



QJ 309 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	45 mm
Contact angle	35 °
Outside diameter	100 mm
Width	25 mm

Performance

Basic dynamic load rating	100 kN
Basic static load rating	83 kN
Limiting speed	12 000 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

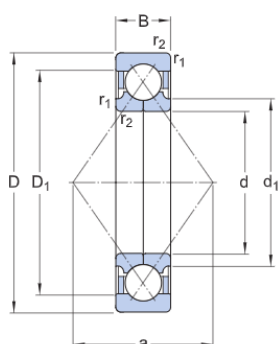
Universal
matching
bearing

No

Technical Specification

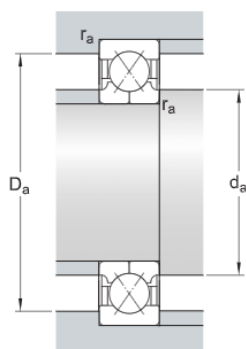
SKF performance class

SKF Explorer



Dimensions

d	45 mm	Bore diameter
D	100 mm	Outside diameter
B	25 mm	Width
d ₁	≈ 58 mm	Shoulder diameter inner ring
D ₁	≈ 81.2 mm	Shoulder diameter outer ring/ inner diameter housing washer
a	51 mm	Distance pressure point(s)
r _{1,2}	min. 1.5 mm	Chamfer dimension inner ring



Abutment dimensions

d _a	min. 54 mm	Abutment diameter shaft
D _a	max. 91 mm	Abutment diameter housing
r _a	max. 1.5 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	100 kN
Basic static load rating	C ₀	83 kN
Fatigue load limit	P _u	3.55 kN

Limiting speed		12 000 r/min
Calculation factor	A	0.0202
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		1.05 kg
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