


The Timken Company

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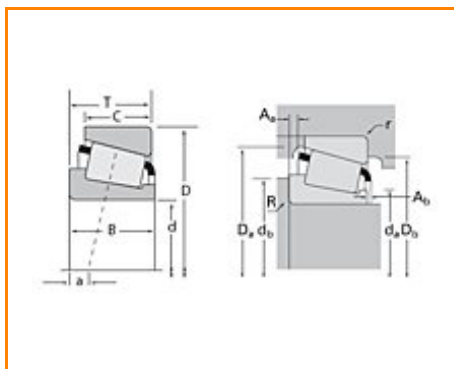
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Timken Part Number HM807035 - HM807010, Tapered Roller Bearings - TS (Tapered Single) Imperial

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.



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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" Radius¹	1.520 mm 0.06 in
r - Cup Backface "To Clear" Radius²	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	56.90 mm 2.24 in
db - Cone Backface Backing Diameter	59.94 mm 2.36 in
Da - Cup Frontface Backing Diameter	100.10 mm 3.96 in
Db - Cup Backface Backing Diameter	88.90 mm 3.50 in
Ab - Cage-Cone Frontface Clearance	2.5 mm 0.1 in
Aa - Cage-Cone Backface Clearance	3 mm 0.12 in
a - Effective Center Location³	-7.4 mm -0.29 in

Basic Load Ratings

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

K - Factor⁷	1.2
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e - ISO Factor⁸	0.49
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Y - ISO Factor⁹	1.23
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G1 - Heat Generation Factor (Roller-Raceway)	63.9
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G2 - Heat Generation Factor (Rib-Roller End)	17.1
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Cg - Geometry Factor	0.076
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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.

