

6414

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	70 mm
Outside diameter	180 mm
Width	42 mm

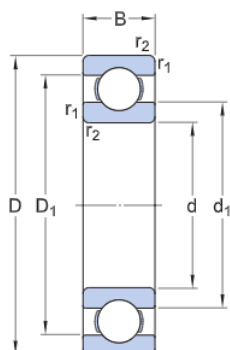
Performance

Basic dynamic load rating	143 kN
Basic static load rating	104 kN
Reference speed	8 500 r/min
Limiting speed	5 300 r/min

Properties

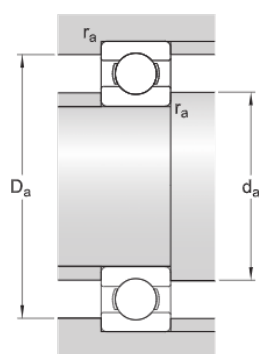
Filling slots	Without
Number of rows	1
Locating feature, bearing outer ring	None
Bore type	Cylindrical
Cage	Sheet metal
Matched arrangement	No
Radial internal clearance	CN
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

Technical Specification



Dimensions

d	70 mm	Bore diameter
D	180 mm	Outside diameter
B	42 mm	Width
d ₁	≈ 103.5 mm	Shoulder diameter
D ₁	≈ 145.95 mm	Shoulder diameter
r _{1,2}	min. 3 mm	Chamfer dimension



Abutment dimensions

d _a	min. 86 mm	Diameter of shaft abutment
D _a	max. 164 mm	Diameter of housing abutment
r _a	max. 2.5 mm	Radius of shaft or housing fillet

Calculation data

Basic dynamic load rating	C	143 kN
Basic static load rating	C ₀	104 kN
Fatigue load limit	P _u	3.9 kN
Reference speed		8 500 r/min
Limiting speed		5 300 r/min
Minimum load factor	k _r	0.035
Calculation factor	f ₀	12.1

Mass

Mass bearing	4.93 kg
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Tolerance class

Dimensional tolerances	Normal
Radial run-out	Normal

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