



The Timken Company

4500 Mt Pleasant St. NW

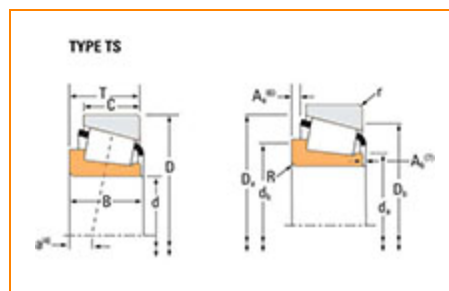
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Part Number 496, Tapered Roller Bearings - Single Cones - Imperial

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	496
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	60500 lbf 269000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	15700 lbf 69700 N

Dimensions

d - Bore	3.1875 in 80.963 mm
B - Cone Width	1.1720 in 29.769 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.14 in 3.600 mm
da - Cone Frontface Backing Diameter	3.5 in 89 mm
db - Cone Backface Backing Diameter	3.74 in 95 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 Location⁴	-0.03 in -0.8 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	9000 lbf 40000 N
C1 - Dynamic Radial Rating (1 million revolutions)⁶	34700 lbf 154000 N
C0 - Static Radial Rating	48600 lbf 216000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	6850 lbf 30500 N

Factors

K - Factor⁸	1.31
G1 - Heat Generation Factor (Roller-Raceway)	104.6
G2 - Heat Generation Factor (Rib-Roller End)	29.3
Cg - Geometry Factor⁹	0.125

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

² 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.

³ These maximum fillet radii will be cleared by the bearing corners.

⁴ Negative value indicates effective center inside cone backface.

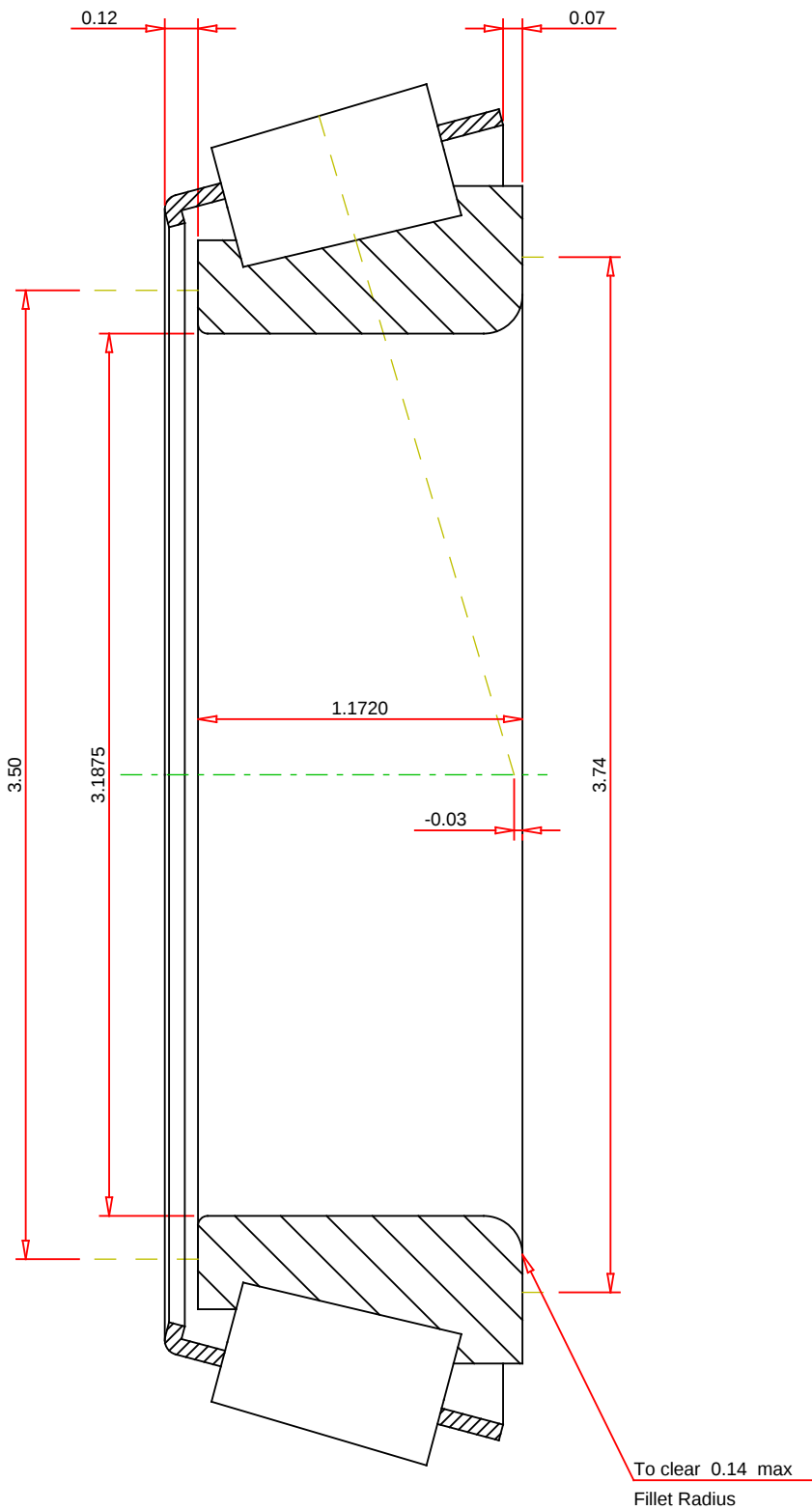
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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

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 Geometry constant for Lubrication Life Adjustment Factor a_3 .



IMPERIAL UNITS

Number of Rollers Per Row 23

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

496
SINGLE TAPERED CONE

K Factor	1.31	
Dynamic Radial Rating - C90	9000	lbf
Dynamic Thrust Rating - Ca90	6850	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.

FOR DISCUSSION ONLY