

# 623 Deep groove ball bearing



## 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	3 mm
Outside diameter	10 mm
Width	4 mm

### Performance

Basic dynamic load rating	0.54 kN
Basic static load rating	0.18 kN
Reference speed	130 000 r/min
Limiting speed	80 000 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
Tolerance class	Class P6 (P6)
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

# Technical Specification



## Dimensions

d	3 mm	Bore diameter
D	10 mm	Outside diameter
B	4 mm	Width
$d_1$	≈ 4.8 mm	Shoulder diameter
$D_2$	≈ 8.2 mm	Recess diameter
$r_{1,2}$	min. 0.15 mm	Chamfer dimension

## Abutment dimensions

$d_a$	min. 4.2 mm	Diameter of shaft abutment
$D_a$	max. 8.8 mm	Diameter of housing abutment
$r_a$	max. 0.1 mm	Radius of shaft or housing fillet



## Calculation data

Basic dynamic load rating	C	0.54 kN
Basic static load rating	$C_0$	0.18 kN
Fatigue load limit	$P_u$	0.007 kN
Reference speed		130 000 r/min
Limiting speed		80 000 r/min
Minimum load factor	$k_r$	0.025
Calculation factor	$f_0$	7.5

## Mass

Mass bearing	0.0015 kg
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## Tolerance class

Dimensional tolerances	Normal
Radial run-out	Normal

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