6213/HC5C3

Hybrid deep groove ball bearing

Hybrid single row deep groove ball bearings have rings made of bearing steel and rolling elements made of bearing grade silicon nitride (Si3N4), which make the bearings electrically insulating. Deep groove ball bearings are the most widely used bearing type, especially in electric motors. 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. These characteristics make them suitable for use in difficult conditions and contaminated environments.

- Protected against electric current damage
- Especially suited for use in difficult conditions and contaminated environments
- Typical benefits of single row deep groove ball bearings

Overview

Dimensions

Bore diameter	65 mm
Outside diameter	120 mm
Width	23 mm

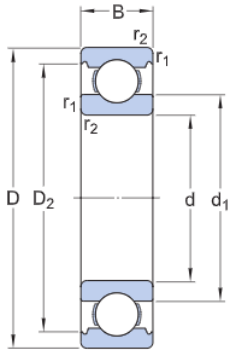
Performance

Basic dynamic load rating	55.9 kN
Basic static load rating	40.5 kN
Limiting speed	8 500 r/min
Reference speed	14 000 r/min

Properties

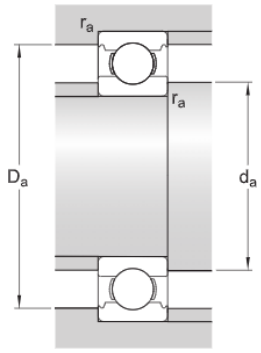
Bore type	Cylindrical
Cage	Sheet metal
Coating	Without
Filling slots	Without
Locating feature, bearing outer ring	None
Lubricant	None
Matched arrangement	No
Material, bearing	Hybrid
Number of rows	1
Radial internal clearance	C3
Relubrication feature	Without
Sealing	Without

Technical Specification



Dimensions

d	65 mm	Bore diameter
D	120 mm	Outside diameter
B	23 mm	Width
d_1	≈ 83.3 mm	Shoulder diameter inner ring
D_2	≈ 106 mm	Recess diameter outer ring shoulder
$r_{1,2}$	min. 1.5 mm	Chamfer dimension



Abutment dimensions

d_a	min. 74 mm	Abutment diameter shaft
D_a	max. 111 mm	Abutment diameter housing
r_a	max. 1.5 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	55.9 kN
Basic static load rating	C_0	40.5 kN
Fatigue load limit	P_u	1.25 kN
Reference speed		14 000 r/min
Limiting speed		8 500 r/min
Calculation factor	k_r	0.025
Calculation factor	f_0	14.7

Mass

Mass bearing	1.02 kg

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