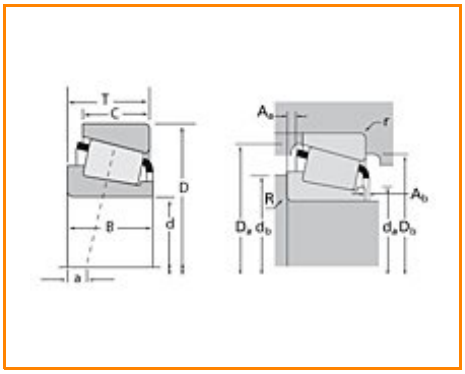
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number HH923649 - HH923610, 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	HH923600
Cone Part Number	HH923649
Cup Part Number	HH923610
Design Units	Imperial
Bearing Weight	17.1 Kg 37.7 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	101.600 mm 4.0000 in
D - Cup Outer Diameter	250.825 mm 9.8750 in
B - Cone Width	73.025 mm 2.8750 in
C - Cup Width	50.800 mm 2.0000 in
T - Bearing Width	76.200 mm 3.0000 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	6.35 mm 0.25 in
r - Cup Backface "To Clear" Radius[2]	6.35 mm 0.250 in
da - Cone Frontface Backing Diameter	130.81 mm 6.10 in
db - Cone Backface Backing Diameter	149.10 mm 5.87 in
Da - Cup Frontface Backing Diameter	229.10 mm 9.02 in
Db - Cup Backface Backing Diameter	207.01 mm 8.15 in
Ab - Cage-Cone Frontface Clearance	5.8 mm 0.23 in
Aa - Cage-Cone Backface Clearance	14 mm 0.55 in
a - Effective Center Location[3]	-3.3 mm -0.13 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	215000 N 48200 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	828000 N 186000 lbf
C0 - Static Radial Rating	827000 N 186000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	257000 N 57800 lbf

Factors

K - Factor[7]	0.84
e - ISO Factor[8]	0.7
Y - ISO Factor[9]	0.86
G1 - Heat Generation Factor (Roller-Raceway)	282.1
G2 - Heat Generation Factor (Rib-Roller End)	35.2
Cg - Geometry Factor	0.137

[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.

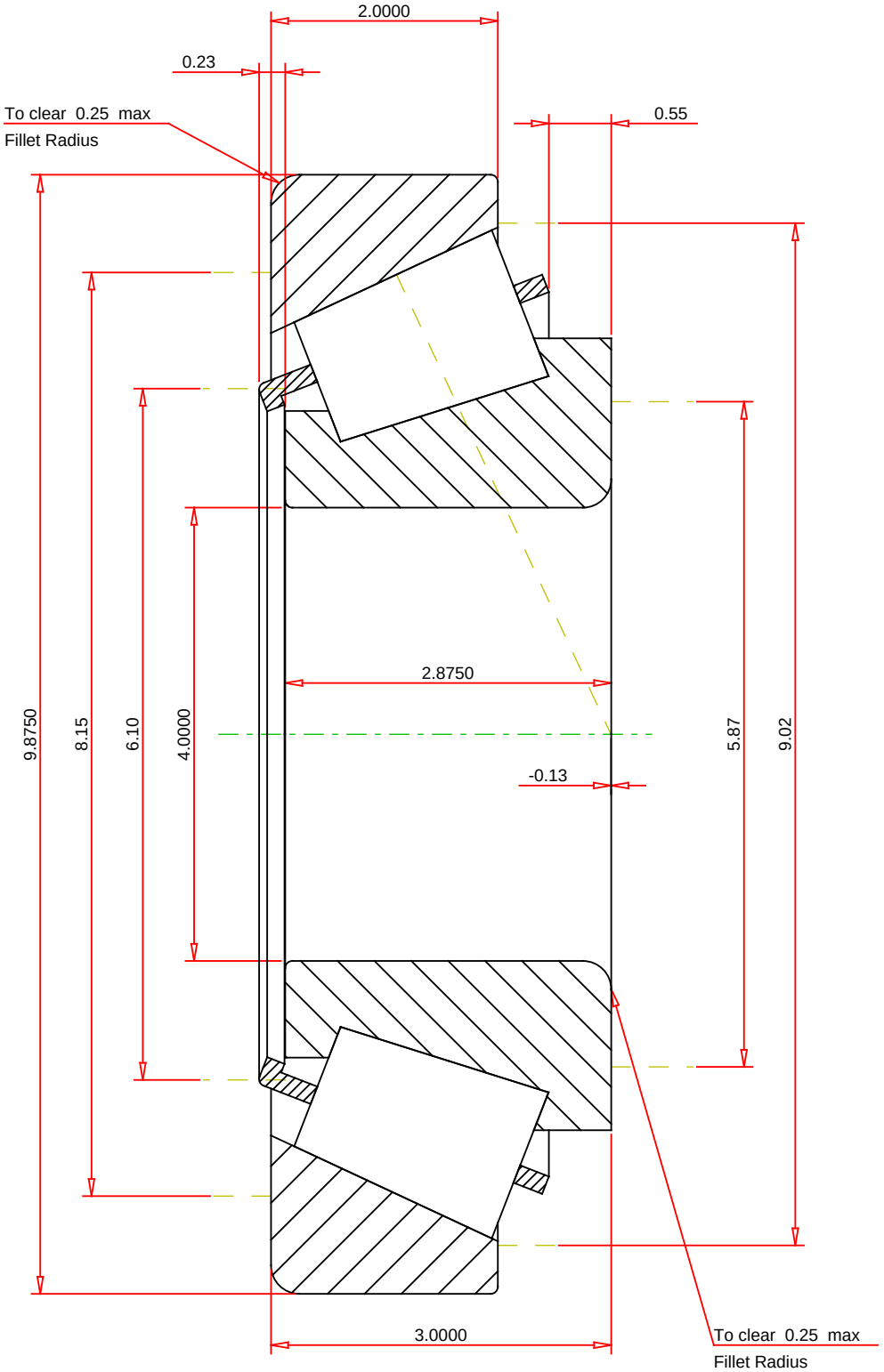
[6] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

[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	0.7	
ISO Factor - Y	0.86	
Bearing Weight	37.7	lb
Number of Rollers Per Row	14	
Effective Center Location	-0.13	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HH923649 - HH923610
TS BEARING ASSEMBLY

K Factor	0.84	
Dynamic Radial Rating - C90	215000	lbf
Dynamic Thrust Rating - Ca90	257000	lbf
Static Radial Rating - C0	827000	lbf
Dynamic Radial Rating - C1	828000	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