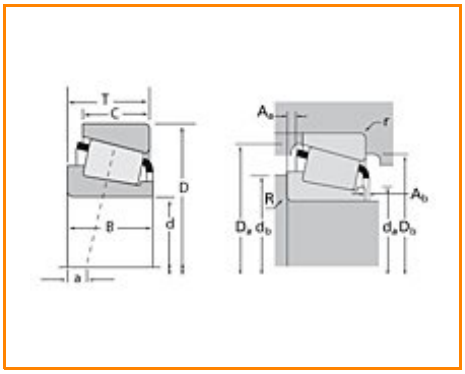
The Timken Company
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N. Canton, OH 44720
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Timken Part Number M349549 - M349510, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	M349500
Cone Part Number	M349549
Cup Part Number	M349510
Design Units	Imperial
Bearing Weight	13.70 Kg 30.200 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	257.175 mm 10.1250 in
D - Cup Outer Diameter	342.900 mm 13.5000 in
B - Cone Width	57.150 mm 2.2500 in
C - Cup Width	44.450 mm 1.7500 in
T - Bearing Width	57.150 mm 2.2500 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	268.99 mm 11.61 in
db - Cone Backface Backing Diameter	280.92 mm 11.06 in
Da - Cup Frontface Backing Diameter	333.00 mm 13.15 in
Db - Cup Backface Backing Diameter	322.07 mm 12.68 in
Ab - Cage-Cone Frontface Clearance	4.3 mm 0.17 in
Aa - Cage-Cone Backface Clearance	3.8 mm 0.15 in
a - Effective Center Location[3]	2.5 mm 0.1 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	202000 N 45500 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	780000 N 175000 lbf
C0 - Static Radial Rating	1430000 N 321000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	120000 N 27000 lbf

Factors

K - Factor[7]	1.68
e - ISO Factor[8]	0.35
Y - ISO Factor[9]	1.73
G1 - Heat Generation Factor (Roller-Raceway)	1420
G2 - Heat Generation Factor (Rib-Roller End)	193
Cg - Geometry Factor	0.147

[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.

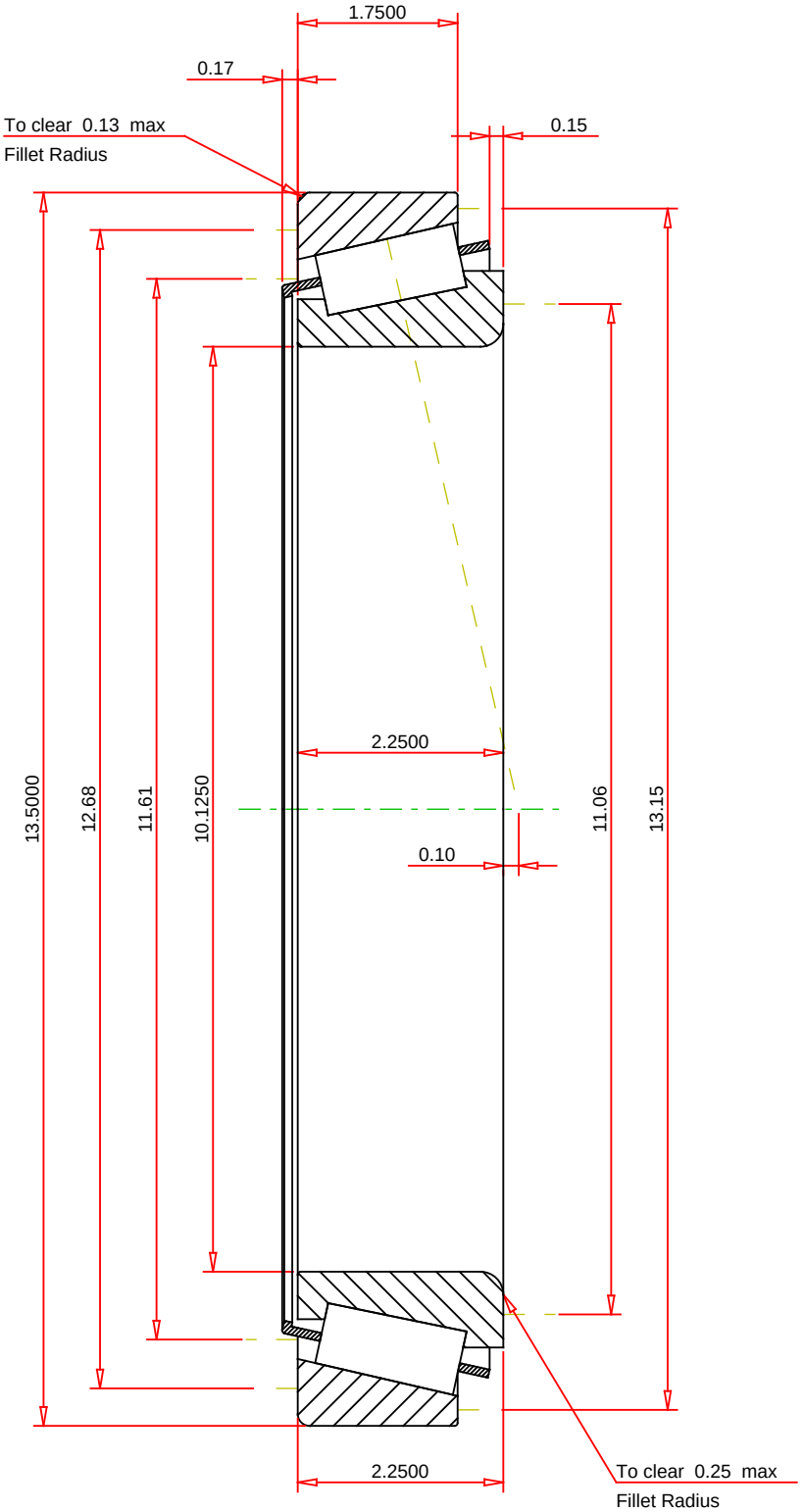
[6] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

[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	0.35	
ISO Factor - Y	1.73	
Bearing Weight	30.2	lb
Number of Rollers Per Row	37	
Effective Center Location	0.1	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

M349549 - M349510
TS BEARING ASSEMBLY

K Factor	1.68	
Dynamic Radial Rating - C90	202000	lbf
Dynamic Thrust Rating - Ca90	120000	lbf
Static Radial Rating - C0	1430000	lbf
Dynamic Radial Rating - C1	780000	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