



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

# **7311 BECBJ**

## 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	120 mm
Width	29 mm
Contact angle	40 °

## Performance

Basic dynamic load rating	85 kN
Basic static load rating	60 kN
Reference speed	7 000 r/min
Limiting speed	7 000 r/min
SKF performance class	SKF Explorer

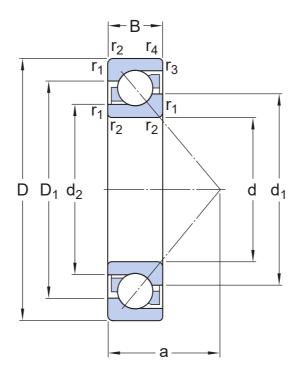
## **Properties**

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	Steel 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

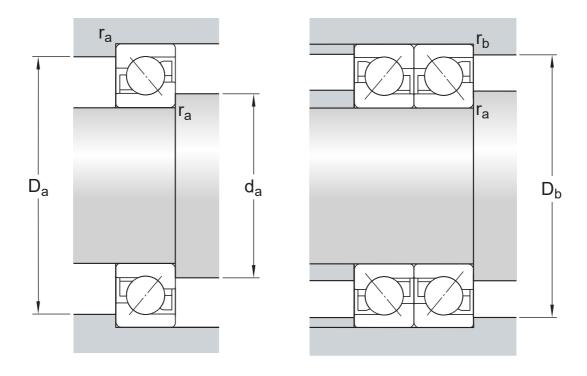
Product net weight	1.39 kg
eClass code	23-05-08-03
UNSPSC code	31171531

# **Technical specification**



# Dimensions

d	55 mm	Bore diameter
D	120 mm	Outside diameter
В	29 mm	Width
$d_1$	≈ 80.3 mm	Shoulder diameter of inner ring (large side face)
d <sub>2</sub>	≈ 66.66 mm	Shoulder diameter of inner ring (small side face)
$D_1$	≈ 96.6 mm	Shoulder diameter of outer ring (large side face)
a	51 mm	Distance side face to pressure point
r <sub>1,2</sub>	min. 2 mm	Chamfer dimension
r <sub>3,4</sub>	min. 1 mm	Chamfer dimension



## Abutment dimensions

da	min. 66 mm	Diameter of shaft abutment
Da	max. 109 mm	Abutment diameter housing
D <sub>b</sub>	max. 114 mm	Diameter of housing abutment
Га	max. 2 mm	Radius of fillet
r <sub>b</sub>	max. 1 mm	Radius of fillet

## Calculation data

SKF performance class		SKF Explorer
Basic dynamic load rating	С	85 kN
Basic static load rating	C <sub>0</sub>	60 kN
Fatigue load limit	Pu	2.55 kN
Reference speed		7 000 r/min
Limiting speed		7 000 r/min
Minimum axial load factor	A	0.0574
Minimum radial load factor	k <sub>r</sub>	0.1
Limiting value	е	1.14

Calculation factor (single, tandem)	X	0.35
Calculation factor (single, tandem)	Y <sub>0</sub>	0.26
Calculation factor (single, tandem)	Y <sub>2</sub>	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 <sub>0</sub>	0.52
Calculation factor (back-to-back, face-to-face)	$Y_1$	0.55
Calculation factor (back-to-back, face-to-face)	Y <sub>2</sub>	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**

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



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