

# 7310 BE-2RZP



Single row angular contact ball bearing with 40° contact angle and non-contact seals on both sides

These single row angular contact ball bearings, with 40° contact angle and non-contact seals on both sides, accommodate radial and axial loads acting simultaneously, where the axial load acts in one direction only. They have a ball-centred glass-fibre reinforced PA66 cage. They are more suitable than deep groove ball bearings for supporting large axial forces acting in one direction.

- 40° contact angle
- Integral sealing prolongs bearing service life
- Glass-fibre reinforced PA66 cage
- Accommodate relatively high radial loads and large unilateral axial loads

## Overview

### Dimensions

Bore diameter	50 mm
Outside diameter	110 mm
Width	27 mm
Contact angle	40 °

### Performance

Basic dynamic load rating	68.9 kN
Basic static load rating	47.5 kN
Reference speed	7 500 r/min
Limiting speed	6 000 r/min

### Properties

Contact type	Normal contact (two-point contact)
Number of rows	1
Locating feature, bearing outer ring	None
Ring type	One-piece inner and outer rings
Cage	Non-metallic
Matched arrangement	No
Universal matching bearing	No
Axial internal clearance	Not applicable
Tolerance class	Normal
Material, bearing	Bearing steel
Coating	Without

Sealing	Seal on both sides
Sealing type	Non-contact
Lubricant	Grease
Relubrication feature	Without

# Technical Specification

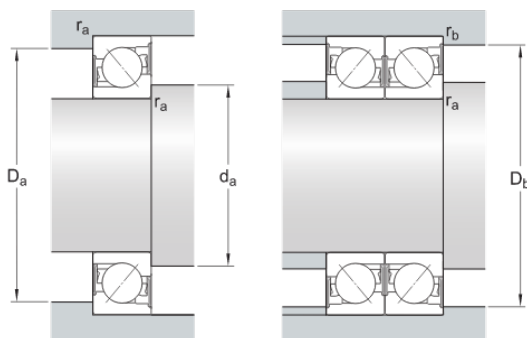


## Dimensions

d	50 mm	Bore diameter
D	110 mm	Outside diameter
B	27 mm	Width
$d_1$	$\approx 73.8$ mm	Shoulder diameter of inner ring (large side face)
$d_2$	$\approx 61.13$ mm	Shoulder diameter of inner ring (small side face)
$D_2$	$\approx 91.55$ mm	Recess diameter of outer ring (large side face)
$D_5$	$\approx 100.85$ mm	Recess diameter of outer ring (small side face)
a	47 mm	Distance side face to pressure point
$r_{1,2}$	min. 2 mm	Chamfer dimension
$r_{3,4}$	min. 1 mm	Chamfer dimension

## Abutment dimensions

$d_a$	min. 61 mm	Diameter of shaft abutment
$d_a$	max. 73 mm	Diameter of shaft abutment
$D_a$	max. 99 mm	Abutment diameter housing
$D_b$	max. 104 mm	Diameter of housing abutment
$r_a$	max. 2 mm	Radius of fillet
$r_b$	max. 1 mm	Radius of fillet



## Calculation data

Basic dynamic load rating	C	68.9 kN
Basic static load rating	$C_0$	47.5 kN
Fatigue load limit	$P_u$	2 kN

Reference speed		7 500 r/min
Limiting speed		6 000 r/min
Minimum axial load factor	A	0.0418
Minimum radial load factor	$k_r$	0.1
Limiting value	e	1.14

#### Single bearing or bearing pair arranged in tandem

Calculation factor (single, tandem)	X	0.35
Calculation factor (single, tandem)	$Y_0$	0.26
Calculation factor (single, tandem)	$Y_2$	0.57

#### Bearing pair arranged back-to-back or face-to-face

Calculation factor (back-to-back, face-to-face)	X	0.57
Calculation factor (back-to-back, face-to-face)	$Y_0$	0.52
Calculation factor (back-to-back, face-to-face)	$Y_1$	0.55
Calculation factor (back-to-back, face-to-face)	$Y_2$	0.93

## Mass

Mass		1.2 kg
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