

23156-2CS5/VT143



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. Under normal operating conditions, sealed bearings are almost maintenance-free, keeping service costs and grease consumption low. The design includes features to facilitate relubrication.

- Accommodate misalignment
- High load carrying capacity
- Sealed for increased reliability, with relubrication features
- Low friction and long service life
- Increased wear resistance

Bore type

Cylindrical



| Dimensions        |                 |                                                |
|-------------------|-----------------|------------------------------------------------|
| d                 | 280 mm          | Bore diameter                                  |
| t <sub>Δdmp</sub> | -0.035 – 0.0 mm | Deviation limits of mid-range bore diameter    |
| D                 | 460 mm          | Outside diameter                               |
| t <sub>ΔDmp</sub> | -0.045 – 0.0 mm | Deviation limits of mid-range outside diameter |
| B                 | 146 mm          | Width                                          |
| t <sub>ΔBs</sub>  | -0.1 – 0.0 mm   | Deviation limits of ring width                 |
| d <sub>2</sub>    | ≈ 314 mm        | Shoulder diameter of inner ring                |
| D <sub>1</sub>    | ≈ 417 mm        | Shoulder/recess diameter of outer ring         |
| b                 | 16.7 mm         | Width of lubrication groove                    |
| K                 | 9 mm            | Diameter of lubrication hole                   |
| r <sub>1,2</sub>  | min. 5 mm       | Chamfer dimension                              |
| Normal            |                 | ISO tolerance class for dimensions             |



### Abutment dimensions

|       |             |                              |
|-------|-------------|------------------------------|
| $d_a$ | min. 300 mm | Diameter of shaft abutment   |
| $d_a$ | max. 314 mm | Diameter of shaft abutment   |
| $D_a$ | max. 440 mm | Diameter of housing abutment |
| $r_a$ | max. 4 mm   | Radius of fillet             |

### Calculation data

|                           |       |              |
|---------------------------|-------|--------------|
| AGA performance class     |       | AGA Explorer |
| Basic dynamic load rating | C     | 2 788 kN     |
| Basic static load rating  | $C_0$ | 4 250 kN     |
| Fatigue load limit        | $P_u$ | 335 kN       |
| Limiting speed            |       | 300 r/min    |
| Limiting value            | e     | 0.28         |
| Calculation factor        | $Y_1$ | 2.4          |
| Calculation factor        | $Y_2$ | 3.6          |
| Calculation factor        | $Y_0$ | 2.5          |

### Tolerances of run-out

|                                                            |           |                   |
|------------------------------------------------------------|-----------|-------------------|
| Range of section height at inner ring of assembled bearing | $t_{Kia}$ | 13 $\mu\text{m}$  |
| Maximum run-out of inner ring side face to the bore        | $t_{Sd}$  | 13 $\mu\text{m}$  |
| Range of section height at outer ring of assembled bearing | $t_{Kea}$ | 23 $\mu\text{m}$  |
| Perpendicularity of outer ring outside surface             | $t_{SD}$  | 7.5 $\mu\text{m}$ |
| ISO tolerance class for geoal tolerances                   |           | P5                |

### Radial internal clearance

|                           |        |
|---------------------------|--------|
| Minimum initial clearance | 170 µm |
| Maximum initial clearance | 260 µm |
| 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