

29244 E



Spherical roller thrust bearing with stamped steel cage

Spherical roller thrust bearings accommodate very heavy axial and considerable radial loads. They have the highest load rating of all thrust bearings, enabling compact, high power density bearing arrangements. By combining two or more spherical roller thrust bearings, it is possible to create a bearing arrangement that is either self-aligning, allowing misalignment of the shaft, or very stiff.

- High load carrying capacity
- Can accommodate combined loads
- Allow misalignment or create very stiff bearing arrangements
- Long service life and low friction
- Separable design

Overview

Dimensions

| | |
|------------------|--------|
| Bore diameter | 220 mm |
| Outside diameter | 300 mm |
| Height | 48 mm |

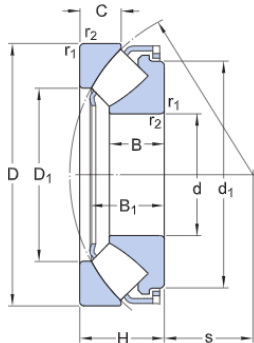
Performance

| | |
|---------------------------|-------------|
| Basic dynamic load rating | 690 kN |
| Basic static load rating | 3 000 kN |
| Reference speed | 1 300 r/min |
| Limiting speed | 2 200 r/min |

Properties

| | |
|----------------------------------|-------------|
| Locating feature, housing washer | None |
| Bore type | Cylindrical |
| Cage | Sheet metal |
| Tolerance class | Normal |

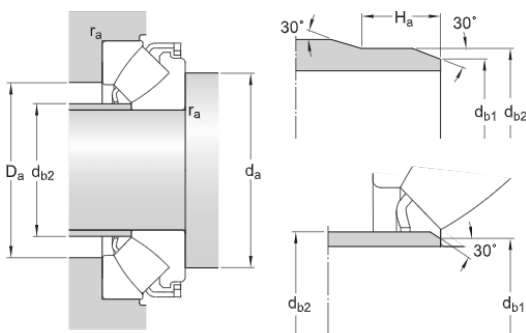
Technical Specification



Dimensions

| | | |
|-----------|-----------|--|
| d | 220 mm | Bore diameter |
| D | 300 mm | Outside diameter |
| H | 48 mm | Height |
| d_1 | ≈ 280 mm | Outside diameter of shaft washer end side face |
| D_1 | ≈ 252 mm | Shoulder diameter outer ring |
| B | 30 mm | Width shaft washer or length of shaft washer bore diameter that fits on shaft (bearings with a stamped steel cage) |
| B_1 | 43.4 mm | Height shaft washer + cage |
| C | 24.5 mm | Height housing washer |
| s | 117 mm | Distance from shaft washer end side face to pressure point |
| $r_{1,2}$ | min. 2 mm | Chamfer dimension shaft washer |

Abutment dimensions



| | | |
|-------|---------------|----------------------------------|
| d_a | min. 255 mm | Diameter of shaft abutment |
| d_b | max. 224.5 mm | Abutment diameter of spacer ring |
| d_b | max. 227 mm | Outside diameter of spacer ring |
| H_e | min. 17 mm | Length of spacer ring |
| D_a | max. 271 mm | Diameter of housing abutment |
| r_a | max. 2 mm | Fillet radius |

Calculation data

| | | |
|---------------------------|-------|-------------|
| Basic dynamic load rating | C | 690 kN |
| Basic static load rating | C_0 | 3 000 kN |
| Fatigue load limit | P_u | 310 kN |
| Reference speed | | 1 300 r/min |
| Limiting speed | | 2 200 r/min |
| Minimum axial load factor | A | 0.86 |

Mass

| | | |
|--------------|--|-------|
| Mass bearing | | 10 kg |
|--------------|--|-------|

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