



The Timken Company

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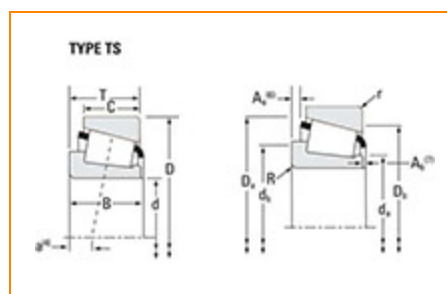
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Timken Part Number M88046 - M88010, Tapered Roller Bearings - TS (Tapered Single) Imperial

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.



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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" Radius¹	1.520 mm 0.06 in
r - Cup Backface "To Clear" Radius²	1.52 mm 0.06 in
da - Cone Frontface Backing Diameter	40.39 mm 1.59 in
db - Cone Backface Backing Diameter	42.93 mm 1.69 in
Da - Cup Frontface Backing Diameter	66.00 mm 2.60 in
Db - Cup Backface Backing Diameter	57.91 mm 2.28 in
Ab - Cage-Cone Frontface Clearance	1.5 mm 0.06 in
Aa - Cage-Cone Backface Clearance	1.3 mm 0.05 in
a - Effective Center Location³	-2.8 mm -0.11 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	4450 lbf 19800 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	17100 lbf 76300 N
C0 - Static Radial Rating	17400 lbf 77400 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	4160 lbf 18500 N

Factors

K - Factor⁷	1.07
e - ISO Factor⁸	0.55
Y - ISO Factor⁹	1.1
G1 - Heat Generation Factor (Roller-Raceway)	19.4
G2 - Heat Generation Factor (Rib-Roller End)	10
C_g - Geometry Factor¹⁰	0.0771

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

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¹⁰ Geometry constant for Lubrication Life Adjustment Factor a_3 .

