

6311-2RS1/HC5C3WT



Hybrid deep groove ball bearing with seals on both sides

Hybrid single row deep groove ball bearings with seals on both sides have rings made of bearing steel and rolling elements made of bearing grade silicon nitride (Si₃N₄), which make the bearings electrically insulating. The integral sealing can significantly prolong bearing service life because it keeps lubricant in the bearings and contaminants out. The silicon nitride elements not only provide protection from electric current damage but also, when compared to same-sized bearings with steel rolling elements, provide enhanced bearing performance, extended bearing service life, higher speed capability, high wear-resistance, high bearing stiffness, reduced risk of smearing and false brinelling, and less sensitivity to temperature gradients, making them suitable for use in difficult conditions and contaminated environments.

- Protected against electric current damage
- Integral sealing prolongs bearing service life
- Especially suited for use in difficult conditions and contaminated environments
- 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	71.5 kN
Basic static load rating	45 kN
Limiting speed	3 800 r/min

Properties

Filling slots	Without
Number of rows	1
Locating feature, bearing outer ring	None
Bore type	Cylindrical
Cage	Sheet metal
Matched arrangement	No
Radial internal clearance	C3
Material, bearing	Hybrid
Coating	Without
Sealing	Seal on both sides
Sealing type	Contact

Lubricant

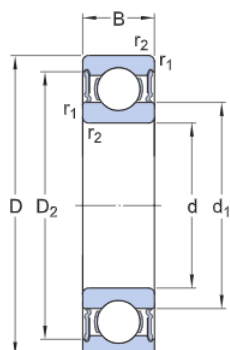
Grease

Relubrication feature

Without

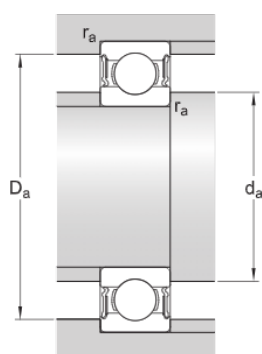
Technical Specification

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	≈ 104 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. 109 mm	Abutment diameter housing
r _a	max. 2 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	71.5 kN
Basic static load rating	C ₀	45 kN
Fatigue load limit	P _u	1.37 kN
Limiting speed		3 800 r/min
Calculation factor	k _r	0.03
Calculation factor	f ₀	13.1

Mass

Mass bearing	1.41 kg
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