The Timken Company
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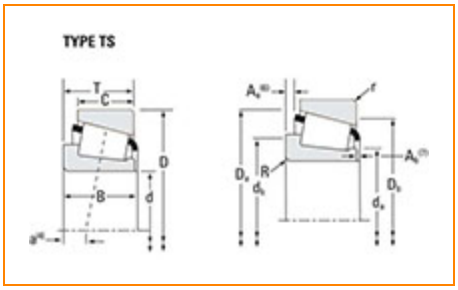
Part Number LL319349 - LL319310, Tapered Roller Bearings - TS (Tapered Single) Imperial

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.



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Specifications

Series	LL319300
Cone Part Number	LL319349
Cup Part Number	LL319310
Design Unit	Inch
Bearing Weight	1.2 lb 0.50 Kg
Cage Material	Stamped Steel

Dimensions

- Bore	3.7500 in 95.25 mm

D - Cup Outer Diameter	5 1/16 in 128.588 mm
B - Cone Width	0.5938 in 15.083 mm
C - Cup Width	0.4688 in 11.908 mm
T - Bearing Width	0.6250 in 15.875 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.06 in 1.520 mm
r - Cup Backface "To Clear" Radius[2]	0.06 in 1.52 mm
da - Cone Frontface Backing Diameter	3.94 in 100 mm
db - Cone Backface Backing Diameter	4.06 in 103 mm
Da - Cup Frontface Backing Diameter	4.89 in 124.00 mm
Db - Cup Backface Backing Diameter	4.80 in 121.92 mm
Ab - Cage-Cone Frontface Clearance	0.12 in 3 mm
Aa - Cage-Cone Backface Clearance	0.01 in 0.3 mm
a - Effective Center Location[3]	0.17 in 4.3 mm

Basic Load Ratings

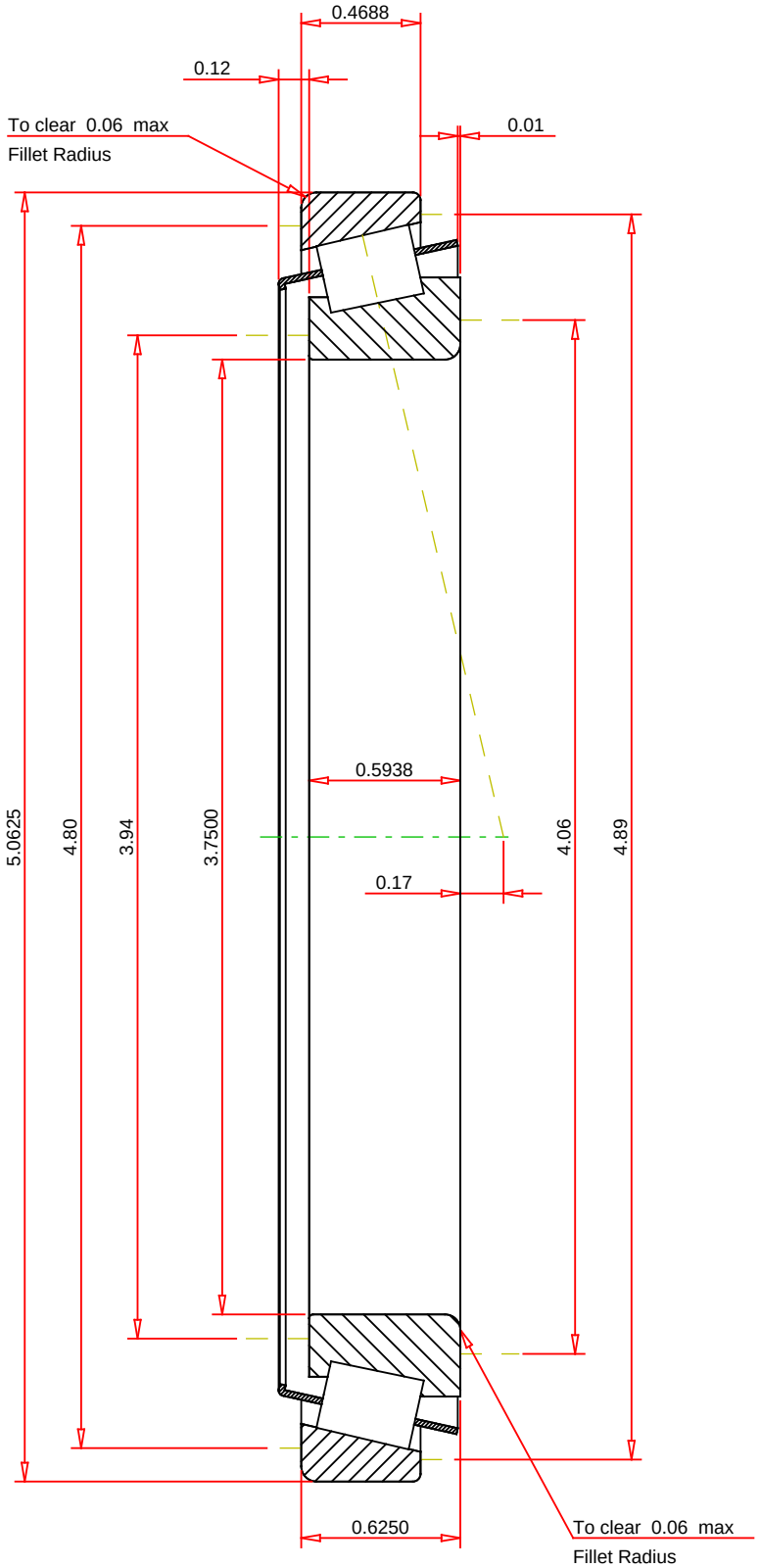
C90 - Dynamic Radial Rating (90 million revolutions)[4]	3700 lbf 16500 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	14300 lbf 63500 N
C0 - Static Radial Rating	22400 lbf 99400 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	2230 lbf 9910 N

Factors

K - Factor[7]	1.66
e - ISO Factor[8]	0.35
Y - ISO Factor[9]	1.71
G1 - Heat Generation Factor (Roller-Raceway)	86.3
G2 - Heat Generation Factor (Rib-Roller End)	88.3
Cg - Geometry Factor[10]	0.107

[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	0.35	
ISO Factor - Y	1.71	
Bearing Weight	1.2	lb
Number of Rollers Per Row	37	
Effective Center Location	0.17	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LL319349 - LL319310

Tapered Roller Bearings - TS (Tapered Single)
Imperial

K Factor	1.66	
Dynamic Radial Rating - C90	3700	lbf
Dynamic Thrust Rating - Ca90	2230	lbf
Static Radial Rating - C0	22400	lbf
Dynamic Radial Rating - C1	14300	lbf

FOR DISCUSSION ONLY