


The Timken Company

4500 Mt Pleasant St. NW

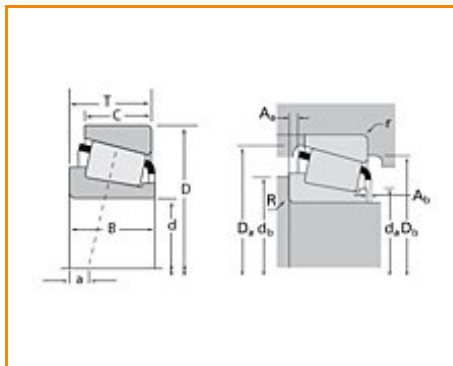
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Timken Part Number 39573 - 39520, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	39500
Cone Part Number	39573
Cup Part Number	39520
Design Units	Imperial
Bearing Weight	1.500 Kg 3.30 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	50.8 mm 2 in
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D - Cup Outer Diameter	112.713 mm 4.4375 in
B - Cone Width	30.163 mm 1.1875 in
C - Cup Width	23.813 mm 0.9375 in
T - Bearing Width	30.163 mm 1.1875 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	0.760 mm 0.03 in
r - Cup Backface "To Clear" Radius²	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	60.96 mm 2.40 in
db - Cone Backface Backing Diameter	61.98 mm 2.44 in
Da - Cup Frontface Backing Diameter	107.95 mm 4.25 in
Db - Cup Backface Backing Diameter	101.09 mm 3.98 in
Ab - Cage-Cone Frontface Clearance	3.3 mm 0.13 in
Aa - Cage-Cone Backface Clearance	1.3 mm 0.05 in
a - Effective Center Location³	-6.6 mm -0.26 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	43300 N 9730 lbf
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C1 - Dynamic Radial Rating (1 million revolutions)⁵	167000 N 37500 lbf
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C0 - Static Radial Rating	224000 N 50300 lbf
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	25100 N 5650 lbf
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Factors

K - Factor⁷	1.72
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e - ISO Factor⁸	0.34
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Y - ISO Factor⁹	1.77
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G1 - Heat Generation Factor (Roller-Raceway)	84.3
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G2 - Heat Generation Factor (Rib-Roller End)	23.7
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Cg - Geometry Factor	0.107
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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.

