

61809-2RZ 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	58 mm
Width	7 mm

Performance

Basic dynamic load rating	5.72 kN
Basic static load rating	5 kN
Reference speed	24 000 r/min
Limiting speed	12 000 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	Seal on both sides
Sealing type	Non-contact
Lubricant	Grease
Relubrication feature	Without

Technical Specification



Dimensions

d	45 mm	Bore diameter
D	58 mm	Outside diameter
B	7 mm	Width
d_1	≈ 48.2 mm	Shoulder diameter
D_2	≈ 55.4 mm	Recess diameter
$r_{1,2}$	min. 0.3 mm	Chamfer dimension

Abutment dimensions

d_a	min. 47 mm	Diameter of shaft abutment
d_a	max. 49 mm	Diameter of shaft abutment
D_a	max. 56 mm	Diameter of housing abutment
r_a	max. 0.3 mm	Radius of shaft or housing fillet



Calculation data

Basic dynamic load rating	C	5.72 kN
Basic static load rating	C_0	5 kN
Fatigue load limit	P_u	0.212 kN
Reference speed		24 000 r/min
Limiting speed		12 000 r/min
Minimum load factor	k_r	0.015
Calculation factor	f_0	15.1

Mass

Mass bearing	0.04 kg
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Tolerance class

Dimensional tolerances	Normal
Radial run-out	Normal

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