



# 7312 BECAP

## 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	2.362 in
Outside diameter	5.118 in
Width	1.22 in

### Performance

Basic dynamic load rating	23 380 lbf
Basic static load rating	17 198 lbf
Limiting speed	6 700 r/min
Reference speed	6 300 r/min
SKF performance class	SKF Explorer

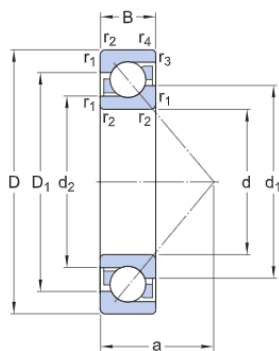
### Properties

Axial internal clearance	Not applicable
Cage	Non-metallic
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

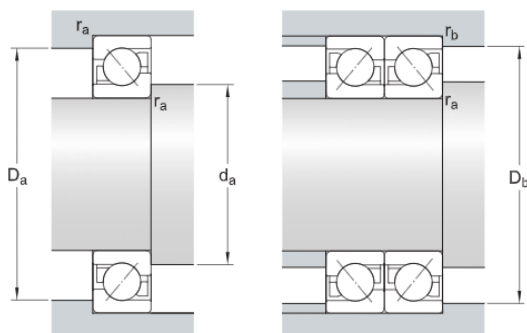


## Dimensions

d	2.362 in	Bore diameter
D	5.118 in	Outside diameter
B	1.22 in	Width
d <sub>1</sub>	≈ 3.435 in	Shoulder diameter of inner ring (large side face)
d <sub>2</sub>	≈ 2.858 in	Shoulder diameter of inner ring (small side face)
D <sub>1</sub>	≈ 4.126 in	Shoulder diameter of outer ring (large side face)
a	2.165 in	Distance side face to pressure point
r <sub>1,2</sub>	min. 0.083 in	Chamfer dimension
r <sub>3,4</sub>	min. 0.043 in	Chamfer dimension

## Abutment dimensions

d <sub>a</sub>	min. 2.835 in	Diameter of shaft abutment
D <sub>a</sub>	max. 4.646 in	Abutment diameter housing
D <sub>b</sub>	max. 4.843 in	Diameter of housing abutment
r <sub>a</sub>	max. 0.079 in	Radius of fillet
r <sub>b</sub>	max. 0.039 in	Radius of fillet



## Calculation data

Basic dynamic load rating	C	23 380 lbf
Basic static load rating	C <sub>0</sub>	17 198 lbf
Fatigue load limit	P <sub>u</sub>	719 lbf
Reference speed		6 300 r/min
Limiting speed		6 700 r/min
Minimum axial load factor	A	0.0846
Minimum radial load factor	k <sub>r</sub>	0.1
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 <sub>0</sub>	0.26
Calculation factor (single, tandem)	Y <sub>2</sub>	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 <sub>0</sub>	0.52
Calculation factor (back-to-back, face-to-face)	Y <sub>1</sub>	0.55
Calculation factor (back-to-back, face-to-face)	Y <sub>2</sub>	0.93

Mass

Mass	3.858 lb
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