

## 231/530 CAK/W33



Spherical roller bearings can accommodate heavy loads in both directions. They are self-aligning and accommodate misalignment and shaft deflections, with virtually no increase in friction or temperature. The design includes features to facilitate relubrication. The bearings can be used in a modular system, including housings, sleeves and nuts.

- Accommodate misalignment
- High load carrying capacity
- Relubrication features
- Low friction and long service life
- Increased wear resistance

Bore type

Tapered 1:12

### Dimensions

|                  |               |                                                |
|------------------|---------------|------------------------------------------------|
| d                | 530 mm        | Bore diameter                                  |
| $t_{\Delta dmp}$ | 0.0 – 0.07 mm | Deviation limits of mid-range bore diameter    |
| $t_{\Delta SL}$  | 0.0 – 0.07 mm | Deviation limits of tapered slope              |
| D                | 870 mm        | Outside diameter                               |
| $t_{\Delta Dmp}$ | -0.1 – 0.0 mm | Deviation limits of mid-range outside diameter |
| B                | 272 mm        | Width                                          |
| $t_{\Delta Bs}$  | -0.5 – 0.0 mm | Deviation limits of ring width                 |
| $d_2$            | ≈ 638 mm      | Shoulder diameter of inner ring                |
| $D_1$            | ≈ 763 mm      | Shoulder/recess diameter of outer ring         |
| b                | 22.3 mm       | Width of lubrication groove                    |
| K                | 12 mm         | Diameter of lubrication hole                   |
| $r_{1,2}$        | min. 7.5 mm   | Chamfer dimension                              |
|                  | Normal        | ISO tolerance class for dimensions             |

## Abutment dimensions

|       |             |                              |
|-------|-------------|------------------------------|
| $D_a$ | max. 838 mm | Diameter of housing abutment |
| $r_a$ | max. 6 mm   | Radius of fillet             |

## Calculation data

|                           |       |              |
|---------------------------|-------|--------------|
| AGA performance class     |       | AGA Explorer |
| Basic dynamic load rating | C     | 8 526 kN     |
| Basic static load rating  | $C_0$ | 14 000 kN    |
| Fatigue load limit        | $P_u$ | 880 kN       |
| Reference speed           |       | 360 r/min    |
| Limiting speed            |       | 670 r/min    |
| Limiting value            | e     | 0.3          |
| Calculation factor        | $Y_1$ | 2.3          |
| Calculation factor        | $Y_2$ | 3.4          |
| Calculation factor        | $Y_0$ | 2.2          |

## Tolerances of run-out

|                                                            |           |                   |
|------------------------------------------------------------|-----------|-------------------|
| Range of section height at inner ring of assembled bearing | $t_{Kia}$ | 70 $\mu\text{m}$  |
| Range of section height at outer ring of assembled bearing | $t_{Kea}$ | 140 $\mu\text{m}$ |
| ISO tolerance class for geoal tolerances                   |           | Normal            |

## Radial internal clearance

|                           |                   |
|---------------------------|-------------------|
| Minimum initial clearance | 410 $\mu\text{m}$ |
| Maximum initial clearance | 540 $\mu\text{m}$ |

## Tolerances of run-out

### GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal, P6, 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

AGA BEARINGS