

Overview

7230 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

Dimensions

Bore diameter	5.906 in
Outside diameter	10.63 in
Width	1.772 in

Performance

Basic dynamic load rating	48 559 lbf
Basic static load rating	53 954 lbf
Limiting speed	3 200 r/min
Reference speed	2 800 r/min

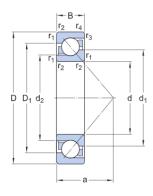
Properties

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 5.906 in	Bore diameter
D 10.63 in	Outside diameter
B 1.772 in	Width
d ₁ ≈ 7.764 in	Shoulder diameter of inner ring (large side face)
d ₂ ≈ 6.913 in	Shoulder diameter of inner ring (small side face)
D ₁ ≈ 8.896 in	Shoulder diameter of outer ring (large side face)
a 4.37 in	Distance side face to pressure point
r _{1,2} min. 0.118 in	Chamfer dimension
r _{3,4} min. 0.043 in	Chamfer dimension

Abutment dimensions



Calculation data

Da

Basic dynamic load rating	С	48 559 lbf
Basic static load rating	C _O	53 954 lbf
Fatigue load limit	P _u	1 562 lbf
Reference speed		2 800 r/min

D_b



Limiting speed		3 200 r/min
Minimum axial load factor	А	1.01
Minimum radial load factor	k _r	0.08
Limiting value	е	1.14

Single bearing or bearing pair arranged in tandem

Calculation factor (single, tandem)	Х	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)	Х	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

М	а	S	S

25.353 lb



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