



Image may differ from product. See technical specification for details.

# 61810

## 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	50 mm
Outside diameter	65 mm
Width	7 mm

## Performance

Basic dynamic load rating	5.4 kN
Basic static load rating	4.15 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
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

## Logistics

Product net weight	0.052 kg
eClass code	23-05-08-01
UNSPSC code	31171504

Technical specification



Dimensions

d	50 mm	Bore diameter
t <sub>Δdmp</sub>	-0.01 – 0 mm	Deviation limits of mid-range bore diameter
D	65 mm	Outside diameter
t <sub>ΔDmp</sub>	-0.011 – 0 mm	Deviation limits of mid-range outside diameter
B	7 mm	Width
t <sub>ΔBs</sub>	-0.12 – 0 mm	Deviation limits of ring width
d <sub>1</sub>	≈ 54.9 mm	Shoulder diameter
D <sub>1</sub>	≈ 60.4 mm	Shoulder diameter
r <sub>1,2</sub>	min. 0.3 mm	Chamfer dimension
	P6	ISO tolerance class for dimensions



## 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	5.4 kN
Basic static load rating	$C_0$	4.15 kN
Fatigue load limit	$P_u$	0.176 kN
Reference speed		20 000 r/min
Limiting speed		13 000 r/min
Minimum load factor	$k_r$	0.015
Calculation factor	$f_0$	11.4

## Tolerances of run-out

Range of section height at inner ring of assembled bearing	$t_{kia}$	10 $\mu$ m
Range of section height at outer ring of assembled bearing	$t_{kea}$	13 $\mu$ m
ISO tolerance class for geometrical tolerances		P6

## Tolerances and clearances

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### GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal (metric), P6, P5, Normal (inch)
- Radial internal clearance: Classes C2 to C5

## BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fits

# More Information

 Product details	 Engineering information	 Tools
<a href="#">Single row deep groove ball bearings</a>	<a href="#">Principles of rolling bearing selection</a>	<a href="#">SKF Product select</a>
<a href="#">Stainless steel deep groove ball bearings</a>	<a href="#">General bearing knowledge</a>	<a href="#">SimPro Quick</a>
<a href="#">Single row deep groove ball bearings with filling slots</a>	<a href="#">Bearing selection process</a>	<a href="#">Bearing Frequency Calculator</a>
<a href="#">Double row deep groove ball bearings</a>	<a href="#">Bearing interfaces</a>	<a href="#">LubeSelect for SKF greases</a>
<a href="#">General bearing specifications</a>	<a href="#">Seat tolerances for standard conditions</a>	<a href="#">Heater selection tool</a>
<a href="#">Loads</a>	<a href="#">Selecting internal clearance</a>	
<a href="#">Temperature limits</a>	<a href="#">Lubrication</a>	
<a href="#">Permissible speed</a>	<a href="#">Sealing, mounting and dismounting</a>	
<a href="#">Designation system</a>	<a href="#">Bearing failure and how to prevent it</a>	

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