



# 3309 A Double row angular contact ball bearing

## 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	No

matching bearing

Axial internal clearance	CN
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

# Technical Specification

SKF performance class

SKF Explorer

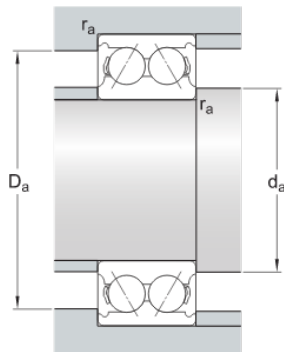


## Dimensions

d	45 mm	Bore diameter
D	100 mm	Outside diameter
B	39.7 mm	Width
$d_2$	$\approx 55.6$ mm	Recess diameter inner ring shoulder
$D_2$	$\approx 89.95$ 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	$k_f$	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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