The Timken Company
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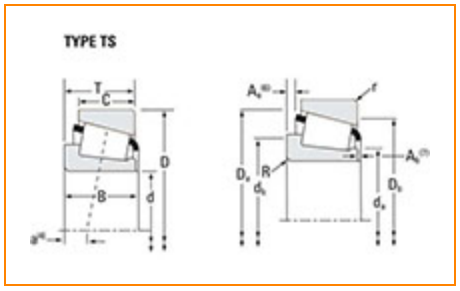
Part Number L814749 - L814710, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	L814700
Cone Part Number	L814749
Cup Part Number	L814710
Design Unit	Inch
Cage Material	Stamped Steel
Related Assembly Number(s)	L814749-90010 L814749-902A3 L814749-906A2

Dimensions

d - Bore	3 in 76.2 mm
D - Cup Outer Diameter	4.3125 in 109.538 mm
B - Cone Width	0.7500 in 19.050 mm
C - Cup Width	0.5938 in 15.083 mm
T - Bearing Width	0.75 in 19.05 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.06 in 1.5 mm
r - Cup Backface "To Clear" Radius[2]	0.06 in 1.52 mm
da - Cone Frontface Backing Diameter	3.23 in 82 mm
db - Cone Backface Backing Diameter	3.31 in 84 mm
Da - Cup Frontface Backing Diameter	4.15 in 105.40 mm
Db - Cup Backface Backing Diameter	3.94 in 100.08 mm
Ab - Cage-Cone Frontface Clearance	0.08 in 2 mm
Aa - Cage-Cone Backface Clearance	0.02 in 0.5 mm
a - Effective Center Location[3]	0.2 in 5.1 mm

Basic Load Ratings

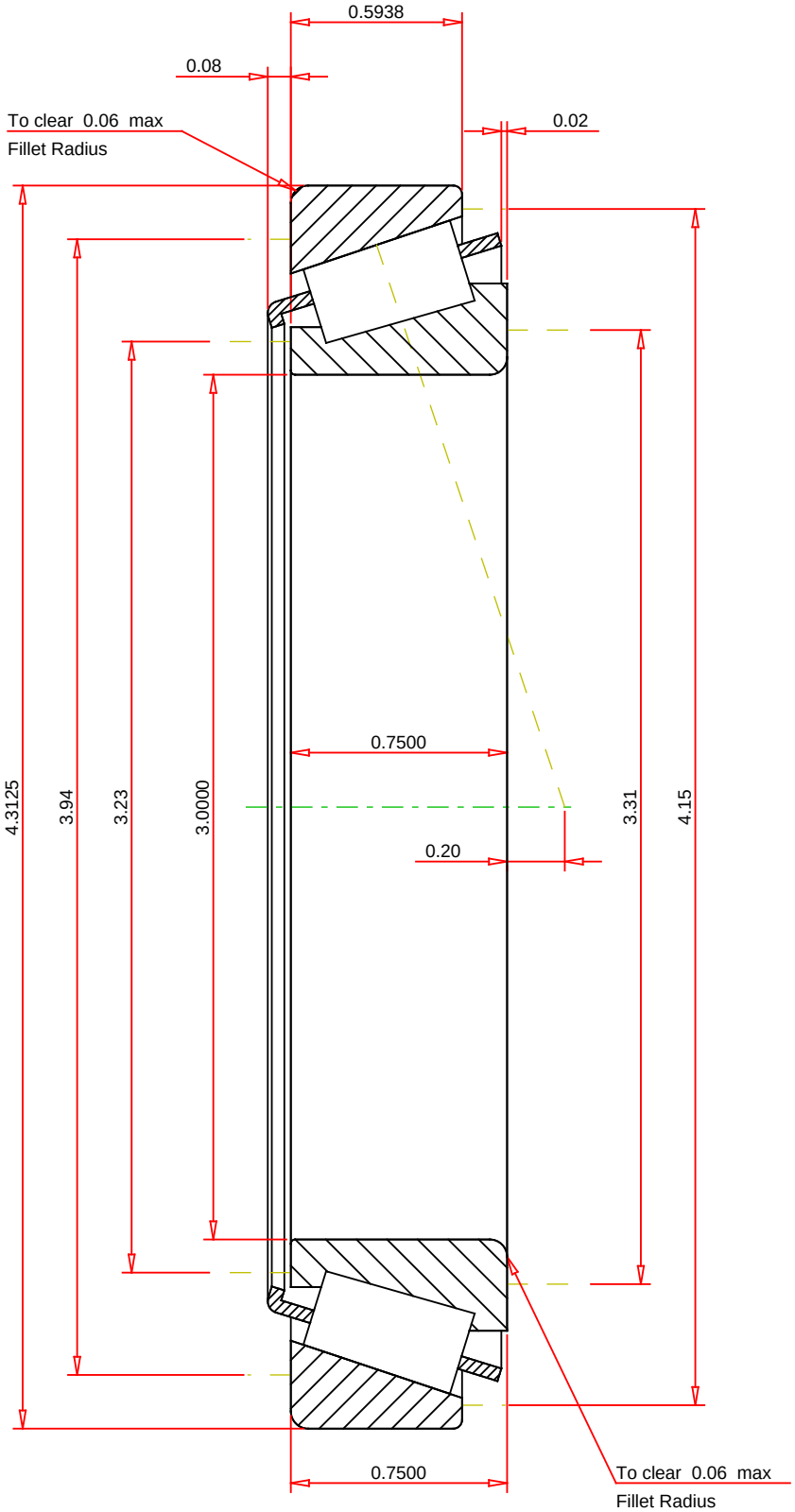
C90 - Dynamic Radial Rating (90 million revolutions)[4]	4030 lbf 17900 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	15600 lbf 69200 N
C0 - Static Radial Rating	27000 lbf 120000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	3470 lbf 15400 N

Factors

K - Factor[7]	1.16
e - ISO Factor[8]	0.5
Y - ISO Factor[9]	1.2
G1 - Heat Generation Factor (Roller-Raceway)	76
G2 - Heat Generation Factor (Rib-Roller End)	58.3
Cg - Geometry Factor[10]	0.116

[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 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.
[5] Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.
[6] 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.

[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.
[10] Geometry constant for Lubrication Life Adjustment Factor a3l.



IMPERIAL UNITS

ISO Factor - e	0.5	
ISO Factor - Y	1.2	
Bearing Weight	1.3	lb
Number of Rollers Per Row	37	
Effective Center Location	0.2	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

L814749 - L814710

Tapered Roller Bearings - TS (Tapered Single)
Imperial

K Factor	1.16	
Dynamic Radial Rating - C90	4030	lbf
Dynamic Thrust Rating - Ca90	3470	lbf
Static Radial Rating - C0	27000	lbf
Dynamic Radial Rating - C1	15600	lbf

FOR DISCUSSION ONLY