



The Timken Company

4500 Mt Pleasant St. NW

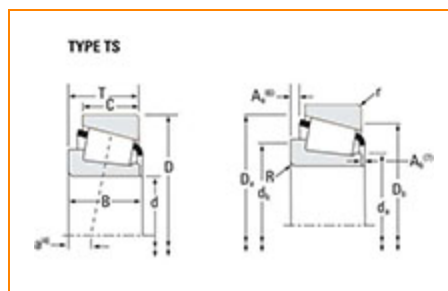
N. Canton, OH 44720

Phone: (234) 262-3000

E-Mail: CustomerCAD@timken.com • Web site: www.timken.com

Part Number LM742745 - 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	LM742745
Cup Part Number	LM742710
Design Units	Imperial
Bearing Weight	8 Kg 17.6 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	212.725 mm 8.3750 in
----------	-------------------------

D - Cup Outer Diameter	285.750 mm 11.2500 in
B - Cone Width	46.038 mm 1.8125 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" Radius¹	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius²	3.3 mm 0.130 in
da - Cone Frontface Backing Diameter	225.04 mm 9.92 in
db - Cone Backface Backing Diameter	230.12 mm 9.06 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	3 mm 0.12 in
Aa - Cage-Cone Backface Clearance	4.6 mm 0.18 in
a - Effective Center Location³	14.2 mm 0.56 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	25000 lbf 111000 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	96600 lbf 430000 N
C0 - Static Radial Rating	200000 lbf 892000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	20600 lbf 91800 N

Factors

K - Factor⁷	1.21
e - ISO Factor⁸	0.48
Y - ISO Factor⁹	1.25
G1 - Heat Generation Factor (Roller-Raceway)	867
G2 - Heat Generation Factor (Rib-Roller End)	225
Cg - Geometry Factor¹⁰	0.139

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 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

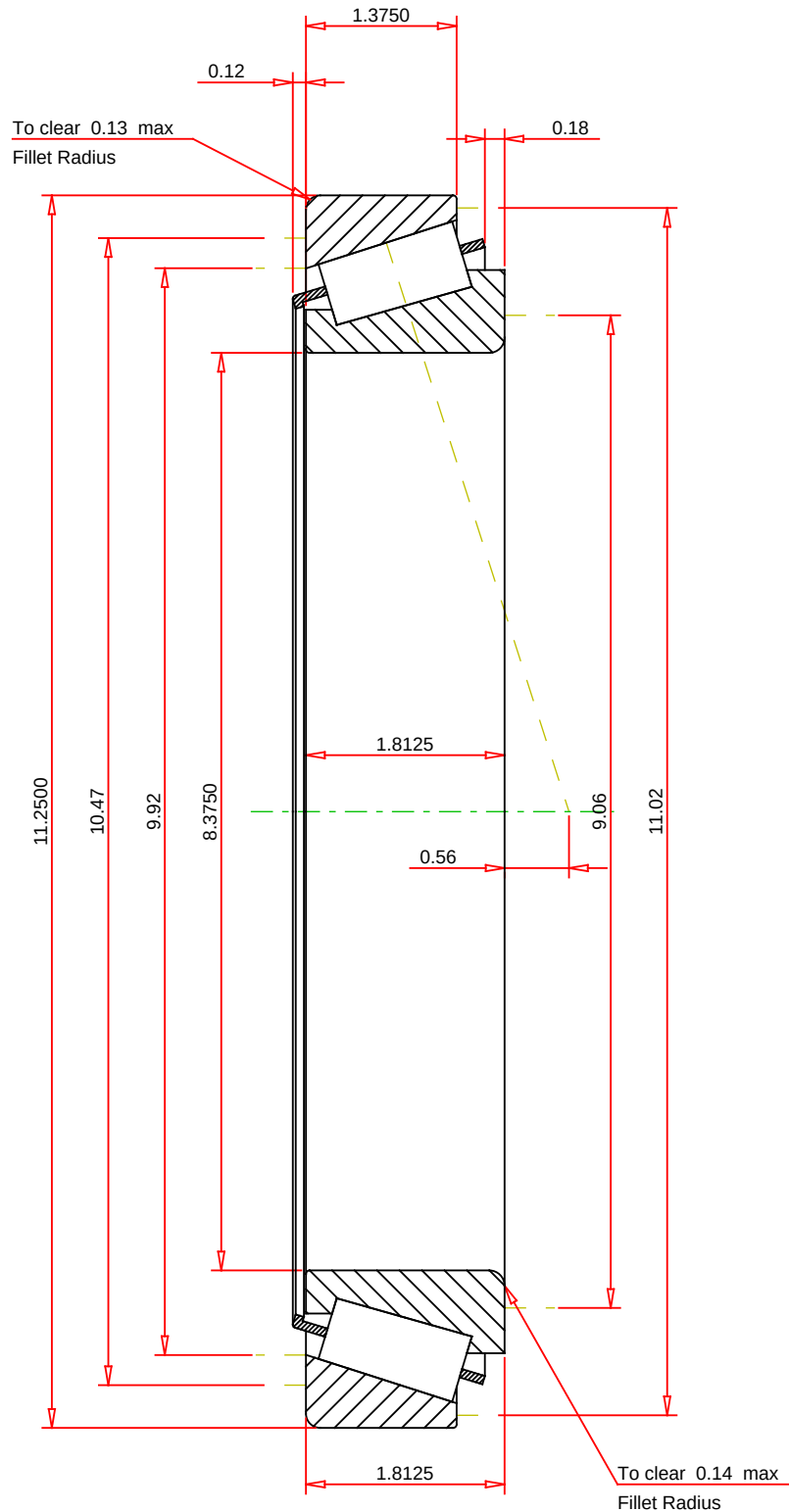
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 a_3 .



IMPERIAL UNITS

ISO Factor - e 0.48
ISO Factor - Y 1.25
Bearing Weight 17.6 lb
Number of Rollers Per Row 42
Effective Center Location 0.56 inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM742745 - LM742710
TS BEARING ASSEMBLY

K Factor	1.21	
Dynamic Radial Rating - C90	25000	lbf
Dynamic Thrust Rating - Ca90	20600	lbf
Static Radial Rating - C0	200000	lbf
Dynamic Radial Rating - C1	96600	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