

6301-Z



Deep groove ball bearing with seals or shields

Single row deep groove ball bearings with seals or shields 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. The integral sealing can significantly prolong bearing service life because it keeps lubricant in the bearings and contaminants out.

- Integral sealing prolongs bearing service life
- Simple, versatile and robust design
- Low friction and 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
Limiting speed	22 000 r/min
Reference speed	45 000 r/min
SKF performance class	SKF Explorer

Properties

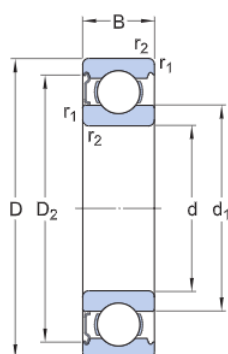
Bore type	Cylindrical
Cage	Sheet metal
Coating	Without
Filling slots	Without
Locating feature, bearing outer ring	None
Lubricant	None
Matched arrangement	No
Material, bearing	Bearing steel
Number of rows	1
Radial internal clearance	CN
Relubrication feature	Without
Sealing	Shield on one side
Sealing type	Non-contact

Technical Specification

SKF performance class

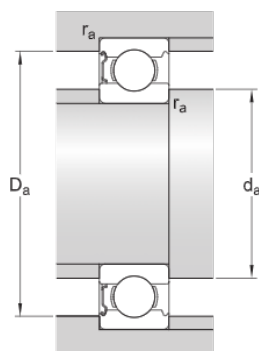
SKF Explorer

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. 19.4 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		22 000 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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