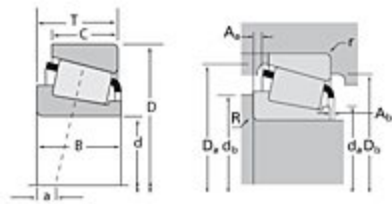




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Timken Part Number LM814849 - LM814810, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	LM814800
Cone Part Number	LM814849
Cup Part Number	LM814810
Design Units	Imperial
Bearing Weight	0.900 Kg 2.00 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	77.788 mm 3.0625 in
D - Cup Outer Diameter	117.475 mm 4.6250 in

B - Cone Width	25.400 mm 1.0000 in
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C - Cup Width	19.050 mm 0.7500 in
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T - Bearing Width	25.400 mm 1.0000 in
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Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	3.560 mm 0.14 in
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r - Cup Backface "To Clear" Radius²	3.30 mm 0.130 in
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da - Cone Frontface Backing Diameter	85.09 mm 4.09 in
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db - Cone Backface Backing Diameter	90.93 mm 3.58 in
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Da - Cup Frontface Backing Diameter	114.00 mm 4.49 in
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Db - Cup Backface Backing Diameter	104.90 mm 4.13 in
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Ab - Cage-Cone Frontface Clearance	2.3 mm 0.09 in
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Aa - Cage-Cone Backface Clearance	2 mm 0.08 in
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a - Effective Center Location³	2.30 mm 0.09 in
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Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	30600 N 6870 lbf
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C1 - Dynamic Radial Rating (1 million revolutions)⁵	118000 N 26500 lbf
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C0 - Static Radial Rating	183000 N 41200 lbf
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	26700 N 5990 lbf
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Factors

K - Factor⁷	1.15
e - ISO Factor⁸	0.51
Y - ISO Factor⁹	1.18
G1 - Heat Generation Factor (Roller-Raceway)	88.6
G2 - Heat Generation Factor (Rib-Roller End)	36.6
Cg - Geometry Factor	0.124

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.

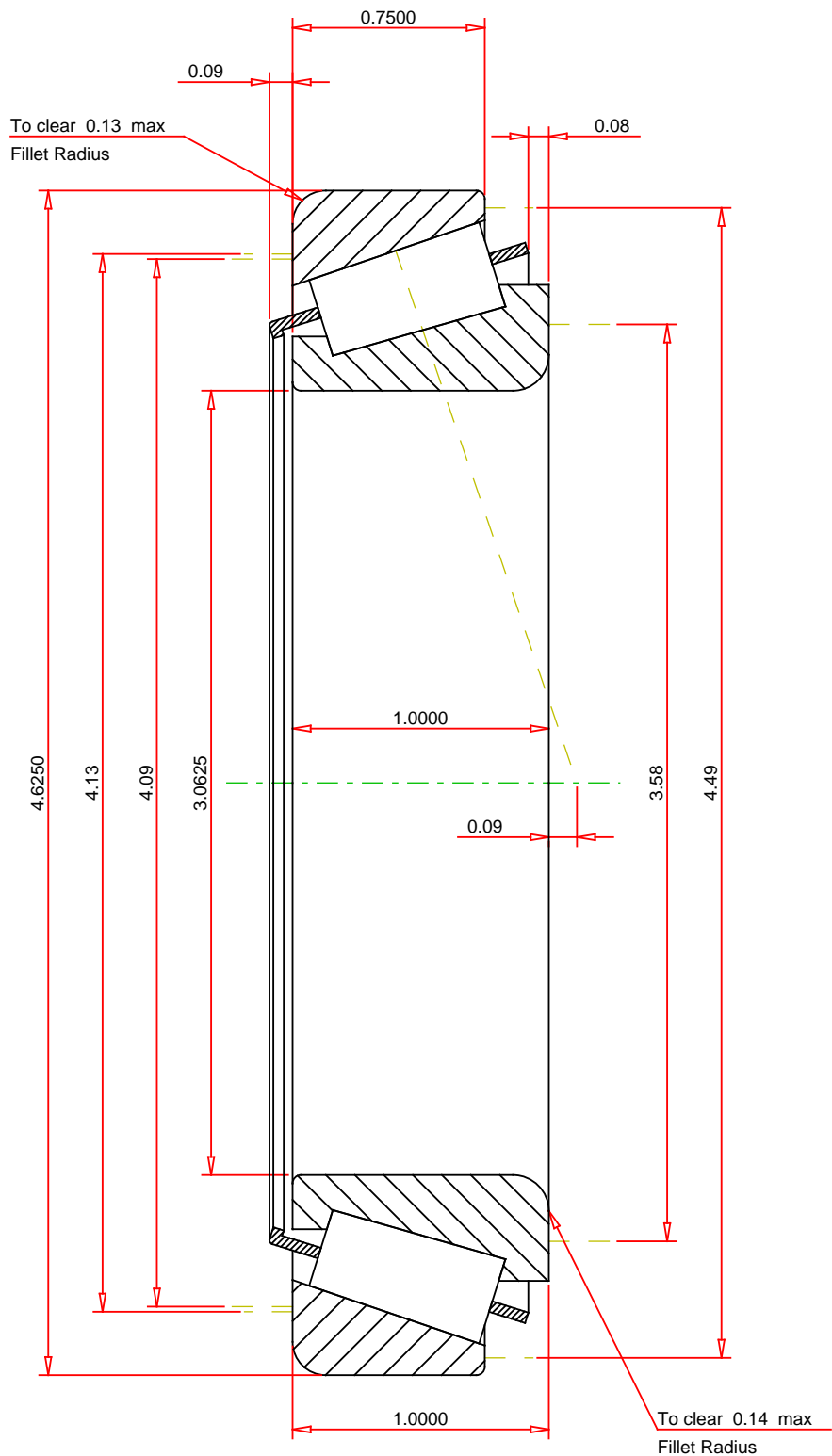
⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

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 0.51
 ISO Factor - Y 1.18
 Bearing Weight 2 lb
 Number of Rollers Per Row 29
 Effective Center Location 0.09 inch

TIMKEN®

THE TIMKEN COMPANY
 NORTH CANTON, OHIO USA

LM814849 - LM814810
TS BEARING ASSEMBLY

K Factor 1.15
 Dynamic Radial Rating - C90 30600 lbf
 Dynamic Thrust Rating - Ca90 26700 lbf
 Static Radial Rating - C0 183000 lbf
 Dynamic Radial Rating - C1 118000 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