



The Timken Company

4500 Mt Pleasant St. NW

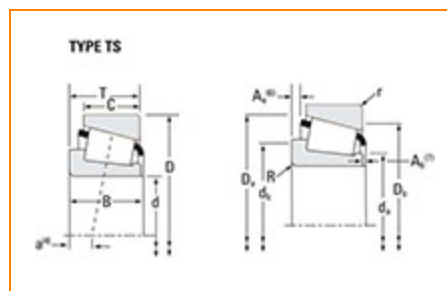
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Timken Part Number 759 - 752, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	755
Cone Part Number	759
Cup Part Number	752
Design Units	Imperial
Bearing Weight	4.1 Kg 9 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	88.900 mm 3.5000 in
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D - Cup Outer Diameter	161.925 mm 6.3750 in
B - Cone Width	48.260 mm 1.9000 in
C - Cup Width	38.100 mm 1.5000 in
T - Bearing Width	47.625 mm 1.8750 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius²	3.3 mm 0.130 in
da - Cone Frontface Backing Diameter	99.06 mm 4.61 in
db - Cone Backface Backing Diameter	105.92 mm 4.17 in
Da - Cup Frontface Backing Diameter	150.88 mm 5.94 in
Db - Cup Backface Backing Diameter	144.02 mm 5.67 in
Ab - Cage-Cone Frontface Clearance	1.8 mm 0.07 in
Aa - Cage-Cone Backface Clearance	2.8 mm 0.11 in
a - Effective Center Location³	-11.9 mm -0.47 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	19100 lbf 84800 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	73600 lbf 327000 N
C0 - Static Radial Rating	99200 lbf 441000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	11100 lbf 49500 N

Factors

K - Factor⁷	1.71
e - ISO Factor⁸	0.34
Y - ISO Factor⁹	1.76
G1 - Heat Generation Factor (Roller-Raceway)	177
G2 - Heat Generation Factor (Rib-Roller End)	29.4
Cg - Geometry Factor¹⁰	0.0945

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.

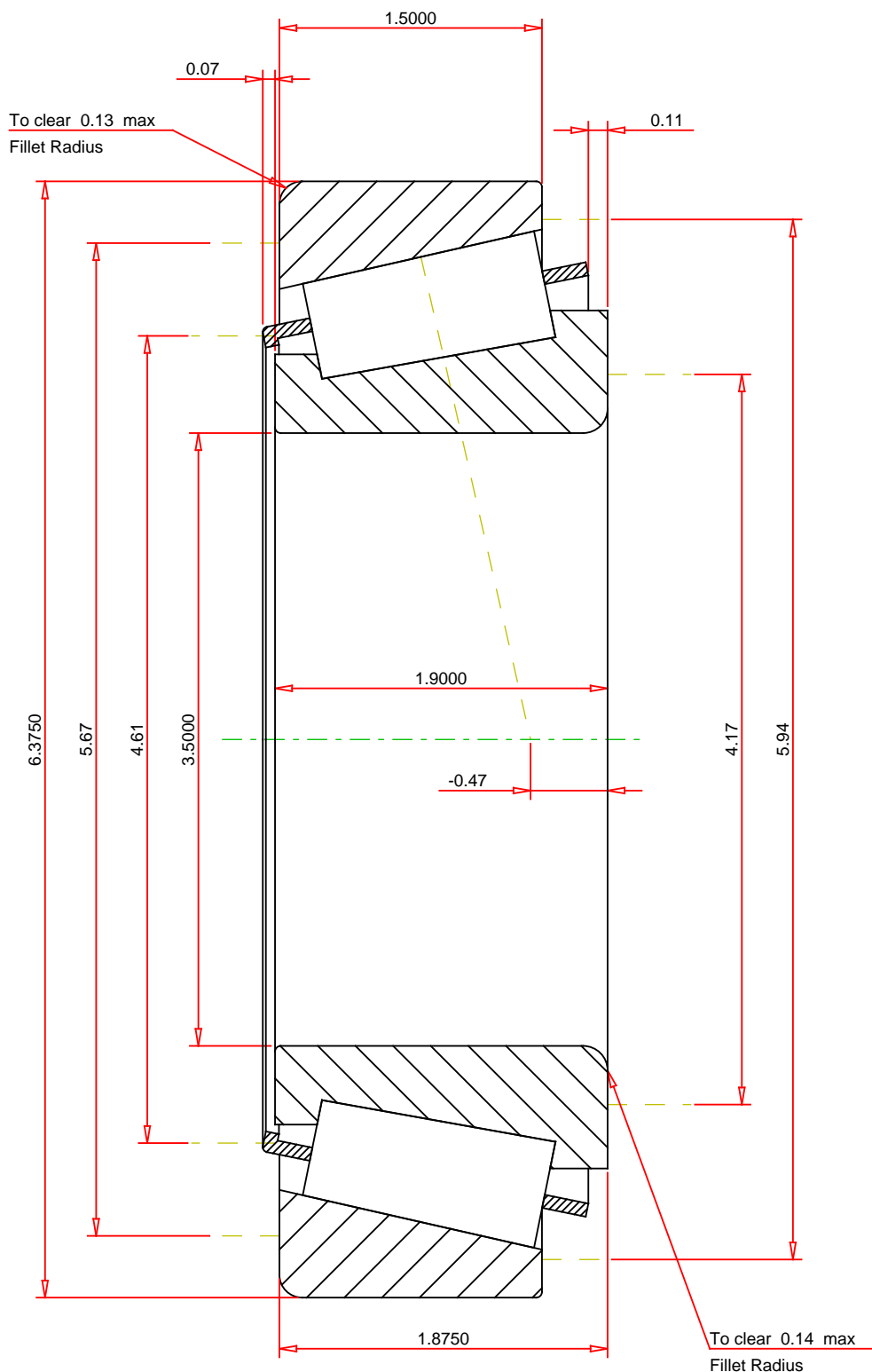
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 a_3 .



IMPERIAL UNITS

ISO Factor - e 0.34
ISO Factor - Y 1.76
Bearing Weight 9 lb
Number of Rollers Per Row 19
Effective Center Location -0.47 inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

759 - 752
TS BEARING ASSEMBLY

K Factor 1.71
Dynamic Radial Rating - C90 19100 lbf
Dynamic Thrust Rating - Ca90 11100 lbf
Static Radial Rating - C0 99200 lbf
Dynamic Radial Rating - C1 73600 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