

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

NKX 40 Z

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	40 mm
Outside diameter	52 mm
Width	32 mm

Performance

Reference speed	5 000 r/min
Limiting speed	4 000 r/min

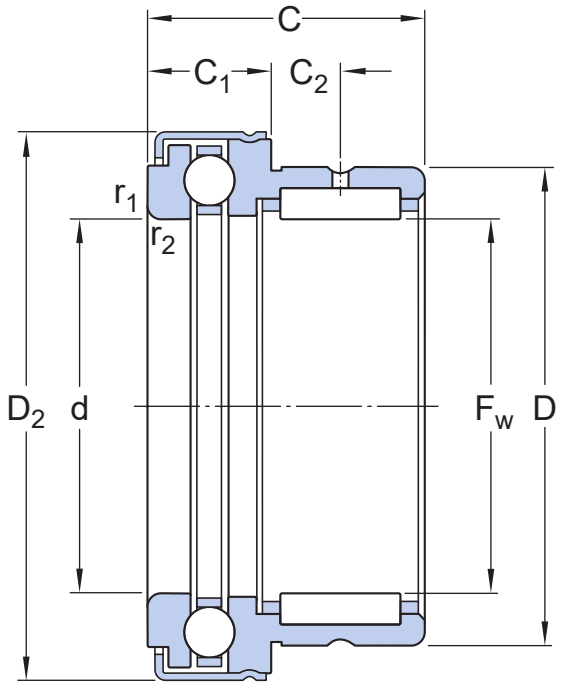
Properties

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
Indicative carbon footprint for new product	0.8 kg CO_2e

Logistics

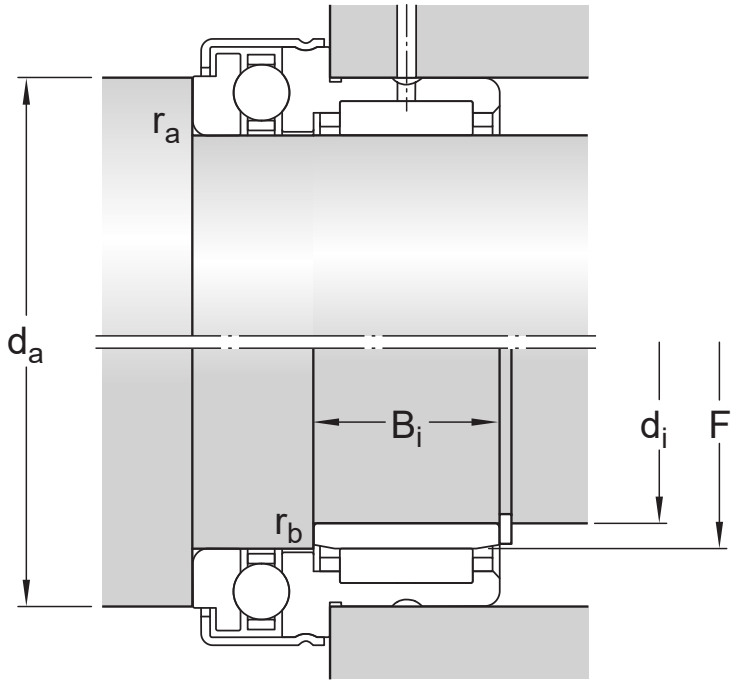
Product net weight	0.221 kg
eClass code	23-05-09-03
UNSPSC code	31171512

Technical specification



Dimensions

F_w	40 mm	Diameter under rollers
D	52 mm	Outside diameter
C	32 mm	Width
C_1	13 mm	Width of thrust part
C_2	10 mm	Distance side face to lubrication hole
d	40 mm	Bore diameter of thrust part
D_2	61.2 mm	Diameter of stamped steel cover
$r_{1,2}$	min. 0.6 mm	Chamfer dimension



Abutment dimensions

d_a	min. 55.7 mm	Diameter of shaft abutment
r_a	max. 0.6 mm	Radius of fillet
r_b	max. 0.3 mm	Radius of fillet
d_i	35 mm	Bore diameter of associated inner ring
F	40 mm	Diameter of inner ring raceway
B_i	20 mm	Width of associated inner ring

Calculation data

Basic dynamic load rating, radial	C	26.4 kN
Basic static load rating, radial	C_0	51 kN
Basic dynamic load rating, axial	C	27 kN
Basic static load rating, axial	C_0	68 kN
Fatigue load limit, radial	P_u	6.3 kN
Fatigue load limit, axial	P_u	2.55 kN
Minimum axial load factor	A	0.02
Reference speed		5 000 r/min
Limiting speed		4 000 r/min

Associated products

Inner ring	IR 35×40×20

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal
- Radial internal clearance: table

DESIGN CONSIDERATIONS

- Shaft and housing tolerances: table

Compatible products

Recommended product

Inner ring for needle roller bearings, IR series	IR 35X40X20

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