


The Timken Company

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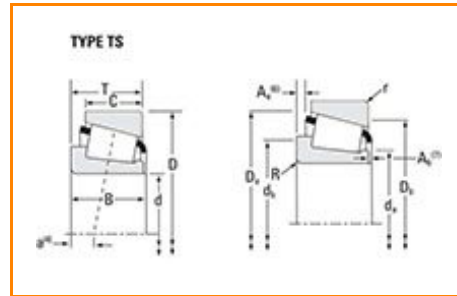
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number 15100 - 15245, 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	15000
Cone Part Number	15100
Cup Part Number	15245
Design Units	Imperial
Bearing Weight	0.60 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	1.0000 in
D - Cup Outer Diameter	2.4409 in
B - Cone Width	0.8125 in
C - Cup Width	0.5625 in
T - Bearing Width	0.7500 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	0.14 in
r - Cup Backface "To Clear" Radius²	0.050 in
da - Cone Frontface Backing Diameter	1.24 in
db - Cone Backface Backing Diameter	1.5 in
Da - Cup Frontface Backing Diameter	2.30 in
Db - Cup Backface Backing Diameter	2.17 in
Ab - Cage-Cone Frontface Clearance	0.07 in
Aa - Cage-Cone Backface Clearance	0.03 in
a - Effective Center Location³	-0.23 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	15500 N 3490 lbf
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C1 - Dynamic Radial Rating (1 million revolutions)⁵	59900 N 13500 lbf
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C0 - Static Radial Rating	53900 N 12100 lbf
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	9310 N 2090 lbf
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Factors

K - Factor⁷	1.67
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e - ISO Factor⁸	0.35
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Y - ISO Factor⁹	1.71
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G1 - Heat Generation Factor (Roller-Raceway)	14.6
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G2 - Heat Generation Factor (Rib-Roller End)	7.58
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C_g - Geometry Factor	0.0606
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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.

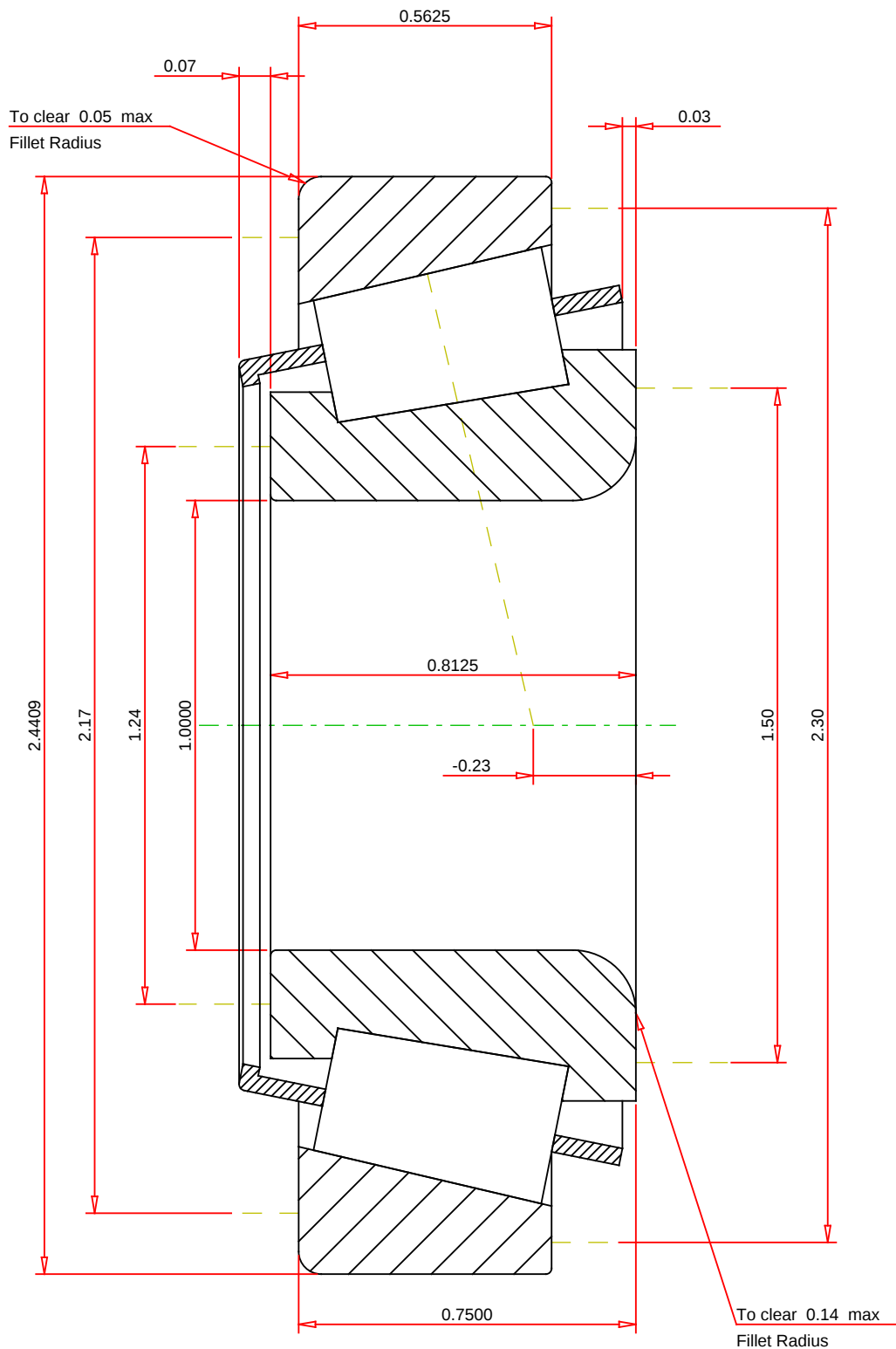
⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

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 - e0.35 ISO Factor - Y1.71 Bearing Weight0.6 lb Number of Rollers Per Row15 Effective Center Location-0.23 inch		TIMIKEN® THE TIMKEN COMPANY NORTH CANTON, OHIO USA		15100 - 15245 TS BEARING ASSEMBLY	
				K Factor1.67 Dynamic Radial Rating - C9015500 lbf Dynamic Thrust Rating - Ca909310 lbf Static Radial Rating - C053900 lbf Dynamic Radial Rating - C159900 lbf	