



The Timken Company

4500 Mt Pleasant St. NW

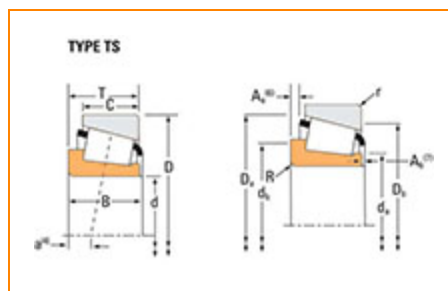
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Part Number 3659, Tapered Roller Bearings - Single Cones - Imperial

This is the most basic and most widely used type of tapered roller bearing. It consists of two main separable parts: the cone (inner ring) assembly and the cup (outer ring). It is typically mounted in opposing pairs on a shaft.



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Specifications

Series	3600
Cone Part Number	3659
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions) ¹	34700 lbf 154000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions) ²	8990 lbf 40000 N

Dimensions

d - Bore	0.9375 in 23.813 mm
B - Cone Width	1.1975 in 30.417 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.09 in 2.300 mm
da - Cone Frontface Backing Diameter	1.24 in 31.5 mm
db - Cone Backface Backing Diameter	1.4 in 35.5 mm
Ab - Cage-Cone Frontface Clearance	0.04 in 1 mm
Aa - Cage-Cone Backface Clearance	0.05 in 1.3 mm
a - Effective Center Location⁴	-0.47 in -11.9 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	5160 lbf 23000 N
C1 - Dynamic Radial Rating (1 million revolutions)⁶	19900 lbf 88600 N
C0 - Static Radial Rating	20200 lbf 89800 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	2500 lbf 11100 N

Factors

K - Factor ⁸	2.07
Cg - Geometry Factor ⁹	0.0592

¹ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

² Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

³ These maximum fillet radii will be cleared by the bearing corners.

⁴ Negative value indicates effective center inside cone backface.

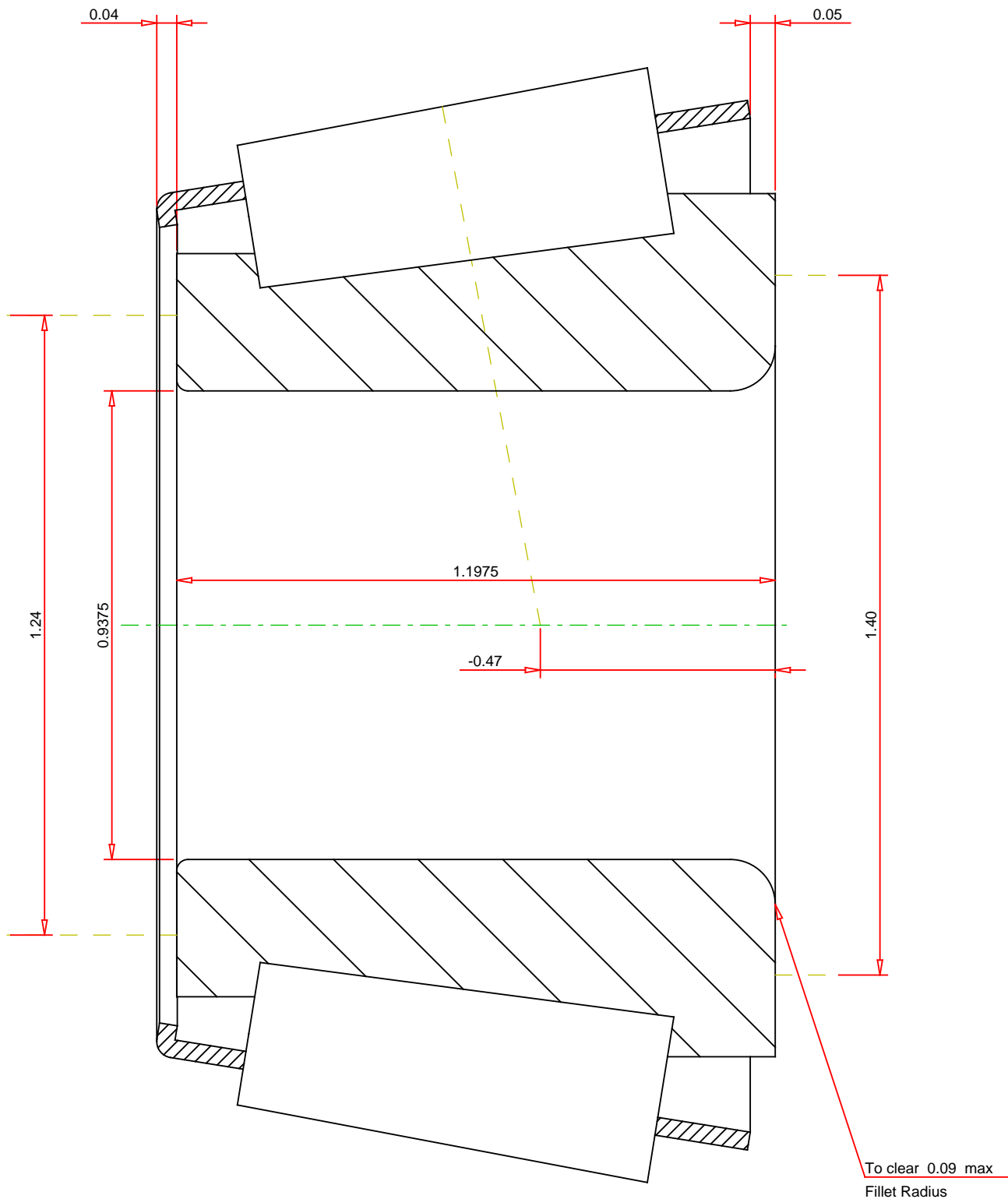
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

⁶ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

⁷ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

⁸ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁹ Geometry constant for Lubrication Life Adjustment Factor a_3 .



IMPERIAL UNITS

<div>Number of Rollers Per Row12</div>	<div>TIMIKEN®</div> <div>THE TIMKEN COMPANY</div> <div>NORTH CANTON, OHIO USA</div>	<div>3659</div> <div>SINGLE TAPERED CONE</div> <div><div><div>K Factor</div><div>Dynamic Radial Rating - C90</div><div>Dynamic Thrust Rating - Ca90</div><div>Dynamic Radial Rating - C1</div></div><div><div>2.07</div><div>5160</div><div>2500</div><div>19900</div></div><div><div>lbf</div><div>lbf</div><div>lbf</div><div>lbf</div></div></div>
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