


The Timken Company

4500 Mt Pleasant St. NW

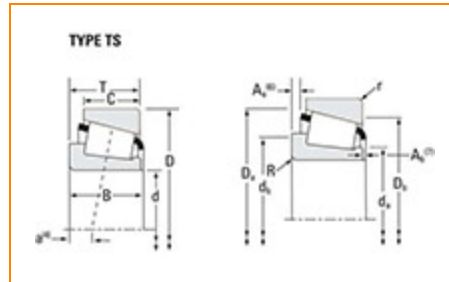
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Part Number 497 - 493, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	495
Cone Part Number	497
Cup Part Number	493
Design Unit	Inch
Bearing Weight	3.3 lb 1.5 Kg
Cage Material	Stamped Steel

Dimensions


- Bore

 3.3750 in
85.725 mm

D - Cup Outer Diameter	5.3750 in 136.525 mm
B - Cone Width	1.1720 in 29.769 mm
C - Cup Width	0.8750 in 22.225 mm
T - Bearing Width	1.1875 in 30.163 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	0.140 in 3.6 mm
r - Cup Backface "To Clear" Radius²	0.13 in 3.3 mm
da - Cone Frontface Backing Diameter	3.7 in 94 mm
db - Cone Backface Backing Diameter	3.98 in 101.0 mm
Da - Cup Frontface Backing Diameter	5.16 in 131.06 mm
Db - Cup Backface Backing Diameter	4.80 in 121.92 mm
Ab - Cage-Cone Frontface Clearance	0.12 in 3 mm
Aa - Cage-Cone Backface Clearance	0.07 in 1.8 mm
a - Effective Center Location³	-0.03 in -0.8 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	9000 lbf 40000 N
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C1 - Dynamic Radial Rating (1 million revolutions)⁵	34700 lbf 154000 N
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C0 - Static Radial Rating	48600 lbf 216000 N
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	6850 lbf 30500 N
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Factors

K - Factor⁷	1.31
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e - ISO Factor⁸	0.44
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Y - ISO Factor⁹	1.35
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G1 - Heat Generation Factor (Roller-Raceway)	104.6
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G2 - Heat Generation Factor (Rib-Roller End)	29.3
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C_g - Geometry Factor¹⁰	0.125
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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.

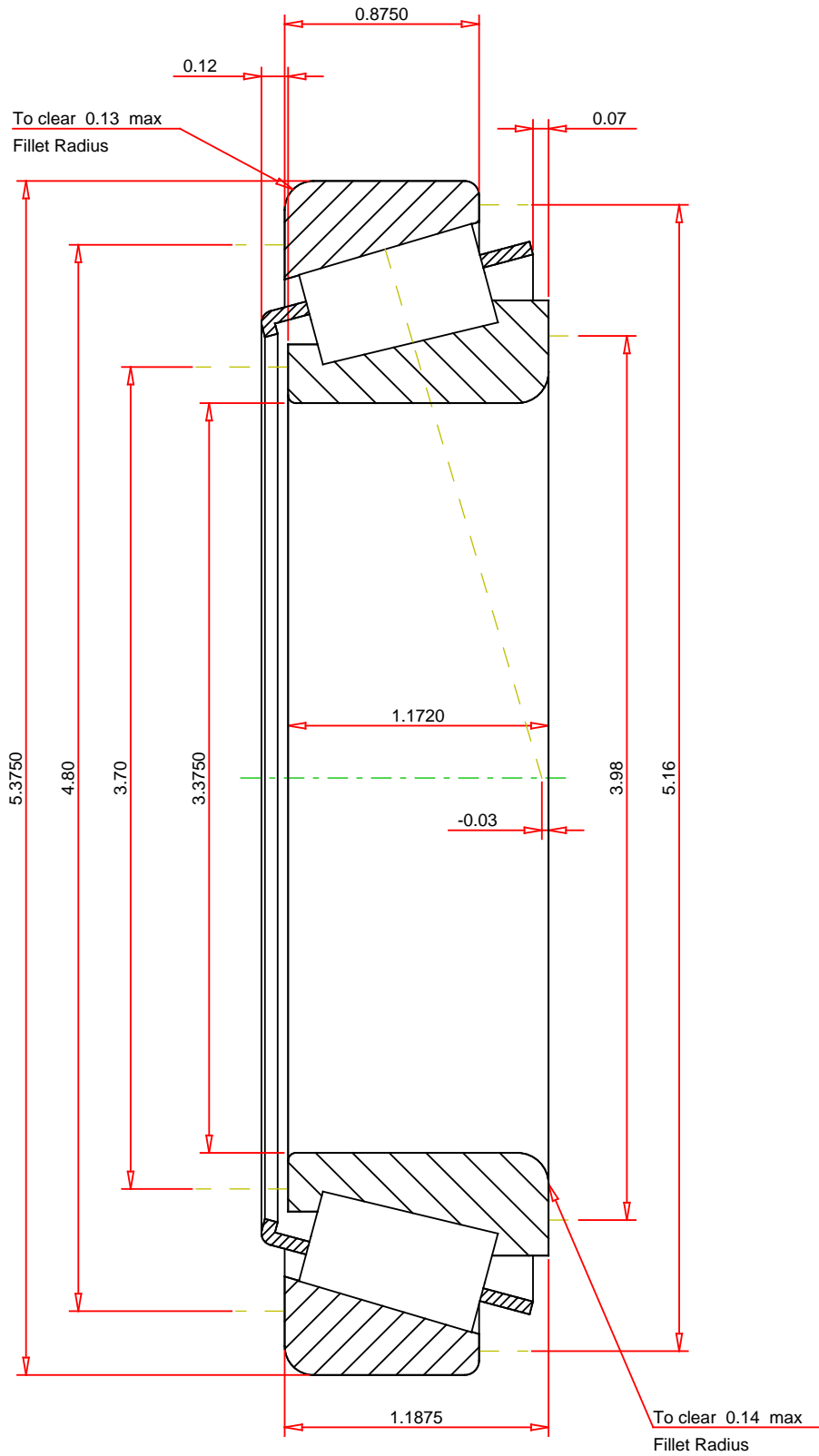
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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.

¹⁰ Geometry constant for Lubrication Life Adjustment Factor a_3 .



IMPERIAL UNITS

<div>ISO Factor - e0.44</div> <div>ISO Factor - Y1.35</div> <div>Bearing Weight3.3lb</div> <div>Number of Rollers Per Row23</div> <div>Effective Center Location-0.03inch</div>		<div>TIMIKEN®</div> <div>THE TIMKEN COMPANY</div> <div>NORTH CANTON, OHIO USA</div>		<div>497 - 493</div> <div>Tapered Roller Bearings - TS (Tapered Single)</div> <div>Imperial</div>	
				<div>K Factor1.31</div> <div>Dynamic Radial Rating - C909000lb_f</div> <div>Dynamic Thrust Rating - Ca906850lb_f</div> <div>Static Radial Rating - C048600lb_f</div> <div>Dynamic Radial Rating - C134700lb_f</div>	