



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

1209 ETN9

Self-aligning ball bearing

Self-aligning ball bearings have two rows of balls, a common sphered raceway in the outer ring and two deep uninterrupted raceway grooves in the inner ring. They are insensitive to angular misalignment of the shaft relative to the housing, which can be caused, for example, by shaft deflection.

- Accommodate static and dynamic misalignment
- Excellent high-speed performance
- Excellent light load performance
- Low friction

Overview

Dimensions

Bore diameter	45 mm
Outside diameter	85 mm
Width	19 mm

Properties

Retaining feature, inner ring	None
Locating feature, bearing outer ring	None
Number of rows	2
Bore type	Cylindrical
Cage	Non-metallic
Radial internal clearance	CN
Tolerance class	Normal
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

Performance

Basic dynamic load rating	22.9 kN
Basic static load rating	7.8 kN
Reference speed	17 000 r/min
Limiting speed	11 000 r/min

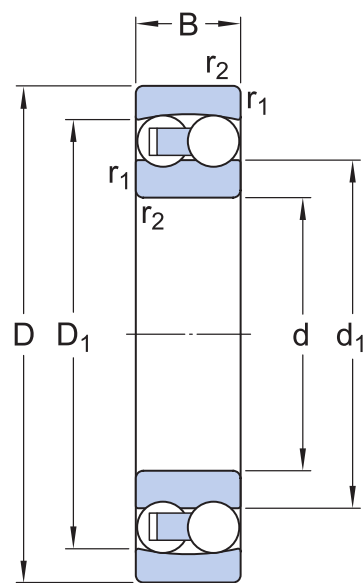
Logistics

Product net weight	0.452 kg
eClass code	23-05-08-06
UNSPSC code	31171532

Technical specification

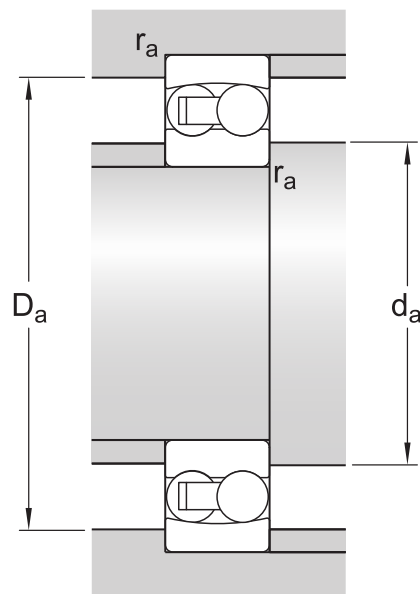
Bore type

Cylindrical



Dimensions

d	45 mm	Bore diameter
D	85 mm	Outside diameter
B	19 mm	Width
d ₁	≈ 57.51 mm	Shoulder diameter inner ring
D ₁	≈ 72.5 mm	Shoulder diameter outer ring
r _{1,2}	min. 1.1 mm	Chamfer dimension



Abutment dimensions

d _a	min. 52 mm	Abutment diameter shaft
D _a	max. 78 mm	Abutment diameter housing
r _a	max. 1.1 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	22.9 kN
Basic static load rating	C ₀	7.8 kN
Fatigue load limit	P _u	0.4 kN
Reference speed		17 000 r/min
Limiting speed		11 000 r/min
Permissible angular misalignment	α	2.5 °
Calculation factor	k _r	0.04
Limiting value	e	0.21

Calculation factor	Y_0	3.2
Calculation factor	Y_1	3
Calculation factor	Y_2	4.6

Mass	
Mass bearing	0.47 kg