



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

6414

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	70 mm
Outside diameter	180 mm
Width	42 mm

Performance

Basic dynamic load rating	143 kN
Basic static load rating	104 kN
Reference speed	8 500 r/min
Limiting speed	5 300 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	4.83 kg
eClass code	23-05-08-01
UNSPSC code	31171504

Technical specification



Dimensions

d	70 mm	Bore diameter
t _{Δdmp}	-0.015 – 0 mm	Deviation limits of mid-range bore diameter
D	180 mm	Outside diameter
t _{ΔDmp}	-0.025 – 0 mm	Deviation limits of mid-range outside diameter
B	42 mm	Width
t _{ΔBs}	-0.15 – 0 mm	Deviation limits of ring width
d ₁	≈ 103.5 mm	Shoulder diameter
D ₁	≈ 145.95 mm	Shoulder diameter
r _{1,2}	min. 3 mm	Chamfer dimension
	Normal	ISO tolerance class for dimensions



Abutment dimensions

d_a	min. 86 mm	Diameter of shaft abutment
D_a	max. 164 mm	Diameter of housing abutment
r_a	max. 2.5 mm	Radius of shaft or housing fillet

Calculation data

Basic dynamic load rating	C	143 kN
Basic static load rating	C_0	104 kN
Fatigue load limit	P_u	3.9 kN
Reference speed		8 500 r/min
Limiting speed		5 300 r/min
Minimum load factor	k_r	0.035
Calculation factor	f_0	12.1

Tolerances of run-out

Range of section height at inner ring of assembled bearing	t_{kia}	20 μm
Range of section height at outer ring of assembled bearing	t_{kea}	45 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

More Information

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

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