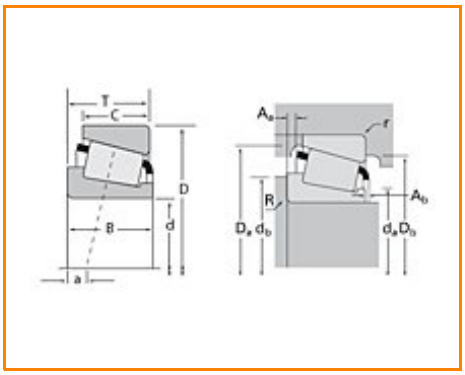
The Timken Company
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N. Canton, OH 44720
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E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number 93708 - 93125, 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	93000
Cone Part Number	93708
Cup Part Number	93125
Design Units	Imperial
Bearing Weight	21.20 Kg 46.800 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	179.974 mm 7.0856 in

D - Cup Outer Diameter	317.500 mm 12.5000 in
B - Cone Width	63.5 mm 2.5 in
C - Cup Width	46.038 mm 1.8125 in
T - Bearing Width	63.5 mm 2.5 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius[2]	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	203.96 mm 9.02 in
db - Cone Backface Backing Diameter	209.04 mm 8.23 in
Da - Cup Frontface Backing Diameter	300.00 mm 11.84 in
Db - Cup Backface Backing Diameter	286.00 mm 11.26 in
Ab - Cage-Cone Frontface Clearance	5.3 mm 0.21 in
Aa - Cage-Cone Backface Clearance	8.1 mm 0.32 in
a - Effective Center Location[3]	7.9 mm 0.31 in

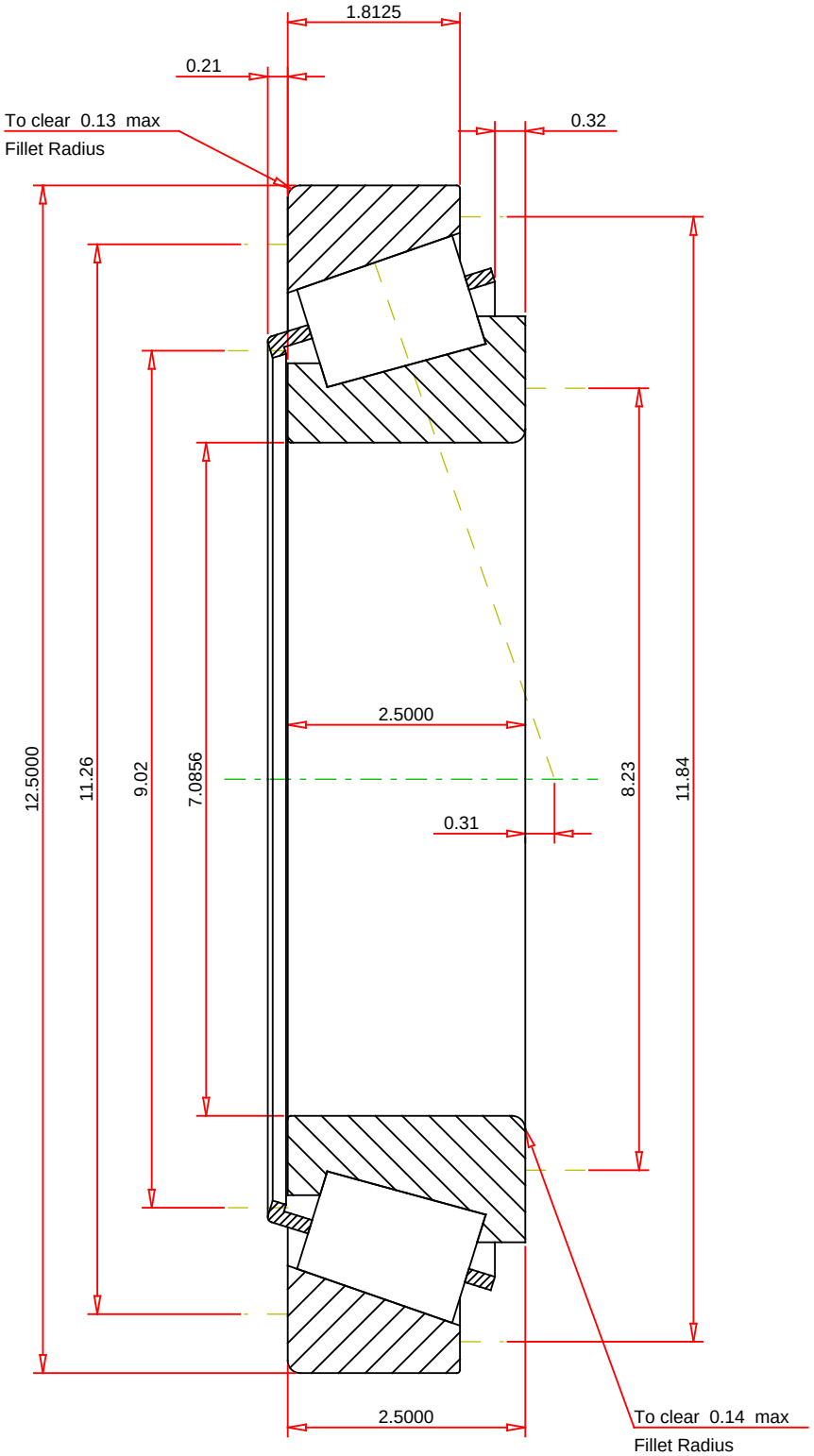
Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	190000 N 42600 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	731000 N 164000 lbf
C0 - Static Radial Rating	1290000 N 290000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	170000 N 38200 lbf

Factors

K - Factor[7]	1.12
e - ISO Factor[8]	0.52
Y - ISO Factor[9]	1.15
G1 - Heat Generation Factor (Roller-Raceway)	912
G2 - Heat Generation Factor (Rib-Roller End)	126
Cg - Geometry Factor	0.146

[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	0.52	
ISO Factor - Y	1.15	
Bearing Weight	46.8	lb
Number of Rollers Per Row	29	
Effective Center Location	0.31	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

93708 - 93125
TS BEARING ASSEMBLY

K Factor	1.12	
Dynamic Radial Rating - C90	190000	lbf
Dynamic Thrust Rating - Ca90	170000	lbf
Static Radial Rating - C0	1290000	lbf
Dynamic Radial Rating - C1	731000	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