

1210 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	1.969 in
Outside diameter	3.543 in
Width	0.787 in

Performance

Basic dynamic load rating	5 957 lbf
Basic static load rating	2 057 lbf
Reference speed	16 000 r/min
Limiting speed	10 000 r/min

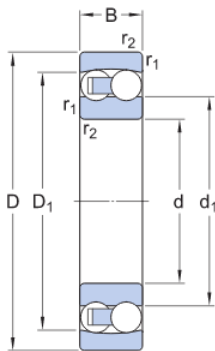
Properties

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

Technical Specification

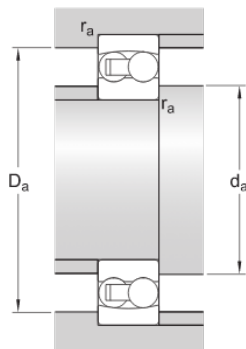
Bore type

Cylindrical



Dimensions

d	1.969 in	Bore diameter
D	3.543 in	Outside diameter
B	0.787 in	Width
d ₁	≈ 2.429 in	Shoulder diameter inner ring
D ₁	≈ 3.075 in	Shoulder diameter outer ring
r _{1,2}	min. 0.043 in	Chamfer dimension



Abutment dimensions

d _a	min. 2.244 in	Abutment diameter shaft
D _a	max. 3.268 in	Abutment diameter housing
r _a	max. 0.043 in	Fillet radius

Calculation data

Basic dynamic load rating	C	5 957 lbf
Basic static load rating	C ₀	2 057 lbf
Fatigue load limit	P _u	107 lbf
Reference speed		16 000 r/min

Limiting speed		10 000 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	1.168 lb
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