

6409 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	45 mm
Outside diameter	120 mm
Width	29 mm

Performance

Basic dynamic load rating	76.1 kN
Basic static load rating	45 kN
Reference speed	13 000 r/min
Limiting speed	8 500 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	120 mm	Outside diameter
B	29 mm	Width
d_1	≈ 68.91 mm	Shoulder diameter
D_1	≈ 95.85 mm	Shoulder diameter
$r_{1,2}$	min. 2 mm	Chamfer dimension

Abutment dimensions

d_a	min. 58 mm	Diameter of shaft abutment
D_a	max. 107 mm	Diameter of housing abutment
r_a	max. 2 mm	Radius of shaft or housing fillet



Calculation data

Basic dynamic load rating	C	76.1 kN
Basic static load rating	C_0	45 kN
Fatigue load limit	P_u	1.9 kN
Reference speed		13 000 r/min
Limiting speed		8 500 r/min
Minimum load factor	k_r	0.035
Calculation factor	f_0	12.1

Mass

Mass bearing	1.57 kg
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Tolerance class

Dimensional tolerances	Normal
Radial run-out	Normal

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