


**The Timken Company**

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## Part Number 310KG, Fafnir® Deep Groove Ball Bearings (9100K, 200K, 300K)

Radial ball bearings consist of an inner and outer ring with a cage containing a complement of precision balls. The standard Conrad-type bearing has a deep-groove construction capable of handling radial and axial loads from either direction in versatile designs that permit relatively high-speed operation.

In addition to standard single-row deep groove bearings, Timken offers special designs, including a maximum capacity series and an extra large (XLS) radial series bearing.

Size range: 3 mm


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### Specifications

|                                  |                  |
|----------------------------------|------------------|
| <b>Design Units</b>              | Metric           |
| <b>d - Bore</b>                  | 50 mm            |
| <b>Ball Type</b>                 | STEEL            |
| <b>Manufacturing Part Number</b> | 310KG Z6 FS50000 |

### Dimensions



|                           |                    |
|---------------------------|--------------------|
| <b>D - Outer Diameter</b> | 110 mm<br>4.331 in |
| <b>Bearing Width</b>      | 27 mm<br>1.063 in  |

## Basic Load Ratings

|   |                      |
|---|----------------------|
| <b>Ce - Dynamic Radial Rating<sup>1</sup></b> | 68600 N<br>15400 lbf |
| <b>C0 - Static Radial Rating</b>              | 37900 N<br>8510 lbf  |

## Factors

|                                |          |
|--------------------------------|----------|
| <b>Limiting Speed (Grease)</b> | 3750 rpm |
| <b>Limiting Speed (Oil)</b>    | 4375 rpm |

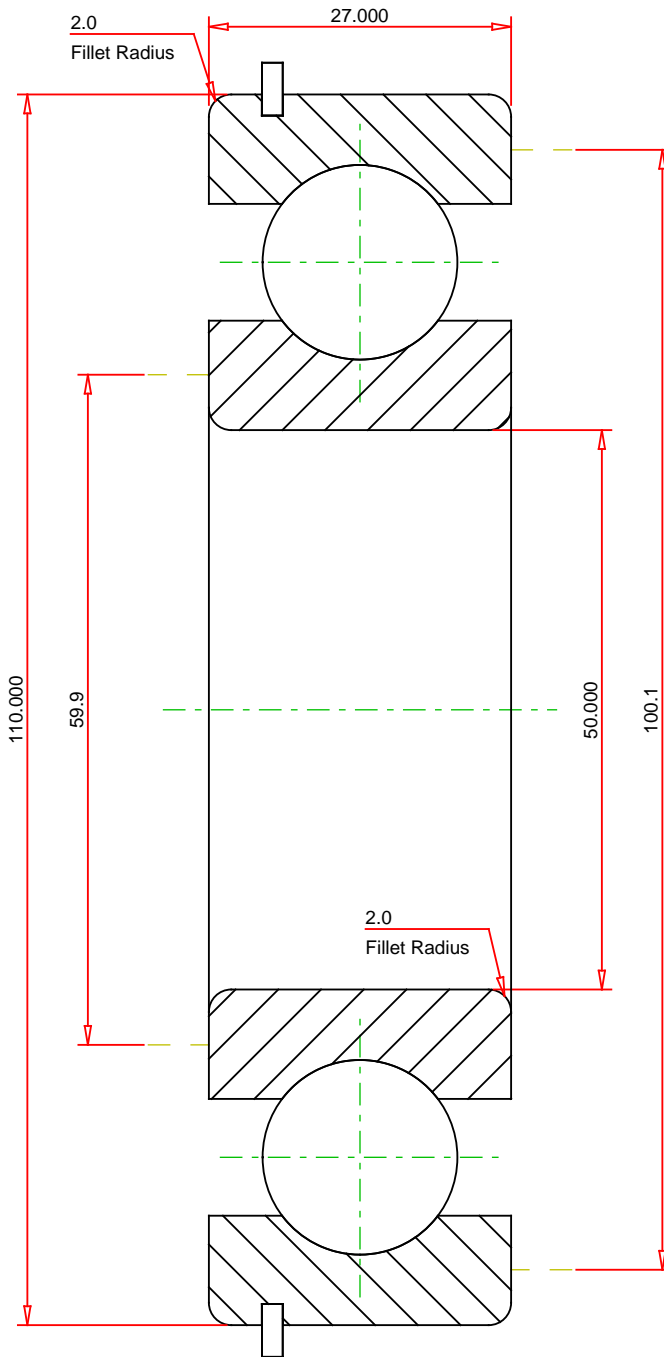
## Abutment and Fillet Dimensions

|   |                        |
|---|------------------------|
| <b>R - Inner Ring "To Clear" Radius<sup>2</sup></b> | 2 mm<br>0.079 in       |
| <b>r - Outer Ring "To Clear" Radius<sup>3</sup></b> | 2 mm<br>0.079 in       |
| <b>da - Inner Ring Backing Diameter</b>             | 59.90 mm<br>2.3583 in  |
| <b>Da - Outer Ring Backing Diameter</b>             | 100.10 mm<br>3.9409 in |

<sup>1</sup> Based on  $10^6$  revolutions of calculated fatigue life.

<sup>2</sup> Maximum housing fillet radius that bearing corners will clear.

<sup>3</sup> Maximum shaft fillet radius that bearing corners will clear.



**METRIC UNITS**

Number of Balls Per Row 8  
 Bearing Weight 1.125 kg

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Dynamic Radial Rating 68600 N  
 Static Radial Rating 37900 N

Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.

**FOR DISCUSSION ONLY**