

ANGULAR CONTACT BALL BEARINGS SINGLE/MATCHED MOUNTINGS Bore Diameter 25 – 40 mm

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

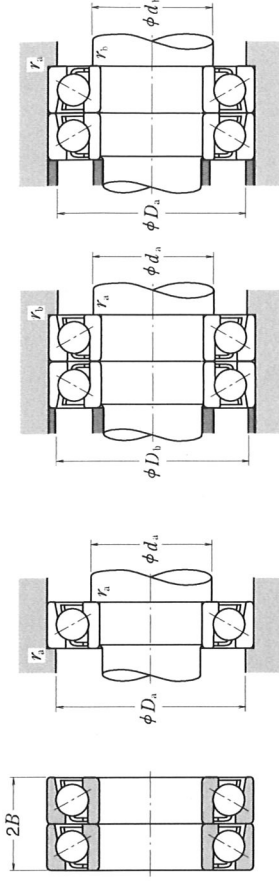
Contact Angle	$i_1 F_{a1}$ C ₁	Single, DT				DB or DF			
		$F_r/F_a \leq e$	$F_r/F_a > e$	$F_r/F_a \leq e$	$F_r/F_a > e$	$F_r/F_a \leq e$	$F_r/F_a > e$	$F_r/F_a \leq e$	$F_r/F_a > e$
		X	Y	X	Y	X	Y	X	Y
	0.178	0.38	0	0.44	1.47	1	1.65	0.72	2.39
	0.357	0.40	1	0	0.44	1.40	1	1.57	0.72
	0.714	0.43	1	0	0.44	1.30	1	1.46	0.72
15°	1.07	0.45	1	0	0.44	1.23	1	1.38	0.72
	1.43	0.47	1	0	0.44	1.19	1	1.34	0.72
	2.14	0.50	1	0	0.44	1.12	1	1.26	0.72
	3.57	0.55	1	0	0.44	1.02	1	1.14	0.72
	5.45	0.56	1	0	0.44	1.00	1	1.12	0.72
25°	—	0.68	1	0	0.41	0.87	1	0.92	0.67
	—	0.80	1	0	0.39	0.76	1	0.78	0.63
30°	—	1.14	1	0	0.35	0.57	1	0.55	0.57
40°	—	—	—	—	—	—	—	—	—

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

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	X_0	Y_0	X_0	Y_0
15°	0.5	0.46	1	0.92	0.5	0.46	1	0.92
25°	0.5	0.38	1	0.76	0.5	0.38	1	0.76
30°	0.5	0.33	1	0.66	0.5	0.33	1	0.66
40°	0.5	0.26	1	0.52	0.5	0.26	1	0.52

Abutment and Fillet Dimensions (mm)



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 (3) (Matched)		Load Center Spacings (mm)		Abutment and Fillet Dimensions (mm)						
d	D	B	r	r ₁	C _r	C _{0r}	f ₀	Grease	Oil	a	d _a	r _a	7500	10000	15000	Single	Standard	Option	C _r	C _{0r}	Grease	Oil	DB	DF	d _a (3)	D _b	r _a (3)	max.
25	62	17	1.1	0.6	24 400	14 600	—	7 500	10 000	26.7	32	55	1	0.241	—	7305 B	W	(M), T	39 500	29 300	6 000	8 000	53.5	19.5	30	57	0.6	
	62	17	1.1	0.6	27 200	14 900	—	10 000	15 000	26.8	32	55	1	0.229	—	*7305 BEA	T85	MR, T7	—	—	8 500	12 000	53.5	19.5	30	57	0.6	
	47	9	0.3	0.15	7 850	5 950	—	18 000	24 000	13.5	32.5	44.5	0.3	0.050	—	7906 A5	TYN	(M), T	12 800	11 900	14 000	19 000	27.0	9.0	—	45.8	0.15	
	47	9	0.3	0.15	8 300	6 250	15.9	22 000	28 000	9.7	32.5	44.5	0.3	0.049	—	7906 C	TYN	(M), T	13 500	12 500	17 000	24 000	19.3	1.3	—	45.8	0.15	
	55	13	1	0.6	14 500	10 100	—	11 000	14 000	18.8	36	49	1	0.116	—	7006 A	W	(M), T, TYN	23 600	20 200	8 500	12 000	37.5	11.5	35	50	0.6	
30	55	13	1	0.6	15 100	10 300	14.9	19 000	26 000	12.2	36	49	1	0.115	—	7006 C	TYN	W, (M), T	24 600	20 500	15 000	22 000	24.4	1.6	—	50	0.6	
	62	16	1	0.6	22 500	14 800	—	9 500	13 000	21.3	36	56	1	0.197	—	7206 A	W	(M), T, TYN	36 500	29 500	8 000	11 000	42.6	10.6	35	57	0.6	
	62	16	1	0.6	23 500	13 500	—	7 100	9 500	27.3	36	56	1	0.202	—	7206 B	W	(M), T	33 500	27 000	5 600	7 500	54.6	22.6	35	57	0.6	
	62	16	1	0.6	23 700	14 300	—	10 000	14 000	27.3	36	56	1	0.194	—	*7206 BEA	T85	MR, T7	—	—	8 000	11 000	54.6	22.6	35	57	0.6	
	62	16	1	0.6	23 000	14 700	13.9	18 000	24 000	14.2	36	56	1	0.197	—	7206 C	TYN	W, (M), T	37 500	29 300	14 000	20 000	28.3	3.7	—	57	0.6	
	72	19	1.1	0.6	33 500	20 900	—	7 100	9 500	24.2	37	65	1	0.346	—	7306 A	W	(M), T	54 500	41 500	5 600	7 500	48.4	10.4	35	67	0.6	
	72	19	1.1	0.6	31 000	19 300	—	6 300	8 500	30.9	37	65	1	0.354	—	7306 B	W	(M), T	50 500	38 500	5 000	7 100	61.8	23.8	35	67	0.6	
	72	19	1.1	0.6	36 500	20 600	—	9 000	13 000	30.9	37	65	1	0.336	—	*7306 BEA	T85	MR, T7	—	—	7 100	10 000	61.8	23.8	35	67	0.6	
	35	55	10	0.6	0.3	11 400	8 700	—	15 000	20 000	15.5	40	50	0.6	0.075	—	7907 A5	TYN	(M), T	18 600	17 400	12 000	17 000	31.0	11.0	—	52.5	0.3
		55	10	0.6	0.3	12 100	9 150	15.7	18 000	24 000	11.0	40	50	0.6	0.075	—	7907 C	TYN	(M), T	19 600	18 300	14 000	20 000	22.1	2.1	—	52.5	0.3
62		14	1	0.6	13 300	13 400	—	9 000	13 000	21.0	41	56	1	0.153	—	7007 A	W	(M), T, TYN	29 700	26 800	7 500	10 000	42.0	14.0	40	57	0.6	
62		14	1	0.6	19 100	13 700	15.0	17 000	22 000	13.5	41	56	1	0.153	—	7007 C	TYN	W, (M), T	31 000	27 300	13 000	19 000	27.0	1.0	—	57	0.6	
72		17	1.1	0.6	29 700	20 100	—	8 500	12 000	23.9	42	65	1	0.287	—	7207 A	W	(M), T, TYN	48 500	40 000	6 700	9 500	47.9	13.9	40	67	0.6	
72		17	1.1	0.6	27 100	18 400	—	6 000	8 000	30.9	42	65	1	0.294	—	7207 B	W	(M), T	44 000	36 500	4 800	6 700	61.9	27.9	40	67	0.6	
72		17	1.1	0.6	32 500	19 600	—	8 500	12 000	30.9	42	65	1	0.271	—	*7207 BEA	T85	MR, T7	—	—	6 700	9 500	61.9	27.9	40	67	0.6	
72		17	1.1	0.6	30 500	19 900	13.9	15 000	20 000	15.7	42	65	1	0.320	—	7207 C	(M)	W, T, TYN	49 500	40 000	12 000	17 000	31.3	2.7	—	67	0.6	
80		21	1.5	1	40 000	26 300	—	6 300	8 500	27.1	44	71	1.5	0.464	—	7307 A	W	(M), T	65 000	52 500	5 000	6 700	54.2	12.2	41	74	1	
80		21	1.5	1	36 500	24 200	—	5 600	7 500	34.6	44	71	1.5	0.474	—	7307 B	W	(M), T	59 500	48 500	4 500	6 000	69.2	27.2	41	74	1	
80	21	1.5	1	40 500	24 400	—	8 000	11 000	34.6	44	71	1.5	0.451	—	*7307 BEA	T85	MR, T7	—	—	6 300	9 000	69.2	27.2	41	74	1		
40	62	12	0.6	0.3	14 300	11 200	—	14 000	18 000	17.9	45	57	0.6	0.110	—	7908 A5	TYN	(M), T	23 300	22 300	11 000	15 000	35.8	11.8	—	59.5	0.3	
	62	12	0.6	0.3	15 100	11 700	15.7	16 000	22 000	12.8	45	57	0.6	0.109	—	7908 C	TYN	(M), T	24 600	23 500	10 000	13 000	25.7	1.7	—	59.5	0.3	
	68	15	1	0.6	19 500	15 400	—	8 500	11 000	23.1	46	62	1	0.190	—	7008 A	W	(M), T, TYN	31 500	31 000	6 700	9 000	46.2	16.2	45	63	0.6	
	68	15	1	0.6	20 600	15 900	15.4	15 000	20 000	14.7	46	62	1	0.213	—	7008 C	(M)	W, T, TYN	33 500	32 000	12 000	17 000	29.5	0.5	—	63	0.6	
	80	18	1.1	0.6	35 500	25 100	—	7 500	10 000	26.3	47	73	1	0.375	—	7208 A	W	(M), T, TYN	57 500	50 500	6 000	8 500	52.6	16.6	45	75	0.6	
80	18	1.1	0.6	32 000	23 000	—	5 300	7 500	34.2	47	73	1	0.383	—	7208 B	W	(M), T	52 000	46 000	4 300	6 000	69.3	32.3	45	75	0.6		

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_a , d_1 , and r_a (min) and r_a (max) respectively.

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

The bearings denoted by an asterisk (*) are NSKHP5^W Angular contact ball bearings and the column of Duplex in

Bearing Numbers indicates the universal matching.