



7238 BCBM

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	7.48 in
Outside diameter	13.386 in
Width	2.165 in

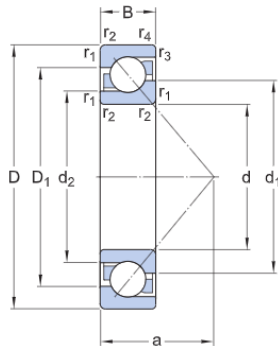
Performance

Basic dynamic load rating	69 016 lbf
Basic static load rating	91 048 lbf
Limiting speed	2 600 r/min
Reference speed	2 200 r/min

Properties

Axial internal clearance	Not applicable
Cage	Machined 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

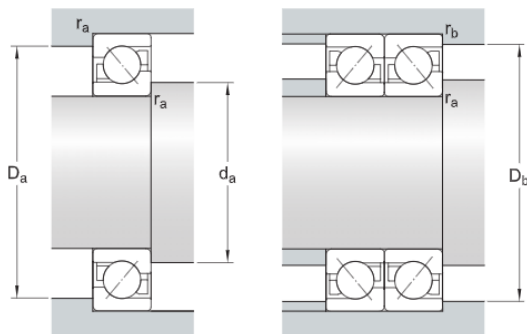
Technical Specification



Dimensions

d	7.48 in	Bore diameter
D	13.386 in	Outside diameter
B	2.165 in	Width
d ₁	≈ 9.858 in	Shoulder diameter of inner ring (large side face)
d ₂	≈ 8.823 in	Shoulder diameter of inner ring (small side face)
D ₁	≈ 11.236 in	Shoulder diameter of outer ring (large side face)
a	5.472 in	Distance side face to pressure point
r _{1,2}	min. 0.157 in	Chamfer dimension
r _{3,4}	min. 0.059 in	Chamfer dimension

Abutment dimensions



d _a	min. 8.15 in	Diameter of shaft abutment
D _a	max. 12.717 in	Abutment diameter housing
D _b	max. 13.031 in	Diameter of housing abutment
r _a	max. 0.118 in	Radius of fillet
r _b	max. 0.059 in	Radius of fillet

Calculation data

Basic dynamic load rating	C	69 016 lbf
Basic static load rating	C ₀	91 048 lbf
Fatigue load limit	P _u	2 338 lbf
Reference speed		2 200 r/min

Limiting speed		2 600 r/min
Minimum axial load factor	A	2.63
Minimum radial load factor	k_r	0.08
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	48.502 lb
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