TIMKEN

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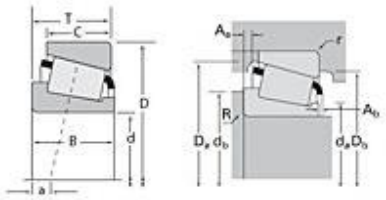
Timken Part Number 399A - 394A, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	395
Cone Part Number	399A
Cup Part Number	394A
Design Units	Imperial
Bearing Weight	1.70 lb 0.700 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	2.6875 in 68.263 mm
D - Cup Outer Diameter	4.3307 in 110.000 mm

B - Cone Width	0.8660 in 21.996 mm
C - Cup Width	0.7411 in 18.824 mm
T - Bearing Width	0.8661 in 21.999 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.090 in 2.290 mm
r - Cup Backface "To Clear" Radius[2]	0.050 in 1.27 mm
da - Cone Frontface Backing Diameter	3.54 in 73.91 mm
db - Cone Backface Backing Diameter	3.07 in 77.98 mm
Da - Cup Frontface Backing Diameter	4.15 in 105.40 mm
Db - Cup Backface Backing Diameter	3.98 in 101.09 mm
Ab - Cage-Cone Frontface Clearance	0.11 in 2.8 mm
Aa - Cage-Cone Backface Clearance	0.05 in 1.3 mm
a - Effective Center Location[3]	-0.03 in -0.80 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	5760 lbf 25600 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	22200 lbf 98900 N
C0 - Static Radial Rating	28100 lbf 125000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	3970 lbf 17600 N

Factors

K - Factor[7]	1.45
e - ISO Factor[8]	0.4
Y - ISO Factor[9]	1.49
G1 - Heat Generation Factor (Roller-Raceway)	56
G2 - Heat Generation Factor (Rib-Roller End)	21.4
Cg - Geometry Factor	0.0984

[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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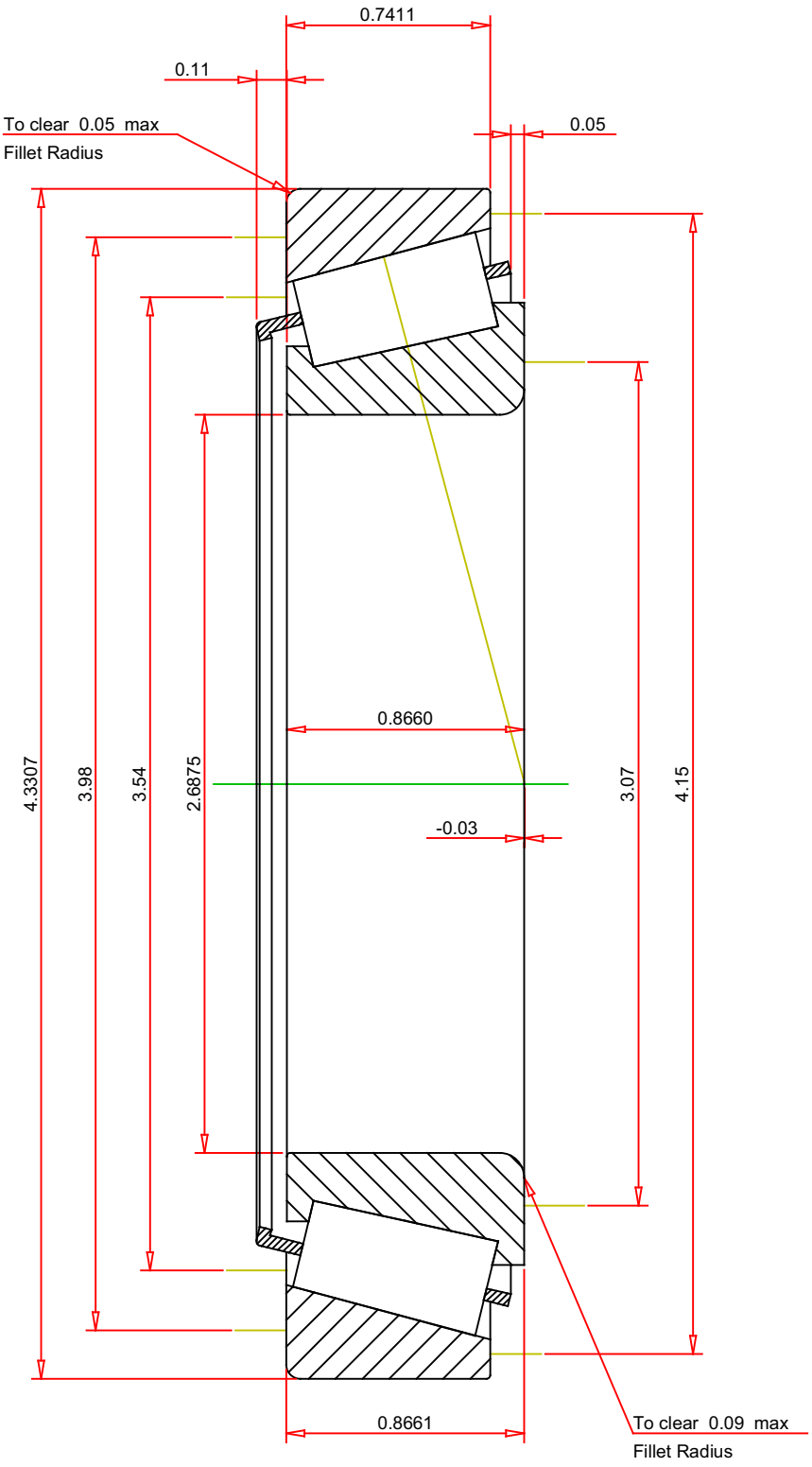

IMPERIAL UNITS

ISO Factor - e	0.4	
ISO Factor - Y	1.49	
Bearing Weight	1.7	lb
Number of Rollers Per Row	22	
Effective Center Location	-0.03	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

399A - 394A
TS BEARING ASSEMBLY

K Factor	1.45	
Dynamic Radial Rating - C90	5760	lbf
Dynamic Thrust Rating - Ca90	3970	lbf
Static Radial Rating - C0	28100	lbf
Dynamic Radial Rating - C1	22200	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