



# 209-Z Deep groove ball bearing with filling slots and integral sealing

## Deep groove ball bearing with filling slots and integral sealing

Single row deep groove ball bearings with filling slots and shields on one or both sides, accommodate more balls than standard deep groove ball bearings. They are of a simple, yet versatile, design and are robust in operation, requiring little maintenance. They can accommodate radial and axial loads in both directions. They have a higher radial load carrying capacity than the corresponding bearings without filling slots but have a limited axial load carrying capacity due to the filling slots. 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
- Accommodate higher radial loads than corresponding bearings without filling slots, with limited axial loads in both directions
- Require little maintenance

## Overview

### Dimensions

|                  |       |
|------------------|-------|
| Bore diameter    | 45 mm |
| Outside diameter | 85 mm |
| Width            | 19 mm |

### Performance

|                           |              |
|---------------------------|--------------|
| Basic dynamic load rating | 35.2 kN      |
| Basic static load rating  | 30 kN        |
| Reference speed           | 14 000 r/min |
| Limiting speed            | 8 500 r/min  |

### Properties

|                                      |               |
|--------------------------------------|---------------|
| Filling slots                        | With          |
| Number of rows                       | 1             |
| Locating feature, bearing outer ring | None          |
| Bore type                            | Cylindrical   |
| Cage                                 | Sheet metal   |
| Matched arrangement                  | No            |
| Radial internal clearance            | CN            |
| Tolerance class                      | Normal        |
| Material, bearing                    | Bearing steel |
| Coating                              | Without       |

|                       |                    |
|-----------------------|--------------------|
| Sealing               | Shield on one side |
| Sealing type          | Non-contact        |
| Lubricant             | None               |
| Relubrication feature | Without            |

# Technical Specification

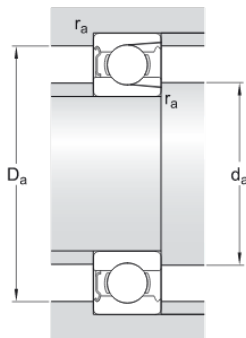


## Dimensions

|                  |             |                   |
|------------------|-------------|-------------------|
| d                | 45 mm       | Bore diameter     |
| D                | 85 mm       | Outside diameter  |
| B                | 19 mm       | Width             |
| d <sub>1</sub>   | ≈ 57.6 mm   | Shoulder diameter |
| D <sub>2</sub>   | ≈ 75.19 mm  | Recess diameter   |
| r <sub>1,2</sub> | min. 1.1 mm | Chamfer dimension |

## Abutment dimensions

|                |              |                                   |
|----------------|--------------|-----------------------------------|
| d <sub>a</sub> | min. 52 mm   | Diameter of shaft abutment        |
| d <sub>a</sub> | max. 57.5 mm | Diameter of shaft abutment        |
| D <sub>a</sub> | max. 78 mm   | Diameter of housing abutment      |
| r <sub>a</sub> | max. 1 mm    | Radius of shaft or housing fillet |



## Calculation data

|                           |                |              |
|---------------------------|----------------|--------------|
| Basic dynamic load rating | C              | 35.2 kN      |
| Basic static load rating  | C <sub>0</sub> | 30 kN        |
| Fatigue load limit        | P <sub>u</sub> | 1.27 kN      |
| Reference speed           |                | 14 000 r/min |
| Limiting speed            |                | 8 500 r/min  |
| Minimum load factor       | k <sub>r</sub> | 0.04         |

## Mass

|              |         |
|--------------|---------|
| Mass bearing | 0.44 kg |
|--------------|---------|

## Tolerance class

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

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