The Timken Company
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Timken Part Number LM251649NW - LM251610D, 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	LM251600
Cone Part Number	LM251649NW
Cup Part Number	LM251610D
Design Units	Imperial
Bearing Weight	20.100 lb
Cage Type	Stamped Steel
Ab - Cage-Cone Frontface Clearance	0 in 0 mm

Dimensions

d - Bore	10.5 in 266.7 mm
D - Cup Outer Diameter	13.875 in 352.425 mm
B - Cone Width	2.125 in 53.975 mm
C - Double Cup Width	3.25 in 82.55 mm
T - Bearing Width across Cones	4.25 in 107.95 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.25 in 6.35 mm
r - Cup Frontface "To Clear" Radius[2]	0.06 in 1.524 mm
db - Cone Backface Backing Diameter	11.46 in 291.084 mm
Da - Cup Frontface Backing Diameter	13.39 in 340.106 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]	33000 lbf 146850 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	221000 lbf 983450 N

C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	57400 lbf 255430 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	18000 lbf 80100 N

Factors

K - Factor[7]	1.83
e - ISO Factor[8]	0.32
Y1 - ISO Factor[9]	2.12
Y2 - ISO Factor[10]	3.15
G1 - Heat Generation Factor (Roller-Raceway)[11]	1402
G2 - Heat Generation Factor (Rib-Roller End)	234

[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.

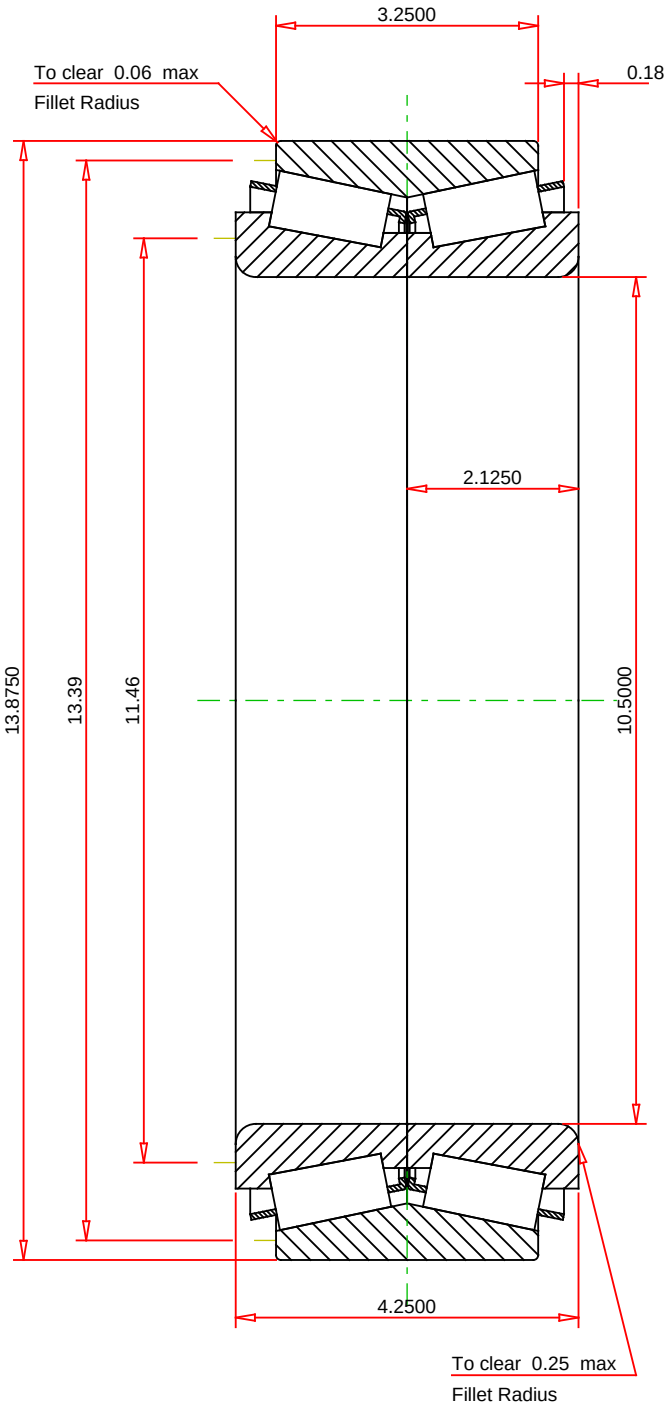
[8] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[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.



IMPERIAL UNITS

ISO Factor - e	0.32	
ISO Factor - Y1	2.12	
ISO Factor - Y2	3.15	
Bearing Weight	20.1	lb
Number of Rollers Per Row	41	

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM251649NW - LM251610D
TDO BEARING ASSEMBLY

K Factor	1.83	
Dynamic Radial Rating - C90	33000	lbf
Dynamic Thrust Rating - Ca90	18000	lbf
Dynamic Radial Rating - C90(2)	57400	lbf
Radial Rating - C1	221000	lbf

FOR DISCUSSION ONLY