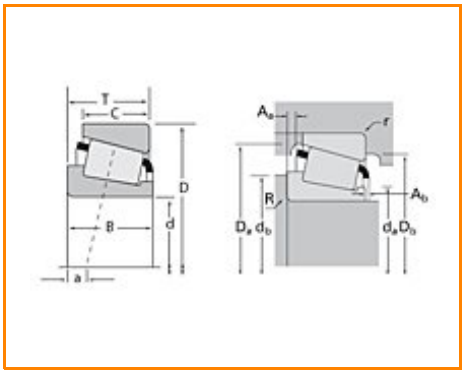
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# Timken Part Number LM742745 - LM742710, Tapered Roller Bearings - TS (Tapered Single) Imperial

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** | LM742700 |
| **Cone Part Number** | LM742745 |
| **Cup Part Number** | LM742710 |
| **Design Units** | Imperial |
| **Bearing Weight** | 8 Kg<br>17.600 lb |
| **Cage Type** | Stamped Steel |

## Dimensions

| | |
|---|---|
| **d - Bore** | 212.725 mm<br>8.3750 in |
| **D - Cup Outer Diameter** | 285.750 mm<br>11.2500 in |
| **B - Cone Width** | 46.038 mm<br>1.8125 in |
| **C - Cup Width** | 34.925 mm<br>1.3750 in |
| **T - Bearing Width** | 46.038 mm<br>1.8125 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]** | 3.30 mm<br>0.130 in |
| **da - Cone Frontface Backing Diameter** | 225.04 mm<br>9.92 in |
| **db - Cone Backface Backing Diameter** | 230.12 mm<br>9.06 in |
| **Da - Cup Frontface Backing Diameter** | 278.90 mm<br>11.02 in |
| **Db - Cup Backface Backing Diameter** | 265.94 mm<br>10.47 in |
| **Ab - Cage-Cone Frontface Clearance** | 3 mm<br>0.12 in |
| **Aa - Cage-Cone Backface Clearance** | 4.6 mm<br>0.18 in |
| **a - Effective Center Location[3]** | 14.20 mm<br>0.56 in |

## Basic Load Ratings

| | |
|---|---|
| **C90 - Dynamic Radial Rating (90 million revolutions)[4]** | 111000 N<br>25000 lbf |
| **C1 - Dynamic Radial Rating (1 million revolutions)[5]** | 430000 N<br>96600 lbf |
| **C0 - Static Radial Rating** | 892000 N<br>200000 lbf |
| **$C_{a90}$ - Dynamic Thrust Rating (90 million revolutions)[6]** | 91800 N<br>20600 lbf |

## Factors

| | |
|---|---|
| **K - Factor[7]** | 1.21 |
| **e - ISO Factor[8]** | 0.48 |
| **Y - ISO Factor[9]** | 1.25 |
| **G1 - Heat Generation Factor (Roller-Raceway)** | 867 |
| **G2 - Heat Generation Factor (Rib-Roller End)** | 225 |
| **Cg - Geometry Factor** | 0.139 |

[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.

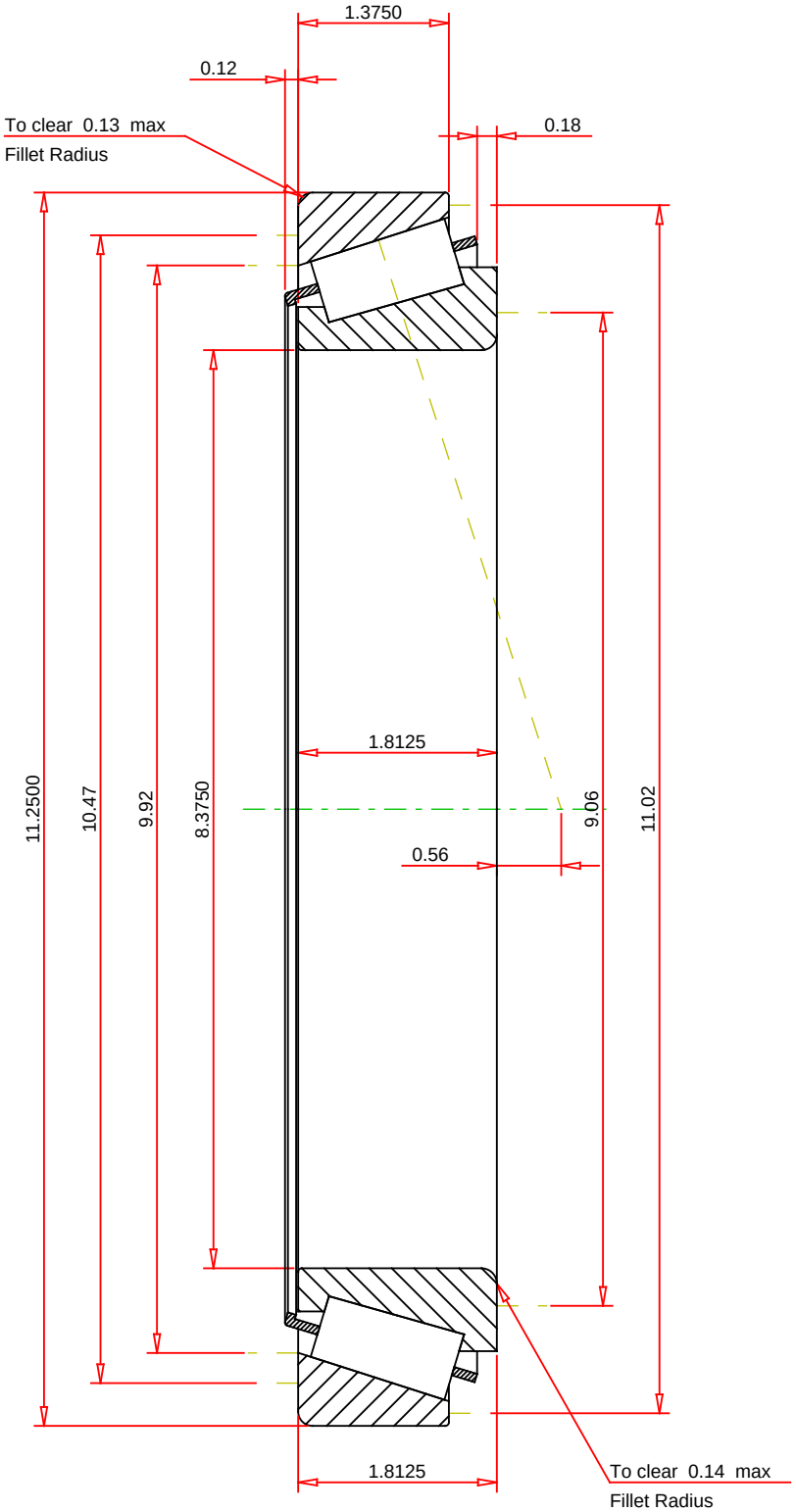
[6] Based on 90 x $10^6$ revolutions $L_{10}$ life, for The Timken Company life calculation method. $C_{90}$ and $C_{a90}$ are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

[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.




IMPERIAL UNITS

| | | |
|---|---|---|
| ISO Factor - e | 0.48 | |
| ISO Factor - Y | 1.25 | |
| Bearing Weight | 17.6 | lb |
| Number of Rollers Per Row | 42 | |
| Effective Center Location | 0.56 | inch |

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM742745 - LM742710
TS BEARING ASSEMBLY

| | | |
|---|---|---|
| K Factor | 1.21 | |
| Dynamic Radial Rating - C90 | 111000 | lbf |
| Dynamic Thrust Rating - Ca90 | 91800 | lbf |
| Static Radial Rating - C0 | 892000 | lbf |
| Dynamic Radial Rating - C1 | 430000 | 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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