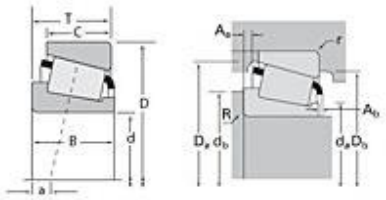
TIMKEN

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Timken Part Number M802048 - M802011, 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	M802000
Cone Part Number	M802048
Cup Part Number	M802011
Design Units	Imperial
Bearing Weight	1.40 lb 0.600 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	1.6250 in 41.275 mm
D - Cup Outer Diameter	3.2500 in 82.550 mm

B - Cone Width	1.0100 in 25.654 mm
C - Cup Width	0.7950 in 20.193 mm
T - Bearing Width	1.0450 in 26.543 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.14 in 3.560 mm
r - Cup Backface "To Clear" Radius[2]	0.130 in 3.30 mm
da - Cone Frontface Backing Diameter	1.99 in 50.55 mm
db - Cone Backface Backing Diameter	2.24 in 56.90 mm
Da - Cup Frontface Backing Diameter	3.13 in 79.00 mm
Db - Cup Backface Backing Diameter	2.76 in 70.10 mm
Ab - Cage-Cone Frontface Clearance	0.1 in 2.5 mm
Aa - Cage-Cone Backface Clearance	0.07 in 1.8 mm
a - Effective Center Location[3]	-0.12 in -3.00 mm

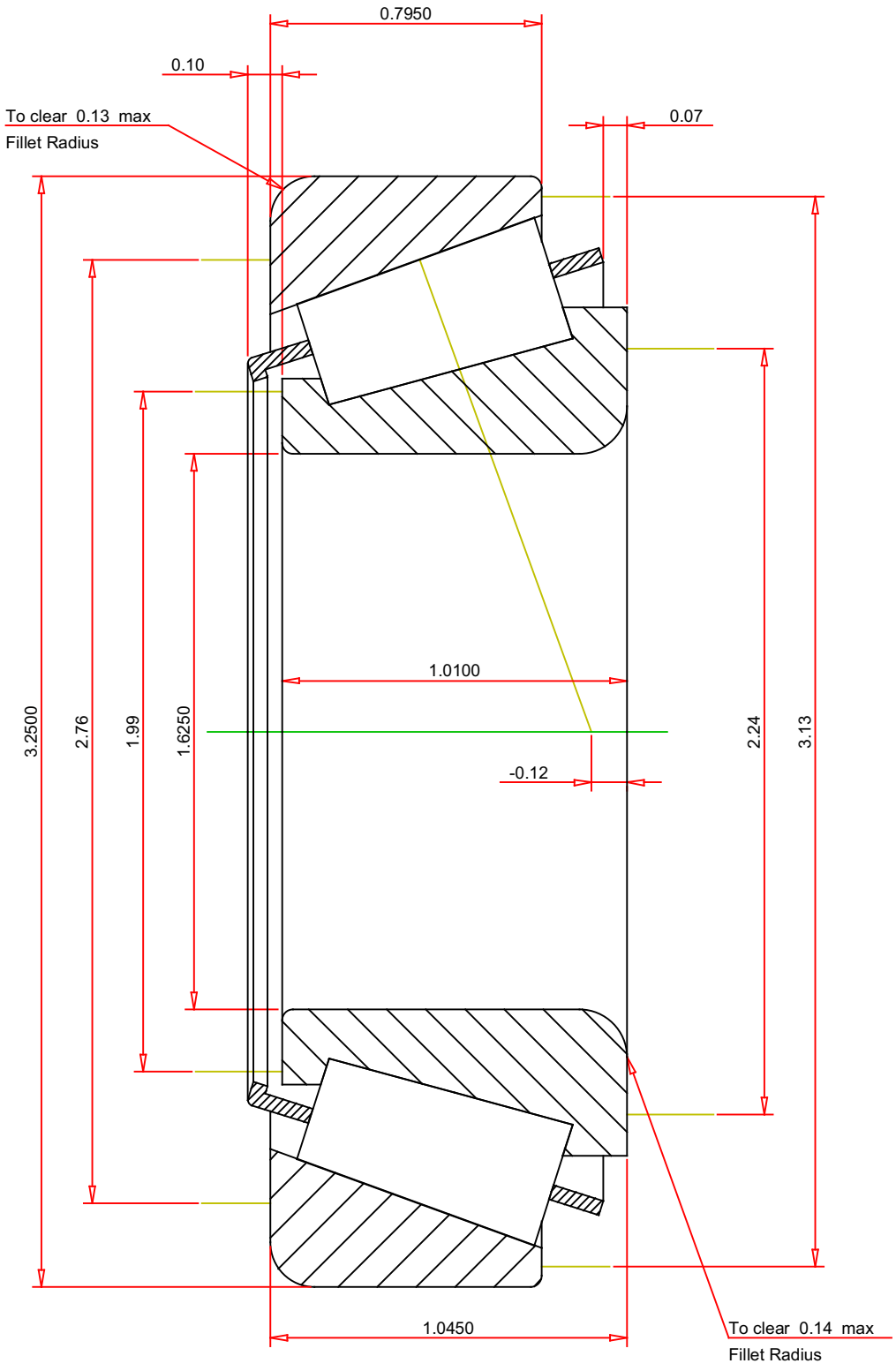
Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	5340 lbf 23800 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	20600 lbf 91700 N
C0 - Static Radial Rating	25300 lbf 112000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	4990 lbf 22200 N

Factors

K - Factor[7]	1.07
e - ISO Factor[8]	0.55
Y - ISO Factor[9]	1.1
G1 - Heat Generation Factor (Roller-Raceway)	30.9
G2 - Heat Generation Factor (Rib-Roller End)	11.9
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	0.55	
ISO Factor - Y	1.1	
Bearing Weight	1.4	lb
Number of Rollers Per Row	18	
Effective Center Location	-0.12	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

M802048 - M802011
TS BEARING ASSEMBLY

K Factor	1.07	
Dynamic Radial Rating - C90	5340	lbf
Dynamic Thrust Rating - Ca90	4990	lbf
Static Radial Rating - C0	25300	lbf
Dynamic Radial Rating - C1	20600	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