



## SKF 23220 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                                  | 100 mm       |
| Deviation limits of mid-range bore diameter    | 0..0.035 mm  |
| Deviation limits of tapered slope              | 0..0.035 mm  |
| Outside diameter                               | 180 mm       |
| Deviation limits of mid-range outside diameter | -0.025..0 mm |
| Width                                          | 60.3 mm      |
| Deviation limits of ring width                 | -0.08..0 mm  |
| Shoulder diameter of inner ring                | 117 mm       |
| Shoulder/recess diameter of outer ring         | 153 mm       |
| Width of lubrication groove                    | 8.3 mm       |
| Diameter of lubrication hole                   | 4.5 mm       |
| Chamfer dimension                              | 2.1 mm       |
| ISO tolerance class for dimensions             | Normal       |

| Abutment dimensions          |        |
|------------------------------|--------|
| Diameter of housing abutment | 168 mm |
| Radius of fillet             | 2 mm   |

| Calculation data          |              |
|---------------------------|--------------|
| SKF performance class     | SKF Explorer |
| Basic dynamic load rating | 498 kN       |
| Basic static load rating  | 600 kN       |
| Fatigue load limit        | 63 kN        |
| Reference speed           | 2400 r/min   |
| Limiting speed            | 3400 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 | 6 µm  |
| Maximum run-out of inner ring side face to the bore        | 9 µm  |
| Range of section height at outer ring of assembled bearing | 13 µm |
| Perpendicularity of outer ring outside surface             | 5 µm  |
| ISO tolerance class for geometrical tolerances             | P5    |

| Radial internal clearance |        |
|---------------------------|--------|
| Minimum initial clearance | 80 µm  |
| Maximum initial clearance | 110 µm |

| Mounting information                      |       |
|-------------------------------------------|-------|
| Recommended tightening angle for lock nut | 150 ° |

| Performance               |              |
|---------------------------|--------------|
| Basic dynamic load rating | 498 kN       |
| Basic static load rating  | 600 kN       |
| Reference speed           | 2400 r/min   |
| Limiting speed            | 3400 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            | 22.9 kg CO <sub>2</sub> e |
| Indicative carbon footprint for remanufactured product | 8 kg CO <sub>2</sub> e    |

| Logistics          |             |
|--------------------|-------------|
| Product net weight | 6.37 kg     |
| eClass code        | 23-05-09-11 |
| UNSPSC code        | 31171510    |

**SKF drawings**

