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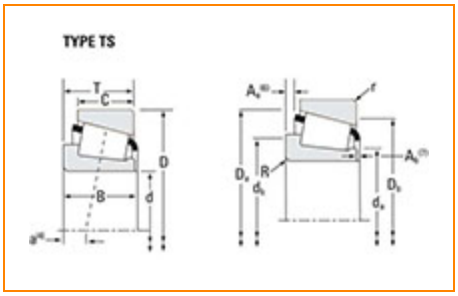
Part Number LM814849 - LM814810, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	0.9 Kg 2 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
C - Cup Width	19.050 mm 0.7500 in
T - Bearing Width	25.400 mm 1.0000 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius[2]	3.3 mm 0.130 in
da - Cone Frontface Backing Diameter	85.09 mm 4.09 in
db - Cone Backface Backing Diameter	90.93 mm 3.58 in
Da - Cup Frontface Backing Diameter	114.00 mm 4.49 in
Db - Cup Backface Backing Diameter	104.90 mm 4.13 in
Ab - Cage-Cone Frontface Clearance	2.3 mm 0.09 in
Aa - Cage-Cone Backface Clearance	2 mm 0.08 in
a - Effective Center Location[3]	2.3 mm 0.09 in

Basic Load Ratings

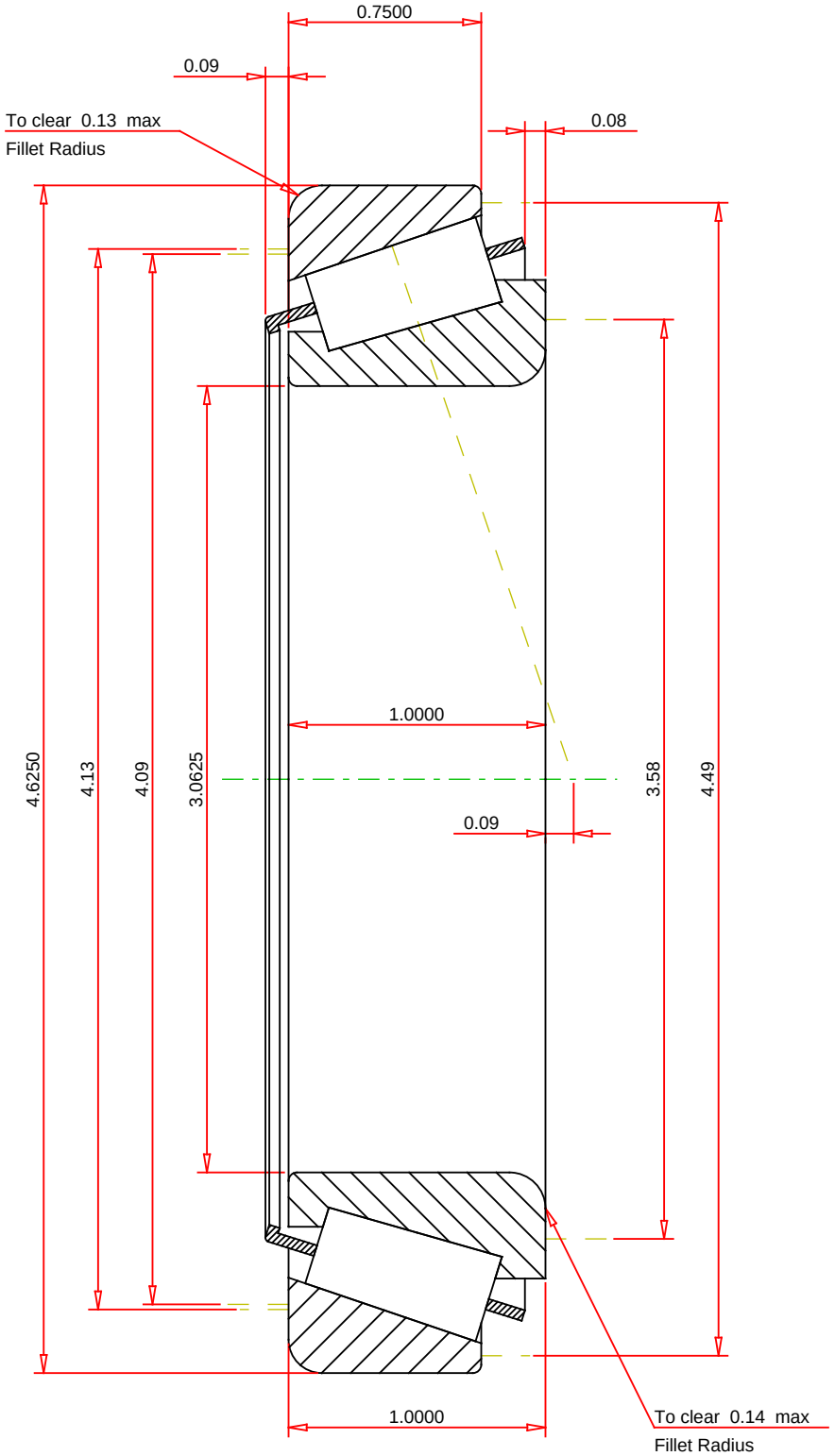
C90 - Dynamic Radial Rating (90 million revolutions)[4]	6870 lbf 30600 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	26500 lbf 118000 N
C0 - Static Radial Rating	41200 lbf 183000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	5990 lbf 26700 N

Factors

K - Factor[7]	1.15
e - ISO Factor[8]	0.51
Y - ISO Factor[9]	1.18
G1 - Heat Generation Factor (Roller-Raceway)	88.6
G2 - Heat Generation Factor (Rib-Roller End)	36.6
Cg - Geometry Factor[10]	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 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.

[10] Geometry constant for Lubrication Life Adjustment Factor a3l.



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	6870	lbf
Dynamic Thrust Rating - Ca90	5990	lbf
Static Radial Rating - C0	41200	lbf
Dynamic Radial Rating - C1	26500	lbf

FOR DISCUSSION ONLY