The Timken Company
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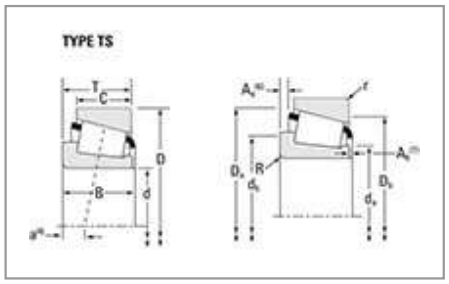
Part Number HM88649A - HM88613, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	HM88649A
Cup Part Number	HM88613
Design Unit	Inch
Bearing Weight	1.2 lb 0.5 Kg
Cage Material	Stamped Steel

Dimensions

Bore	1 3/8 in 34.925 mm

D - Cup Outer Diameter	2.8750 in 73.025 mm
B - Cone Width	1.0000 in 25.400 mm
C - Cup Width	0.8442 in 21.443 mm
T - Bearing Width	1.0630 in 27.000 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.14 in 3.56 mm
r - Cup Backface "To Clear" Radius[2]	0.06 in 1.52 mm
da - Cone Frontface Backing Diameter	1.69 in 43 mm
db - Cone Backface Backing Diameter	2.01 in 51 mm
Da - Cup Frontface Backing Diameter	2.74 in 69.10 mm
Db - Cup Backface Backing Diameter	2.44 in 61.98 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 -4.6 mm

Basic Load Ratings

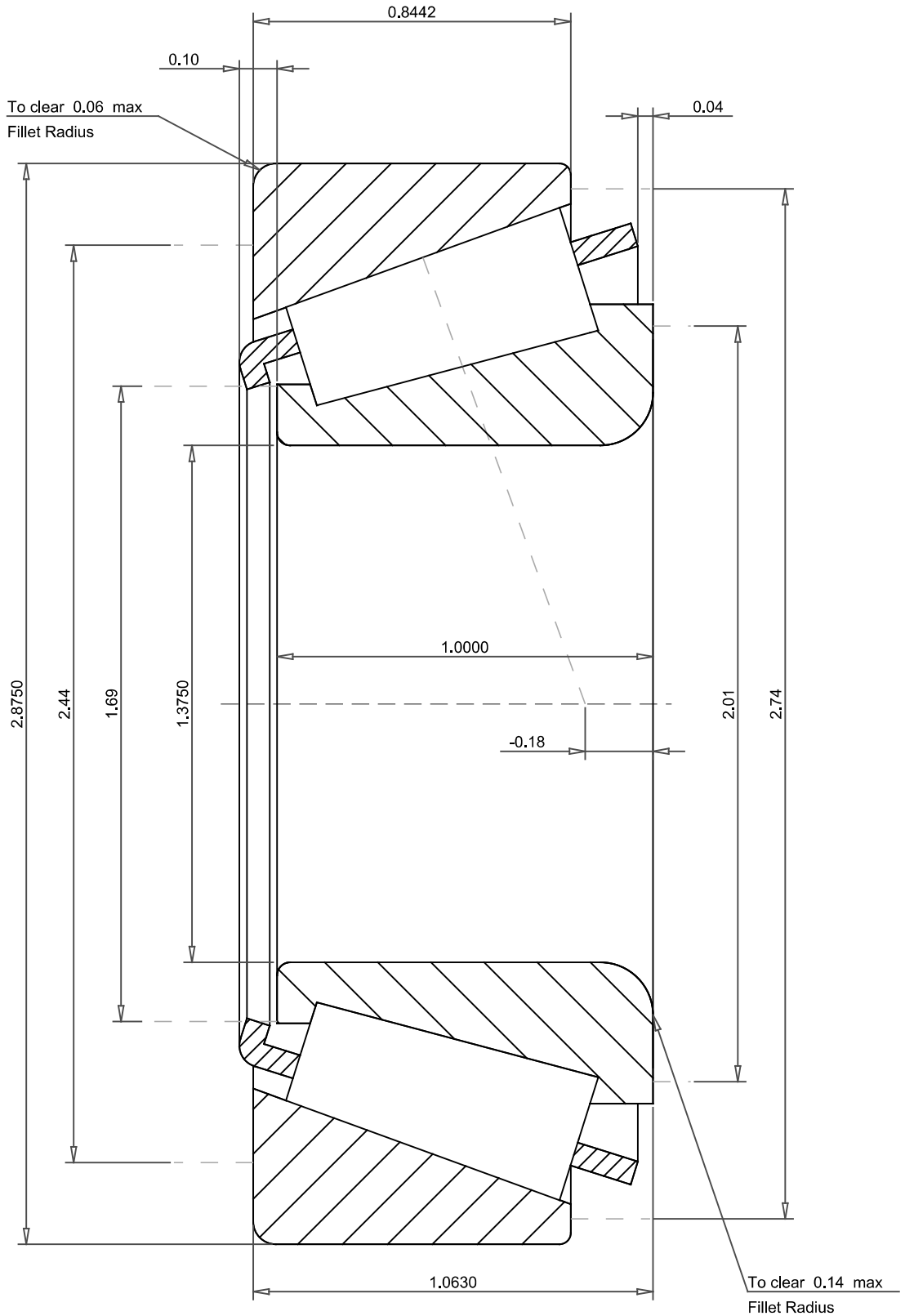
C90 - Dynamic Radial Rating (90 million revolutions)[4]	4480 lbf 19900 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	17300 lbf 76800 N
C0 - Static Radial Rating	21200 lbf 94200 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	4180 lbf 18600 N

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)	9.4
Cg - Geometry Factor[10]	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 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.
[5] Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.
[6] Based on 90×10^6 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] Geometry constant for Lubrication Life Adjustment Factor a3l.



IMPERIAL UNITS

ISO Factor - e	0.55	
ISO Factor - Y	1.1	
Bearing Weight	1.2	lb
Number of Rollers Per Row	17	
Effective Center Location	-0.18	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HM88649A - HM88613

Tapered Roller Bearings - TS (Tapered Single)
Imperial

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

FOR DISCUSSION ONLY