

NKIA 5903 Combined needle roller / angular contact ball bearing for axial loads in one direction

Combined needle roller / angular contact ball bearing for axial loads in one direction

These bearings consist of a radial needle roller bearing combined with an angular contact ball bearing. Together they can accommodate both heavy radial loads and light axial loads in one direction. In addition, they can operate at 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 loads and axial loads in one direction
- High load carrying capacity
- High-speed capability
- Low cross section
- Separable design

Overview

Dimensions

Bore diameter	17 mm
Outside diameter	30 mm
Width	18 mm

Performance

Reference speed	18 000 r/min
Limiting speed	20 000 r/min

Properties

Bearing part	Complete bearing
Thrust part	With cage
Radial part	With cage
Rolling element (thrust part)	Balls
Axial load capability	Single-direction
Radial internal clearance	CN
Tolerance class	Normal
Material, bearing	Bearing steel
Coating	Without
Lubricant (thrust part)	None

Technical Specification

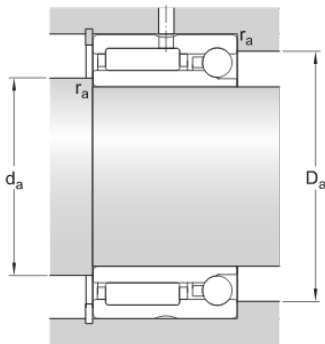


Dimensions

d	17 mm	Bore diameter
D	30 mm	Outside diameter
B	18 mm	Width
F	22 mm	Diameter of inner ring raceway
r _{1,2}	min. 0.3 mm	Chamfer dimension

Abutment dimensions

d _a	min. 19 mm	Diameter of shaft abutment
D _a	max. 28 mm	Diameter of housing abutment
r _a	max. 0.3 mm	Radius of fillet



Calculation data

Basic dynamic load rating, radial	C	11.4 kN
Basic static load rating, radial	C ₀	16.3 kN
Basic dynamic load rating, axial	C	2.24 kN
Basic static load rating, axial	C ₀	2.74 kN
Fatigue load limit, radial	P _u	1.96 kN
Fatigue load limit, axial	P _u	0.116 kN
Reference speed		18 000 r/min
Limiting speed		20 000 r/min

Mass

Mass

0.056 kg

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