



The Timken Company

4500 Mt Pleasant St. NW

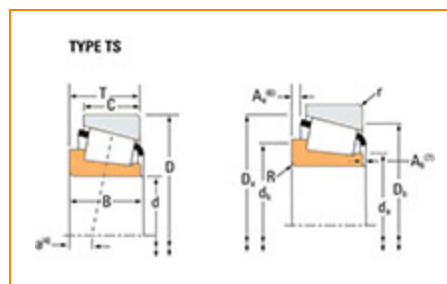
N. Canton, OH 44720

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Part Number 415, 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

Cone Part Number	415
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	45300 lbf 201000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	11700 lbf 52200 N

Dimensions



d - Cone Bore	1 1/2 in 38.1 mm
B - Cone Width	1.1450 in 29.083 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.03 in 0.760 mm
da - Cone Frontface Backing Diameter	1.75 in 44.5 mm
db - Cone Backface Backing Diameter	1.77 in 45 mm
Ab - Cage-Cone Frontface Clearance	0.06 in 1.5 mm
Aa - Cage-Cone Backface Clearance	0.03 in 0.8 mm
a - Effective Center Location⁴	-0.38 in -9.7 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	6740 lbf 30000 N
C1 - Dynamic Radial Rating (1 million revolutions)⁶	26000 lbf 116000 N
C0 - Static Radial Rating	28000 lbf 124000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	3040 lbf 13500 N

Factors

K - Factor⁸	2.22
G1 - Heat Generation Factor (Roller-Raceway)	34.4
G2 - Heat Generation Factor (Rib-Roller End)	9.9
Cg - Geometry Factor⁹	0.0731

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.

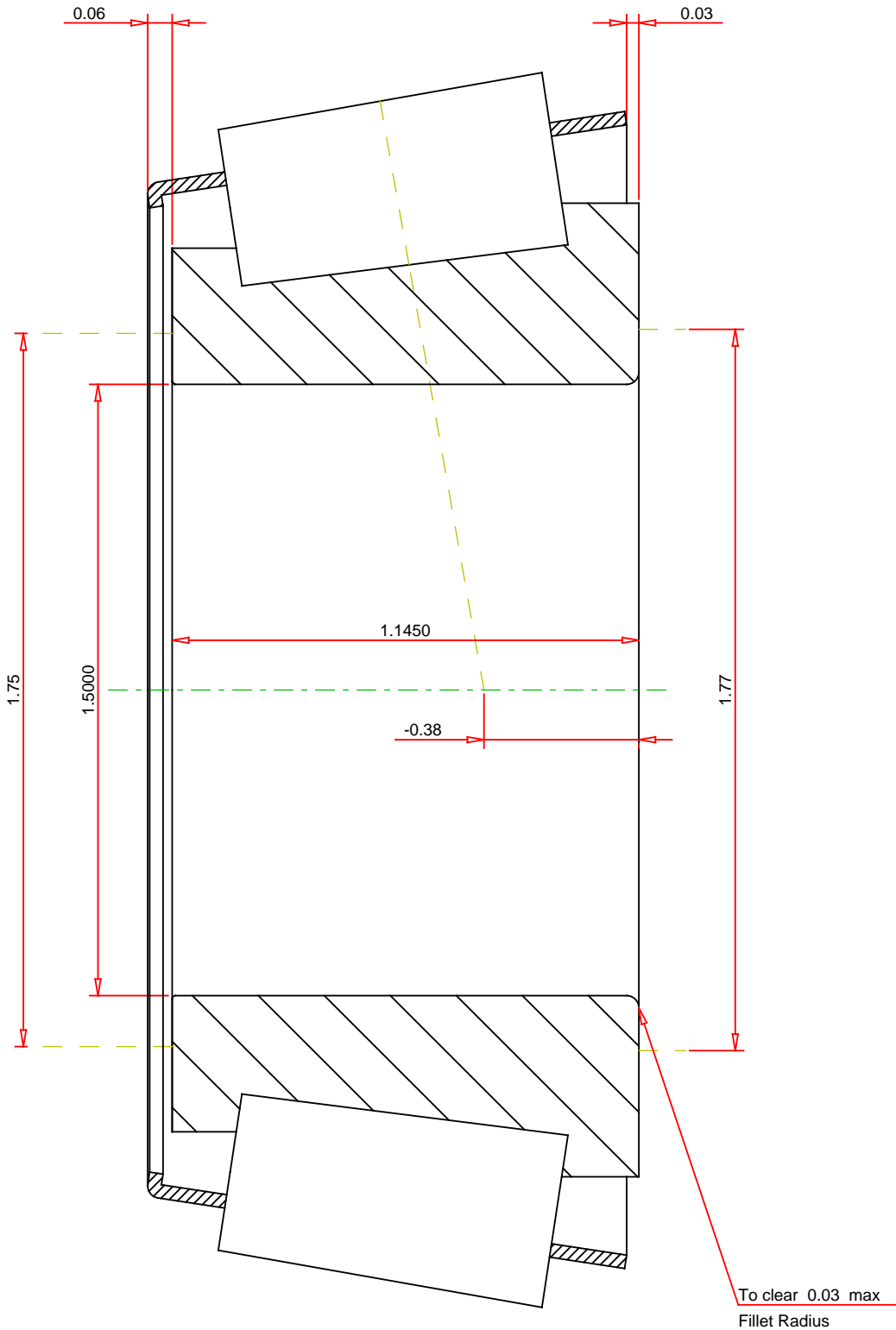
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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

<div>Number of Rollers Per Row14</div>	<div>TIMKEN®</div> <div>THE TIMKEN COMPANY</div> <div>NORTH CANTON, OHIO USA</div>	<div>415</div> <div>Tapered Roller Bearings - Single Cones - Imperial</div> <div><div>K Factor2.22</div><div>Dynamic Radial Rating - C906740 lbf</div><div>Dynamic Thrust Rating - Ca903040 lbf</div><div>Dynamic Radial Rating - C126000 lbf</div></div>
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