The Timken Company
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Timken Part Number H249148 - H249111CD, 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	H249100
Cone Part Number	H249148
Cup Part Number	H249111CD
Design Units	Imperial
Bearing Weight	227.20 lb 103.056 Kg
Cage Type	Stamped Steel
Ab - Cage-Cone Frontface Clearance	0.25 in 6.3 mm

Dimensions

d - Bore	9.5000 in 241.300 mm
D - Cup Outer Diameter	16.0000 in 406.400 mm
B - Cone Width	3.9375 in 100.013 mm
C - Double Cup Width	7.2500 in 184.150 mm
T - Bearing Width across Cones	8.4999 in 215.897 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	10.75 in 273.10 mm
Da - Cup Frontface Backing Diameter	15.27 in 387.86 mm
Aa - Cage-Cone Backface Clearance	0.4 in 10.2 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]	109000 lbf 485000 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	732000 lbf 3260000 N

C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	190000 lbf 844000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	62000 lbf 276000 N

Factors

K - Factor[7]	1.76
e - ISO Factor[8]	0.7
Y1 - ISO Factor[9]	0.97 1.44
Y2 - ISO Factor[10]	1.44
Cg - Geometry Factor[11]	0.156

[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.

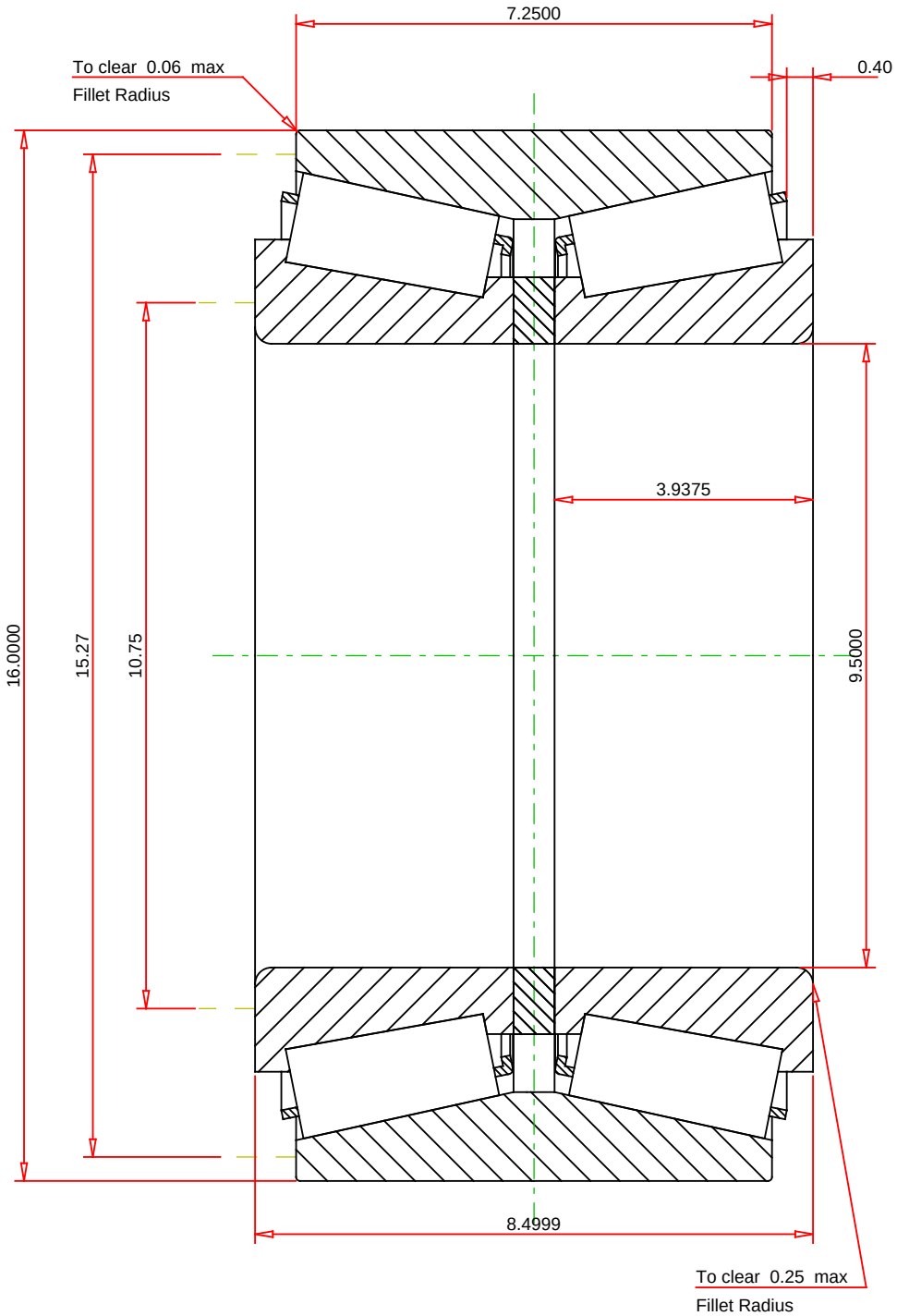
[7] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[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 on use.

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

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



IMPERIAL UNITS

ISO Factor - e	0.7	
ISO Factor - Y1	0.97	
ISO Factor - Y2	1.44	
Bearing Weight	227.2	lb
Number of Rollers Per Row	21	

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

H249148 - H249111CD
TDO BEARING ASSEMBLY

K Factor	1.76	
Dynamic Radial Rating - C90	109000	lbf
Dynamic Thrust Rating - Ca90	62000	lbf
Dynamic Radial Rating - C90(2)	190000	lbf
Radial Rating - C1	732000	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