



SKF 6003

Deep groove ball bearing

Single row deep groove ball bearings are particularly versatile, have low friction and are optimized for low noise and low vibration, which enables high rotational speeds. They accommodate radial and axial loads in both directions, are easy to mount, and require less maintenance than many other bearing types.

Technical specifications

| Dimensions | |
|------------------------------------------------|--------------------------------|
| Bore diameter | 17 mm |
| Deviation limits of mid-range bore diameter | -0.007..0 mm |
| Outside diameter | 35 mm |
| Deviation limits of mid-range outside diameter | -0.009..0 mm |
| Width | 10 mm |
| Deviation limits of ring width | -0.06..0 mm |
| Shoulder diameter | 23 mm |
| Recess diameter | 31.2 mm |
| Chamfer dimension | 0.3 mm |
| ISO tolerance class for dimensions | P6 and tighter width tolerance |

| Abutment dimensions | |
|-----------------------------------|--------|
| Diameter of shaft abutment | 19 mm |
| Diameter of housing abutment | 33 mm |
| Radius of shaft or housing fillet | 0.3 mm |

| Calculation data | |
|---------------------------|--------------|
| SKF performance class | SKF Explorer |
| Basic dynamic load rating | 6.37 kN |
| Basic static load rating | 3.25 kN |
| Fatigue load limit | 0.137 kN |
| Reference speed | 45000 r/min |
| Limiting speed | 28000 r/min |
| Minimum load factor | 0.03 |
| Calculation factor | 14 |

| Tolerances of run-out | |
|------------------------------------------------------------|------|
| Range of section height at inner ring of assembled bearing | 4 µm |
| Maximum run-out of inner ring side face to the bore | 7 µm |
| Maximum axial run-out of inner ring of assembled bearing | 7 µm |
| Range of section height at outer ring of assembled bearing | 7 µm |
| Perpendicularity of outer ring outside surface | 4 µm |
| Maximum axial run-out of outer ring of assembled bearing | 8 µm |
| ISO tolerance class for geometrical tolerances | P5 |

| Performance | |
|---------------------------|--------------|
| Basic dynamic load rating | 6.37 kN |
| Basic static load rating | 3.25 kN |
| Reference speed | 45000 r/min |
| Limiting speed | 28000 r/min |
| SKF performance class | SKF Explorer |

| Properties | |
|--------------------------------------|-------------|
| Filling slots | Without |
| Number of rows | 1 |
| Locating feature, bearing outer ring | Without |
| Bore type | Cylindrical |

| | |
|---------------------------------------------|---------------------------|
| Cage | Sheet metal |
| Matched arrangement | No |
| Radial internal clearance | CN |
| Material, bearing | Bearing steel |
| Coating | Without |
| Sealing | Without |
| Lubricant | None |
| Relubrication feature | Without |
| Indicative carbon footprint for new product | 0.14 kg CO ₂ e |

| Logistics | |
|--------------------|-------------|
| Product net weight | 0.0375 kg |
| eClass code | 23-05-08-01 |
| UNSPSC code | 31171504 |

SKF drawings

