



RNA 6903 Single row needle roller bearing with machined rings, with flanges, without inner ring

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Single row needle roller bearings without an inner ring consist of an outer ring with a needle roller and cage assembly. They are an excellent choice for compact bearing arrangements in applications where hardened and ground raceways can be provided on the shaft. The outer ring includes two integral flanges to guide the bearing axially and an annular groove with one or more lubrication holes to facilitate relubrication.

- High radial load carrying capacity
- High stiffness
- Low cross-sectional height
- Accommodate axial displacement in both directions

Overview

Dimensions

Bore diameter of needle roller complement	22 mm
Outside diameter	30 mm
Width	23 mm

Performance

Basic dynamic load rating	18.7 kN
Basic static load rating	30.5 kN
Reference speed	18 000 r/min
Limiting speed	20 000 r/min

Properties

Bearing part	Bearing without inner ring
Number of rows	1
Outer ring type	Machined (solid)
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	With

Technical Specification



Dimensions

F_w	22 mm	Diameter under rollers
D	30 mm	Outside diameter
C	23 mm	Width
$r_{1,2}$	min. 0.3 mm	Chamfer dimension outer ring

Abutment dimensions



D_a	max. 28 mm	Abutment diameter housing (with flanges)
r_a	max. 0.3 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	18.7 kN
Basic static load rating	C_0	30.5 kN
Fatigue load limit	P_u	3.75 kN
Reference speed		18 000 r/min
Limiting speed		20 000 r/min

Mass

Mass bearing

0.042 kg

Associated seals



G 22x30x4	Radial shaft seal with a low cross-sectional height, single lip
SD 22x30x4	Radial shaft seal with a low cross-sectional height, double lip

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