

# 61810 Deep groove ball bearing



## Deep groove ball bearing

Single row deep groove ball bearings are the most widely used bearing type and are particularly versatile. They have low friction and are optimized for low noise and low vibration, which enables high rotational speeds. They can 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	50 mm
Outside diameter	65 mm
Width	7 mm

### Performance

Basic dynamic load rating	6.76 kN
Basic static load rating	6.8 kN
Reference speed	20 000 r/min
Limiting speed	13 000 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	Normal
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

# Technical Specification



## Dimensions

d	50 mm	Bore diameter
D	65 mm	Outside diameter
B	7 mm	Width
$d_1$	≈ 54.67 mm	Shoulder diameter
$D_1$	≈ 60.3 mm	Shoulder diameter
$r_{1,2}$	min. 0.3 mm	Chamfer dimension

## Abutment dimensions

$d_a$	min. 52 mm	Diameter of shaft abutment
$D_a$	max. 63 mm	Diameter of housing abutment
$r_a$	max. 0.3 mm	Radius of shaft or housing fillet



## Calculation data

Basic dynamic load rating	C	6.76 kN
Basic static load rating	$C_0$	6.8 kN
Fatigue load limit	$P_u$	0.285 kN
Reference speed		20 000 r/min
Limiting speed		13 000 r/min
Minimum load factor	$k_r$	0.015
Calculation factor	$f_0$	17.2

## Mass

Mass bearing	0.052 kg
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## Tolerance class

Dimensional tolerances	Normal
Radial run-out	Normal

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