


The Timken Company

4500 Mt Pleasant St. NW

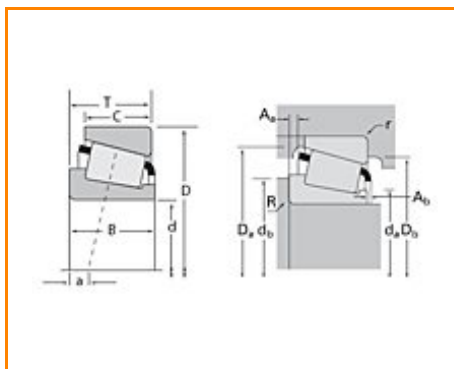
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Timken Part Number LM522548 - LM522510, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	LM522500
Cone Part Number	LM522548
Cup Part Number	LM522510
Design Units	Imperial
Bearing Weight	2.200 Kg 4.80 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	109.987 mm 4.3302 in
D - Cup Outer Diameter	159.987 mm 6.2987 in
B - Cone Width	34.925 mm 1.3750 in
C - Cup Width	26.988 mm 1.0625 in
T - Bearing Width	34.925 mm 1.3750 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	7.870 mm 0.310 in
r - Cup Backface "To Clear" Radius²	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	118.11 mm 5.59 in
db - Cone Backface Backing Diameter	133.10 mm 5.24 in
Da - Cup Frontface Backing Diameter	154.43 mm 6.08 in
Db - Cup Backface Backing Diameter	146.05 mm 5.75 in
Ab - Cage-Cone Frontface Clearance	2 mm 0.08 in
Aa - Cage-Cone Backface Clearance	2.3 mm 0.09 in
a - Effective Center Location³	-1.5 mm -0.06 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	50700 N 11400 lbf
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C1 - Dynamic Radial Rating (1 million revolutions)⁵	196000 N 44000 lbf
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C0 - Static Radial Rating	357000 N 80300 lbf
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	34900 N 7850 lbf
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Factors

K - Factor⁷	1.45
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e - ISO Factor⁸	0.40
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Y - ISO Factor⁹	1.49
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G1 - Heat Generation Factor (Roller-Raceway)	232
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G2 - Heat Generation Factor (Rib-Roller End)	63.3
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Cg - Geometry Factor	0.158
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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.

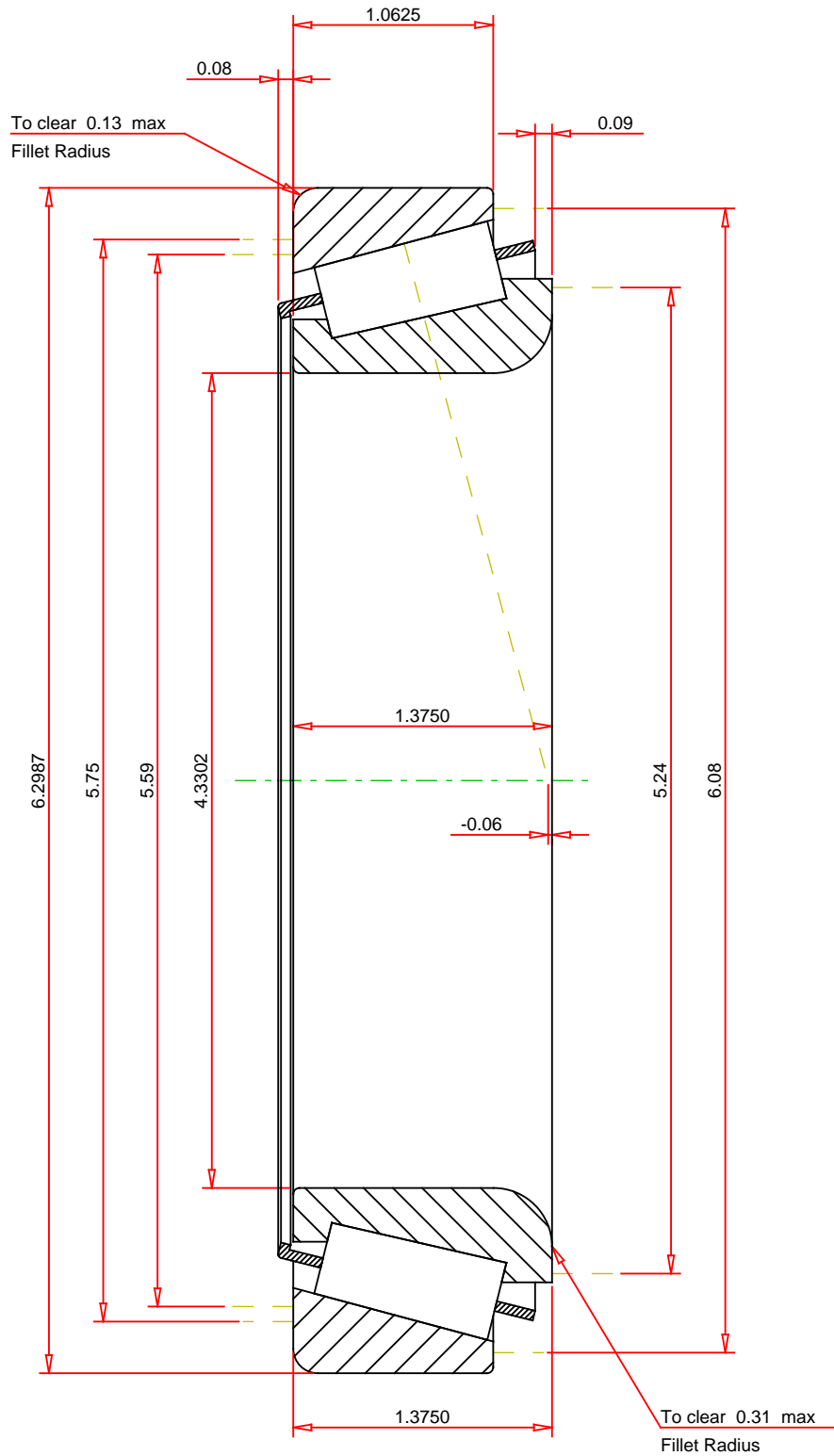
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 4.8 lb
 Number of Rollers Per Row 34
 Effective Center Location -0.06 inch

TIMKEN®

THE TIMKEN COMPANY
 NORTH CANTON, OHIO USA

LM522548 - LM522510
TS BEARING ASSEMBLY

K Factor 1.45
 Dynamic Radial Rating - C90 50700 lbf
 Dynamic Thrust Rating - Ca90 34900 lbf
 Static Radial Rating - C0 357000 lbf
 Dynamic Radial Rating - C1 196000 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