

2305 E-2RS1TN9

Self-aligning ball bearing with seals on both sides



Self-aligning ball bearings, with seals on both sides, 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. The integral sealing can significantly prolong bearing service life because it keeps lubricant in the bearings and contaminants out.

- Accommodate static and dynamic misalignment
- Excellent high-speed performance
- Excellent light load performance
- Low friction
- Integral sealing results in reduced maintenance requirements and prolonged bearing service life

Overview

Dimensions

Bore diameter	0.984 in
Outside diameter	2.441 in
Width	0.945 in

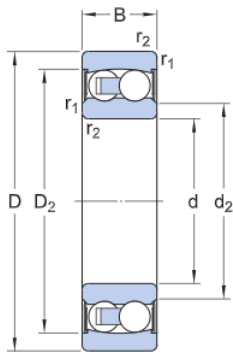
Properties

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

Technical Specification

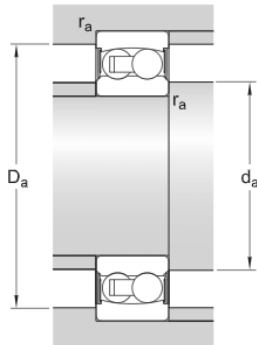
Bore type

Cylindrical



Dimensions

d	0.984 in	Bore diameter
D	2.441 in	Outside diameter
B	0.945 in	Width
d ₂	≈ 1.291 in	Recess diameter inner ring
D ₂	≈ 2.075 in	Recess diameter outer ring
r _{1,2}	min. 0.043 in	Chamfer dimension



Abutment dimensions

d _a	min. 1.26 in	Abutment diameter shaft
d _a	max. 1.28 in	Abutment diameter shaft
D _a	max. 2.165 in	Abutment diameter housing
r _a	max. 0.043 in	Fillet radius

Calculation data

Basic dynamic load rating	C	4 271 lbf
Basic static load rating	C ₀	1 214 lbf
Fatigue load limit	P _u	63 lbf
Limiting speed		7 500 r/min

Permissible angular misalignment	α	1.5 °
Calculation factor	k_r	0.05
Limiting value	e	0.28
Calculation factor	Y_0	2.5
Calculation factor	Y_1	2.2
Calculation factor	Y_2	3.5

Mass

Mass bearing	0.75 lb
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