


**The Timken Company**

4500 Mt Pleasant St. NW

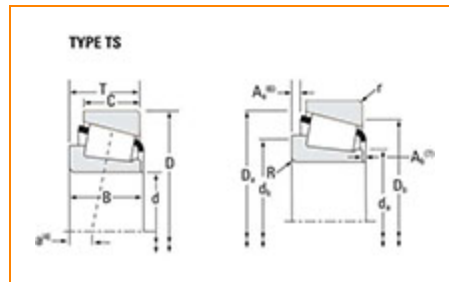
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## Part Number 497 - 493, Tapered Roller Bearings - TS (Tapered Single) Imperial

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>	495
<b>Cone Part Number</b>	497
<b>Cup Part Number</b>	493
<b>Design Unit</b>	Inch
<b>Bearing Weight</b>	3.3 lb 1.5 Kg
<b>Cage Material</b>	Stamped Steel

### Dimensions


**- Bore**

 3.3750 in  
85.725 mm

<b>D - Cup Outer Diameter</b>	5.3750 in 136.525 mm
<b>B - Cone Width</b>	1.1720 in 29.769 mm
<b>C - Cup Width</b>	0.8750 in 22.225 mm
<b>T - Bearing Width</b>	1.1875 in 30.163 mm

## Abutment and Fillet Dimensions

<b>R - Cone Backface "To Clear" Radius<sup>1</sup></b>	0.140 in 3.6 mm
<b>r - Cup Backface "To Clear" Radius<sup>2</sup></b>	0.130 in 3.30 mm
<b>da - Cone Frontface Backing Diameter</b>	3.7 in 94 mm
<b>db - Cone Backface Backing Diameter</b>	3.98 in 101 mm
<b>Da - Cup Frontface Backing Diameter</b>	5.16 in 131.06 mm
<b>Db - Cup Backface Backing Diameter</b>	4.80 in 121.92 mm
<b>Ab - Cage-Cone Frontface Clearance</b>	0.12 in 3 mm
<b>Aa - Cage-Cone Backface Clearance</b>	0.07 in 1.8 mm
<b>a - Effective Center Location<sup>3</sup></b>	-0.03 in -0.8 mm

## Basic Load Ratings

<b>C90 - Dynamic Radial Rating (90 million revolutions)<sup>4</sup></b>	9000 lbf 40000 N
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<b>C1 - Dynamic Radial Rating (1 million revolutions)<sup>5</sup></b>	34700 lbf 154000 N
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<b>C0 - Static Radial Rating</b>	48600 lbf 216000 N
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<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	6850 lbf 30500 N
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## Factors

<b>K - Factor<sup>7</sup></b>	1.31
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<b>e - ISO Factor<sup>8</sup></b>	0.44
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<b>Y - ISO Factor<sup>9</sup></b>	1.35
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<b>G1 - Heat Generation Factor (Roller-Raceway)</b>	104.6
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<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	29.3
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<b>Cg - Geometry Factor<sup>10</sup></b>	0.125
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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.

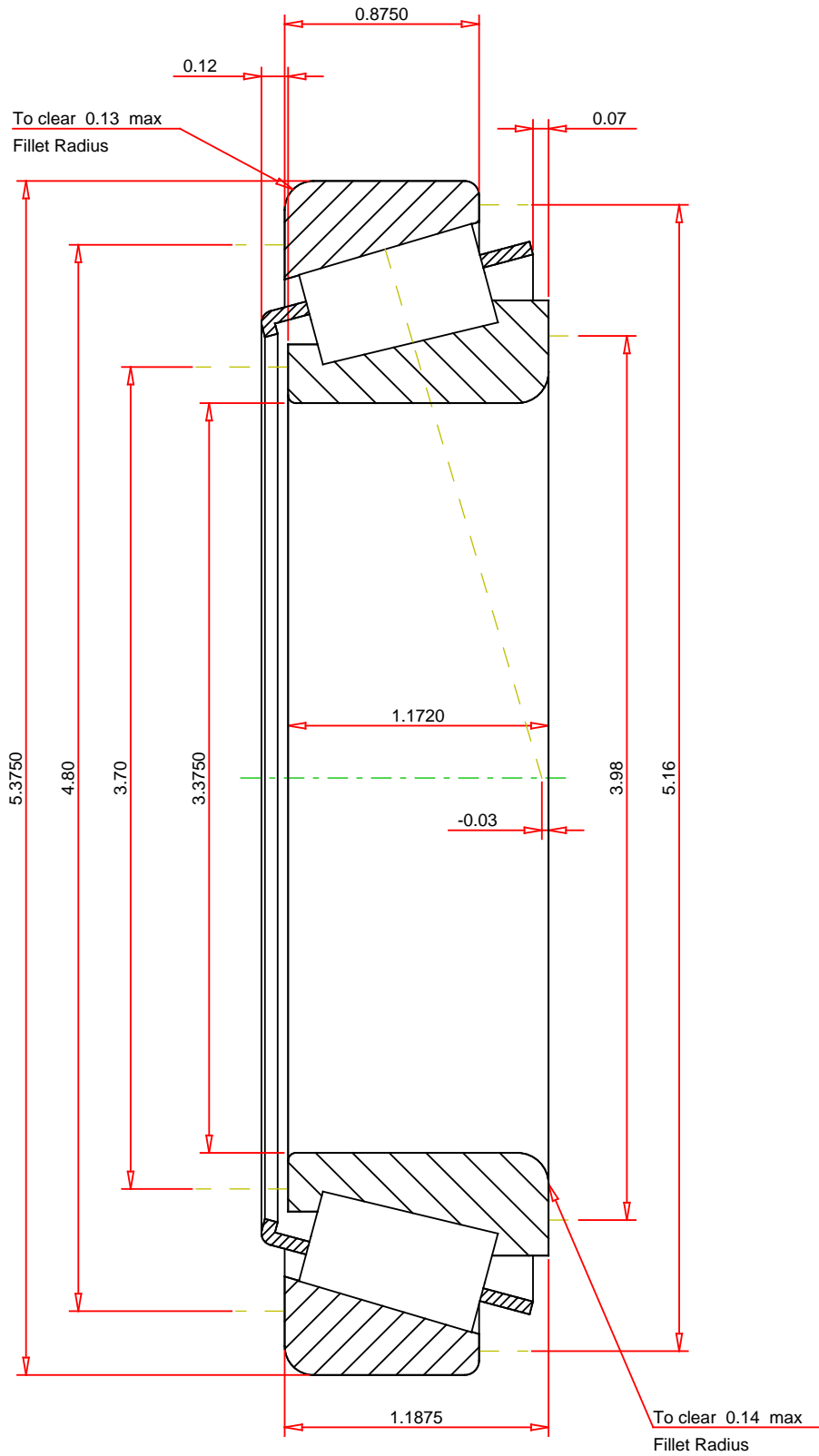
<sup>6</sup> Based on  $90 \times 10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values for a single-row,  $C_{90(2)}$  is the two-row radial value.

<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

<div>ISO Factor - e0.44</div> <div>ISO Factor - Y1.35</div> <div>Bearing Weight3.3lb</div> <div>Number of Rollers Per Row23</div> <div>Effective Center Location-0.03inch</div>		<div>TIMIKEN®</div> <div>THE TIMKEN COMPANY</div> <div>NORTH CANTON, OHIO USA</div>		<div>497 - 493</div> <div>Tapered Roller Bearings - TS (Tapered Single)</div> <div>Imperial</div>	
				<div>K Factor1.31</div> <div>Dynamic Radial Rating - C909000lbf</div> <div>Dynamic Thrust Rating - Ca906850lbf</div> <div>Static Radial Rating - C048600lbf</div> <div>Dynamic Radial Rating - C134700lbf</div>	