


The Timken Company

4500 Mt Pleasant St. NW

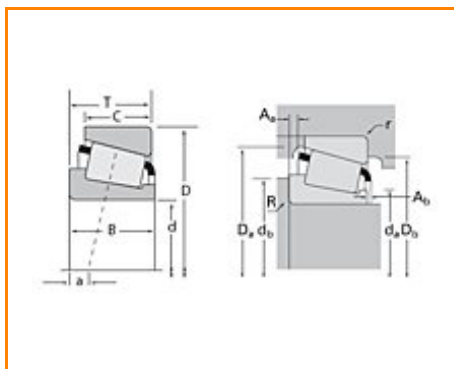
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Timken Part Number HH224332 - HH224310, Tapered Roller Bearings - TS (Tapered Single) Imperial

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.



[Specifications](#) | [Dimensions](#) | [Abutment and Fillet Dimensions](#) | [Basic Load Ratings](#) | [Factors](#)

Specifications

Series	HH224300
Cone Part Number	HH224332
Cup Part Number	HH224310
Design Units	Imperial
Bearing Weight	11.400 Kg 25.000 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	98.425 mm 3.8750 in
D - Cup Outer Diameter	212.725 mm 8.3750 in
B - Cone Width	66.675 mm 2.6250 in
C - Cup Width	53.975 mm 2.1250 in
T - Bearing Width	66.675 mm 2.6250 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius²	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	119.13 mm 5.63 in
db - Cone Backface Backing Diameter	122.94 mm 4.84 in
Da - Cup Frontface Backing Diameter	201.70 mm 7.95 in
Db - Cup Backface Backing Diameter	192.02 mm 7.56 in
Ab - Cage-Cone Frontface Clearance	3.8 mm 0.15 in
Aa - Cage-Cone Backface Clearance	4.1 mm 0.16 in
a - Effective Center Location³	-18.80 mm -0.74 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	176000 N 39600 lbf
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C1 - Dynamic Radial Rating (1 million revolutions)⁵	680000 N 153000 lbf
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C0 - Static Radial Rating	906000 N 204000 lbf
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	98300 N 22100 lbf
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Factors

K - Factor⁷	1.79
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e - ISO Factor⁸	0.33
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Y - ISO Factor⁹	1.84
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G1 - Heat Generation Factor (Roller-Raceway)	367
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G2 - Heat Generation Factor (Rib-Roller End)	47.8
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Cg - Geometry Factor	0.118
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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.

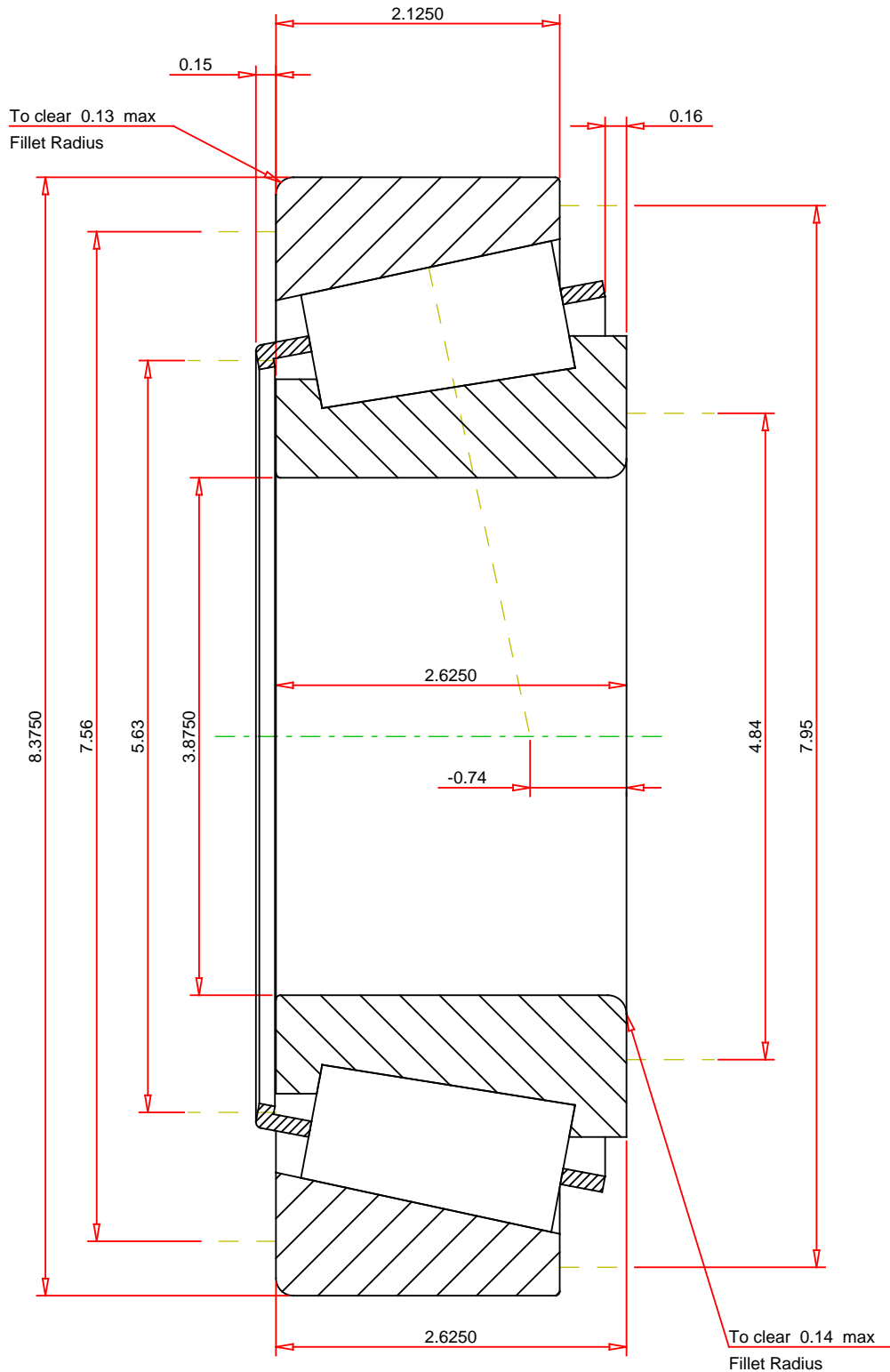
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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

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⁹ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.



IMPERIAL UNITS

ISO Factor - e 0.33
ISO Factor - Y 1.84
Bearing Weight 25 lb
Number of Rollers Per Row 17
Effective Center Location -0.74 inch



THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HH224332 - HH224310
TS BEARING ASSEMBLY

K Factor 1.79
Dynamic Radial Rating - C90 176000 lbf
Dynamic Thrust Rating - Ca90 98300 lbf
Static Radial Rating - C0 906000 lbf
Dynamic Radial Rating - C1 680000 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