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

# 609-RSH

## Deep groove ball bearing with seals

Single row deep groove ball bearings with seals on one or both sides 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.

- Integral sealing prolongs bearing service life
- Simple, versatile and robust design
- Low friction and high-speed capability
- Accommodate radial and axial loads in both directions
- Require little maintenance

# Overview

## Dimensions

| | |
|---|---|
| Bore diameter | 9 mm |
| Outside diameter | 24 mm |
| Width | 7 mm |

## Performance

| | |
|---|---|
| Basic dynamic load rating | 3.9 kN |
| Basic static load rating | 1.66 kN |
| Limiting speed | 19 000 r/min |
| SKF performance class | SKF Explorer |

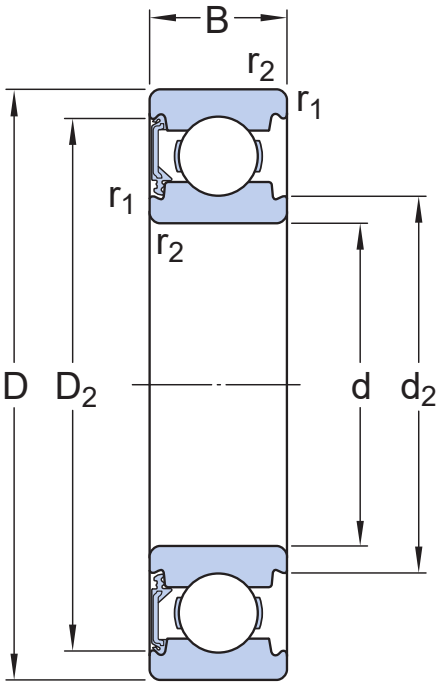
## Properties

| | |
|---|---|
| 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 | Bearing steel |
| Coating | Without |
| Sealing | Seal on one side |
| Sealing type | Contact |
| Lubricant | None |
| Relubrication feature | Without |

## Logistics

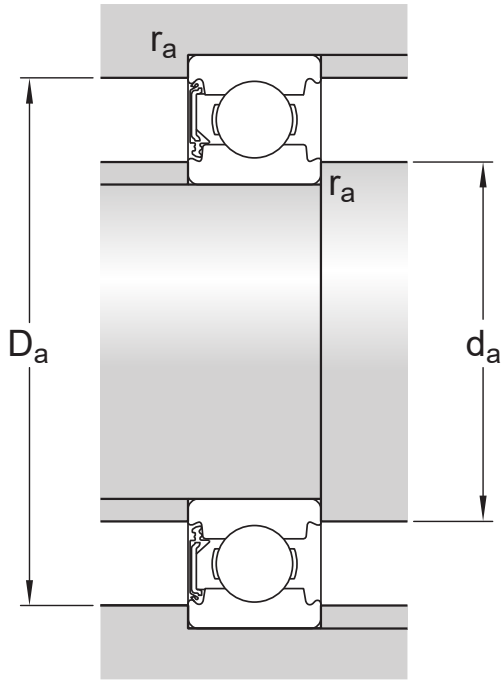
| | |
|---|---|
| Product net weight | 0.0136 kg |
| eClass code | 23-05-08-01 |
| UNSPSC code | 31171504 |

# Technical specification




## Dimensions

| | | |
|---|---|---|
| d | 9 mm | Bore diameter |
| $t_{\Delta dmp}$ | -0.007 – 0 mm | Deviation limits of mid-range bore diameter |
| D | 24 mm | Outside diameter |
| $t_{\Delta Dmp}$ | -0.008 – 0 mm | Deviation limits of mid-range outside diameter |
| B | 7 mm | Width |
| $t_{\Delta Bs}$ | -0.06 – 0 mm | Deviation limits of ring width |
| $d_2$ | ≈ 12.85 mm | Recess diameter |
| $D_2$ | ≈ 21.2 mm | Recess diameter |
| $r_{1,2}$ | min. 0.3 mm | Chamfer dimension |
| | P6 and tighter width tolerance | ISO tolerance class for dimensions |




## Abutment dimensions

| | | |
|---|---|---|
| $d_a$ | min. 11 mm | Diameter of shaft abutment |
| $d_a$ | max. 12.5 mm | Diameter of shaft abutment |
| $D_a$ | max. 22 mm | Diameter of housing abutment |
| $r_a$ | max. 0.3 mm | Radius of shaft or housing fillet |

## Calculation data

| | | |
|---|---|---|
| SKF performance class | | SKF Explorer |
| Basic dynamic load rating | C | 3.9 kN |
| Basic static load rating | $C_0$ | 1.66 kN |
| Fatigue load limit | $P_u$ | 0.071 kN |
| Limiting speed | | 19 000 r/min |
| Minimum load factor | $k_r$ | 0.025 |
| Calculation factor | $f_0$ | 13 |

## Tolerances of run-out

| | | |
|---|---|---|
| Range of section height at inner ring of assembled bearing | $t_{Kia}$ | 4 µm |
| Maximum run-out of inner ring side face to the bore | $t_{Sd}$ | 7 µm |

| | | |
|---|---|---|
| Maximum axial run-out of inner ring of assembled bearing | $t_{Sia}$ | 7 µm |
| Range of section height at outer ring of assembled bearing | $t_{Kea}$ | 6 µm |
| Perpendicularity of outer ring outside surface | $t_{SD}$ | 4 µm |
| Maximum axial run-out of outer ring of assembled bearing | $t_{Sea}$ | 8 µm |
| ISO tolerance class for geometrical tolerances | | P5 |

## 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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