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 M244249 - M244210CD, 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	M244200
Cone Part Number	M244249
Cup Part Number	M244210CD
Design Units	Imperial
Bearing Weight	65.33 lb 29.634 Kg
Cage Type	Stamped Steel
Ab - Cage-Cone Frontface Clearance	0.14 in 3.6 mm

Dimensions

d - Bore	8.6875 in 220.663 mm
D - Cup Outer Diameter	12.3750 in 314.325 mm
B - Cone Width	2.4375 in 61.913 mm
C - Double Cup Width	4.1875 in 106.363 mm
T - Bearing Width across Cones	5.1874 in 131.760 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	9.65 in 245.10 mm
Da - Cup Frontface Backing Diameter	11.84 in 300.70 mm
Aa - Cage-Cone Backface Clearance	0.17 in 4.3 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]	40500 lbf 180000 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	272000 lbf 1210000 N

C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	70500 lbf 314000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	23100 lbf 103000 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
G1 - Heat Generation Factor (Roller-Raceway)[11]	1150
G2 - Heat Generation Factor (Rib-Roller End)	141
Cg - Geometry Factor[12]	0.136

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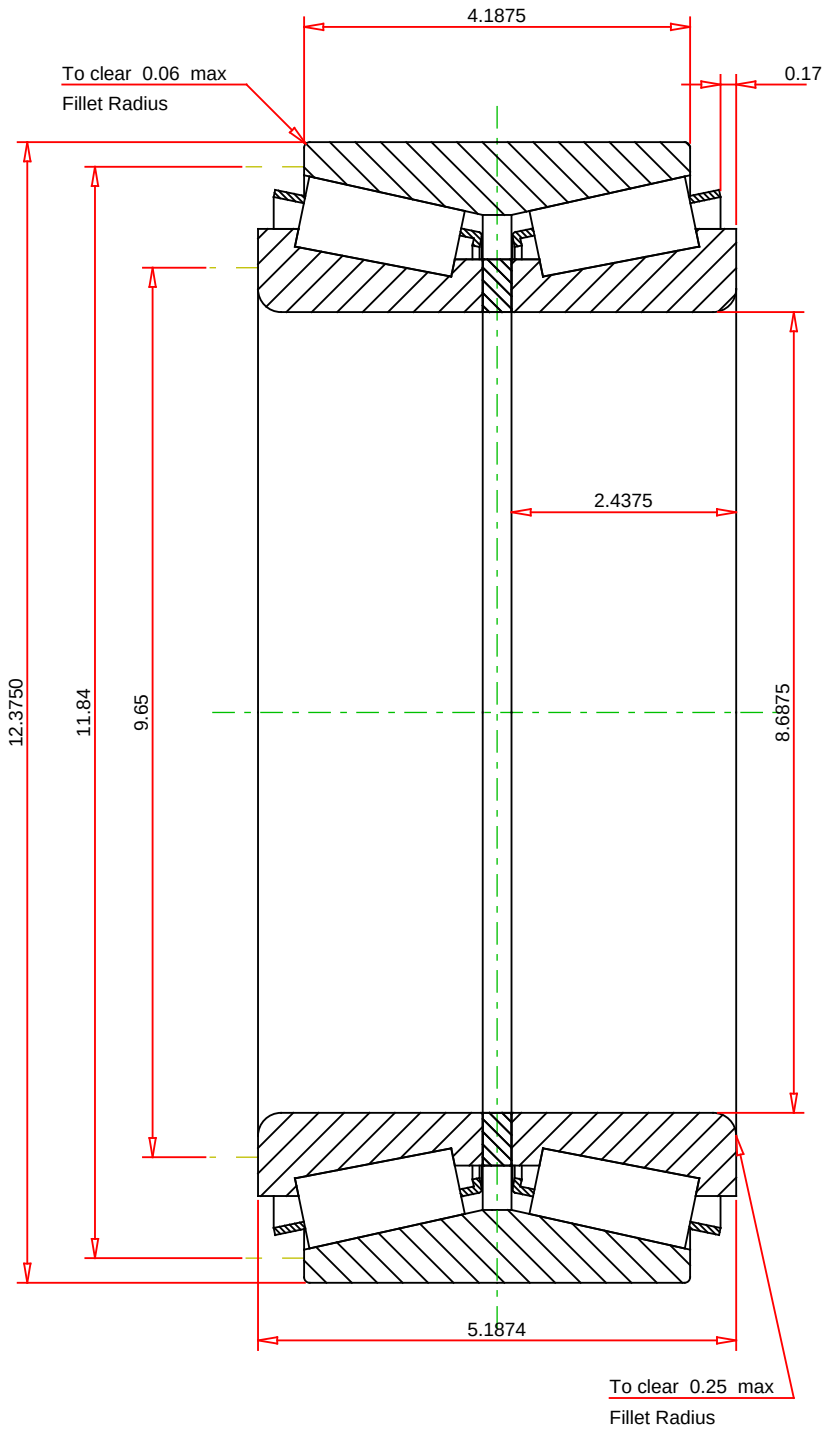
[10] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[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	0.7	
ISO Factor - Y1	0.97	
ISO Factor - Y2	1.44	
Bearing Weight	65.33	lb
Number of Rollers Per Row	32	

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

M244249 - M244210CD
TDO BEARING ASSEMBLY

K Factor	1.76	
Dynamic Radial Rating - C90	40500	lbf
Dynamic Thrust Rating - Ca90	23100	lbf
Dynamic Radial Rating - C90(2)	70500	lbf
Radial Rating - C1	272000	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