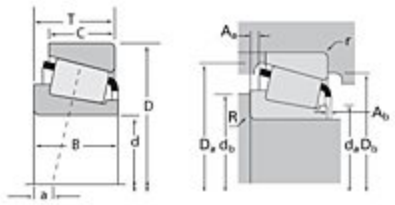
TIMKEN

The Timken Company
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Timken Part Number 44150 - 44348, 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.





Specifications | Dimensions | Abutment and Fillet Dimensions | Basic Load Ratings | Factors

Specifications

Series	44000
Cone Part Number	44150
Cup Part Number	44348
Design Units	Imperial
Bearing Weight	0.700 Kg 1.60 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	38.1 mm 1.5 in
D - Cup Outer Diameter	88.501 mm 3.4843 in

B - Cone Width	23.698 mm 0.9330 in
C - Cup Width	17.463 mm 0.6875 in
T - Bearing Width	25.400 mm 1.0000 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	2.290 mm 0.090 in
r - Cup Backface "To Clear" Radius[2]	1.52 mm 0.06 in
da - Cone Frontface Backing Diameter	50.80 mm 2.00 in
db - Cone Backface Backing Diameter	55.12 mm 2.17 in
Da - Cup Frontface Backing Diameter	84.10 mm 3.34 in
Db - Cup Backface Backing Diameter	74.93 mm 2.95 in
Ab - Cage-Cone Frontface Clearance	3.8 mm 0.15 in
Aa - Cage-Cone Backface Clearance	3 mm 0.12 in
a - Effective Center Location[3]	2.30 mm 0.09 in

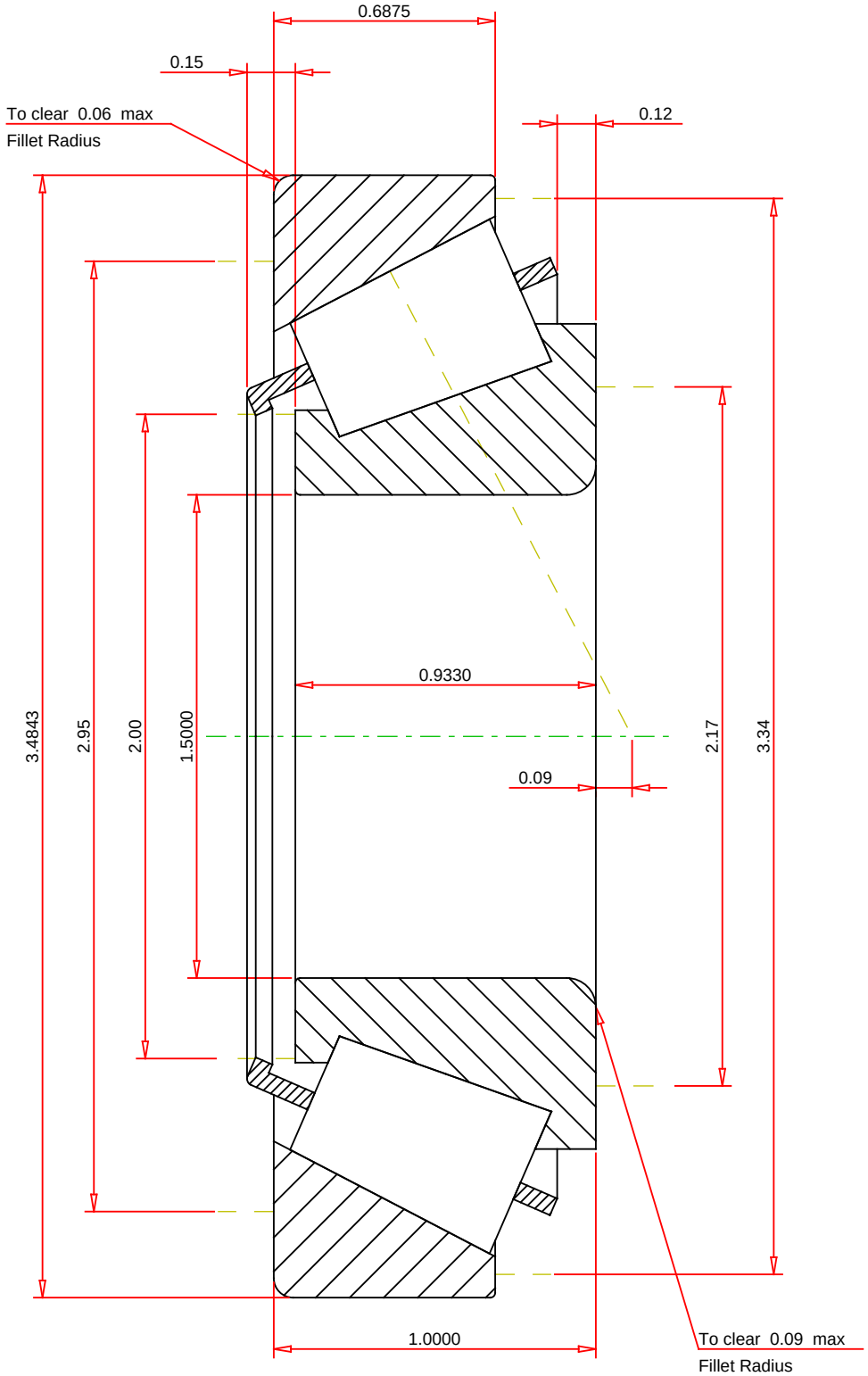
Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	25900 N 5810 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	99800 N 22400 lbf
C0 - Static Radial Rating	88600 N 19900 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	34600 N 7770 lbf

Factors

K - Factor[7]	0.75
e - ISO Factor[8]	0.78
Y - ISO Factor[9]	0.77
G1 - Heat Generation Factor (Roller-Raceway)	22.9
G2 - Heat Generation Factor (Rib-Roller End)	8.71
Cg - Geometry Factor	0.0899

[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.
[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.



IMPERIAL UNITS

ISO Factor - e	0.78	
ISO Factor - Y	0.77	
Bearing Weight	1.6	lb
Number of Rollers Per Row	15	
Effective Center Location	0.09	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

44150 - 44348
TS BEARING ASSEMBLY

K Factor	0.75	
Dynamic Radial Rating - C90	25900	lbf
Dynamic Thrust Rating - Ca90	34600	lbf
Static Radial Rating - C0	88600	lbf
Dynamic Radial Rating - C1	99800	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