



The Timken Company

4500 Mt Pleasant St. NW

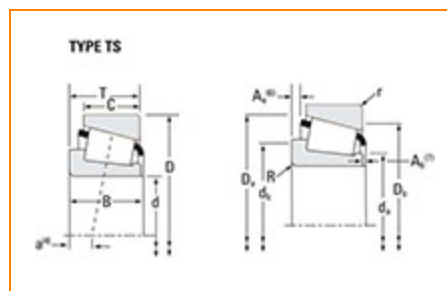
N. Canton, OH 44720

Phone: (234) 262-3000

E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Part Number LL52549 - LL52510, 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.



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Specifications

Series	LL52500
Cone Part Number	LL52549
Cup Part Number	LL52510
Design Units	Imperial
Bearing Weight	0.10 Kg 0.100 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	22.225 mm 0.8750 in
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D - Cup Outer Diameter	42.070 mm 1.6563 in
B - Cone Width	11.176 mm 0.4400 in
C - Cup Width	8.636 mm 0.3400 in
T - Bearing Width	11.176 mm 0.4400 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	1.270 mm 0.050 in
r - Cup Backface "To Clear" Radius²	1.27 mm 0.050 in
da - Cone Frontface Backing Diameter	25.91 mm 1.02 in
db - Cone Backface Backing Diameter	27.43 mm 1.08 in
Da - Cup Frontface Backing Diameter	40.39 mm 1.59 in
Db - Cup Backface Backing Diameter	36.58 mm 1.44 in
Ab - Cage-Cone Frontface Clearance	1.8 mm 0.07 in
Aa - Cage-Cone Backface Clearance	-0.5 mm -0.02 in
a - Effective Center Location³	-1.8 mm -0.07 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	966 lbf 4300 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	3730 lbf 16600 N
C0 - Static Radial Rating	3770 lbf 16800 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	655 lbf 2920 N

Factors

K - Factor⁷	1.47
e - ISO Factor⁸	0.4
Y - ISO Factor⁹	1.51
G1 - Heat Generation Factor (Roller-Raceway)	4.7
G2 - Heat Generation Factor (Rib-Roller End)	8.62
Cg - Geometry Factor¹⁰	0.0431

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.

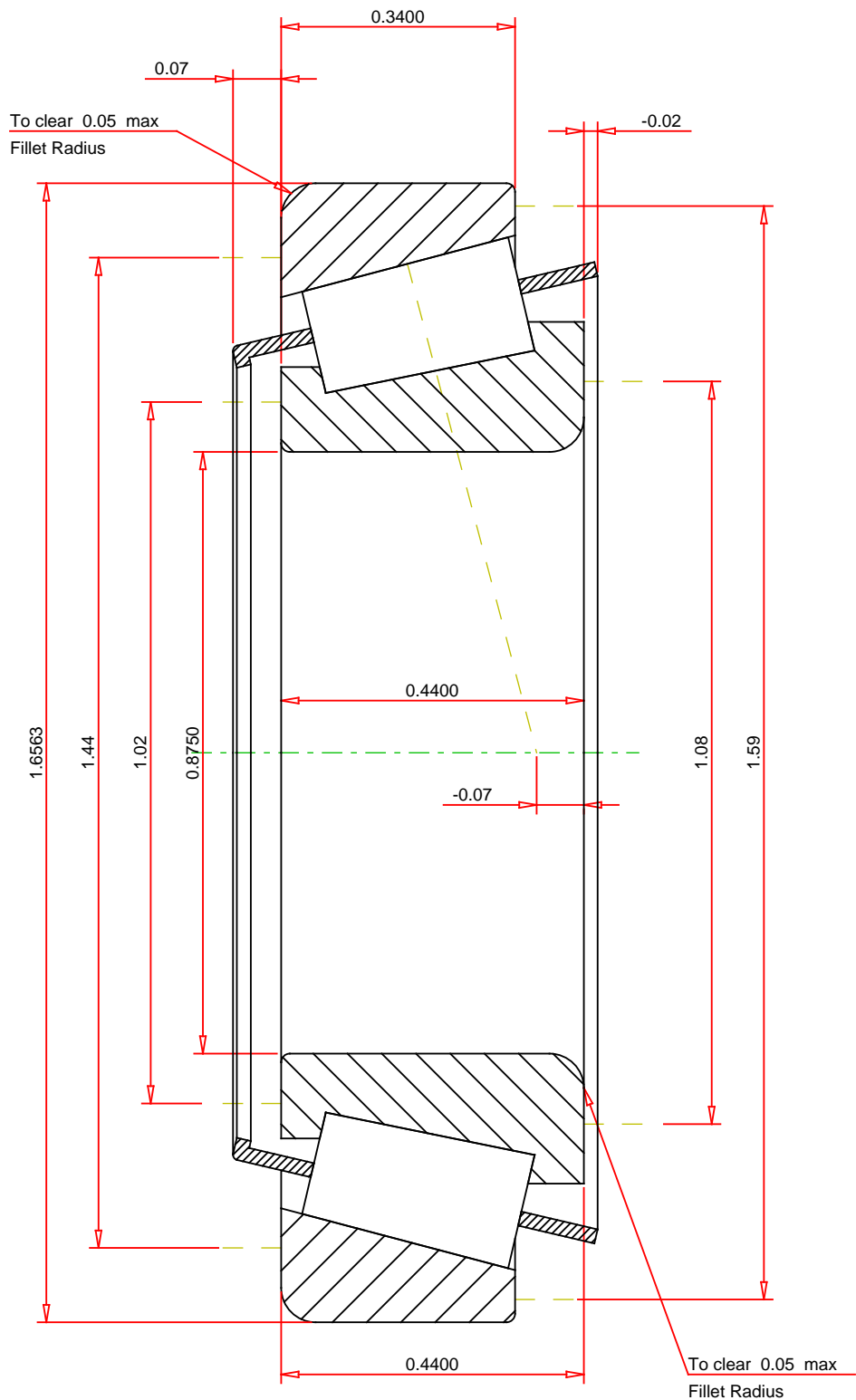
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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.

¹⁰ Geometry constant for Lubrication Life Adjustment Factor a_3 .



IMPERIAL UNITS

ISO Factor - e 0.4
 ISO Factor - Y 1.51
 Bearing Weight 0.1 lb
 Number of Rollers Per Row 17
 Effective Center Location -0.07 inch

TIMKEN®

THE TIMKEN COMPANY
 NORTH CANTON, OHIO USA

LL52549 - LL52510
TS BEARING ASSEMBLY

K Factor	1.47	
Dynamic Radial Rating - C90	966	lbf
Dynamic Thrust Rating - Ca90	655	lbf
Static Radial Rating - C0	3770	lbf
Dynamic Radial Rating - C1	3730	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