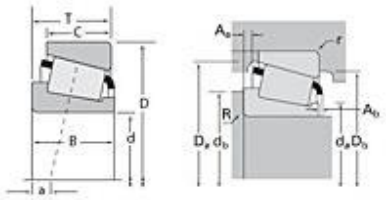
TIMKEN

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 HM88649 - HM88610, Tapered Roller Bearings - TS (Tapered Single) Imperial

This is the most basic and most widely used type of tapered roller bearing. It consists of two main separable parts: the cone (inner ring) assembly and the cup (outer ring). It is typically mounted in opposing pairs on a shaft.





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Specifications

Series	HM88600
Cone Part Number	HM88649
Cup Part Number	HM88610
Design Units	Imperial
Bearing Weight	1.10 lb 0.500 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	1.3750 in 34.925 mm
D - Cup Outer Diameter	2.8438 in 72.233 mm

B - Cone Width	1.0000 in 25.400 mm
C - Cup Width	0.7812 in 19.842 mm
T - Bearing Width	1.0000 in 25.400 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.090 in 2.290 mm
r - Cup Backface "To Clear" Radius[2]	0.090 in 2.29 mm
da - Cone Frontface Backing Diameter	1.68 in 42.67 mm
db - Cone Backface Backing Diameter	1.91 in 48.51 mm
Da - Cup Frontface Backing Diameter	2.74 in 69.10 mm
Db - Cup Backface Backing Diameter	2.36 in 59.94 mm
Ab - Cage-Cone Frontface Clearance	0.1 in 2.5 mm
Aa - Cage-Cone Backface Clearance	0.04 in 1 mm
a - Effective Center Location[3]	-0.18 in -4.60 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	4480 lbf 19900 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	17300 lbf 76800 N
C0 - Static Radial Rating	21200 lbf 94200 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	4180 lbf 18600 N

Factors

K - Factor[7]	1.07
e - ISO Factor[8]	0.55
Y - ISO Factor[9]	1.1
G1 - Heat Generation Factor (Roller-Raceway)	23.4
G2 - Heat Generation Factor (Rib-Roller End)	10.9
Cg - Geometry Factor	0.0822

[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] Negative value indicates effective center inside cone backface.
[4] 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.
[5] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.
[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.
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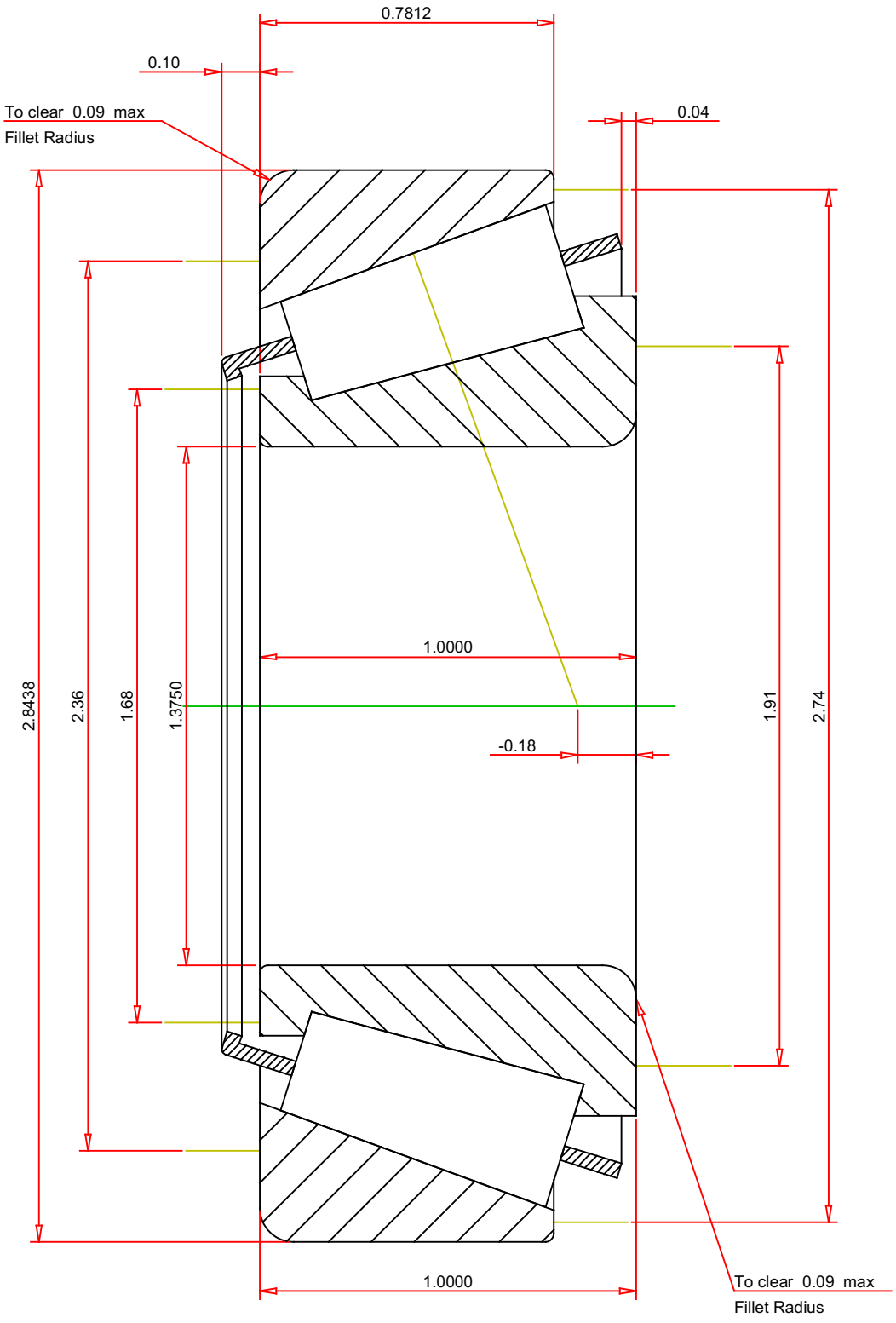

IMPERIAL UNITS

ISO Factor - e	0.55	
ISO Factor - Y	1.1	
Bearing Weight	1.1	lb
Number of Rollers Per Row	17	
Effective Center Location	-0.18	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HM88649 - HM88610
TS BEARING ASSEMBLY

K Factor	1.07	
Dynamic Radial Rating - C90	4480	lbf
Dynamic Thrust Rating - Ca90	4180	lbf
Static Radial Rating - C0	21200	lbf
Dynamic Radial Rating - C1	17300	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