

NX 12 ZCombined needle roller / thrust ball bearing (full complement thrust part) with a cover

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These bearings consist of a radial needle roller bearing combined with a full complement thrust ball bearing. Together they can accommodate both moderate radial loads and lighter axial loads in one direction. 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
- Low cross section
- Non-separable design

Overview

Dimensions

Bore diameter	12 mm
Outside diameter	21 mm
Width	18 mm

Performance

Reference speed	8 000 r/min
Limiting speed	5 300 r/min

Properties

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

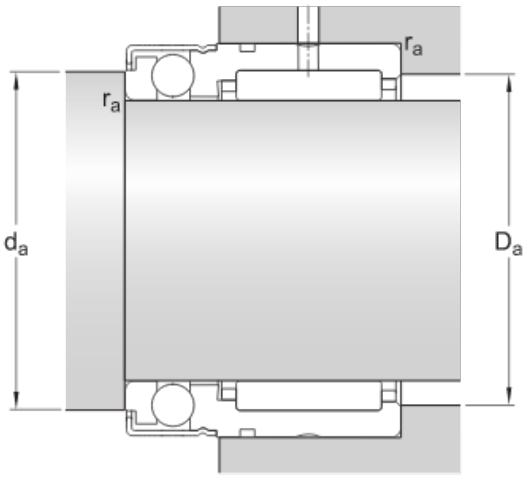
Tolerance class	Other
Material, bearing	Bearing steel
Coating	Without
Special feature	Thrust part with stamped steel cover without lubrication holes
Lubricant (thrust part)	Grease

Technical Specification

NOT FOUND

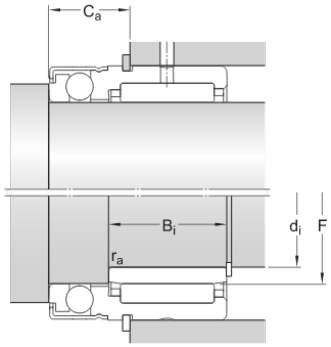
Dimensions

F_w	12 mm	Diameter under rollers
D	21 mm	Outside diameter
C	18 mm	Width
C_1	4.7 mm	Distance side face to lubrication hole
d	12 mm	Bore diameter of thrust part
$r_{1,2}$	min. 0.3 mm	Chamfer dimension



Abutment dimensions

d_a	min. 16.6 mm	Diameter of shaft abutment
D_a	max. 19 mm	Diameter of housing abutment
C_a	10 mm	Distance side face to back face of snap ring
r_a	max. 0.3 mm	Radius of fillet
d_i	8 mm	Bore diameter of associated inner ring
F	12 mm	Diameter of inner ring raceway
B_i	10 mm	Width of associated inner ring



Calculation data

Basic dynamic load rating, radial	C	5.39 kN
Basic static load rating, radial	C_0	5.2 kN
Basic dynamic load rating, axial	C	5.27 kN
Basic static load rating, axial	C_0	9.65 kN
Fatigue load limit, radial	P_u	0.61 kN
Fatigue load limit, axial	P_u	0.355 kN
Minimum axial load factor	A	0.00048
Reference speed		8 000 r/min
Limiting speed		5 300 r/min

Mass

Mass	0.028 kg

Associated products

Inner ring	IR 8x12x10 IS1
Snap ring	SW 21

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