



**The Timken Company**

4500 Mt Pleasant St. NW

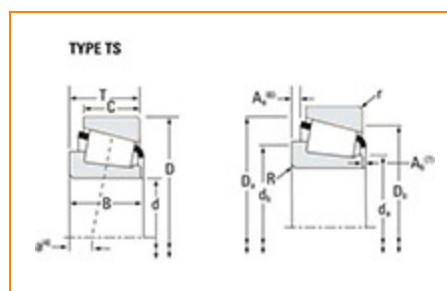
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## Timken Part Number 49162 - 49368, Tapered Roller Bearings - TS (Tapered Single) Imperial

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

Series	49000
Cone Part Number	49162
Cup Part Number	49368
Design Units	Imperial
Bearing Weight	1.00 Kg 2.3 lb
Cage Type	Stamped Steel

### Dimensions

d - Bore	41.275 mm 1.6250 in
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<b>D - Cup Outer Diameter</b>	93.663 mm 3.6875 in
<b>B - Cone Width</b>	31.750 mm 1.2500 in
<b>C - Cup Width</b>	25.400 mm 1.0000 in
<b>T - Bearing Width</b>	31.750 mm 1.2500 in

## Abutment and Fillet Dimensions

<b>R - Cone Backface "To Clear" Radius<sup>1</sup></b>	3.560 mm 0.14 in
<b>r - Cup Backface "To Clear" Radius<sup>2</sup></b>	3.3 mm 0.130 in
<b>da - Cone Frontface Backing Diameter</b>	50.04 mm 1.97 in
<b>db - Cone Backface Backing Diameter</b>	56.90 mm 2.24 in
<b>Da - Cup Frontface Backing Diameter</b>	87.88 mm 3.46 in
<b>Db - Cup Backface Backing Diameter</b>	82.04 mm 3.23 in
<b>Ab - Cage-Cone Frontface Clearance</b>	1.8 mm 0.07 in
<b>Aa - Cage-Cone Backface Clearance</b>	2.3 mm 0.09 in
<b>a - Effective Center Location<sup>3</sup></b>	-9.1 mm -0.36 in

## Basic Load Ratings

<b>C90 - Dynamic Radial Rating (90 million revolutions)<sup>4</sup></b>	7900 lbf 35200 N
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<b>C1 - Dynamic Radial Rating (1 million revolutions)<sup>5</sup></b>	30500 lbf 136000 N
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<b>C0 - Static Radial Rating</b>	35000 lbf 156000 N
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<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	4870 lbf 21700 N
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## Factors

<b>K - Factor<sup>7</sup></b>	1.62
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<b>e - ISO Factor<sup>8</sup></b>	0.36
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<b>Y - ISO Factor<sup>9</sup></b>	1.67
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<b>G1 - Heat Generation Factor (Roller-Raceway)</b>	42.4
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<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	13.6
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<b>C<sub>g</sub> - Geometry Factor<sup>10</sup></b>	0.0872
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<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.

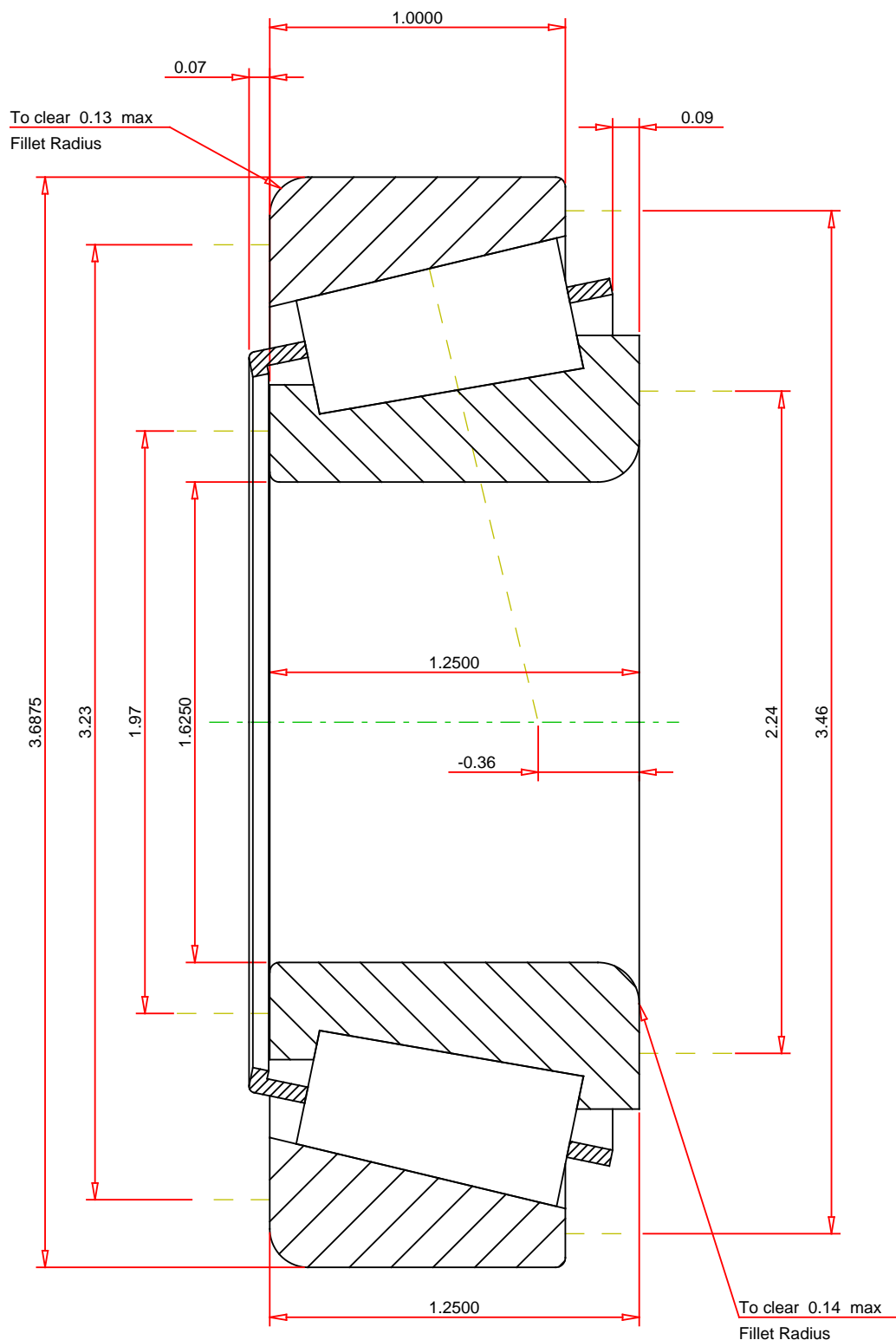
<sup>6</sup> Based on  $90 \times 10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values for a single-row,  $C_{90(2)}$  is the two-row radial value.

<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  $a_3$ .



## IMPERIAL UNITS

ISO Factor - e 0.36  
ISO Factor - Y 1.67  
Bearing Weight 2.3 lb  
Number of Rollers Per Row 16  
Effective Center Location -0.36 inch

**TIMKEN®**

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

**49162 - 49368**  
**TS BEARING ASSEMBLY**

K Factor	1.62	
Dynamic Radial Rating - C90	7900	lbf
Dynamic Thrust Rating - Ca90	4870	lbf
Static Radial Rating - C0	35000	lbf
Dynamic Radial Rating - C1	30500	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**