



The Timken Company

4500 Mt Pleasant St. NW

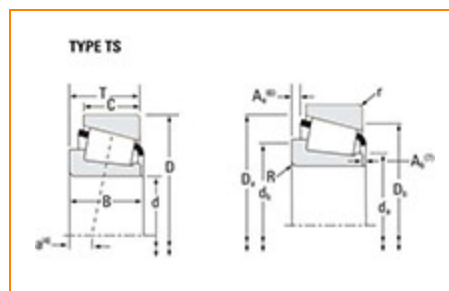
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Part Number 358 - 354A, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	355
Cone Part Number	358
Cup Part Number	354A
Design Units	Imperial
Bearing Weight	0.5 Kg 1.1 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	45.001 mm 1.7717 in
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D - Cup Outer Diameter	85.001 mm 3.3465 in
B - Cone Width	21.692 mm 0.8540 in
C - Cup Width	17.463 mm 0.6875 in
T - Bearing Width	20.638 mm 0.8125 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	1.520 mm 0.06 in
r - Cup Backface "To Clear" Radius²	1.27 mm 0.050 in
da - Cone Frontface Backing Diameter	50.04 mm 1.97 in
db - Cone Backface Backing Diameter	53.09 mm 2.09 in
Da - Cup Frontface Backing Diameter	80.77 mm 3.18 in
Db - Cup Backface Backing Diameter	76.96 mm 3.03 in
Ab - Cage-Cone Frontface Clearance	2.3 mm 0.09 in
Aa - Cage-Cone Backface Clearance	0 mm 0 in
a - Effective Center Location³	-4.8 mm -0.19 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	5650 lbf 25100 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	21800 lbf 97000 N
C0 - Static Radial Rating	20000 lbf 88800 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	2960 lbf 13200 N

Factors

K - Factor⁷	1.91
e - ISO Factor⁸	0.31
Y - ISO Factor⁹	1.96
G1 - Heat Generation Factor (Roller-Raceway)	30
G2 - Heat Generation Factor (Rib-Roller End)	12.2
Cg - Geometry Factor¹⁰	0.0732

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.

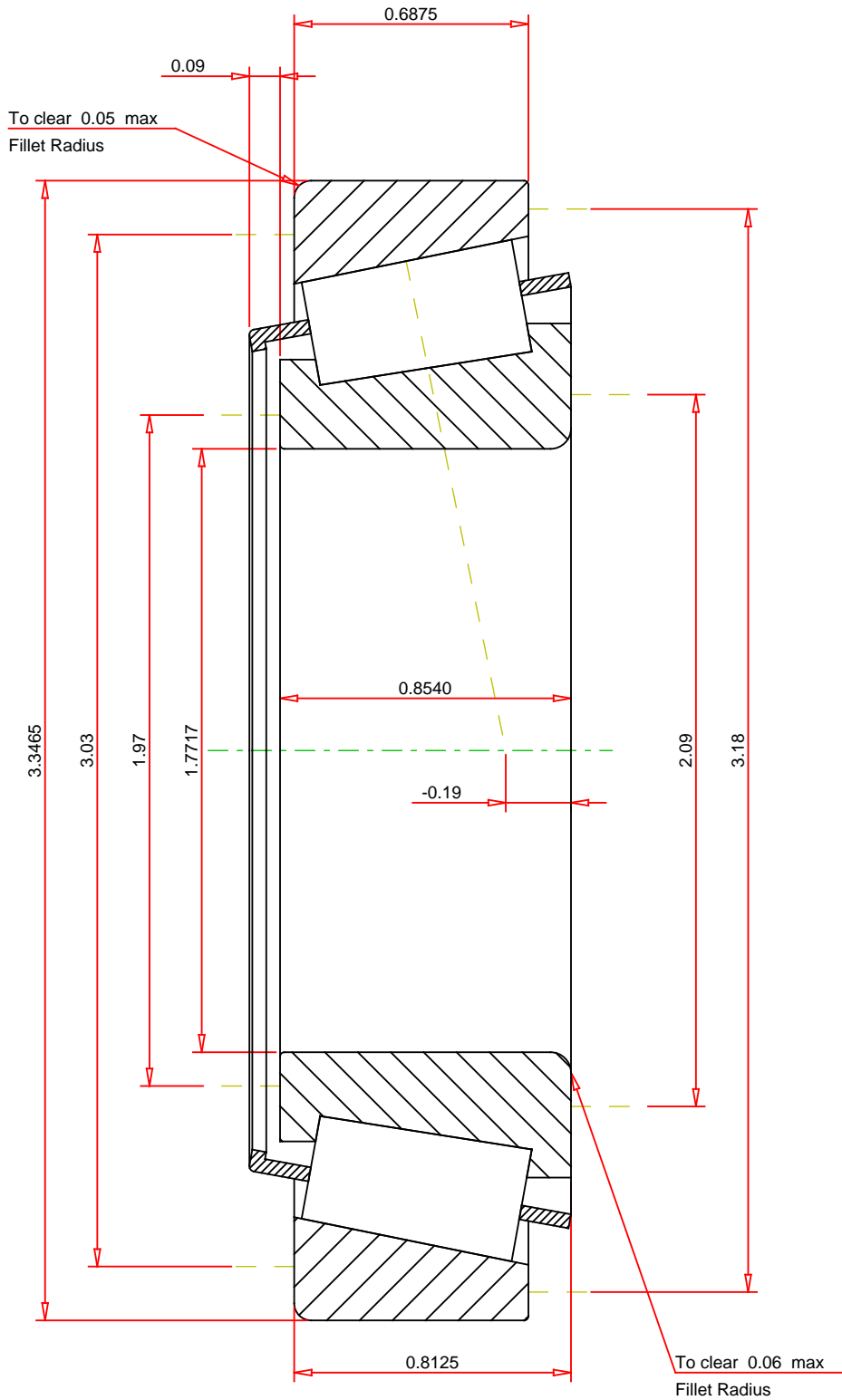
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 0.31
ISO Factor - Y 1.96
Bearing Weight 1.1 lb
Number of Rollers Per Row 16
Effective Center Location -0.19 inch



THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

358 - 354A
TS BEARING ASSEMBLY

K Factor	1.91
Dynamic Radial Rating - C90	5650 lbf
Dynamic Thrust Rating - Ca90	2960 lbf
Static Radial Rating - C0	20000 lbf
Dynamic Radial Rating - C1	21800 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