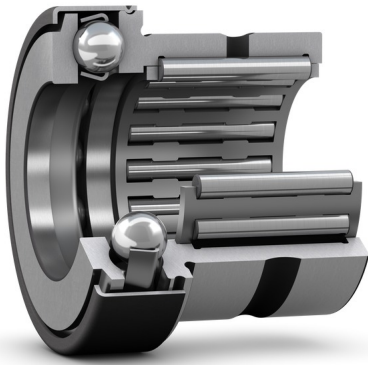


# NKX 12 ZCombined needle roller / thrust ball bearing with a cover



## Combined needle roller / thrust ball bearing with a cover

These bearings consist of a radial needle roller bearing combined with a thrust ball bearing. Together they can accommodate both radial loads and axial loads in one direction. In addition, they can operate at relatively high speeds. Their low cross-sectional height makes the bearings particularly suitable for applications where other types of locating bearing arrangements occupy too much space. The thrust part is capped with a cover that forms a gap-type seal to retain the grease in the bearings.

- Accommodate radial and axial loads in one direction
- High load carrying capacity
- Relatively high-speed capability
- Low cross section
- Non-separable design

## Overview

### Dimensions

Bore diameter	12 mm
Outside diameter	21 mm
Width	23 mm

## Performance

Reference speed	9 000 r/min
Limiting speed	7 500 r/min

## Properties

Rolling bearing type	Needle roller / thrust ball bearing
Bearing part	Radial part without inner ring
Thrust part	With cage
Radial part	With cage
Rolling element (thrust part)	Balls
Axial load capability	Single-direction

Tolerance class	Other
Material, bearing	Bearing steel
Coating	Without
Special feature	Thrust part with stamped steel cover without lubrication holes
Lubricant (thrust part)	Grease

## Technical Specification

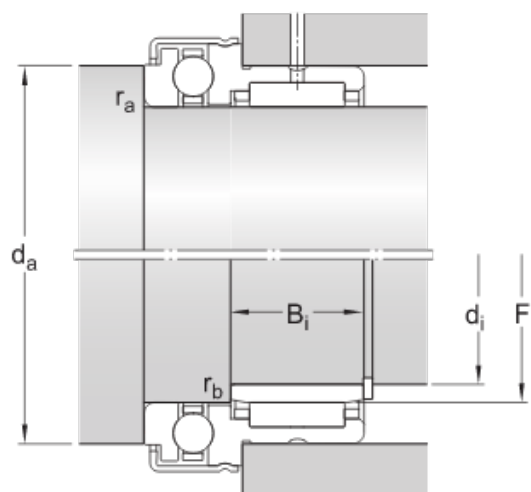


### Dimensions

$F_w$	12 mm	Diameter under rollers
$D$	21 mm	Outside diameter
$C$	23 mm	Width
$C_1$	9 mm	Width of thrust part
$C_1$	6.5 mm	Distance side face to lubrication hole
$d$	12 mm	Bore diameter of thrust part
$D_2$	27.2 mm	Diameter of stamped steel cover
$r_{1,2}$	min. 0.3 mm	Chamfer dimension

### Abutment dimensions

$d_a$	min. 21.7 mm	Diameter of shaft abutment
$r_a$	max. 0.3 mm	Radius of fillet
$r_b$	max. 0.3 mm	Radius of fillet
$d_i$	9 mm	Bore diameter of associated inner ring
$F$	12 mm	Diameter of inner ring raceway
$B_i$	16 mm	Width of associated inner ring



### Calculation data

Basic dynamic load rating, radial	$C$	9.13 kN
Basic static load rating, radial	$C_0$	12 kN
Basic dynamic load rating, axial	$C$	10.4 kN
Basic static load rating, axial	$C_0$	16.6 kN
Fatigue load limit, radial	$P_u$	1.43 kN
Fatigue load limit, axial	$P_u$	0.62 kN
Minimum axial load factor	$A$	0.0014

Reference speed	9 000 r/min
Limiting speed	7 500 r/min

## Mass

Mass	0.04 kg
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## Associated products

Inner ring	IR 9x12x16
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