


**The Timken Company**

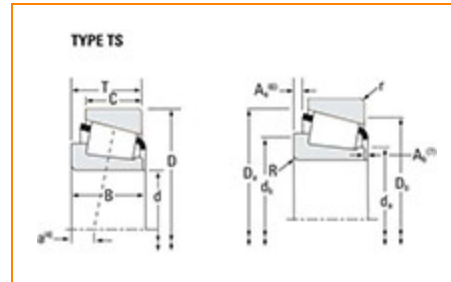
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**Part Number L319249 - L319210, Tapered Roller Bearings - TS (Tapered Single) Imperial**

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>	L319200
<b>Cone Part Number</b>	L319249
<b>Cup Part Number</b>	L319210
<b>Design Unit</b>	Inch
<b>Cage Material</b>	Stamped Steel
<b>Related Assembly Number(s)</b>	L319249-90010 L319249-90021 L319249-903A3

**Dimensions**



<b>d - Bore</b>	3 3/4 in 95.250 mm
<b>D - Cup Outer Diameter</b>	5.1250 in 130.175 mm
<b>B - Cone Width</b>	0.8438 in 21.433 mm
<b>C - Cup Width</b>	0.6563 in 16.670 mm
<b>T - Bearing Width</b>	0.8125 in 20.638 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>	3.98 in 101 mm
<b>db - Cone Backface Backing Diameter</b>	4.06 in 103 mm
<b>Da - Cup Frontface Backing Diameter</b>	4.96 in 125.00 mm
<b>Db - Cup Backface Backing Diameter</b>	4.80 in 121.92 mm
<b>Ab - Cage-Cone Frontface Clearance</b>	0.08 in 2 mm
<b>Aa - Cage-Cone Backface Clearance</b>	0.01 in 0.3 mm
<b>a - Effective Center Location<sup>3</sup></b>	0.05 in 1.3 mm

## Basic Load Ratings

<b>C<sub>90</sub> - Dynamic Radial Rating (90 million revolutions)<sup>4</sup></b>	5560 lbf 24700 N
<b>C<sub>1</sub> - Dynamic Radial Rating (1 million revolutions)<sup>5</sup></b>	21400 lbf 95400 N
<b>C<sub>0</sub> - Static Radial Rating</b>	37400 lbf 166000 N
<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	3320 lbf 14800 N

## Factors

<b>K - Factor<sup>7</sup></b>	1.67
<b>e - ISO Factor<sup>8</sup></b>	0.35
<b>Y - ISO Factor<sup>9</sup></b>	1.72
<b>G<sub>1</sub> - Heat Generation Factor (Roller-Raceway)</b>	125
<b>G<sub>2</sub> - Heat Generation Factor (Rib-Roller End)</b>	90.7
<b>C<sub>g</sub> - Geometry Factor<sup>10</sup></b>	0.122

<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.

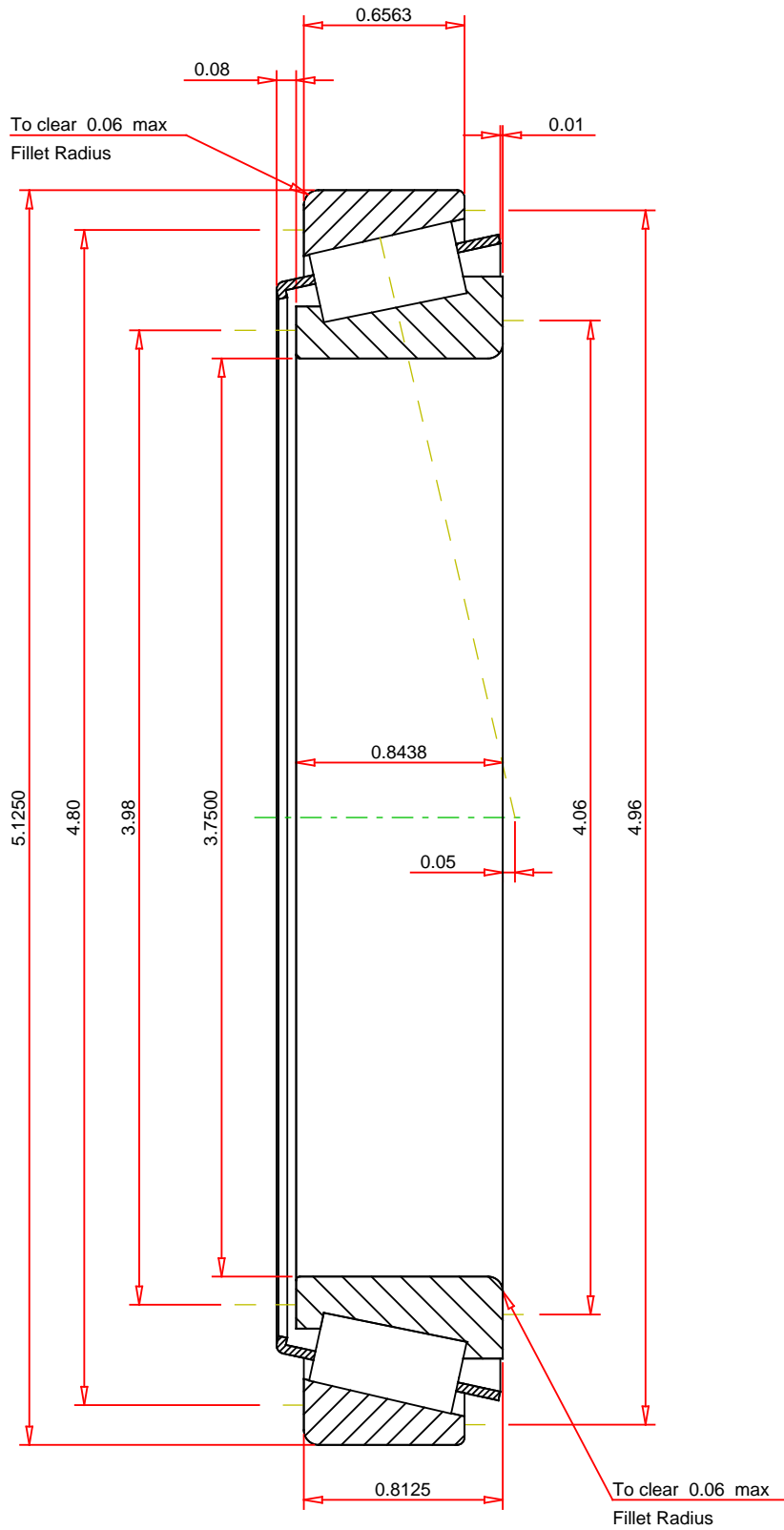
<sup>6</sup> Based on  $90 \times 10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values for a single-row,  $C_{90(2)}$  is the two-row radial value.

<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	0.35
ISO Factor - Y	1.72
Bearing Weight	1.7 lb
Number of Rollers Per Row	36
Effective Center Location	0.05 inch

**TIMKEN**®

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

**L319249 - L319210**  
Tapered Roller Bearings - TS (Tapered Single)  
Imperial

K Factor	1.67
Dynamic Radial Rating - C90	5560 lbf
Dynamic Thrust Rating - Ca90	3320 lbf
Static Radial Rating - C0	37400 lbf
Dynamic Radial Rating - C1	21400 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**