7207 BECBY

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	1.378 in
Outside diameter	2.835 in
Width	0.669 in

Performance

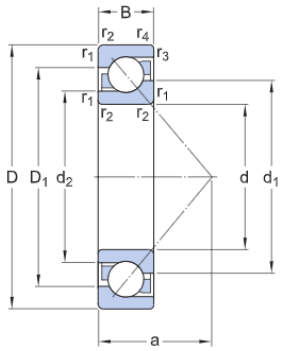
Basic dynamic load rating	6 969 lbf
Basic static load rating	4 676 lbf
Limiting speed	12 000 r/min
Reference speed	12 000 r/min
SKF performance class	SKF Explorer

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

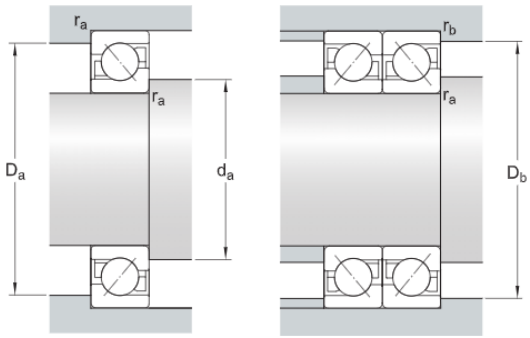
Technical Specification

SKF performance class	SKF Explorer



Dimensions

d	1.378 in	Bore diameter
D	2.835 in	Outside diameter
B	0.669 in	Width
d_1	≈ 1.955 in	Shoulder diameter of inner ring (large side face)
d_2	≈ 1.652 in	Shoulder diameter of inner ring (small side face)
D_1	≈ 2.293 in	Shoulder diameter of outer ring (large side face)
a	1.22 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. 1.654 in	Diameter of shaft abutment
D_a	max. 2.559 in	Abutment diameter housing
D_b	max. 2.669 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	6 969 lbf
Basic static load rating	C_0	4 676 lbf
Fatigue load limit	P_u	198 lbf
Reference speed		12 000 r/min
Limiting speed		12 000 r/min
Minimum axial load factor	A	0.0073
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	0.617 lb

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