

7209 BEGBY

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



Overview

Dimensions

Bore diameter	1.772 in
Outside diameter	3.346 in
Width	0.748 in

Performance

Basic dynamic load rating	8 543 lbf
Basic static load rating	6 407 lbf
Limiting speed	10 000 r/min
Reference speed	10 000 r/min
SKF performance class	SKF Explorer

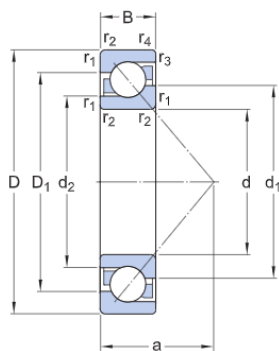
Properties

Axial internal clearance	Not applicable
Cage	Sheet metal
Coating	Without
Contact type	Normal contact (two-point contact)
Locating feature, bearing outer ring	None
Lubricant	None
Matched arrangement	No
Material, bearing	Bearing steel
Number of rows	1
Relubrication feature	Without
Ring type	One-piece inner and outer rings
Sealing	Without
Universal matching bearing	Yes

Technical Specification

SKF performance class

SKF Explorer

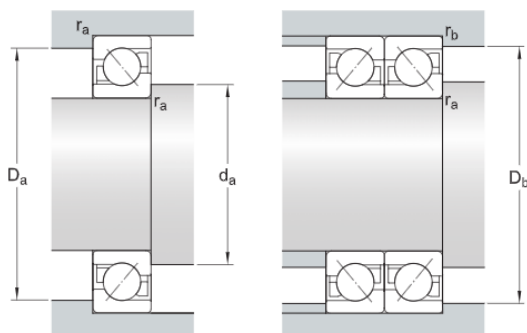


Dimensions

d	1.772 in	Bore diameter
D	3.346 in	Outside diameter
B	0.748 in	Width
d ₁	≈ 2.396 in	Shoulder diameter of inner ring (large side face)
d ₂	≈ 2.074 in	Shoulder diameter of inner ring (small side face)
D ₁	≈ 2.762 in	Shoulder diameter of outer ring (large side face)
a	1.457 in	Distance side face to pressure point
r _{1,2}	min. 0.043 in	Chamfer dimension
r _{3,4}	min. 0.024 in	Chamfer dimension

Abutment dimensions

d _a	min. 2.047 in	Diameter of shaft abutment
D _a	max. 3.071 in	Abutment diameter housing
D _b	max. 3.181 in	Diameter of housing abutment
r _a	max. 0.039 in	Radius of fillet
r _b	max. 0.024 in	Radius of fillet



Calculation data

Basic dynamic load rating	C	8 543 lbf
Basic static load rating	C ₀	6 407 lbf
Fatigue load limit	P _u	274 lbf
Reference speed		10 000 r/min
Limiting speed		10 000 r/min
Minimum axial load factor	A	0.0128
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	0.926 lb
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