The Timken Company
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Timken Part Number HM256849 - HM256810CD, 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	HM256800
Cone Part Number	HM256849
Cup Part Number	HM256810CD
Design Units	Imperial
Bearing Weight	158.42 lb 71.860 Kg
Cage Type	Pin-Type
Ab - Cage-Cone Frontface Clearance	0.2 in 5.1 mm

Dimensions

d - Bore	11.8125 in 300.038 mm
D - Cup Outer Diameter	16.6250 in 422.275 mm
B - Cone Width	3.2500 in 82.550 mm
C - Double Cup Width	5.3750 in 136.525 mm
T - Bearing Width across Cones	6.8750 in 174.625 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	12.91 in 327.90 mm
Da - Cup Frontface Backing Diameter	15.95 in 405.10 mm
Aa - Cage-Cone Backface Clearance	0.22 in 5.6 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]	75600 lbf 336000 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	508000 lbf 2260000 N

C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	132000 lbf 586000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	43600 lbf 194000 N

Factors

K - Factor[7]	1.73
e - ISO Factor[8]	0.71
Y1 - ISO Factor[9]	0.95 1.42
Y2 - ISO Factor[10]	1.42
Cg - Geometry Factor[11]	0.178

[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.

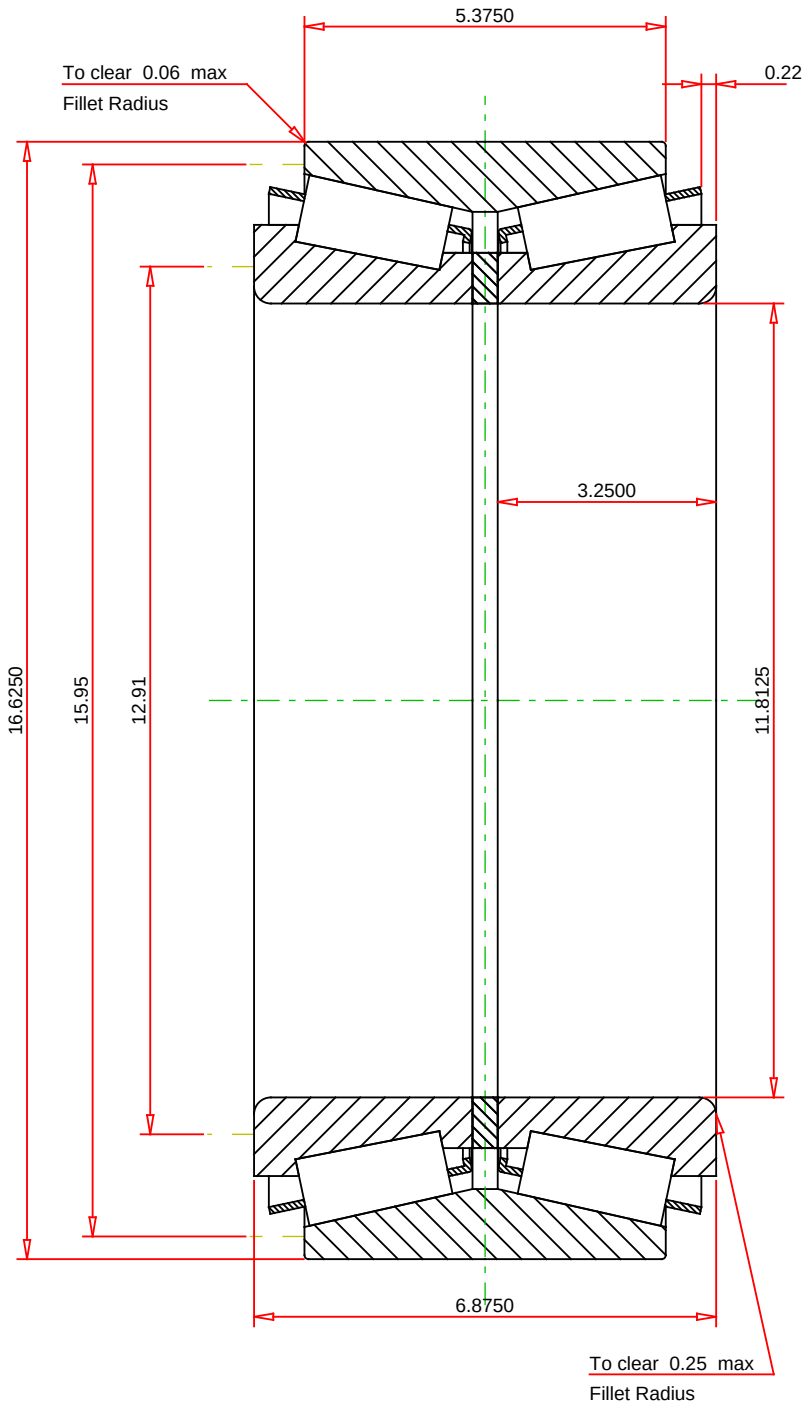
[7] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[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	0.71	
ISO Factor - Y1	0.95	
ISO Factor - Y2	1.42	
Bearing Weight	158.42	lb
Number of Rollers Per Row	36	

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HM256849 - HM256810CD
TDO BEARING ASSEMBLY

K Factor	1.73	
Dynamic Radial Rating - C90	75600	lbf
Dynamic Thrust Rating - Ca90	43600	lbf
Dynamic Radial Rating - C90(2)	132000	lbf
Radial Rating - C1	508000	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