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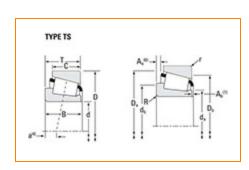
E-Mail: <u>CustomerCAD@timken.com</u> • Web site: <u>www.timken.com</u>

Timken Part Number M88046 - M88010, 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	M88000	
	Cone Part Number	M88046	
	Cup Part Number	M88010	
	Design Units	Imperial	
	Bearing Weight	0.4 Kg 0.9 lb	
	Cage Type	Stamped Steel	

Dimensions		-

d - Bore	31.750 mm 1.2500 in
D - Cup Outer Diameter	68.263 mm 2.6875 in
B - Cone Width	22.225 mm 0.8750 in
C - Cup Width	17.463 mm 0.6875 in
T - Bearing Width	22.225 mm 0.8750 in

#### Abutment and Fillet Dimensions

R - Cone Backface "To Clear" 1.520 mm Radius<sup>1</sup> 0.06 in r - Cup Backface "To Clear" 1.52 mm Radius<sup>2</sup> 0.06 in da - Cone Frontface Backing 40.39 mm Diameter 1.59 in 42.93 mm db - Cone Backface Backing Diameter 1.69 in Da - Cup Frontface Backing 66.00 mm Diameter 2.60 in **Db - Cup Backface Backing** 57.91 mm Diameter 2.28 in Ab - Cage-Cone Frontface 1.5 mm Clearance 0.06 in Aa - Cage-Cone Backface 1.3 mm Clearance 0.05 in -2.8 mm a - Effective Center Location<sup>3</sup> -0.11 in

Basic Load Ratings -			
C90 - Dynamic Radial Rating (90 million revolutions) <sup>4</sup>	4450 lbf 19800 N		
C1 - Dynamic Radial Rating (1 million revolutions) <sup>5</sup>	17100 lbf 76300 N		
C0 - Static Radial Rating	17400 lbf 77400 N		
C <sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions) <sup>6</sup>	4160 lbf 18500 N		

Factors -			
	K - Factor <sup>7</sup>	1.07	
	e - ISO Factor <sup>8</sup>	0.55	
	Y - ISO Factor <sup>9</sup>	1.1	
	G1 - Heat Generation Factor (Roller-Raceway)	19.4	
	G2 - Heat Generation Factor (Rib-Roller End)	10	
	Cg - Geometry Factor <sup>10</sup>	0.0771	

<sup>&</sup>lt;sup>1</sup> These maximum fillet radii will be cleared by the bearing corners.

 $<sup>^{2}</sup>$  These maximum fillet radii will be cleared by the bearing corners.

<sup>&</sup>lt;sup>3</sup> Negative value indicates effective center inside cone backface.

 $<sup>^4</sup>$  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.

 $<sup>^{5}</sup>$  Based on 1 x  $10^{6}$  revolutions  $L_{10}$  life, for the ISO life calculation method.

 $<sup>^6</sup>$  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.

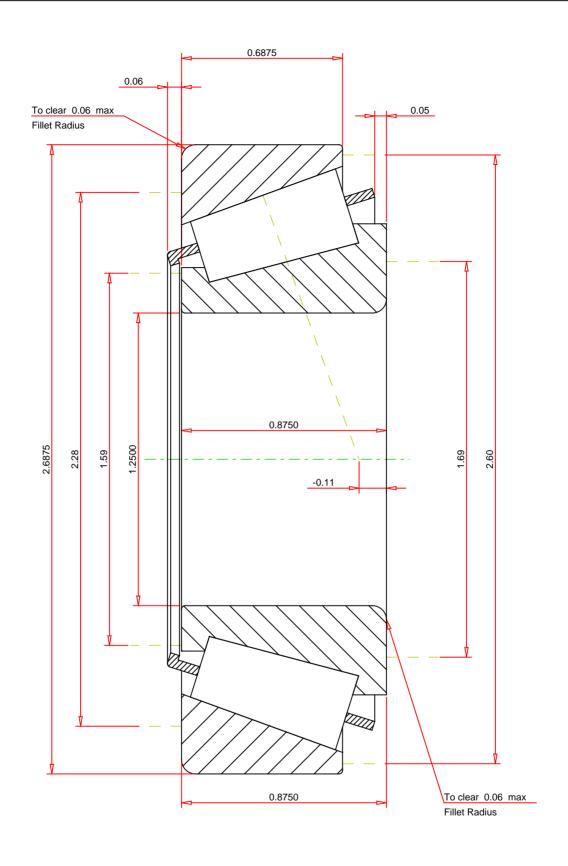
<sup>&</sup>lt;sup>7</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

 $<sup>^{8}</sup>$  These factors apply for both inch and metric calculations. Consult your Timken representative for

instruction on use.

 $<sup>^{9}</sup>$  These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

 $<sup>^{10}</sup>$  Geometry constant for Lubrication Life Adjustment Factor a3l.



## **IMPERIAL UNITS**

ISO Factor - e ISO Factor - Y Bearing Weight Number of Rollers Per Row Effective Center Location	0.55 1.1 0.9 lb 18 -0.11 inch		M88046 - M88010 TS BEARING ASSEMBLY		
		THE TIMKEN COMPANY NORTH CANTON, OHIO USA	K Factor Dynamic Radial Rating - C90 Dynamic Thrust Rating - Ca90 Static Radial Rating - C0 Dynamic Radial Rating - C1	1.07 4450 4160 17400 17100	lbf lbf lbf lbf
Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no			EOD DISCUSSION ONLY		

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