



The Timken Company

4500 Mt Pleasant St. NW

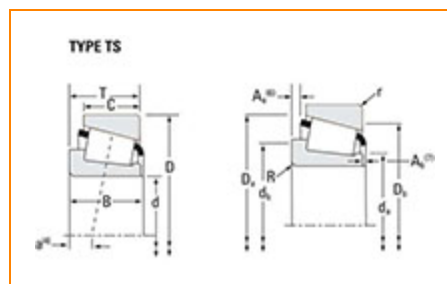
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Part Number M12649 - M12610, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	M12600
Cone Part Number	M12649
Cup Part Number	M12610
Design Unit	Inch
Cage Material	Stamped Steel
Related Assembly Number(s)	M12649-902A1

Dimensions



1 - Bore

0.8437 in
21.430 mm

D - Cup Outer Diameter	1.9687 in 50.005 mm
B - Cone Width	0.7200 in 18.288 mm
C - Cup Width	0.5500 in 13.970 mm
T - Bearing Width	0.69 in 17.526 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	0.050 in 1.270 mm
r - Cup Backface "To Clear" Radius²	0.050 in 1.27 mm
da - Cone Frontface Backing Diameter	1.08 in 27.5 mm
db - Cone Backface Backing Diameter	1.16 in 29.5 mm
Da - Cup Frontface Backing Diameter	1.83 in 46.48 mm
Db - Cup Backface Backing Diameter	1.73 in 43.94 mm
Ab - Cage-Cone Frontface Clearance	0.07 in 1.8 mm
Aa - Cage-Cone Backface Clearance	-0.01 in -0.3 mm
a - Effective Center Location³	-0.25 in -6.4 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴ 3040 lbf
13500 N

C1 - Dynamic Radial Rating (1 million revolutions)⁵ 11700 lbf
52200 N

C0 - Static Radial Rating 9780 lbf
43500 N

C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶ 1450 lbf
6440 N

Factors

K - Factor⁷ 2.1

e - ISO Factor⁸ 0.28

Y - ISO Factor⁹ 2.16

G1 - Heat Generation Factor (Roller-Raceway) 9.1

G2 - Heat Generation Factor (Rib-Roller End) 5.63

Cg - Geometry Factor¹⁰ 0.0479

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.

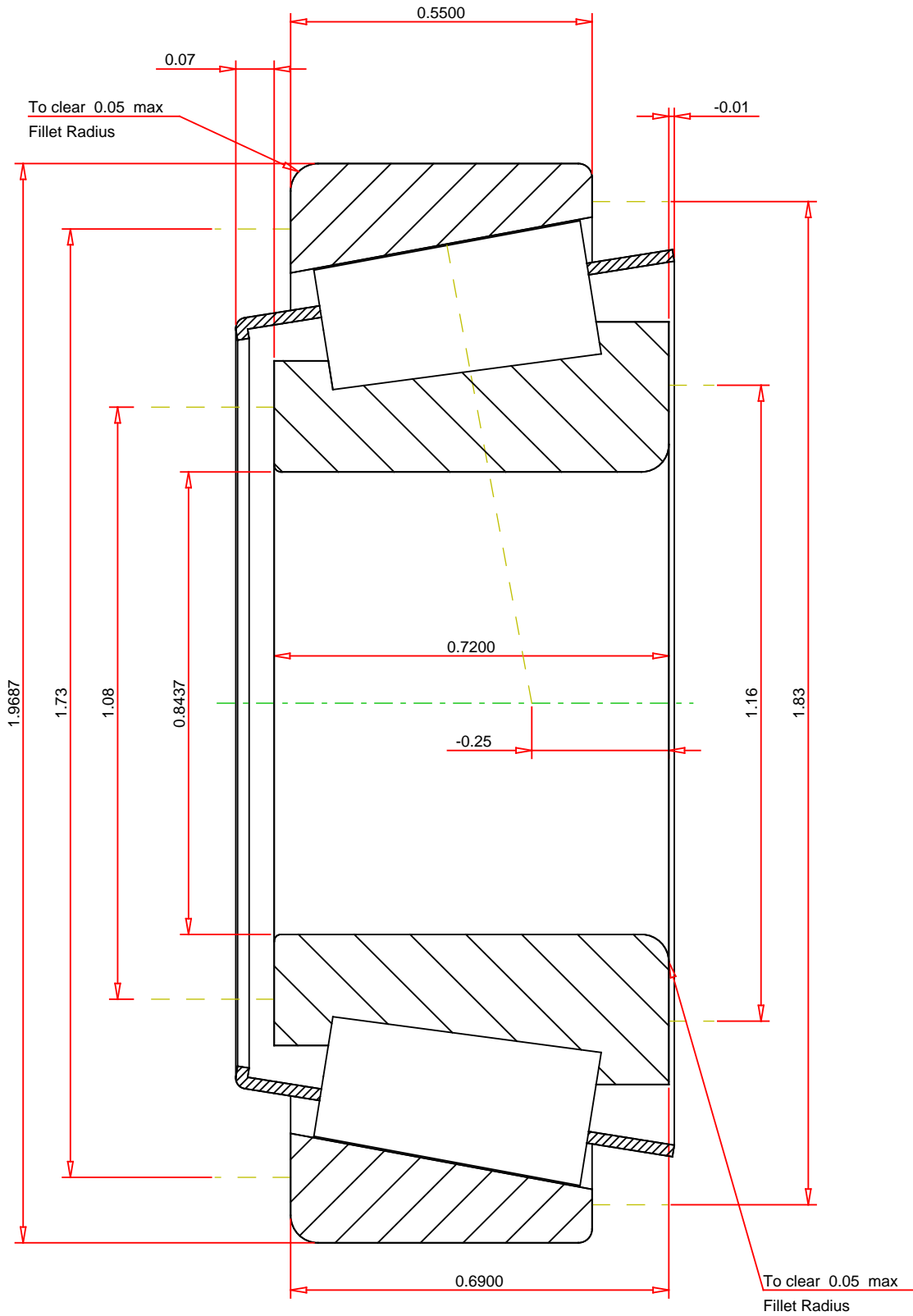
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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.

¹⁰ Geometry constant for Lubrication Life Adjustment Factor a_3 .



IMPERIAL UNITS

<div>ISO Factor - e0.28</div> <div>ISO Factor - Y2.16</div> <div>Bearing Weight0.4 lbf</div> <div>Number of Rollers Per Row14</div> <div>Effective Center Location-0.25 inch</div>		<div>TIMKEN®</div> <div>THE TIMKEN COMPANY</div> <div>NORTH CANTON, OHIO USA</div>		<div>M12649 - M12610</div> <div>Tapered Roller Bearings - TS (Tapered Single)</div> <div>Imperial</div>	
				<div>K Factor2.1</div> <div>Dynamic Radial Rating - C903040 lbf</div> <div>Dynamic Thrust Rating - Ca901450 lbf</div> <div>Static Radial Rating - C09780 lbf</div> <div>Dynamic Radial Rating - C111700 lbf</div>	