


The Timken Company

4500 Mt Pleasant St. NW

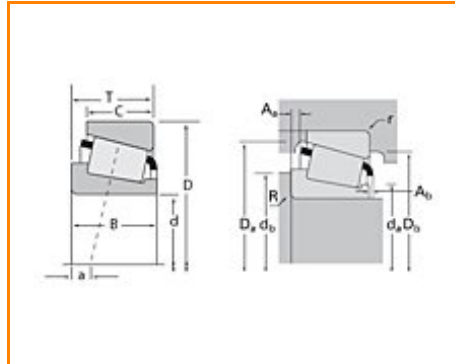
N. Canton, OH 44720

Phone: (234) 262-3000

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

Timken Part Number 49577 - 49520, 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	49500
Cone Part Number	49577
Cup Part Number	49520
Design Units	Imperial
Bearing Weight	1.200 Kg 2.70 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	44.450 mm 1.7500 in
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D - Cup Outer Diameter	101.600 mm 4.0000 in
B - Cone Width	31.750 mm 1.2500 in
C - Cup Width	25.400 mm 1.0000 in
T - Bearing Width	31.750 mm 1.2500 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius²	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	54.10 mm 2.13 in
db - Cone Backface Backing Diameter	59.94 mm 2.36 in
Da - Cup Frontface Backing Diameter	97.00 mm 3.82 in
Db - Cup Backface Backing Diameter	87.88 mm 3.46 in
Ab - Cage-Cone Frontface Clearance	2.3 mm 0.09 in
Aa - Cage-Cone Backface Clearance	1.8 mm 0.07 in
a - Effective Center Location³	-7.10 mm -0.28 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	34400 N 7740 lbf
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C1 - Dynamic Radial Rating (1 million revolutions)⁵	133000 N 29800 lbf
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C0 - Static Radial Rating	155000 N 35000 lbf
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	23600 N 5310 lbf
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Factors

K - Factor⁷	1.46
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e - ISO Factor⁸	0.40
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Y - ISO Factor⁹	1.5
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G1 - Heat Generation Factor (Roller-Raceway)	49.1
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G2 - Heat Generation Factor (Rib-Roller End)	16.8
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Cg - Geometry Factor	0.0946
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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.

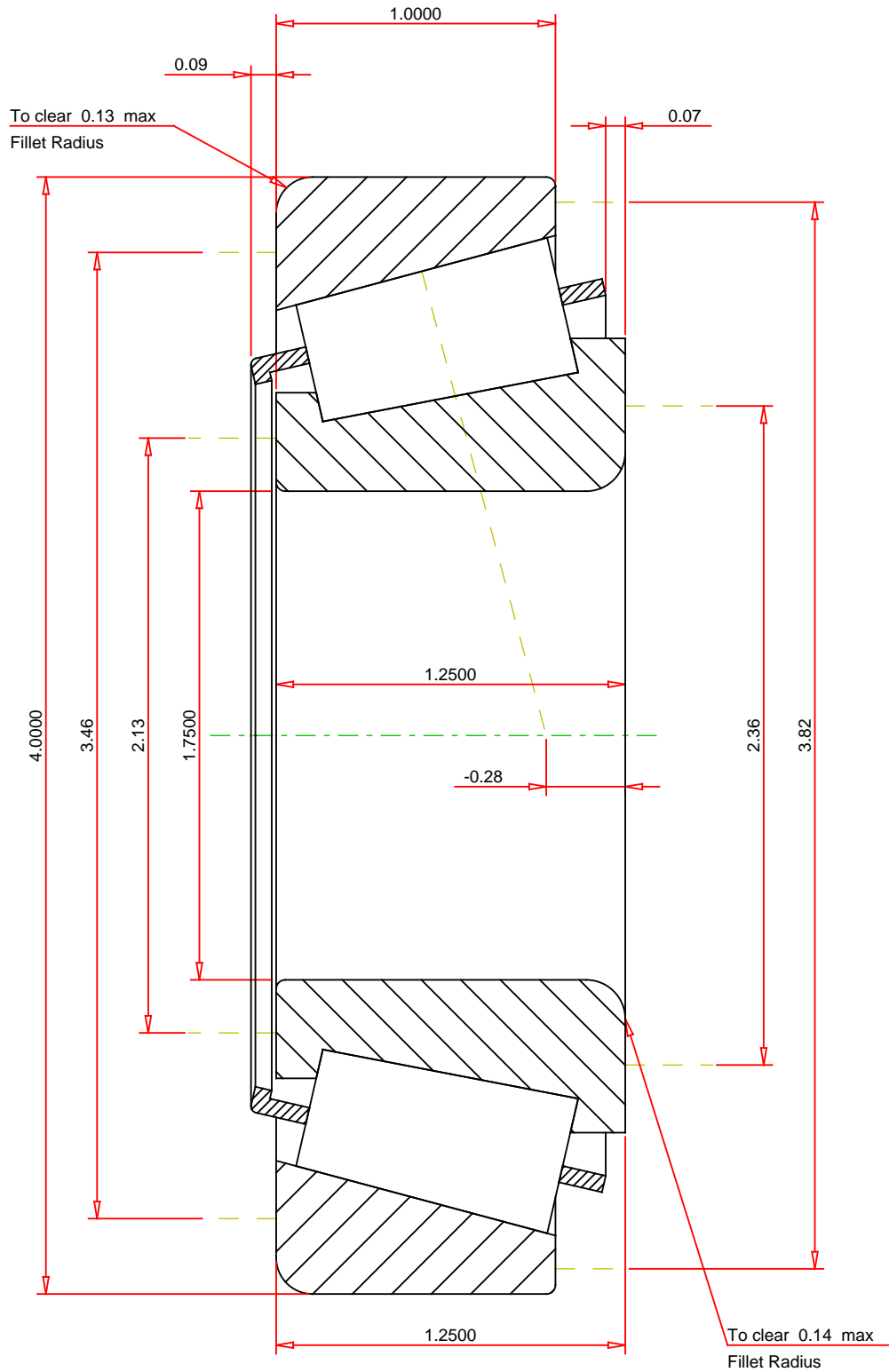
⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

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.



IMPERIAL UNITS

<div>ISO Factor - e0.4</div> <div>ISO Factor - Y1.5</div> <div>Bearing Weight2.7 lb</div> <div>Number of Rollers Per Row16</div> <div>Effective Center Location-0.28 inch</div>		<div>TIMKEN®</div> <div>THE TIMKEN COMPANY</div> <div>NORTH CANTON, OHIO USA</div>		<div>49577 - 49520</div> <div>TS BEARING ASSEMBLY</div>	
				<div>K Factor1.46</div> <div>Dynamic Radial Rating - C9034400 lbf</div> <div>Dynamic Thrust Rating - Ca9023600 lbf</div> <div>Static Radial Rating - C0155000 lbf</div> <div>Dynamic Radial Rating - C1133000 lbf</div>	