The Timken Company
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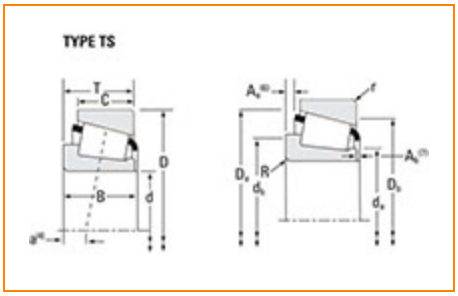
Part Number LM742747 - LM742710, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	LM742700
Cone Part Number	LM742747
Cup Part Number	LM742710
Design Units	Imperial
Bearing Weight	7.7 Kg 17 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	216.408 mm 8.5200 in

D - Cup Outer Diameter	285.750 mm 11.2500 in
B - Cone Width	49.213 mm 1.9375 in
C - Cup Width	34.925 mm 1.3750 in
T - Bearing Width	46.038 mm 1.8125 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	227.08 mm 10.04 in
db - Cone Backface Backing Diameter	232.92 mm 9.17 in
Da - Cup Frontface Backing Diameter	278.90 mm 11.02 in
Db - Cup Backface Backing Diameter	265.94 mm 10.47 in
Ab - Cage-Cone Frontface Clearance	1.5 mm 0.06 in
Aa - Cage-Cone Backface Clearance	3.6 mm 0.14 in
a - Effective Center Location[3]	14.2 mm 0.56 in

Basic Load Ratings

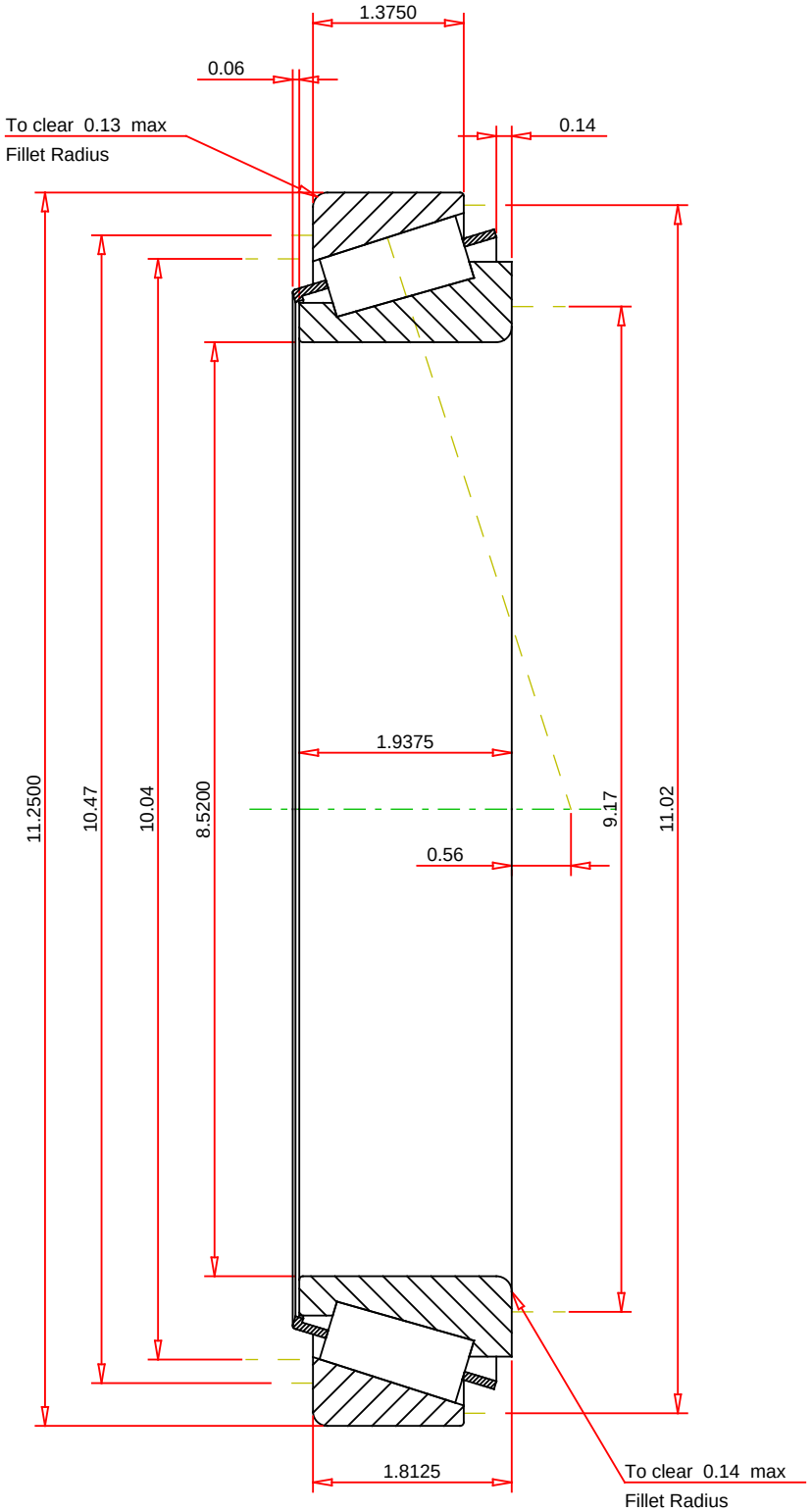
C90 - Dynamic Radial Rating (90 million revolutions)[4]	23400 lbf 104000 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	90100 lbf 401000 N
C0 - Static Radial Rating	181000 lbf 807000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	19200 lbf 85600 N

Factors

K - Factor[7]	1.21
e - ISO Factor[8]	0.48
Y - ISO Factor[9]	1.25
G1 - Heat Generation Factor (Roller-Raceway)	808.2
G2 - Heat Generation Factor (Rib-Roller End)	210.6
Cg - Geometry Factor[10]	0.135

[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	0.48	
ISO Factor - Y	1.25	
Bearing Weight	17	lb
Number of Rollers Per Row	38	
Effective Center Location	0.56	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM742747 - LM742710
TS BEARING ASSEMBLY

K Factor	1.21	
Dynamic Radial Rating - C90	23400	lbf
Dynamic Thrust Rating - Ca90	19200	lbf
Static Radial Rating - C0	181000	lbf
Dynamic Radial Rating - C1	90100	lbf

FOR DISCUSSION ONLY