

RNA 6903

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



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	Diameter of housing abutment
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



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

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal, P6, P5, ISO - F6 (F_w)
- Radial internal clearance: table

DESIGN CONSIDERATIONS

- Housing tolerances: table
- Shaft tolerances: Operating clearance