

1205 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

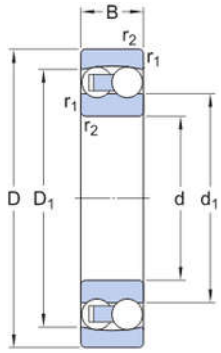
Bore diameter	25 mm
Outside diameter	52 mm
Width	15 mm

Properties

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

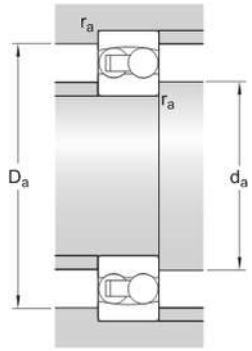
Technical Specification

Bore type	Cylindrical



Dimensions

d	25 mm	Bore diameter
D	52 mm	Outside diameter
B	15 mm	Width
d_1	≈ 33.3 mm	Shoulder diameter inner ring
D_1	≈ 44.6 mm	Shoulder diameter outer ring
$r_{1,2}$	min. 1 mm	Chamfer dimension



Abutment dimensions

d_a	min. 30.6 mm	Abutment diameter shaft
D_a	max. 46.4 mm	Abutment diameter housing
r_a	max. 1 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	14.3 kN
Basic static load rating	C_0	4 kN
Fatigue load limit	P_u	0.204 kN
Reference speed		28 000 r/min

Limiting speed		18 000 r/min
Permissible angular misalignment	α	2.5 °
Calculation factor	k_r	0.04
Calculation factor	e	0.28
Calculation factor	Y_0	2.5
Calculation factor	Y_1	2.2
Calculation factor	Y_2	3.5

Mass

Mass bearing	0.14 kg

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