



3217 A/C3

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	85 mm
Contact angle	30 °
Outside diameter	150 mm
Width	49.2 mm

Performance

Basic dynamic load rating	124 kN
Basic static load rating	110 kN
Limiting speed	3 800 r/min
Reference speed	4 500 r/min

Properties

Arrangement of contact angle (double-row bearing)	Back-to-back (0)
Axial internal clearance	C3
Cage	Sheet metal
Coating	Without
Contact type	Normal contact (two-point contact)
Locating feature, bearing outer ring	None
Lubricant	None
Matched arrangement	No
Material, bearing	Bearing steel
Number of rows	2
Relubrication feature	Without

Ring type	One-piece inner and outer rings
Sealing	Without
Universal matching bearing	No

Technical Specification

Dimensions

Bore diameter	d	85 mm
Outside diameter	D	150 mm
Width	B	49.2 mm
Shoulder diameter inner ring	d ₁	≈ 103.73 mm
Shoulder diameter outer ring	D ₁	≈ 135.19 mm
Chamfer dimension inner ring	r _{1,2}	min. 2 mm
Distance pressure point(s)	a	88 mm

Abutment dimensions

Abutment diameter shaft	d _a	min. 96 mm
Abutment diameter housing	D _a	max. 139 mm
Fillet radius	r _a	max. 2 mm

Calculation data

Basic dynamic load rating	C	124 kN
Basic static load rating	C ₀	110 kN
Fatigue load limit	P _u	4.4 kN
Reference speed		4 500 r/min
Limiting speed		3 800 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

3.4 kg

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