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Timken Part Number LM742749 - LM742710-B, Tapered Roller Bearings - TSF (Tapered Single with Flange) Imperial

Like the TS bearing design, the TSF design 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. TSF bearings have flanged cups to facilitate axial location and accurately align seals in through-bored housings.



Specifications | Dimensions | Abutment and Fillet Dimensions | Basic Load Ratings | Factors

Specifications

Series	LM742700
Cone Part Number	LM742749
Cup Part Number	LM742710-B
Design Units	Imperial
Bearing Weight	17.200 lb 7.800 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	8.5000 in 215.900 mm
D - Cup Outer Diameter	11.2500 in 285.750 mm
D1 - Flange Outer Diameter	11.5624 in 293.685 mm
B - Cone Width	1.8125 in 46.038 mm
C - Cup Width	1.3750 in 34.925 mm
C1 - Cup Flange Width	0.3125 in 7.938 mm
T1 - Bearing Width	1.8125 in 46.038 mm
T - Bearing Width to Flange	0.7500 in 19.050 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.14 in 3.600 mm
r - Cup Backface "To Clear" Radius[2]	0.130 in 3.30 mm
da - Cone Frontface Backing Diameter	8.94 in 227.10 mm
db - Cone Backface Backing Diameter	9.17 in 232.90 mm
Da - Cup Frontface Backing Diameter	11.06 in 279.91 mm
Ab - Cage-Cone Frontface Clearance	0.12 in 3 mm

Aa - Cage-Cone Backface Clearance	0.18 in 4.6 mm
a - Effective Center Location[3]	0.56 in 14.20 mm

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 - Factor[7]	1.21
e - ISO Factor[8]	0.48
Y - ISO Factor[9]	1.25
G1 - Heat Generation Factor (Roller-Raceway)[10]	867
G2 - Heat Generation Factor (Rib-Roller End)	225
Cg - Geometry Factor[11]	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 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.

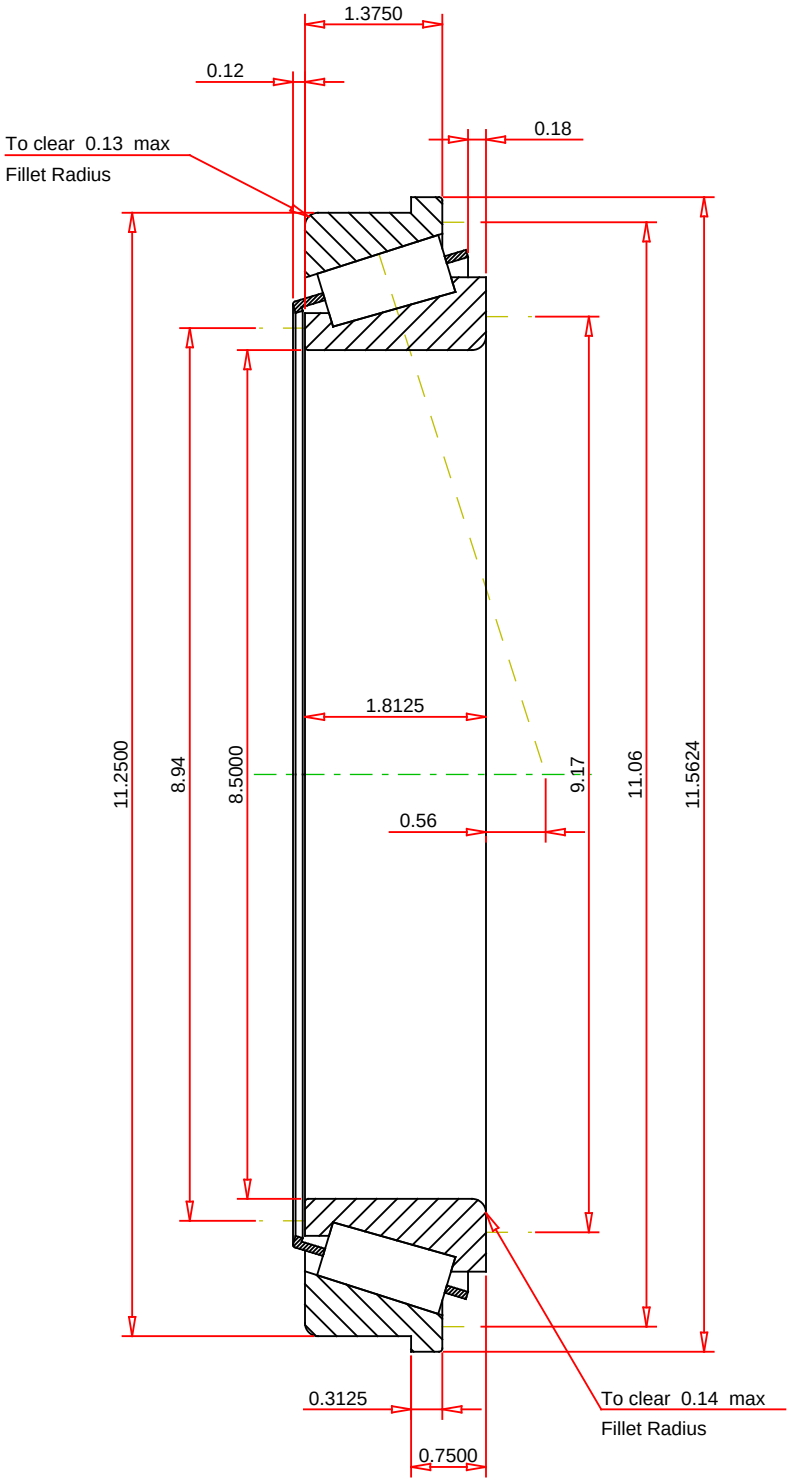
[7] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[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] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

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



IMPERIAL UNITS

ISO Factor - e	0.48	
ISO Factor - Y	1.25	
Bearing Weight	17.2	lb
Number of Rollers Per Row	42	
Effective Center Location	0.56	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM742749 - LM742710-B
TSF 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