The Timken Company
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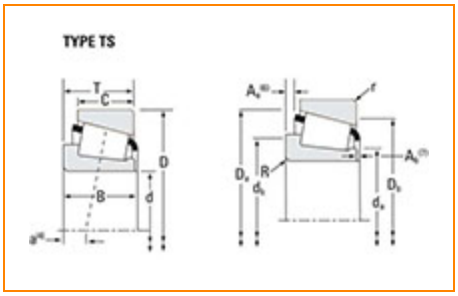
Part Number LL244549 - LL244510, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	LL244500
Cone Part Number	LL244549
Cup Part Number	LL244510
Design Units	Imperial
Bearing Weight	1.9 Kg 4.100 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	231.775 mm 9.1250 in

D - Cup Outer Diameter	268.288 mm 10.5625 in
B - Cone Width	21.501 mm 0.8465 in
C - Cup Width	18.499 mm 0.7283 in
T - Bearing Width	22.499 mm 0.8858 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	2.030 mm 0.080 in
r - Cup Backface "To Clear" Radius[2]	2.03 mm 0.08 in
da - Cone Frontface Backing Diameter	236.98 mm 10.51 in
db - Cone Backface Backing Diameter	241.05 mm 9.49 in
Da - Cup Frontface Backing Diameter	263.65 mm 10.38 in
Db - Cup Backface Backing Diameter	259.08 mm 10.20 in
Ab - Cage-Cone Frontface Clearance	3.3 mm 0.13 in
Aa - Cage-Cone Backface Clearance	-0.3 mm -0.01 in
a - Effective Center Location[3]	15.7 mm 0.62 in

Basic Load Ratings

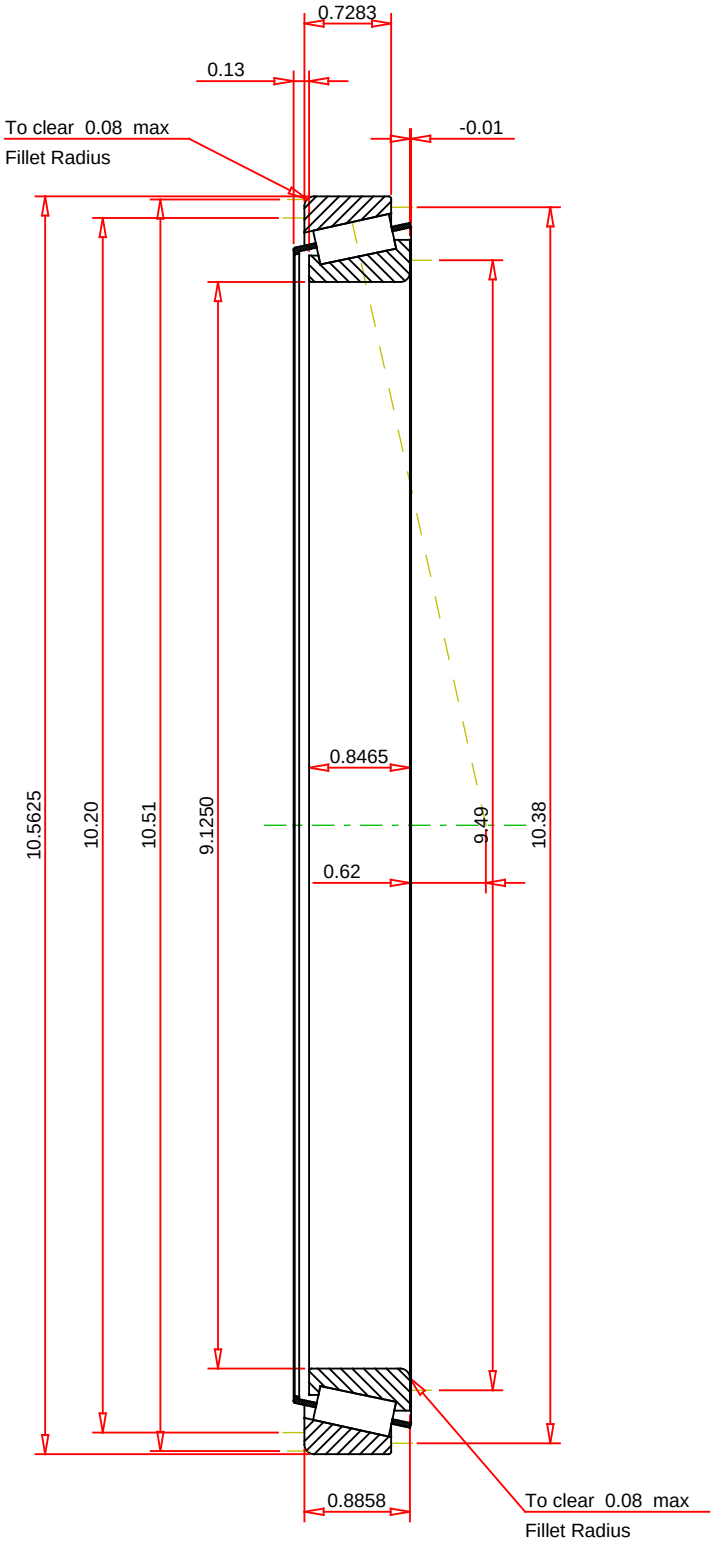
C90 - Dynamic Radial Rating (90 million revolutions)[4]	8520 lbf 37900 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	32900 lbf 146000 N
C0 - Static Radial Rating	78500 lbf 349000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	4850 lbf 21600 N

Factors

K - Factor[7]	1.76
e - ISO Factor[8]	0.33
Y - ISO Factor[9]	1.8
G1 - Heat Generation Factor (Roller-Raceway)	694
G2 - Heat Generation Factor (Rib-Roller End)	584
Cg - Geometry Factor[10]	0.142

[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	0.33	
ISO Factor - Y	1.8	
Bearing Weight	4.1	lb
Number of Rollers Per Row	65	
Effective Center Location	0.62	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LL244549 - LL244510
TS BEARING ASSEMBLY

K Factor	1.76	
Dynamic Radial Rating - C90	8520	lbf
Dynamic Thrust Rating - Ca90	4850	lbf
Static Radial Rating - C0	78500	lbf
Dynamic Radial Rating - C1	32900	lbf

FOR DISCUSSION ONLY