



Image may differ from product. See technical specification for details.

## 3309 DMA

### Double row angular contact ball bearing with two-piece inner ring

Double row angular contact ball bearings, with two-piece inner ring, correspond to a pair of single row angular contact ball bearings in a back-to-back arrangement, while requiring less axial space than the equivalent pair of single row angular contact ball bearings. The two-

piece inner ring enables incorporation of a larger number of balls, with a larger contact angle, providing a high load carrying capacity, especially in the axial direction.

- Accommodate very high axial loads in both directions, radial loads, and tilting moments
- Suitable where a stiff bearing arrangement is required
- Separable design means outer ring with ball and cage assemblies can be mounted independently of the inner ring halves

Overview

Dimensions

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

Performance

Basic dynamic load rating	79.3 kN
Basic static load rating	69.5 kN
Reference speed	7 500 r/min
Limiting speed	6 300 r/min

Properties

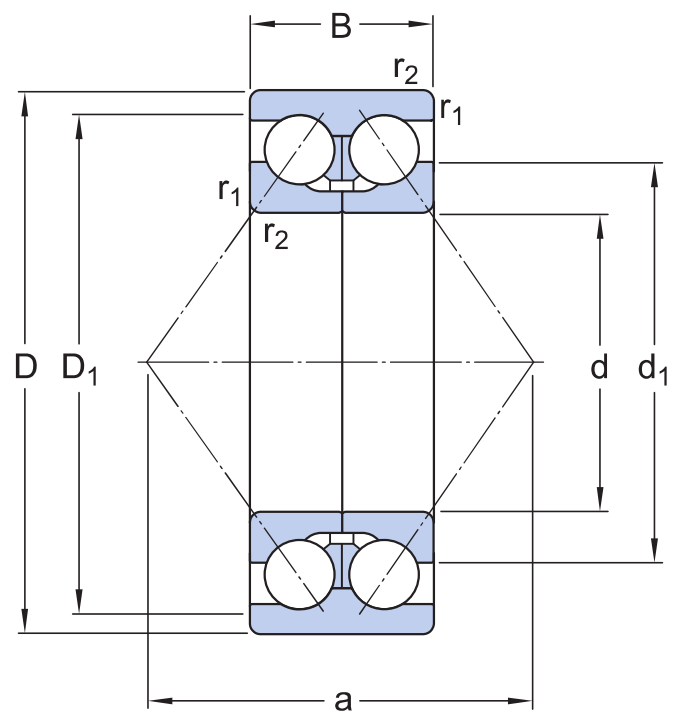
Contact type	Normal contact (two-point contact)
Number of rows	2
Locating feature, bearing outer ring	None
Ring type	Two-piece inner ring and one-piece outer ring
Cage	Machined metal
Arrangement of contact angle (double-row bearing)	Back-to-back (O)
Matched arrangement	No
Universal matching bearing	No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

Logistics

Product net weight	1.61 kg
eClass code	23-05-08-03
UNSPSC code	31171531

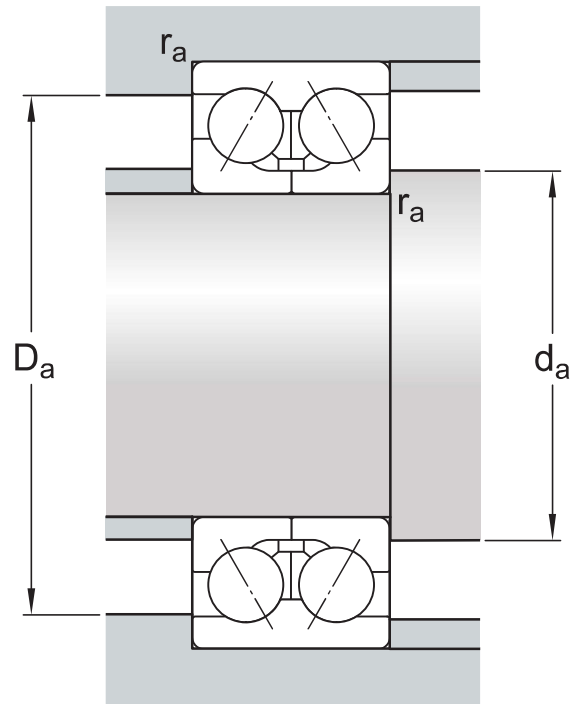


Technical specification



Dimensions

d	45 mm	Bore diameter
D	100 mm	Outside diameter
B	39.7 mm	Width
d <sub>1</sub>	≈ 70 mm	Shoulder diameter inner ring for two-piece inner ring
D <sub>1</sub>	≈ 86.35 mm	Shoulder diameter outer ring
r <sub>1,2</sub>	min. 1.5 mm	Chamfer dimension inner ring for two-piece inner ring
a	93 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	79.3 kN
Basic static load rating	$C_0$	69.5 kN
Fatigue load limit	$P_u$	3 kN
Reference speed		7 500 r/min
Limiting speed		6 300 r/min
Calculation factor	$k_r$	0.095
Limiting value	e	1.34
Calculation factor	X	0.54
Calculation factor	$Y_0$	0.44
Calculation factor	$Y_1$	0.47
Calculation factor	$Y_2$	0.81

## Tolerances and clearances

---

### GENERAL BEARING SPECIFICATIONS




- Tolerances: Normal, P6, P5
- Internal clearance: table, drawing no

## BEARING INTERFACES

- [Seat tolerances for standard conditions](#)
- [Tolerances and resultant fit](#)



More Information

<div> <b>Product details</b></div> <div><div><a href="#">Designs and variants</a></div><div><a href="#">General bearing specifications</a></div><div><a href="#">Loads</a></div><div><a href="#">Temperature limits</a></div><div><a href="#">Permissible speed</a></div><div><a href="#">Designation system</a></div></div>	<div><div> <b>Engineering information</b></div><div><div><a href="#">Principles of rolling bearing selection</a></div><div><a href="#">General bearing knowledge</a></div><div><a href="#">Bearing selection process</a></div><div><a href="#">Bearing interfaces</a></div><div><a href="#">Seat tolerances for standard conditions</a></div><div><a href="#">Selecting internal clearance or preload</a></div><div><a href="#">Lubrication</a></div><div><a href="#">Sealing, mounting and dismounting</a></div><div><a href="#">Bearing failure and how to prevent it</a></div></div></div>	<div><div> <b>Tools</b></div><div><div><a href="#">SKF Product select</a></div><div><a href="#">SimPro Quick</a></div><div><a href="#">Bearing Frequency Calculator</a></div><div><a href="#">LubeSelect for SKF greases</a></div><div><a href="#">Heater selection tool</a></div><div><a href="#">SKF mounting and dismounting instructions</a></div></div></div>
---	--	---



# Terms of use

By accessing and using this website / app owned and published by AB SKF (publ.) (556007-3495 · Gothenburg) ("SKF"), you agree to the following terms and conditions:

## Warranty Disclaimer and Limitation of Liability

Although every care has been taken to assure the accuracy of the information on this website / app, SKF provides this information "AS IS" and DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. You acknowledge that your use of this website / app is at your sole risk, that you assume full responsibility for all costs associated with use of this website / app, and that SKF shall not be liable for any direct, incidental, consequential, or indirect damages of any kind arising out of your access to, or use of the information or software made available on this website / app.

Any warranties and representations in this website / app for SKF products or services that you purchase or use will be subject to the agreed upon terms and conditions in the contract for such product or service.

Further, for non-SKF websites / apps that are referenced in our website / app or where a hyperlink appears, SKF makes no warranties concerning the accuracy or reliability of the information in these websites / apps and assumes no responsibility for material created or published by third parties contained therein. In addition, SKF does not warrant that this website / app or these other linked websites / apps are free from viruses or other harmful elements.

## Third Party Services

When viewing YouTube content via the SKF website(s) (i.e. using [YouTube API Services](#)), you agree to be bound by the [YouTube Terms of Service](#).

## Copyright

Copyright in this website / app copyright of the information and software made available on this website / app rest with SKF or its licensors. All rights are reserved. All licensed material will reference the licensor that has granted SKF the right to use the material. The information and software made available on this website / app may not be reproduced, duplicated, copied, transferred, distributed, stored, modified, downloaded or otherwise exploited for any commercial use without the prior written approval of SKF. However, it may be reproduced, stored and downloaded for use by individuals without prior written approval of SKF. Under no circumstances may this information or software be supplied to third parties.

This website /app includes certain images used under license from Shutterstock, Inc.

## Trademarks and Patents

All trademarks, brand names, and corporate logos displayed on the website / app are the property of SKF or its licensors, and may not be used in any way without prior written approval by SKF. All licensed trademarks published on this website / app reference the licensor that has granted SKF the right to use the trademark. Access to this website / app does not grant to the user any license under any patents owned by or licensed to SKF.

## Changes

SKF reserves the right to make changes or additions to this website / app at any time.