



# 3311 DMADouble row angular contact ball bearing with two-piece inner ring

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Double row angular contact ball bearings, with two-piece inner ring, correspond to a pair of single row angular contact ball bearings in a back-to-back arrangement, while requiring less axial space than the equivalent pair of single row angular contact ball bearings. The two-piece inner ring enables incorporation of a larger number of balls, with a larger contact angle, providing a high load carrying capacity, especially in the axial direction.

- Accommodate very high axial loads in both directions, radial loads, and tilting moments
- Suitable where a stiff bearing arrangement is required
- Separable design means outer ring with ball and cage assemblies can be mounted independently of the inner ring halves

## Overview

### Dimensions

Bore diameter	55 mm
Outside diameter	120 mm
Width	49.2 mm
Contact angle	45 °

### Performance

Basic dynamic load rating	111 kN
Basic static load rating	100 kN
Reference speed	6 000 r/min
Limiting speed	5 000 r/min

### Properties

Contact type	Normal contact (two-point contact)
Number of rows	2
Locating feature, bearing outer ring	None
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	CN
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

# Technical Specification

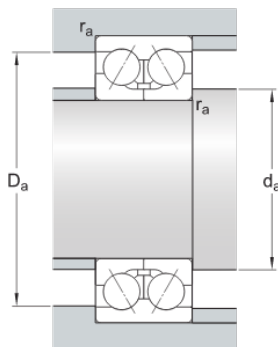


## Dimensions

d	55 mm	Bore diameter
D	120 mm	Outside diameter
B	49.2 mm	Width
$d_1$	$\approx 81.4$ mm	Shoulder diameter inner ring for two-piece inner ring
$D_1$	$\approx 104.4$ mm	Shoulder diameter outer ring
$r_{1,2}$	min. 2 mm	Chamfer dimension inner ring for two-piece inner ring
a	114 mm	Distance pressure point(s)

## Abutment dimensions

$d_a$	min. 66 mm	Abutment diameter shaft
$D_a$	max. 109 mm	Abutment diameter housing
$r_a$	max. 2 mm	Fillet radius



## Calculation data

Basic dynamic load rating	C	111 kN
Basic static load rating	$C_0$	100 kN
Fatigue load limit	$P_u$	4.3 kN
Reference speed		6 000 r/min
Limiting speed		5 000 r/min
Calculation factor	$k_r$	0.095

Limiting value	$e$	1.34
Calculation factor	$X$	0.54
Calculation factor	$Y_0$	0.44
Calculation factor	$Y_1$	0.47
Calculation factor	$Y_2$	0.81

## Mass

Mass bearing	2.82 kg
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