

# 6301 Deep groove ball bearing



## 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	12 mm
Outside diameter	37 mm
Width	12 mm

### Performance

Basic dynamic load rating	10.1 kN
Basic static load rating	4.15 kN
Reference speed	45 000 r/min
Limiting speed	28 000 r/min
SKF performance class	SKF Explorer

### 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
Tolerance class	Class P6 (P6)
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

# Technical Specification

SKF performance class

SKF Explorer



## Dimensions

d	12 mm	Bore diameter
D	37 mm	Outside diameter
B	12 mm	Width
$d_1$	≈ 19.51 mm	Shoulder diameter
$D_2$	≈ 31.48 mm	Recess diameter
$r_{1,2}$	min. 1 mm	Chamfer dimension

## Abutment dimensions

$d_a$	min. 17.6 mm	Diameter of shaft abutment
$D_a$	max. 31.4 mm	Diameter of housing abutment
$r_a$	max. 1 mm	Radius of shaft or housing fillet



## Calculation data

Basic dynamic load rating	C	10.1 kN
Basic static load rating	$C_0$	4.15 kN
Fatigue load limit	$P_u$	0.176 kN
Reference speed		45 000 r/min

Limiting speed		28 000 r/min
Minimum load factor	$k_r$	0.03
Calculation factor	$f_0$	11

## Mass

Mass bearing		0.06 kg
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## Tolerance class

Dimensional tolerances		P6
Radial run-out		P5

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