

New 40° Angular Contact Ball Bearings

In addition to the quality and performance customers already enjoy, NSK now offers a new, higher capacity universal mounting series for greater convenience and longer bearing life.



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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
40°	—	1.14	1	0	0.35	0.57	1	0.55	0.57	0.93

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
40°	0.5	0.26	1	0.52

Single or DT mounting. When $F_r > 0.5F_r + Y_0 F_a$ use $P_0 = F_r$

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

Features

- Higher capacity and longer life compared to our conventional types
- Universal mounting, single row, angular contact ball bearings with various clearances and preload classes available
- Cage molded from a redesigned glass fiber reinforced polyamide 46 resin



Bearing Nomenclature

Example: **7310 B EA T85 SU L**

Angular contact ball bearing series

40° contact angle

Higher capacity

Polyamide 46 resin cage

Universal mounting

Accuracy
No suffix: ISO Class 0
P6: ISO Class 6
P5: ISO Class 5

Preload symbol
N: Clearance (larger than X)
X: Clearance
L: Light preload
M: Medium preload
H: Heavy preload

Face control for 40° angular contact bearings

Bore Diameter (mm)		Axial Clearance (+) / Axial Interference (-) (Total for two bearings face to face or back to back) (μm)									
over	d include	Suffix SUN min.	Suffix SUN max.	Suffix SUX min.	Suffix SUX max.	Suffix SUL min.	Suffix SUL max.	Suffix SUM min.	Suffix SUM max.	Suffix SUH min.	Suffix SUH max.
10	30	16	36	-2	18	-12	8	-16	4	-20	0
30	50	16	40	-2	18	-12	8	-18	2	-22	-2
50	80	22	46	-2	22	-14	6	-22	-2	-28	-8

Remark: These values are under measuring load.

Bearing Numbers	Boundary Dimensions (mm)					Basic Load Ratings (N)		Abutment and Fillet Dimensions (mm)					
	d	D	B	r min.	r_1 min.	C_r dynamic	C_{or} static	d_a min.	D_a max.	r_a max.	d_b min.	D_b max.	r_b max.
7201BEA	12	32	10	0.6	0.3	7 750	3 750	17	27	0.6	14.5	29.5	0.3
7301BEA	12	37	12	1	0.6	10 500	4 950	18	31	1	17	32	0.6
7202BEA	15	35	11	0.6	0.3	9 300	4 800	20	30	0.6	17.5	32.5	0.3
7302BEA	15	42	13	1	0.6	13 600	6 900	21	36	1	20	37	0.6
7203BEA	17	40	12	0.6	0.3	11 000	6 100	22	35	0.6	19.5	37.5	0.3
7303BEA	17	47	14	1	0.6	16 000	8 300	23	41	1	22	42	0.6
7204BEA	20	47	14	1	0.6	14 800	8 150	26	41	1	25	42	0.6
7304BEA	20	52	15	1.1	0.6	18 900	10 500	27	45	1	25	47	0.6
7205BEA	25	52	15	1	0.6	16 700	10 200	31	46	1	30	47	0.6
7305BEA	25	62	17	1.1	0.6	25 900	14 900	32	55	1	30	57	0.6
7206BEA	30	62	16	1	0.6	22 600	14 300	36	56	1	35	57	0.6
7306BEA	30	72	19	1.1	0.6	34 500	20 600	37	65	1	35	67	0.6
7207BEA	35	72	17	1.1	0.6	31 000	19 600	42	65	1	40	67	0.6
7307BEA	35	80	21	1.5	1	38 500	24 400	44	71	1.5	41	74	1
7208BEA	40	80	18	1.1	0.6	36 500	24 500	47	73	1	45	75	0.6
7308BEA	40	90	23	1.5	1	50 500	33 000	49	81	1.5	46	84	1
7209BEA	45	85	19	1.1	0.6	38 500	27 100	52	78	1	50	80	0.6
7309BEA	45	100	25	1.5	1	59 500	39 500	54	91	1.5	51	94	1
7210BEA	50	90	20	1.1	0.6	40 000	29 700	57	83	1	55	85	0.6
7310BEA	50	110	27	2	1	74 500	50 500	60	100	2	56	104	1
7211BEA	55	100	21	1.5	1	49 000	37 000	64	91	1.5	61	94	1
7311BEA	55	120	29	2	1	85 000	58 500	65	110	2	61	114	1
7212BEA	60	110	22	1.5	1	59 000	45 000	69	101	1.5	66	104	1
7312BEA	60	130	31	2.1	1.1	97 500	68 500	72	118	2	67	123	1
7213BEA	65	120	23	1.5	1	66 500	53 500	74	111	1.5	71	114	1
7313BEA	65	140	33	2.1	1.1	108 000	77 000	77	128	2	72	133	1
7214BEA	70	125	24	1.5	1	72 000	58 500	79	116	1.5	76	119	1
7314BEA	70	150	35	2.1	1.1	118 000	87 500	82	138	2	77	143	1
7215BEA	75	130	25	1.5	1	75 000	63 500	84	121	1.5	81	124	1
7315BEA	75	160	37	2.1	1.1	127 000	98 500	87	148	2	82	153	1
7216BEA	80	140	26	2	1	83 500	70 000	90	130	2	86	134	1
7316BEA	80	170	39	2.1	1.1	138 000	110 000	92	158	2	87	163	1

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