



## SKF 23228 CCK/W33

Spherical roller bearing with tapered bore and relubrication features

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.

### Technical specifications

| General                                                    |              |
|------------------------------------------------------------|--------------|
| Bore type                                                  | Tapered 1:12 |
| Dimensions                                                 |              |
| Bore diameter                                              | 140 mm       |
| Deviation limits of mid-range bore diameter                | 0..0.04 mm   |
| Deviation limits of tapered slope                          | 0..0.04 mm   |
| Outside diameter                                           | 250 mm       |
| Deviation limits of mid-range outside diameter             | -0.03..0 mm  |
| Width                                                      | 88 mm        |
| Deviation limits of ring width                             | -0.08..0 mm  |
| Shoulder diameter of inner ring                            | 165 mm       |
| Shoulder/recess diameter of outer ring                     | 212 mm       |
| Width of lubrication groove                                | 11.1 mm      |
| Diameter of lubrication hole                               | 6 mm         |
| Chamfer dimension                                          | 3 mm         |
| ISO tolerance class for dimensions                         | Normal       |
| Abutment dimensions                                        |              |
| Diameter of housing abutment                               | 236 mm       |
| Radius of fillet                                           | 2.5 mm       |
| Calculation data                                           |              |
| SKF performance class                                      | SKF Explorer |
| Basic dynamic load rating                                  | 962 kN       |
| Basic static load rating                                   | 1250 kN      |
| Fatigue load limit                                         | 120 kN       |
| Reference speed                                            | 1700 r/min   |
| Limiting speed                                             | 2400 r/min   |
| Limiting value                                             | 0.33         |
| Calculation factor                                         | 2            |
| Calculation factor                                         | 3            |
| Calculation factor                                         | 2            |
| Tolerances of run-out                                      |              |
| Range of section height at inner ring of assembled bearing | 8 µm         |
| Maximum run-out of inner ring side face to the bore        | 10 µm        |
| Range of section height at outer ring of assembled bearing | 15 µm        |
| Perpendicularity of outer ring outside surface             | 5.5 µm       |
| ISO tolerance class for geometrical tolerances             | P5           |
| Radial internal clearance                                  |              |
| Minimum initial clearance                                  | 120 µm       |
| Maximum initial clearance                                  | 160 µm       |
| Performance                                                |              |
| Basic dynamic load rating                                  | 962 kN       |
| Basic static load rating                                   | 1250 kN      |

|                       |              |
|-----------------------|--------------|
| Reference speed       | 1700 r/min   |
| Limiting speed        | 2400 r/min   |
| SKF performance class | SKF Explorer |

| Properties                                             |                           |
|--------------------------------------------------------|---------------------------|
| Number of rows                                         | 2                         |
| Locating feature, bearing outer ring                   | Without                   |
| Bore type                                              | Tapered 1:12              |
| Cage                                                   | Sheet metal               |
| Radial internal clearance                              | CN                        |
| Tolerance class for dimensions                         | Normal                    |
| Tolerance class for run-out                            | P5                        |
| Sealing                                                | Without                   |
| Lubricant                                              | None                      |
| Relubrication feature                                  | With                      |
| Candidate for remanufacturing                          | Yes                       |
| Indicative carbon footprint for new product            | 64.4 kg CO <sub>2</sub> e |
| Indicative carbon footprint for remanufactured product | 22.5 kg CO <sub>2</sub> e |

| Logistics          |             |
|--------------------|-------------|
| Product net weight | 17.9 kg     |
| eClass code        | 23-05-09-11 |
| UNSPSC code        | 31171510    |

**SKF drawings**

