

Image may differ from product. See technical specification for details.

6004-2RSLTN9/HC5C3WT

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

Hybrid ceramic 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, 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 ceramic rolling 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	20 mm
Outside diameter	42 mm
Width	12 mm

Performance

Basic dynamic load rating	9.36 kN
Basic static load rating	5 kN
Reference speed	43 000 r/min
Limiting speed	19 000 r/min

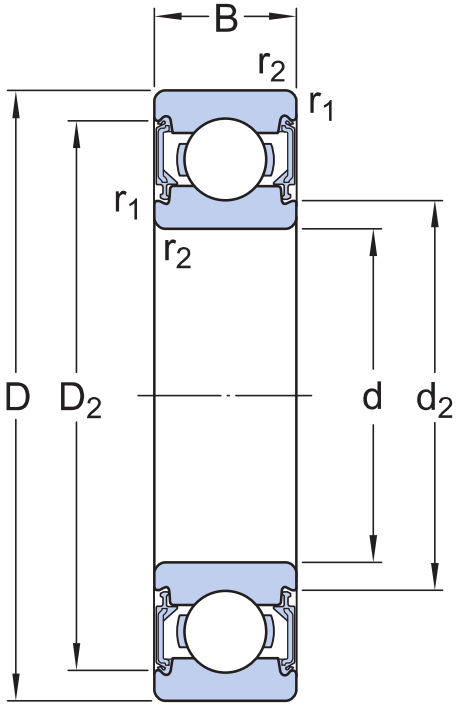
Properties

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 (ceramic balls)
Coating	Without
Sealing	Seal on both sides
Sealing type	Low-friction
Lubricant	Grease
Relubrication feature	Without

Logistics

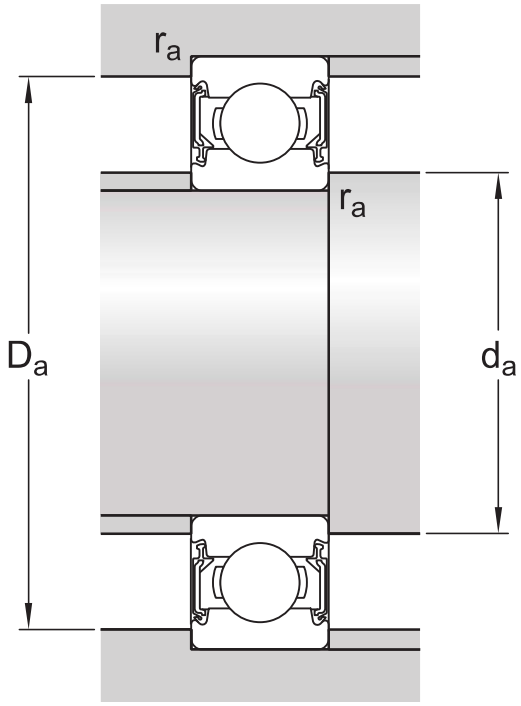
Product net weight	0.062 kg
eClass code	23-05-08-01
UNSPSC code	31171504

Technical specification



Dimensions

d	20 mm	Bore diameter
D	42 mm	Outside diameter
B	12 mm	Width
d_2	≈ 24.9 mm	Recess diameter inner ring shoulder
D_2	37.19 mm	Recess diameter outer ring shoulder
$r_{1,2}$	min. 0.6 mm	Chamfer dimension



Abutment dimensions

d_a	min. 23.2 mm	Abutment diameter shaft
d_a	max. 24.5 mm	Abutment diameter shaft
D_a	max. 38.8 mm	Abutment diameter housing
r_a	max. 0.3 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	9.36 kN
Basic static load rating	C_0	5 kN
Fatigue load limit	P_u	0.156 kN
Reference speed		43 000 r/min
Limiting speed		19 000 r/min
Calculation factor	k_r	0.025
Calculation factor	f_0	13.8

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal (metric), P6, P5, Normal (inch)
- Radial internal clearance: Classes C2 to C5

BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fits

More Information

Product details

- Single row deep groove ball bearings
- Stainless steel deep groove ball bearings
- Single row deep groove ball bearings with filling slots
- Double row deep groove ball bearings
- General bearing specifications
- Loads
- Temperature limits
- Permissible speed
- Designation system

Engineering information

- Principles of rolling bearing selection
- General bearing knowledge
- Bearing selection process
- Bearing interfaces
- Seat tolerances for standard conditions
- Selecting internal clearance
- Lubrication
- Sealing, mounting and dismounting
- Bearing failure and how to prevent it

Tools

- SKF Product select
- SimPro Quick
- Bearing Frequency Calculator
- LubeSelect for SKF greases
- Heater selection tool

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