


The Timken Company

4500 Mt Pleasant St. NW

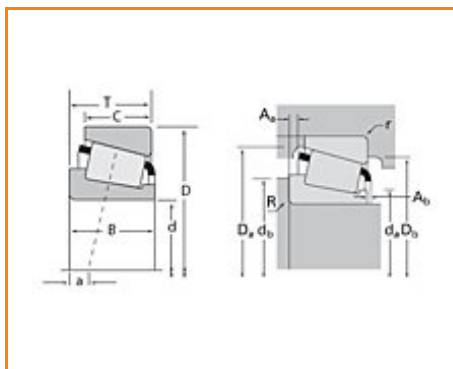
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Timken Part Number LM104947A - LM104912, Tapered Roller Bearings - TS (Tapered Single) Imperial

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.



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Specifications

Series	LM104900
Cone Part Number	LM104947A
Cup Part Number	LM104912
Design Units	Imperial
Bearing Weight	0.400 Kg 1.00 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	49.987 mm 1.9680 in
D - Cup Outer Diameter	82.931 mm 3.2650 in
B - Cone Width	22.225 mm 0.8750 in
C - Cup Width	16.510 mm 0.6500 in
T - Bearing Width	21.595 mm 0.8502 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	0.510 mm 0.020 in
r - Cup Backface "To Clear" Radius²	1.27 mm 0.050 in
da - Cone Frontface Backing Diameter	55.12 mm 2.17 in
db - Cone Backface Backing Diameter	55.12 mm 2.17 in
Da - Cup Frontface Backing Diameter	77.98 mm 3.07 in
Db - Cup Backface Backing Diameter	74.93 mm 2.95 in
Ab - Cage-Cone Frontface Clearance	2.5 mm 0.1 in
Aa - Cage-Cone Backface Clearance	0.8 mm 0.03 in
a - Effective Center Location³	-5.8 mm -0.23 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	25000 N 5610 lbf
C1 - Dynamic Radial Rating (1 million revolutions)⁵	96300 N 21700 lbf
C0 - Static Radial Rating	104000 N 23400 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	13000 N 2930 lbf

Factors

K - Factor⁷	1.91
e - ISO Factor⁸	0.31
Y - ISO Factor⁹	1.97
G1 - Heat Generation Factor (Roller-Raceway)	38.8
G2 - Heat Generation Factor (Rib-Roller End)	19.3
Cg - Geometry Factor	0.0801

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.

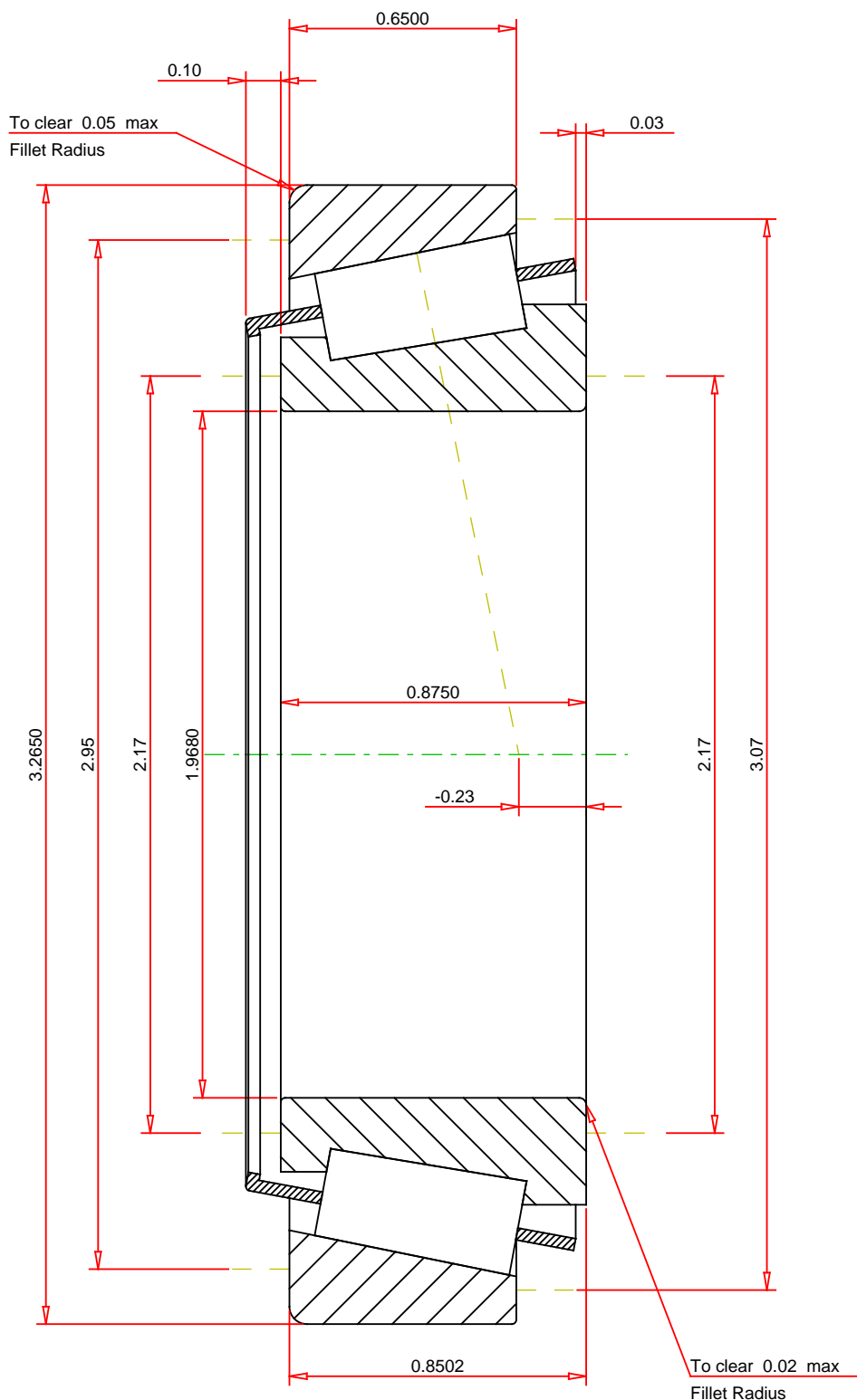
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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

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⁹ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.



IMPERIAL UNITS

ISO Factor - e 0.31
 ISO Factor - Y 1.97
 Bearing Weight 1 lb
 Number of Rollers Per Row 21
 Effective Center Location -0.23 inch

TIMKEN®

THE TIMKEN COMPANY
 NORTH CANTON, OHIO USA

LM104947A - LM104912
TS BEARING ASSEMBLY

K Factor 1.91
 Dynamic Radial Rating - C90 25000 lbf
 Dynamic Thrust Rating - Ca90 13000 lbf
 Static Radial Rating - C0 104000 lbf
 Dynamic Radial Rating - C1 96300 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