



SKF 7416 CBM

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.

Technical specifications

Dimensions	
Bore diameter	80 mm
Deviation limits of mid-range bore diameter	-0.012..0 mm
Outside diameter	200 mm
Deviation limits of mid-range outside diameter	-0.02..0 mm
Width	48 mm
Deviation limits of ring width	-0.15..0 mm
Shoulder diameter of inner ring (large side face)	117.23 mm
Shoulder diameter of outer ring (large side face)	161.85 mm
Distance side face to pressure point	83 mm
Chamfer dimension	3 mm
Chamfer dimension	3 mm
ISO tolerance class for dimensions	P6
Contact angle	37 °

Abutment dimensions	
Diameter of shaft abutment	92 mm
Abutment diameter housing	188 mm
Diameter of housing abutment	179.4 mm
Radius of fillet	2 mm
Radius of fillet	2 mm

Calculation data	
Basic dynamic load rating	182 kN
Basic static load rating	156 kN
Fatigue load limit	5.6 kN
Reference speed	4300 r/min
Limiting speed	4300 r/min
Minimum axial load factor	0.45
Minimum radial load factor	0.1
Limiting value	1
Calculation factor (single, tandem)	0.36
Calculation factor (single, tandem)	0.28
Calculation factor (single, tandem)	0.62
Calculation factor (back-to-back, face-to-face)	0.59
Calculation factor (back-to-back, face-to-face)	0.56
Calculation factor (back-to-back, face-to-face)	0.62
Calculation factor (back-to-back, face-to-face)	1

Tolerances of run-out	
Range of section height at inner ring of assembled bearing	10 µm
Range of section height at outer ring of assembled bearing	25 µm
ISO tolerance class for geometrical tolerances	P6

Performance	
Basic dynamic load rating	182 kN
Basic static load rating	156 kN
Reference speed	4300 r/min

Limiting speed	4300 r/min
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Properties	
Contact type	Normal contact (two-point contact)
Number of rows	1
Locating feature, bearing outer ring	Without
Ring type	One-piece inner and outer rings
Cage	Machined brass
Matched arrangement	No
Universal matching bearing	Yes
Axial internal clearance	Not applicable
Tolerance class	Class 6 (P6)
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without
Indicative carbon footprint for new product	28.2 kg CO ₂ e

Logistics	
Product net weight	7.83 kg
eClass code	23-05-08-03
UNSPSC code	31171531

SKF drawings

