



Image may differ from product. See technical specification for details.

627-Z

Deep groove ball bearing with seals or shields

Single row deep groove ball bearings with seals or shields 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. The integral sealing can significantly prolong bearing service life because it keeps lubricant in the bearings and contaminants out.

- Integral sealing prolongs bearing service life
- Simple, versatile and robust design
- Low friction and high-speed capability
- Accommodate radial and axial loads in both directions
- Require little maintenance

Overview

Dimensions

| | |
|------------------|-------|
| Bore diameter | 7 mm |
| Outside diameter | 22 mm |
| Width | 7 mm |

Performance

| | |
|---------------------------|--------------|
| Basic dynamic load rating | 3.45 kN |
| Basic static load rating | 1.37 kN |
| Reference speed | 70 000 r/min |
| Limiting speed | 45 000 r/min |
| SKF performance class | SKF Explorer |

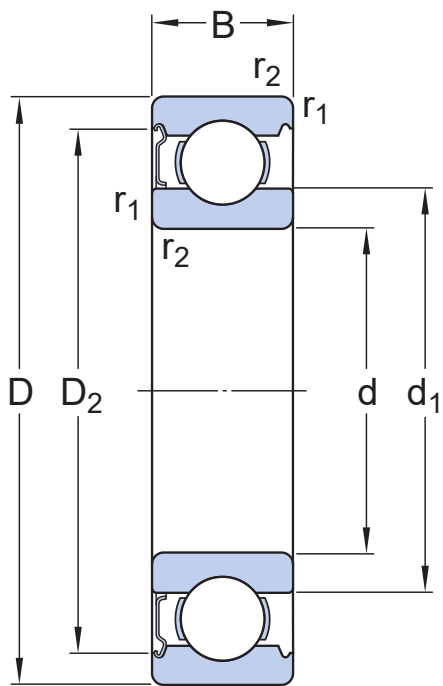
Properties

| | |
|--------------------------------------|--------------------|
| Filling slots | Without |
| Number of rows | 1 |
| Locating feature, bearing outer ring | None |
| Bore type | Cylindrical |
| Cage | Sheet metal |
| Matched arrangement | No |
| Radial internal clearance | CN |
| Material, bearing | Bearing steel |
| Coating | Without |
| Sealing | Shield on one side |
| Sealing type | Non-contact |
| Lubricant | None |
| Relubrication feature | Without |

Logistics

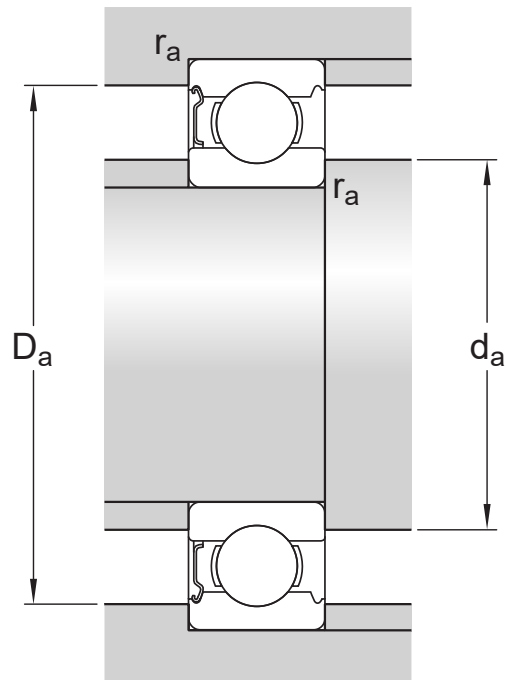
| | |
|--------------------|-------------|
| Product net weight | 0.012 kg |
| eClass code | 23-05-08-01 |
| UNSPSC code | 31171504 |

Technical specification



Dimensions

| | | |
|--------------------------------|---------------|--|
| d | 7 mm | Bore diameter |
| t _{Δdmp} | -0.007 – 0 mm | Deviation limits of mid-range bore diameter |
| D | 22 mm | Outside diameter |
| t _{ΔDmp} | -0.008 – 0 mm | Deviation limits of mid-range outside diameter |
| B | 7 mm | Width |
| t _{ΔBs} | -0.06 – 0 mm | Deviation limits of ring width |
| d ₁ | ≈ 12.15 mm | Shoulder diameter |
| D ₂ | ≈ 19.2 mm | Recess diameter |
| r _{1,2} | min. 0.3 mm | Chamfer dimension |
| P6 and tighter width tolerance | | ISO tolerance class for dimensions |



Abutment dimensions

| | | |
|-------|--------------|-----------------------------------|
| d_a | min. 9.4 mm | Diameter of shaft abutment |
| d_a | max. 12.1 mm | Diameter of shaft abutment |
| D_a | max. 19.6 mm | Diameter of housing abutment |
| r_a | max. 0.3 mm | Radius of shaft or housing fillet |

Calculation data

| | | |
|---------------------------|-------|--------------|
| SKF performance class | | SKF Explorer |
| Basic dynamic load rating | C | 3.45 kN |
| Basic static load rating | C_0 | 1.37 kN |
| Fatigue load limit | P_u | 0.057 kN |
| Reference speed | | 70 000 r/min |
| Limiting speed | | 45 000 r/min |
| Minimum load factor | k_r | 0.025 |
| Calculation factor | f_0 | 12 |

Tolerances of run-out

| | | |
|--|-----------|-----------------|
| Range of section height at inner ring of assembled bearing | t_{kia} | 4 μm |
| Maximum run-out of inner ring side face to the bore | t_{sd} | 7 μm |

| | | |
|--|------------------|-----------------|
| Maximum axial run-out of inner ring of assembled bearing | t_{Sia} | 7 μm |
| Range of section height at outer ring of assembled bearing | t_{Kea} | 6 μm |
| Perpendicularity of outer ring outside surface | t_{SD} | 4 μm |
| Maximum axial run-out of outer ring of assembled bearing | t_{Sea} | 8 μm |
| ISO tolerance class for geometrical tolerances | | P5 |

Tolerances and clearances




GENERAL BEARING SPECIFICATIONS

- **Tolerances:** Normal (metric), P6, P5, Normal (inch)
- **Radial internal clearance:** Classes C2 to C5

BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fits

More Information

|  Product details |  Engineering information |  Tools |
|---|---|---|
| Single row deep groove ball bearings | Principles of rolling bearing selection | SKF Product select |
| Stainless steel deep groove ball bearings | General bearing knowledge | SimPro Quick |
| Single row deep groove ball bearings with filling slots | Bearing selection process | Bearing Frequency Calculator |
| Double row deep groove ball bearings | Bearing interfaces | LubeSelect for SKF greases |
| General bearing specifications | Seat tolerances for standard conditions | Heater selection tool |
| Loads | Selecting internal clearance | |
| Temperature limits | Lubrication | |
| Permissible speed | Sealing, mounting and dismounting | |
| Designation system | Bearing failure and how to prevent it | |

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