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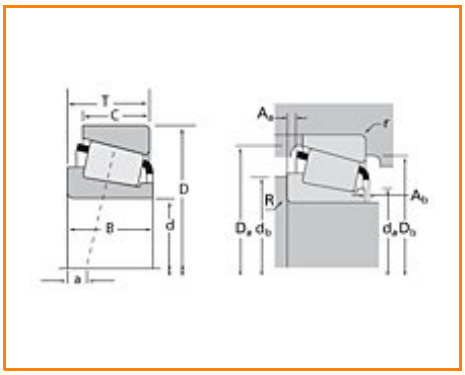
Timken Part Number 857 - 854, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	855
Cone Part Number	857
Cup Part Number	854
Design Units	Imperial
Bearing Weight	7.40 Kg 16.400 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	92.075 mm 3.6250 in

D - Cup Outer Diameter	190.5 mm 7.5 in
B - Cone Width	57.531 mm 2.2650 in
C - Cup Width	44.450 mm 1.7500 in
T - Bearing Width	57.150 mm 2.2500 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	7.870 mm 0.310 in
r - Cup Backface "To Clear" Radius[2]	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	105.92 mm 4.88 in
db - Cone Backface Backing Diameter	120.90 mm 4.76 in
Da - Cup Frontface Backing Diameter	174.00 mm 6.86 in
Db - Cup Backface Backing Diameter	169.93 mm 6.69 in
Ab - Cage-Cone Frontface Clearance	1.5 mm 0.06 in
Aa - Cage-Cone Backface Clearance	3.8 mm 0.15 in
a - Effective Center Location[3]	-15.2 mm -0.6 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	119000 N 26700 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	458000 N 103000 lbf
C0 - Static Radial Rating	630000 N 142000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	68000 N 15300 lbf

Factors

K - Factor[7]	1.74
e - ISO Factor[8]	0.33
Y - ISO Factor[9]	1.79
G1 - Heat Generation Factor (Roller-Raceway)	264
G2 - Heat Generation Factor (Rib-Roller End)	44.9
Cg - Geometry Factor	0.107

[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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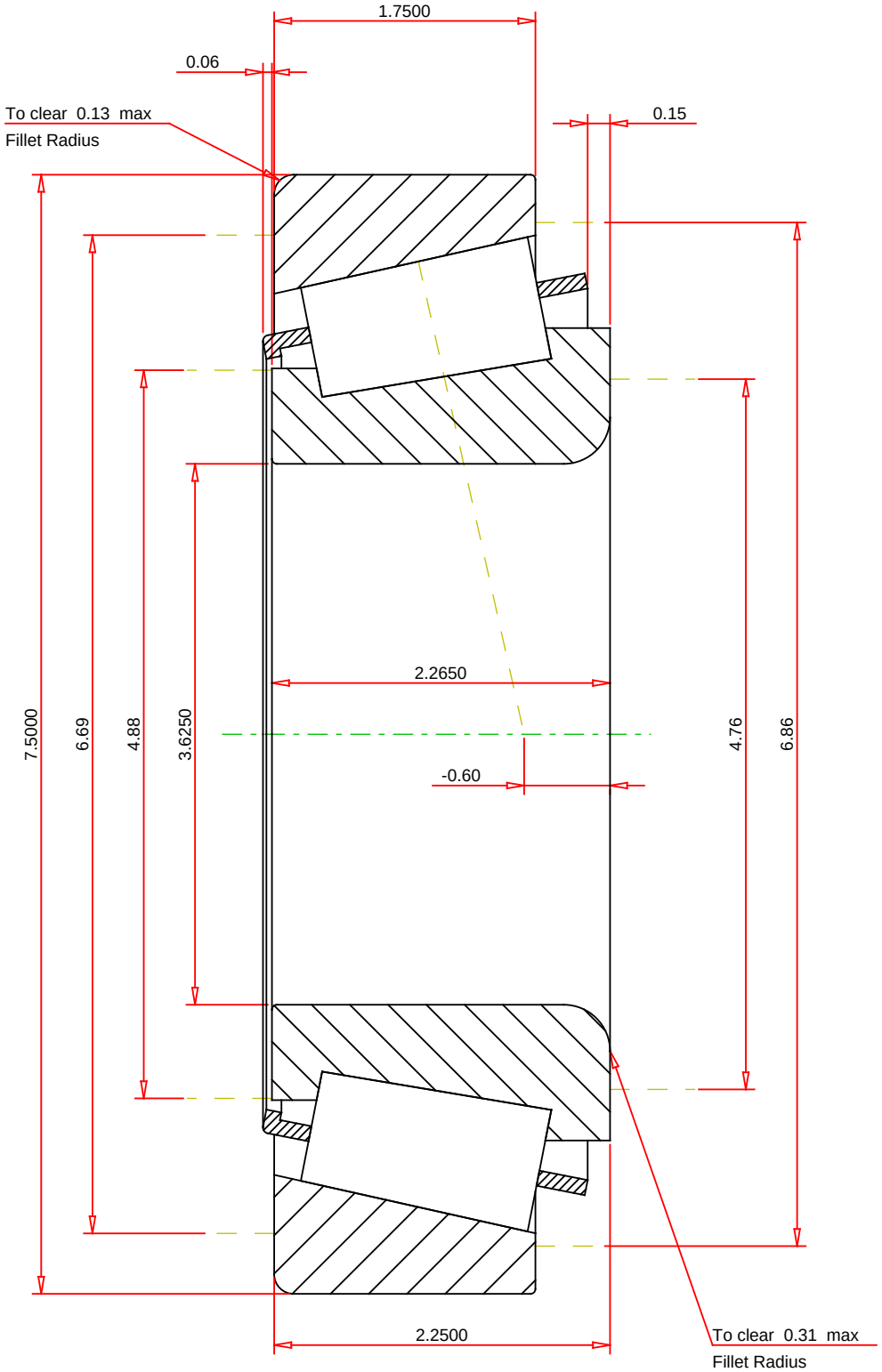

IMPERIAL UNITS

ISO Factor - e	0.33	
ISO Factor - Y	1.79	
Bearing Weight	16.4	lb
Number of Rollers Per Row	19	
Effective Center Location	-0.6	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

857 - 854
TS BEARING ASSEMBLY

K Factor	1.74	
Dynamic Radial Rating - C90	119000	lbf
Dynamic Thrust Rating - Ca90	68000	lbf
Static Radial Rating - C0	630000	lbf
Dynamic Radial Rating - C1	458000	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