



The Timken Company

4500 Mt Pleasant St. NW

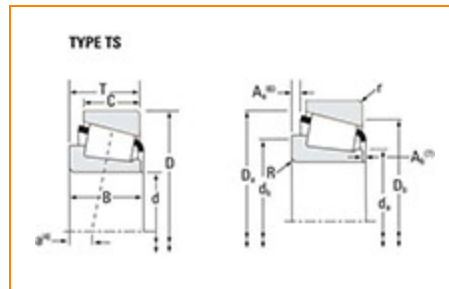
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Part Number 67780 - 67720, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	67700
Cone Part Number	67780
Cup Part Number	67720
Design Units	Imperial
Bearing Weight	8 Kg 17.6 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	165.1 mm 6.5 in
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D - Cup Outer Diameter	247.650 mm 9.7500 in
B - Cone Width	47.625 mm 1.875 in
C - Cup Width	38.100 mm 1.5000 in
T - Bearing Width	47.625 mm 1.8750 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius²	3.3 mm 0.130 in
da - Cone Frontface Backing Diameter	179.07 mm 7.99 in
db - Cone Backface Backing Diameter	184.91 mm 7.28 in
Da - Cup Frontface Backing Diameter	240.80 mm 9.48 in
Db - Cup Backface Backing Diameter	229.11 mm 9.02 in
Ab - Cage-Cone Frontface Clearance	2.8 mm 0.11 in
Aa - Cage-Cone Backface Clearance	4.3 mm 0.17 in
a - Effective Center Location³	4.8 mm 0.19 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	23600 lbf 105000 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	91100 lbf 405000 N
C0 - Static Radial Rating	175000 lbf 779000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	17800 lbf 79000 N

Factors

K - Factor⁷	1.33
e - ISO Factor⁸	0.44
Y - ISO Factor⁹	1.36
G1 - Heat Generation Factor (Roller-Raceway)	622
G2 - Heat Generation Factor (Rib-Roller End)	122
Cg - Geometry Factor¹⁰	0.121

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.

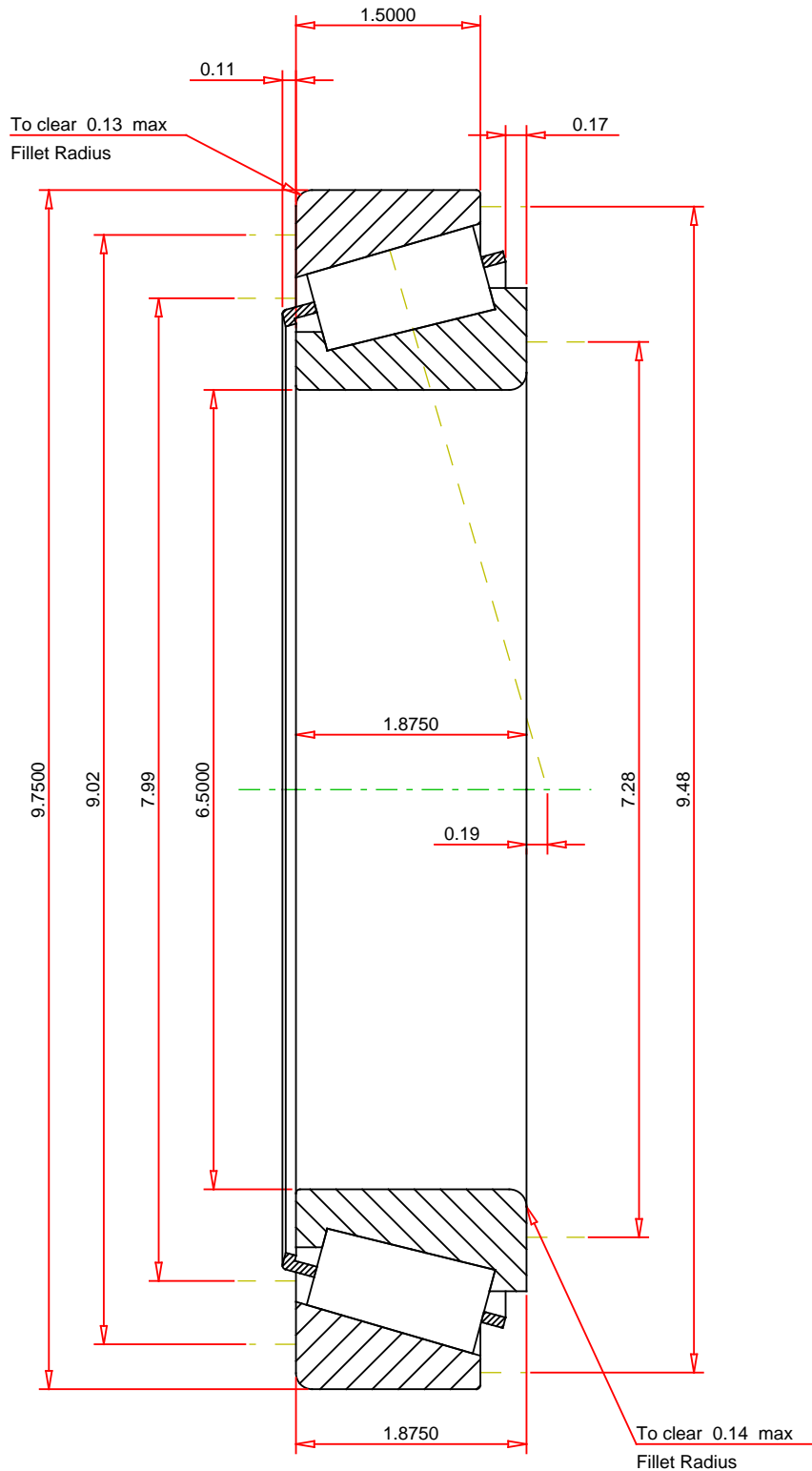
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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

ISO Factor - e 0.44
 ISO Factor - Y 1.36
 Bearing Weight 17.6 lb
 Number of Rollers Per Row 36
 Effective Center Location 0.19 inch

TIMKEN®

THE TIMKEN COMPANY
 NORTH CANTON, OHIO USA

67780 - 67720
 TS BEARING ASSEMBLY

K Factor 1.33
 Dynamic Radial Rating - C90 23600 lbf
 Dynamic Thrust Rating - Ca90 17800 lbf
 Static Radial Rating - C0 175000 lbf
 Dynamic Radial Rating - C1 91100 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