



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

# 311

### Deep groove ball bearing with filling slots

Single row deep groove ball bearings with filling slots accommodate more balls than standard deep groove ball bearings. They are of a simple, yet versatile, design and are robust in operation, requiring little maintenance. They can accommodate radial and axial loads in both directions. They have a higher radial load carrying capacity than the corresponding bearings without filling slots but have a limited axial load carrying capacity due to the filling slots.

- Simple, versatile and robust design
- Accommodate higher radial loads than corresponding bearings without filling slots, with limited axial loads in both directions
- Require little maintenance

## Overview

## Dimensions

Bore diameter	2.1654 in
Outside diameter	4.7244 in
Width	1.1417 in

## Performance

Basic dynamic load rating	17 805 lbf
Basic static load rating	15 062 lbf
Reference speed	10 000 r/min
Limiting speed	6 300 r/min

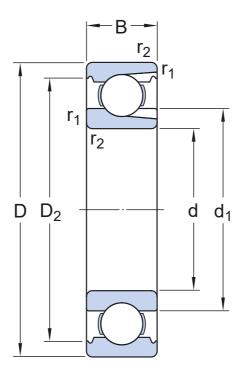
# **Properties**

Filling slots	With
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
Indicative product carbon footprint to manufacture	11.905 lb CO <sub>2</sub> e

## Logistics

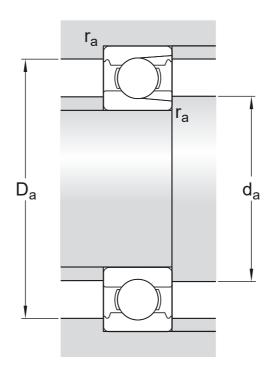
Product net weight	3.307 lb
eClass code	23-05-08-01
UNSPSC code	31171504

# **Technical specification**



# Dimensions

d	2.1654 in	Bore diameter
D	4.7244 in	Outside diameter
В	1.1417 in	Width
$d_1$	≈ 2.9661 in	Shoulder diameter
D <sub>2</sub>	≈ 4.0827 in	Recess diameter
r <sub>1.2</sub>	min. 0.0787 in	Chamfer dimension



## **Abutment dimensions**

d <sub>a</sub>	min. 2.5984 in	Diameter of shaft abutment
D <sub>a</sub>	max. 4.2913 in	Diameter of housing abutment
r <sub>a</sub>	max. 0.0787 in	Radius of shaft or housing fillet

### Calculation data

Basic dynamic load rating	С	17 805 lbf
Basic static load rating	C <sub>0</sub>	15 062 lbf
Fatigue load limit	$P_{\rm u}$	641 lbf
Reference speed		10 000 r/min
Limiting speed		6 300 r/min
Minimum load factor	k <sub>r</sub>	0.05

### 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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