TIMKEN

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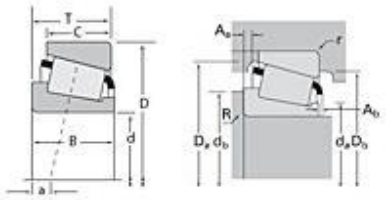
## Timken Part Number 1988 - 1922, Tapered Roller Bearings - TS (Tapered Single) Imperial

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** | 1900 |
| **Cone Part Number** | 1988 |
| **Cup Part Number** | 1922 |
| **Design Units** | Imperial |
| **Bearing Weight** | 0.50 lb<br>0.200 Kg |
| **Cage Type** | Stamped Steel |

### Dimensions

| | |
|---|---|
| **d - Bore** | 1.1250 in<br>28.575 mm |
| **D - Cup Outer Diameter** | 2.2500 in<br>57.150 mm |

| | |
|---|---|
| **B - Cone Width** | 0.7620 in<br>19.355 mm |
| **C - Cup Width** | 0.6250 in<br>15.875 mm |
| **T - Bearing Width** | 0.7813 in<br>19.845 mm |

## Abutment and Fillet Dimensions

| | |
|---|---|
| **R - Cone Backface "To Clear" Radius[1]** | 0.14 in<br>3.560 mm |
| **r - Cup Backface "To Clear" Radius[2]** | 0.060 in<br>1.52 mm |
| **da - Cone Frontface Backing Diameter** | 1.32 in<br>33.53 mm |
| **db - Cone Backface Backing Diameter** | 1.56 in<br>39.62 mm |
| **Da - Cup Frontface Backing Diameter** | 2.13 in<br>54.10 mm |
| **Db - Cup Backface Backing Diameter** | 2.01 in<br>51.05 mm |
| **Ab - Cage-Cone Frontface Clearance** | 0.08 in<br>2 mm |
| **Aa - Cage-Cone Backface Clearance** | 0 in<br>0 mm |
| **a - Effective Center Location[3]** | -0.23 in<br>-5.80 mm |

## Basic Load Ratings

| | |
|---|---|
| **C90 - Dynamic Radial Rating (90 million revolutions)[4]** | 2820 lbf<br>12500 N |
| **C1 - Dynamic Radial Rating (1 million revolutions)[5]** | 10900 lbf<br>48400 N |
| **C0 - Static Radial Rating** | 11300 lbf<br>50200 N |
| **$C_{a90}$ - Dynamic Thrust Rating (90 million revolutions)[6]** | 1590 lbf<br>7080 N |

## Factors

| | |
|---|---|
| **K - Factor[7]** | 1.77 |
| **e - ISO Factor[8]** | 0.33 |
| **Y - ISO Factor[9]** | 1.82 |
| **G1 - Heat Generation Factor (Roller-Raceway)** | 12.5 |
| **G2 - Heat Generation Factor (Rib-Roller End)** | 6.3 |
| **Cg - Geometry Factor** | 0.0565 |

[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.
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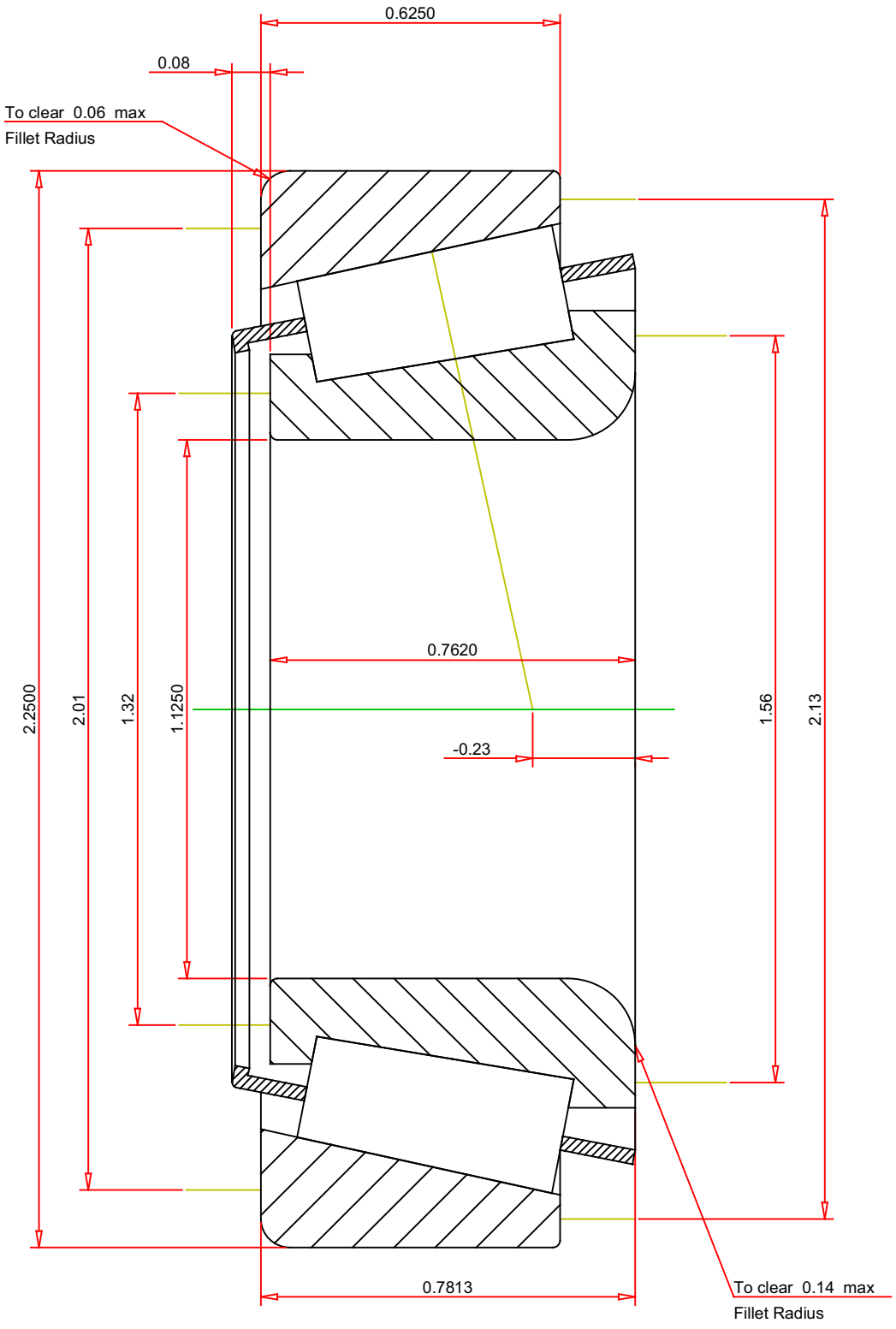


IMPERIAL UNITS

| | | |
|---|---|---|
| ISO Factor - e | 0.33 | |
| ISO Factor - Y | 1.82 | |
| Bearing Weight | 0.5 | lb |
| Number of Rollers Per Row | 14 | |
| Effective Center Location | -0.23 | inch |

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

1988 - 1922
TS BEARING ASSEMBLY

| | | |
|---|---|---|
| K Factor | 1.77 | |
| Dynamic Radial Rating - C90 | 2820 | lbf |
| Dynamic Thrust Rating - Ca90 | 1590 | lbf |
| Static Radial Rating - C0 | 11300 | lbf |
| Dynamic Radial Rating - C1 | 10900 | lbf |



FOR DISCUSSION ONLY