


The Timken Company

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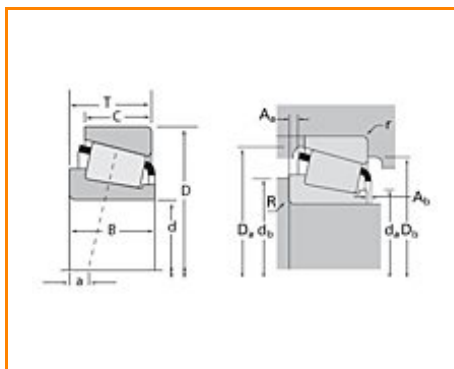
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Timken Part Number M86643 - M86610, Tapered Roller Bearings - TS (Tapered Single)

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	M86600
Cone Part Number	M86643
Cup Part Number	M86610
Design Units	Imperial
Bearing Weight	0.400 Kg 0.80 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	25.400 mm 1.0000 in
D - Cup Outer Diameter	64.292 mm 2.5312 in
B - Cone Width	21.433 mm 0.8438 in
C - Cup Width	16.670 mm 0.6563 in
T - Bearing Width	21.433 mm 0.8438 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	36.58 mm 1.44 in
db - Cone Backface Backing Diameter	38.10 mm 1.5 in
Da - Cup Frontface Backing Diameter	60.96 mm 2.40 in
Db - Cup Backface Backing Diameter	54.10 mm 2.13 in
Ab - Cage-Cone Frontface Clearance	1.8 mm 0.07 in
Aa - Cage-Cone Backface Clearance	0.8 mm 0.03 in
a - Effective Center Location³	-3.3 mm -0.13 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	15600 N 3510 lbf
C1 - Dynamic Radial Rating (1 million revolutions)⁵	60200 N 13500 lbf
C0 - Static Radial Rating	71700 N 16100 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	14600 N 3280 lbf

Factors

K - Factor⁷	1.07
e - ISO Factor⁸	0.55
Y - ISO Factor⁹	1.1
G1 - Heat Generation Factor (Roller-Raceway)	16.8
G2 - Heat Generation Factor (Rib-Roller End)	7.4
Cg - Geometry Factor	0.0736

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

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⁹ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

