The Timken Company
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Timken Part Number L357049 - L357010CD, 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	L357000
Cone Part Number	L357049
Cup Part Number	L357010CD
Design Units	Imperial
Bearing Weight	64.72 lb 29.358 Kg
Cage Type	Stamped Steel
Ab - Cage-Cone Frontface Clearance	0.1 in 2.5 mm

Dimensions

d - Bore	12 in 304.8 mm
D - Cup Outer Diameter	15.5 in 393.7 mm
B - Cone Width	2 in 50.8 mm
C - Double Cup Width	3.25 in 82.55 mm
T - Bearing Width across Cones	4.2499 in 107.947 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	12.95 in 328.90 mm
Da - Cup Frontface Backing Diameter	15.08 in 383.00 mm
Aa - Cage-Cone Backface Clearance	0.18 in 4.6 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]	34200 lbf 152000 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	229000 lbf 1020000 N

C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	59500 lbf 265000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	21000 lbf 93500 N

Factors

K - Factor[7]	1.63
e - ISO Factor[8]	0.76
Y1 - ISO Factor[9]	0.89 1.32
Y2 - ISO Factor[10]	1.32
G1 - Heat Generation Factor (Roller-Raceway)[11]	1750
G2 - Heat Generation Factor (Rib-Roller End)	301
Cg - Geometry Factor[12]	0.158

[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.

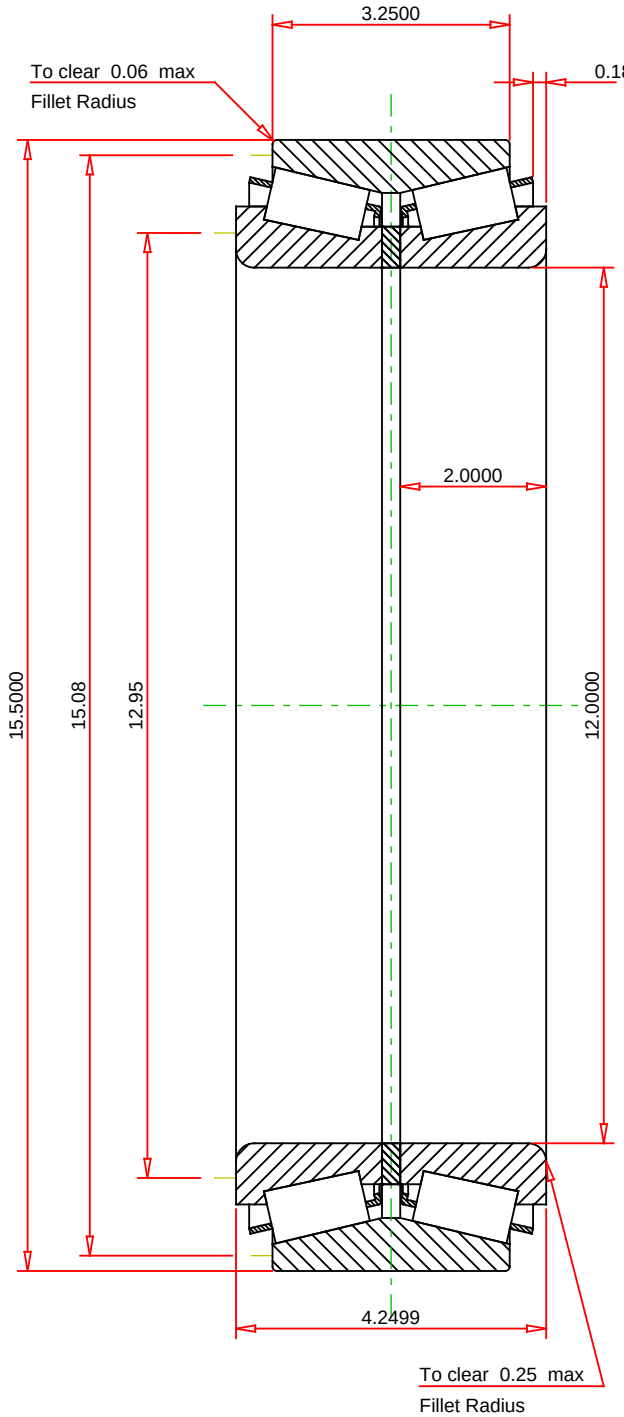
[9] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction

on use.

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

[11] 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	0.76	
ISO Factor - Y1	0.89	
ISO Factor - Y2	1.32	
Bearing Weight	64.72	lb
Number of Rollers Per Row	45	

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

L357049 - L357010CD
TDO BEARING ASSEMBLY

K Factor	1.63	
Dynamic Radial Rating - C90	34200	lbf
Dynamic Thrust Rating - Ca90	21000	lbf
Dynamic Radial Rating - C90(2)	59500	lbf
Radial Rating - C1	229000	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