

# 3218 A Double row angular contact ball bearing



## Double row angular contact ball bearing

Double row angular contact ball bearings correspond, in their design and operation, to a pair of single row angular contact ball bearings in a back-to-back arrangement, while requiring less axial space. They can operate at high speeds and are more suitable than deep groove ball bearings for supporting large axial forces in both directions.

- High-speed capability
- Accommodate relatively high radial loads, high axial loads in both directions 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	90 mm
Outside diameter	160 mm
Width	52.4 mm
Contact angle	30 °

### Performance

Basic dynamic load rating	130 kN
Basic static load rating	120 kN
Reference speed	4 300 r/min
Limiting speed	3 600 r/min

### Properties

Contact type	Normal contact (two-point contact)
Number of rows	2
Locating feature, bearing outer ring	None
Ring type	One-piece inner and outer rings
Cage	Sheet metal
Arrangement of contact angle (double-row bearing)	Back-to-back (O)
Matched arrangement	No
Universal	No

matching bearing

Axial internal clearance	CN
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

# Technical Specification

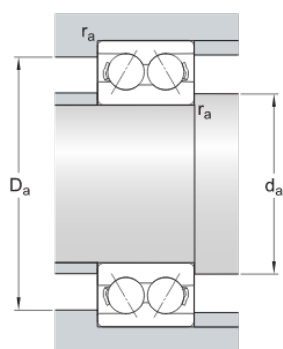


## Dimensions

d	90 mm	Bore diameter
D	160 mm	Outside diameter
B	52.4 mm	Width
$d_1$	≈ 111.53 mm	Shoulder diameter inner ring
$D_1$	≈ 136.76 mm	Shoulder diameter outer ring
$r_{1,2}$	min. 2 mm	Chamfer dimension inner ring
a	94 mm	Distance pressure point(s)

## Abutment dimensions

$d_a$	min. 101 mm	Abutment diameter shaft
$D_a$	max. 149 mm	Abutment diameter housing
$r_a$	max. 2 mm	Fillet radius



## Calculation data

Basic dynamic load rating	C	130 kN
Basic static load rating	$C_0$	120 kN
Fatigue load limit	$P_u$	4.55 kN
Reference speed		4 300 r/min
Limiting speed		3 600 r/min
Calculation factor	$k_r$	0.06
Limiting value	e	0.8
Calculation factor	X	0.63

Calculation factor	$Y_0$	0.66
Calculation factor	$Y_1$	0.78
Calculation factor	$Y_2$	1.24

## Mass

Mass bearing		4.15 kg
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