The Timken Company
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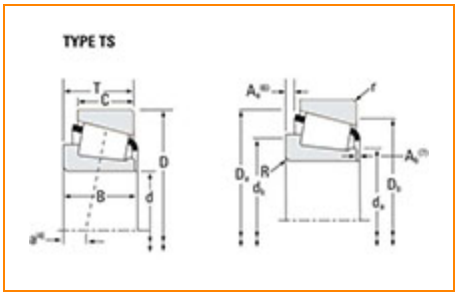
Part Number LL103049 - LL103010, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	LL103000
Cone Part Number	LL103049
Cup Part Number	LL103010
Design Units	Imperial
Bearing Weight	0.20 Kg 0.4 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	44.450 mm 1.7500 in

D - Cup Outer Diameter	71.438 mm 2.8125 in
B - Cone Width	12.700 mm 0.5000 in
C - Cup Width	9.525 mm 0.3750 in
T - Bearing Width	12.700 mm 0.5000 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	48.51 mm 1.91 in
db - Cone Backface Backing Diameter	51.05 mm 2.01 in
Da - Cup Frontface Backing Diameter	68.10 mm 2.72 in
Db - Cup Backface Backing Diameter	65.02 mm 2.56 in
Ab - Cage-Cone Frontface Clearance	2 mm 0.08 in
Aa - Cage-Cone Backface Clearance	-0.3 mm -0.01 in
a - Effective Center Location[3]	-1.3 mm -0.05 in

Basic Load Ratings

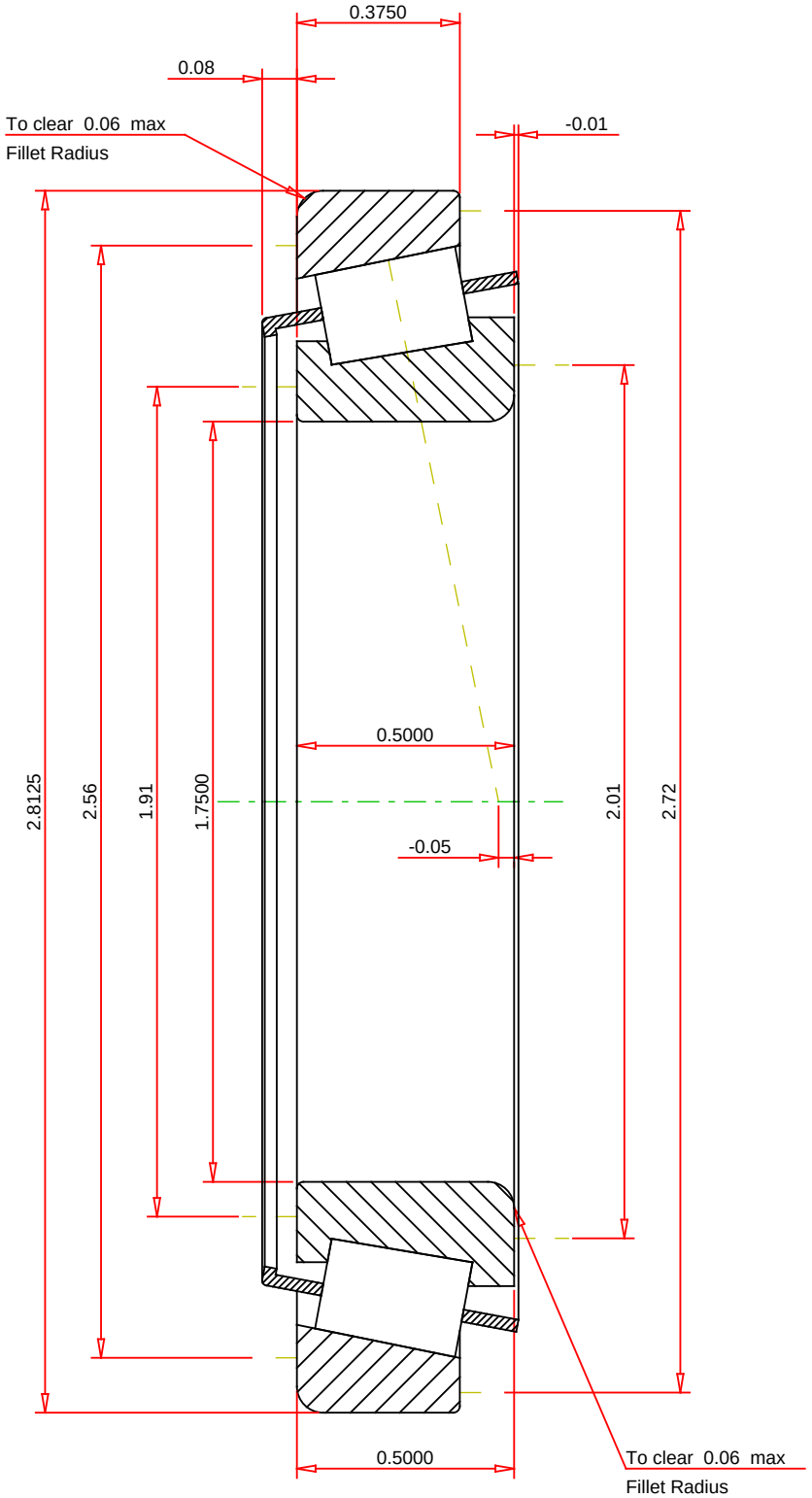
C90 - Dynamic Radial Rating (90 million revolutions)[4]	2100 lbf 9350 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	8110 lbf 36100 N
C0 - Static Radial Rating	9790 lbf 43600 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	1100 lbf 4890 N

Factors

K - Factor[7]	1.91
e - ISO Factor[8]	0.31
Y - ISO Factor[9]	1.97
G1 - Heat Generation Factor (Roller-Raceway)	20
G2 - Heat Generation Factor (Rib-Roller End)	23.6
Cg - Geometry Factor[10]	0.0637

[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.

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



IMPERIAL UNITS

ISO Factor - e	0.31	
ISO Factor - Y	1.97	
Bearing Weight	0.4	lb
Number of Rollers Per Row	24	
Effective Center Location	-0.05	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LL103049 - LL103010
TS BEARING ASSEMBLY

K Factor	1.91	
Dynamic Radial Rating - C90	2100	lbf
Dynamic Thrust Rating - Ca90	1100	lbf
Static Radial Rating - C0	9790	lbf
Dynamic Radial Rating - C1	8110	lbf

FOR DISCUSSION ONLY