TIMKEN

The Timken Company
4500 Mt Pleasant St. NW
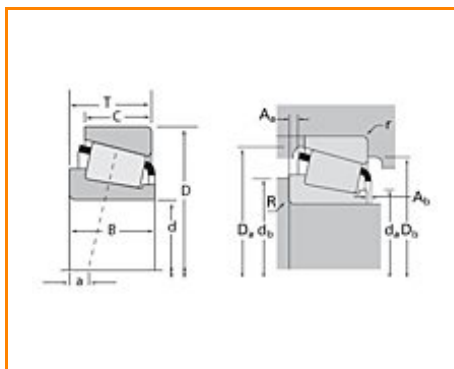N. Canton, OH 44720
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Timken Part Number LM11949 - LM11910, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	LM11900
Cone Part Number	LM11949
Cup Part Number	LM11910
Design Units	Imperial
Bearing Weight	0.100 Kg 0.30 lb
Cage Type	Stamped Steel

Dimensions −

d - Bore	19.050 mm 0.7500 in
D - Cup Outer Diameter	45.237 mm 1.7810 in
B - Cone Width	16.637 mm 0.6550 in
C - Cup Width	12.065 mm 0.4750 in
T - Bearing Width	15.494 mm 0.6100 in

Abutment and Fillet Dimensions −

R - Cone Backface "To Clear" Radius[1]	1.270 mm 0.050 in
r - Cup Backface "To Clear" Radius[2]	1.27 mm 0.050 in
da - Cone Frontface Backing Diameter	23.62 mm 0.93 in
db - Cone Backface Backing Diameter	24.89 mm 0.98 in
Da - Cup Frontface Backing Diameter	41.90 mm 1.65 in
Db - Cup Backface Backing Diameter	39.62 mm 1.56 in
Ab - Cage-Cone Frontface Clearance	1.3 mm 0.05 in
Aa - Cage-Cone Backface Clearance	-0.3 mm -0.01 in
a - Effective Center Location[3]	-5.60 mm -0.22 in

Basic Load Ratings —

C90 - Dynamic Radial Rating (90 million revolutions)[4]	10100 N 2280 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	39100 N 8800 lbf
C0 - Static Radial Rating	32000 N 7200 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	5220 N 1170 lbf

Factors —

K - Factor[7]	1.94
e - ISO Factor[8]	0.3
Y - ISO Factor[9]	2
G1 - Heat Generation Factor (Roller-Raceway)	6.6
G2 - Heat Generation Factor (Rib-Roller End)	5.49
Cg - Geometry Factor	0.0441

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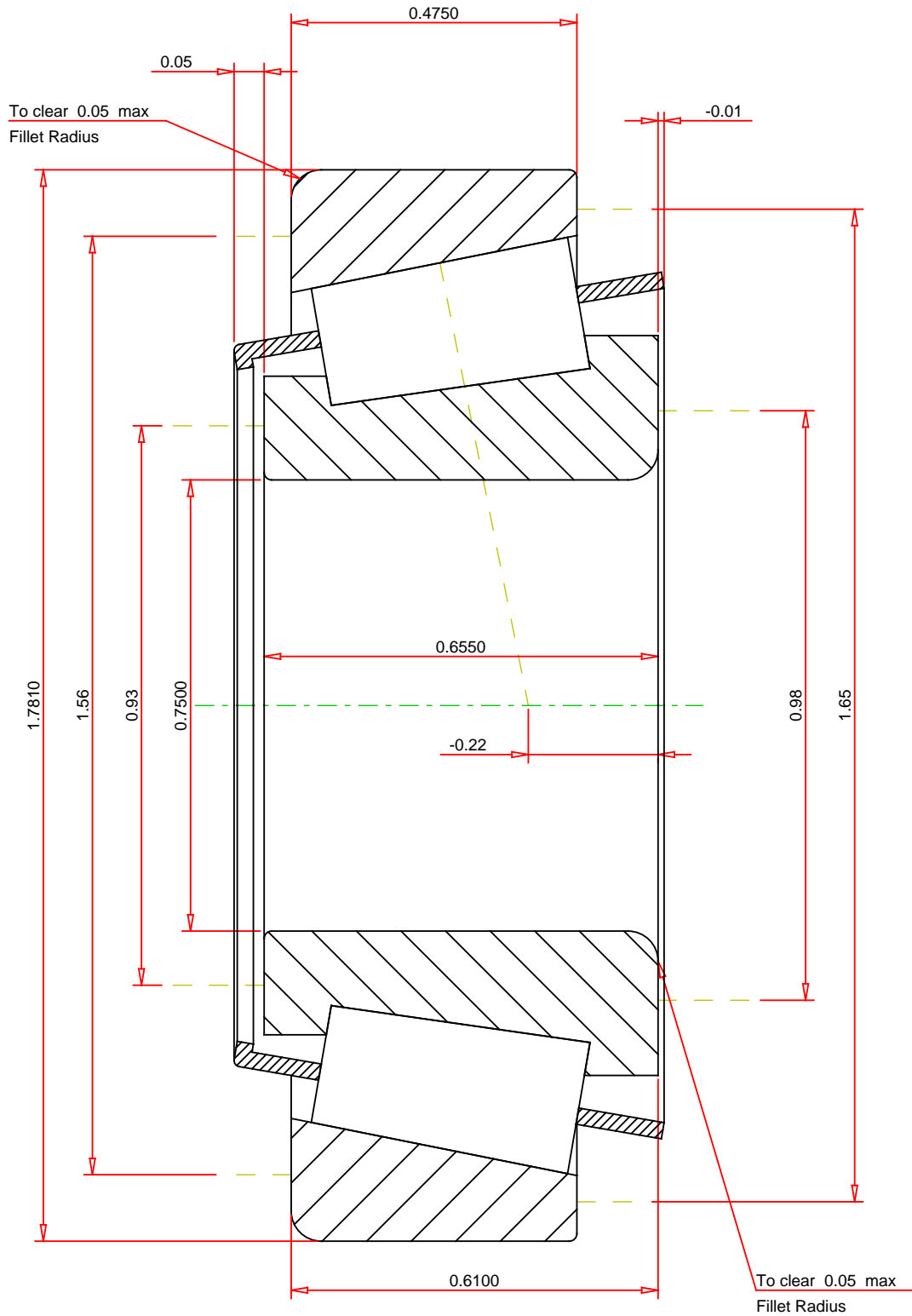
[6] Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

[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.

0.4750

0.05

To clear 0.05 max
Fillet Radius

-0.01

1.7810

1.56

0.93

0.7500

0.6550

-0.22

0.98

1.65

0.6100

To clear 0.05 max
Fillet Radius

IMPERIAL UNITS

ISO Factor - e	0.3	
ISO Factor - Y	2	
Bearing Weight	0.3	lb
Number of Rollers Per Row	14	
Effective Center Location	-0.22	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM11949 - LM11910
TS BEARING ASSEMBLY

K Factor	1.94	
Dynamic Radial Rating - C90	10100	lbf
Dynamic Thrust Rating - Ca90	5220	lbf
Static Radial Rating - C0	32000	lbf
Dynamic Radial Rating - C1	39100	lbf

FOR DISCUSSION ONLY