



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

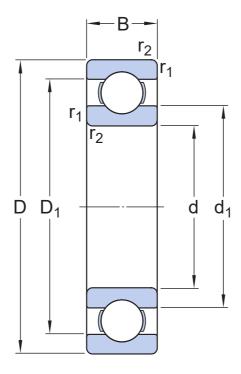
# **Properties**

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

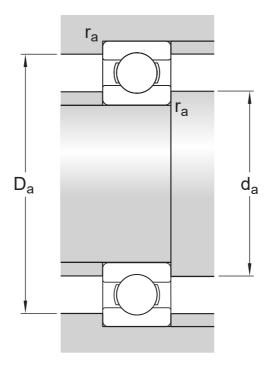
Product net weight	4.83 kg
eClass code	23-05-08-01
UNSPSC code	31171504

# **Technical specification**



# Dimensions

d	70 mm	Bore diameter
$t_{\Deltadmp}$	-0.015 - 0 mm	Deviation limits of mid-range bore diameter
D	180 mm	Outside diameter
$t_{\DeltaDmp}$	-0.025 – 0 mm	Deviation limits of mid-range outside diameter
В	42 mm	Width
t∆Bs	-0.15 - 0 mm	Deviation limits of ring width
d <sub>1</sub>	≈ 103.5 mm	Shoulder diameter
D <sub>1</sub>	≈ 145.95 mm	Shoulder diameter
r <sub>1,2</sub>	min. 3 mm	Chamfer dimension
	Normal	ISO tolerance class for dimensions



## Abutment dimensions

da	min. 86 mm	Diameter of shaft abutment
Da	max. 164 mm	Diameter of housing abutment
r <sub>a</sub>	max. 2.5 mm	Radius of shaft or housing fillet

## Calculation data

Basic dynamic load rating	С	143 kN
Basic static load rating	$C_0$	104 kN
Fatigue load limit	P <sub>u</sub>	3.9 kN
Reference speed		8 500 r/min
Limiting speed		5 300 r/min
Minimum load factor	k <sub>r</sub>	0.035
Calculation factor	f <sub>O</sub>	12.1

## Tolerances of run-out

Range of section height at inner ring of assembled bearing	t <sub>Kia</sub>	20 μm
Range of section height at outer ring of assembled bearing	t <sub>Kea</sub>	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**

#### **Engineering** Tools Product details information Single row deep groove ball bearings SKF Product select Principles of rolling bearing selection Stainless steel deep groove ball SimPro Quick General bearing knowledge Bearing Frequency Calculator Single row deep groove ball bearings Bearing selection process with filling slots LubeSelect for SKF greases Bearing interfaces Double row deep groove ball bearings Heater selection tool Seat tolerances for standard General bearing specifications conditions 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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