

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

# W 6003-2RS1

## Stainless steel deep groove ball bearing with integral sealing

Stainless steel single row deep groove ball bearing with seals or shields on both sides, provide greater chemical and corrosion resistance. As with deep groove ball bearings generally, they are particularly versatile, have low friction and are optimized for low noise and low vibration, which enables high rotational speeds. They accommodate radial and axial loads in both directions, are easy to mount, and require less maintenance than other bearing types. The integral sealing can significantly prolong bearing service life because it keeps lubricant in the bearings and contaminants out.

- Greater chemical and corrosion resistance
- Integral sealing prolongs bearing service life
- 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 | 4.94 kN |
| Basic static load rating | 3.15 kN |
| Limiting speed | 13 000 r/min |

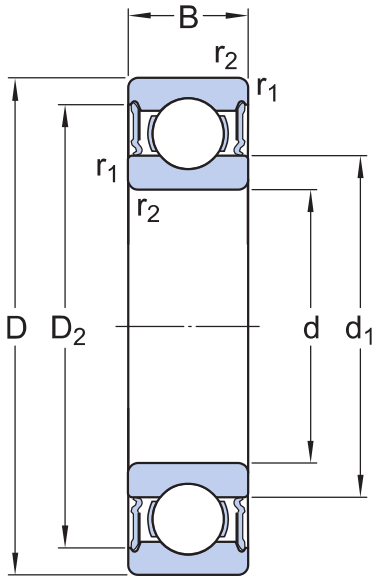
## Properties

| | |
|---|---|
| Filling slots | Without |
| Number of rows | 1 |
| Locating feature, bearing outer ring | None |
| Bore type | Cylindrical |
| Cage | Sheet metal |
| Matched arrangement | No |
| Radial internal clearance | CN |
| Material, bearing | Stainless steel |
| Coating | Without |
| Sealing | Seal on both sides |
| Sealing type | Contact |
| Lubricant | Grease |
| Relubrication feature | Without |

## Logistics

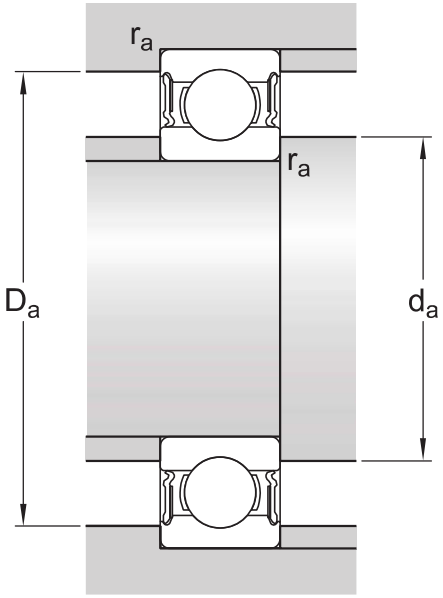
| | |
|---|---|
| Product net weight | 0.0374 kg |
| eClass code | 23-05-08-01 |
| UNSPSC code | 31171504 |

# Technical specification




## Dimensions

| | | |
|---|---|---|
| d | 17 mm | Bore diameter |
| D | 35 mm | Outside diameter |
| B | 10 mm | Width |
| $d_1$ | ≈ 23.5 mm | Shoulder diameter |
| $d_2$ | ≈ 23.5 mm | Recess diameter |
| $D_2$ | ≈ 31.85 mm | Recess diameter |
| $r_{1,2}$ | min. 0.3 mm | Chamfer dimension |




## Abutment dimensions

| | | |
|---|---|---|
| $d_a$ | min. 19 mm | Diameter of shaft abutment |
| $d_a$ | max. 23 mm | Diameter of shaft abutment |
| $D_a$ | max. 33 mm | Diameter of housing abutment |
| $r_a$ | max. 0.3 mm | Radius of shaft or housing fillet |

## Calculation data

| | | |
|---|---|---|
| Basic dynamic load rating | C | 4.94 kN |
| Basic static load rating | $C_0$ | 3.15 kN |
| Fatigue load limit | $P_u$ | 0.137 kN |
| Limiting speed | | 13 000 r/min |
| Minimum load factor | $k_r$ | 0.03 |
| Calculation factor | $f_0$ | 14.1 |

## Tolerance class

| | |
|---|---|
| Dimensional tolerances | Normal |
| Radial run-out | Normal |

## 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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