

6203-2RSLTN9/HC5C3WT



Hybrid deep groove ball bearing with low-friction seals on both sides

Hybrid single row deep groove ball bearings with low-friction 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 low-friction seals provide better sealing effectiveness than shields and non-contact seals, thus providing significantly prolonged bearing service life, yet they can still operate at the same speeds as shields. 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
- Especially suited for use in difficult conditions and contaminated environments
- Typical benefits of single row deep groove ball bearings

Overview

Dimensions

Bore diameter	17 mm
Outside diameter	40 mm
Width	12 mm

Performance

Basic dynamic load rating	9.56 kN
Basic static load rating	4.75 kN
Limiting speed	20 000 r/min
Reference speed	45 000 r/min

Properties

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

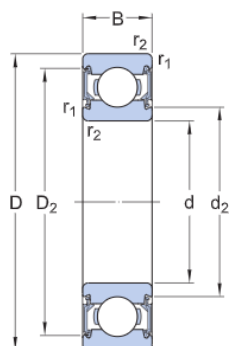
Sealing

Seal on both sides

Sealing type

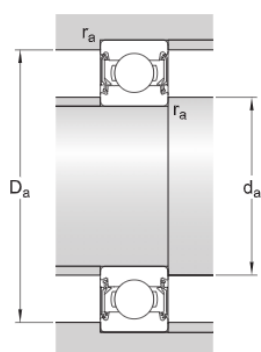
Low-friction

Technical Specification



Dimensions

d	17 mm	Bore diameter
D	40 mm	Outside diameter
B	12 mm	Width
d_2	≈ 22.2 mm	Recess diameter inner ring shoulder
D_2	≈ 35 mm	Recess diameter outer ring shoulder
$r_{1,2}$	min. 0.6 mm	Chamfer dimension



Abutment dimensions

d_a	min. 21.2 mm	Abutment diameter shaft
d_a	max. 22 mm	Abutment diameter shaft
D_a	max. 35.8 mm	Abutment diameter housing
r_a	max. 0.6 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	9.56 kN
Basic static load rating	C_0	4.75 kN
Fatigue load limit	P_u	0.146 kN
Reference speed		45 000 r/min
Limiting speed		20 000 r/min
Calculation factor	k_f	0.025
Calculation factor	f_0	13.1

Mass

Mass bearing

0.059 kg

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