NACHI



Angular Contact Ball Bearings

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● Design

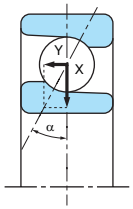
Angular Contact Ball Bearings can sustain combined loads of simultaneously acting radial and axial loads because they have a contact angle (α).

The contact angle is defined as the angle between the line joining the points of contact between the ball and the raceways in the radial plane.

1. Single-row Angular Contact Ball Bearings

These bearings are designed with three contact angle classifications as shown in Table 1.
Normally, contact angle A design and B design are fitted with a cage as shown in Table 2-1. High precision (JIS/ISO class 5 or higher) may be fitted with a machined cage of bronze or phenolic resin or a polyamide cage.
Contact angle C design are generally applied high precision, JIS (ISO) class 5 or higher, and are fitted with a machined phenolic resin cage or a polyamide cage.

Table 1. Contact Angle and Characteristics of Single-row Angular Contact Ball Bearings

Contact Angle Symbol	Example Bearing No.	Contact Angle (α)	Speed	Load capability comparison(2)		Cross section
				Radial Load Direction (X)	Axial Load Direction (Y)	
A	7205(1)	30°	—	—	—	
B	7205B	40°	Less	Less	Greater	
C	7205C	15°	Greater	Greater	Less	

Notes: (1) Contact angle symbol "A" is omitted.
(2) Axial load can be accommodated in one direction only.

Table 2-1. Angular Contact Ball Bearing Cage for Contact Angle Symbol A and B (For JIS/ISO class 0 or 6)

	Applicable Bore Diameter Number	
	Pressed Steel	Machined Brass
72, 72B	00～22	24～40
73, 73B	00～19	20～40

Table 2-2. Angular Contact Ball Bearing Cage for Contact Angle Symbol C

	Applicable Bore Diameter Number	
	Machined Synthetic Resin	Polyamide
70C	00～40	00～20
72C	00～26	00～20
73C	00～22	—