



The Timken Company

4500 Mt Pleasant St. NW

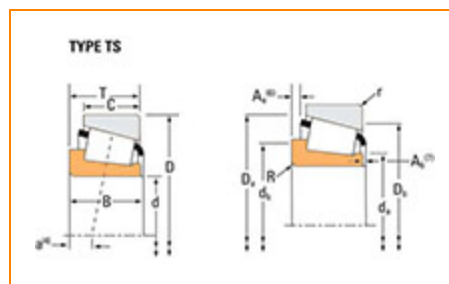
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Part Number 14120, Tapered Roller Bearings - Single Cones - Imperial

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	14000
Cone Part Number	14120
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	21400 lbf 95100 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	5540 lbf 24600 N



Dimensions

d - Cone Bore	1.1900 in 30.226 mm
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B - Cone Width	1.0520 in 26.721 mm
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Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.170 in 4.3 mm
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da - Cone Frontface Backing Diameter	1.44 in 36.5 mm
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db - Cone Backface Backing Diameter	1.73 in 44 mm
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Ab - Cage-Cone Frontface Clearance	0.07 in 1.8 mm
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Aa - Cage-Cone Backface Clearance	0.31 in 7.9 mm
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a - Effective Center Location⁴	-0.45 in -11.4 mm
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Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	3180 lbf 14200 N
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C1 - Dynamic Radial Rating (1 million revolutions)⁶	12300 lbf 54600 N
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C0 - Static Radial Rating	13900 lbf 61700 N
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	2080 lbf 9260 N
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Factors

K - Factor⁸	1.53
G1 - Heat Generation Factor (Roller-Raceway)	18
G2 - Heat Generation Factor (Rib-Roller End)	13.3
Cg - Geometry Factor⁹	0.0668

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.

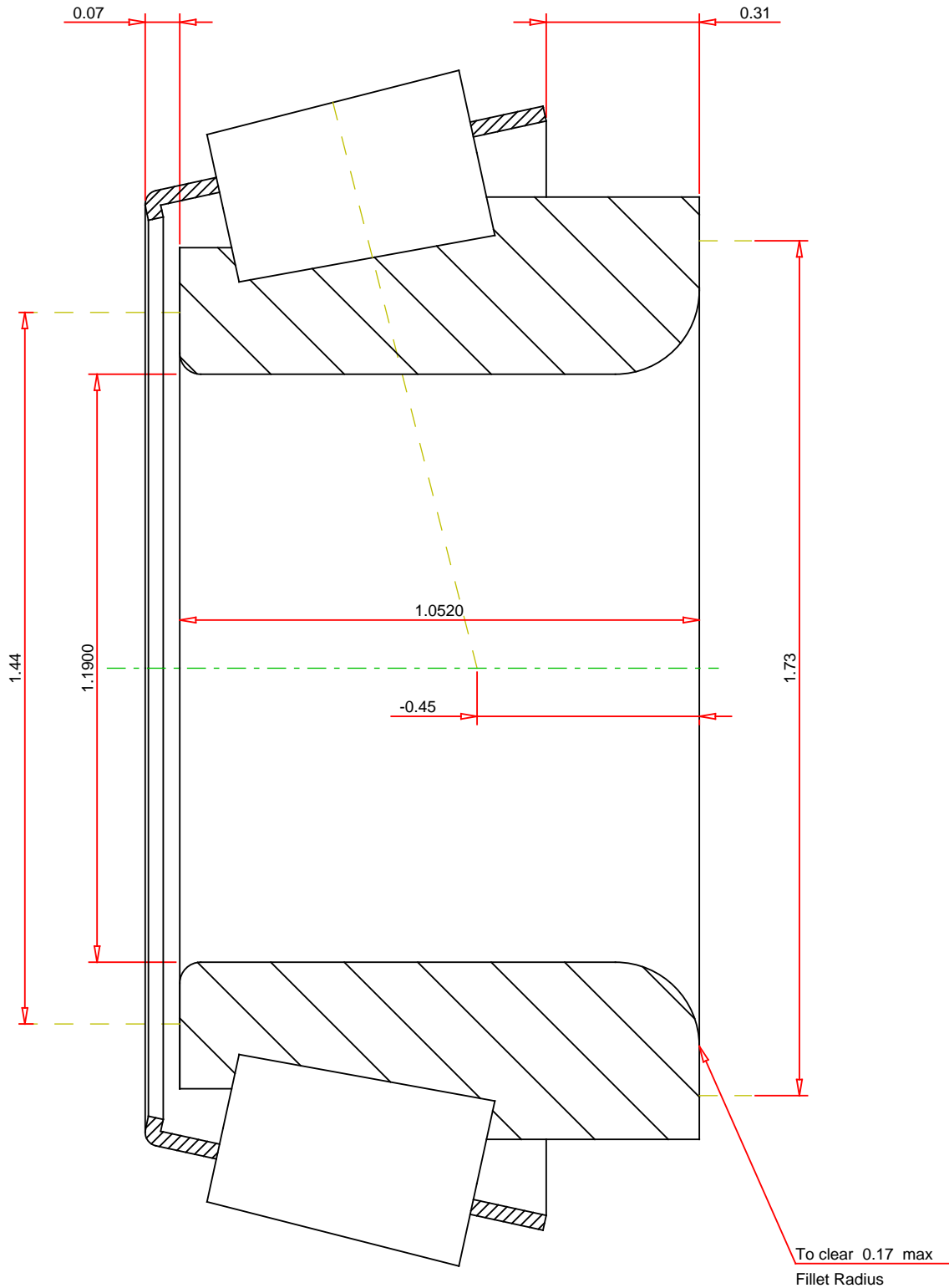
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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

17

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

14120

Tapered Roller Bearings - Single Cones - Imperial

K Factor	1.53	
Dynamic Radial Rating - C90	3180	lbf
Dynamic Thrust Rating - Ca90	2080	lbf
Dynamic Radial Rating - C1	12300	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