


The Timken Company

4500 Mt Pleasant St. NW

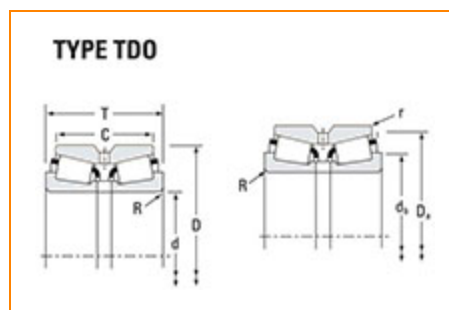
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Part Number 495-S - 493D, Tapered Roller Bearings - TDO (Tapered Double Outer) Imperial

The configuration of the TDO provides a wide effective bearing spread, making it ideal for applications in which overturning moments are a significant load component. TDO bearings can be used in fixed positions or allowed to float in the housing bore.



[Specifications](#) | [Dimensions](#) | [Abutment and Fillet Dimensions](#) | [Basic Load Ratings](#) | [Factors](#)

Specifications

Series	495
Cone Part Number	495-S
Cup Part Number	493D
Design Unit	Inch
Cage Material	Stamped Steel
Related Assembly Number(s)	495S-90233

Dimensions



- Bore

2 13/16 in
71.438 mm

D - Cup Outer Diameter	5.3750 in 136.525 mm
B - Cone Width	1.1720 in 29.769 mm
C - Double Cup Width	2.1250 in 53.975 mm
T - Bearing Width across Cones	2.7500 in 69.850 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	0.14 in 3.600 mm
r - Cup Backface "To Clear" Radius²	0.030 in 0.8 mm
db - Cone Backface Backing Diameter	3.46 in 88 mm
Da - Cup Frontface Backing Diameter	5.16 in 130.05 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 (One-Row, 90 million revolutions)⁴	9000 lbf 40000 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)⁵	60500 lbf 269000 N

C₉₀₍₂₎ - Dynamic Radial Rating (Two-Row, 90 million revolutions)⁶	15700 lbf 69700 N
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	6850 lbf 30500 N
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Factors

K - Factor⁸	1.31
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e - ISO Factor⁹	0.44
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Y1 - ISO Factor¹⁰	1.52
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Y2 - ISO Factor¹¹	2.26
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C_g - Geometry Factor¹²	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 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.

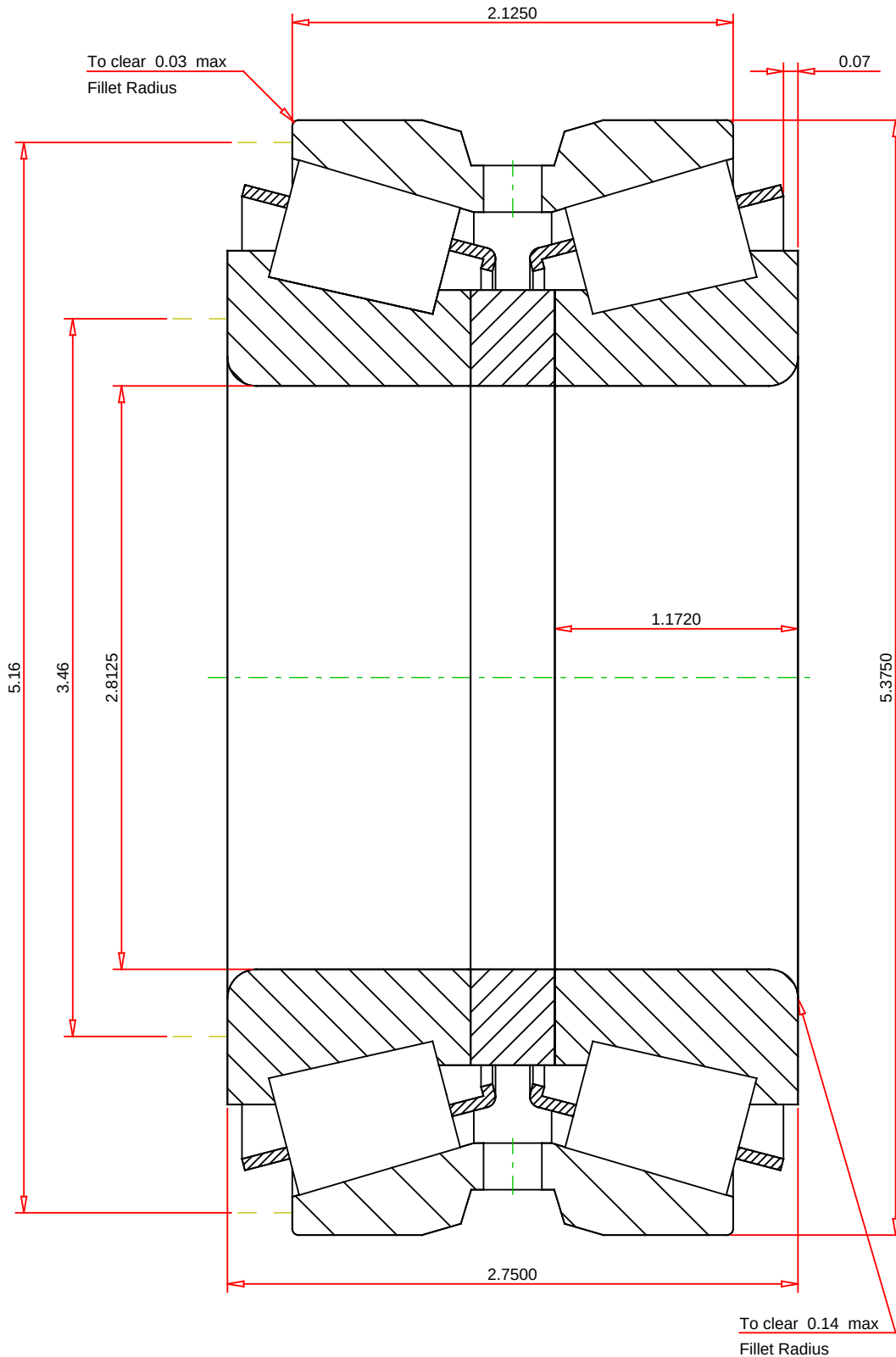
⁸ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁹ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

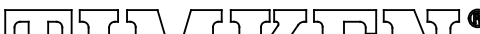
¹⁰ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

¹¹ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

¹² Geometry constant for Lubrication Life Adjustment Factor a3l.



IMPERIAL UNITS

ISO Factor - e	0.44	lb		495-S - 493D		
ISO Factor - Y1	1.52			Tapered Roller Bearings - TDO (Tapered Double Outer) Imperial		
ISO Factor - Y2	2.26					
Bearing Weight	9.19					
Number of Rollers Per Row	23					
			THE TIMKEN COMPANY NORTH CANTON, OHIO USA			
				K Factor	1.31	
				Dynamic Radial Rating - C90	9000	lbf
				Dynamic Thrust Rating - Ca90	6850	lbf
				Dynamic Radial Rating - C90(2)	15700	lbf
			Radial Rating - C1	60500	lbf	