


The Timken Company

4500 Mt Pleasant St. NW

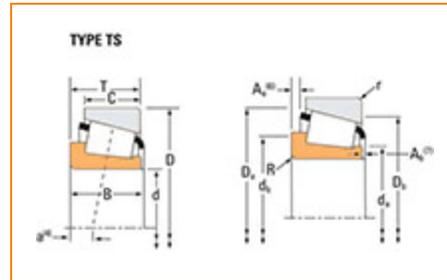
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Part Number HM218248, Tapered Roller Bearings - Single Cones - Imperial

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

Cone Part Number	HM218248
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	565000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	147000 N

Dimensions



d - Cone Bore	89.974 mm
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B - Cone Width	40.000 mm
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Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	7.110 mm
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da - Cone Frontface Backing Diameter	99 mm
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db - Cone Backface Backing Diameter	112.0 mm
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Ab - Cage-Cone Frontface Clearance	3.6 mm
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Aa - Cage-Cone Backface Clearance	1 mm
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a - Effective Center Location⁴	-8.6 mm
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Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	84200 N
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C1 - Dynamic Radial Rating (1 million revolutions)⁶	325000 N
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C0 - Static Radial Rating	388000 N
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	47900 N
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Factors

K - Factor⁸	1.76
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G1 - Heat Generation Factor (Roller-Raceway)	168.2
G2 - Heat Generation Factor (Rib-Roller End)	34.7
Cg - Geometry Factor⁹	0.0921

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.

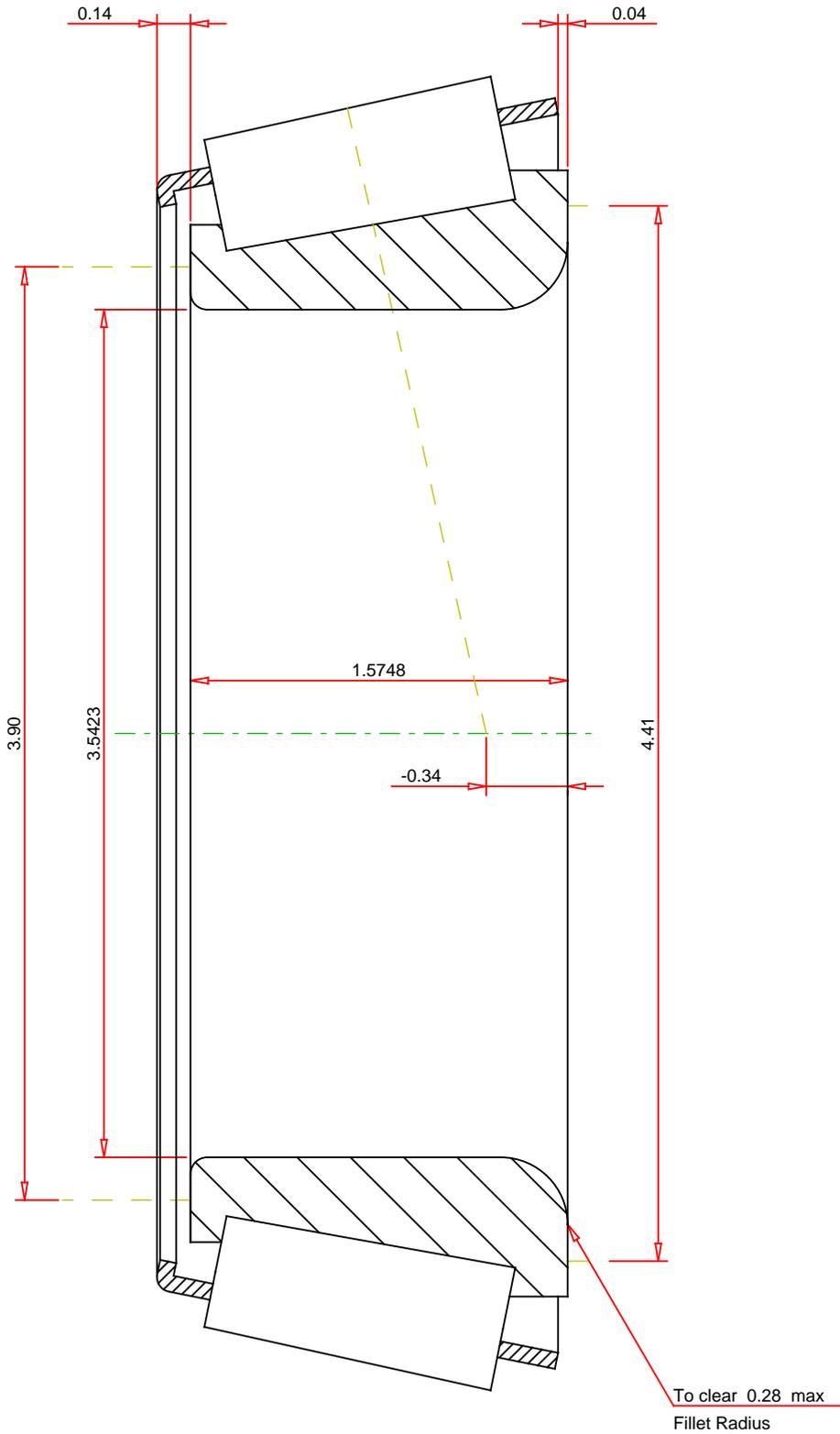
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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 a3l.



IMPERIAL UNITS

Number of Rollers Per Row	21
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TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HM218248	
Tapered Roller Bearings - Single Cones - Imperial	
K Factor	1.76
Dynamic Radial Rating - C90	84200 lbf
Dynamic Thrust Rating - Ca90	47900 lbf
Dynamic Radial Rating - C1	325000 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.

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