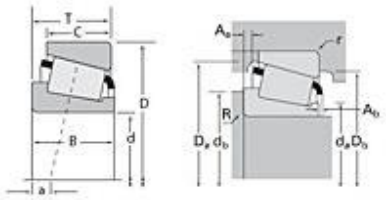
TIMKEN

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 LM501349 - LM501314, 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	LM501300
Cone Part Number	LM501349
Cup Part Number	LM501314
Design Units	Imperial
Bearing Weight	0.80 lb 0.400 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	1.6250 in 41.275 mm
D - Cup Outer Diameter	2.8910 in 73.431 mm

B - Cone Width	0.7800 in 19.812 mm
C - Cup Width	0.6537 in 16.604 mm
T - Bearing Width	0.8437 in 21.430 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]	0.030 in 0.76 mm
da - Cone Frontface Backing Diameter	1.89 in 48.01 mm
db - Cone Backface Backing Diameter	2.13 in 54.10 mm
Da - Cup Frontface Backing Diameter	2.80 in 71.10 mm
Db - Cup Backface Backing Diameter	2.56 in 65.02 mm
Ab - Cage-Cone Frontface Clearance	0.07 in 1.8 mm
Aa - Cage-Cone Backface Clearance	0.01 in 0.3 mm
a - Effective Center Location[3]	-0.13 in -3.30 mm

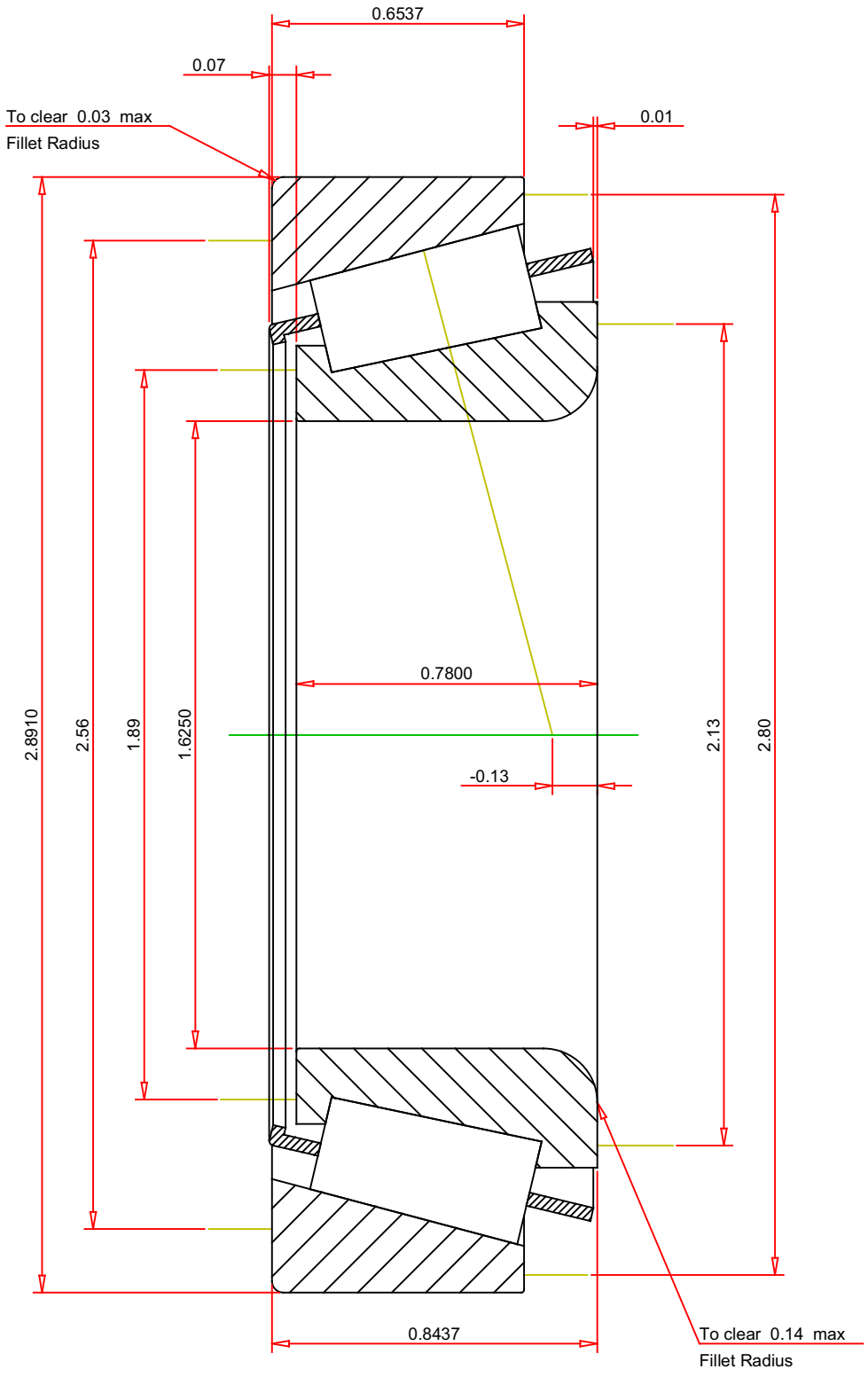
Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	4360 lbf 19400 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	16800 lbf 74800 N
C0 - Static Radial Rating	16700 lbf 74200 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	2980 lbf 13300 N

Factors

K - Factor[7]	1.46
e - ISO Factor[8]	0.4
Y - ISO Factor[9]	1.5
G1 - Heat Generation Factor (Roller-Raceway)	23.3
G2 - Heat Generation Factor (Rib-Roller End)	13.3
Cg - Geometry Factor	0.0739

[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	0.4	
ISO Factor - Y	1.5	
Bearing Weight	0.8	lb
Number of Rollers Per Row	19	
Effective Center Location	-0.13	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM501349 - LM501314
TS BEARING ASSEMBLY

K Factor	1.46	
Dynamic Radial Rating - C90	4360	lbf
Dynamic Thrust Rating - Ca90	2980	lbf
Static Radial Rating - C0	16700	lbf
Dynamic Radial Rating - C1	16800	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