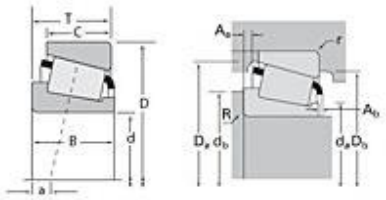
TIMKEN

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Timken Part Number LM11749 - LM11710, 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	LM11700
Cone Part Number	LM11749
Cup Part Number	LM11710
Design Units	Imperial
Bearing Weight	0.20 lb 0.100 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	0.6875 in 17.463 mm
D - Cup Outer Diameter	1.5700 in 39.878 mm

B - Cone Width	0.5750 in 14.605 mm
C - Cup Width	0.4200 in 10.668 mm
T - Bearing Width	0.5450 in 13.843 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.050 in 1.270 mm
r - Cup Backface "To Clear" Radius[2]	0.050 in 1.27 mm
da - Cone Frontface Backing Diameter	0.87 in 22.10 mm
db - Cone Backface Backing Diameter	0.94 in 23.88 mm
Da - Cup Frontface Backing Diameter	1.48 in 37.59 mm
Db - Cup Backface Backing Diameter	1.34 in 34.04 mm
Ab - Cage-Cone Frontface Clearance	0.05 in 1.3 mm
Aa - Cage-Cone Backface Clearance	0 in 0 mm
a - Effective Center Location[3]	-0.20 in -5.10 mm

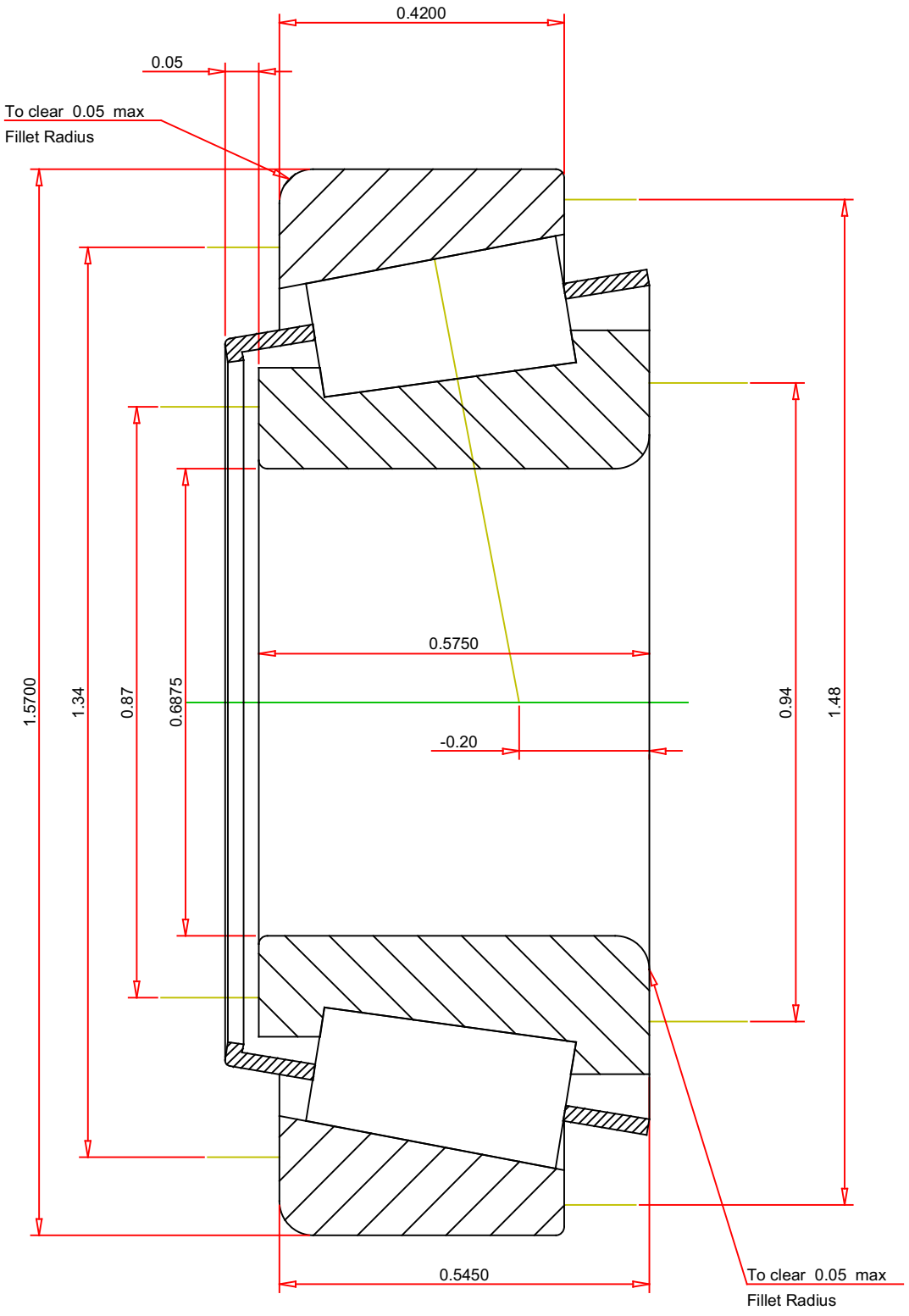
Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	1710 lbf 7610 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	6600 lbf 29400 N
C0 - Static Radial Rating	5260 lbf 23400 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	838 lbf 3730 N

Factors

K - Factor[7]	2.04
e - ISO Factor[8]	0.29
Y - ISO Factor[9]	2.1
G1 - Heat Generation Factor (Roller-Raceway)	4.8
G2 - Heat Generation Factor (Rib-Roller End)	4.74
Cg - Geometry Factor	0.0392

[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.



IMPERIAL UNITS

ISO Factor - e	0.29	
ISO Factor - Y	2.1	
Bearing Weight	0.2	lb
Number of Rollers Per Row	14	
Effective Center Location	-0.2	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM11749 - LM11710
TS BEARING ASSEMBLY

K Factor	2.04	
Dynamic Radial Rating - C90	1710	lbf
Dynamic Thrust Rating - Ca90	838	lbf
Static Radial Rating - C0	5260	lbf
Dynamic Radial Rating - C1	6600	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