



The Timken Company

4500 Mt Pleasant St. NW

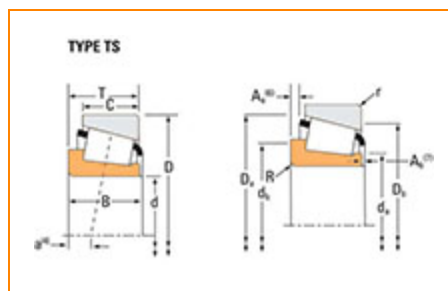
N. Canton, OH 44720

Phone: (234) 262-3000

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

Part Number M86643, 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	M86600
Cone Part Number	M86643
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	23600 lbf 105000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	6110 lbf 27200 N

Dimensions

d - Bore	1.0000 in 25.400 mm
B - Cone Width	0.8438 in 21.433 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.06 in 1.5 mm
da - Cone Frontface Backing Diameter	1.44 in 36.5 mm
db - Cone Backface Backing Diameter	1.5 in 38 mm
Ab - Cage-Cone Frontface Clearance	0.07 in 1.8 mm
Aa - Cage-Cone Backface Clearance	0.03 in 0.8 mm
a - Effective Center Location⁴	-0.13 in -3.3 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	3510 lbf 15600 N
C1 - Dynamic Radial Rating (1 million revolutions)⁶	13500 lbf 60200 N
C0 - Static Radial Rating	16100 lbf 71700 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	3280 lbf 14600 N

Factors

K - Factor ⁸	1.07
Cg - Geometry Factor ⁹	0.0736

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.

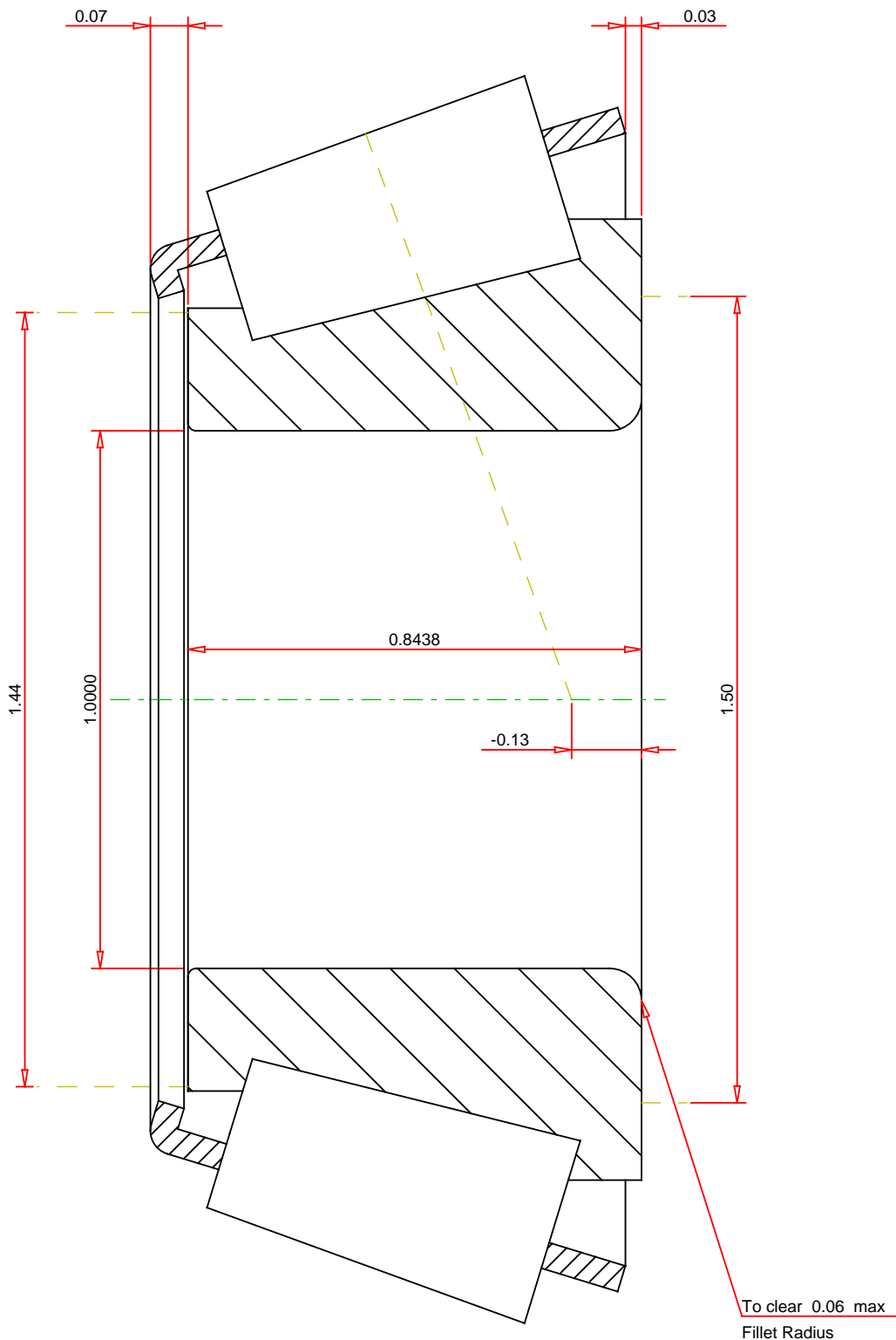
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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>TIMKEN®</div> <div>THE TIMKEN COMPANY</div> <div>NORTH CANTON, OHIO USA</div>	<div>M86643</div> <div>SINGLE TAPERED CONE</div> <div><div>K Factor1.07</div><div>Dynamic Radial Rating - C903510 lbf</div><div>Dynamic Thrust Rating - Ca903280 lbf</div><div>Dynamic Radial Rating - C113500 lbf</div></div>
--	--	--