


The Timken Company

4500 Mt Pleasant St. NW

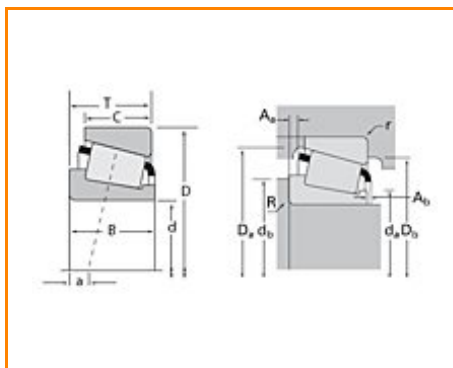
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Timken Part Number 96900 - 96140, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	96000
Cone Part Number	96900
Cup Part Number	96140
Design Units	Imperial
Bearing Weight	23.400 Kg 51.500 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	228.600 mm 9.0000 in
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D - Cup Outer Diameter	355.6 mm 14 in
B - Cone Width	66.675 mm 2.6250 in
C - Cup Width	47.625 mm 1.8750 in
T - Bearing Width	68.263 mm 2.6875 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	7.110 mm 0.280 in
r - Cup Backface "To Clear" Radius²	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	248.92 mm 10.94 in
db - Cone Backface Backing Diameter	260.10 mm 10.24 in
Da - Cup Frontface Backing Diameter	334.26 mm 13.16 in
Db - Cup Backface Backing Diameter	318.01 mm 12.52 in
Ab - Cage-Cone Frontface Clearance	5.1 mm 0.2 in
Aa - Cage-Cone Backface Clearance	10.9 mm 0.43 in
a - Effective Center Location³	17.00 mm 0.67 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	197000 N 44200 lbf
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C1 - Dynamic Radial Rating (1 million revolutions)⁵	759000 N 171000 lbf
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C0 - Static Radial Rating	1420000 N 319000 lbf
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	199000 N 44700 lbf
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Factors

K - Factor⁷	0.99
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e - ISO Factor⁸	0.59
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Y - ISO Factor⁹	1.02
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G1 - Heat Generation Factor (Roller-Raceway)	1140
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G2 - Heat Generation Factor (Rib-Roller End)	160
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Cg - Geometry Factor	0.163
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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.

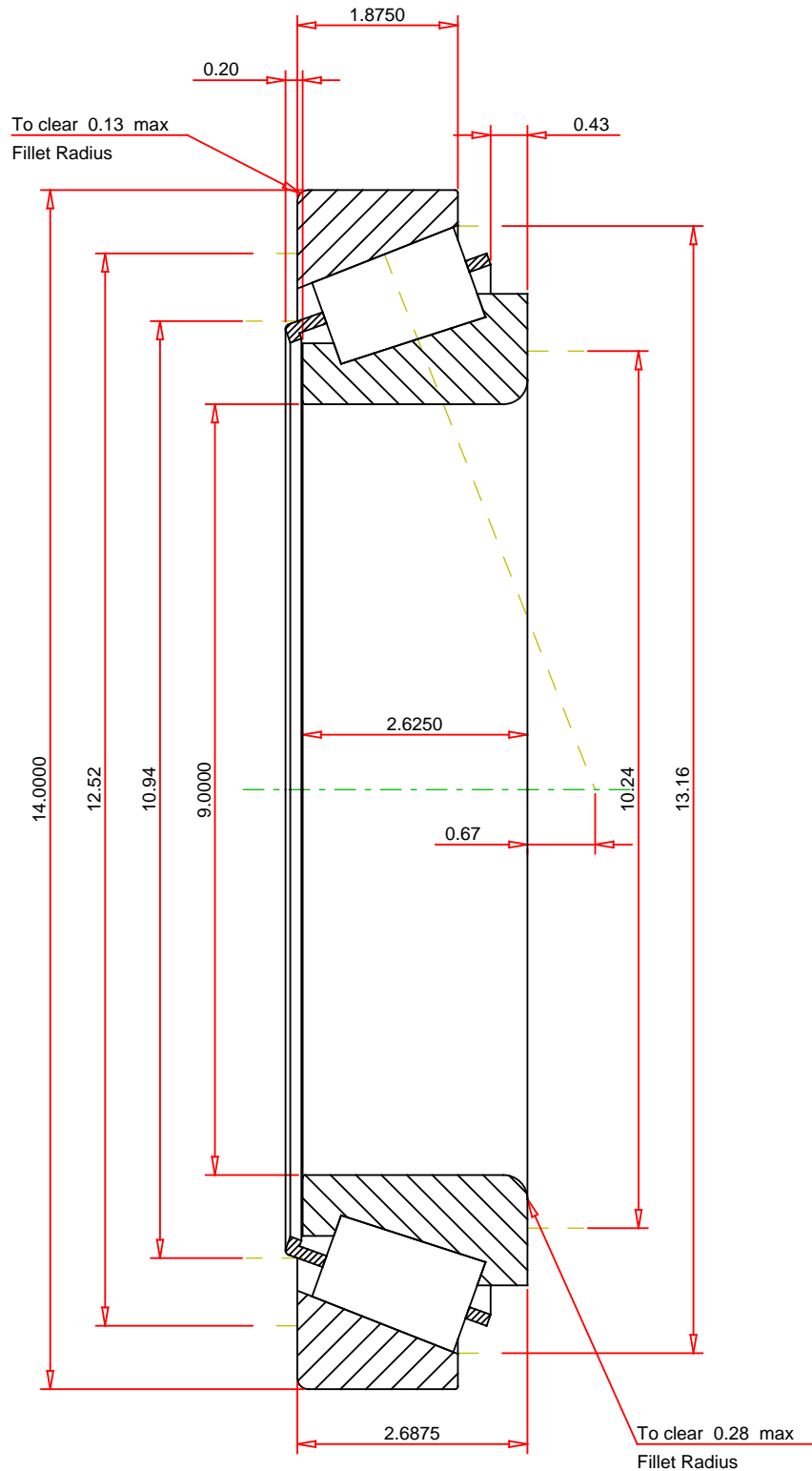
⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

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

ISO Factor - e 0.59
 ISO Factor - Y 1.02
 Bearing Weight 51.5 lb
 Number of Rollers Per Row 32
 Effective Center Location 0.67 inch

TIMKEN®

THE TIMKEN COMPANY
 NORTH CANTON, OHIO USA

96900 - 96140
TS BEARING ASSEMBLY

K Factor 0.99
 Dynamic Radial Rating - C90 197000 lbf
 Dynamic Thrust Rating - Ca90 199000 lbf
 Static Radial Rating - C0 1420000 lbf
 Dynamic Radial Rating - C1 759000 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