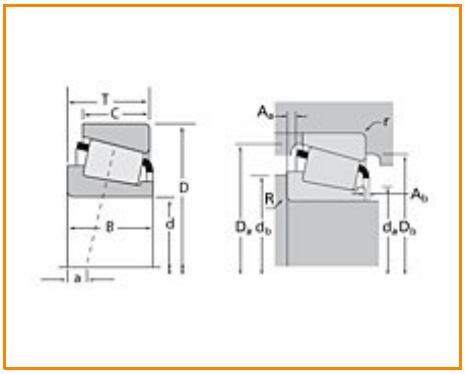
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number LL714649 - LL714610, Tapered Roller Bearings - TS (Tapered Single) 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	LL714600
Cone Part Number	LL714649
Cup Part Number	LL714610
Design Units	Imperial
Bearing Weight	0.300 Kg 0.70 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	76.2 mm 3 in
D - Cup Outer Diameter	105.570 mm 4.1563 in
B - Cone Width	13.495 mm 0.5313 in
C - Cup Width	9.525 mm 0.3750 in
T - Bearing Width	13.495 mm 0.5313 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	1.520 mm 0.06 in
r - Cup Backface "To Clear" Radius[2]	1.52 mm 0.06 in
da - Cone Frontface Backing Diameter	81.03 mm 3.87 in
db - Cone Backface Backing Diameter	83.06 mm 3.27 in
Da - Cup Frontface Backing Diameter	103.10 mm 4.06 in
Db - Cup Backface Backing Diameter	99.06 mm 3.90 in
Ab - Cage-Cone Frontface Clearance	1.8 mm 0.07 in
Aa - Cage-Cone Backface Clearance	0.5 mm 0.02 in
a - Effective Center Location[3]	6.60 mm 0.26 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	10600 N 2390 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	41000 N 9210 lbf
C0 - Static Radial Rating	61000 N 13700 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	8600 N 1930 lbf

Factors

K - Factor[7]	1.24
e - ISO Factor[8]	0.47
Y - ISO Factor[9]	1.27
G1 - Heat Generation Factor (Roller-Raceway)	45.7
G2 - Heat Generation Factor (Rib-Roller End)	64.3
Cg - Geometry Factor	0.0956

[1] These maximum fillet radii will be cleared by the bearing corners.

[2] These maximum fillet radii will be cleared by the bearing corners.

[3] Negative value indicates effective center inside cone backface.

[4] 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.

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

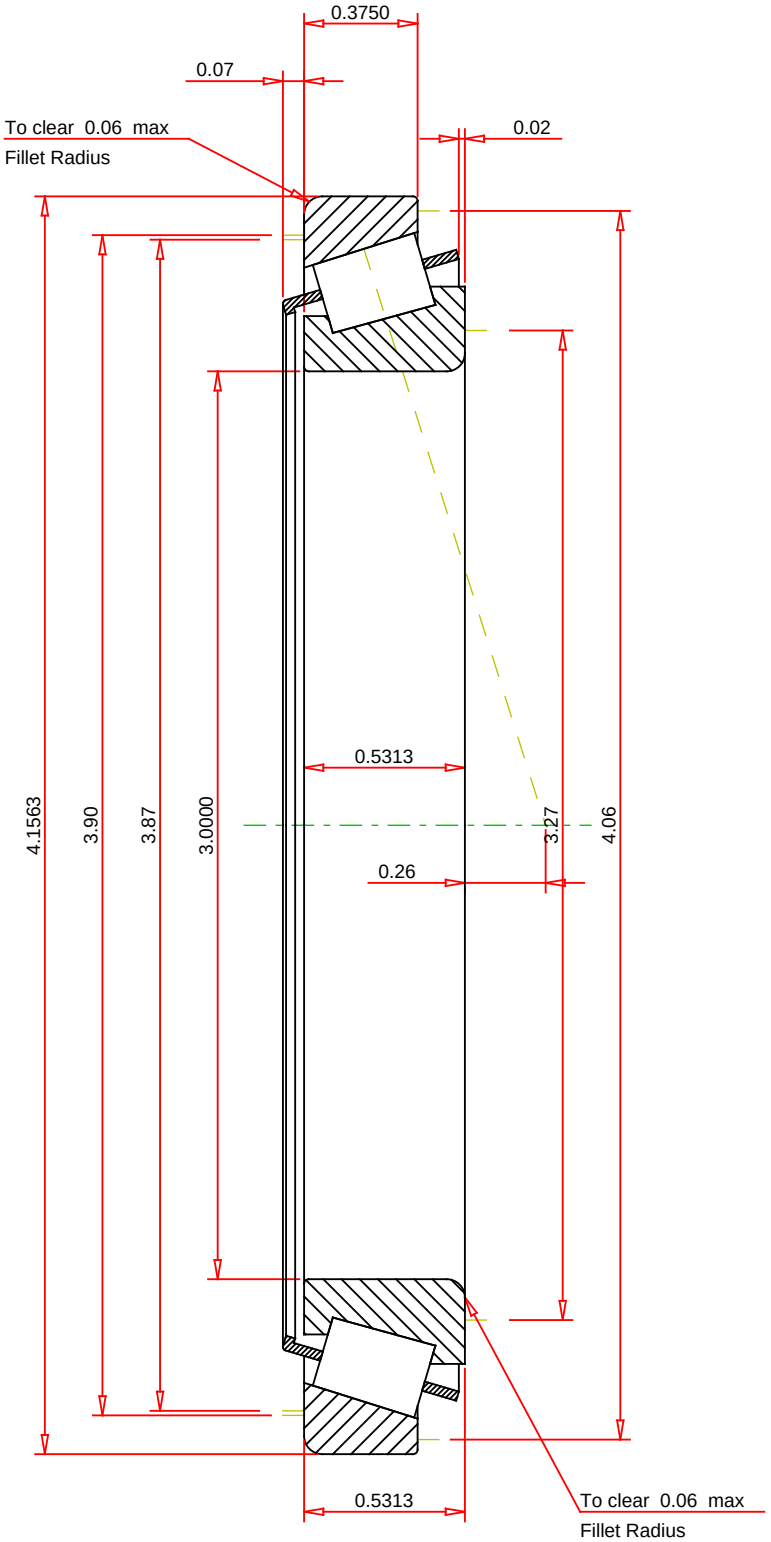
[6] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

[7] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[8] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction

on use.

[9] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.



IMPERIAL UNITS

ISO Factor - e	0.47	
ISO Factor - Y	1.27	
Bearing Weight	0.7	lb
Number of Rollers Per Row	36	
Effective Center Location	0.26	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LL714649 - LL714610
TS BEARING ASSEMBLY

K Factor	1.24	
Dynamic Radial Rating - C90	10600	lbf
Dynamic Thrust Rating - Ca90	8600	lbf
Static Radial Rating - C0	61000	lbf
Dynamic Radial Rating - C1	41000	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