



The Timken Company

4500 Mt Pleasant St. NW

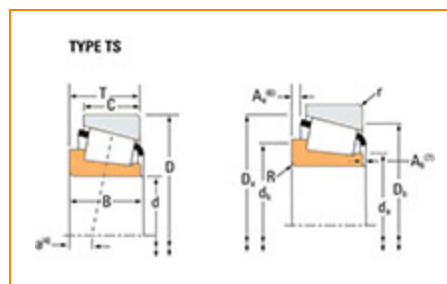
N. Canton, OH 44720

Phone: (234) 262-3000

E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Part Number HM903245, 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	HM903245
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	53400 lbf 237000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	13800 lbf 61600 N

Dimensions



d - Cone Bore	1 5/8 in 41.275 mm
B - Cone Width	1.1250 in 28.575 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.140 in 3.56 mm
da - Cone Frontface Backing Diameter	2.13 in 54 mm
db - Cone Backface Backing Diameter	2.48 in 63 mm
Ab - Cage-Cone Frontface Clearance	0.11 in 2.8 mm
Aa - Cage-Cone Backface Clearance	0.12 in 3 mm
a - Effective Center Location⁴	0.02 in 0.5 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	7950 lbf 35400 N
C1 - Dynamic Radial Rating (1 million revolutions)⁶	30700 lbf 136000 N
C0 - Static Radial Rating	29700 lbf 132000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	10100 lbf 44800 N

Factors

K - Factor⁸	0.79
G1 - Heat Generation Factor (Roller-Raceway)	33.7
G2 - Heat Generation Factor (Rib-Roller End)	12.4
Cg - Geometry Factor⁹	0.101

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.

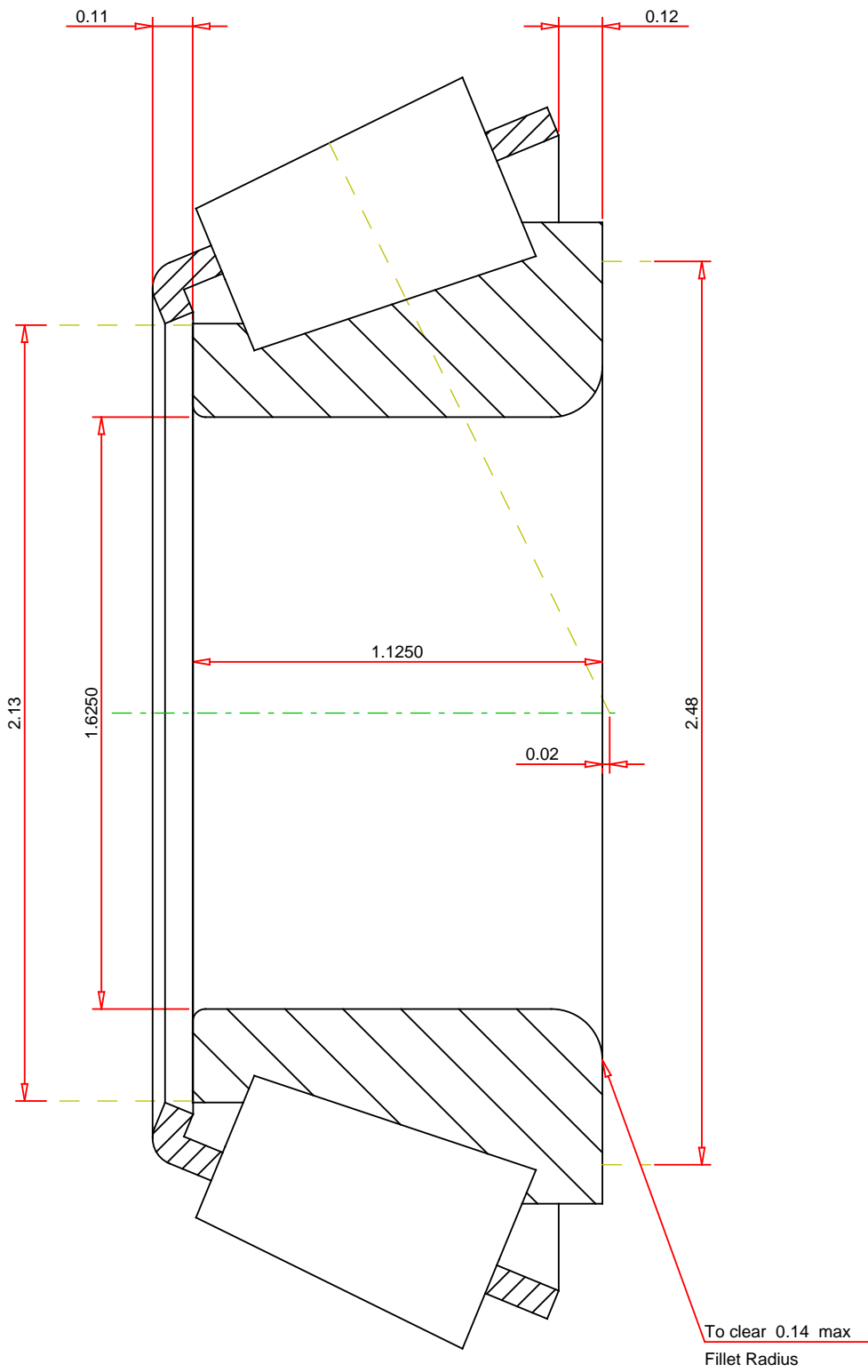
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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

Number of Rollers Per Row16	<div>TIMKEN®</div>	HM903245 Tapered Roller Bearings - Single Cones - Imperial	
	<div>THE TIMKEN COMPANY NORTH CANTON, OHIO USA</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>0.79</div><div>7950</div><div>10100</div><div>30700</div></div><div><div>lbf</div><div>lbf</div><div>lbf</div><div>lbf</div></div></div>	
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