

3309 A



Double row angular contact ball bearing

Double row angular contact ball bearings correspond, in their design and operation, to a pair of single row angular contact ball bearings in a back-to-back arrangement, while requiring less axial space. They can operate at high speeds and are more suitable than deep groove ball bearings for supporting large axial forces in both directions.

- High-speed capability
- Accommodate relatively high radial loads, high axial loads in both directions and tilting moments
- Suitable where a stiff bearing arrangement is required
- Require less axial space than equivalent pair of single row angular contact ball bearings

Overview

Dimensions

Bore diameter	45 mm
Outside diameter	100 mm
Width	39.7 mm
Contact angle	30 °

Performance

Basic dynamic load rating	75 kN
Basic static load rating	53 kN
Reference speed	7 500 r/min
Limiting speed	6 700 r/min
SKF performance class	SKF Explorer

Properties

Contact type	Normal contact (two-point contact)
Number of rows	2
Locating feature, bearing outer ring	None
Ring type	One-piece inner and outer rings
Cage	Sheet metal
Arrangement of contact angle (double-row bearing)	Back-to-back (O)
Matched arrangement	No
Universal matching bearing	No
Axial internal clearance	CN
Material, bearing	Bearing steel
Coating	Without

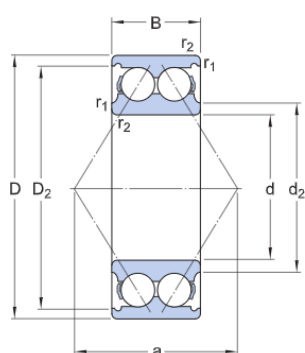
Sealing	Without
Lubricant	None
Relubrication feature	Without

Technical Specification

SKF performance class

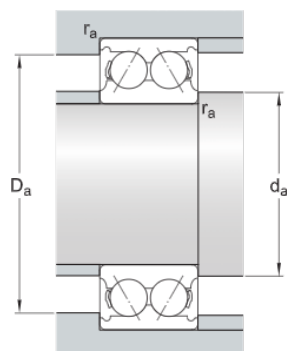
SKF Explorer

Dimensions



d	45 mm	Bore diameter
D	100 mm	Outside diameter
B	39.7 mm	Width
d ₂	≈ 55.6 mm	Recess diameter inner ring shoulder
D ₂	≈ 89.95 mm	Recess diameter outer ring shoulder
r _{1,2}	min. 1.5 mm	Chamfer dimension inner ring
a	58 mm	Distance pressure point(s)

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	75 kN
Basic static load rating	C ₀	53 kN
Fatigue load limit	P _u	2.24 kN
Reference speed		7 500 r/min

Limiting speed		6 700 r/min
Calculation factor	k_r	0.07
Limiting value	e	0.8
Calculation factor	X	0.63
Calculation factor	Y_0	0.66
Calculation factor	Y_1	0.78
Calculation factor	Y_2	1.24

Mass

Mass bearing	1.25 kg
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