

HPS™ ANGULAR CONTACT BALL BEARINGS FOR INDUSTRIAL MACHINERY



Take advantage of a new standard of high performance with HPS™ angular contact ball bearings from NSK. Optimal internal design results in reduced operating costs, increased efficiency, improved reliability and highly accurate positioning.



High Performance and Precision

- ➔ **LONG LIFE**
Increase of bearing life by maximum 90%
- ➔ **HIGH SPEED**
Increase of limiting speeds by 15-20%
- ➔ **RUNNING ACCURACY P5**
Inner/outer ring radial runout
Inner/outer ring axial runout
- ➔ **DIMENSIONAL ACCURACY P6**
Bore, outer diameter, width
- ➔ **HIGH PERFORMANCE CAGES**
Brass, L-PPS, Nylon - 46 plastic cage

Universal Matching

- ➔ Universal standard matching
- ➔ Axial clearance range: 8-12 µm

Cage Design

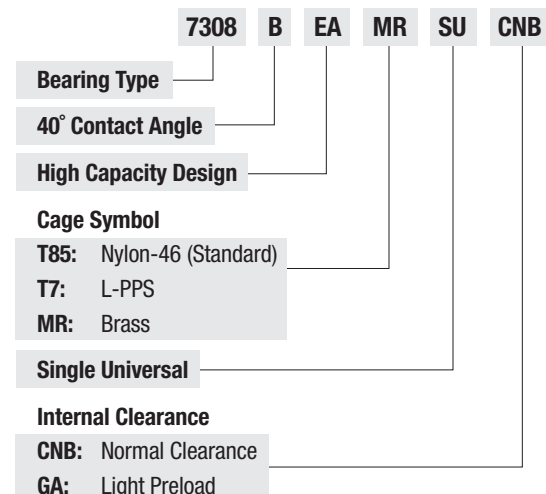
Series	Cages	NSK	SKF	FAG
72xx73xx	Clearance	Brass	BEAMRSUCNB	BECBY BMPUA
	Preload	Brass	BEAMRSUGA	BECBM BMPUO
	Clearance	Nylon-46 Standard	BEAT85SUCNSB	BEGAM BMPUL
	Preload	Nylon-46 Standard	BEAT85SUGA	BECBP ² TVPUA ²
		L-PPS ¹	T7	BEGAP ² TVPUL ²
				N/A N/A

¹ NSK Premium patented cage
² Basic Nylon-66 cage

Innovative Technology

- ➔ **DESIGN TECHNOLOGY**
Exclusive NSK design through advanced analytical technology
- ➔ **MANUFACTURING TECHNOLOGY**
The most advanced production system guarantees outstanding quality control
- ➔ **MATERIALS TECHNOLOGY**
State-of-the-art material technology through detailed analysis of raw material

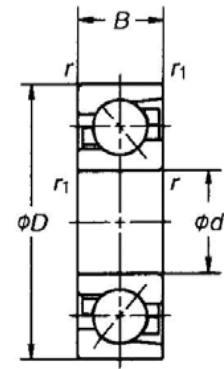
NSK References - Angular Contact



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Matched Measured Axial Clearance

Bore Diameter		CNB		GA	
Over	Incl.	Min.	Max.	Min.	Max.
mm		μm		μm	
12	18	17	25	-2	6
18	30	20	28	-2	6
30	50	24	32	-2	6
50	80	29	41	-3	9



Bearing Table

Bearing Numbers	Boundary Dimensions (mm)					Basic Load Ratings (N)		Limiting Speed (min ⁻¹)
	d	D	B	r (min)	r ₁ (min)	Cr	Cor	
7201BEA	12	32	10	0.6	0.3	8 150	3 750	30 000
7301BEA	12	37	12	1	0.6	11 100	4 950	26 000
7202BEA	15	35	11	0.6	0.3	9 800	4 800	26 000
7302BEA	15	42	13	1	0.6	14 300	6 900	22 000
7203BEA	17	40	12	0.6	0.3	11 600	6 100	22 000
7303BEA	17	47	14	1	0.6	16 800	8 300	20 000
7204BEA	20	47	14	1	0.6	15 600	8 150	19 000
7304BEA	20	52	15	1.1	0.6	19 800	10 500	18 000
7205BEA	25	52	15	1	0.6	17 600	10 200	17 000
7305BEA	25	62	17	1.1	0.6	27 200	14 900	15 000
7206BEA	30	62	16	1	0.6	23 700	14 300	14 000
7306BEA	30	72	19	1.1	0.6	36 500	20 600	13 000
7207BEA	35	72	17	1.1	0.6	32 500	19 600	12 000
7307BEA	35	80	21	1.5	1	40 500	24 400	11 000
7208BEA	40	80	18	1.1	0.6	38 500	24 500	11 000
7308BEA	40	90	23	1.5	1	53 000	33 000	10 000
7209BEA	45	85	19	1.1	0.6	40 500	27 100	10 000
7309BEA	45	100	25	1.5	1	62 500	39 500	9 000
7210BEA	50	90	20	1.1	0.6	42 000	29 700	9 500
7310BEA	50	110	27	2	1	78 000	50 500	8 000
7211BEA	55	100	21	1.5	1	51 500	37 000	8 500
7311BEA	55	120	29	2	1	89 000	58 500	7 500
7212BEA	60	110	22	1.5	1	61 500	45 000	7 500
7312BEA	60	130	31	2.1	1.1	102 000	68 500	6 700
7213BEA	65	120	23	1.5	1	70 000	53 500	7 100
7313BEA	65	140	33	2.1	1.1	114 000	77 000	6 300
7214BEA	70	125	24	1.5	1	75 500	58 500	6 700
7314BEA	70	150	35	2.1	1.1	124 000	87 500	6 000
7215BEA	75	130	25	1.5	1	78 500	63 500	6 300
7216BEA	80	140	26	2	1	87 500	70 000	6 000