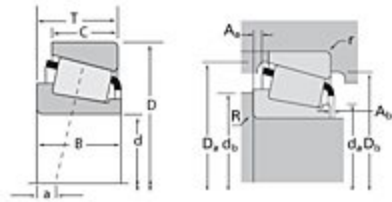


TIMKEN

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Timken Part Number LM503349A - LM503310, 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 | LM503300 |
| Cone Part Number | LM503349A |
| Cup Part Number | LM503310 |
| Design Units | Imperial |
| Bearing Weight | 0.300 Kg 0.70 lb |
| Cage Type | Stamped Steel |

Dimensions

| | |
|-------------------------------|------------------------|
| d - Bore | 45.987 mm 1.8105 in |
| D - Cup Outer Diameter | 74.976 mm 2.9518 in |

| | |
|--------------------------|------------------------|
| B - Cone Width | 18.001 mm 0.7087 in |
| C - Cup Width | 14 mm 0.5512 in |
| T - Bearing Width | 18.001 mm 0.7087 in |

Abutment and Fillet Dimensions

| | |
|--|----------------------|
| R - Cone Backface "To Clear" Radius¹ | 0.000 mm 0.000 in |
| r - Cup Backface "To Clear" Radius² | 1.52 mm 0.06 in |
| da - Cone Frontface Backing Diameter | 51.05 mm 2.01 in |
| db - Cone Backface Backing Diameter | 56.90 mm 2.24 in |
| Da - Cup Frontface Backing Diameter | 71.88 mm 2.83 in |
| Db - Cup Backface Backing Diameter | 67.06 mm 2.64 in |
| Ab - Cage-Cone Frontface Clearance | 2.3 mm 0.09 in |
| Aa - Cage-Cone Backface Clearance | 0.5 mm 0.02 in |
| a - Effective Center Location³ | -2.00 mm -0.08 in |

Basic Load Ratings

| | |
|---|----------------------|
| C90 - Dynamic Radial Rating (90 million revolutions)⁴ | 17500 N 3930 lbf |
| C1 - Dynamic Radial Rating (1 million revolutions)⁵ | 67400 N 15100 lbf |
| C0 - Static Radial Rating | 75400 N 17000 lbf |
| C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶ | 12000 N 2700 lbf |

Factors

| | |
|---|--------|
| K - Factor⁷ | 1.45 |
| e - ISO Factor⁸ | 0.40 |
| Y - ISO Factor⁹ | 1.49 |
| G1 - Heat Generation Factor (Roller-Raceway) | 28.3 |
| G2 - Heat Generation Factor (Rib-Roller End) | 18.2 |
| Cg - Geometry Factor | 0.0789 |

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

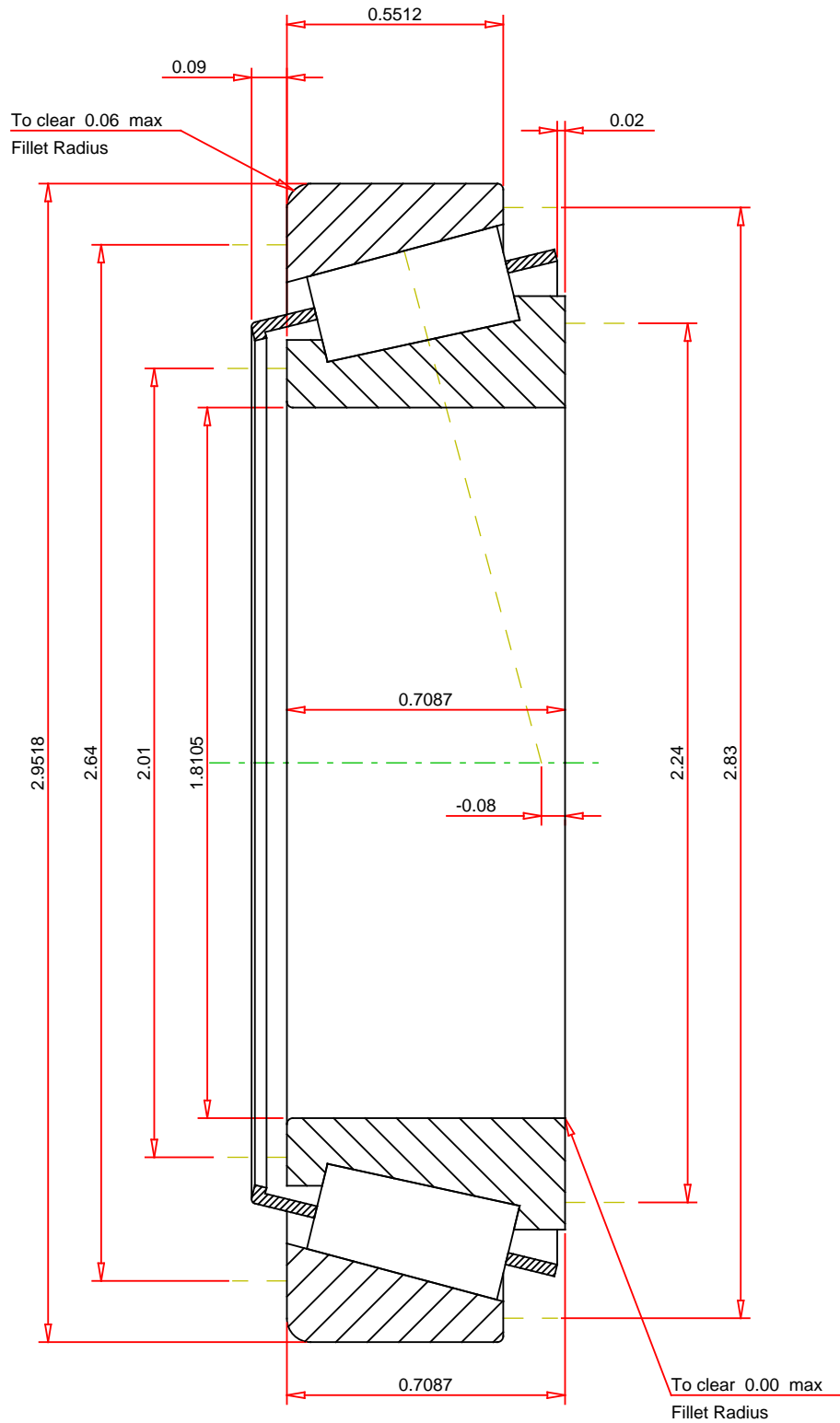
⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

⁶ 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.

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 | 0.4 |
| ISO Factor - Y | 1.49 |
| Bearing Weight | 0.7 lb |
| Number of Rollers Per Row | 24 |
| Effective Center Location | -0.08 inch |

TIMKEN®

LM503349A - LM503310
TS BEARING ASSEMBLY

THE TIMKEN COMPANY
 NORTH CANTON, OHIO USA

| | |
|------------------------------|-----------|
| K Factor | 1.45 |
| Dynamic Radial Rating - C90 | 17500 lbf |
| Dynamic Thrust Rating - Ca90 | 12000 lbf |
| Static Radial Rating - C0 | 75400 lbf |
| Dynamic Radial Rating - C1 | 67400 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.

FOR DISCUSSION ONLY