



AMS 24 ABP

Single row angular contact ball bearing with 20° contact angle, inch series

These inch series single row angular contact ball bearings, with 20° contact angle, accommodate radial and axial loads acting simultaneously, where the axial load acts in one direction only. They have a ball-centred brass or glass-fibre reinforced PA66 cage. 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.

- Inch series
- 20° contact angle
- Brass or glass-fibre reinforced PA66 cage
- High-speed capability
- Accommodate relatively high radial loads and large unilateral axial loads

Overview

Dimensions

Bore diameter	3 in
Outside diameter	7 in
Width	1.563 in

Performance

Basic dynamic load rating	36 644 lbf
Basic static load rating	30 799 lbf
Limiting speed	5 000 r/min
Reference speed	5 300 r/min

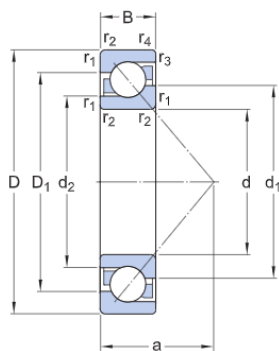
Properties

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

Technical Specification

Aftermarket only

Yes

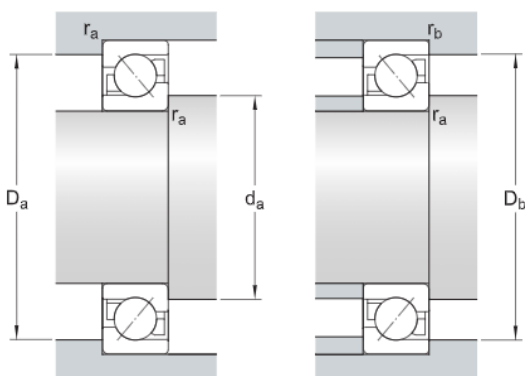


Dimensions

d	3 in	Bore diameter
D	7 in	Outside diameter
B	1.563 in	Width
d ₁	≈ 4.244 in	Shoulder diameter of inner ring (large side face)
d ₂	≈ 3.819 in	Shoulder diameter of inner ring (small side face)
D ₁	≈ 5.596 in	Shoulder diameter of outer ring (large side face)
a	1.693 in	Distance side face to pressure point
r _{1,2}	min. 0.157 in	Chamfer dimension
r _{3,4}	min. 0.063 in	Chamfer dimension

Abutment dimensions

d _a	min. 3.65 in	Diameter of shaft abutment
D _a	max. 6.48 in	Abutment diameter housing
D _b	max. 6.614 in	Diameter of housing abutment
r _a	max. 0.157 in	Radius of fillet
r _b	max. 0.059 in	Radius of fillet



Calculation data

Basic dynamic load rating	C	36 644 lbf
Basic static load rating	C ₀	30 799 lbf
Fatigue load limit	P _u	1 147 lbf
Reference speed		5 300 r/min
Limiting speed		5 000 r/min
Minimum axial load factor	A	0.0621
Minimum radial load factor	k _r	0.1
Limiting value	e	0.57

Single bearing or bearing pair arranged in tandem

Calculation factor (single, tandem)	X	0.43
Calculation factor (single, tandem)	Y ₀	0.42
Calculation factor (single, tandem)	Y ₂	1

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	11.486 lb
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