

618/4 Deep groove ball bearing



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.

- Simple, versatile and robust design
- Low friction
- High-speed capability
- Accommodate radial and axial loads in both directions
- Require little maintenance

Overview

Dimensions

| | |
|------------------|--------|
| Bore diameter | 4 mm |
| Outside diameter | 9 mm |
| Width | 2.5 mm |

Performance

| | |
|---------------------------|---------------|
| Basic dynamic load rating | 0.423 kN |
| Basic static load rating | 0.116 kN |
| Reference speed | 140 000 r/min |
| Limiting speed | 85 000 r/min |

Properties

| | |
|--------------------------------------|---------------|
| Filling slots | Without |
| Number of rows | 1 |
| Locating feature, bearing outer ring | None |
| Bore type | Cylindrical |
| Matched arrangement | No |
| Radial internal clearance | CN |
| Tolerance class | Normal |
| Material, bearing | Bearing steel |
| Coating | Without |
| Sealing | Without |
| Lubricant | None |
| Relubrication feature | Without |

Technical Specification



Dimensions

| | | |
|-----------|-------------|-------------------|
| d | 4 mm | Bore diameter |
| D | 9 mm | Outside diameter |
| B | 2.5 mm | Width |
| d_1 | ≈ 5.2 mm | Shoulder diameter |
| D_1 | ≈ 7.5 mm | Shoulder diameter |
| $r_{1,2}$ | min. 0.1 mm | Chamfer dimension |

Abutment dimensions

| | | |
|-------|-------------|-----------------------------------|
| d_a | min. 4.6 mm | Diameter of shaft abutment |
| D_a | max. 8.4 mm | Diameter of housing abutment |
| r_a | max. 0.1 mm | Radius of shaft or housing fillet |



Calculation data

| | | |
|---------------------------|-------|---------------|
| Basic dynamic load rating | C | 0.423 kN |
| Basic static load rating | C_0 | 0.116 kN |
| Fatigue load limit | P_u | 0.005 kN |
| Reference speed | | 140 000 r/min |
| Limiting speed | | 85 000 r/min |
| Minimum load factor | k_r | 0.015 |
| Calculation factor | f_0 | 6.5 |

Mass

| | |
|--------------|-----------|
| Mass bearing | 0.0007 kg |
|--------------|-----------|

Tolerance class

| | |
|------------------------|--------|
| Dimensional tolerances | Normal |
| Radial run-out | Normal |

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