

6003-2RSLTN9/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	35 mm
Width	10 mm

Performance

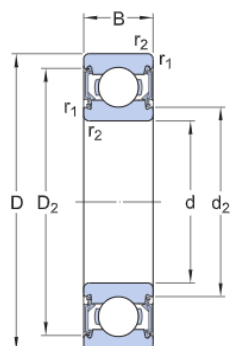
Basic dynamic load rating	6.05 kN
Basic static load rating	3.25 kN
Limiting speed	22 000 r/min
Reference speed	50 000 r/min

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

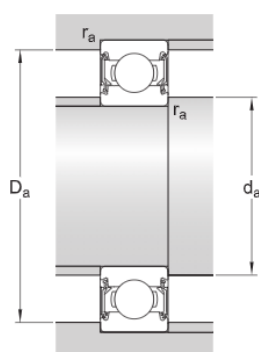
Relubrication feature	Without
Sealing	Seal on both sides
Sealing type	Low-friction

Technical Specification



Dimensions

d	17 mm	Bore diameter
D	35 mm	Outside diameter
B	10 mm	Width
d ₂	≈ 20.7 mm	Recess diameter inner ring shoulder
D ₂	≈ 31.4 mm	Recess diameter outer ring shoulder
r _{1,2}	min. 0.3 mm	Chamfer dimension



Abutment dimensions

d _a	min. 19 mm	Abutment diameter shaft
d _a	max. 20.5 mm	Abutment diameter shaft
D _a	max. 33 mm	Abutment diameter housing
r _a	max. 0.3 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	6.05 kN
Basic static load rating	C ₀	3.25 kN
Fatigue load limit	P _u	0.1 kN
Reference speed		50 000 r/min
Limiting speed		22 000 r/min
Calculation factor	k _r	0.025
Calculation factor	f ₀	14.4

Mass

Mass bearing	0.038 kg
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