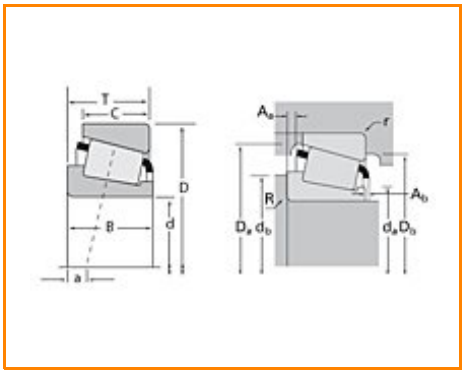
The Timken Company
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Timken Part Number LM770949 - LM770910, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	LM770900
Cone Part Number	LM770949
Cup Part Number	LM770910
Design Units	Imperial
Bearing Weight	59.900 Kg 132.20 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	457.200 mm 18.0000 in
D - Cup Outer Diameter	603.250 mm 23.7500 in
B - Cone Width	84.138 mm 3.3125 in
C - Cup Width	60.325 mm 2.3750 in
T - Bearing Width	85.725 mm 3.3750 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	6.35 mm 0.25 in
r - Cup Backface "To Clear" Radius[2]	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	479.04 mm 21.61 in
db - Cone Backface Backing Diameter	488.95 mm 19.25 in
Da - Cup Frontface Backing Diameter	581.66 mm 22.90 in
Db - Cup Backface Backing Diameter	569.98 mm 22.44 in
Ab - Cage-Cone Frontface Clearance	5.1 mm 0.2 in
Aa - Cage-Cone Backface Clearance	12.2 mm 0.48 in
a - Effective Center Location[3]	30.5 mm 1.2 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	386000 N 86800 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	1490000 N 335000 lbf
C0 - Static Radial Rating	3440000 N 773000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	300000 N 67300 lbf

Factors

K - Factor[7]	1.29
e - ISO Factor[8]	0.45
Y - ISO Factor[9]	1.32
G1 - Heat Generation Factor (Roller-Raceway)	4660
G2 - Heat Generation Factor (Rib-Roller End)	537
Cg - Geometry Factor	0.237

[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.

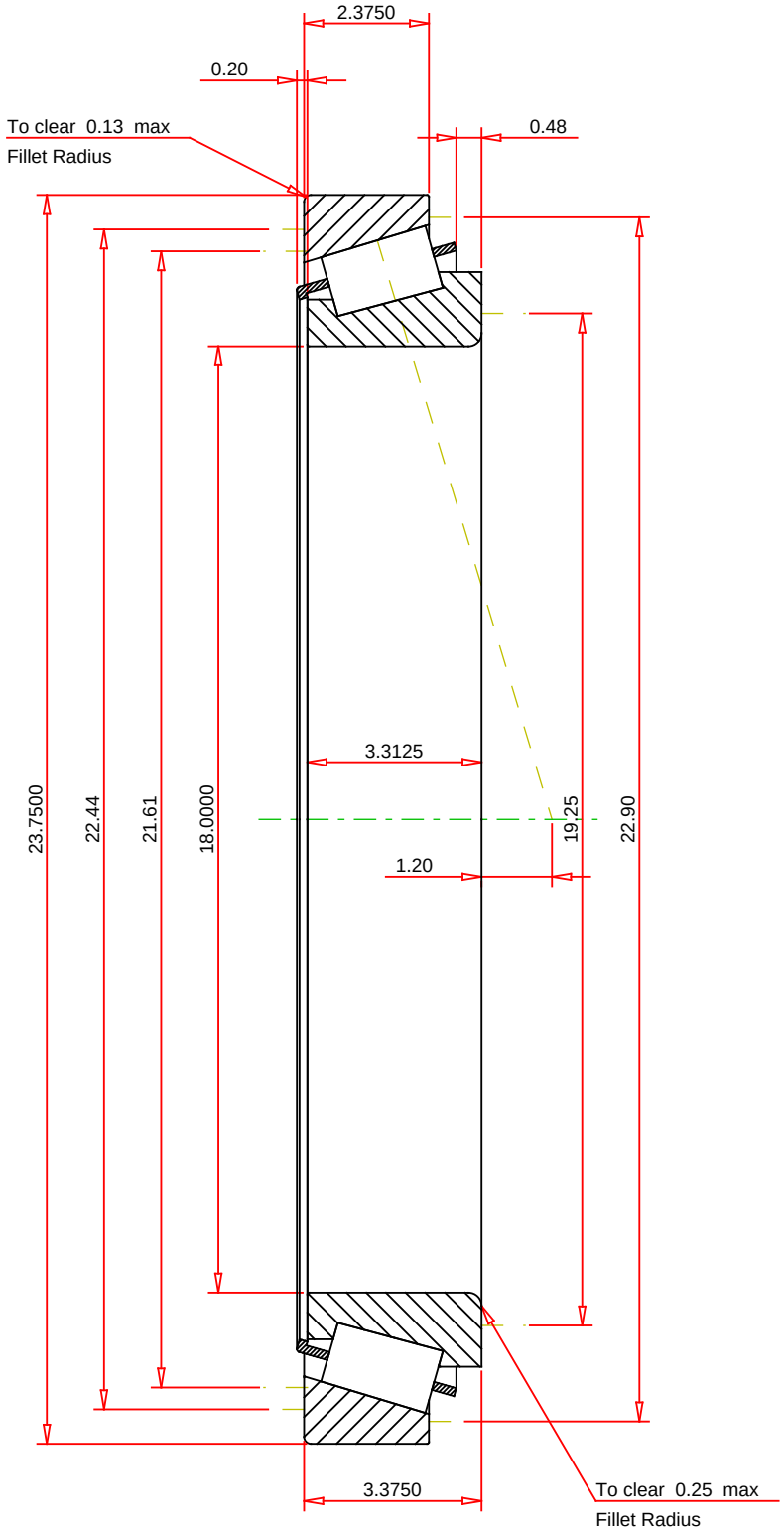
[6] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

[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	0.45	
ISO Factor - Y	1.32	
Bearing Weight	132.2	lb
Number of Rollers Per Row	42	
Effective Center Location	1.2	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM770949 - LM770910
TS BEARING ASSEMBLY

K Factor	1.29	
Dynamic Radial Rating - C90	386000	lbf
Dynamic Thrust Rating - Ca90	300000	lbf
Static Radial Rating - C0	3440000	lbf
Dynamic Radial Rating - C1	1490000	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