

C 3148

CARB toroidal roller bearings are unique: as well as accommodating misalignment without increased stress levels, they also provide frictionless axial movement within the bearing in the non-locating position in self-aligning bearing arrangements. Being NR Explorer bearings, they can accommodate higher load levels and provide significantly extended service life.



- Accommodate misalignment and axial displacement within the bearing
- High radial load carrying capacity
- Provide frictionless axial movement
- Long bearing system life
- Reduce noise and vibration levels

Bore type

Cylindrical



Dimensions

|                  |              |                                           |
|------------------|--------------|-------------------------------------------|
| d                | 240 mm       | Bore diameter                             |
| D                | 400 mm       | Outside diameter                          |
| B                | 128 mm       | Width                                     |
| d <sub>2</sub>   | ≈ 281 mm     | Shoulder diameter of inner ring           |
| D <sub>1</sub>   | ≈ 357 mm     | Shoulder or recess diameter of outer ring |
| s <sub>1</sub>   | max. 20.4 mm | Permissible axial displacement            |
| r <sub>1,2</sub> | min. 4 mm    | Chamfer dimension                         |



Abutment dimensions

|                |             |                              |
|----------------|-------------|------------------------------|
| d <sub>a</sub> | min. 257 mm | Diameter of shaft abutment   |
| d <sub>a</sub> | max. 309 mm | Diameter of shaft abutment   |
| D <sub>a</sub> | min. 334 mm | Diameter of housing abutment |
| D <sub>a</sub> | max. 383 mm | Abutment diameter housing    |

|                                            |             |                                            |
|--------------------------------------------|-------------|--------------------------------------------|
| $C_a$                                      | min. 3.7 mm | Minimum width of space required in housing |
| $r_a$                                      | max. 3 mm   | Radius of fillet                           |
| A negative value for $C_a$ is theoretical. |             |                                            |

## Calculation data

| AGA performance class     | AGA Explorer |             |
|---------------------------|--------------|-------------|
| Basic dynamic load rating | C            | 2 320 kN    |
| Basic static load rating  | $C_0$        | 3 450 kN    |
| Fatigue load limit        | $P_u$        | 285 kN      |
| Reference speed           |              | 1 300 r/min |
| Limiting speed            |              | 1 700 r/min |
| Misalignment factor       | $k_1$        | 0.116       |
| Internal clearance factor | $k_2$        | 0.095       |

## Tolerances and clearances

### GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal, P5, tapered bore 1:12, tapered bore 1:30
- Radial internal clearance: cylindrical bore, tapered bore

### BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fit