The Timken Company
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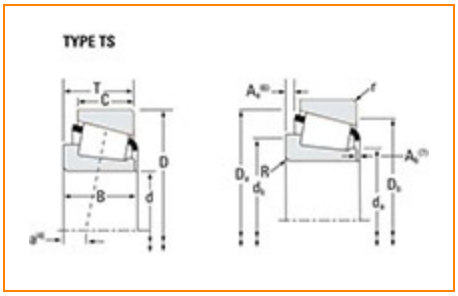
Part Number LM522548 - LM522510, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	LM522500
Cone Part Number	LM522548
Cup Part Number	LM522510
Design Units	Imperial
Bearing Weight	2.2 Kg 4.8 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	109.987 mm 4.3302 in

D - Cup Outer Diameter	159.987 mm 6.2987 in
B - Cone Width	34.925 mm 1.3750 in
C - Cup Width	26.988 mm 1.0625 in
T - Bearing Width	34.925 mm 1.3750 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	7.870 mm 0.310 in
r - Cup Backface "To Clear" Radius[2]	3.3 mm 0.130 in
da - Cone Frontface Backing Diameter	118.11 mm 5.59 in
db - Cone Backface Backing Diameter	133.10 mm 5.24 in
Da - Cup Frontface Backing Diameter	154.43 mm 6.08 in
Db - Cup Backface Backing Diameter	146.05 mm 5.75 in
Ab - Cage-Cone Frontface Clearance	2 mm 0.08 in
Aa - Cage-Cone Backface Clearance	2.3 mm 0.09 in
a - Effective Center Location[3]	-1.5 mm -0.06 in

Basic Load Ratings

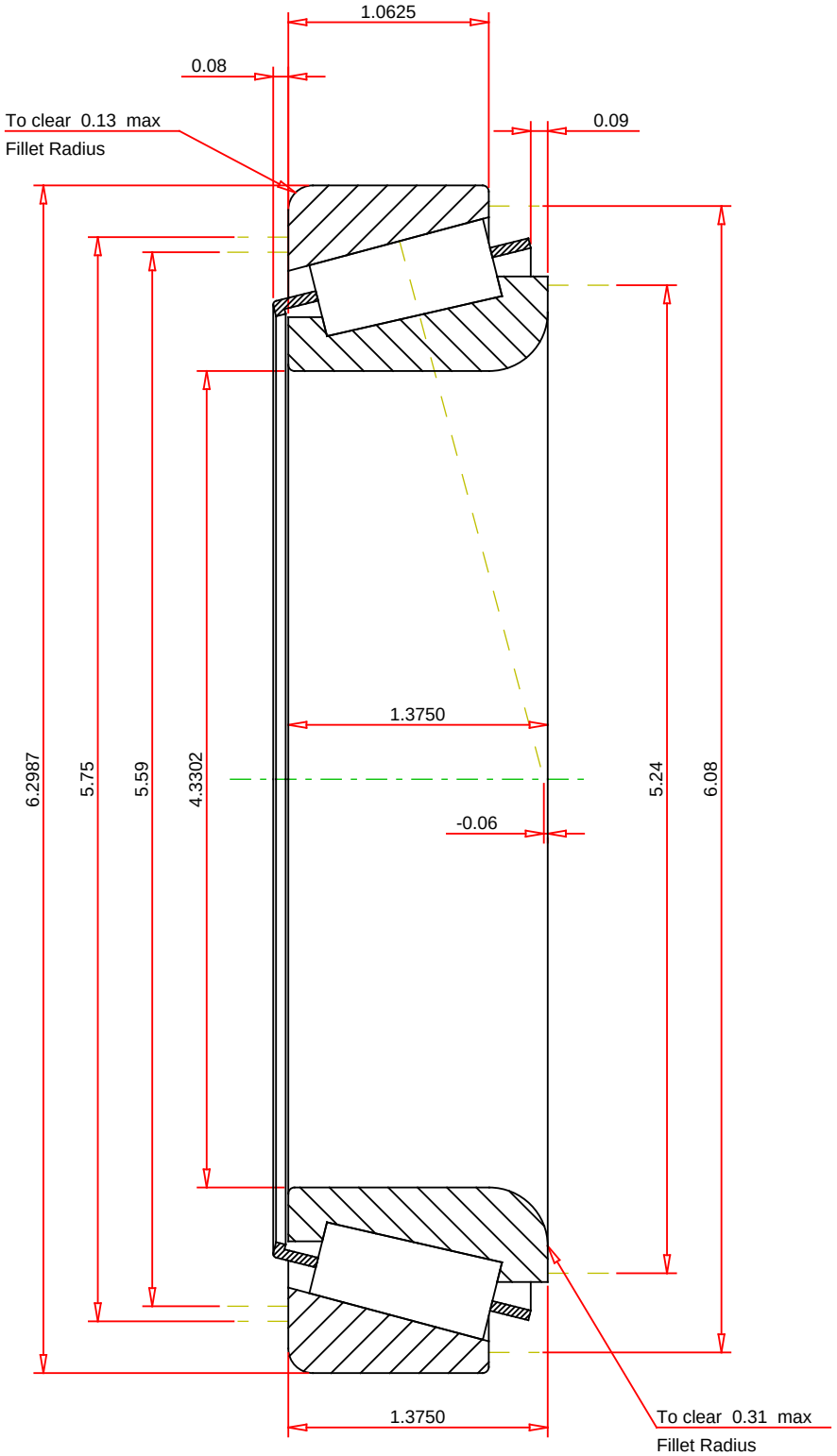
C90 - Dynamic Radial Rating (90 million revolutions)[4]	11400 lbf 50700 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	44000 lbf 196000 N
C0 - Static Radial Rating	80300 lbf 357000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	7850 lbf 34900 N

Factors

K - Factor[7]	1.45
e - ISO Factor[8]	0.4
Y - ISO Factor[9]	1.49
G1 - Heat Generation Factor (Roller-Raceway)	232
G2 - Heat Generation Factor (Rib-Roller End)	63.3
Cg - Geometry Factor[10]	0.158

[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	0.4	
ISO Factor - Y	1.49	
Bearing Weight	4.8	lb
Number of Rollers Per Row	34	
Effective Center Location	-0.06	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM522548 - LM522510
TS BEARING ASSEMBLY

K Factor	1.45	
Dynamic Radial Rating - C90	11400	lbf
Dynamic Thrust Rating - Ca90	7850	lbf
Static Radial Rating - C0	80300	lbf
Dynamic Radial Rating - C1	44000	lbf

FOR DISCUSSION ONLY