



The Timken Company

4500 Mt Pleasant St. NW

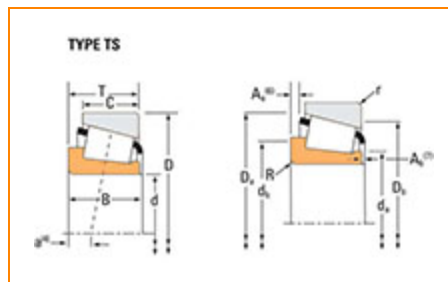
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Part Number HM89440, Tapered Roller Bearings - Single Cones - Imperial

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.



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

Specifications

Series	HM89400
Cone Part Number	HM89440
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	43200 lbf 192000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	11200 lbf 49800 N



Dimensions

d - Cone Bore	1 1/4 in 31.75 mm
B - Cone Width	1.1250 in 28.575 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.03 in 0.8 mm
da - Cone Frontface Backing Diameter	1.75 in 44.5 mm
db - Cone Backface Backing Diameter	1.79 in 45.5 mm
Ab - Cage-Cone Frontface Clearance	0.08 in 2 mm
Aa - Cage-Cone Backface Clearance	0.06 in 1.5 mm
a - Effective Center Location⁴	-0.22 in -5.6 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	6440 lbf 28600 N
C1 - Dynamic Radial Rating (1 million revolutions)⁶	24800 lbf 110000 N
C0 - Static Radial Rating	26700 lbf 119000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	6020 lbf 26800 N

Factors

K - Factor⁸

1.07

Cg - Geometry Factor⁹

0.0883

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.

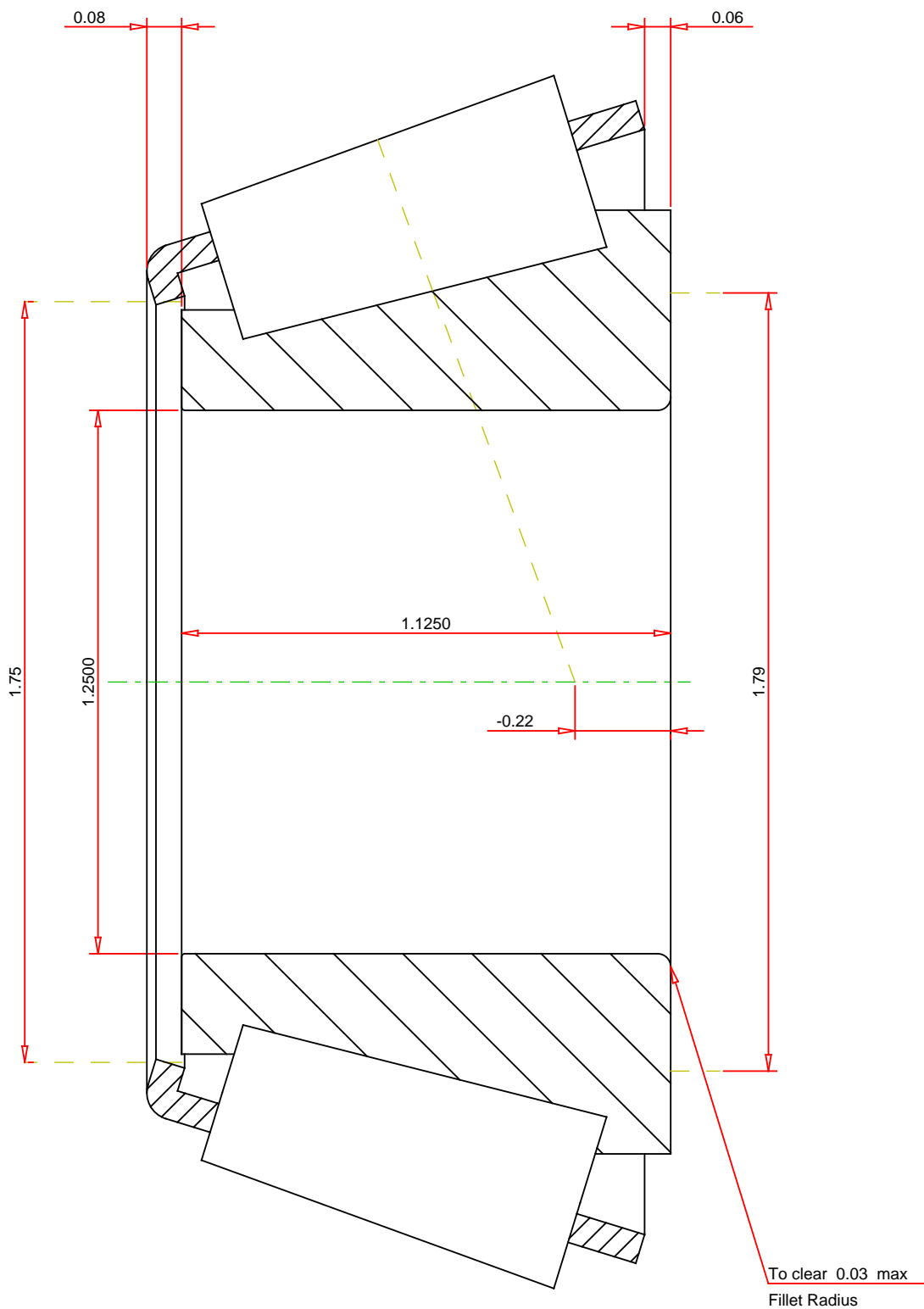
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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 a_3 .



IMPERIAL UNITS

<div>Number of Rollers Per Row18</div>	<div><div>TIMKEN®</div><div>THE TIMKEN COMPANY</div><div>NORTH CANTON, OHIO USA</div></div>	<div><div>HM89440</div><div>Tapered Roller Bearings - Single Cones - Imperial</div></div> <div><div><div>K Factor</div><div>Dynamic Radial Rating - C90</div><div>Dynamic Thrust Rating - Ca90</div><div>Dynamic Radial Rating - C1</div></div><div><div>1.07</div><div>6440 lbf</div><div>6020 lbf</div><div>24800 lbf</div></div></div>
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