2204 E-2RS1TN9Self-aligning ball bearing with seals on both sides

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	20 mm
Outside diameter	47 mm
Width	18 mm

Performance

Basic dynamic load rating	12.7 kN
Basic static load rating	3.4 kN
Reference speed	28 000 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	Seal on both sides
Sealing type	Contact
Lubricant	Grease

Relubrication feature	Without

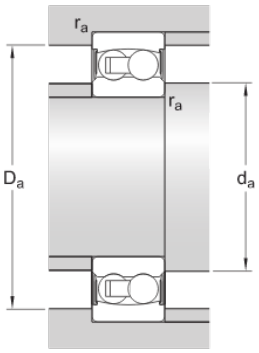
Technical Specification

Bore type	Cylindrical

NOT FOUND

Dimensions

d	20 mm	Bore diameter
D	47 mm	Outside diameter
B	18 mm	Width
d_2	≈ 25.9 mm	Recess diameter inner ring
D_2	≈ 41.23 mm	Recess diameter outer ring
$r_{1,2}$	min. 1 mm	Chamfer dimension



Abutment dimensions

d_a	min. 25 mm	Abutment diameter shaft
d_a	max. 25.5 mm	Abutment diameter shaft
D_a	max. 41.4 mm	Abutment diameter housing
r_a	max. 1 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	12.7 kN
Basic static load rating	C_0	3.4 kN
Fatigue load limit	P_u	0.176 kN
Reference speed		28 000 r/min

Limiting speed		10 000 r/min
Permissible angular misalignment	α	1.5 °
Calculation factor	k_r	0.045
Limiting value	e	0.3
Calculation factor	Y_0	2.2
Calculation factor	Y_1	2.1
Calculation factor	Y_2	3.3

Mass

Mass bearing	0.14 kg

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