

# 3203 A-2ZTN9/MT33



## Double row angular contact ball bearing with seals on both sides

Double row angular contact ball bearings, with seals on both sides, correspond to a pair of single row angular contact ball bearings in a back-to-back arrangement, while requiring less axial space. Depending on the sealing execution, 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
- Integral sealing prolongs bearing service life

## Overview

### Dimensions

Bore diameter	17 mm
Contact angle	30 °
Outside diameter	40 mm
Width	17.5 mm

### Performance

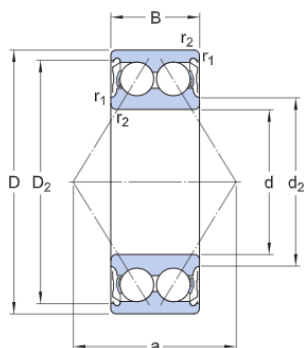
Basic dynamic load rating	14.3 kN
Basic static load rating	8.8 kN
Limiting speed	16 000 r/min
Reference speed	19 000 r/min

## Properties

Arrangement of contact angle (double-row bearing)	Back-to-back (0)
Axial internal clearance	CN
Cage	Non-metallic
Coating	Without
Contact type	Normal contact (two-point contact)
Locating feature, bearing outer ring	None
Lubricant	Grease
Matched arrangement	No
Material, bearing	Bearing steel

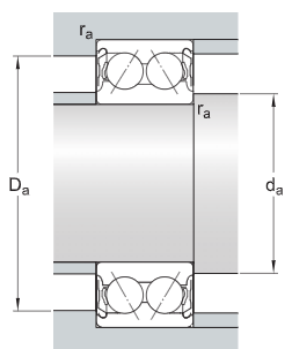
Number of rows	2
Relubrication feature	Without
Ring type	One-piece inner and outer rings
Sealing	Shield on both sides
Sealing type	Non-contact
Universal matching bearing	No

## Technical Specification



### Dimensions

d	17 mm	Bore diameter
D	40 mm	Outside diameter
B	17.5 mm	Width
d <sub>2</sub>	≈ 23.3 mm	Recess diameter inner ring shoulder
D <sub>2</sub>	≈ 34.95 mm	Recess diameter outer ring shoulder
r <sub>1,2</sub>	min. 0.6 mm	Chamfer dimension inner ring
a	23 mm	Distance pressure point(s)



### Abutment dimensions

d <sub>a</sub>	min. 21.4 mm	Abutment diameter shaft
d <sub>a</sub>	max. 23 mm	Abutment diameter shaft
D <sub>a</sub>	max. 35.6 mm	Abutment diameter housing
r <sub>a</sub>	max. 0.6 mm	Fillet radius

### Calculation data

Basic dynamic load rating	C	14.3 kN
Basic static load rating	C <sub>0</sub>	8.8 kN
Fatigue load limit	P <sub>u</sub>	0.365 kN
Reference speed		19 000 r/min
Limiting speed		16 000 r/min
Calculation factor	k <sub>r</sub>	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

## Mass

Mass bearing	0.096 kg
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