



# 3311 DNRCBMD Double row angular contact ball bearing with snap ring and split inner ring

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Double row angular contact ball bearings, with snap ring and split inner ring, correspond to a pair of single row angular contact ball bearings in a back-to-back arrangement. The snap ring, fitted in an annular groove in the outer ring, facilitates axial location of the bearings within their housings. The split inner ring enables incorporation of more balls, resulting in higher load carrying capacity.

- Snap ring facilitates axial location within housing
- Accommodate very high axial loads in both directions, radial loads, and tilting moments
- Suitable where a stiff bearing arrangement is required
- Require less axial space than equivalent pair of single row angular contact ball bearings

## Overview

### Dimensions

Bore diameter	55 mm
Outside diameter	120 mm
Width	49.2 mm
Contact angle	40 °

### Performance

Basic dynamic load rating	95.6 kN
Basic static load rating	83 kN
Reference speed	6 000 r/min
Limiting speed	5 300 r/min

### Properties

Contact type	Normal contact (two-point contact)
Number of rows	2
Locating feature, bearing outer ring	Snap ring (fitted)
Ring type	Two-piece inner ring and one-piece outer ring
Cage	Machined metal
Arrangement of contact angle (double-row bearing)	Back-to-back (O)

Matched arrangement	No
Universal matching bearing	No
Axial internal clearance	CB
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

# Technical Specification

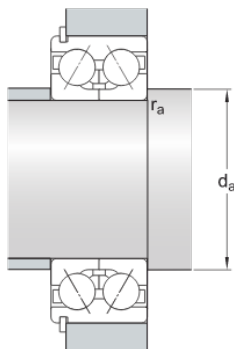


## Dimensions

d	55 mm	Bore diameter
D	120 mm	Outside diameter
B	49.2 mm	Width
$d_1$	$\approx 81.55$ mm	Shoulder diameter inner ring for two-piece inner ring
$D_1$	$\approx 105.43$ mm	Shoulder diameter outer ring
$D_3$	115.2 mm	Snap ring groove diameter at outer ring
$D_4$	129.7 mm	Outside diameter snap ring
C	4.9 mm	Distance outer ring side face - snap ring groove
b	3.1 mm	Width snap ring groove outer ring
f	2.82 mm	Width snap ring
$r_0$	max. 0.6 mm	Snap ring groove bottom radius
$r_{1,2}$	min. 2 mm	Chamfer dimension inner ring for two-piece inner ring
a	97 mm	Distance pressure point(s)

## Abutment dimensions

$d_a$	min. 66 mm	Abutment diameter shaft
$r_a$	max. 2 mm	Fillet radius



## Calculation data

Basic dynamic load rating	C	95.6 kN
Basic static load rating	$C_0$	83 kN
Fatigue load limit	$P_u$	3.55 kN
Reference speed		6 000 r/min
Limiting speed		5 300 r/min
Calculation factor	$k_r$	0.095
Limiting value	e	1.14
Calculation factor	X	0.57
Calculation factor	$Y_0$	0.52
Calculation factor	$Y_1$	0.55
Calculation factor	$Y_2$	0.93

## Mass

Mass bearing	2.55 kg
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