

ANGULAR CONTACT BALL BEARINGS

SINGLE/MATCHED MOUNTINGS

Bore Diameter 55 – 65 mm

BEARINGS TABLE

NSK

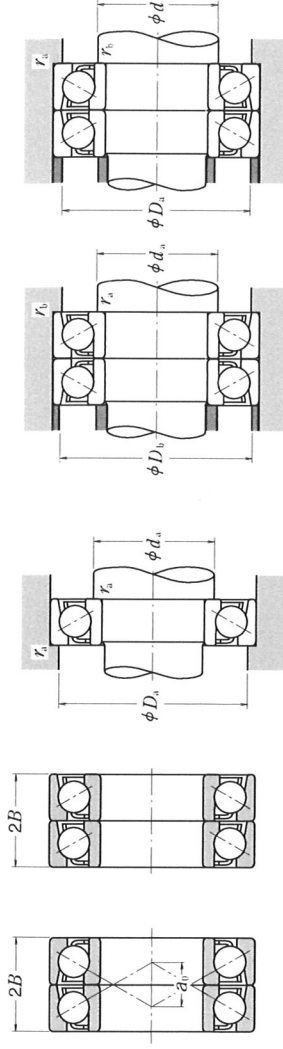
Dynamic Equivalent Load $P = X F_r + Y F_a$

Contact Angle	$i f_0 F_a / C_{90}$	Single DT				DB or DF	
		$F_r / F_a \leq e$	$F_r / F_a > e$	$F_r / F_a \leq e$	$F_r / F_a > e$	$F_r / F_a \leq e$	$F_r / F_a > e$
15°	0.178	0.38	1	0	0.44	1.47	1
	0.357	0.40	1	0	0.44	1.40	1
	0.7/4	0.43	1	0	0.44	1.30	1
	1.0/4	0.46	1	0	0.44	1.23	1
25°	1.43	0.47	1	0	0.44	1.19	1
	2.14	0.50	1	0	0.44	1.12	1
	3.5/7	0.55	1	0	0.44	1.02	1
	5.25	0.56	1	0	0.44	1.00	1
30°	—	0.68	1	0	0.41	0.87	1
	—	0.80	1	0	0.39	0.76	1
	—	1.14	1	0	0.35	0.57	1
	—	1.14	1	0	0.35	0.57	1

*For f_0 , 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
15°	0.5	0.46	1	0.52	0.52	0.46
25°	0.5	0.38	1	0.76	0.76	0.38
30°	0.5	0.33	1	0.66	0.66	0.33
40°	0.5	0.26	1	0.52	0.52	0.26



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 (1) (Matched)		Load Center Spacings (mm)		Abutment and Fillet Dimensions (mm)	
d	D	B	r	r1	f0	Grease	Oil	a	d1	d2	approx.	Single	Option	C1	C2	Grease	Oil	DB	DF	d3	d4
55	90	18	1.1	0.6	15.5	11 000	15 000	18.7	62	83	0.430	7011 C	(M)	55 500	57 500	9 000	12 000	37.4	1.4	—	85
	100	21	1.5	1	—	5 600	8 000	32.9	64	91	0.613	7211 A	(M)	83 000	79 000	4 500	6 300	65.7	23.7	61	94
	100	21	1.5	1	—	4 000	5 600	43.0	64	91	0.627	7211 B	(M)	75 000	72 000	3 400	4 500	86.0	44.0	61	94
	100	21	1.5	1	—	6 000	8 500	43.0	64	91	0.596	*7211 BEA	T85	—	—	4 500	6 700	86.0	44.0	61	94
	100	21	1.5	1	14.5	10 000	14 000	20.9	64	91	0.688	7211 C	(M)	86 000	80 000	8 500	12 000	41.7	0.3	—	94
	120	29	2	1	—	4 000	5 600	39.8	65	110	1.41	7311 A	(M)	139 000	123 000	3 200	4 300	79.5	21.5	61	114
	120	29	2	1	—	3 600	5 000	51.2	65	110	1.45	7311 B	(M)	128 000	113 000	3 000	4 000	102.4	44.4	61	114
	120	29	2	1	—	5 000	7 500	51.2	65	110	1.36	*7311 BEA	T85	—	—	4 000	6 000	102.4	44.4	61	114
	120	29	2	1	—	9 500	13 000	23.4	66	79	0.197	7912 A5	(M)	29 800	35 500	7 500	10 000	46.8	20.8	—	80
	120	29	2	1	—	11 000	15 000	16.2	66	79	0.194	7912 C	(M)	31 500	37 500	9 000	12 000	32.4	6.4	—	80
60	95	18	1.1	0.6	16.5	5 600	8 000	31.4	67	88	0.417	7012 A	(M)	53 500	59 000	4 500	6 300	62.7	26.7	65	90
	95	18	1.1	0.6	15.7	10 000	14 000	19.4	67	88	0.460	7012 C	(M)	57 000	61 500	8 500	12 000	38.8	2.8	—	90
	110	22	1.5	1	—	5 300	7 100	35.5	69	101	0.798	7212 A	(M)	100 000	97 500	4 300	6 000	71.1	27.1	66	104
	110	22	1.5	1	—	3 800	5 300	46.7	69	101	0.815	7212 B	(M)	91 000	89 000	3 000	4 000	93.3	49.3	66	104
	110	22	1.5	1	—	5 300	7 500	46.7	69	101	0.791	*7212 BEA	T85	—	—	4 300	6 000	93.3	49.3	66	104
	110	22	1.5	1	14.4	9 500	13 000	22.4	69	101	0.889	7212 C	(M)	104 000	98 500	7 500	11 000	44.8	0.3	—	104
	130	31	2.1	1.1	—	3 800	5 000	42.9	72	118	1.74	7312 A	(M)	159 000	143 000	3 000	4 000	85.9	23.9	67	123
	130	31	2.1	1.1	—	3 400	4 500	55.4	72	118	1.78	7312 B	(M)	146 000	131 000	2 600	3 800	110.7	48.7	67	123
	130	31	2.1	1.1	—	4 800	6 700	55.4	72	118	1.70	*7312 BEA	T85	—	—	3 800	5 600	110.7	48.7	67	123
	130	31	2.1	1.1	—	9 000	12 000	24.6	71	84	0.211	7913 A5	(M)	31 000	39 000	7 100	9 500	49.1	23.1	—	85
65	90	13	1	0.6	16.7	10 000	14 000	16.9	71	84	0.208	7913 C	(M)	33 000	41 000	8 500	12 000	33.8	7.3	—	85
	90	13	1	0.6	—	5 300	7 500	32.8	72	93	0.455	7013 A	(M)	56 500	65 500	4 300	6 000	65.6	29.6	70	95
	100	18	1.1	0.6	15.9	10 000	13 000	20.0	72	93	0.493	7013 C	(M)	60 500	68 500	8 000	11 000	40.1	4.1	—	95
	120	23	1.5	1	—	4 800	6 700	38.2	74	111	1.03	7213 A	(M)	114 000	116 000	3 800	5 300	76.4	30.4	71	114
	120	23	1.5	1	—	3 400	4 800	50.3	74	111	1.05	7213 B	(M)	103 000	105 000	2 800	3 800	100.6	54.6	71	114
	120	23	1.5	1	—	4 800	7 100	50.3	74	111	1.01	*7213 BEA	T85	—	—	3 800	5 600	100.6	54.6	71	114
	120	23	1.5	1	14.6	9 000	12 000	23.9	74	111	1.14	7213 C	(M)	119 000	117 000	7 100	9 500	47.8	1.8	—	114
	140	33	2.1	1.1	—	3 600	4 800	46.1	77	128	2.12	7313 A	(M)	180 000	164 000	2 800	3 800	92.2	26.2	72	133
	140	33	2.1	1.1	—	3 200	4 300	59.5	77	128	2.17	7313 B	(M)	166 000	151 000	2 400	3 400	119.0	53.0	72	133
	140	33	2.1	1.1	—	4 300	6 300	59.5	77	128	2.09	*7313 BEA	T85	—	—	3 600	5 000	119.0	53.0	72	133

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

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

(3) For bearings marked — in the column for d_1 , d_2 and r_1 for shafts are d_1 (min) and r_1 (max) respectively.

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

Remark The bearings denoted by an asterisk (*) are NSK/HPS™ Angular contact ball bearings and the column of Duplex in Bearing Numbers indicates the universal matching.