


The Timken Company

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Part Number 495A - 492A, 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	495
Cone Part Number	495A
Cup Part Number	492A
Design Unit	Inch
Bearing Weight	3.7 lb 1.7 Kg
Cage Material	Stamped Steel

Dimensions


Bore

 3 in
76.2 mm

D - Cup Outer Diameter	5.25 in 133.35 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	0.14 in 3.6 mm
r - Cup Backface "To Clear" Radius²	0.130 in 3.3 mm
da - Cone Frontface Backing Diameter	3.39 in 86 mm
db - Cone Backface Backing Diameter	3.62 in 92 mm
Da - Cup Frontface Backing Diameter	5.08 in 129.00 mm
Db - Cup Backface Backing Diameter	4.72 in 119.89 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
C1 - Dynamic Radial Rating (1 million revolutions)⁵	34700 lbf 154000 N
C0 - Static Radial Rating	48600 lbf 216000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	6850 lbf 30500 N

Factors

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

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.

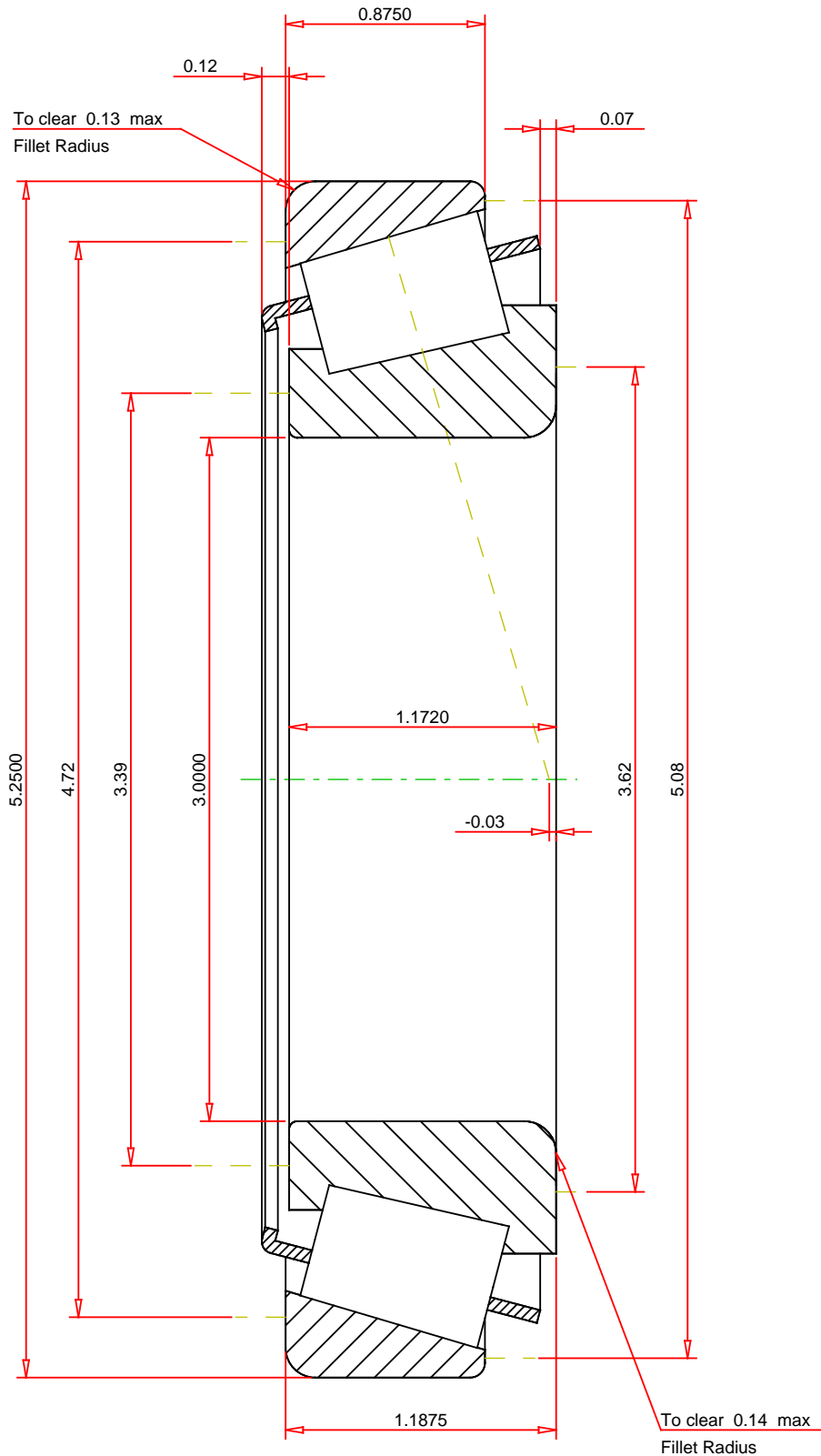
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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.

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¹⁰ Geometry constant for Lubrication Life Adjustment Factor a3l.



IMPERIAL UNITS

ISO Factor - e 0.44
ISO Factor - Y 1.35
Bearing Weight 3.7 lb
Number of Rollers Per Row 23
Effective Center Location -0.03 inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

495A - 492A
Tapered Roller Bearings - TS (Tapered Single)
Imperial

K Factor	1.31	
Dynamic Radial Rating - C90	9000	lbf
Dynamic Thrust Rating - Ca90	6850	lbf
Static Radial Rating - C0	48600	lbf
Dynamic Radial Rating - C1	34700	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.

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