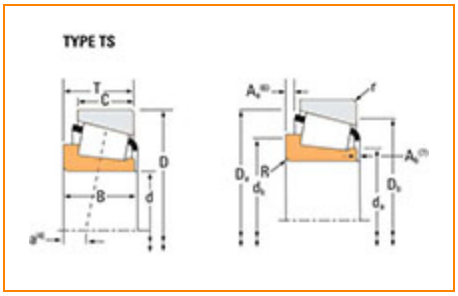
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Part Number LM522549, 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	LM522500
Cone Part Number	LM522549
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[1]	404000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[2]	105000 N

Dimensions

d - Bore	109.987 mm
B - Cone Width	34.925 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[3]	3.600 mm
da - Cone Frontface Backing Diameter	118 mm
db - Cone Backface Backing Diameter	124 mm
Ab - Cage-Cone Frontface Clearance	2 mm
Aa - Cage-Cone Backface Clearance	2.3 mm
a - Effective Center Location[4]	-1.5 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[5]	60100 N
C1 - Dynamic Radial Rating (1 million revolutions)[6]	232000 N
C0 - Static Radial Rating	357000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[7]	41400 N

Factors

K - Factor[8]	1.45

G1 - Heat Generation Factor (Roller-Raceway)	231.6
G2 - Heat Generation Factor (Rib-Roller End)	63.4
Cg - Geometry Factor[9]	0.158

[1] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.

[2] Based on 90 x 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.

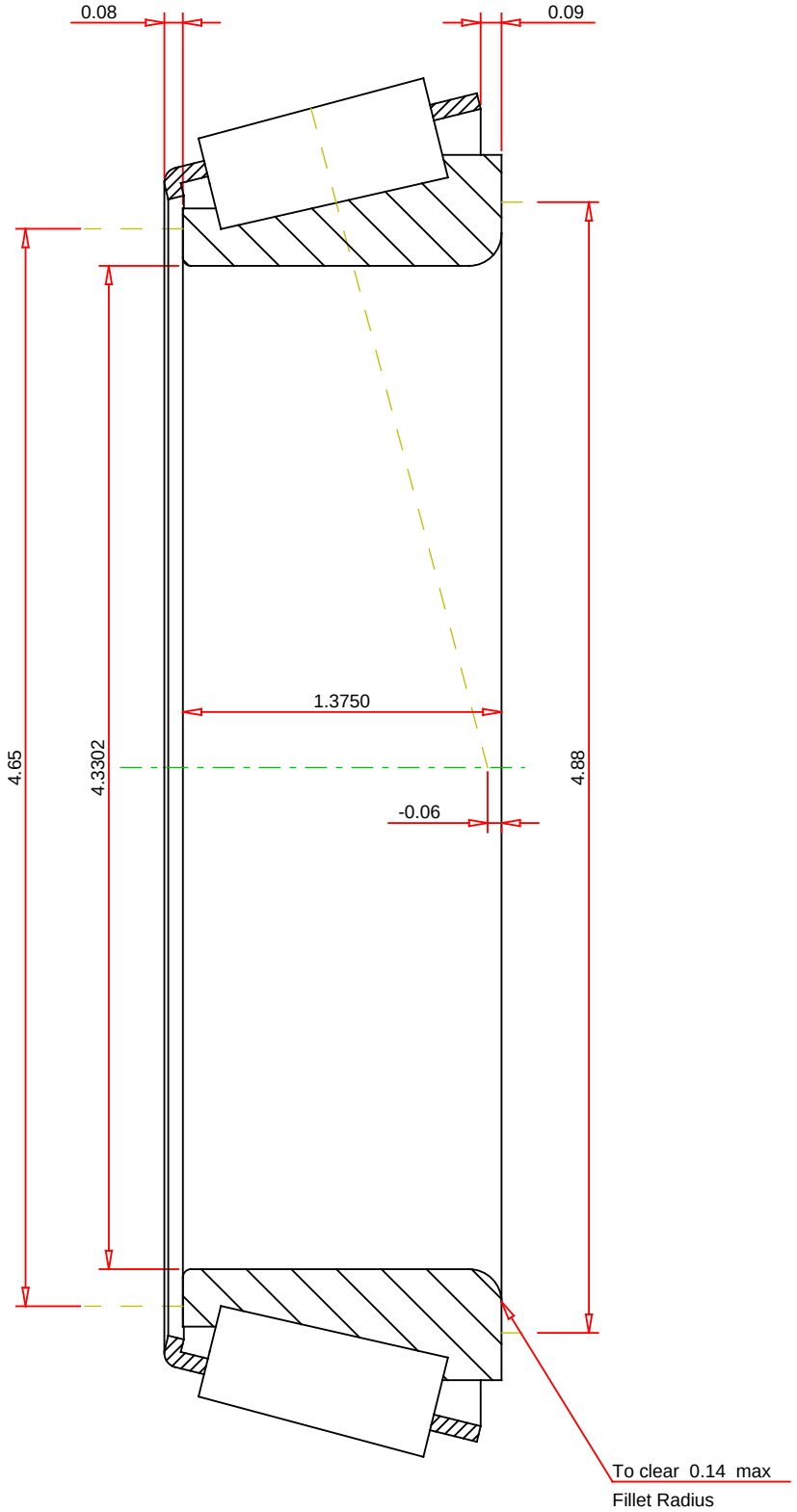
[5] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

[6] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.

[7] Based on 90 x 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 a3l.



IMPERIAL UNITS

Number of Rollers Per Row	34

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM522549
SINGLE TAPERED CONE

K Factor	1.45	
Dynamic Radial Rating - C90	13500	lbf
Dynamic Thrust Rating - Ca90	9300	lbf
Dynamic Radial Rating - C1	52200	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