TIMKEN

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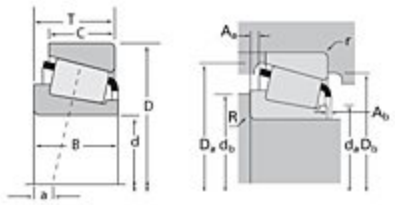
Timken Part Number HM88547 - HM88510, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	HM88500
Cone Part Number	HM88547
Cup Part Number	HM88510
Design Units	Imperial
Bearing Weight	0.600 Kg 1.30 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	33.338 mm 1.3125 in
D - Cup Outer Diameter	73.025 mm 2.8750 in

B - Cone Width	27.783 mm 1.0938 in
C - Cup Width	23.020 mm 0.9063 in
T - Bearing Width	29.370 mm 1.1563 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]	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	42.67 mm 1.68 in
db - Cone Backface Backing Diameter	45.47 mm 1.79 in
Da - Cup Frontface Backing Diameter	71.10 mm 2.80 in
Db - Cup Backface Backing Diameter	58.93 mm 2.32 in
Ab - Cage-Cone Frontface Clearance	2.5 mm 0.1 in
Aa - Cage-Cone Backface Clearance	1.5 mm 0.06 in
a - Effective Center Location[3]	-5.60 mm -0.22 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	26700 N 6010 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	103000 N 23200 lbf
C0 - Static Radial Rating	111000 N 24900 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	25000 N 5620 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)	26.3
G2 - Heat Generation Factor (Rib-Roller End)	11.7
Cg - Geometry Factor	0.0857

[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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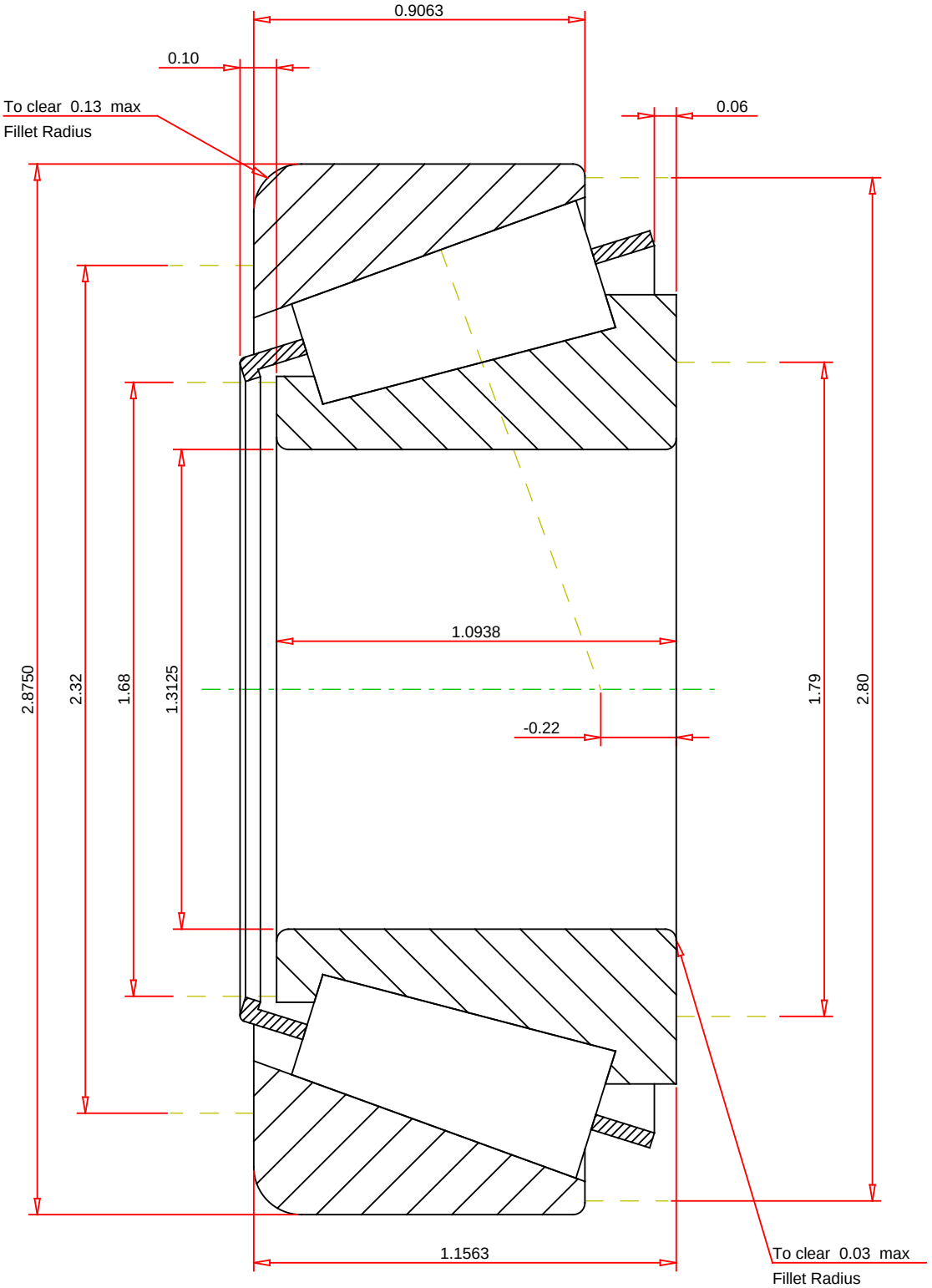

IMPERIAL UNITS

ISO Factor - e	0.55	
ISO Factor - Y	1.1	
Bearing Weight	1.3	lb
Number of Rollers Per Row	18	
Effective Center Location	-0.22	inch

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THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HM88547 - HM88510
TS BEARING ASSEMBLY

K Factor	1.07	
Dynamic Radial Rating - C90	26700	lbf
Dynamic Thrust Rating - Ca90	25000	lbf
Static Radial Rating - C0	111000	lbf
Dynamic Radial Rating - C1	103000	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