144
	150	28	2	1	107 000	14.7	6 700	9 500	29.7	95	140	2.04	7217 C	(M)	174 000	181 000	5 600	7 500	59.5	3.5	—	144
	180	41	3	1.1	159 000	—	2 600	3 600	58.8	99	166	2.5	7317 A	W	258 000	265 000	2 200	2 800	117.5	35.5	92	173
	180	41	3	1.1	146 000	—	2 400	3 200	76.1	99	166	2.5	7317 B	W	236 000	244 000	1 900	2 600	152.2	70.2	92	173
90	120	18	1.1	0.6	39 500	15.7	7 100	9 500	27.4	99	131	1.34	7918 A5	(M)	64 000	87 000	5 000	7 100	68.1	32.1	—	120
	125	18	1.1	0.6	41 500	15.7	6 300	8 500	34.1	97	118	1	7918 C	(M)	67 500	92 000	6 000	8 500	48.8	10.8	—	120
	140	24	1.5	1	67 500	—	3 800	5 300	45.2	99	131	1.5	7018 A	W	109 000	133 000	3 200	4 300	90.4	42.4	96	134
	140	24	1.5	1	71 500	—	3 600	4 800	51.1	100	150	2	7018 C	(M)	116 000	138 000	5 600	8 000	54.8	6.8	—	134
	160	30	2	1	107 000	—	2 600	3 400	67.4	100	150	2	7218 B	W	173 000	188 000	2 000	2 800	102.2	42.2	96	154
	160	30	2	1	109 000	—	3 600	5 300	67.4	100	150	2	7218 BEA	T85	—	—	2 800	4 000	152.2	70.2	92	173
	160	30	2	1	123 000	14.6	6 300	9 000	31.7	100	150	2	7218 C	(M)	198 000	209 000	5 300	7 100	63.5	3.5	—	154
	190	43	3	1.1	171 000	—	2 600	3 400	61.9	104	176	2.5	7318 A	W	277 000	294 000	2 000	2 800	123.8	37.8	97	183
	190	43	3	1.1	156 000	—	2 200	3 000	80.2	104	176	2.5	7318 B	W	254 000	270 000	1 800	2 400	160.5	74.5	97	183
	190	43	3	1.1	169 000	—	3 200	4 500	80.2	104	176	2.5	7318 BEA	T85	—	—	2 600	3 600	160.5	74.5	97	183
95	130	18	1.1	0.6	40 000	16.7	6 000	8 500	35.2	102	123	1	7919 A5	(M)	64 500	91 000	4 800	6 700	70.5	34.5	—	125
	130	18	1.1	0.6	42 500	16.7	7 100	10 000	24.1	102	123	1	7919 C	(M)	68 500	96 000	5 600	8 000	48.1	12.1	—	125
	145	24	1.5	1	67 000	—	4 500	6 300	46.6	104	136	1.5	7019 A	W	109 000	134 000	3 800	5 000	93.3	45.3	—	139
	145	24	1.5	1	73 500	15.9	6 700	9 000	28.1	104	136	1.5	7019 C	(M)	119 000	146 000	5 300	7 500	56.1	8.1	—	139
	170	32	2.1	1.1	128 000	—	3 400	4 500	54.2	107	158	2	7219 A	W	208 000	221 000	2 600	3 600	108.5	44.5	102	163
	170	32	2.1	1.1	116 000	—	2 400	3 200	71.6	107	158	2	7219 B	W	188 000	202 000	1 900	2 600	143.2	79.2	102	163
	170	32	2.1	1.1	123 000	—	3 400	5 000	71.6	107	158	2	7219 BEA	T85	—	—	2 800	4 000	143.2	79.2	102	163
	170	32	2.1	1.1	133 000	14.6	6 000	8 500	33.7	107	158	2	7219 C	(M)	216 000	224 000	4 800	6 700	67.5	3.5	—	163
	200	45	3	1.1	183 000	—	2 400	3 200	65.1	109	186	2.5	7319 A	W	297 000	325 000	1 900	2 600	130.2	40.2	102	193
	200	45	3	1.1	167 000	—	2 200	3 000	84.3	109	186	2.5	7319 B	W	272 000	298 000	1 700	2 400	168.7	78.7	102	193
100	140	20	1.1	0.6	47 500	16.5	5 600	8 000	38.0	107	133	1	7920 A5	(M)	77 000	103 000	4 500	6 300	76.0	36.0	—	135
	140	20	1.1	0.6	50 000	16.5	6 700	9 000	26.1	107	133	1	7920 C	(M)	81 500	108 000	5 300	7 500	52.2	12.2	—	135
	150	24	1.5	1	68 500	—	4 500	6 000	48.1	109	141	1.5	7020 A	W	111 000	141 000	3 600	5 000	96.2	48.2	—	144
	150	24	1.5	1	70 500	—	5 600	8 000	38.0	107	133	1	7920 A5	(M)	77 000	103 000	4 500	6 300	76.0	36.0	—	135
	150	24	1.5	1	70 500	—	6 700	9 000	26.1	107	133	1	7920 C	(M)	81 500	108 000	5 300	7 500	52.2	12.2	—	135

Notes (1) For applications operating near the limiting speed, refer to Page C077.

(2) The suffixes A, A5, B, and C represent contact angles of 30°, 25°, 40°, and 15° respectively.

(3) For bearings marked — in the column for d_h, d_s and r_s for shafts are d_h (min) and r_s (max) respectively.

Note (1) (M) in the column of cage symbols are usually omitted from the bearing number.