

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

BK 1212

Drawn cup needle roller bearing with a closed end

Drawn cup needle roller bearings are typically used in applications where the housing bore cannot be used as a raceway for a needle roller and cage assembly, but where a very compact and economical bearing arrangement is required. Owing to the large number of rollers, the bearings have a high load carrying capacity and stiffness. The closed end makes them suitable for bearing arrangements where they are situated at the end of a shaft.

- High radial load carrying capacity
- Accommodate small axial guidance forces
- High stiffness
- Very low cross-sectional height

Overview

Dimensions

Bore diameter of needle roller complement	12 mm
Outside diameter	18 mm
Width	12 mm

Performance

Basic dynamic load rating	6.27 kN
Basic static load rating	7.35 kN
Reference speed	16 000 r/min
Limiting speed	18 000 r/min

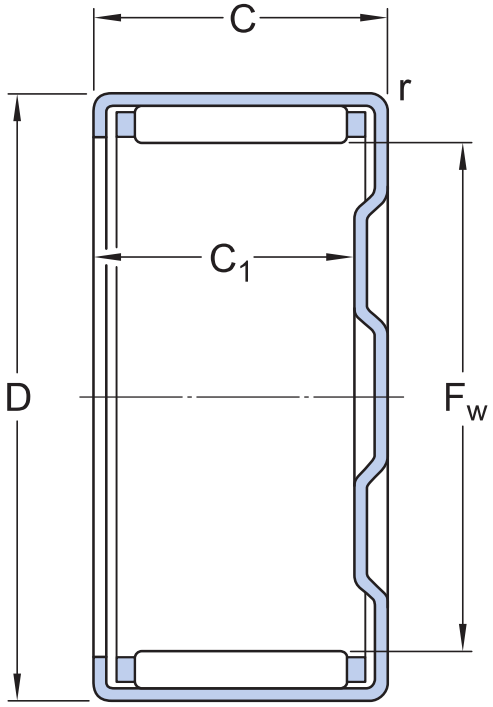
Properties

Bearing part	Bearing without inner ring
Number of rows	1
Outer ring type	Drawn cup with one closed end
Aligning feature	Without
Cage	Sheet steel
Number of flanges, outer ring	2
Tolerance class	Normal
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

Logistics

Product net weight	0.01 kg
eClass code	23-05-09-03
UNSPSC code	31171512

Technical specification



Dimensions

F_w	12 mm	Diameter under rollers
D	18 mm	Outside diameter
C	12 mm	Width
C_1	min. 9.3 mm	Depth of the drawn cup BK
r	min. 0.8 mm	Chamfer dimension drawn cup (outer ring)

Calculation data

Basic dynamic load rating	C	6.27 kN
Basic static load rating	C_0	7.35 kN
Fatigue load limit	P_u	0.85 kN
Reference speed		16 000 r/min
Limiting speed		18 000 r/min

Associated products

Inner ring IR series	IR 8x12x12.5

Inner ring LR series	LR 8x12x12.5
Radial shaft seal with a low cross-sectional height, single lip	G 12x18x3
Radial shaft seal with a low cross-sectional height, double lip	SD 12x18x3

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: table

DESIGN CONSIDERATIONS

- Shaft and housing tolerances: table

Compatible products

Recommended product

Inner ring for needle roller bearings, IR series	IR 8X12X12.5
Radial shaft seal with low cross-sectional height for needle roller bearings, G design	G 12X18X3

More Information

Product details

- Designs and variants
- General bearing specifications
- Loads
- Temperature limits
- Permissible speed
- Design considerations
- Mounting
- 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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