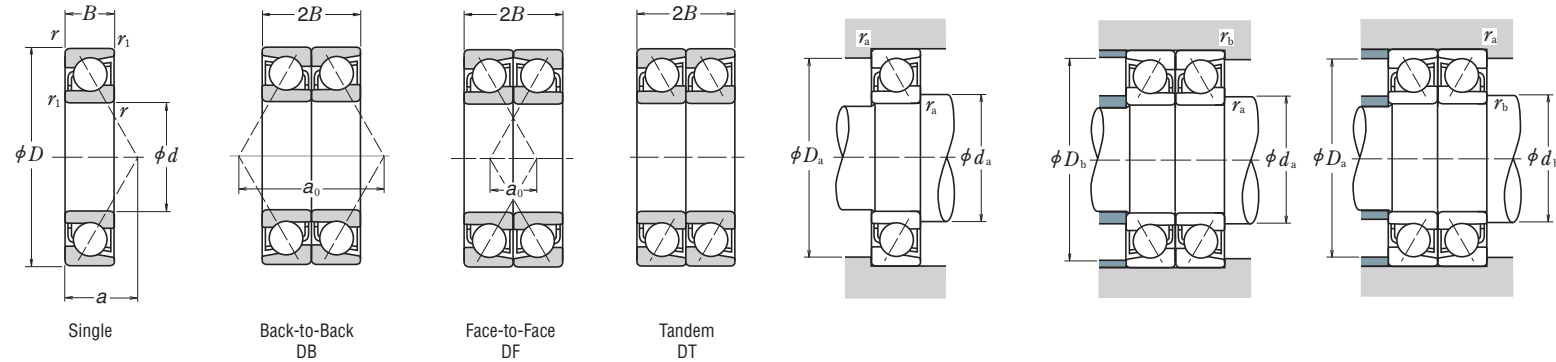


ANGULAR CONTACT BALL BEARINGS
SINGLE/MATCHED MOUNTINGS

Bore Diameter 55 – 65 mm


Dynamic Equivalent Load $P = XF_r + YF_a$

Contact Angle	$\frac{if_0 F_a}{C_{or}}$	e	Single, DT				DB or DF			
			$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
			X	Y	X	Y	X	Y	X	Y
30°	—	0.80	1	0	0.39	0.76	1	0.78	0.63	1.24
40°	—	1.14	1	0	0.35	0.57	1	0.55	0.57	0.93

 *For i , use 2 for DB and 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		Single or DT mounting When $F_r > 0.5 F_r + Y_0 F_a$ use $F_0 = F_r$
	X_0	Y_0	X_0	Y_0	
	X_0	Y_0	X_0	Y_0	
30°	0.5	0.33	1	0.66	
40°	0.5	0.26	1	0.52	

Boundary Dimensions (mm)					Basic Load Ratings (Single)		Factor	Limiting Speeds ⁽¹⁾ (min ⁻¹)		Eff. Load Center (mm) a	Abutment and Fillet Dimensions (mm)			Mass (kg) approx.	Bearing Designations ⁽²⁾ Cage Designation ⁽⁴⁾				Basic Load Ratings (Matched) ^(N)		Limiting Speeds ⁽¹⁾ (Matched) (min ⁻¹)		Load Center Spacings (mm) a_0		Abutment and Fillet Dimensions (mm)		
d	D	B	r min.	r_1 min.	C_r	C_{or}		Grease	Oil		d_a min.	D_a max.	r_a max.		Single	Standard	Option	Arrangement	C_r	C_{or}	Grease	Oil	DB	DF	d_b ⁽³⁾ min.	D_b max.	r_b ⁽³⁾ max.
55	100	21	1.5	1	56 000	39 500	—	5 600	8 000	32.9	64	91	1.5	0.613	7211 A	W	(M), T, TYN	DB DF DT	91 500	79 000	4 500	6 300	65.7	23.7	61	94	1
	100	21	1.5	1	51 000	36 000	—	4 000	5 600	43.0	64	91	1.5	0.627	7211 B	W	(M), T	DB DF DT	83 000	72 000	3 400	4 500	86.0	44.0	61	94	1
	100	21	1.5	1	54 000	37 000	—	6 000	8 500	43.0	64	91	1.5	0.596	*7211 BEA	T85	MR, T7	— — —	—	—	4 500	6 700	86.0	44.0	61	94	1
	120	29	2	1	94 500	61 500	—	4 000	5 600	39.8	65	110	2	1.41	7311 A	W	(M), T	DB DF DT	153 000	123 000	3 200	4 300	79.5	21.5	61	114	1
	120	29	2	1	93 500	58 500	—	5 000	7 500	51.2	65	110	2	1.36	*7311 BEA	T85	MR, T7	— — —	—	—	4 000	6 000	102.4	44.4	61	114	1
	120	29	2	1	93 500	58 500	—	3 600	5 000	51.2	65	110	2	1.42	7311 BEA	W	MR, T7	DB DF DT	152 000	117 000	3 000	4 000	102.4	44.4	61	114	1
	110	22	1.5	1	64 500	45 000	—	5 300	7 500	46.7	69	101	1.5	0.791	7012 A	W	(M), T, TYN	DB DF DT	59 000	59 000	4 500	6 300	62.7	26.7	65	90	0.6
	110	22	1.5	1	68 000	48 500	—	5 300	7 100	35.5	69	101	1.5	0.798	7212 A	W	(M), T, TYN	DB DF DT	110 000	97 500	4 300	6 000	71.1	27.1	66	104	1
	110	22	1.5	1	61 500	44 500	—	3 800	5 300	46.7	69	101	1.5	0.815	7212 B	W	(M), T	DB DF DT	100 000	89 000	3 000	4 000	93.3	49.3	66	104	1
	130	31	2.1	1.1	108 000	71 500	—	3 800	5 000	42.9	72	118	2	1.74	*7212 BEA	T85	MR, T7	— — —	—	—	4 300	6 000	93.3	49.3	66	104	1
	130	31	2.1	1.1	107 000	68 500	—	4 800	6 700	55.4	72	118	2	1.70	7312 A	W	(M), T	DB DF DT	175 000	143 000	3 000	4 000	85.9	23.9	67	123	1
	130	31	2.1	1.1	107 000	68 500	—	3 400	4 500	55.4	72	118	2	1.77	*7312 BEA	T85	MR, T7	— — —	—	—	3 800	5 600	110.7	48.7	67	123	1
65	100	18	1.1	0.6	38 500	33 000	—	5 300	7 500	32.8	72	93	1	0.455	7013 A	W	(M), T, TYN	DB DF DT	62 000	65 500	4 300	6 000	65.6	29.6	70	95	0.6
	120	23	1.5	1	77 500	58 000	—	4 800	6 700	38.2	74	111	1.5	1.03	7213 A	W	(M), T, TYN	DB DF DT	126 000	116 000	3 800	5 300	76.4	30.4	71	114	1
	120	23	1.5	1	70 000	52 500	—	3 400	4 800	50.3	74	111	1.5	1.05	7213 B	W	(M), T	DB DF DT	114 000	105 000	2 800	3 800	100.6	54.6	71	114	1
	120	23	1.5	1	73 500	53 500	—	4 800	7 100	50.3	74	111	1.5	1.01	*7213 BEA	T85	MR, T7	— — —	—	—	3 800	5 600	100.6	54.6	71	114	1
	140	33	2.1	1.1	122 000	82 000	—	3 600	4 800	46.1	77	128	2	2.12	7313 A	W	(M), T	DB DF DT	198 000	164 000	2 800	3 800	92.2	26.2	72	133	1
	140	33	2.1	1.1	119 000	77 000	—	4 300	6 300	59.5	77	128	2	2.09	*7313 BEA	T85	MR, T7	— — —	—	—	3 600	5 000	119.0	53.0	72	133	1
	140	33	2.1	1.1	119 000	77 000	—	3 200	4 300	59.5	77	128	2	2.17	7313 BEA	W	MR, T7	DB DF DT	193 000	154 000	2 400	3 400	119.0	53.0	72	133	1
	120	23	1.5	1	73 500	53 500	—	4 800	7 100	50.3	74	111	1.5	1.01													
	140	33	2.1	1.1	122 000	82 000	—	3 600	4 800	46.1	77	128	2	2.12													
	140	33	2.1	1.1	119 000	77 000	—	4 300	6 300	59.5	77	128	2	2.09													
	140	33	2.1	1.1	119 000	77 000	—	3 200	4 300	59.5	77	128	2	2.17													

- Notes** ⁽¹⁾ For applications operating near the limiting speed, refer to Page C077.
⁽²⁾ Suffixes A and B represent contact angles of 30° and 40° respectively.
⁽³⁾ Use the values of d_a (min) and r_a (max) for bearings with “—” in the d_b column.

- Note** ⁽⁴⁾ Cage designation (M) is usually omitted from the bearing designation.
Remark Bearings with an asterisk (*) are high-accuracy angular contact ball bearings. In arrangements, they are limited to SU universal matching types. See Page C073 for details.