


**The Timken Company**

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## Part Number 309KDD, 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>	45 mm
<b>Ball Type</b>	STEEL
<b>Manufacturing Part Number</b>	309KDD Z3 FS50000

### Dimensions



<b>D - Outer Diameter</b>	100 mm 3.937 in
<b>Bearing Width</b>	25 mm 0.9843 in

## Basic Load Ratings

<b>Ce - Dynamic Radial Rating<sup>1</sup></b>	58500 N 13200 lbf
<b>C0 - Static Radial Rating</b>	31700 N 7120 lbf

## Factors

<b>Limiting Speed (Grease)</b>	4138 rpm
<b>Limiting Speed (Oil)</b>	4828 rpm

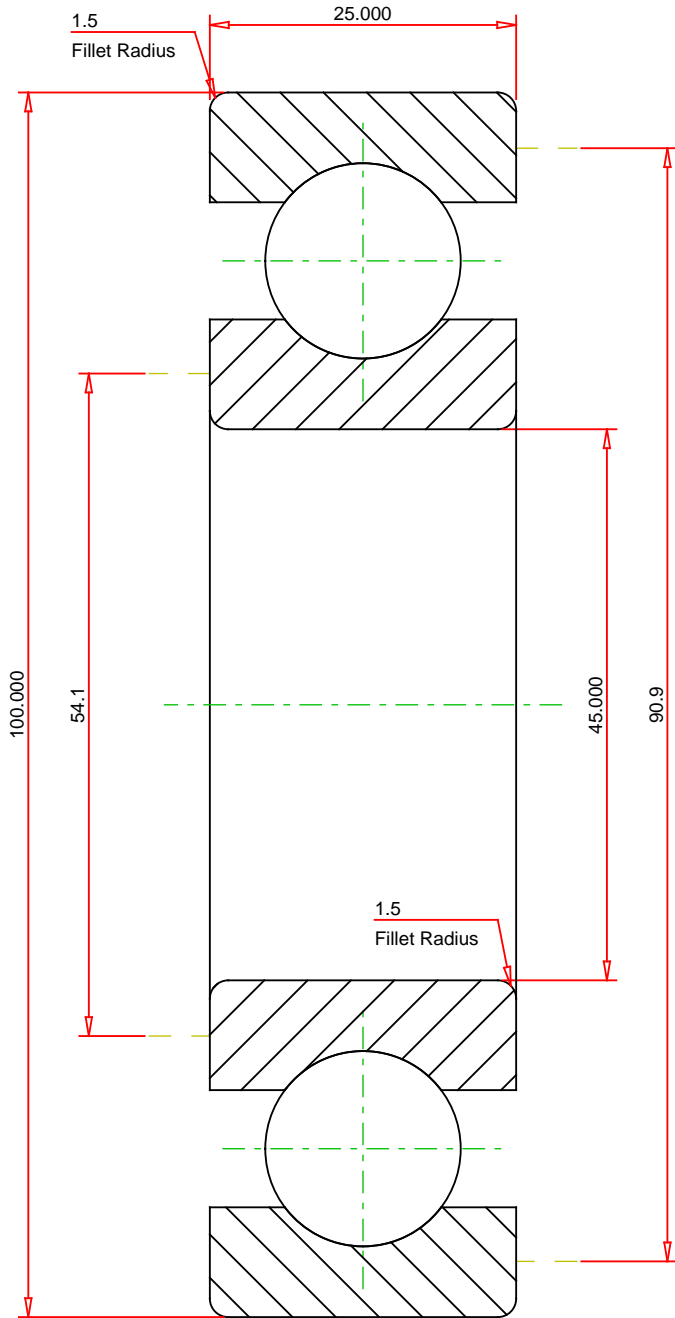
## Abutment and Fillet Dimensions

<b>R - Inner Ring "To Clear" Radius<sup>2</sup></b>	1.5 mm 0.059 in
<b>r - Outer Ring "To Clear" Radius<sup>3</sup></b>	1.5 mm 0.059 in
<b>da - Inner Ring Backing Diameter</b>	54.10 mm 2.1299 in
<b>Da - Outer Ring Backing Diameter</b>	90.90 mm 3.5787 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	0.862 kg

**TIMKEN**®

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NORTH CANTON, OHIO USA

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Dynamic Radial Rating	58500 N
Static Radial Rating	31700 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**