

The Timken Company

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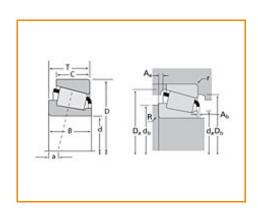
E-Mail: <u>CustomerCAD@timken.com</u> • Web site: <u>www.timken.com</u>

Timken Part Number HM807035 - HM807010, 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.





<u>Specifications</u> | <u>Dimensions</u> | <u>Abutment and Fillet Dimensions</u> | <u>Basic Load Ratings</u> | <u>Factors</u>

Specifications		-
Series	HM807000	
Cone Part Number	HM807035	
Cup Part Number	HM807010	
Design Units	Imperial	
Bearing Weight	1.700 Kg 3.70 lb	
Cage Type	Stamped Steel	

Dimensions	-

d - Bore	41.275 mm 1.6250 in
D - Cup Outer Diameter	104.775 mm 4.1250 in
B - Cone Width	36.513 mm 1.4375 in
C - Cup Width	28.575 mm 1.1250 in
T - Bearing Width	36.513 mm 1.4375 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius ¹	1.520 mm 0.06 in
r - Cup Backface "To Clear"	3.30 mm
Radius ²	0.130 in
da - Cone Frontface Backing	56.90 mm
Diameter	2.24 in
db - Cone Backface Backing	59.94 mm
Diameter	2.36 in
Da - Cup Frontface Backing	100.10 mm
Diameter	3.96 in
Db - Cup Backface Backing Diameter	88.90 mm 3.50 in
Ab - Cage-Cone Frontface	2.5 mm
Clearance	0.1 in
Aa - Cage-Cone Backface	3 mm
Clearance	0.12 in
a - Effective Center Location ³	-7.4 mm -0.29 in

Basic Load Ratings		_
C90 - Dynamic Radial Rating (90 million revolutions) ⁴	44500 N 10000 lbf	
C1 - Dynamic Radial Rating (1 million revolutions) ⁵	172000 N 38600 lbf	
C0 - Static Radial Rating	223000 N 50200 lbf	
C _{a90} - Dynamic Thrust Rating (90 million revolutions) ⁶	37100 N 8350 lbf	

Factors		-
K - Factor ⁷	1.2	
e - ISO Factor ⁸	0.49	
Y - ISO Factor ⁹	1.23	
G1 - Heat Generation Factor (Roller-Raceway)	63.9	
G2 - Heat Generation Factor (Rib-Roller End)	17.1	
Cg - Geometry Factor	0.076	

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.

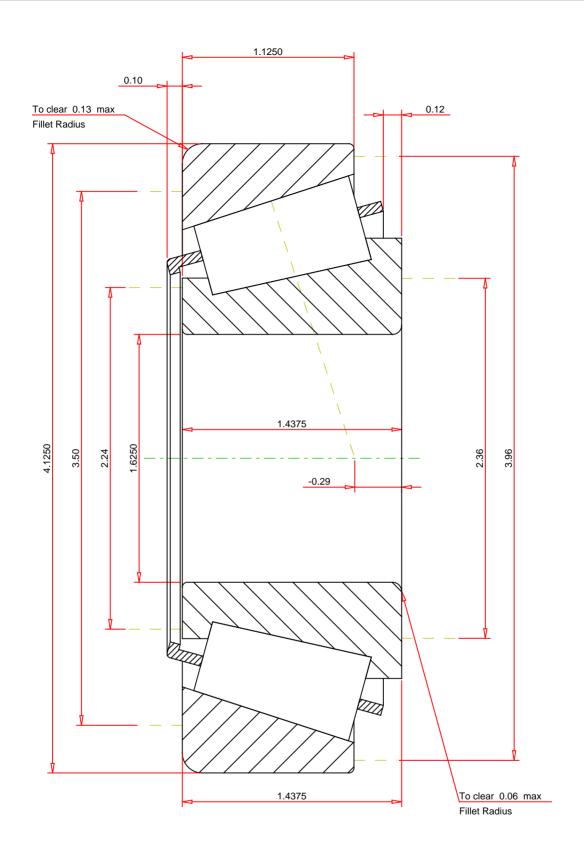
 $^{^6}$ Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 ISO Factor - Y Bearing Weight Number of Rollers Per Row Effective Center Location	0.49 1.23 3.7 lb 18 -0.29 inch	
		THE TIMKEN COMPANY

HM807035 - HM807010 TS BEARING ASSEMBLY

 K Factor
 1.2

 Dynamic Radial Rating - C90
 44500
 lbf

 Dynamic Thrust Rating - Ca90
 37100
 lbf

 Static Radial Rating - C0
 223000
 lbf

 Dynamic Radial Rating - C1
 172000
 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.

NORTH CANTON, OHIO USA

FOR DISCUSSION ONLY