


**The Timken Company**

4500 Mt Pleasant St. NW

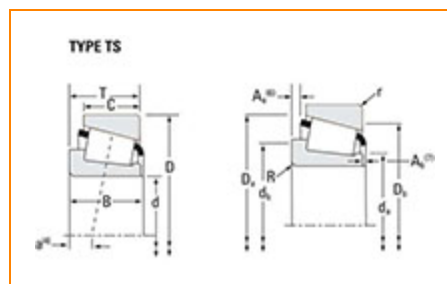
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## Part Number LM29749 - LM29710, Tapered Roller Bearings - TS (Tapered Single) Imperial

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>                     | LM29700                        |
| <b>Cone Part Number</b>           | LM29749                        |
| <b>Cup Part Number</b>            | LM29710                        |
| <b>Design Unit</b>                | Inch                           |
| <b>Cage Material</b>              | Stamped Steel                  |
| <b>Related Assembly Number(s)</b> | LM29749-90021<br>LM29749-902A6 |

### Dimensions



- Bore

1 1/2 in  
38.1 mm

|                               |                        |
|-------------------------------|------------------------|
| <b>D - Cup Outer Diameter</b> | 2.5625 in<br>65.088 mm |
| <b>B - Cone Width</b>         | 0.7200 in<br>18.288 mm |
| <b>C - Cup Width</b>          | 0.5500 in<br>13.970 mm |
| <b>T - Bearing Width</b>      | 0.71 in<br>18.034 mm   |

## Abutment and Fillet Dimensions

|  |                     |
|--|---------------------|
| <b>R - Cone Backface "To Clear" Radius<sup>1</sup></b> | 0.09 in<br>2.290 mm |
| <b>r - Cup Backface "To Clear" Radius<sup>2</sup></b>  | 0.050 in<br>1.27 mm |
| <b>da - Cone Frontface Backing Diameter</b>            | 1.67 in<br>42.5 mm  |
| <b>db - Cone Backface Backing Diameter</b>             | 1.83 in<br>46.5 mm  |
| <b>Da - Cup Frontface Backing Diameter</b>             | 2.46 in<br>62.00 mm |
| <b>Db - Cup Backface Backing Diameter</b>              | 2.32 in<br>58.93 mm |
| <b>Ab - Cage-Cone Frontface Clearance</b>              | 0.07 in<br>1.8 mm   |
| <b>Aa - Cage-Cone Backface Clearance</b>               | 0.01 in<br>0.3 mm   |
| <b>a - Effective Center Location<sup>3</sup></b>       | -0.16 in<br>-4.1 mm |

## Basic Load Ratings

**C90 - Dynamic Radial Rating (90 million revolutions)<sup>4</sup>** 2830 lbf  
12600 N

**C1 - Dynamic Radial Rating (1 million revolutions)<sup>5</sup>** 10900 lbf  
48600 N

**C0 - Static Radial Rating** 13600 lbf  
60300 N

**C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup>** 1610 lbf  
7170 N

## Factors

**K - Factor<sup>7</sup>** 1.76

**e - ISO Factor<sup>8</sup>** 0.33

**Y - ISO Factor<sup>9</sup>** 1.8

**G1 - Heat Generation Factor (Roller-Raceway)** 20.4

**G2 - Heat Generation Factor (Rib-Roller End)** 15

**Cg - Geometry Factor<sup>10</sup>** 0.0666

<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.

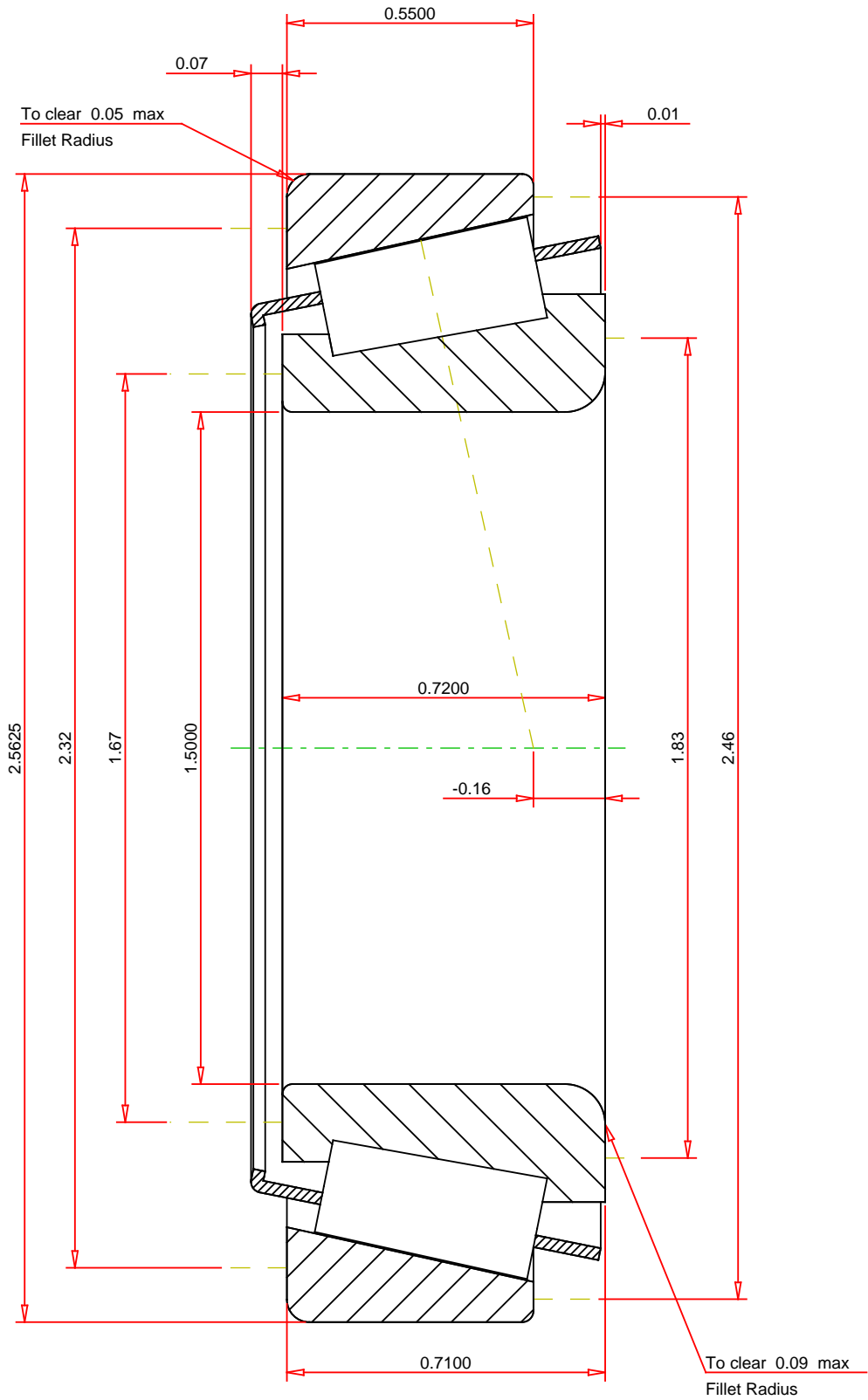
<sup>6</sup> Based on  $90 \times 10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values for a single-row,  $C_{90(2)}$  is the two-row radial value.

<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            | 0.33       |
| ISO Factor - Y            | 1.8        |
| Bearing Weight            | 0.5 lb     |
| Number of Rollers Per Row | 21         |
| Effective Center Location | -0.16 inch |

TIMKEN®

THE TIMKEN COMPANY  
NORTH CANTON, OHIO USA

LM29749 - LM29710  
Tapered Roller Bearings - TS (Tapered Single)  
Imperial

|                              |           |
|------------------------------|-----------|
| K Factor                     | 1.76      |
| Dynamic Radial Rating - C90  | 2830 lbf  |
| Dynamic Thrust Rating - Ca90 | 1610 lbf  |
| Static Radial Rating - C0    | 13600 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.

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