

Overview

7304 BEGBP



Single row angular contact ball bearing

These single row angular contact ball bearings can accommodate radial and axial loads acting simultaneously, where the axial load acts in one direction only. They can operate at high speeds and, depending on the variant, even very high speeds. They are more suitable than deep groove ball bearings for supporting large axial forces acting in one direction.

- High-speed capability
- Accommodate relatively high radial loads and large unilateral axial loads

Dimensions

Bore diameter	20 mm
Outside diameter	52 mm
Width	15 mm
Contact angle	40 °

Performance

Basic dynamic load rating	19 kN
Basic static load rating	10 kN
Reference speed	17 000 r/min
Limiting speed	18 000 r/min
SKF performance class	SKF Explorer

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	Yes
Axial internal clearance	Not applicable
Matched condition (axial clearance/ preload)	Medium preload
Tolerance class	Class P6 (P6)
Material, bearing	Bearing steel
Coating	Without

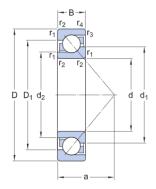


Sealing	Without
Lubricant	None
Relubrication feature	Without



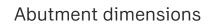
Technical Specification

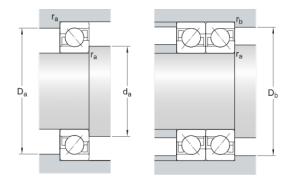
SKF performance class SKF Explorer



Dimensions

d	20 mm	Bore diameter
D	52 mm	Outside diameter
В	15 mm	Width
d ₁	≈ 32.9 mm	Shoulder diameter of inner ring (large side face)
d ₂	≈ 26.75 mm	Shoulder diameter of inner ring (small side face)
D_1	≈ 40.35 mm	Shoulder diameter of outer ring (large side face)
а	22.8 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





d _a	min. 27 mm	Diameter of shaft abutment
D_a	max. 45 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	С		19 kN
Basic static load rating	C_0		10 kN
Fatigue load limit	P_{u}		0.425 kN
Reference speed		17	7 000 r/min
Limiting speed		18	3 000 r/min
Minimum axial load factor	А		0.00191
Minimum radial load factor	k _r		0.1
Limiting value	е		1.14
Single bearing or bearing pair arranged in tandem Calculation factor (single, tandem) Calculation factor (single, tandem)		X	
Calculation factor (single, tandem)		Y ₀ Y ₂	0.35 0.26 0.57
Calculation factor (single, tandem) Bearing pair arranged back-to-back or face-to-face			0.26
			0.26
Bearing pair arranged back-to-back or face-to-face		Y ₂	0.26 0.57

Mass

Mass	0.14 kg

Calculation factor (back-to-back, face-to-face)

0.93

 Y_2



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