



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

3205 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	25 mm
Outside diameter	52 mm
Width	20.6 mm
Contact angle	30 °

Performance

Basic dynamic load rating	22 kN
Basic static load rating	15.3 kN
Reference speed	12 000 r/min
Limiting speed	12 000 r/min
SKF performance class	SKF Explorer

Properties

Contact type	Normal contact (two-point contact)
Number of rows	2
Locating feature, bearing outer ring	None
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

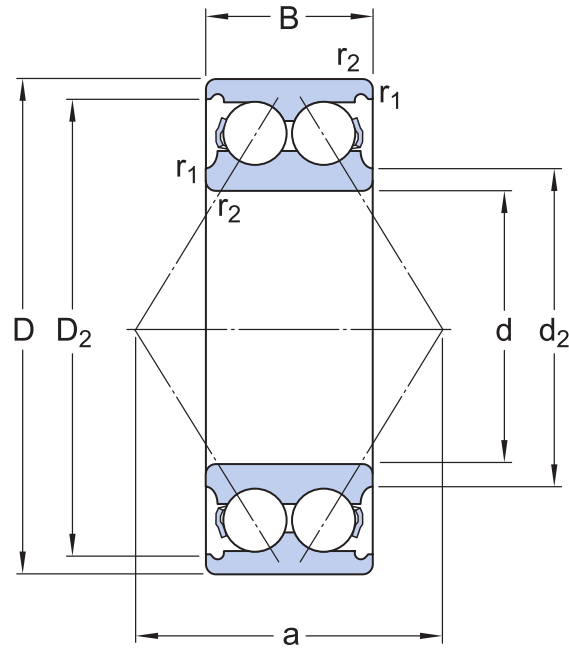
Logistics

Product net weight	0.169 kg
eClass code	23-05-08-03

UNSPSC code

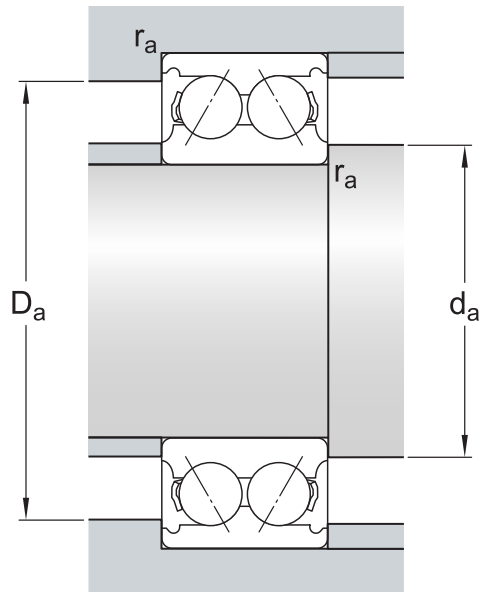
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Technical specification



Dimensions

d	25 mm	Bore diameter
D	52 mm	Outside diameter
B	20.6 mm	Width
d ₂	≈ 32.7 mm	Recess diameter inner ring shoulder
D ₂	≈ 45.9 mm	Recess diameter outer ring shoulder
r _{1,2}	min. 1 mm	Chamfer dimension inner ring
a	30 mm	Distance pressure point(s)






Abutment dimensions

d_a	min. 31 mm	Abutment diameter shaft
D_a	max. 46 mm	Abutment diameter housing
r_a	max. 1 mm	Fillet radius

Calculation data

SKF performance class		SKF Explorer
Basic dynamic load rating	C	22 kN
Basic static load rating	C_0	15.3 kN
Fatigue load limit	P_u	0.64 kN
Reference speed		12 000 r/min
Limiting speed		12 000 r/min
Calculation factor	k_r	0.06
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

More Information

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



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