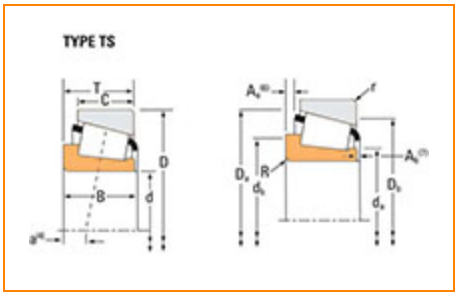
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Part Number 74500, 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	74000
Cone Part Number	74500
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[1]	150000 lbf 665000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[2]	38800 lbf 172000 N

Dimensions

d - Bore	5 in 127 mm
B - Cone Width	1.875 in 47.625 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[3]	0.14 in 3.600 mm
da - Cone Frontface Backing Diameter	5.55 in 141 mm
db - Cone Backface Backing Diameter	5.83 in 148 mm
Ab - Cage-Cone Frontface Clearance	0.11 in 2.8 mm
Aa - Cage-Cone Backface Clearance	0.17 in 4.3 mm
a - Effective Center Location[4]	0.09 in 2.3 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[5]	22300 lbf 99000 N
C1 - Dynamic Radial Rating (1 million revolutions)[6]	85900 lbf 382000 N
C0 - Static Radial Rating	138000 lbf 614000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[7]	18600 lbf 82600 N

Factors

K - Factor[8]	1.2
G1 - Heat Generation Factor (Roller-Raceway)	362.9
G2 - Heat Generation Factor (Rib-Roller End)	68.5
Cg - Geometry Factor[9]	0.134

[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.

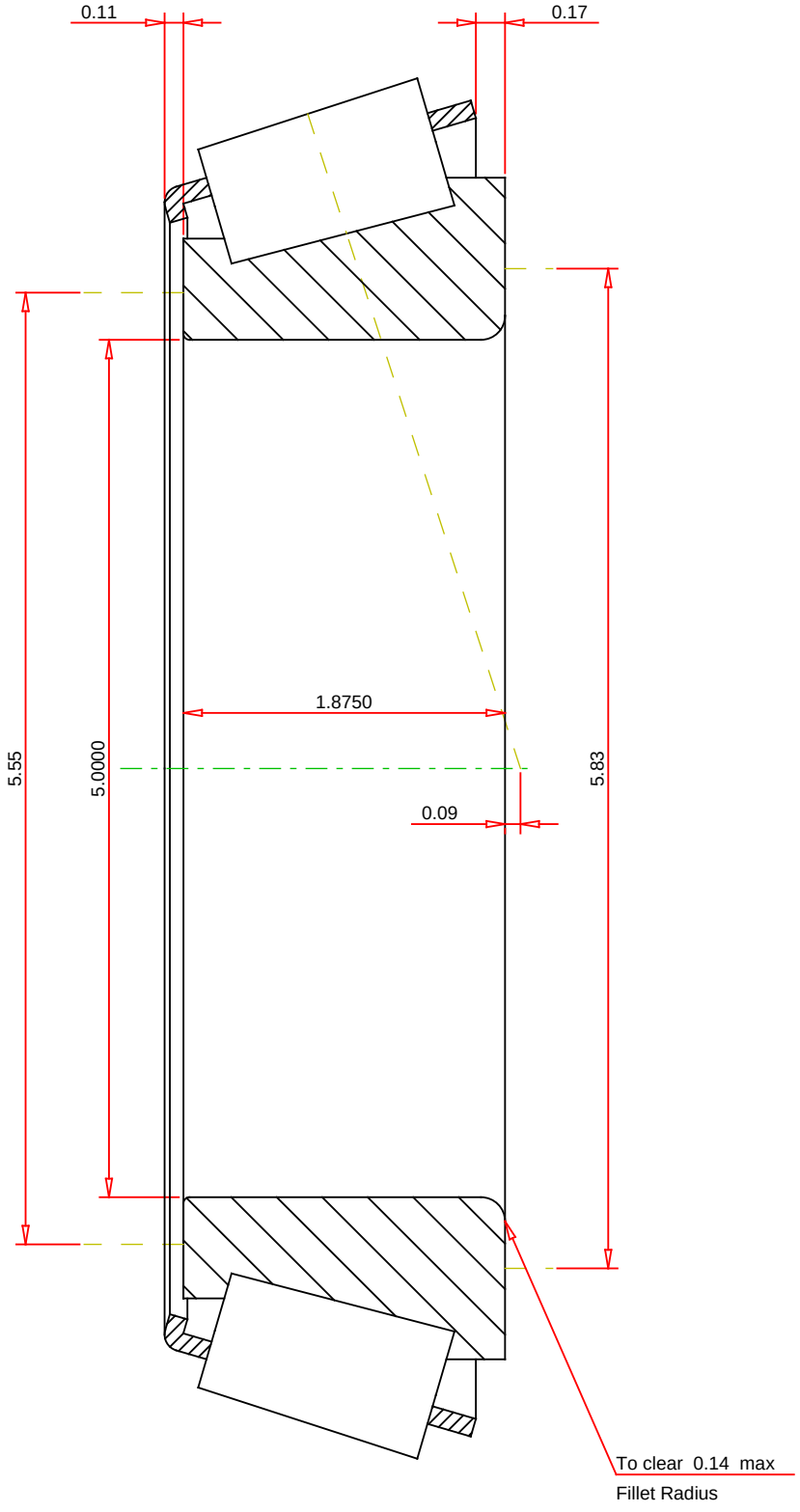
[5] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

[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	26

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

74500
SINGLE TAPERED CONE

K Factor	1.2	
Dynamic Radial Rating - C90	22300	lbf
Dynamic Thrust Rating - Ca90	18600	lbf
Dynamic Radial Rating - C1	85900	lbf

FOR DISCUSSION ONLY