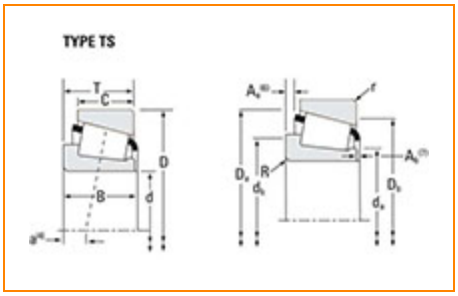
**The Timken Company**
4500 Mt Pleasant St. NW
N. Canton, OH 44720
**Phone:** (234) 262-3000
**E-Mail:** CustomerCAD@timken.com • **Web site:** www.timken.com

# Part Number L68149 - L68110, 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.




Specifications | Dimensions | Abutment and Fillet Dimensions | Basic Load Ratings | Factors

## Specifications

| | |
|---|---|
| **Series** | L68100 |
| **Cone Part Number** | L68149 |
| **Cup Part Number** | L68110 |
| **Design Units** | Imperial |
| **Bearing Weight** | 0.20 Kg<br>0.4 lb |
| **Cage Type** | Stamped Steel |

## Dimensions

| | |
|---|---|
| **d - Bore** | 34.989 mm<br>1.3775 in |

| | |
|---|---|
| **D - Cup Outer Diameter** | 59.131 mm<br>2.3280 in |
| **B - Cone Width** | 16.764 mm<br>0.6600 in |
| **C - Cup Width** | 11.938 mm<br>0.4700 in |
| **T - Bearing Width** | 15.875 mm<br>0.6250 in |

## Abutment and Fillet Dimensions

| | |
|---|---|
| **R - Cone Backface "To Clear" Radius[1]** | 3.560 mm<br>0.14 in |
| **r - Cup Backface "To Clear" Radius[2]** | 1.27 mm<br>0.050 in |
| **da - Cone Frontface Backing Diameter** | 39.12 mm<br>1.54 in |
| **db - Cone Backface Backing Diameter** | 45.47 mm<br>1.79 in |
| **Da - Cup Frontface Backing Diameter** | 55.90 mm<br>2.24 in |
| **Db - Cup Backface Backing Diameter** | 53.09 mm<br>2.09 in |
| **Ab - Cage-Cone Frontface Clearance** | 1.5 mm<br>0.06 in |
| **Aa - Cage-Cone Backface Clearance** | 0.3 mm<br>0.01 in |
| **a - Effective Center Location[3]** | -2.5 mm<br>-0.1 in |

## Basic Load Ratings

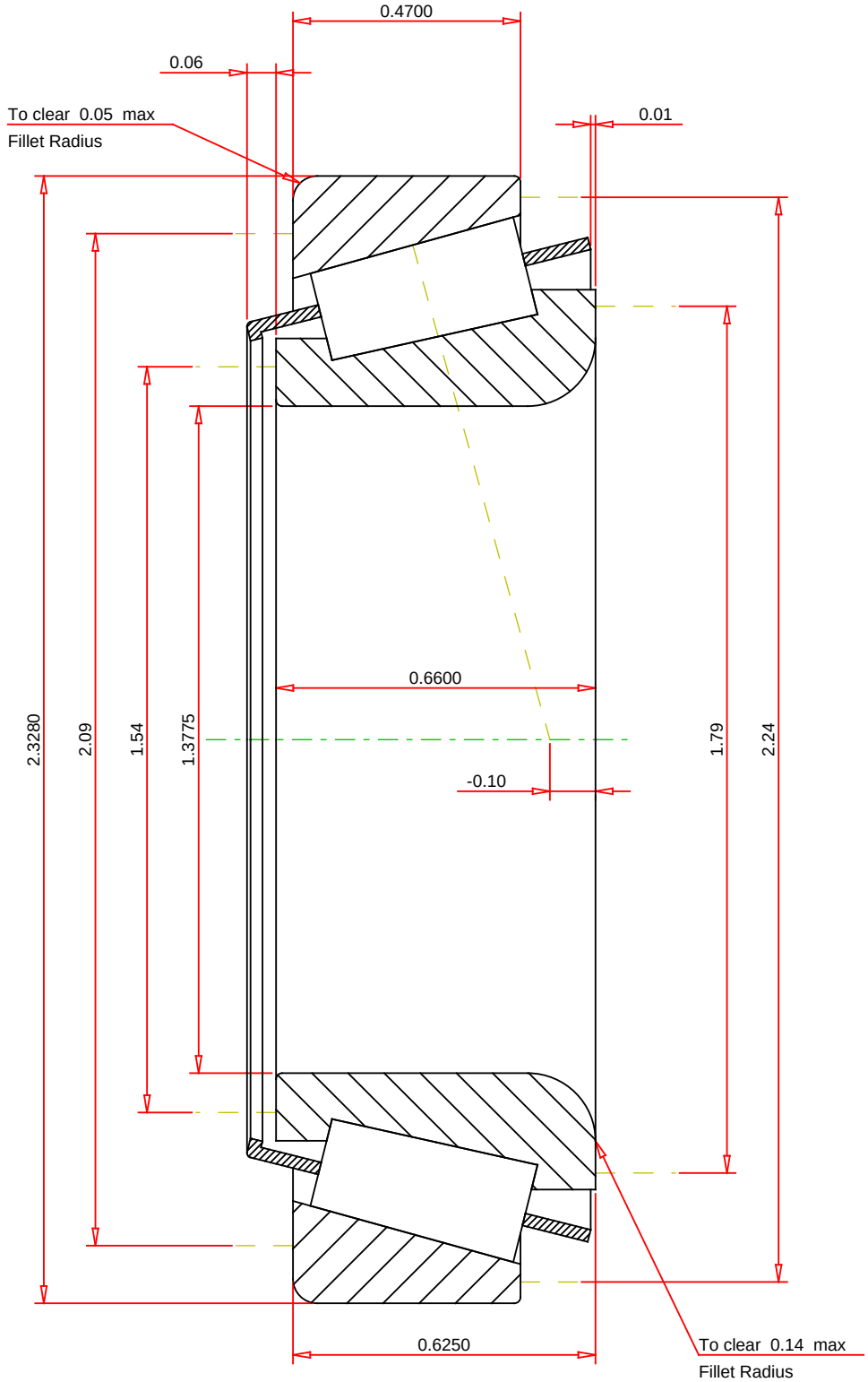
| | |
|---|---|
| **C90 - Dynamic Radial Rating (90 million revolutions)[4]** | 2650 lbf<br>11800 N |
| **C1 - Dynamic Radial Rating (1 million revolutions)[5]** | 10200 lbf<br>45500 N |
| **C0 - Static Radial Rating** | 11000 lbf<br>48700 N |
| **$C_{a90}$ - Dynamic Thrust Rating (90 million revolutions)[6]** | 1890 lbf<br>8400 N |

## Factors

| | |
|---|---|
| **K - Factor[7]** | 1.4 |
| **e - ISO Factor[8]** | 0.42 |
| **Y - ISO Factor[9]** | 1.44 |
| **G1 - Heat Generation Factor (Roller-Raceway)** | 15.7 |
| **G2 - Heat Generation Factor (Rib-Roller End)** | 13.9 |
| **Cg - Geometry Factor[10]** | 0.0657 |

[1] These maximum fillet radii will be cleared by the bearing corners.
[2] These maximum fillet radii will be cleared by the bearing corners.
[3] Negative value indicates effective center inside cone backface.
[4] Based on 90 x $10^6$ revolutions $L_{10}$ life, for The Timken Company life calculation method. $C_{90}$ and $C_{a90}$ are radial and thrust values.
[5] Based on 1 x $10^6$ revolutions $L_{10}$ life, for the ISO life calculation method.
[6] Based on 90 x $10^6$ 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.
[7] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.
[8] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.
[9] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[10] Geometry constant for Lubrication Life Adjustment Factor a3l.




IMPERIAL UNITS

| | | |
|---|---|---|
| ISO Factor - e | 0.42 | |
| ISO Factor - Y | 1.44 | |
| Bearing Weight | 0.4 | lb |
| Number of Rollers Per Row | 23 | |
| Effective Center Location | -0.1 | inch |

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

# L68149 - L68110
TS BEARING ASSEMBLY

| | | |
|---|---|---|
| K Factor | 1.4 | |
| Dynamic Radial Rating - C90 | 2650 | lbf |
| Dynamic Thrust Rating - Ca90 | 1890 | lbf |
| Static Radial Rating - C0 | 11000 | lbf |
| Dynamic Radial Rating - C1 | 10200 | lbf |



FOR DISCUSSION ONLY