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# Timken Part Number MM311K, Fafnir® Spindle Deep Grove 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

more



Specifications | Dimensions | Basic Load Ratings | Factors | Abutment and Fillet Dimensions

## Specifications

| | |
|---|---|
| **Design Units** | METRIC |
| **Ball Type** | Steel |
| **Cage Type** | CR - Phenolic Inner Land Riding Cage |
| **Bearing Weight** | 1.329 Kg<br>2.930 lb |
| **Precision Class** | ISO P4S (ABEC 7/9) |

## Dimensions

| | |
|---|---|
| **d - Bore** | 55.000 mm<br>2.1654 in |
| **D - Outer Diameter** | 120.000 mm<br>4.7244 in |
| **Bearing Width** | 29.000 mm<br>1.1417 in |
| **do - Ball Diameter** | 20.63750 mm<br>0.81250 in |

## Basic Load Ratings

| | |
|---|---|
| **Ce - Dynamic Radial Rating**[1] | 79300 N<br>17800 lbf |
| **C0 - Static Radial Rating** | 44600 N<br>10000 lbf |

## Factors

| | |
|---|---|
| **Limiting Speed (Grease)** | 12500 rpm |
| **Limiting Speed (Oil)** | 25000 rpm |

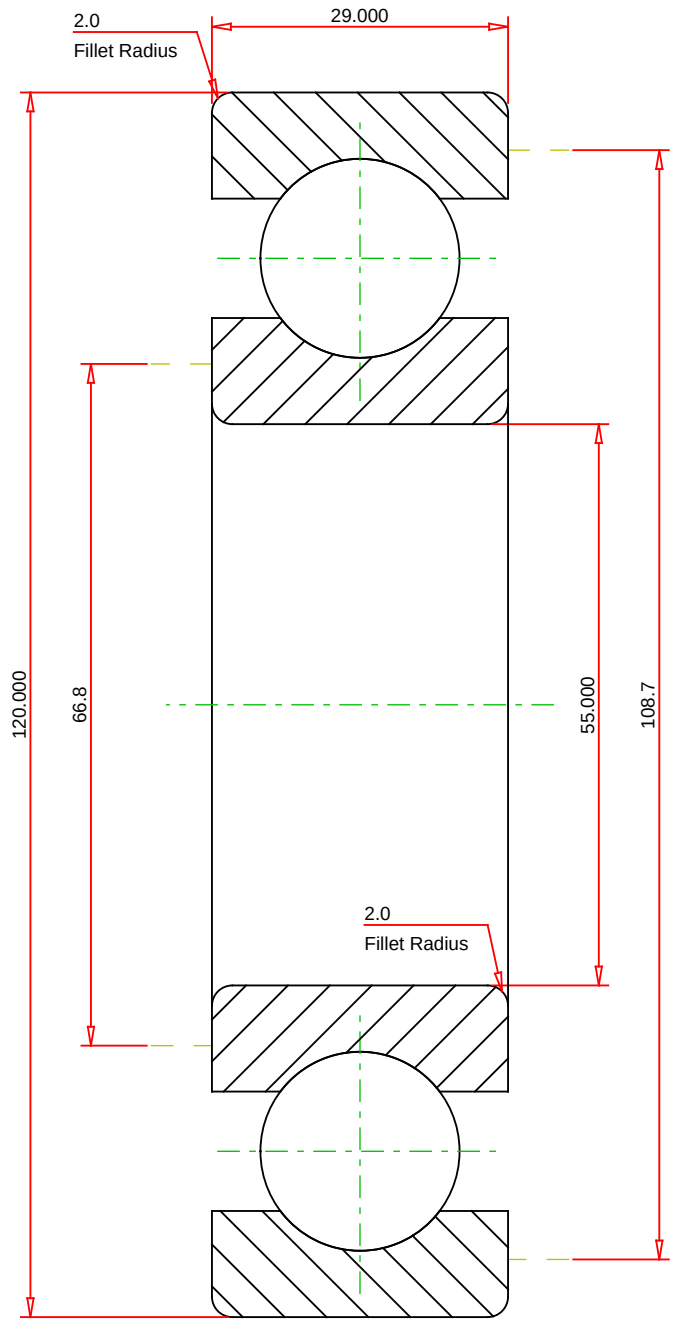
## Abutment and Fillet Dimensions

| | |
|---|---|
| **R - Inner Ring "To Clear" Radius**[2] | 2.000 mm<br>0.079 in |
| **r - Outer Ring "To Clear" Radius**[3] | 2.000 mm<br>0.079 in |
| **da - Inner Ring Backing Diameter** | 66.800 mm<br>2.630 in |
| **Da - Outer Ring Backing Diameter** | 108.700 mm<br>4.280 in |

[1] Based on $10^6$ revolutions of calculated fatigue life.

[2] Maximum housing fillet radius that bearing corners will clear.

[3] Maximum shaft fillet radius that bearing corners will clear.




METRIC UNITS

| | | |
|---|---|---|
| Number of Balls Per Row | 8 | |
| Bearing Weight | 1.329 | kg |

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

# MM311K

Fafnir® Spindle Deep Grove Ball Bearings (9100K, 200K, 300K)

| | | |
|---|---|---|
| Dynamic Radial Rating | 79300 | N |
| | | N |
| Static Radial Rating | 44600 | 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