7205 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	25 mm
Contact angle	40 °
Outside diameter	52 mm
Width	15 mm

Performance

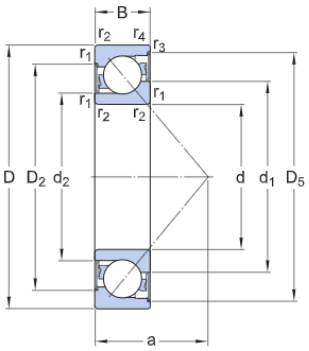
Basic dynamic load rating	14.8 kN
Basic static load rating	9.3 kN
Limiting speed	12 000 r/min
Reference speed	16 000 r/min

Properties

Axial internal clearance	Not applicable
Cage	Non-metallic
Coating	Without
Contact type	Normal contact (two-point contact)
Locating feature, bearing outer ring	None
Lubricant	Grease
Matched arrangement	No
Material, bearing	Bearing steel
Number of rows	1
Relubrication feature	Without
Ring type	One-piece inner and outer rings
Sealing	Seal on both sides

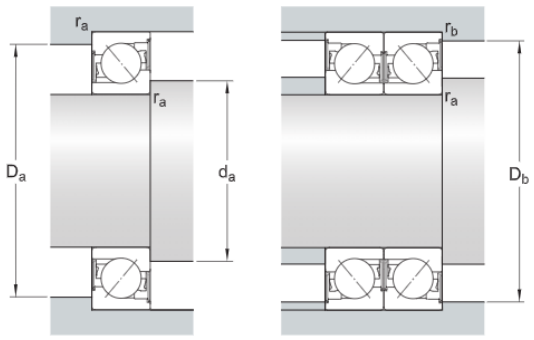
Sealing type	Non-contact
Universal matching bearing	No

Technical Specification



Dimensions

d	25 mm	Bore diameter
D	52 mm	Outside diameter
B	15 mm	Width
d_1	≈ 35.85 mm	Shoulder diameter of inner ring (large side face)
d_2	≈ 30.87 mm	Shoulder diameter of inner ring (small side face)
D_2	≈ 42.7 mm	Recess diameter of outer ring (large side face)
D_5	≈ 46.8 mm	Recess diameter of outer ring (small side face)
a	24 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. 30.6 mm	Diameter of shaft abutment
d_a	max. 35.5 mm	Diameter of shaft abutment
D_a	max. 46.4 mm	Abutment diameter housing
D_b	max. 47.8 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	14.8 kN
Basic static load rating	C_0	9.3 kN
Fatigue load limit	P_u	0.4 kN

Reference speed		16 000 r/min
Limiting speed		12 000 r/min
Minimum axial load factor	A	0.00159
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	0.13 kg

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