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 L305649 - L305610D, 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	L305600
Cone Part Number	L305649
Cup Part Number	L305610D
Design Units	Imperial
Bearing Weight	1.67 lb 0.755 Kg
Cage Type	Stamped Steel
Ab - Cage-Cone Frontface Clearance	0.1 in 2.5 mm

Dimensions

d - Bore	2 in 50.8 mm
D - Cup Outer Diameter	3.1875 in 80.963 mm
B - Cone Width	0.7188 in 18.258 mm
C - Double Cup Width	1.3750 in 34.925 mm
T - Bearing Width across Cones	1.6875 in 42.863 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.06 in 1.5 mm
r - Cup Frontface "To Clear" Radius[2]	0.03 in 0.8 mm
db - Cone Backface Backing Diameter	2.28 in 57.90 mm
Da - Cup Frontface Backing Diameter	3.05 in 77.47 mm
Aa - Cage-Cone Backface Clearance	0 in 0 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]	3540 lbf 15800 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	23800 lbf 106000 N

C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	6170 lbf 27400 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	2160 lbf 9590 N

Factors

K - Factor[7]	1.64
e - ISO Factor[8]	0.75
Y1 - ISO Factor[9]	0.90 1.33
Y2 - ISO Factor[10]	1.33
Cg - Geometry Factor[11]	0.0841

[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.

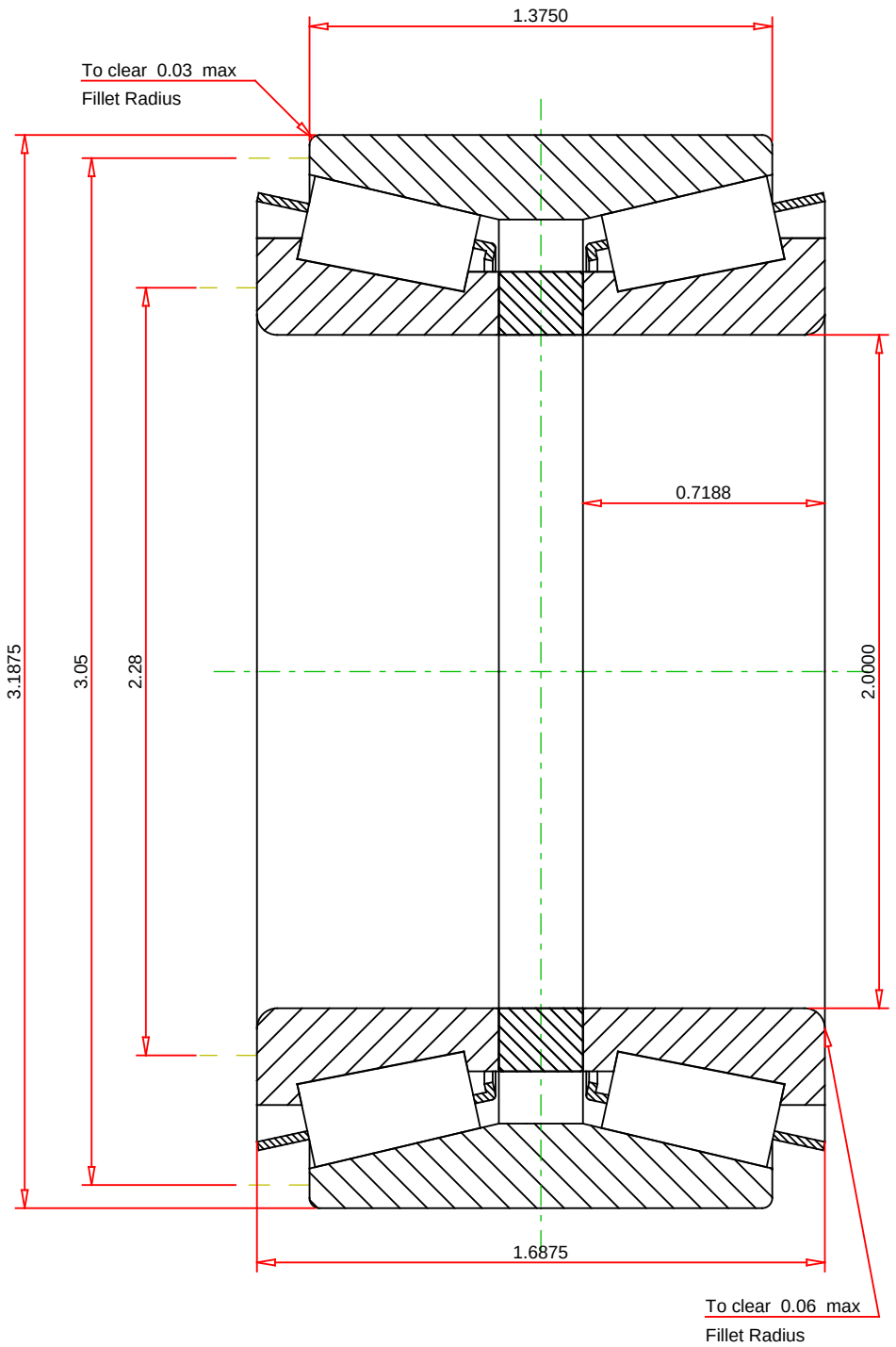
[7] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[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	0.75	
ISO Factor - Y1	0.9	
ISO Factor - Y2	1.33	
Bearing Weight	1.67	lb
Number of Rollers Per Row	27	

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

L305649 - L305610D
TDO BEARING ASSEMBLY

K Factor	1.64	
Dynamic Radial Rating - C90	3540	lbf
Dynamic Thrust Rating - Ca90	2160	lbf
Dynamic Radial Rating - C90(2)	6170	lbf
Radial Rating - C1	23800	lbf

FOR DISCUSSION ONLY