


The Timken Company

4500 Mt Pleasant St. NW

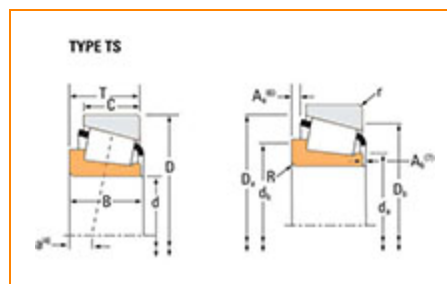
N. Canton, OH 44720

Phone: (234) 262-3000

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

Part Number 449, 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	435
Cone Part Number	449
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	49700 lbf 221000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	12900 lbf 57300 N



Dimensions

d - Cone Bore	1 3/8 in 34.925 mm
----------------------	-----------------------

B - Cone Width	1.1772 in 29.901 mm
-----------------------	------------------------

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.03 in 0.8 mm
--	-------------------

da - Cone Frontface Backing Diameter	1.71 in 43.5 mm
---	--------------------

db - Cone Backface Backing Diameter	1.73 in 44 mm
--	------------------

Ab - Cage-Cone Frontface Clearance	0.05 in 1.3 mm
---	-------------------

Aa - Cage-Cone Backface Clearance	0.04 in 1 mm
--	-----------------

a - Effective Center Location⁴	-0.36 in -9.1 mm
--	---------------------

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	7400 lbf 32900 N
---	---------------------

C1 - Dynamic Radial Rating (1 million revolutions)⁶	28500 lbf 127000 N
---	-----------------------

C0 - Static Radial Rating	32400 lbf 144000 N
----------------------------------	-----------------------

C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	3600 lbf 16000 N
---	---------------------

Factors

K - Factor⁸	2.05
G1 - Heat Generation Factor (Roller-Raceway)	42.5
G2 - Heat Generation Factor (Rib-Roller End)	11.3
Cg - Geometry Factor⁹	0.0805

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.

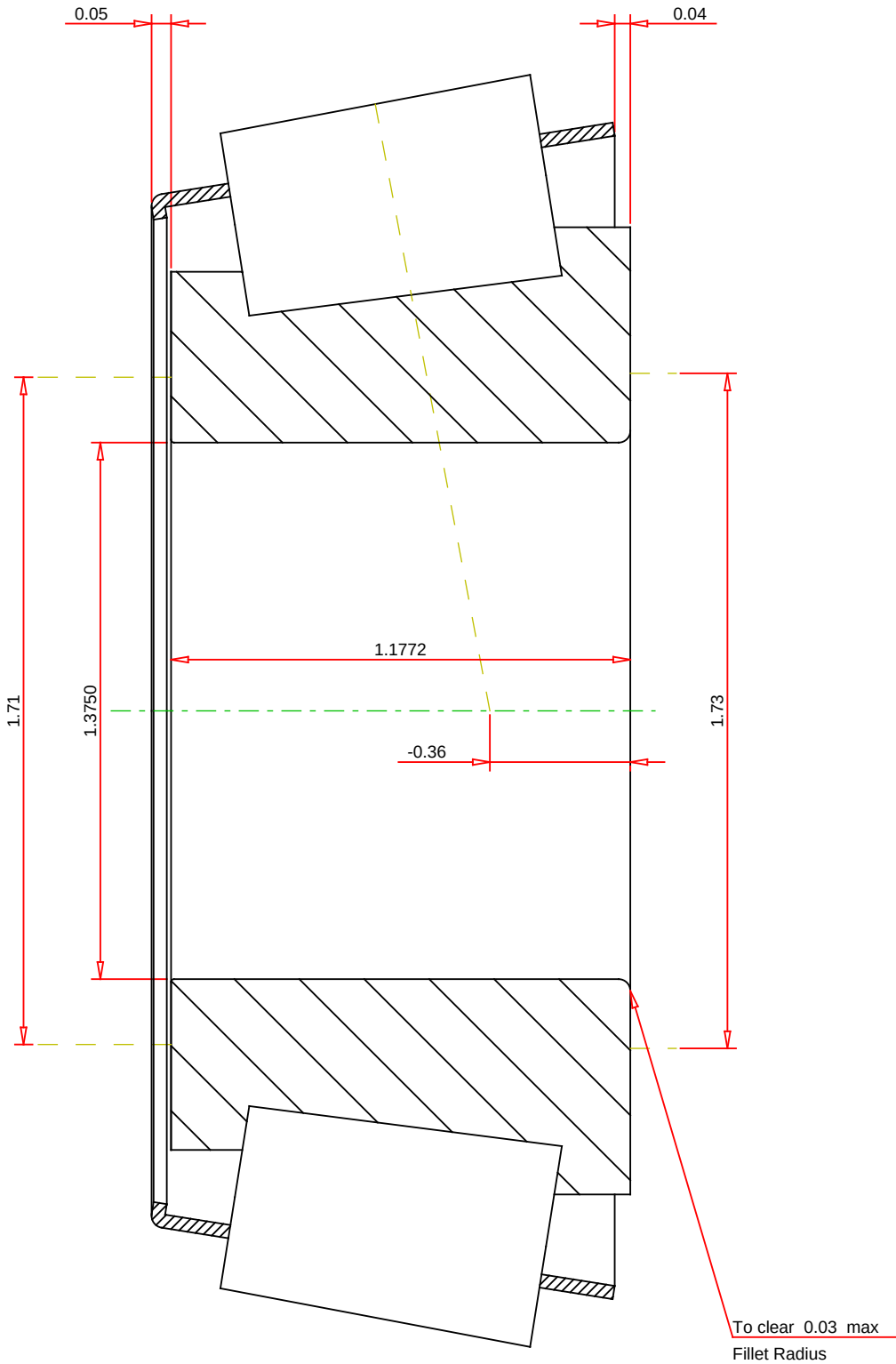
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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	TIMKEN®	449 Tapered Roller Bearings - Single Cones - Imperial	
	THE TIMKEN COMPANY NORTH CANTON, OHIO USA	K Factor2.05 Dynamic Radial Rating - C907400 lbf Dynamic Thrust Rating - Ca903600 lbf Dynamic Radial Rating - C128500 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	