

# 6409

## Deep groove ball bearing

Single row deep groove ball bearings 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.

- Simple, versatile and robust design
- Low friction
- High-speed capability
- Accommodate radial and axial loads in both directions
- Require little maintenance



## Overview

## Dimensions

|                  |        |
|------------------|--------|
| Bore diameter    | 45 mm  |
| Outside diameter | 120 mm |
| Width            | 29 mm  |

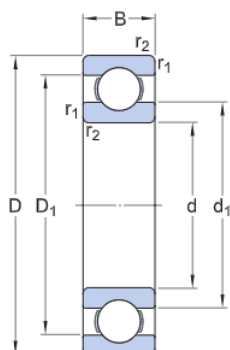
## Performance

|                           |              |
|---------------------------|--------------|
| Basic dynamic load rating | 76.1 kN      |
| Basic static load rating  | 45 kN        |
| Reference speed           | 13 000 r/min |
| Limiting speed            | 8 500 r/min  |

## Properties

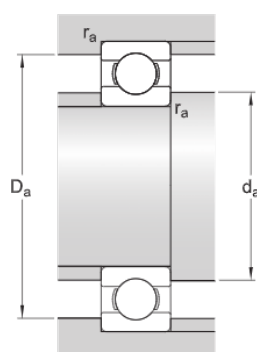
|                                      |               |
|--------------------------------------|---------------|
| Filling slots                        | Without       |
| Number of rows                       | 1             |
| Locating feature, bearing outer ring | None          |
| Bore type    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

# Technical Specification



## Dimensions

|                  |            |                   |
|------------------|------------|-------------------|
| d                | 45 mm      | Bore diameter     |
| D                | 120 mm     | Outside diameter  |
| B                | 29 mm      | Width             |
| d <sub>1</sub>   | ≈ 68.91 mm | Shoulder diameter |
| D <sub>1</sub>   | ≈ 95.85 mm | Shoulder diameter |
| r <sub>1,2</sub> | min. 2 mm  | Chamfer dimension |



## Abutment dimensions

|                |             |                                   |
|----------------|-------------|-----------------------------------|
| d <sub>a</sub> | min. 58 mm  | Diameter of shaft abutment        |
| D <sub>a</sub> | max. 107 mm | Diameter of housing abutment      |
| r <sub>a</sub> | max. 2 mm   | Radius of shaft or housing fillet |

## Calculation data

|                           |                |              |
|---------------------------|----------------|--------------|
| Basic dynamic load rating | C              | 76.1 kN      |
| Basic static load rating  | C <sub>0</sub> | 45 kN        |
| Fatigue load limit        | P <sub>u</sub> | 1.9 kN       |
| Reference speed           |                | 13 000 r/min |
| Limiting speed            |                | 8 500 r/min  |
| Minimum load factor       | k <sub>r</sub> | 0.035        |
| Calculation factor        | f <sub>0</sub> | 12.1         |

## Mass

|              |         |
|--------------|---------|
| Mass bearing | 1.57 kg |
|--------------|---------|

## Tolerance class

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

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