



The Timken Company

4500 Mt Pleasant St. NW

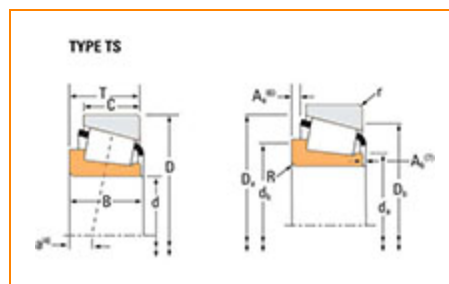
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Part Number 66584, Tapered Roller Bearings - Single Cones - Imperial

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

| | |
|---|-----------------------|
| Series | 66500 |
| Cone Part Number | 66584 |
| Design Units | Imperial |
| Cage Type | Stamped Steel |
| C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹ | 71700 lbf 319000 N |
| C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)² | 18600 lbf 82700 N |



Dimensions

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|----------------------|-----------------------|
| d - Cone Bore | 2 1/8 in 53.975 mm |
|----------------------|-----------------------|

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|-----------------------|------------------------|
| B - Cone Width | 1.2500 in 31.750 mm |
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Abutment and Fillet Dimensions

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|--|--------------------|
| R - Cone Backface "To Clear" Radius³ | 0.140 in 3.6 mm |
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| da - Cone Frontface Backing Diameter | 2.68 in 68 mm |
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|--|------------------|
| db - Cone Backface Backing Diameter | 2.95 in 75 mm |
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|---|-------------------|
| Ab - Cage-Cone Frontface Clearance | 0.11 in 2.8 mm |
|---|-------------------|

| | |
|--|-------------------|
| Aa - Cage-Cone Backface Clearance | 0.18 in 4.6 mm |
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|--|-----------------|
| a - Effective Center Location⁴ | 0.08 in 2 mm |
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Basic Load Ratings

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|---|----------------------|
| C90 - Dynamic Radial Rating (90 million revolutions)⁵ | 10700 lbf 47500 N |
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|---|-----------------------|
| C1 - Dynamic Radial Rating (1 million revolutions)⁶ | 41200 lbf 183000 N |
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|----------------------------------|-----------------------|
| C0 - Static Radial Rating | 39900 lbf 178000 N |
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|---|----------------------|
| C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷ | 12200 lbf 54100 N |
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Factors

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|---|--------|
| K - Factor⁸ | 0.88 |
| G1 - Heat Generation Factor (Roller-Raceway) | 57 |
| G2 - Heat Generation Factor (Rib-Roller End) | 18.3 |
| Cg - Geometry Factor⁹ | 0.0797 |

¹ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

² Based on 90×10^6 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.

³ These maximum fillet radii will be cleared by the bearing corners.

⁴ Negative value indicates effective center inside cone backface.

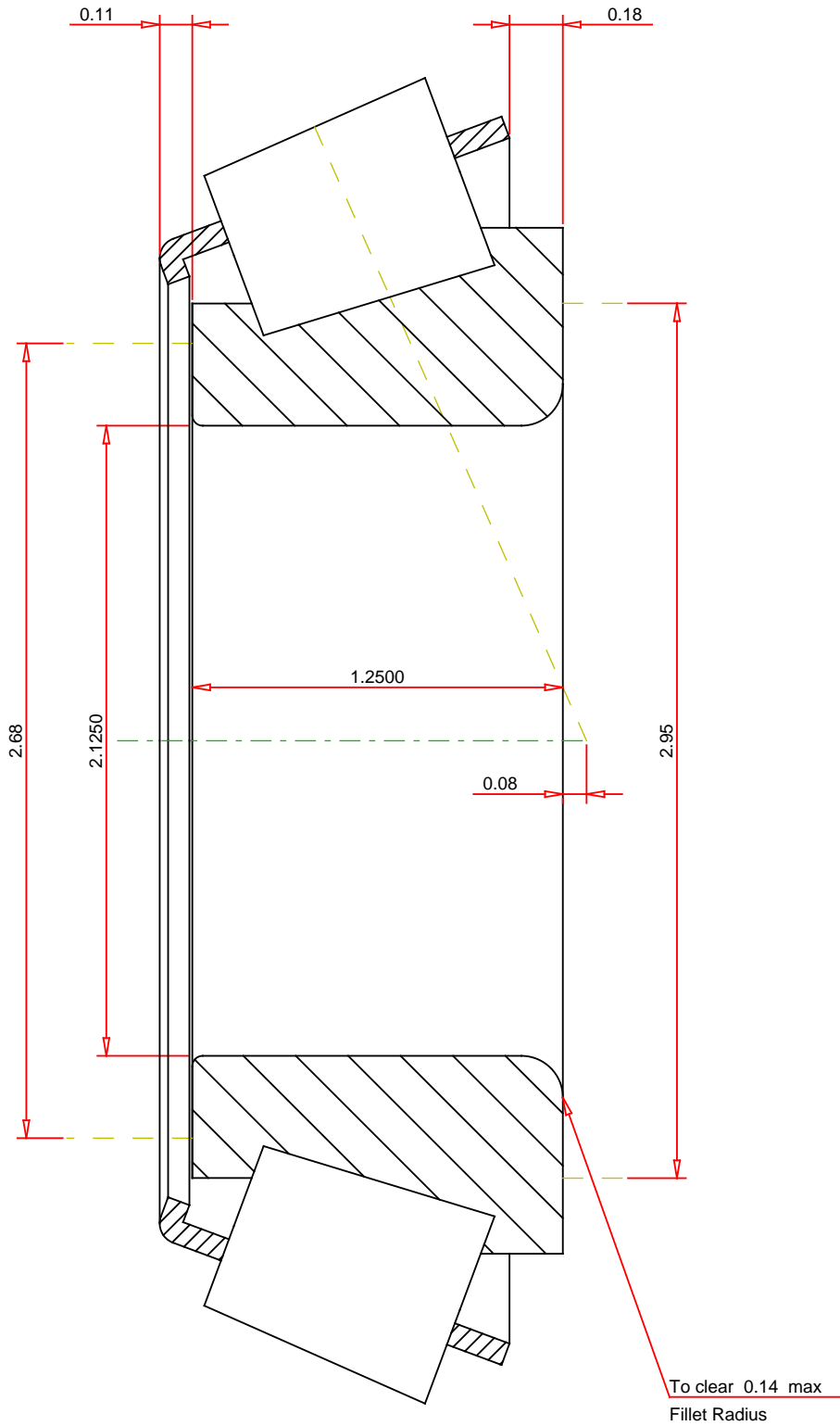
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

⁶ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

⁷ Based on 90×10^6 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.

⁸ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁹ Geometry constant for Lubrication Life Adjustment Factor a_3 .



IMPERIAL UNITS

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| Number of Rollers Per Row < |
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