

# 624-2Z

## Deep groove ball bearing with seals or shields

Single row deep groove ball bearings with seals or shields 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 many 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 | 4 mm |
| Outside diameter | 13 mm |
| Width | 5 mm |

### Performance

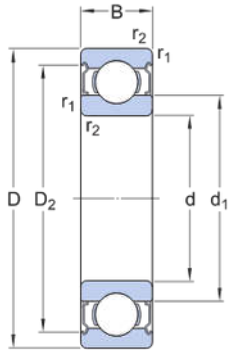
| | |
|---|---|
| Basic dynamic load rating | 0.936 kN |
| Basic static load rating | 0.29 kN |
| Reference speed | 110 000 r/min |
| Limiting speed | 53 000 r/min |

### 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 | Bearing steel |
| Coating | Without |
| Sealing | Shield on both sides |
| Sealing type | Non-contact |
| Lubricant | Grease |
| Relubrication feature | Without |

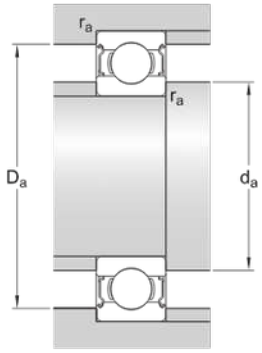
# Technical Specification

## Dimensions




| | | |
|---|---|---|
| d | 4 mm | Bore diameter |
| D | 13 mm | Outside diameter |
| B | 5 mm | Width |
| $d_1$ | ≈ 6.95 mm | Shoulder diameter |
| $D_2$ | ≈ 11.2 mm | Recess diameter |
| $r_{1,2}$ | min. 0.2 mm | Chamfer dimension |

## Abutment dimensions




| | | |
|---|---|---|
| $d_a$ | min. 5.8 mm | Diameter of shaft abutment |
| $d_a$ | max. 6.6 mm | Diameter of shaft abutment |
| $D_a$ | max. 11.2 mm | Diameter of housing abutment |
| $r_a$ | max. 0.2 mm | Radius of shaft or housing fillet |

## Calculation data

| | | |
|---|---|---|
| Basic dynamic load rating | C | 0.936 kN |
| Basic static load rating | $C_0$ | 0.29 kN |
| Fatigue load limit | $P_u$ | 0.012 kN |
| Reference speed | | 110 000 r/min |
| Limiting speed | | 53 000 r/min |
| Minimum load factor | $k_r$ | 0.025 |
| Calculation factor | $f_0$ | 7.3 |

## Mass

| | |
|---|---|
| Mass bearing | 0.0031 kg |

## Tolerance class

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

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