


**The Timken Company**

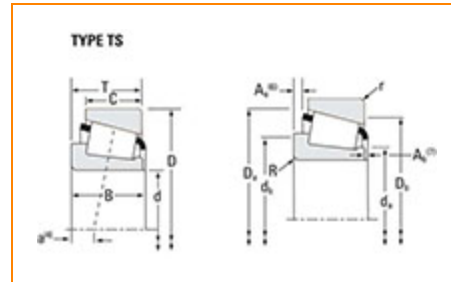
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**Part Number M84548 - M84510, Tapered Roller Bearings - TS (Tapered Single) Imperial**

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**

<b>Series</b>	M84500
<b>Cone Part Number</b>	M84548
<b>Cup Part Number</b>	M84510
<b>Design Unit</b>	Inch
<b>Cage Material</b>	Stamped Steel

**Dimensions**

<b>d - Bore</b>	1.0000 in 25.400 mm
 <b>- Cup Outer Diameter</b>	2.2500 in 57.150 mm

<b>B - Cone Width</b>	0.7650 in 19.431 mm
<b>C - Cup Width</b>	0.5800 in 14.732 mm
<b>T - Bearing Width</b>	0.7650 in 19.431 mm

## Abutment and Fillet Dimensions

<b>R - Cone Backface "To Clear" Radius<sup>1</sup></b>	0.06 in 1.5 mm
<b>r - Cup Backface "To Clear" Radius<sup>2</sup></b>	0.06 in 1.52 mm
<b>da - Cone Frontface Backing Diameter</b>	1.3 in 33 mm
<b>db - Cone Backface Backing Diameter</b>	1.52 in 38.5 mm
<b>Da - Cup Frontface Backing Diameter</b>	2.17 in 55.10 mm
<b>Db - Cup Backface Backing Diameter</b>	1.91 in 48.51 mm
<b>Ab - Cage-Cone Frontface Clearance</b>	0.07 in 1.8 mm
<b>Aa - Cage-Cone Backface Clearance</b>	0.03 in 0.8 mm
<b>a - Effective Center Location<sup>3</sup></b>	-0.12 in -3 mm

## Basic Load Ratings

<b>C90 - Dynamic Radial Rating (90</b>	2830 lbf
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million revolutions) <sup>4</sup>	12600 N
<b>C1 - Dynamic Radial Rating (1 million revolutions)<sup>5</sup></b>	10900 lbf 48500 N
<b>C0 - Static Radial Rating</b>	11900 lbf 52900 N
<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	2640 lbf 11800 N

## Factors

<b>K - Factor<sup>7</sup></b>	1.07
<b>e - ISO Factor<sup>8</sup></b>	0.55
<b>Y - ISO Factor<sup>9</sup></b>	1.1
<b>G1 - Heat Generation Factor (Roller-Raceway)</b>	11.3
<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	7.39
<b>Cg - Geometry Factor<sup>10</sup></b>	0.0644

<sup>1</sup> These maximum fillet radii will be cleared by the bearing corners.

<sup>2</sup> These maximum fillet radii will be cleared by the bearing corners.

<sup>3</sup> Negative value indicates effective center inside cone backface.

<sup>4</sup> Based on  $90 \times 10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values.

<sup>5</sup> Based on  $1 \times 10^6$  revolutions  $L_{10}$  life, for the ISO life calculation method.

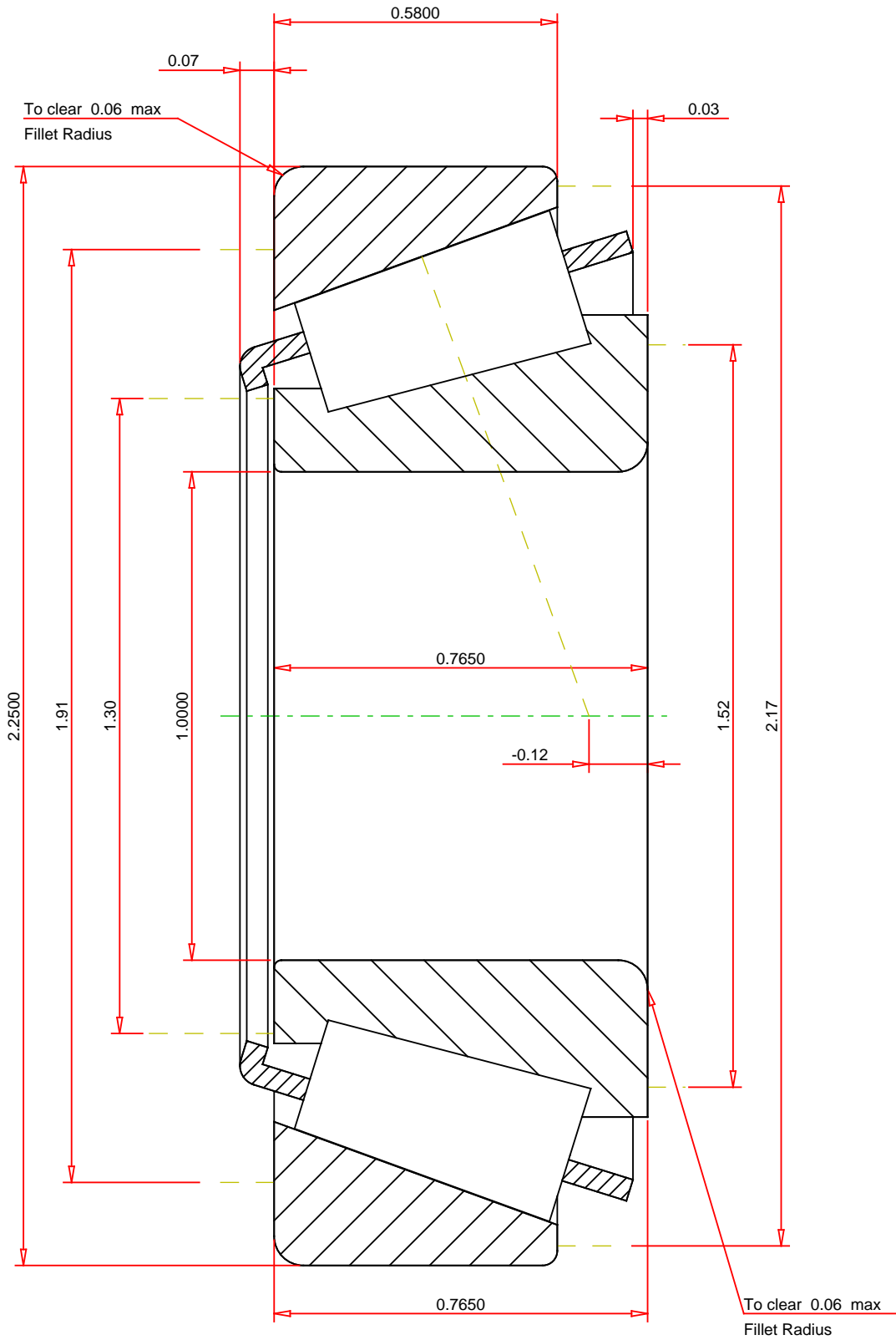
<sup>6</sup> Based on  $90 \times 10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values for a single-row,  $C_{90(2)}$  is the two-row radial value.

<sup>7</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

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

<sup>9</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>10</sup> Geometry constant for Lubrication Life Adjustment Factor a3l.



**IMPERIAL UNITS**

ISO Factor - e	0.55
ISO Factor - Y	1.1
Bearing Weight	0.5 lb
Number of Rollers Per Row	16
Effective Center Location	-0.12 inch

**TIMKEN**®

**THE TIMKEN COMPANY**  
NORTH CANTON, OHIO USA

**M84548 - M84510**  
Tapered Roller Bearings - TS (Tapered Single)  
Imperial

K Factor	1.07
Dynamic Radial Rating - C90	2830 lbf
Dynamic Thrust Rating - Ca90	2640 lbf
Static Radial Rating - C0	11900 lbf
Dynamic Radial Rating - C1	10900 lbf

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**