

Image may differ from product. See specification for details.

3304 ATN9

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	20 mm
Outside diameter	52 mm
Width	22.2 mm
Contact angle	30 °

Performance

Basic dynamic load rating	24.5 kN
Basic static load rating	15.6 kN
Reference speed	13 000 r/min
Limiting speed	13 000 r/min
SKF performance class	SKF Explorer

Properties

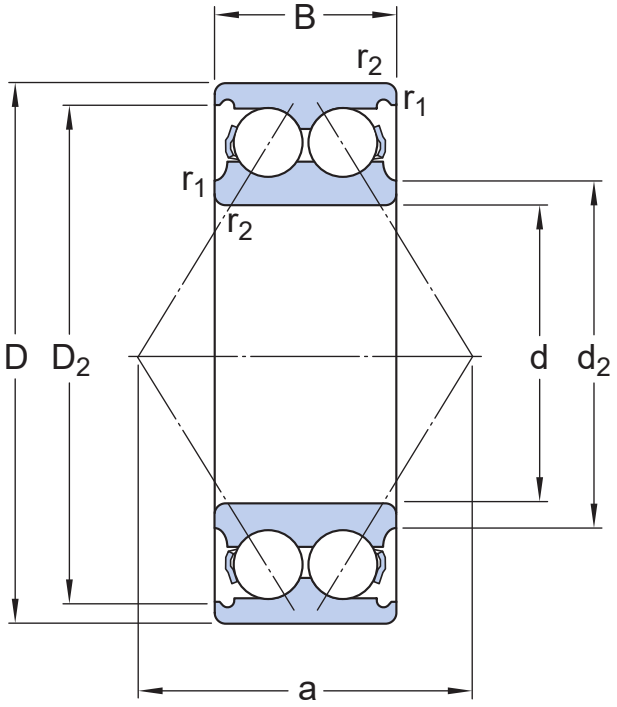
Contact type	Normal contact (two-point contact)
Number of rows	2
Locating feature, bearing outer ring	Without
Ring type	One-piece inner and outer rings
Cage	Non-metallic
Arrangement of contact angle (double-row bearing)	Back-to-back (O)
Matched arrangement	No
Universal matching bearing	No
Axial internal clearance	CN
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without
Indicative carbon footprint for new product	0.761 kg CO_2e

Logistics

Product net weight	0.211 kg

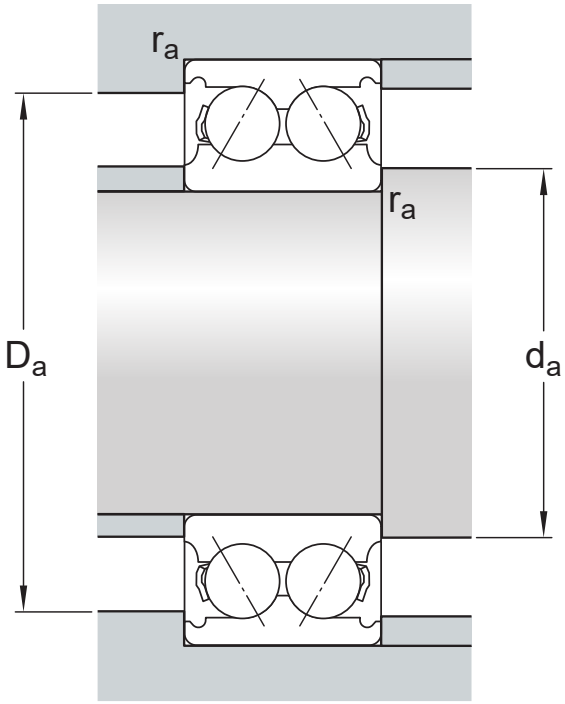
eClass code	23-05-08-03
UNSPSC code	31171531

Technical specification



Dimensions

d	20 mm	Bore diameter
D	52 mm	Outside diameter
B	22.2 mm	Width
d_2	≈ 29.9 mm	Recess diameter inner ring shoulder
D_2	≈ 43.95 mm	Recess diameter outer ring shoulder
$r_{1,2}$	min. 1.1 mm	Chamfer dimension inner ring
a	30 mm	Distance pressure point(s)



Abutment dimensions

d_a	min. 27 mm	Abutment diameter shaft
D_a	max. 45 mm	Abutment diameter housing
r_a	max. 1 mm	Fillet radius

Calculation data

SKF performance class		SKF Explorer
Basic dynamic load rating	C	24.5 kN
Basic static load rating	C_0	15.6 kN
Fatigue load limit	P_u	0.67 kN
Reference speed		13 000 r/min
Limiting speed		13 000 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

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

Product details

- Designs and variants
- General bearing specifications
- Loads
- Temperature limits
- Permissible speed
- Designation system

Engineering information

- Principles of rolling bearing selection
- General bearing knowledge
- Bearing selection process
- Bearing interfaces
- Seat tolerances for standard conditions
- Selecting internal clearance or preload
- Lubrication
- Sealing, mounting and dismounting
- Bearing failure and how to prevent it

Tools

- SKF Product select
- SimPro Quick
- Bearing Frequency Calculator
- LubeSelect for SKF greases
- Heater selection tool
- SKF mounting and dismounting instructions

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