

## NK 19/20



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 |             |                              |
|------------|-------------|------------------------------|
| $F_w$      | 19 mm       | Diameter under rollers       |
| $D$        | 27 mm       | Outside diameter             |
| $C$        | 20 mm       | Width                        |
| $r_{1,2}$  | min. 0.3 mm | Chamfer dimension outer ring |

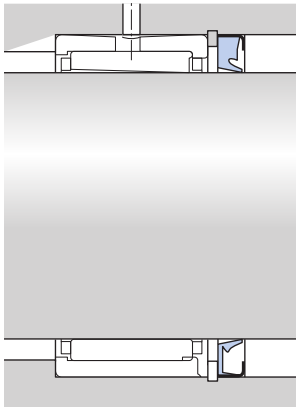


| Abutment dimensions |             |                              |
|---------------------|-------------|------------------------------|
| $D_a$               | max. 25 mm  | Diameter of housing abutment |
| $r_a$               | max. 0.3 mm | Fillet radius                |

### Calculation data

|                           |       |         |
|---------------------------|-------|---------|
| Basic dynamic load rating | $C$   | 16.5 kN |
| Basic static load rating  | $C_0$ | 25.5 kN |

|                    |       |              |
|--------------------|-------|--------------|
| Fatigue load limit | $P_u$ | 3.05 kN      |
| Reference speed    |       | 20 000 r/min |
| Limiting speed     |       | 24 000 r/min |



| Associated seals |                                                                 |
|------------------|-----------------------------------------------------------------|
| G 19x27x4        | Radial shaft seal with a low cross-sectional height, single lip |
| SD 19x27x4       | 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