


The Timken Company

4500 Mt Pleasant St. NW

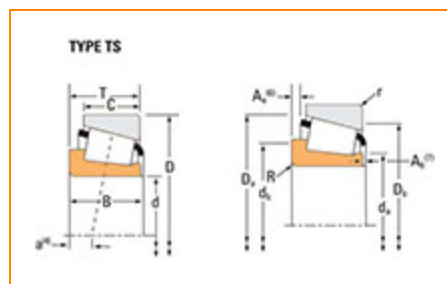
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Part Number 6381, Tapered Roller Bearings - Single Cones - Imperial

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	6300
Cone Part Number	6381
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	126000 lbf 560000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	32600 lbf 145000 N



Dimensions

d - Cone Bore	2.1649 in 54.988 mm
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B - Cone Width	2.2050 in 56.007 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	2.76 in 70 mm
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db - Cone Backface Backing Diameter	2.99 in 76 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	0.13 in 3.3 mm
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a - Effective Center Location⁴	-0.76 in -19.3 mm
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Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	18700 lbf 83300 N
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C1 - Dynamic Radial Rating (1 million revolutions)⁶	72300 lbf 321000 N
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C0 - Static Radial Rating	90900 lbf 404000 N
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	10400 lbf 46300 N
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Factors

K - Factor⁸	1.8
G1 - Heat Generation Factor (Roller-Raceway)	124
G2 - Heat Generation Factor (Rib-Roller End)	22.4
Cg - Geometry Factor⁹	0.0827

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.

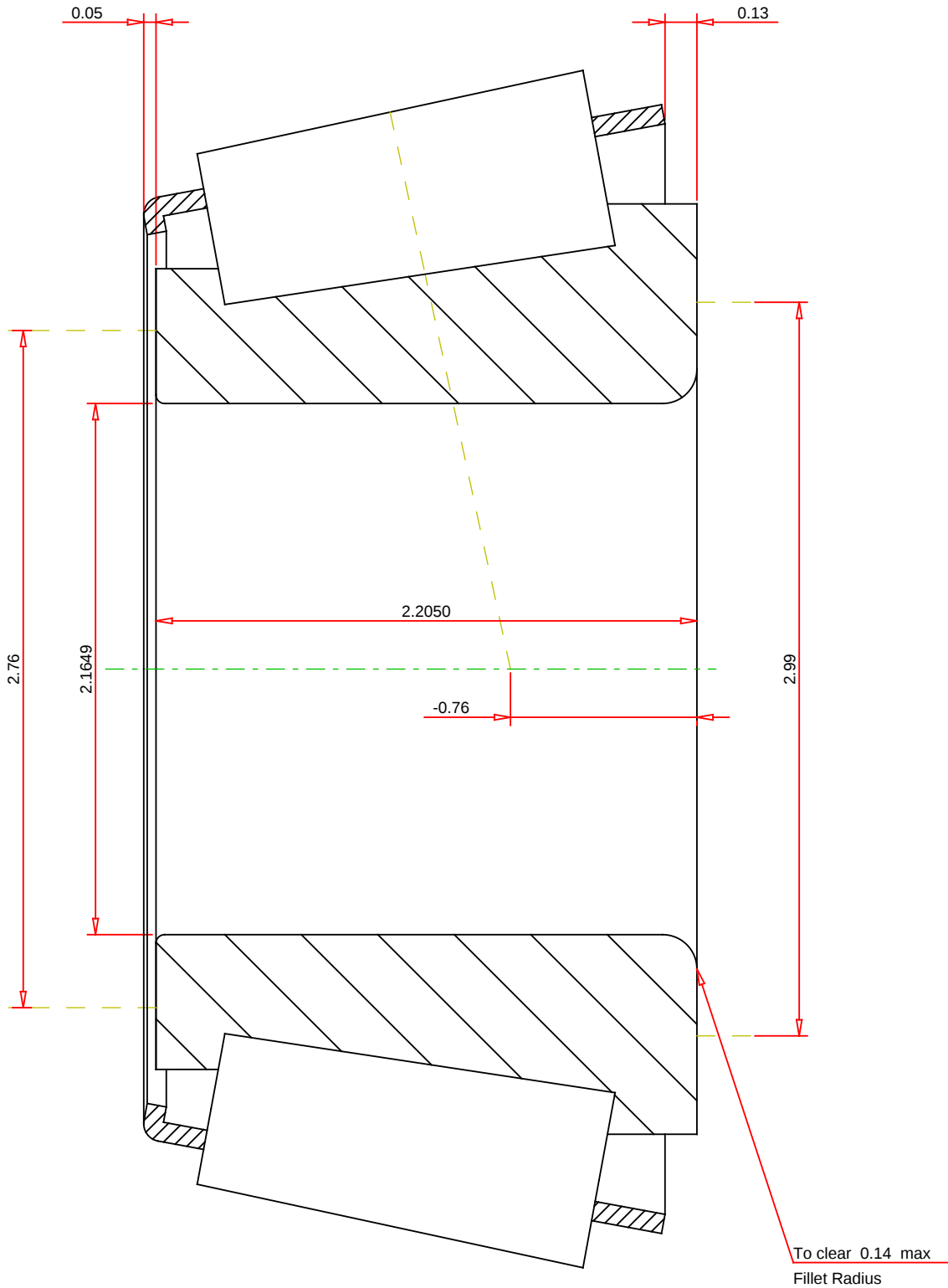
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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 Row15	TIMKEN®	6381 Tapered Roller Bearings - Single Cones - Imperial		
	THE TIMKEN COMPANY NORTH CANTON, OHIO USA	K Factor1.8 Dynamic Radial Rating - C9018700lbf Dynamic Thrust Rating - Ca9010400lbf Dynamic Radial Rating - C172300lbf		
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		