

NK 90/35



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	90 mm	Diameter under rollers
D	110 mm	Outside diameter
C	35 mm	Width
$r_{1,2}$	min. 1 mm	Chamfer dimension outer ring



Abutment dimensions		
D_a	max. 105 mm	Diameter of housing abutment
r_a	max. 1 mm	Fillet radius

Calculation data

AGA performance class	AGA Explorer	
Basic dynamic load rating	C	116 kN

Basic static load rating	C ₀	216 kN
Fatigue load limit	P _u	28 kN
Reference speed		4 500 r/min
Limiting speed		5 000 r/min



Associated seals	
90x110x10 HMS5 RG	Radial shaft seal

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