

Image may differ from product. See technical specification for details.

61884 MA

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. Also available on request with special sized bore and/or outside diameters, suitable for reworked shafts and housings.

- 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	420 mm
Outside diameter	520 mm
Width	46 mm

Performance

Basic dynamic load rating	251 kN
Basic static load rating	425 kN
Reference speed	2 200 r/min
Limiting speed	1 800 r/min

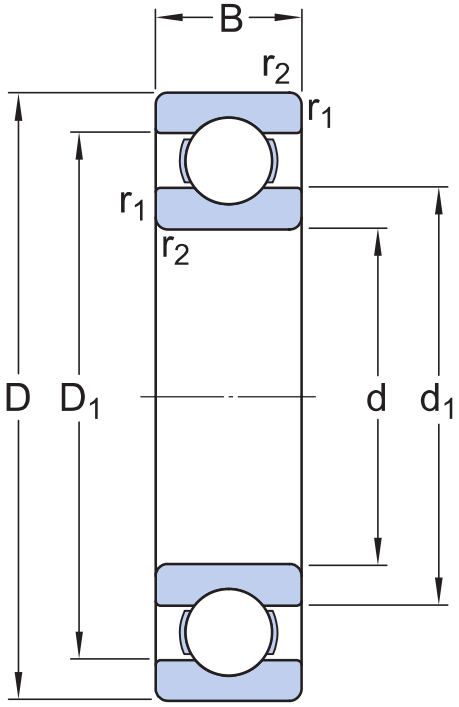
Properties

Filling slots	Without
Number of rows	1
Locating feature, bearing outer ring	Without
Bore type	Cylindrical
Cage	Machined brass
Matched arrangement	No
Radial internal clearance	CN
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without
Candidate for remanufacturing	Yes
Indicative carbon footprint for new product	79.6 kg CO_2e
Indicative carbon footprint for remanufactured product	26.4 kg CO_2e

Logistics

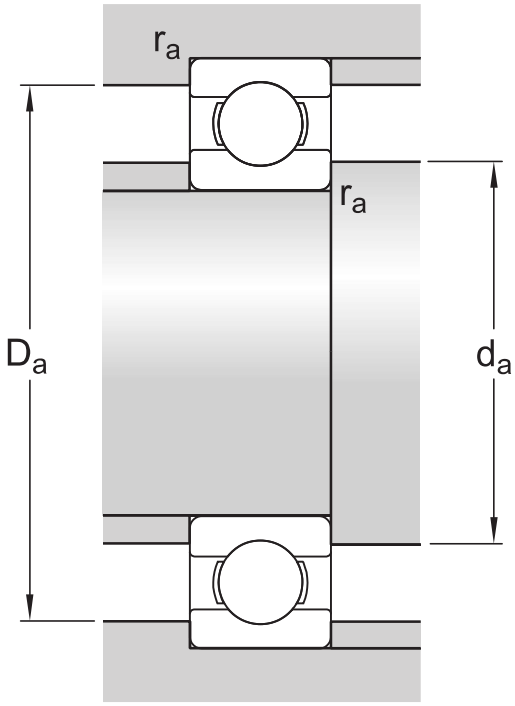
Product net weight	21.5 kg
eClass code	23-05-08-01
UNSPSC code	31171504

Technical specification



Dimensions

d	420 mm	Bore diameter
$t_{\Delta dmp}$	-0.045 – 0 mm	Deviation limits of mid-range bore diameter
D	520 mm	Outside diameter
$t_{\Delta Dmp}$	-0.05 – 0 mm	Deviation limits of mid-range outside diameter
B	46 mm	Width
$t_{\Delta Bs}$	-0.45 – 0 mm	Deviation limits of ring width
d_1	≈ 452.4 mm	Shoulder diameter
D_1	≈ 490.16 mm	Shoulder diameter
$r_{1,2}$	min. 2.1 mm	Chamfer dimension
	Normal	ISO tolerance class for dimensions



Abutment dimensions

d_a	min. 432 mm	Diameter of shaft abutment
D_a	max. 508 mm	Diameter of housing abutment
r_a	max. 2 mm	Radius of shaft or housing fillet

Calculation data

Basic dynamic load rating	C	251 kN
Basic static load rating	C_0	425 kN
Fatigue load limit	P_u	8.3 kN
Reference speed		2 200 r/min
Limiting speed		1 800 r/min
Minimum load factor	k_r	0.015
Calculation factor	f_0	17.3

Tolerances of run-out

Range of section height at inner ring of assembled bearing	t_{Kia}	65 µm
Range of section height at outer ring of assembled bearing	t_{Kea}	100 µm
ISO tolerance class for geometrical tolerances		Normal

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal (metric), P6, P5, Normal (inch)
- Radial internal clearance: Classes C2 to C5

BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fits

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