



Image may differ from product. See technical specification for details.

7209 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	45 mm
Outside diameter	85 mm
Width	19 mm
Contact angle	40 °

Performance

Basic dynamic load rating	35.8 kN
Basic static load rating	26 kN
Reference speed	9 500 r/min
Limiting speed	7 500 r/min

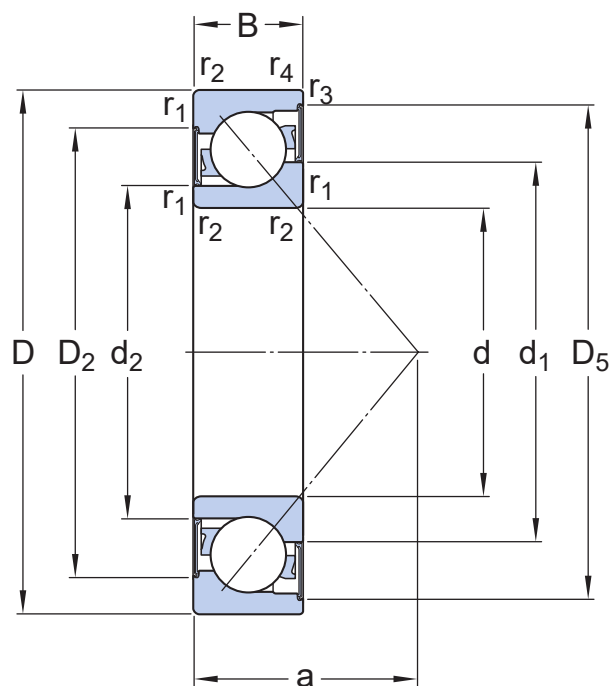
Properties

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

Logistics

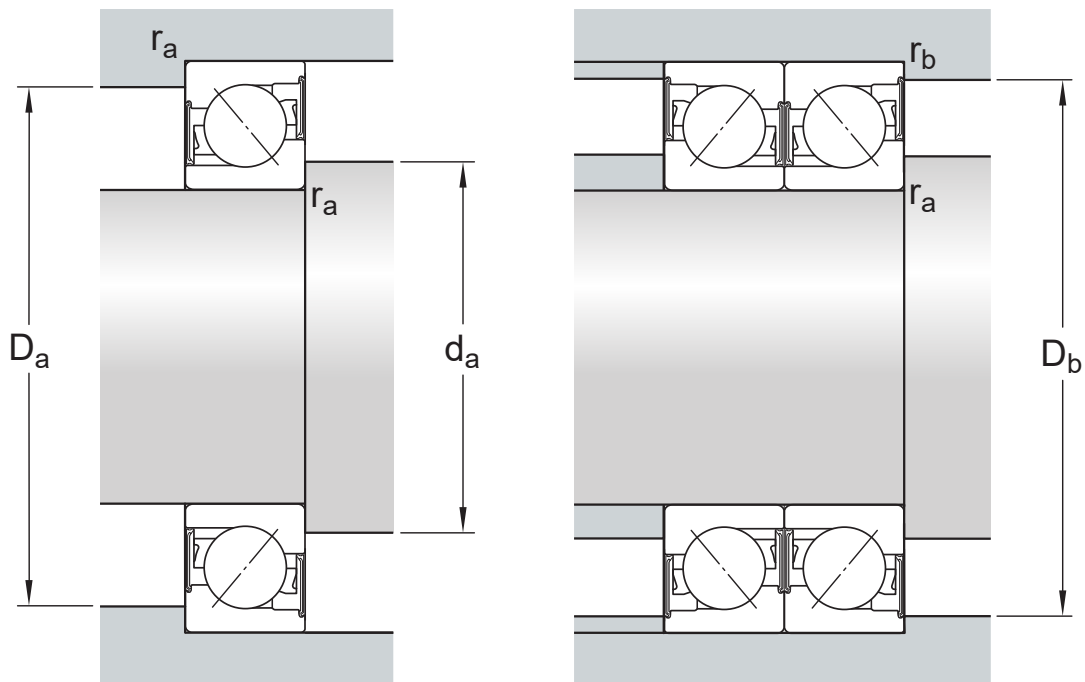
Product net weight	0.412 kg
eClass code	23-05-08-03
UNSPSC code	31171531

Technical specification



Dimensions

d	45 mm	Bore diameter
D	85 mm	Outside diameter
B	19 mm	Width
d ₁	≈ 60.85 mm	Shoulder diameter of inner ring (large side face)
d ₂	≈ 52.68 mm	Shoulder diameter of inner ring (small side face)
D ₂	≈ 71.8 mm	Recess diameter of outer ring (large side face)
D ₅	≈ 79.9 mm	Recess diameter of outer ring (small side face)
a	37 mm	Distance side face to pressure point
r _{1,2}	min. 1.1 mm	Chamfer dimension
r _{3,4}	min. 0.6 mm	Chamfer dimension



Abutment dimensions

d_a	min. 52 mm	Diameter of shaft abutment
d_a	max. 60 mm	Diameter of shaft abutment
D_a	max. 78 mm	Abutment diameter housing
D_b	max. 80.8 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	35.8 kN
Basic static load rating	C_0	26 kN
Fatigue load limit	P_u	1.12 kN
Reference speed		9 500 r/min
Limiting speed		7 500 r/min
Minimum axial load factor	A	0.012
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

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal (metric), P6, P5, Normal (inch)
- Internal clearance: CA+CB+CC, G
- Preload: GA+GB+GC

BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fit

More Information

 Product details	 Engineering information	 Tools
Designs and variants	Principles of rolling bearing selection	SKF Product select
General bearing specifications	General bearing knowledge	SimPro Quick
Loads	Bearing selection process	Bearing Frequency Calculator
Temperature limits	Bearing interfaces	LubeSelect for SKF greases
Permissible speed	Seat tolerances for standard conditions	Heater selection tool
Design considerations	Selecting internal clearance or preload	SKF mounting and dismounting instructions
Designation system	Lubrication	
	Sealing, mounting and dismounting	
	Bearing failure and how to prevent it	

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