


The Timken Company

4500 Mt Pleasant St. NW

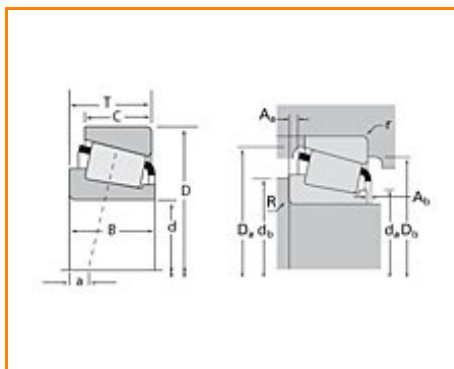
N. Canton, OH 44720

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Timken Part Number HM212044 - HM212011, 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	HM212000
Cone Part Number	HM212044
Cup Part Number	HM212011
Design Units	Imperial
Bearing Weight	2.000 Kg 4.50 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	60.325 mm 2.3750 in
D - Cup Outer Diameter	122.238 mm 4.8125 in
B - Cone Width	38.354 mm 1.5100 in
C - Cup Width	29.718 mm 1.1700 in
T - Bearing Width	38.100 mm 1.5000 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	7.870 mm 0.310 in
r - Cup Backface "To Clear" Radius²	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	70.10 mm 2.76 in
db - Cone Backface Backing Diameter	85.09 mm 3.35 in
Da - Cup Frontface Backing Diameter	116.10 mm 4.60 in
Db - Cup Backface Backing Diameter	107.95 mm 4.25 in
Ab - Cage-Cone Frontface Clearance	3.8 mm 0.15 in
Aa - Cage-Cone Backface Clearance	1.8 mm 0.07 in
a - Effective Center Location³	-10.9 mm -0.43 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	69200 N 15600 lbf
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C1 - Dynamic Radial Rating (1 million revolutions)⁵	267000 N 60000 lbf
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C0 - Static Radial Rating	279000 N 62700 lbf
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	40000 N 8990 lbf
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Factors

K - Factor⁷	1.73
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e - ISO Factor⁸	0.34
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Y - ISO Factor⁹	1.78
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G1 - Heat Generation Factor (Roller-Raceway)	92.2
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G2 - Heat Generation Factor (Rib-Roller End)	18.1
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Cg - Geometry Factor	0.0759
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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 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

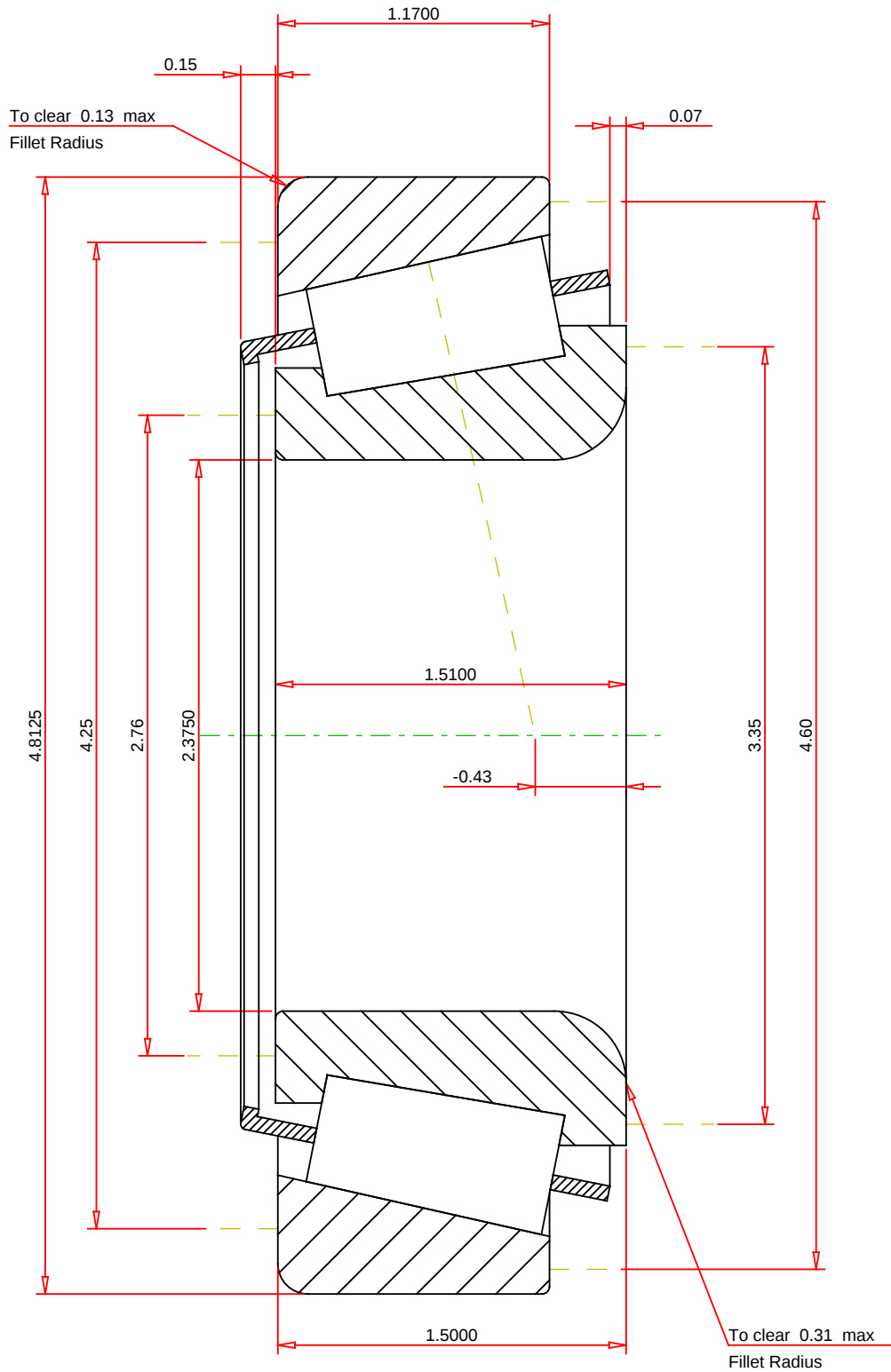
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 - e0.34 ISO Factor - Y1.78 Bearing Weight4.5 lb Number of Rollers Per Row17 Effective Center Location-0.43 inch		TIMKEN® THE TIMKEN COMPANY NORTH CANTON, OHIO USA		HM212044 - HM212011 TS BEARING ASSEMBLY	
				K Factor1.73 Dynamic Radial Rating - C9069200 lbf Dynamic Thrust Rating - Ca9040000 lbf Static Radial Rating - C0279000 lbf Dynamic Radial Rating - C1267000 lbf	