



# 2211 E-2RS1KTN9 Self-aligning ball bearing with tapered bore and seals on both sides

Self-aligning ball bearing with tapered bore and seals on both sides

Self-aligning ball bearings, with a tapered bore and 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 tapered bore facilitates ease of mounting via adapter/withdrawal sleeves. The integral sealing can prolong bearing service life by keeping lubricant in the bearings and contaminants out.

- Ease of mounting via adapter/withdrawal sleeves
- Accommodate static and dynamic misalignment
- Excellent high-speed and light load performance
- Low friction
- Integral sealing results in reduced maintenance requirements and prolonged bearing service life

## Overview

### Dimensions

Bore diameter	55 mm
Outside diameter	100 mm
Width	25 mm

### Performance

Basic dynamic load rating	27.6 kN
Basic static load rating	10.6 kN
Reference speed	12 000 r/min
Limiting speed	4 300 r/min

### Properties

Retaining feature, inner ring	None
Locating feature, bearing outer ring	None
Number of rows	2
Bore type	Tapered 1:12
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

Tapered 1:12

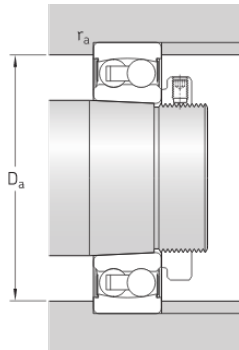


## Dimensions

d	55 mm	Bore diameter
D	100 mm	Outside diameter
B	25 mm	Width
$d_2$	≈ 65.9 mm	Recess diameter inner ring
$D_2$	≈ 88.5 mm	Recess diameter outer ring
$r_{1,2}$	min. 1.5 mm	Chamfer dimension

## Abutment dimensions

$D_a$	max. 91 mm	Abutment diameter housing
$r_a$	max. 1.5 mm	Fillet radius



## Calculation data

Basic dynamic load rating	C	27.6 kN
Basic static load rating	$C_0$	10.6 kN
Fatigue load limit	$P_u$	0.54 kN
Reference speed		12 000 r/min

Limiting speed		4 300 r/min
Permissible angular misalignment	$\alpha$	1.5 °
Calculation factor	$k_r$	0.045
Limiting value	$e$	0.2
Calculation factor	$Y_0$	3.2
Calculation factor	$Y_1$	3.2
Calculation factor	$Y_2$	4.9

## Mass

Mass bearing		0.79 kg
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