The Timken Company
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Timken Part Number HH924349 - HH924310D, Tapered Roller Bearings - TDO (Tapered Double Outer) Imperial

The configuration of the TDO provides a wide effective bearing spread, making it ideal for applications in which overturning moments are a significant load component. TDO bearings can be used in fixed positions or allowed to float in the housing bore.



Specifications | Dimensions | Abutment and Fillet Dimensions | Basic Load Ratings | Factors

Specifications

Series	HH924300
Cone Part Number	HH924349
Cup Part Number	HH924310D
Design Units	Imperial
Bearing Weight	68.26 lb 30.960 Kg
Cage Type	Stamped Steel
Ab - Cage-Cone Frontface Clearance	0.25 in 6.3 mm

Dimensions

d - Bore	4.3750 in 111.125 mm
D - Cup Outer Diameter	9.5000 in 241.300 mm
B - Cone Width	2.8125 in 71.438 mm
C - Double Cup Width	4.2500 in 107.950 mm
T - Bearing Width across Cones	6.2500 in 158.750 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.25 in 6.400 mm
r - Cup Frontface "To Clear" Radius[2]	0.06 in 1.5 mm
db - Cone Backface Backing Diameter	6.18 in 157.00 mm
Da - Cup Frontface Backing Diameter	8.94 in 227.08 mm
Aa - Cage-Cone Backface Clearance	0.53 in 13.5 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]	46400 lbf 206000 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	311000 lbf 1390000 N

C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	80700 lbf 359000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	58100 lbf 258000 N

Factors

K - Factor[7]	0.8
e - ISO Factor[8]	1.92
Y1 - ISO Factor[9]	0.35 0.52
Y2 - ISO Factor[10]	0.52
G1 - Heat Generation Factor (Roller-Raceway)[11]	306
G2 - Heat Generation Factor (Rib-Roller End)	37.3
Cg - Geometry Factor[12]	0.143

[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] 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.

[4] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.

[5] 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.

[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

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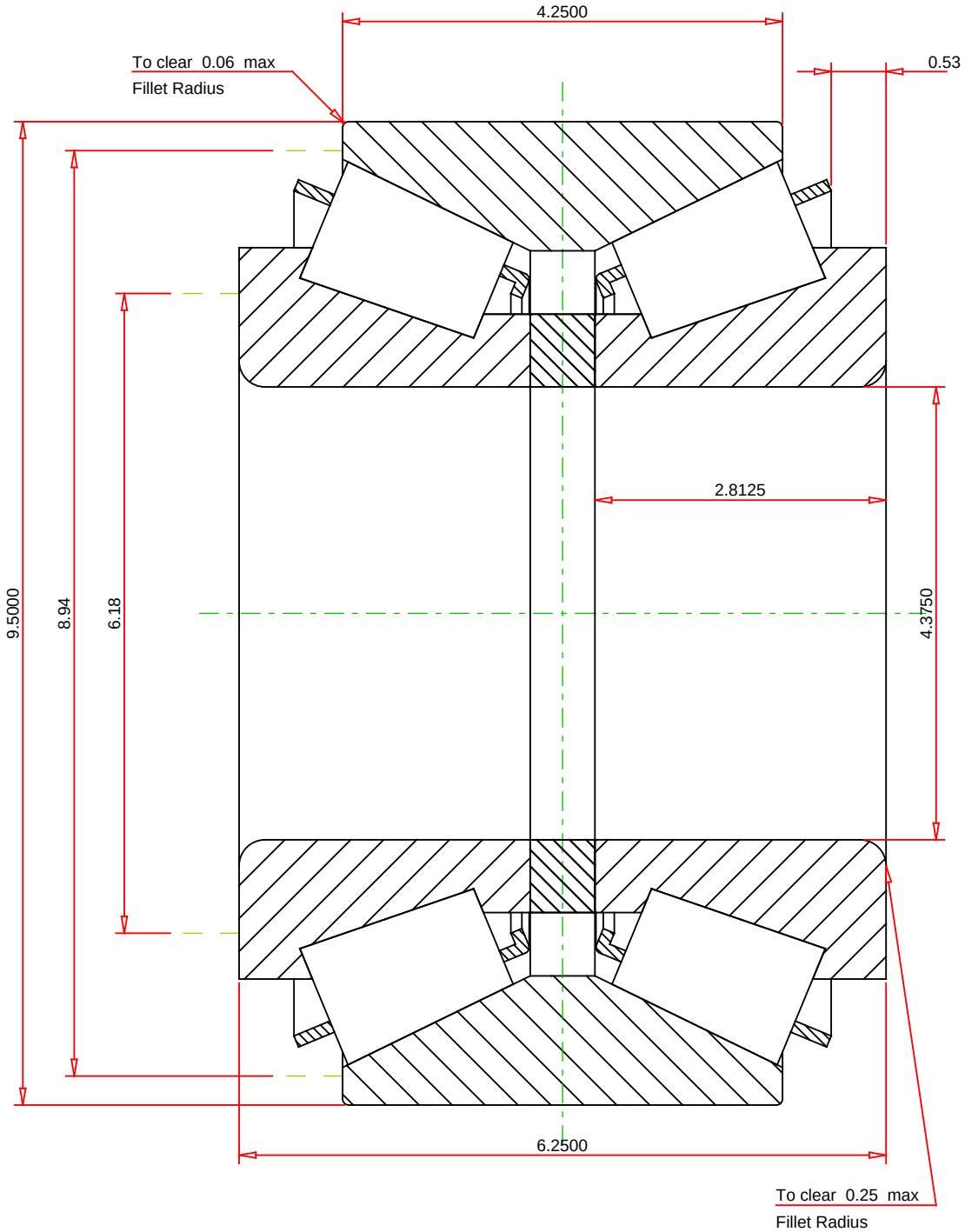
[10] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[11] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

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



IMPERIAL UNITS

ISO Factor - e	1.92	
ISO Factor - Y1	0.35	
ISO Factor - Y2	0.52	
Bearing Weight	68.26	lb
Number of Rollers Per Row	16	

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HH924349 - HH924310D
TDO BEARING ASSEMBLY

K Factor	0.8	
Dynamic Radial Rating - C90	46400	lbf
Dynamic Thrust Rating - Ca90	58100	lbf
Dynamic Radial Rating - C90(2)	80700	lbf
Radial Rating - C1	311000	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