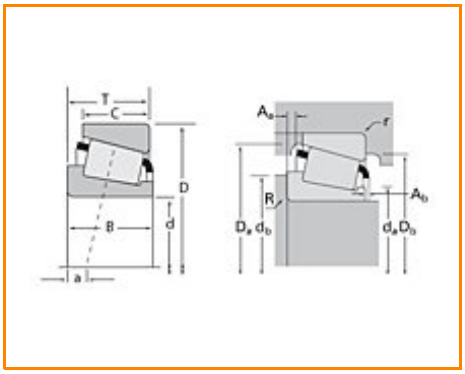
The Timken Company
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Timken Part Number HM88630 - HM88610, Tapered Roller Bearings - TS (Tapered Single) Imperial

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.





Specifications | Dimensions | Abutment and Fillet Dimensions | Basic Load Ratings | Factors

Specifications

Series	HM88600
Cone Part Number	HM88630
Cup Part Number	HM88610
Design Units	Imperial
Bearing Weight	0.600 Kg 1.30 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	25.400 mm 1.0000 in
D - Cup Outer Diameter	72.233 mm 2.8438 in
B - Cone Width	25.400 mm 1.0000 in
C - Cup Width	19.842 mm 0.7812 in
T - Bearing Width	25.400 mm 1.0000 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.760 mm 0.03 in
r - Cup Backface "To Clear" Radius[2]	2.29 mm 0.090 in
da - Cone Frontface Backing Diameter	39.62 mm 1.56 in
db - Cone Backface Backing Diameter	39.62 mm 1.56 in
Da - Cup Frontface Backing Diameter	69.10 mm 2.74 in
Db - Cup Backface Backing Diameter	59.94 mm 2.36 in
Ab - Cage-Cone Frontface Clearance	2.5 mm 0.1 in
Aa - Cage-Cone Backface Clearance	1 mm 0.04 in
a - Effective Center Location[3]	-4.6 mm -0.18 in

Basic Load Ratings

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

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.

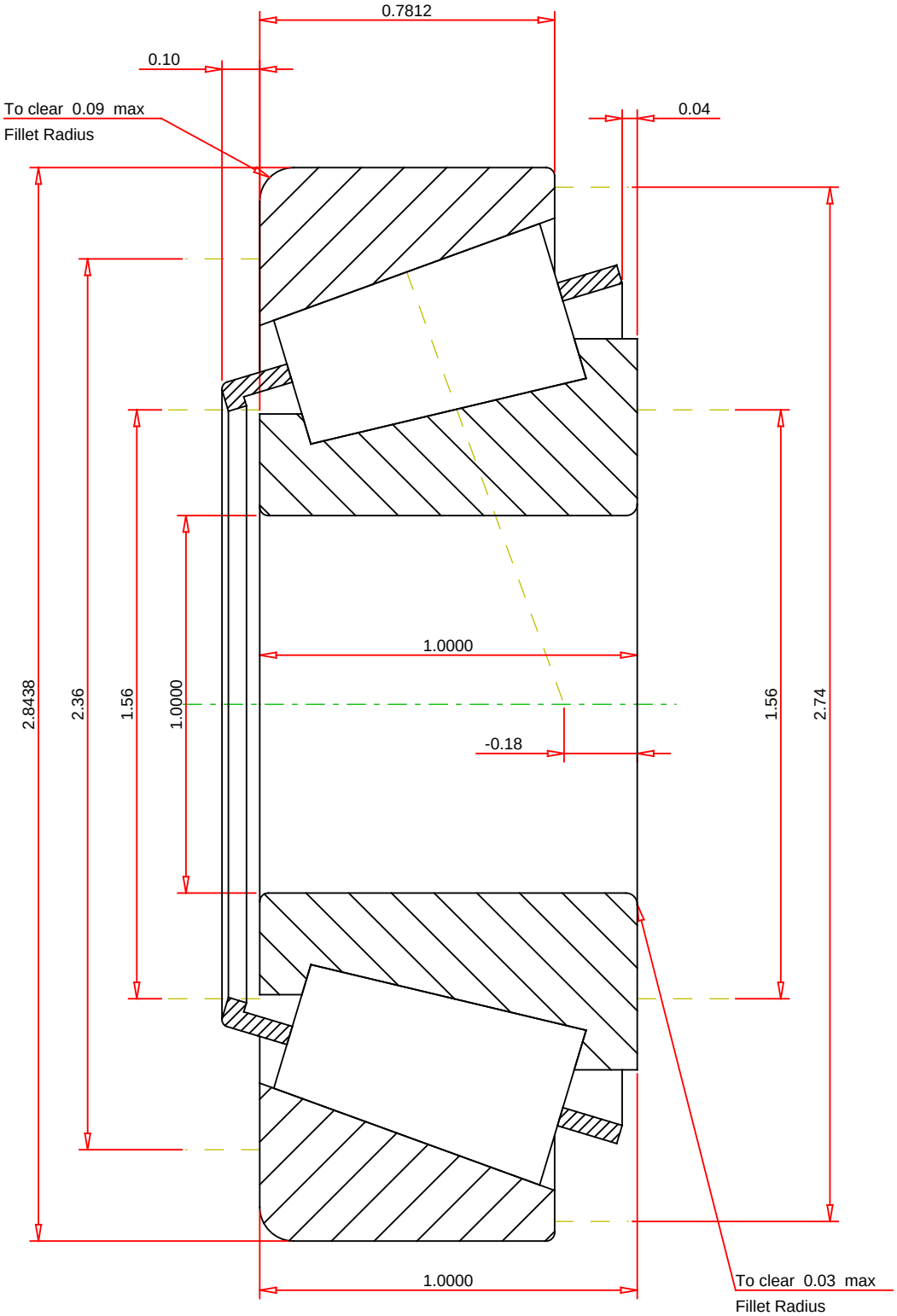
[6] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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

[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.



IMPERIAL UNITS

ISO Factor - e	0.55	
ISO Factor - Y	1.1	
Bearing Weight	1.3	lb
Number of Rollers Per Row	17	
Effective Center Location	-0.18	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HM88630 - HM88610
TS BEARING ASSEMBLY

K Factor	1.07	
Dynamic Radial Rating - C90	19900	lbf
Dynamic Thrust Rating - Ca90	18600	lbf
Static Radial Rating - C0	94200	lbf
Dynamic Radial Rating - C1	76800	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