QJ 310 MA

Four-point contact ball bearing

Four-point contact ball bearings can accommodate high axial loads in both directions and small radial loads. They can operate at very high speeds and are more suitable than deep groove ball bearings for supporting large axial forces. The outer ring, with ball and cage assembly, can be mounted separately from the two inner ring halves.

- High-speed capability
- Accommodate high axial loads in both directions and small radial loads
- Require considerably less axial space than double row angular contact ball bearings

Overview

Dimensions

Bore diameter	50 mm
Contact angle	35 °
Outside diameter	110 mm
Width	27 mm

Performance

Basic dynamic load rating	118 kN
Basic static load rating	100 kN
Limiting speed	11 000 r/min
SKF performance class	SKF Explorer

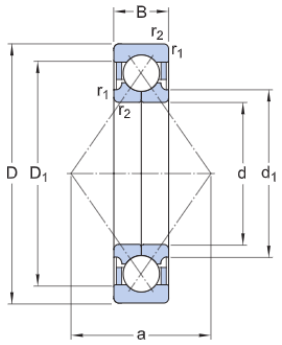
Properties

Axial internal clearance	CN
Cage	Machined metal
Coating	Without
Contact type	Four-point contact
Locating feature, bearing outer ring	None
Lubricant	None
Matched arrangement	No
Material, bearing	Bearing steel
Number of rows	1
Relubrication feature	Without
Ring type	Two-piece inner ring and one-piece outer ring

Sealing	Without
Universal matching bearing	No

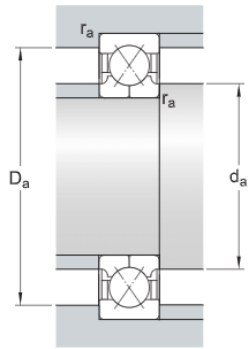
Technical Specification

SKF performance class	SKF Explorer



Dimensions

d	50 mm	Bore diameter
D	110 mm	Outside diameter
B	27 mm	Width
d_1	≈ 65 mm	Shoulder diameter inner ring
D_1	≈ 90 mm	Shoulder diameter outer ring/ inner diameter housing washer
a	56 mm	Distance pressure point(s)
$r_{1,2}$	min. 2 mm	Chamfer dimension inner ring



Abutment dimensions

d_a	min. 61 mm	Abutment diameter shaft
D_a	max. 99 mm	Abutment diameter housing
r_a	max. 2 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	118 kN
Basic static load rating	C_0	100 kN

Fatigue load limit	P_u	4.25 kN
Limiting speed		11 000 r/min
Calculation factor	A	0.029
Limiting value	e	0.95
Calculation factor	X	0.6
Calculation factor	Y_0	0.58
Calculation factor	Y_1	0.66
Calculation factor	Y_2	1.07

Mass

Mass bearing	1.35 kg

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