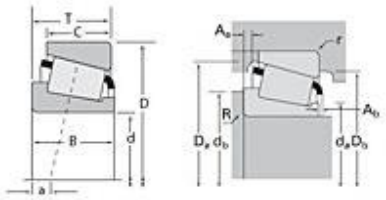
The Timken Company
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E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number LM104949 - LM104911, 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	LM104900
Cone Part Number	LM104949
Cup Part Number	LM104911
Design Units	Imperial
Bearing Weight	0.90 lb 0.400 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	2 in 50.8 mm
D - Cup Outer Diameter	3.2500 in 82.550 mm

B - Cone Width	0.8750 in 22.225 mm
C - Cup Width	0.6500 in 16.510 mm
T - Bearing Width	0.8500 in 21.590 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.14 in 3.560 mm
r - Cup Backface "To Clear" Radius[2]	0.050 in 1.27 mm
da - Cone Frontface Backing Diameter	2.20 in 55.88 mm
db - Cone Backface Backing Diameter	2.48 in 62.99 mm
Da - Cup Frontface Backing Diameter	3.11 in 78.00 mm
Db - Cup Backface Backing Diameter	2.95 in 74.93 mm
Ab - Cage-Cone Frontface Clearance	0.1 in 2.5 mm
Aa - Cage-Cone Backface Clearance	0.03 in 0.8 mm
a - Effective Center Location[3]	-0.23 in -5.80 mm

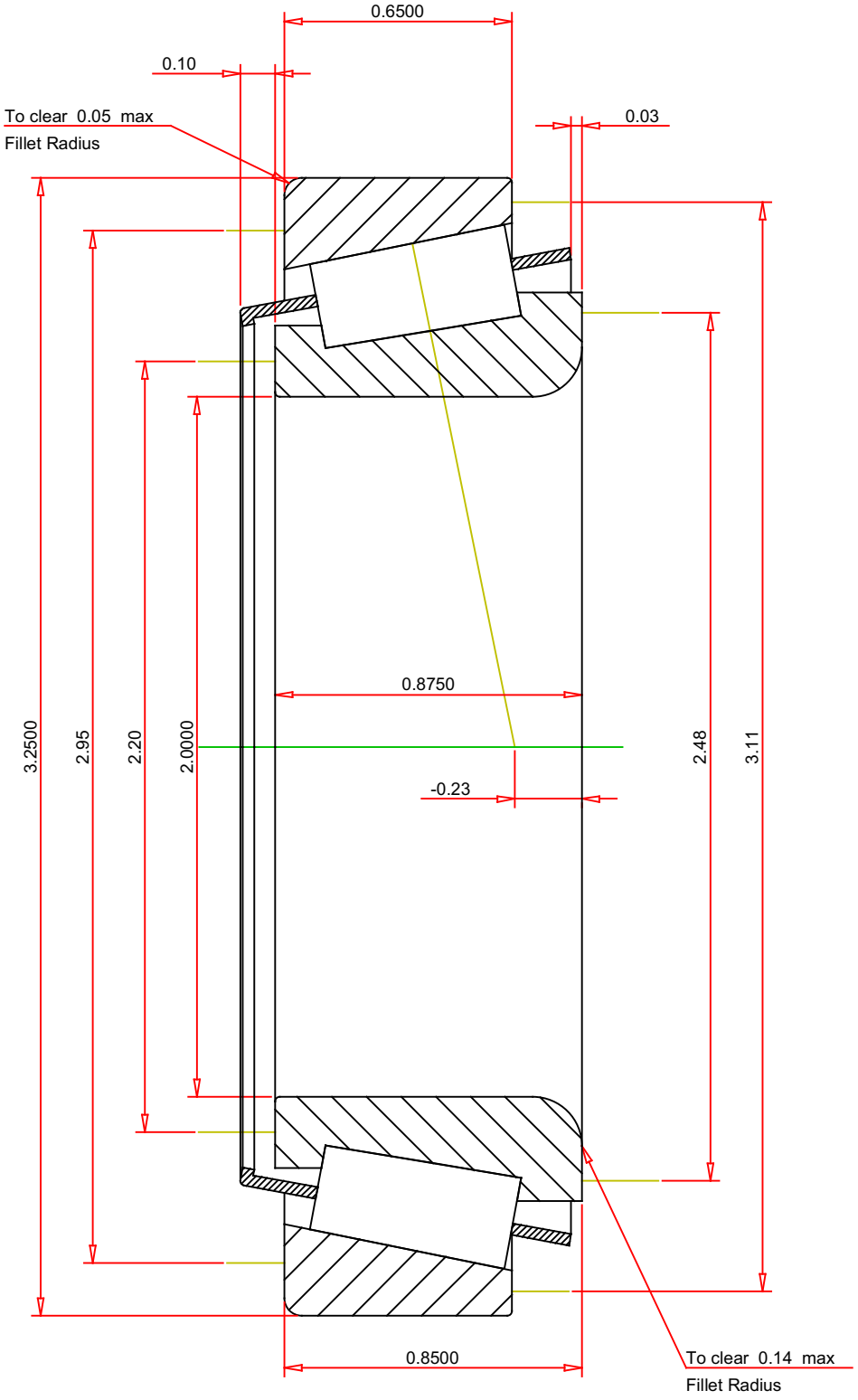
Basic Load Ratings

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

Factors

K - Factor[7]	1.91
e - ISO Factor[8]	0.31
Y - ISO Factor[9]	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 x 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 x 10^6 revolutions L_{10} life, for the ISO life calculation method.
[6] Based on 90 x 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	0.31	
ISO Factor - Y	1.97	
Bearing Weight	0.9	lb
Number of Rollers Per Row	21	
Effective Center Location	-0.23	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM104949 - LM104911
TS BEARING ASSEMBLY

K Factor	1.91	
Dynamic Radial Rating - C90	5610	lbf
Dynamic Thrust Rating - Ca90	2930	lbf
Static Radial Rating - C0	23400	lbf
Dynamic Radial Rating - C1	21700	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