



# QJ 220 N2MA Four-point contact ball bearing with locating slots

## Four-point contact ball bearing with locating slots

Four-point contact ball bearings with locating slots can accommodate high axial loads in both directions and small radial loads. They can operate at very high speeds and are more suitable than deep groove ball bearings for supporting large axial forces. The outer ring, with ball and cage assembly, can be mounted separately from the two inner ring halves. The locating slots can be used to prevent the outer ring from rotating.

- High-speed capability
- Accommodate high axial loads in both directions and small radial loads
- Require considerably less axial space than double row angular contact ball bearings
- The locating slots can be used to prevent the outer ring from rotating

## Overview

### Dimensions

Bore diameter	100 mm
Outside diameter	180 mm
Width	34 mm
Contact angle	35 °

## Performance

Basic dynamic load rating	236 kN
Basic static load rating	265 kN
Limiting speed	6 300 r/min
SKF performance class	SKF Explorer

## Properties

Contact type	Four-point contact
Number of rows	1
Locating feature, bearing outer ring	Locating slot
Ring type	Two-piece inner ring and one-piece outer ring
Cage	Machined metal
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

SKF performance class

SKF Explorer

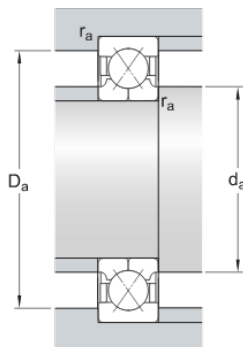


## Dimensions

d	100 mm	Bore diameter
D	180 mm	Outside diameter
B	34 mm	Width
$d_1$	≈ 127 mm	Shoulder diameter inner ring
$D_1$	≈ 153 mm	Shoulder diameter outer ring/ inner diameter housing washer
a	98 mm	Distance pressure point(s)
h	10.1 mm	Locating slot depth outer ring
b	8.5 mm	Locating slot width outer ring
$r_0$	2 mm	Corner radius locating slot
$r_{1,2}$	min. 2.1 mm	Chamfer dimension inner ring

## Abutment dimensions

$d_a$	min. 112 mm	Abutment diameter shaft
$D_a$	max. 168 mm	Abutment diameter housing
$r_a$	max. 2 mm	Fillet radius



## Calculation data

Basic dynamic load rating	C	236 kN
Basic static load rating	C <sub>0</sub>	265 kN
Fatigue load limit	P <sub>u</sub>	9.5 kN
Limiting speed		6 300 r/min
Calculation factor	A	0.176
Limiting value	e	0.95
Calculation factor	X	0.6
Calculation factor	Y <sub>0</sub>	0.58
Calculation factor	Y <sub>1</sub>	0.66
Calculation factor	Y <sub>2</sub>	1.07

## Mass

Mass bearing	4.05 kg
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