


The Timken Company

4500 Mt Pleasant St. NW

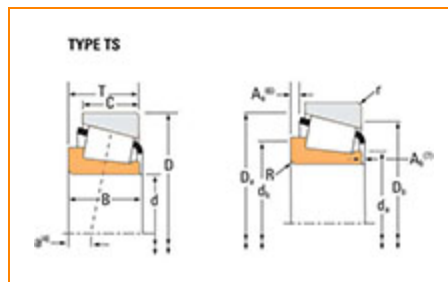
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Part Number 3477, Tapered Roller Bearings - Single Cones - Imperial

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	3400
Cone Part Number	3477
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	41000 lbf 182000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	10600 lbf 47200 N



Dimensions

d - Cone Bore	1 5/16 in 33.338 mm
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B - Cone Width	1.1721 in 29.771 mm
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Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.140 in 3.6 mm
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da - Cone Frontface Backing Diameter	1.67 in 42.5 mm
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db - Cone Backface Backing Diameter	1.93 in 49 mm
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Ab - Cage-Cone Frontface Clearance	0.05 in 1.3 mm
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Aa - Cage-Cone Backface Clearance	0.04 in 1 mm
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a - Effective Center Location⁴	-0.34 in -8.6 mm
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Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	6100 lbf 27100 N
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C1 - Dynamic Radial Rating (1 million revolutions)⁶	23500 lbf 105000 N
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C0 - Static Radial Rating	26800 lbf 119000 N
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	3820 lbf 17000 N
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Factors

K - Factor⁸	1.6
G1 - Heat Generation Factor (Roller-Raceway)	29.9
G2 - Heat Generation Factor (Rib-Roller End)	11.2
Cg - Geometry Factor⁹	0.0781

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

² 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.

³ These maximum fillet radii will be cleared by the bearing corners.

⁴ Negative value indicates effective center inside cone backface.

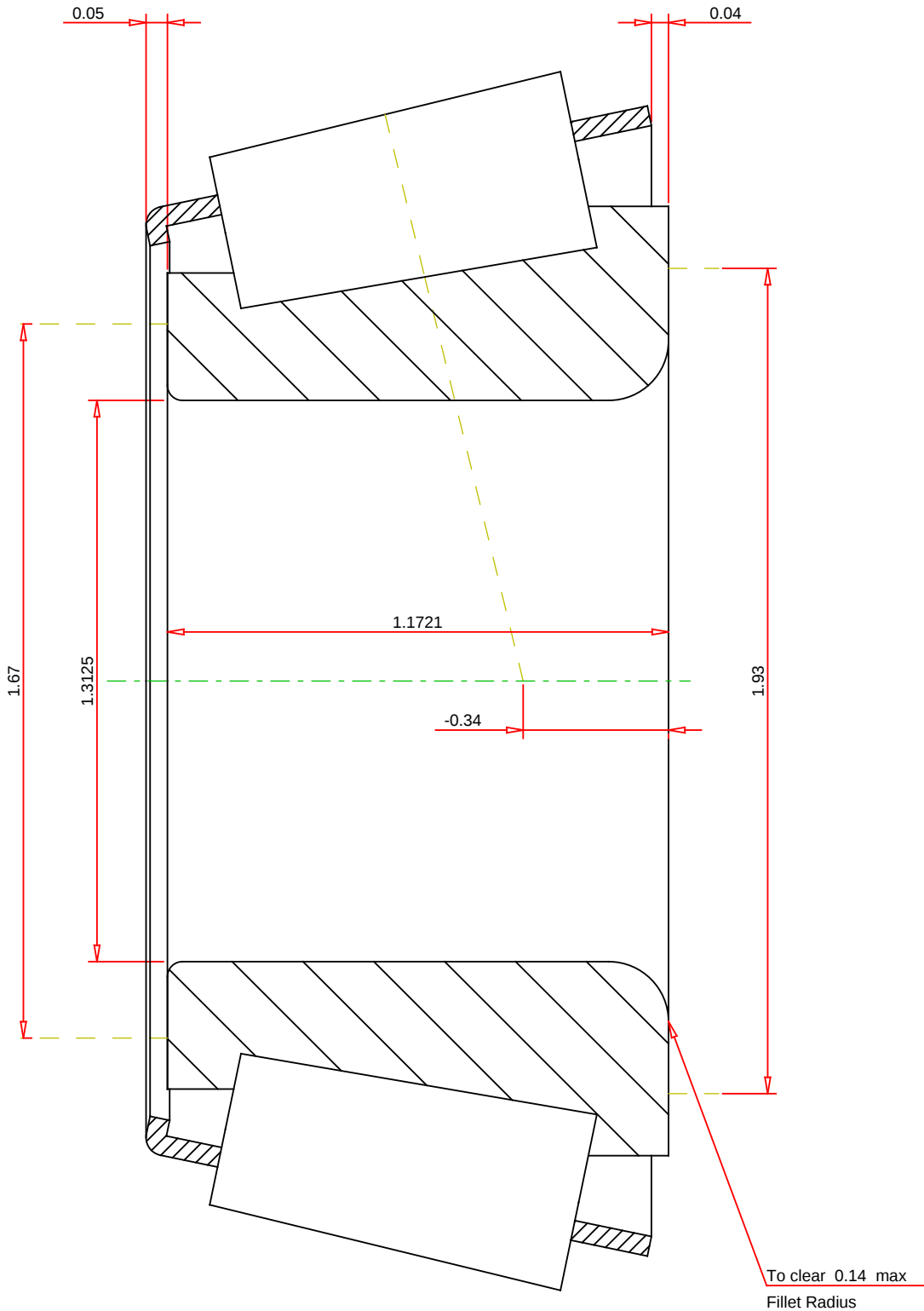
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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

⁷ 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.

⁸ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁹ Geometry constant for Lubrication Life Adjustment Factor a_3 .



IMPERIAL UNITS

Number of Rollers Per Row	15	TIMKEN®	3477		
		Tapered Roller Bearings - Single Cones - Imperial			
		THE TIMKEN COMPANY NORTH CANTON, OHIO USA	K Factor	1.6	
			Dynamic Radial Rating - C90	6100	lbf
			Dynamic Thrust Rating - Ca90	3820	lbf
			Dynamic Radial Rating - C1	23500	lbf
Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.			FOR DISCUSSION ONLY		