


The Timken Company

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Part Number 309K, 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

Design Units	Metric
d - Bore	45 mm
Ball Type	STEEL
Manufacturing Part Number	309K Z3 FS50000

Dimensions



D - Outer Diameter	100 mm 3.937 in
Bearing Width	25 mm 0.9843 in

Basic Load Ratings

Ce - Dynamic Radial Rating¹	58717 N 13200 lbf
C0 - Static Radial Rating	31671 N 7120 lbf

Factors

Limiting Speed (Grease)	4140 rpm
Limiting Speed (Oil)	4830 rpm

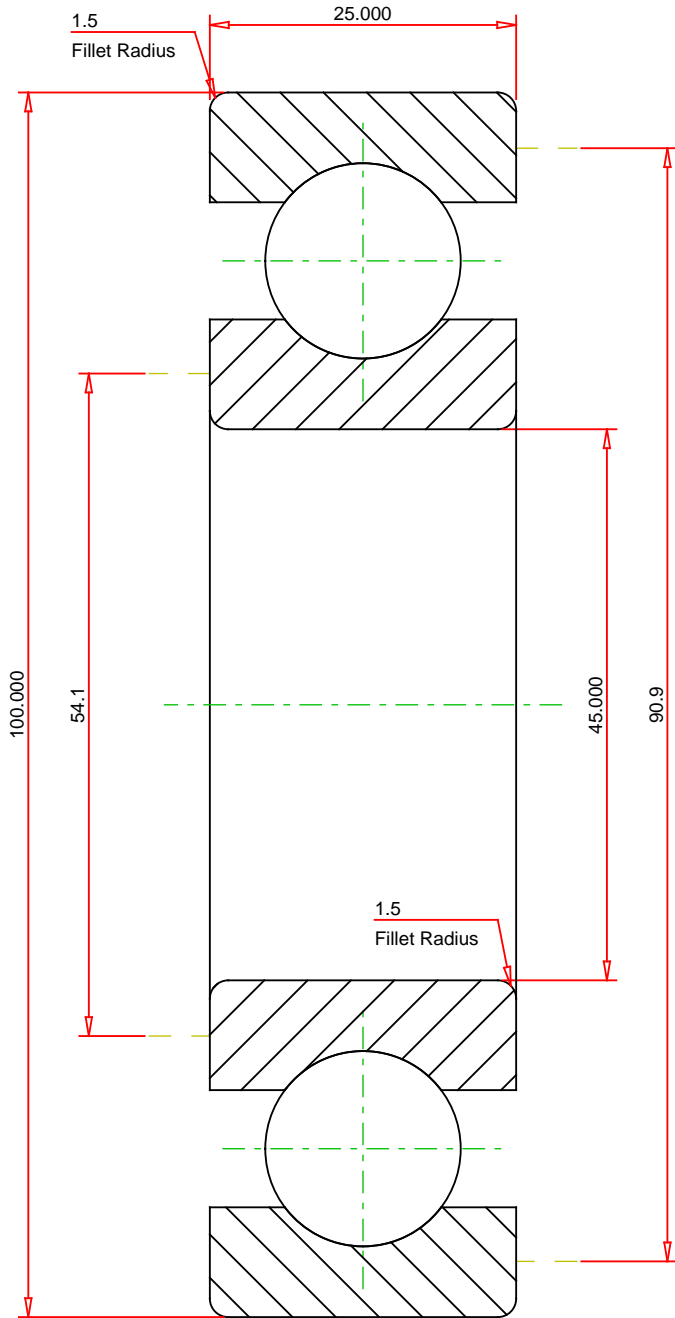
Abutment and Fillet Dimensions

R - Inner Ring "To Clear" Radius²	1.5 mm 0.059 in
r - Outer Ring "To Clear" Radius³	1.5 mm 0.059 in
da - Inner Ring Backing Diameter	54.10 mm 2.1300 in
Da - Outer Ring Backing Diameter	90.90 mm 3.580 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	0.862 kg

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NORTH CANTON, OHIO USA

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Static Radial Rating	31671 N

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