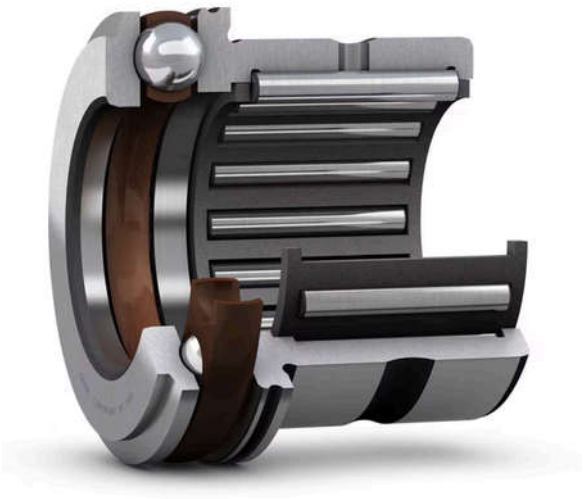


Image may differ from product. See technical specification for details.

NKX 70

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	70 mm
Outside diameter	85 mm
Width	40 mm

Performance

Reference speed	3 400 r/min
Limiting speed	4 500 r/min

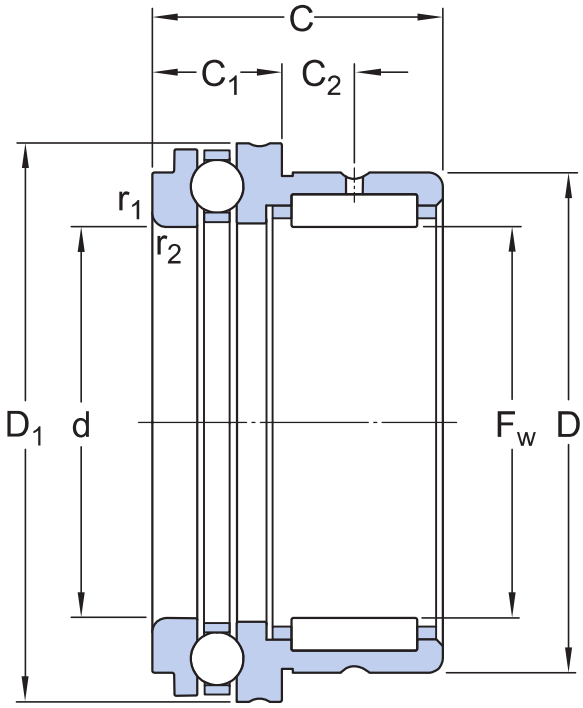
Properties

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
Lubricant (thrust part)	None

Logistics

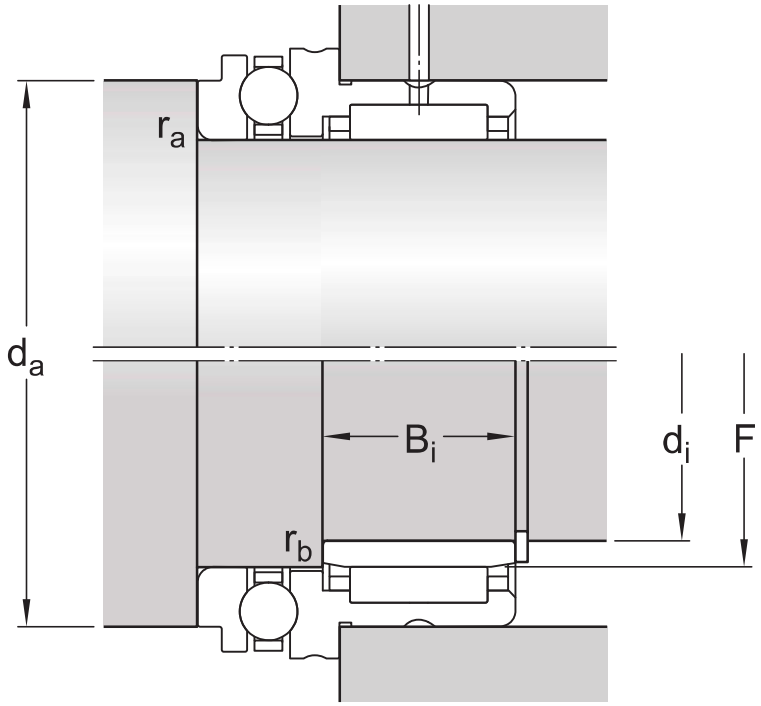
Product net weight	0.56 kg
eClass code	23-05-09-03
UNSPSC code	31171512

Technical specification



Dimensions

F_w	70 mm	Diameter under rollers
D	85 mm	Outside diameter
C	40 mm	Width
C_1	18 mm	Width of thrust part
C_1	11 mm	Distance side face to lubrication hole
d	70 mm	Bore diameter of thrust part
D_1	95.2 mm	Diameter of flange
$r_{1,2}$	min. 1 mm	Chamfer dimension



Abutment dimensions

d_a	min. 90.5 mm	Diameter of shaft abutment
r_a	max. 1 mm	Radius of fillet
r_b	max. 1 mm	Radius of fillet
d_i	60 mm	Bore diameter of associated inner ring
F	70 mm	Diameter of inner ring raceway
B_i	25 mm	Width of associated inner ring

Calculation data

Basic dynamic load rating, radial	C	44.6 kN
Basic static load rating, radial	C_0	98 kN
Basic dynamic load rating, axial	C	43.6 kN
Basic static load rating, axial	C_0	137 kN
Fatigue load limit, radial	P_u	12.2 kN
Fatigue load limit, axial	P_u	5.1 kN
Minimum axial load factor	A	0.097
Reference speed		3 400 r/min
Limiting speed		4 500 r/min

Associated products

Inner ring	IR 60x70x25

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 60X70X25

More Information

Product details

- Needle roller / angular contact ball bearings
- Needle roller / thrust ball bearings
- Needle roller / cylindrical roller thrust bearings
- General bearing specifications
- Loads
- Temperature limits
- Permissible speed
- Design considerations
- Designation system

Engineering information

- Principles of rolling bearing selection
- General bearing knowledge
- Bearing selection process
- Bearing failure and how to prevent it

Tools

- SimPro Quick
- Bearing Select
- Engineering Calculator
- LubeSelect for SKF greases
- Heater Selection Tool
- skf.com/mount

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