

Image may differ from product. See technical specification for details.

## NKX 50

### Combined needle roller / thrust ball bearing

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.

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

## Overview

## Dimensions

Bore diameter	50 mm
Outside diameter	62 mm
Width	35 mm

## Performance

Reference speed	4 300 r/min
Limiting speed	6 300 r/min

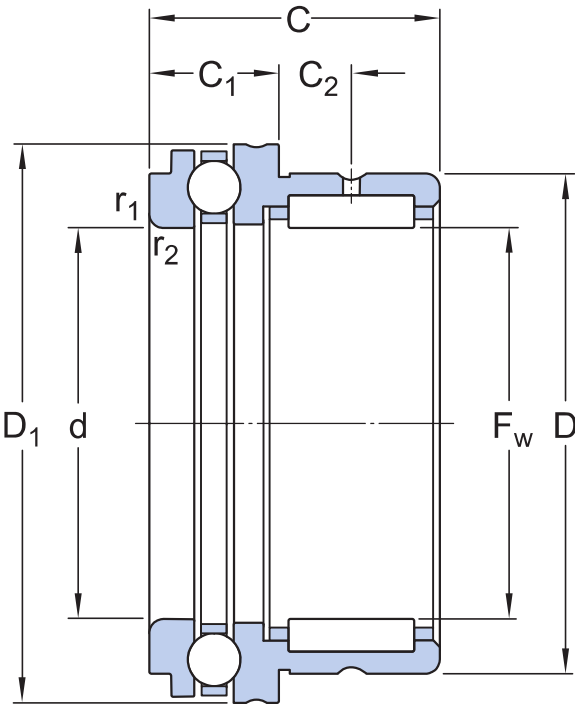
## Properties

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
Lubricant (thrust part)	None

## Logistics

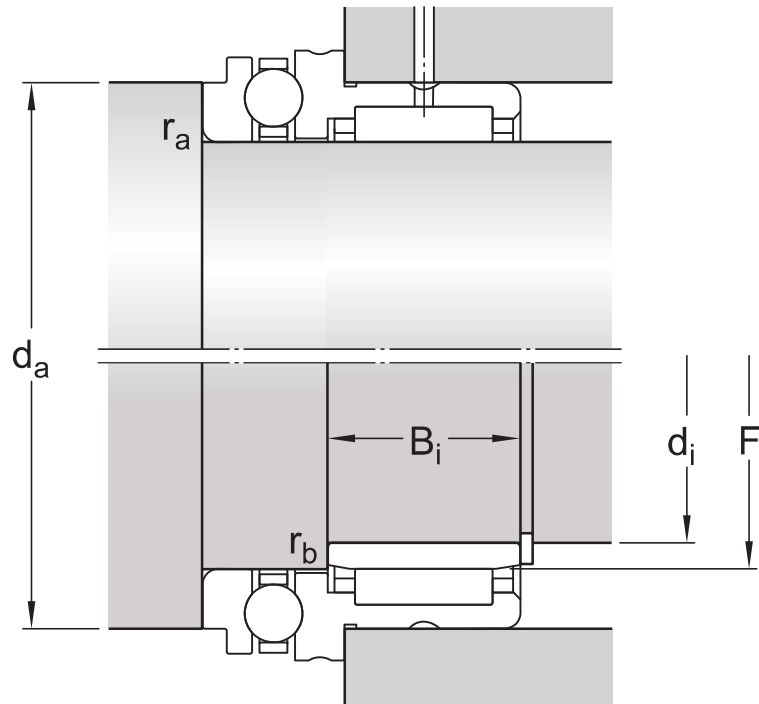
Product net weight	0.28 kg
eClass code	23-05-09-03
UNSPSC code	31171512

Technical specification



Dimensions

$F_w$	50 mm	Diameter under rollers
$D$	62 mm	Outside diameter
$C$	35 mm	Width
$C_1$	14 mm	Width of thrust part
$C_1$	10 mm	Distance side face to lubrication hole
$d$	50 mm	Bore diameter of thrust part
$D_1$	70.2 mm	Diameter of flange
$r_{1,2}$	min. 0.6 mm	Chamfer dimension



Abutment dimensions

$d_a$	min. 65.5 mm	Diameter of shaft abutment
$r_a$	max. 0.6 mm	Radius of fillet
$r_b$	max. 0.6 mm	Radius of fillet
$d_i$	45 mm	Bore diameter of associated inner ring
F	50 mm	Diameter of inner ring raceway
$B_i$	25 mm	Width of associated inner ring

Calculation data

Basic dynamic load rating, radial	C	38 kN
Basic static load rating, radial	$C_0$	78 kN
Basic dynamic load rating, axial	C	28.6 kN
Basic static load rating, axial	$C_0$	81.5 kN
Fatigue load limit, radial	$P_u$	9.65 kN
Fatigue load limit, axial	$P_u$	3.05 kN
Minimum axial load factor	A	0.034
Reference speed		4 300 r/min
Limiting speed		6 300 r/min

Associated products

Inner ring	IR 45x50x25
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Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- [Tolerances: Normal](#)
- [Radial internal clearance: table](#)

DESIGN CONSIDERATIONS

- [Shaft and housing tolerances: table](#)

Compatible products




Recommended product

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Inner ring for needle roller bearings, IR series

[IR 45X50X25](#)

More Information

<div> <b>Product details</b></div> <div><a href="#">Needle roller / angular contact ball bearings</a></div> <div><a href="#">Needle roller / thrust ball bearings</a></div> <div><a href="#">Needle roller / cylindrical roller thrust bearings</a></div> <div><a href="#">General bearing specifications</a></div> <div><a href="#">Loads</a></div> <div><a href="#">Temperature limits</a></div> <div><a href="#">Permissible speed</a></div> <div><a href="#">Design considerations</a></div> <div><a href="#">Designation system</a></div>	<div> <b>Engineering information</b></div> <div><a href="#">Principles of rolling bearing selection</a></div> <div><a href="#">General bearing knowledge</a></div> <div><a href="#">Bearing selection process</a></div> <div><a href="#">Bearing failure and how to prevent it</a></div>	<div> <b>Tools</b></div> <div><a href="#">SimPro Quick</a></div> <div><a href="#">Bearing Select</a></div> <div><a href="#">Engineering Calculator</a></div> <div><a href="#">LubeSelect for SKF greases</a></div> <div><a href="#">Heater Selection Tool</a></div> <div><a href="#">skf.com/mount</a></div>
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