

61909 Deep groove ball bearing



Deep groove ball bearing

Single row deep groove ball bearings are the most widely used bearing type and are particularly versatile. They have low friction and are optimized for low noise and low vibration, which enables high rotational speeds. They can 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	45 mm
Outside diameter	68 mm
Width	12 mm

Performance

Basic dynamic load rating	14 kN
Basic static load rating	10.8 kN
Reference speed	20 000 r/min
Limiting speed	13 000 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
Tolerance class	Normal
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

Technical Specification



Dimensions

d	45 mm	Bore diameter
D	68 mm	Outside diameter
B	12 mm	Width
d_1	≈ 52.4 mm	Shoulder diameter
D_1	≈ 61.2 mm	Shoulder diameter
$r_{1,2}$	min. 0.6 mm	Chamfer dimension

Abutment dimensions

d_a	min. 48.2 mm	Diameter of shaft abutment
D_a	max. 64.8 mm	Diameter of housing abutment
r_a	max. 0.6 mm	Radius of shaft or housing fillet



Calculation data

Basic dynamic load rating	C	14 kN
Basic static load rating	C_0	10.8 kN
Fatigue load limit	P_u	0.465 kN
Reference speed		20 000 r/min
Limiting speed		13 000 r/min
Minimum load factor	k_r	0.02
Calculation factor	f_0	15.9

Mass

Mass bearing	0.13 kg
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Tolerance class

Dimensional tolerances	Normal
Radial run-out	Normal

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