The Timken Company
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Timken Part Number HM127446 - HM127415XD, 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	HM127400
Cone Part Number	HM127446
Cup Part Number	HM127415XD
Design Units	Imperial
Bearing Weight	37.230 lb 16.888 Kg
Cage Type	Stamped Steel
Ab - Cage-Cone Frontface Clearance	0.07 in 1.8 mm

Dimensions

d - Bore	5.1870 in 131.750 mm
D - Cup Outer Diameter	8.1875 in 207.963 mm
B - Cone Width	2.2500 in 57.150 mm
C - Double Cup Width	6.0000 in 152.400 mm
T - Bearing Width across Cones	5.7600 in 146.304 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]	0.04 in 1.0 mm
db - Cone Backface Backing Diameter	5.67 in 144 mm
Da - Cup Frontface Backing Diameter	7.80 in 198.10 mm
Aa - Cage-Cone Backface Clearance	0.06 in 1.5 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]	24500 lbf 109000 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	164000 lbf 732000 N

C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	42600 lbf 190000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	11100 lbf 49300 N

Factors

K - Factor[7]	2.21
e - ISO Factor[8]	0.55
Y1 - ISO Factor[9]	1.24 1.84
Y2 - ISO Factor[10]	1.84
G1 - Heat Generation Factor (Roller-Raceway)[11]	423
G2 - Heat Generation Factor (Rib-Roller End)	85.4
Cg - Geometry Factor[12]	0.116

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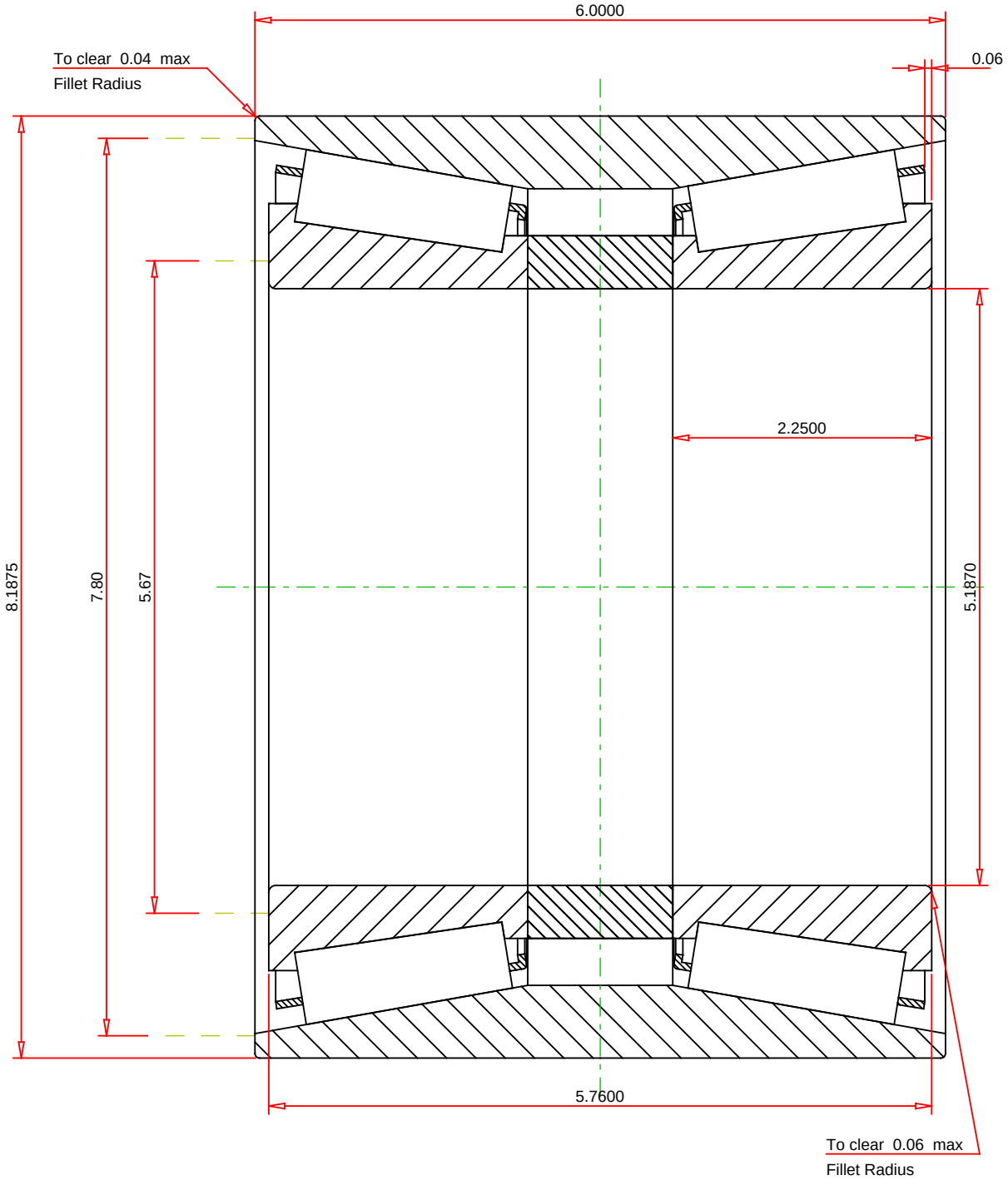
[10] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[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	0.55	
ISO Factor - Y1	1.24	
ISO Factor - Y2	1.84	
Bearing Weight	37.23	lb
Number of Rollers Per Row	23	

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HM127446 - HM127415XD
TDO BEARING ASSEMBLY

K Factor	2.21	
Dynamic Radial Rating - C90	24500	lbf
Dynamic Thrust Rating - Ca90	11100	lbf
Dynamic Radial Rating - C90(2)	42600	lbf
Radial Rating - C1	164000	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