



QJ 311 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	55 mm
Contact angle	35 °
Outside diameter	120 mm
Width	29 mm

Performance

Basic dynamic load rating	137 kN
Basic static load rating	118 kN
Limiting speed	10 000 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

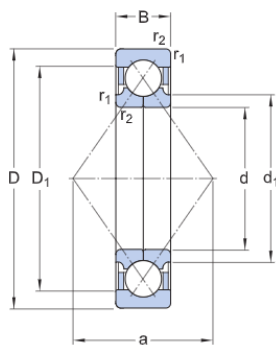
Universal
matching
bearing

No

Technical Specification

SKF performance class

SKF Explorer

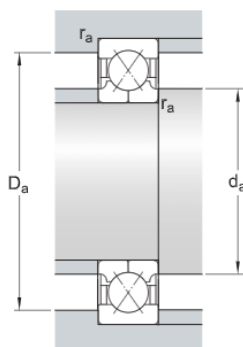


Dimensions

d	55 mm	Bore diameter
D	120 mm	Outside diameter
B	29 mm	Width
d ₁	≈ 70.5 mm	Shoulder diameter inner ring
D ₁	≈ 97.8 mm	Shoulder diameter outer ring/ inner diameter housing washer
a	61 mm	Distance pressure point(s)
r _{1,2}	min. 2 mm	Chamfer dimension inner ring

Abutment dimensions

d _a	min. 66 mm	Abutment diameter shaft
D _a	max. 109 mm	Abutment diameter housing
r _a	max. 2 mm	Fillet radius



Calculation data

Basic dynamic load rating	C	137 kN
Basic static load rating	C ₀	118 kN

Fatigue load limit	P_u	5 kN
Limiting speed		10 000 r/min
Calculation factor	A	0.0404
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	1.75 kg
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