


The Timken Company

4500 Mt Pleasant St. NW

N. Canton, OH 44720

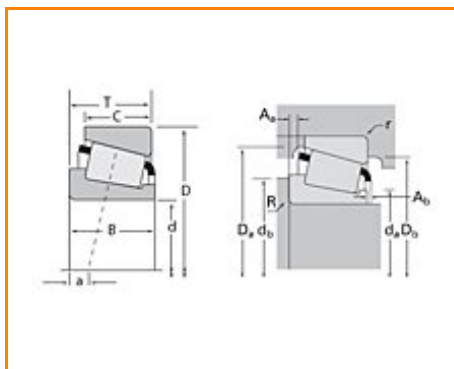
Phone: (234) 262-3000

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

Timken Part Number L305648 - L305610, 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	L305600
Cone Part Number	L305648
Cup Part Number	L305610
Design Units	Imperial
Bearing Weight	0.400 Kg 0.80 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	49.987 mm 1.9680 in
D - Cup Outer Diameter	80.963 mm 3.1875 in
B - Cone Width	18.258 mm 0.7188 in
C - Cup Width	14.288 mm 0.5625 in
T - Bearing Width	18.258 mm 0.7188 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	55.12 mm 2.17 in
db - Cone Backface Backing Diameter	56.90 mm 2.24 in
Da - Cup Frontface Backing Diameter	77.00 mm 3.05 in
Db - Cup Backface Backing Diameter	72.90 mm 2.87 in
Ab - Cage-Cone Frontface Clearance	2.5 mm 0.1 in
Aa - Cage-Cone Backface Clearance	0 mm 0 in
a - Effective Center Location³	-2.5 mm -0.1 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	15800 N 3540 lbf
C1 - Dynamic Radial Rating (1 million revolutions)⁵	60800 N 13700 lbf
C0 - Static Radial Rating	88800 N 20000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	9590 N 2160 lbf

Factors

K - Factor⁷	1.64
e - ISO Factor⁸	0.36
Y - ISO Factor⁹	1.69
G1 - Heat Generation Factor (Roller-Raceway)	38.8
G2 - Heat Generation Factor (Rib-Roller End)	27.8
Cg - Geometry Factor	0.0841

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.

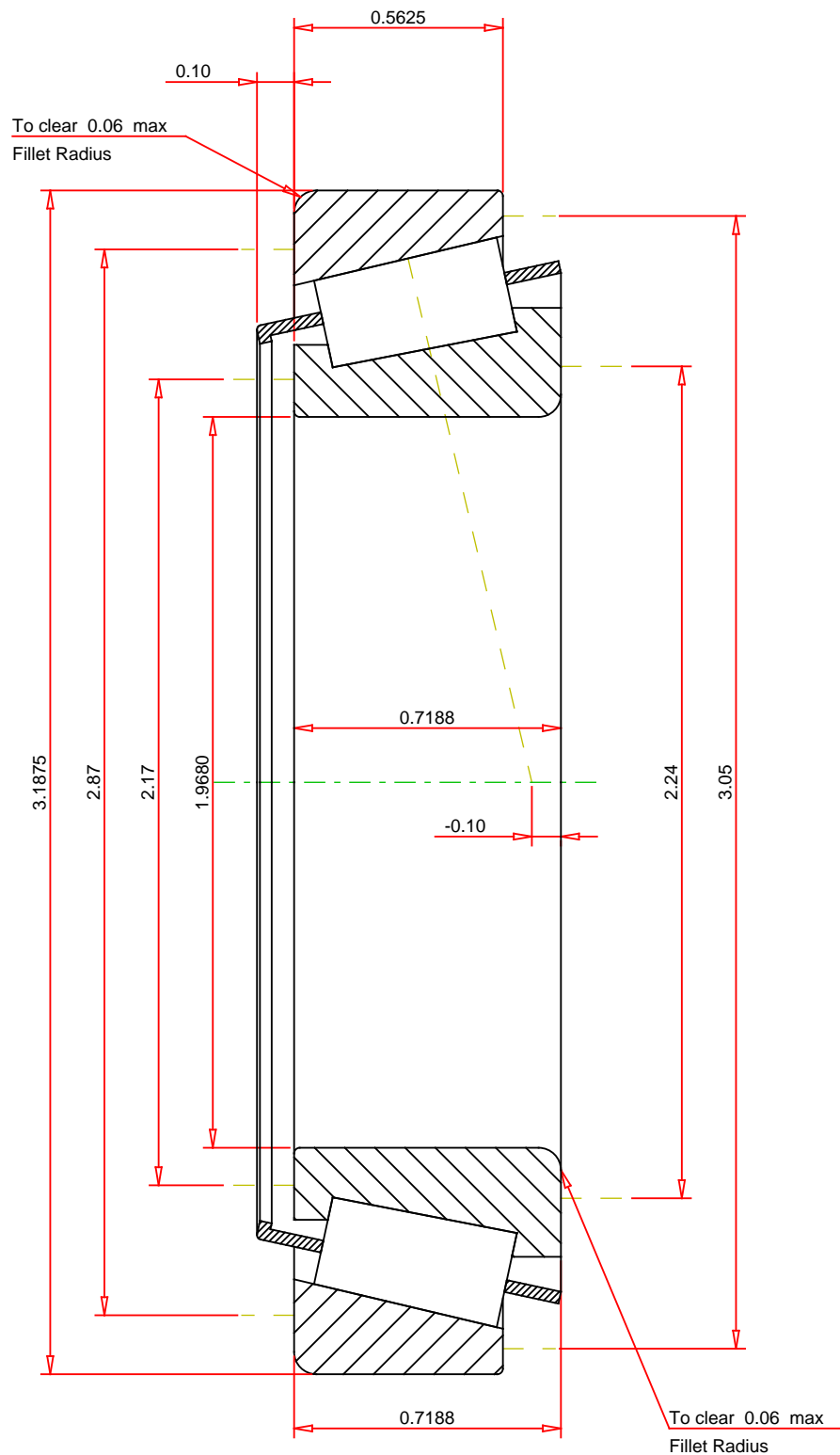
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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	0.36
ISO Factor - Y	1.69
Bearing Weight	0.8 lb
Number of Rollers Per Row	27
Effective Center Location	-0.1 inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

L305648 - L305610
TS BEARING ASSEMBLY

K Factor	1.64
Dynamic Radial Rating - C90	15800 lbf
Dynamic Thrust Rating - Ca90	9590 lbf
Static Radial Rating - C0	88800 lbf
Dynamic Radial Rating - C1	60800 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