


The Timken Company

4500 Mt Pleasant St. NW

N. Canton, OH 44720

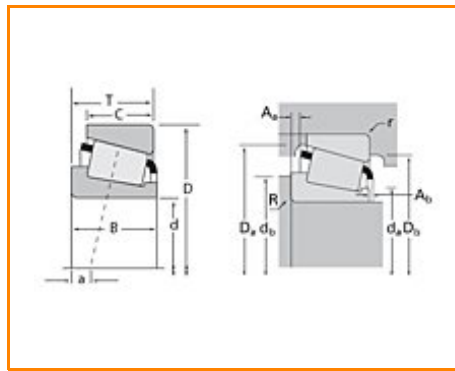
Phone: (234) 262-3000

E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number L540049 - L540010, 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	L540000
Cone Part Number	L540049
Cup Part Number	L540010
Design Units	Imperial
Bearing Weight	3.300 Kg 7.30 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	196.850 mm 7.7500 in
D - Cup Outer Diameter	254.000 mm 10.0000 in
B - Cone Width	27.783 mm 1.0938 in
C - Cup Width	21.433 mm 0.8438 in
T - Bearing Width	28.575 mm 1.1250 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	1.520 mm 0.06 in
r - Cup Backface "To Clear" Radius²	1.52 mm 0.06 in
da - Cone Frontface Backing Diameter	204.98 mm 9.03 in
db - Cone Backface Backing Diameter	207.01 mm 8.15 in
Da - Cup Frontface Backing Diameter	246.90 mm 9.80 in
Db - Cup Backface Backing Diameter	243.08 mm 9.57 in
Ab - Cage-Cone Frontface Clearance	2.5 mm 0.1 in
Aa - Cage-Cone Backface Clearance	2 mm 0.08 in
a - Effective Center Location³	14.20 mm 0.56 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	54700 N 12300 lbf
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C1 - Dynamic Radial Rating (1 million revolutions)⁵	211000 N 47400 lbf
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C0 - Static Radial Rating	408000 N 91800 lbf
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	37100 N 8350 lbf
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Factors

K - Factor⁷	1.47
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e - ISO Factor⁸	0.40
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Y - ISO Factor⁹	1.51
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G1 - Heat Generation Factor (Roller-Raceway)	504
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G2 - Heat Generation Factor (Rib-Roller End)	226
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Cg - Geometry Factor	0.137
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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.

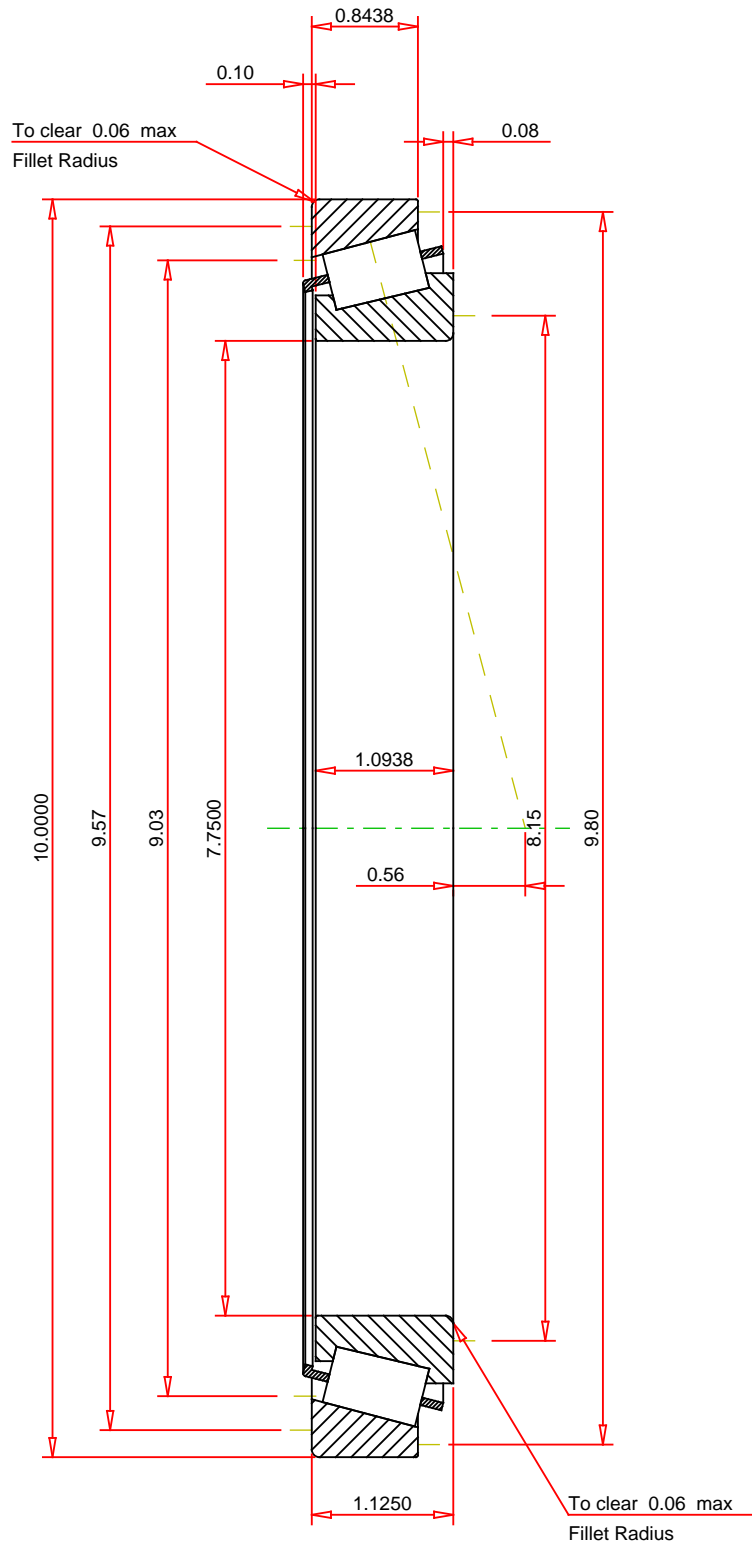
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 1.51
Bearing Weight 7.3 lb
Number of Rollers Per Row 46
Effective Center Location 0.56 inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

L540049 - L540010
TS BEARING ASSEMBLY

K Factor 1.47
Dynamic Radial Rating - C90 54700 lbf
Dynamic Thrust Rating - Ca90 37100 lbf
Static Radial Rating - C0 408000 lbf
Dynamic Radial Rating - C1 211000 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