7338 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	190 mm
Outside diameter	400 mm
Width	78 mm
Contact angle	40 °

Performance

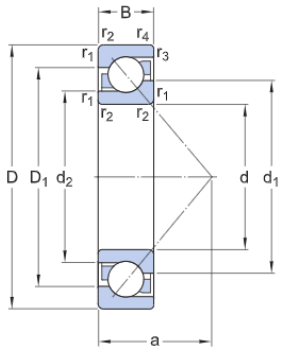
Basic dynamic load rating	442 kN
Basic static load rating	600 kN
Reference speed	2 000 r/min
Limiting speed	2 200 r/min

Properties

Contact type	Normal contact (two-point contact)
Number of rows	1
Locating feature, bearing outer ring	None
Ring type	One-piece inner and outer rings
Cage	Machined brass
Matched arrangement	No
Universal matching bearing	Yes
Axial internal clearance	Not applicable
Matched condition (axial clearance/ preload)	Axial clearance CB
Tolerance class	Class P6 (P6)
Material, bearing	Bearing steel
Coating	Without

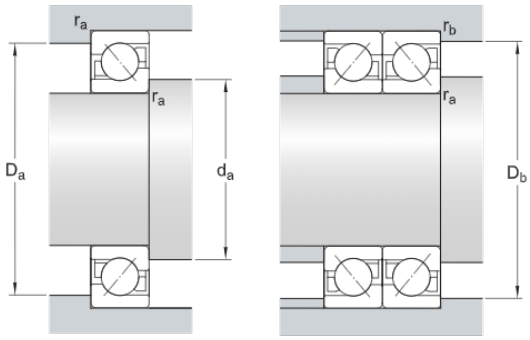
Sealing	Without
Lubricant	None
Relubrication feature	Without

Technical Specification



Dimensions

d	190 mm	Bore diameter
D	400 mm	Outside diameter
B	78 mm	Width
d_1	≈ 271.6 mm	Shoulder diameter of inner ring (large side face)
d_2	≈ 231.8 mm	Shoulder diameter of inner ring (small side face)
D_1	≈ 324.25 mm	Shoulder diameter of outer ring (large side face)
a	164 mm	Distance side face to pressure point
$r_{1,2}$	min. 5 mm	Chamfer dimension
$r_{3,4}$	min. 2 mm	Chamfer dimension



Abutment dimensions

d_a	min. 210 mm	Diameter of shaft abutment
D_a	max. 380 mm	Abutment diameter housing
D_b	max. 390 mm	Diameter of housing abutment
r_a	max. 4 mm	Radius of fillet
r_b	max. 2 mm	Radius of fillet

Calculation data

Basic dynamic load rating	C	442 kN
Basic static load rating	C_0	600 kN
Fatigue load limit	P_u	14.6 kN
Reference speed		2 000 r/min
Limiting speed		2 200 r/min

Minimum axial load factor	A	6.5
Minimum radial load factor	k_r	0.09
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	48.5 kg

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