The Timken Company
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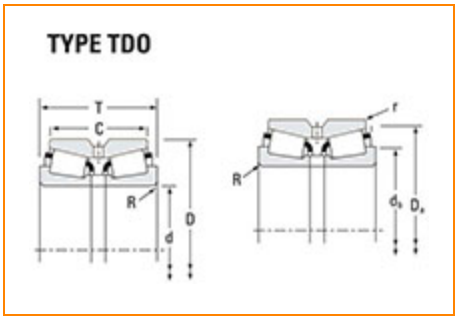
Part Number M249749 - M249710CD, Tapered Roller Bearings - TDO (Tapered Double Outer) Imperial

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	M249700
Cone Part Number	M249749
Cup Part Number	M249710CD
Design Units	Imperial
Bearing Weight	97.46 lb 44.205 Kg
Cage Type	Stamped Steel
Ab - Cage-Cone Frontface Clearance	0.17 in 4.3 mm
Alternate Part Name	M249749-M249710CD

Dimensions

d - Bore	10.0000 in 254.000 mm
D - Cup Outer Diameter	14.1250 in 358.775 mm
B - Cone Width	2.8125 in 71.438 mm
C - Double Cup Width	4.6250 in 117.475 mm
T - Bearing Width across Cones	5.9999 in 152.397 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.14 in 3.600 mm
r - Cup Frontface "To Clear" Radius[2]	0.06 in 1.5 mm
db - Cone Backface Backing Diameter	10.79 in 274.10 mm
Da - Cup Frontface Backing Diameter	13.52 in 343.41 mm
Aa - Cage-Cone Backface Clearance	0.28 in 7.1 mm

Basic Load Ratings

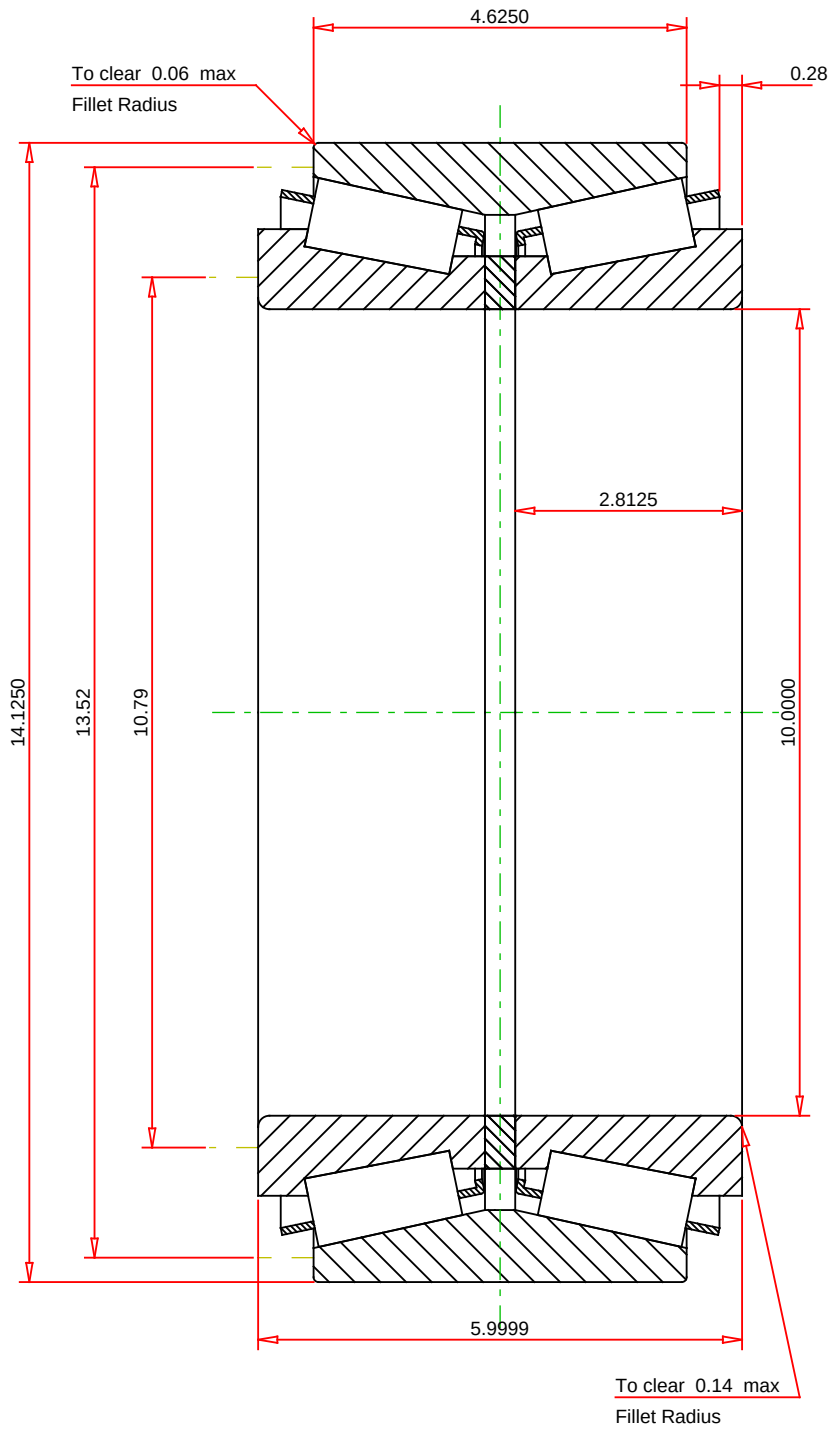
C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]	53300 lbf 237000 N

C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	358000 lbf 1590000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	92800 lbf 413000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	30300 lbf 135000 N

Factors

K - Factor[7]	1.76
e - ISO Factor[8]	0.33
Y1 - ISO Factor[9]	2.03
Y2 - ISO Factor[10]	3.02
Cg - Geometry Factor[11]	0.153

[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	0.33	
ISO Factor - Y1	2.03	
ISO Factor - Y2	3.02	
Bearing Weight	97.46	lb
Number of Rollers Per Row	33	

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

M249749 - M249710CD
TDO BEARING ASSEMBLY

K Factor	1.76	
Dynamic Radial Rating - C90	53300	lbf
Dynamic Thrust Rating - Ca90	30300	lbf
Dynamic Radial Rating - C90(2)	92800	lbf
Radial Rating - C1	358000	lbf

FOR DISCUSSION ONLY