



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	45 mm
Outside diameter	100 mm
Width	25 mm

Performance

Basic dynamic load rating	52.7 kN
Basic static load rating	31.5 kN
Limiting speed	4 500 r/min

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	C3
Material, bearing	Hybrid
Coating	Without
Sealing	Seal on both sides
Sealing type	Contact

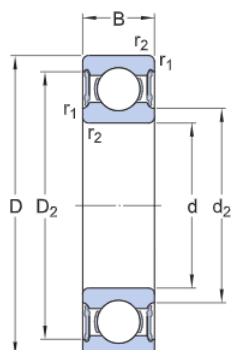
Lubricant

Grease

Relubrication feature

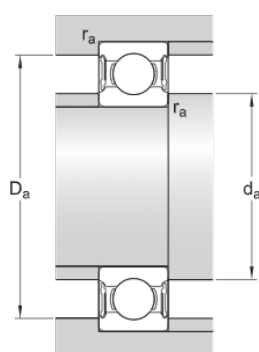
Without

Technical Specification



Dimensions

d	45 mm	Bore diameter
D	100 mm	Outside diameter
B	25 mm	Width
d_2	≈ 54 mm	Recess diameter inner ring shoulder
D_2	≈ 86.7 mm	Recess diameter outer ring shoulder
$r_{1,2}$	min. 1.5 mm	Chamfer dimension



Abutment dimensions

d_a	min. 54 mm	Abutment diameter shaft
d_a	max. 62.1 mm	Abutment diameter shaft
D_a	max. 91 mm	Abutment diameter housing
r_a	max. 1.5 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	52.7 kN
Basic static load rating	C_0	31.5 kN
Fatigue load limit	P_u	0.98 kN
Limiting speed		4 500 r/min
Calculation factor	k_T	0.03
Calculation factor	f_0	13

Mass

Mass bearing

0.71 kg

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