

Overview

7321 BEP



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	105 mm
Outside diameter	225 mm
Width	49 mm
Contact angle	40 °

Performance

Basic dynamic load rating	203 kN
Basic static load rating	193 kN
Reference speed	3 600 r/min
Limiting speed	3 400 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	Without



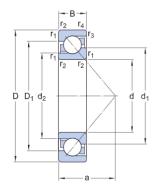
Lubricant

Relubrication feature

Without



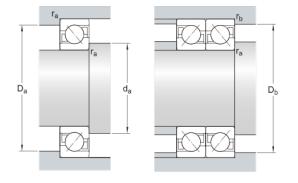
Technical Specification



Dimensions

d	105 mm	Bore diameter
D	225 mm	Outside diameter
В	49 mm	Width
d_1	≈ 151.65 mm	Shoulder diameter of inner ring (large side face)
d ₂	≈ 127.87 mm	Shoulder diameter of inner ring (small side face)
D_1	≈ 181.35 mm	Shoulder diameter of outer ring (large side face)
а	94 mm	Distance side face to pressure point
r _{1,2}	min. 3 mm	Chamfer dimension
r _{3,4}	min. 1.1 mm	Chamfer dimension

Abutment dimensions



d _a	min. 119 mm	Diameter of shaft abutment
D_a	max. 211 mm	Abutment diameter housing
D_b	max. 218 mm	Diameter of housing abutment
ra	max. 2.5 mm	Radius of fillet
r_{b}	max.1 mm	Radius of fillet

Calculation data

Basic dynamic load rating	С	203 kN
Basic static load rating	C_0	193 kN
Fatigue load limit	P_{u}	6.4 kN
Reference speed		3 600 r/min



Limiting speed			3 400 r/min
Minimum axial load factor	А		0.669
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)		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			8.55 kg



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