



The Timken Company

4500 Mt Pleasant St. NW

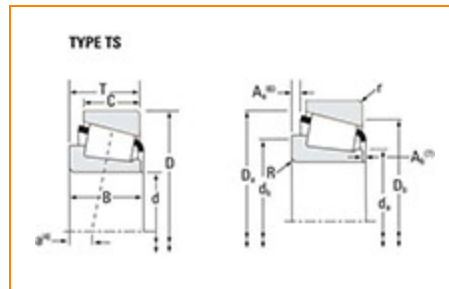
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Part Number 48190 - 48120, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	48100
Cone Part Number	48190
Cup Part Number	48120
Design Units	Imperial
Bearing Weight	2.3 Kg 5.2 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	107.95 mm 4.25 in
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D - Cup Outer Diameter	161.925 mm 6.3750 in
B - Cone Width	34.925 mm 1.3750 in
C - Cup Width	26.988 mm 1.0625 in
T - Bearing Width	34.925 mm 1.3750 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	116.08 mm 5.43 in
db - Cone Backface Backing Diameter	121.92 mm 4.8 in
Da - Cup Frontface Backing Diameter	156.00 mm 6.16 in
Db - Cup Backface Backing Diameter	146.05 mm 5.75 in
Ab - Cage-Cone Frontface Clearance	1.8 mm 0.07 in
Aa - Cage-Cone Backface Clearance	2.3 mm 0.09 in
a - Effective Center Location³	3.8 mm 0.15 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	11200 lbf 49800 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	43200 lbf 192000 N
C0 - Static Radial Rating	69200 lbf 308000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	9680 lbf 43100 N

Factors

K - Factor⁷	1.16
e - ISO Factor⁸	0.51
Y - ISO Factor⁹	1.19
G1 - Heat Generation Factor (Roller-Raceway)	180
G2 - Heat Generation Factor (Rib-Roller End)	44.7
Cg - Geometry Factor¹⁰	0.156

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.

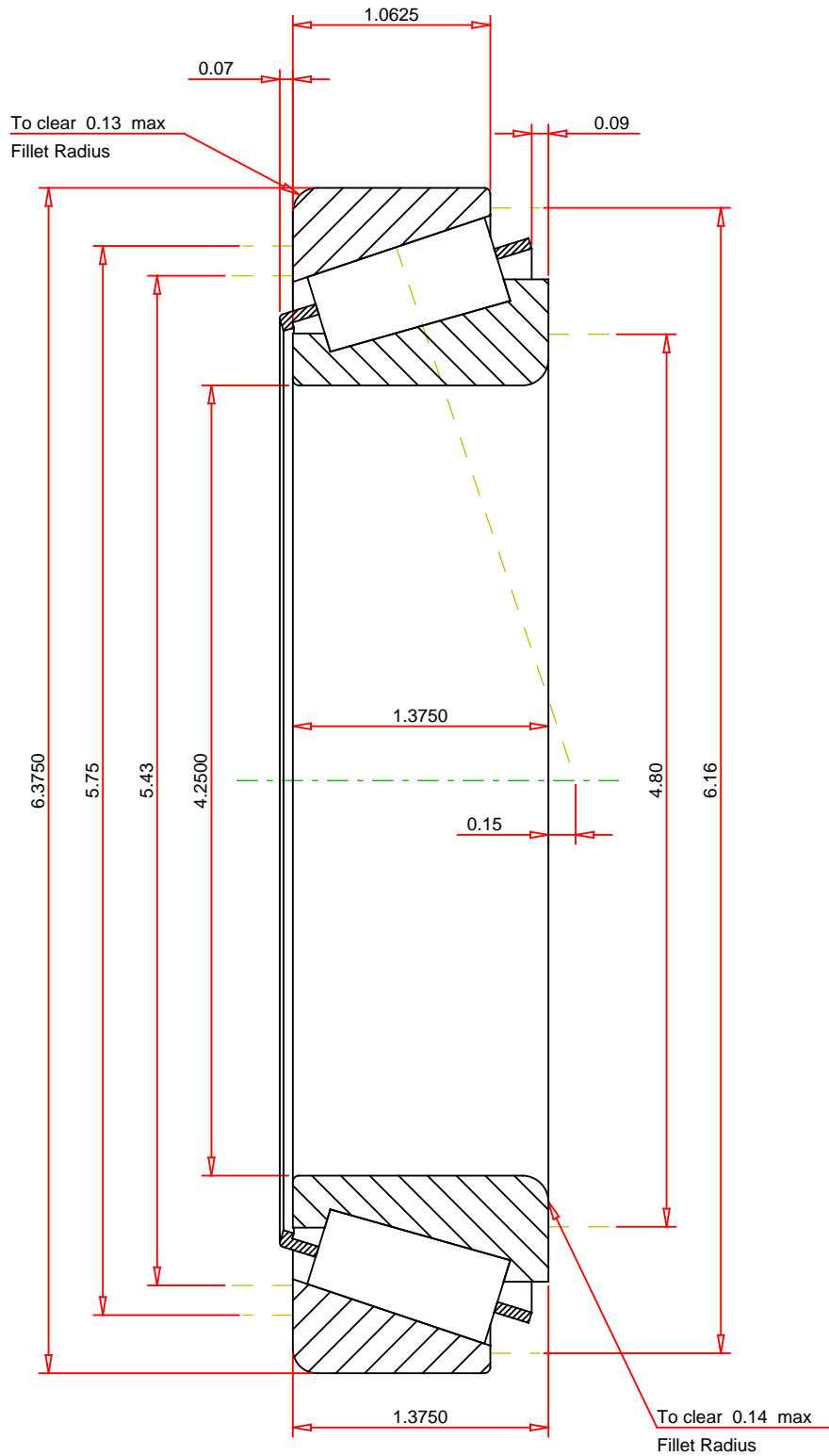
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 0.51
 ISO Factor - Y 1.19
 Bearing Weight 5.2 lb
 Number of Rollers Per Row 27
 Effective Center Location 0.15 inch

TIMKEN®

THE TIMKEN COMPANY
 NORTH CANTON, OHIO USA

48190 - 48120
TS BEARING ASSEMBLY

K Factor 1.16
 Dynamic Radial Rating - C90 11200 lbf
 Dynamic Thrust Rating - Ca90 9680 lbf
 Static Radial Rating - C0 69200 lbf
 Dynamic Radial Rating - C1 43200 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