



The Timken Company

4500 Mt Pleasant St. NW

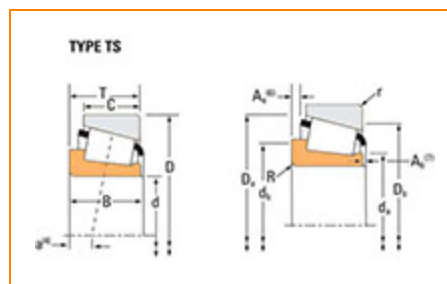
N. Canton, OH 44720

Phone: (234) 262-3000

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

Part Number 525, 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	525
Cone Part Number	525
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	64400 lbf 287000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	16700 lbf 74300 N



Dimensions

d - Cone Bore	1 1/2 in 38.1 mm
B - Cone Width	1.4200 in 36.068 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.140 in 3.6 mm
da - Cone Frontface Backing Diameter	1.89 in 48 mm
db - Cone Backface Backing Diameter	2.13 in 54 mm
Ab - Cage-Cone Frontface Clearance	0.1 in 2.5 mm
Aa - Cage-Cone Backface Clearance	0.09 in 2.3 mm
a - Effective Center Location⁴	-0.5 in -12.7 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	9600 lbf 42700 N
C1 - Dynamic Radial Rating (1 million revolutions)⁶	37000 lbf 165000 N
C0 - Static Radial Rating	43000 lbf 191000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	4690 lbf 20800 N

Factors

K - Factor⁸

2.05

Cg - Geometry Factor⁹

0.0894

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.

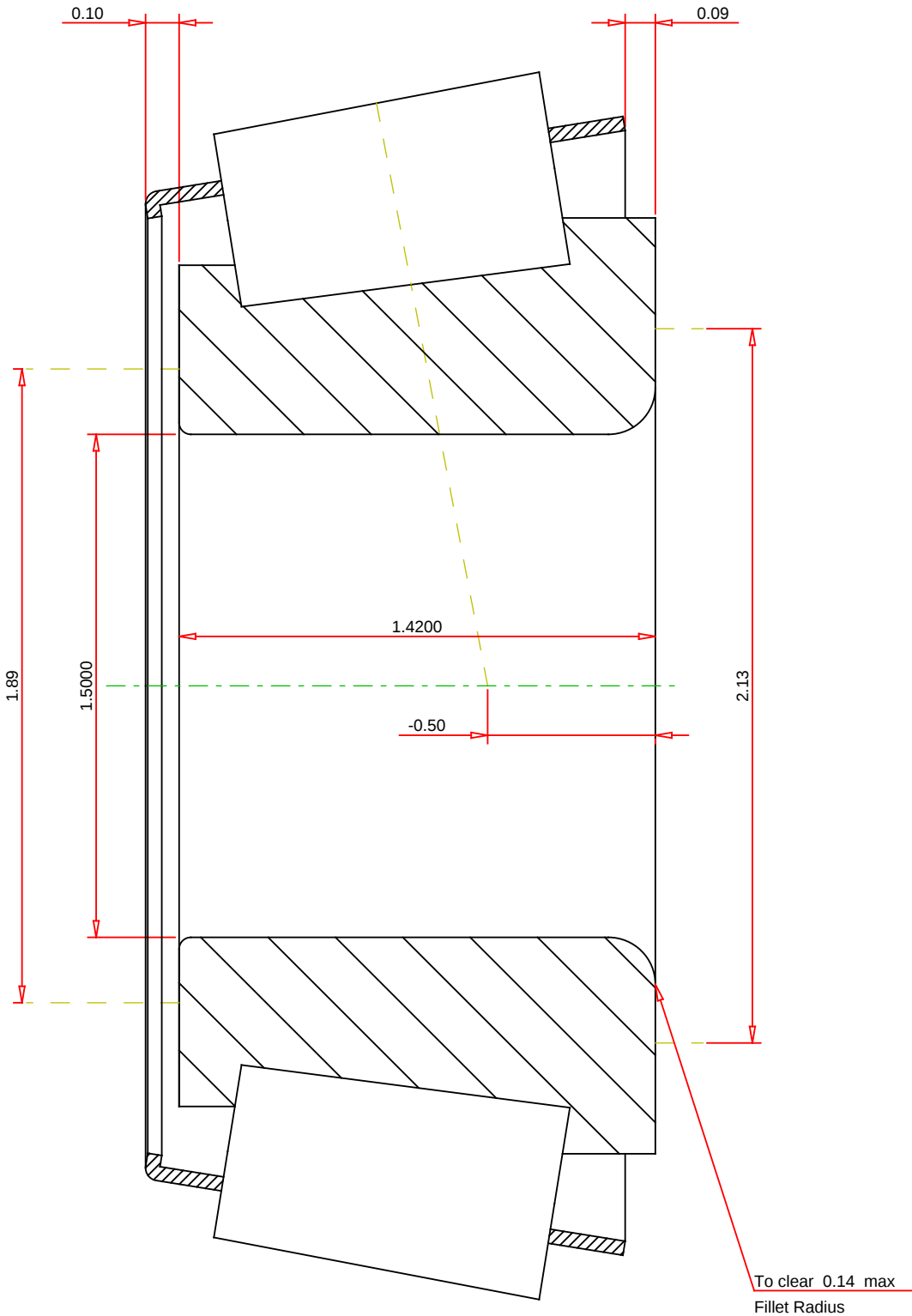
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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 Row15	TIMIKEN® THE TIMKEN COMPANY NORTH CANTON, OHIO USA	525 Tapered Roller Bearings - Single Cones - Imperial K Factor Dynamic Radial Rating - C90 Dynamic Thrust Rating - Ca90 Dynamic Radial Rating - C1 2.05 9600 4690 37000 lbf lbf lbf
--	--	---