

6311-2Z/VA208



Deep groove ball bearing for high temperature applications with shields on both sides

Single row deep groove ball bearings for high temperature applications, with shields on both sides, are designed for challenging operating conditions, with certain variants being capable of performing at temperatures as high as 350 °C (660 °F). They have larger radial internal clearances and use graphite-based lubricants that enable operation at high temperatures. They are lubricated for the life of the bearing and the entire surface of the bearings and shields 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
- Integral sealing prolongs bearing service life
- Typical benefits of single row deep groove ball bearings

Overview

Dimensions

Bore diameter	55 mm
Outside diameter	120 mm
Width	29 mm

Performance

Basic dynamic load rating	74.1 kN
Basic static load rating	45 kN
Limiting speed	50 r/min
Maximum operating temperature	350 °C

Properties

Filling slots	Without
Number of rows	1
Locating feature, bearing outer ring	None
Bore type	Cylindrical
Cage	Non-metallic
Matched arrangement	No
Radial internal clearance	Multiples of C5
Material, bearing	High temperature steel
Coating	Coated
Sealing	Shield on both sides

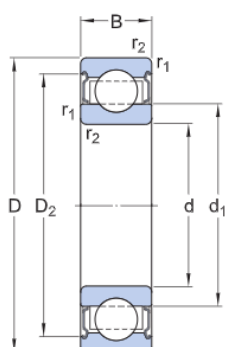
Sealing type	Non-contact
Lubricant	Solid lubricant
Relubrication feature	Without

Technical Specification

Running in required

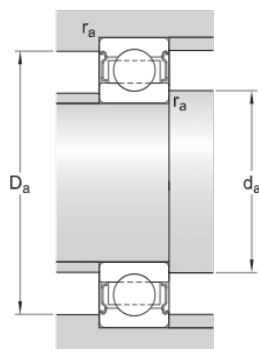
No

Dimensions



d	55 mm	Bore diameter
D	120 mm	Outside diameter
B	29 mm	Width
d_1	≈ 75.34 mm	Shoulder diameter inner ring
D_2	≈ 103.7 mm	Recess diameter outer ring shoulder
$r_{1,2}$	min. 2 mm	Chamfer dimension

Abutment dimensions



d_a	min. 66 mm	Abutment diameter shaft
d_a	max. 75.2 mm	Abutment diameter shaft
D_a	max. 109 mm	Abutment diameter housing
r_a	max. 2 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	74.1 kN
Basic static load rating	C_0	45 kN
Limiting speed		50 r/min
Operating temperature	T	max. 350 °C

Mass

Mass bearing

1.42 kg

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