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# Timken Part Number H924045 - H924010D, Tapered Roller Bearings - TDO (Tapered Double Outer) Imperial

The configuration of the TDO provides a wide effective bearing spread, making it ideal for applications in which overturning moments are a significant load component. TDO bearings can be used in fixed positions or allowed to float in the housing bore.



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

## Specifications

| | |
|---|---|
| **Series** | H924000 |
| **Cone Part Number** | H924045 |
| **Cup Part Number** | H924010D |
| **Design Units** | Imperial |
| **Bearing Weight** | 37.16 lb<br>16.856 Kg |
| **Cage Type** | Stamped Steel |
| **Ab - Cage-Cone Frontface Clearance** | 0.17 in<br>4.3 mm |

## Dimensions

| | |
|---|---|
| **d - Bore** | 4.3750 in<br>111.125 mm |
| **D - Cup Outer Diameter** | 8.4375 in<br>214.313 mm |
| **B - Cone Width** | 2.0625 in<br>52.388 mm |
| **C - Double Cup Width** | 3.3125 in<br>84.138 mm |
| **T - Bearing Width across Cones** | 4.5624 in<br>115.885 mm |

## Abutment and Fillet Dimensions

| | |
|---|---|
| **R - Cone Backface "To Clear" Radius[1]** | 0.14 in<br>3.600 mm |
| **r - Cup Frontface "To Clear" Radius[2]** | 0.06 in<br>1.5 mm |
| **db - Cone Backface Backing Diameter** | 5.47 in<br>138.90 mm |
| **Da - Cup Frontface Backing Diameter** | 8.11 in<br>206.00 mm |
| **Aa - Cage-Cone Backface Clearance** | 0.23 in<br>5.8 mm |

## Basic Load Ratings

| | |
|---|---|
| **C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]** | 32500 lbf<br>144000 N |
| **C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]** | 218000 lbf<br>970000 N |

| | |
|---|---|
| **C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]** | 56500 lbf<br>251000 N |
| **$C_{a90}$ - Dynamic Thrust Rating (90 million revolutions)[6]** | 37500 lbf<br>167000 N |

## Factors

| | |
|---|---|
| **K - Factor[7]** | 0.87 |
| **e - ISO Factor[8]** | 1.69 |
| **Y1 - ISO Factor[9]** | 0.40<br>0.59 |
| **Y2 - ISO Factor[10]** | 0.59 |
| **Cg - Geometry Factor[11]** | 0.13 |

[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] 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.

[4] Based on 1 x $10^6$ revolutions $L_{10}$ life, for the ISO life calculation method.

[5] 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.

[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.

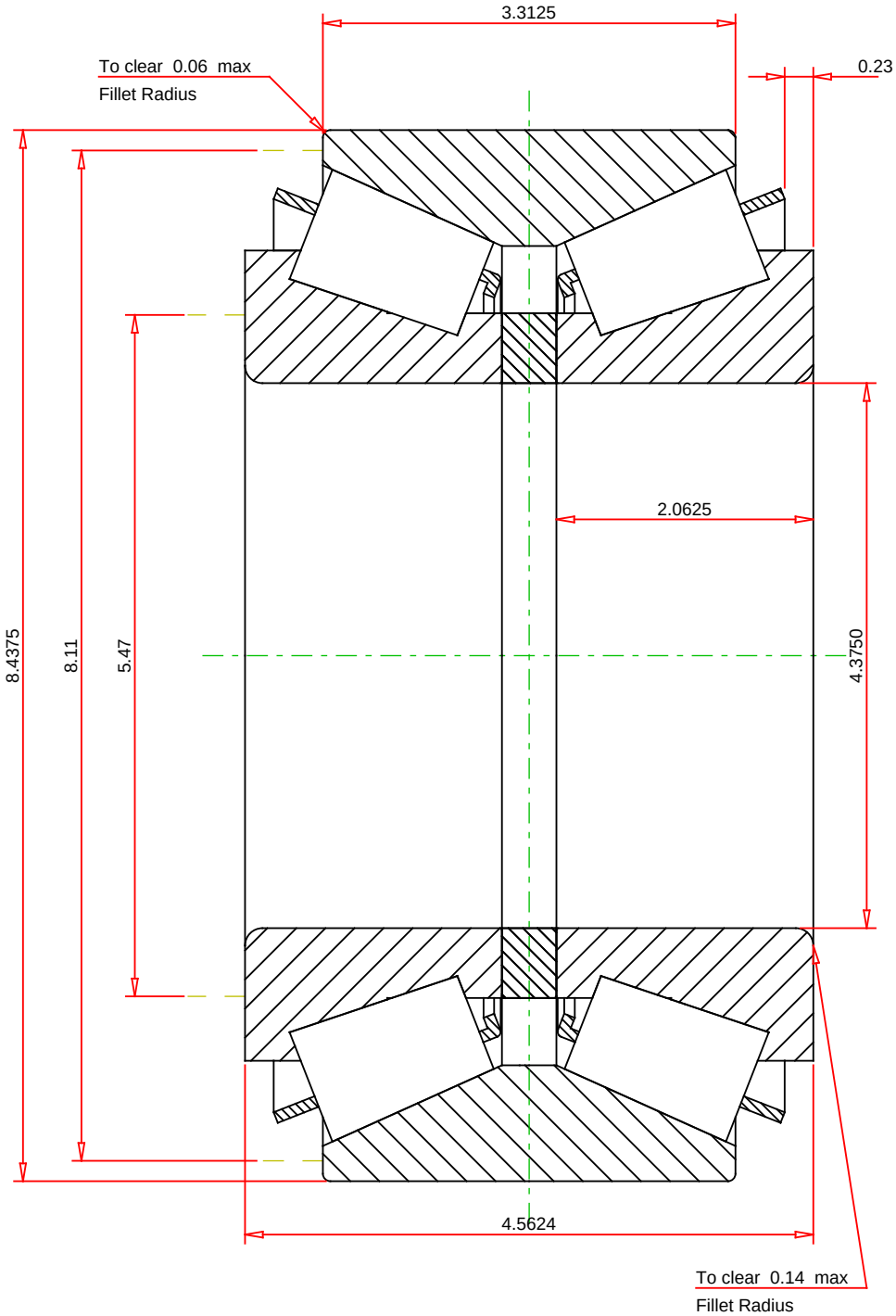
[7] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[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] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

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




IMPERIAL UNITS

| | | |
|---|---|---|
| ISO Factor - e | 1.69 | |
| ISO Factor - Y1 | 0.4 | |
| ISO Factor - Y2 | 0.59 | |
| Bearing Weight | 37.16 | lb |
| Number of Rollers Per Row | 18 | |

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

H924045 - H924010D
TDO BEARING ASSEMBLY

| | | |
|---|---|---|
| K Factor | 0.87 | |
| Dynamic Radial Rating - C90 | 32500 | lbf |
| Dynamic Thrust Rating - Ca90 | 37500 | lbf |
| Dynamic Radial Rating - C90(2) | 56500 | lbf |
| Radial Rating - C1 | 218000 | 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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