

# 6205-2RSLTN9/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 (Si<sub>3</sub>N<sub>4</sub>), 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    | 25 mm |
| Outside diameter | 52 mm |
| Width            | 15 mm |

### Performance

|                           |              |
|---------------------------|--------------|
| Basic dynamic load rating | 14 kN        |
| Basic static load rating  | 7.8 kN       |
| Limiting speed            | 15 000 r/min |
| Reference speed           | 32 000 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      |

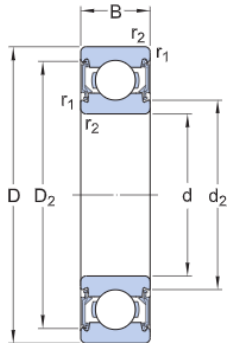
Sealing

Seal on both sides

Sealing type

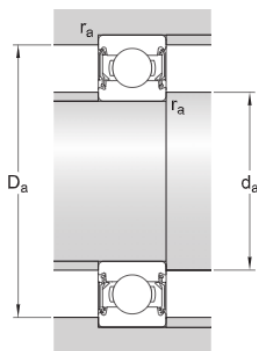
Low-friction

# Technical Specification



## Dimensions

|                  |           |                                     |
|------------------|-----------|-------------------------------------|
| d                | 25 mm     | Bore diameter                       |
| D                | 52 mm     | Outside diameter                    |
| B                | 15 mm     | Width                               |
| d <sub>2</sub>   | ≈ 31.8 mm | Recess diameter inner ring shoulder |
| D <sub>2</sub>   | ≈ 46.3 mm | Recess diameter outer ring shoulder |
| r <sub>1,2</sub> | min. 1 mm | Chamfer dimension                   |



## Abutment dimensions

|                |              |                           |
|----------------|--------------|---------------------------|
| d <sub>a</sub> | min. 30.6 mm | Abutment diameter shaft   |
| d <sub>a</sub> | max. 31.5 mm | Abutment diameter shaft   |
| D <sub>a</sub> | max. 46.4 mm | Abutment diameter housing |
| r <sub>a</sub> | max. 1 mm    | Fillet radius             |

## Calculation data

|                           |                |              |
|---------------------------|----------------|--------------|
| Basic dynamic load rating | C              | 14 kN        |
| Basic static load rating  | C <sub>0</sub> | 7.8 kN       |
| Fatigue load limit        | P <sub>u</sub> | 0.245 kN     |
| Reference speed           |                | 32 000 r/min |
| Limiting speed            |                | 15 000 r/min |
| Calculation factor        | k <sub>r</sub> | 0.025        |
| Calculation factor        | f <sub>0</sub> | 13.9         |

Mass

Mass bearing

0.13 kg

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