

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

6410

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	130 mm
Width	31 mm

Performance

Basic dynamic load rating	87.1 kN
Basic static load rating	52 kN
Reference speed	12 000 r/min
Limiting speed	7 500 r/min

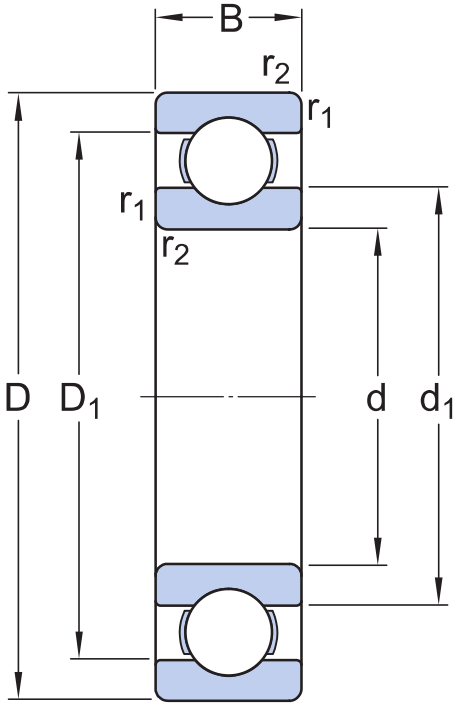
Properties

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

Logistics

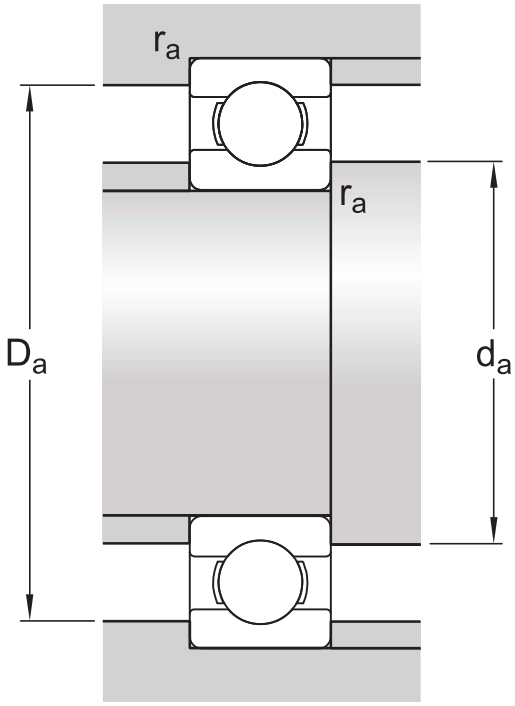
Product net weight	1.89 kg
eClass code	23-05-08-01
UNSPSC code	31171504

Technical specification



Dimensions

d	50 mm	Bore diameter
$t_{\Delta dmp}$	-0.012 – 0 mm	Deviation limits of mid-range bore diameter
D	130 mm	Outside diameter
$t_{\Delta Dmp}$	-0.018 – 0 mm	Deviation limits of mid-range outside diameter
B	31 mm	Width
$t_{\Delta Bs}$	-0.12 – 0 mm	Deviation limits of ring width
d_1	≈ 75.46 mm	Shoulder diameter
D_1	≈ 104.25 mm	Shoulder diameter
$r_{1,2}$	min. 2.1 mm	Chamfer dimension
	Normal	ISO tolerance class for dimensions



Abutment dimensions

d_a	min. 64 mm	Diameter of shaft abutment
D_a	max. 116 mm	Diameter of housing abutment
r_a	max. 2 mm	Radius of shaft or housing fillet

Calculation data

Basic dynamic load rating	C	87.1 kN
Basic static load rating	C_0	52 kN
Fatigue load limit	P_u	2.2 kN
Reference speed		12 000 r/min
Limiting speed		7 500 r/min
Minimum load factor	k_r	0.035
Calculation factor	f_0	12.2

Tolerances of run-out

Range of section height at inner ring of assembled bearing	t_{Kia}	15 µm

Range of section height at outer ring of assembled bearing	t_{Kea}	40 µm
ISO tolerance class for geometrical tolerances		Normal

Tolerances and clearances

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

Compatible products

Recommended tool

Deep groove ball bearing puller kit	TMMD 100

More Information

Product details

- Single row deep groove ball bearings
- Stainless steel deep groove ball bearings
- Single row deep groove ball bearings with filling slots
- Double row deep groove ball bearings
- General bearing specifications
- Loads
- Temperature limits
- Permissible speed
- Designation system

Engineering information

- Principles of rolling bearing selection
- General bearing knowledge
- Bearing selection process
- Bearing interfaces
- Seat tolerances for standard conditions
- Selecting internal clearance
- Lubrication
- Sealing, mounting and dismounting
- Bearing failure and how to prevent it

Tools

- SKF Product select
- SimPro Quick
- Bearing Frequency Calculator
- LubeSelect for SKF greases
- Heater selection tool

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