

# 7204 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	20 mm
Outside diameter	47 mm
Width	14 mm
Contact angle	40 °

### Performance

Basic dynamic load rating	13.3 kN
Basic static load rating	7.65 kN
Reference speed	19 000 r/min
Limiting speed	14 000 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

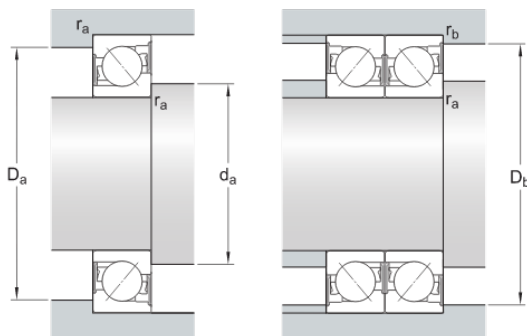


## Dimensions

d	20 mm	Bore diameter
D	47 mm	Outside diameter
B	14 mm	Width
$d_1$	$\approx 30.85$ mm	Shoulder diameter of inner ring (large side face)
$d_2$	$\approx 25.87$ mm	Shoulder diameter of inner ring (small side face)
$D_2$	$\approx 37.7$ mm	Recess diameter of outer ring (large side face)
$D_5$	$\approx 43.2$ mm	Recess diameter of outer ring (small side face)
a	21 mm	Distance side face to pressure point
$r_{1,2}$	min. 1 mm	Chamfer dimension
$r_{3,4}$	min. 0.6 mm	Chamfer dimension

## Abutment dimensions

$d_a$	min. 25.6 mm	Diameter of shaft abutment
$d_a$	max. 30 mm	Diameter of shaft abutment
$D_a$	max. 41.4 mm	Abutment diameter housing
$D_b$	max. 42.8 mm	Diameter of housing abutment
$r_a$	max. 1 mm	Radius of fillet
$r_b$	max. 0.6 mm	Radius of fillet



## Calculation data

Basic dynamic load rating	C	13.3 kN
Basic static load rating	$C_0$	7.65 kN

Fatigue load limit	$P_u$	0.325 kN
Reference speed		19 000 r/min
Limiting speed		14 000 r/min
Minimum axial load factor	A	0.00113
Minimum radial load factor	$k_r$	0.095
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	0.15 kg
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