

# 6003/VA201

## Deep groove ball bearing for high temperature applications



Single row deep groove ball bearings for high temperature applications are designed for challenging operating conditions, with certain variants being capable of performing at temperatures as high as 350 °C (660 °F). They have increased radial internal clearances and use graphite-based lubricants that are optimized for operation at high temperatures. The entire surface of the bearings are manganese phosphate treated, which enhances adhesion of the lubricant to the metal and improves their running-in properties. As with deep groove ball bearings generally, they are particularly versatile, accommodate radial and axial loads in both directions, and are easy to mount.

- Optimized for operation at high temperatures – up to 350 °C (660 °F)
- Easily swapped with grease-lubricated bearings of corresponding ISO dimensions
- Increased reliability, reduced complexity and decreased environmental impact
- Typical benefits of single row deep groove ball bearings

## Overview

### Dimensions

Bore diameter	17 mm
Outside diameter	35 mm
Width	10 mm

### Performance

Basic dynamic load rating	6.37 kN
Basic static load rating	3.25 kN
Limiting speed	170 r/min
Maximum operating temperature	250 °C

## Properties

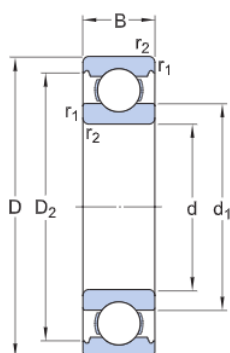
Bore type	Cylindrical
Cage	Sheet metal
Coating	Coated
Filling slots	Without
Locating feature, bearing outer ring	None
Lubricant	Solid lubricant
Matched arrangement	No
Material, bearing	High temperature steel
Number of rows	1
Radial internal clearance	Multiples of C5

Relubrication feature	Without
Sealing	Without

# Technical Specification

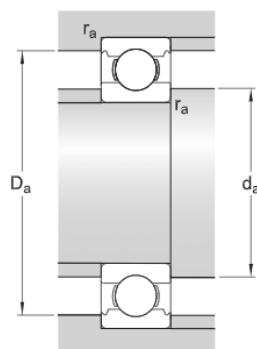
Running in required

Yes



## Dimensions

d	17 mm	Bore diameter
D	35 mm	Outside diameter
B	10 mm	Width
d <sub>1</sub>	≈ 23 mm	Shoulder diameter inner ring
D <sub>2</sub>	≈ 31.2 mm	Recess diameter outer ring shoulder
r <sub>1,2</sub>	min. 0.3 mm	Chamfer dimension



## Abutment dimensions

d <sub>a</sub>	min. 19 mm	Abutment diameter shaft
D <sub>a</sub>	max. 33 mm	Abutment diameter housing
r <sub>a</sub>	max. 0.3 mm	Fillet radius

## Calculation data

Basic dynamic load rating	C	6.37 kN
Basic static load rating	C <sub>0</sub>	3.25 kN
Limiting speed		170 r/min
Operating temperature	T	max. 250 °C

## Mass

Mass bearing	0.038 kg
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