6210/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	50 mm
Outside diameter	90 mm
Width	20 mm

Performance

Basic dynamic load rating	37.1 kN
Basic static load rating	23.2 kN
Limiting speed	60 r/min
Maximum operating temperature	250 °C

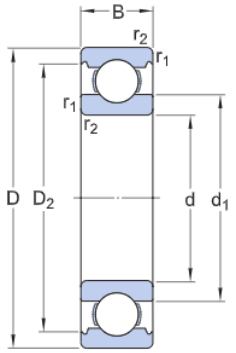
Properties

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

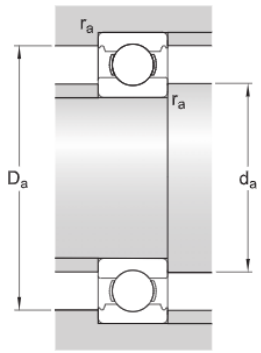
Technical Specification

Running in required	Yes



Dimensions

d	50 mm	Bore diameter
D	90 mm	Outside diameter
B	20 mm	Width
d_1	≈ 62.51 mm	Shoulder diameter inner ring
D_2	≈ 81.61 mm	Recess diameter outer ring shoulder
$r_{1,2}$	min. 1.1 mm	Chamfer dimension



Abutment dimensions

d_a	min. 57 mm	Abutment diameter shaft
D_a	max. 83 mm	Abutment diameter housing
r_a	max. 1 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	37.1 kN
Basic static load rating	C_0	23.2 kN
Limiting speed		60 r/min
Operating temperature	T	max. 250 °C

Mass

Mass bearing	0.45 kg

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