



Image may differ from product. See technical specification for details.

7211 BECBY

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	55 mm
Outside diameter	100 mm
Width	21 mm
Contact angle	40 °

Performance

Basic dynamic load rating	49 kN
Basic static load rating	40 kN
Reference speed	8 000 r/min
Limiting speed	8 000 r/min
SKF performance class	SKF Explorer

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	Brass sheet metal
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

Logistics

Product net weight	0.616 kg
eClass code	23-05-08-03
UNSPSC code	31171531

Technical specification



Dimensions

d	55 mm	Bore diameter
D	100 mm	Outside diameter
B	21 mm	Width
d ₁	≈ 72.5 mm	Shoulder diameter of inner ring (large side face)
d ₂	≈ 63.62 mm	Shoulder diameter of inner ring (small side face)
D ₁	≈ 83.3 mm	Shoulder diameter of outer ring (large side face)
a	43 mm	Distance side face to pressure point
r _{1,2}	min. 1.5 mm	Chamfer dimension
r _{3,4}	min. 1 mm	Chamfer dimension



Abutment dimensions

d_a	min. 64 mm	Diameter of shaft abutment
D_a	max. 91 mm	Abutment diameter housing
D_b	max. 94 mm	Diameter of housing abutment
r_a	max. 1.5 mm	Radius of fillet
r_b	max. 1 mm	Radius of fillet

Calculation data

SKF performance class		SKF Explorer
Basic dynamic load rating	C	49 kN
Basic static load rating	C_0	40 kN
Fatigue load limit	P_U	1.66 kN
Reference speed		8 000 r/min
Limiting speed		8 000 r/min
Minimum axial load factor	A	0.0235
Minimum radial load factor	k_r	0.095
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

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal (metric), P6, P5, Normal (inch)
- Internal clearance: CA+CB+CC, G
- Preload: GA+GB+GC

BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fit

More Information

 Product details	 Engineering information	 Tools
Designs and variants	Principles of rolling bearing selection	SKF Product select
General bearing specifications	General bearing knowledge	SimPro Quick
Loads	Bearing selection process	Bearing Frequency Calculator
Temperature limits	Bearing interfaces	LubeSelect for SKF greases
Permissible speed	Seat tolerances for standard conditions	Heater selection tool
Design considerations	Selecting internal clearance or preload	SKF mounting and dismounting instructions
Designation system	Lubrication	
	Sealing, mounting and dismounting	
	Bearing failure and how to prevent it	

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