

# RNU 202 ECPSingle row cylindrical roller bearing, NU design, without inner ring

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Single row cylindrical roller bearings of the NU design without an inner ring consist of an outer ring with a roller and cage assembly. They are typically used in applications where hardened and ground raceways are provided on the shaft. Without the inner ring, a larger shaft diameter can be used to provide a stronger, stiffer shaft. The bearings can accommodate axial displacement in both directions, limited only by the width of the raceway on the shaft.

- High radial load carrying capacity
- Enable a stronger, stiffer shaft
- Low friction
- Long service life
- Accommodate axial displacement in both directions

## Overview

### Dimensions

|                  |         |
|------------------|---------|
| Bore diameter    | 19.3 mm |
| Outside diameter | 35 mm   |
| Width            | 11 mm   |

### Performance

|                           |              |
|---------------------------|--------------|
| Basic dynamic load rating | 12.5 kN      |
| Basic static load rating  | 10.2 kN      |
| Reference speed           | 22 000 r/min |
| Limiting speed            | 26 000 r/min |

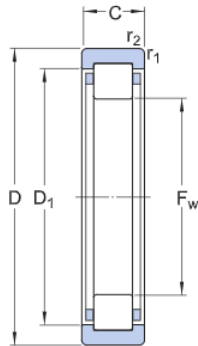
### Properties

|                                      |                            |
|--------------------------------------|----------------------------|
| Bearing part                         | Bearing without inner ring |
| Number of rows                       | 1                          |
| Locating feature, bearing outer ring | None                       |
| Bore type                            | Cylindrical                |
| Cage                                 | Non-metallic               |
| Number of flanges, outer ring        | 2                          |
| Loose flange                         | None                       |
| Coating                              | Without                    |

|                       |         |
|-----------------------|---------|
| Sealing               | Without |
| Lubricant             | None    |
| Relubrication feature | Without |

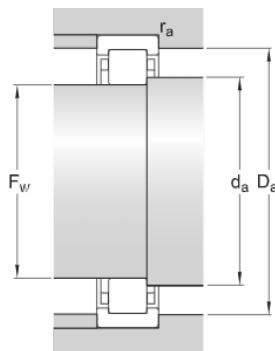
# Technical Specification

## Dimensions



|           |                   |                              |
|-----------|-------------------|------------------------------|
| $F_w$     | 19.3 mm           | Diameter under rollers       |
| D         | 35 mm             | Outside diameter             |
| C         | 11 mm             | Width                        |
| $D_1$     | $\approx 27.7$ mm | Shoulder diameter outer ring |
| $r_{1,2}$ | min. 0.6 mm       | Corner radius                |

## Abutment dimensions



|       |              |                           |
|-------|--------------|---------------------------|
| $d_a$ | max. 21.9 mm | Abutment diameter shaft   |
| $D_a$ | max. 31.3 mm | Abutment diameter housing |
| $r_a$ | max. 0.6 mm  | Fillet radius             |

## Calculation data

|                           |       |              |
|---------------------------|-------|--------------|
| Basic dynamic load rating | C     | 12.5 kN      |
| Basic static load rating  | $C_0$ | 10.2 kN      |
| Fatigue load limit        | $P_u$ | 1.22 kN      |
| Reference speed           |       | 22 000 r/min |
| Limiting speed            |       | 26 000 r/min |
| Calculation factor        | $k_r$ | 0.15         |
| Limiting value            | e     | 0.2          |
| Calculation factor        | Y     | 0.6          |

## Mass

|              |          |
|--------------|----------|
| Mass bearing | 0.037 kg |
|--------------|----------|

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