



The Timken Company

4500 Mt Pleasant St. NW

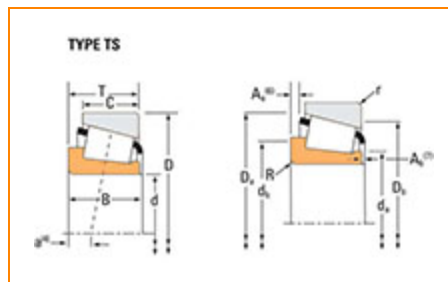
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Part Number 46176, Tapered Roller Bearings - Single Cones - Imperial

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	46176
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	50600 lbf 225000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	13100 lbf 58400 N

Dimensions



d - Cone Bore	1 3/4 in 44.450 mm
B - Cone Width	1.2500 in 31.750 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.140 in 3.56 mm
da - Cone Frontface Backing Diameter	2.13 in 54 mm
db - Cone Backface Backing Diameter	2.36 in 60 mm
Ab - Cage-Cone Frontface Clearance	0.08 in 2 mm
Aa - Cage-Cone Backface Clearance	0.06 in 1.5 mm
a - Effective Center Location⁴	-0.31 in -7.9 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	7540 lbf 33500 N
C1 - Dynamic Radial Rating (1 million revolutions)⁶	29100 lbf 129000 N
C0 - Static Radial Rating	35500 lbf 158000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	5190 lbf 23100 N

Factors

K - Factor⁸	1.45
G1 - Heat Generation Factor (Roller-Raceway)	44.4
G2 - Heat Generation Factor (Rib-Roller End)	13.6
Cg - Geometry Factor⁹	0.092

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.

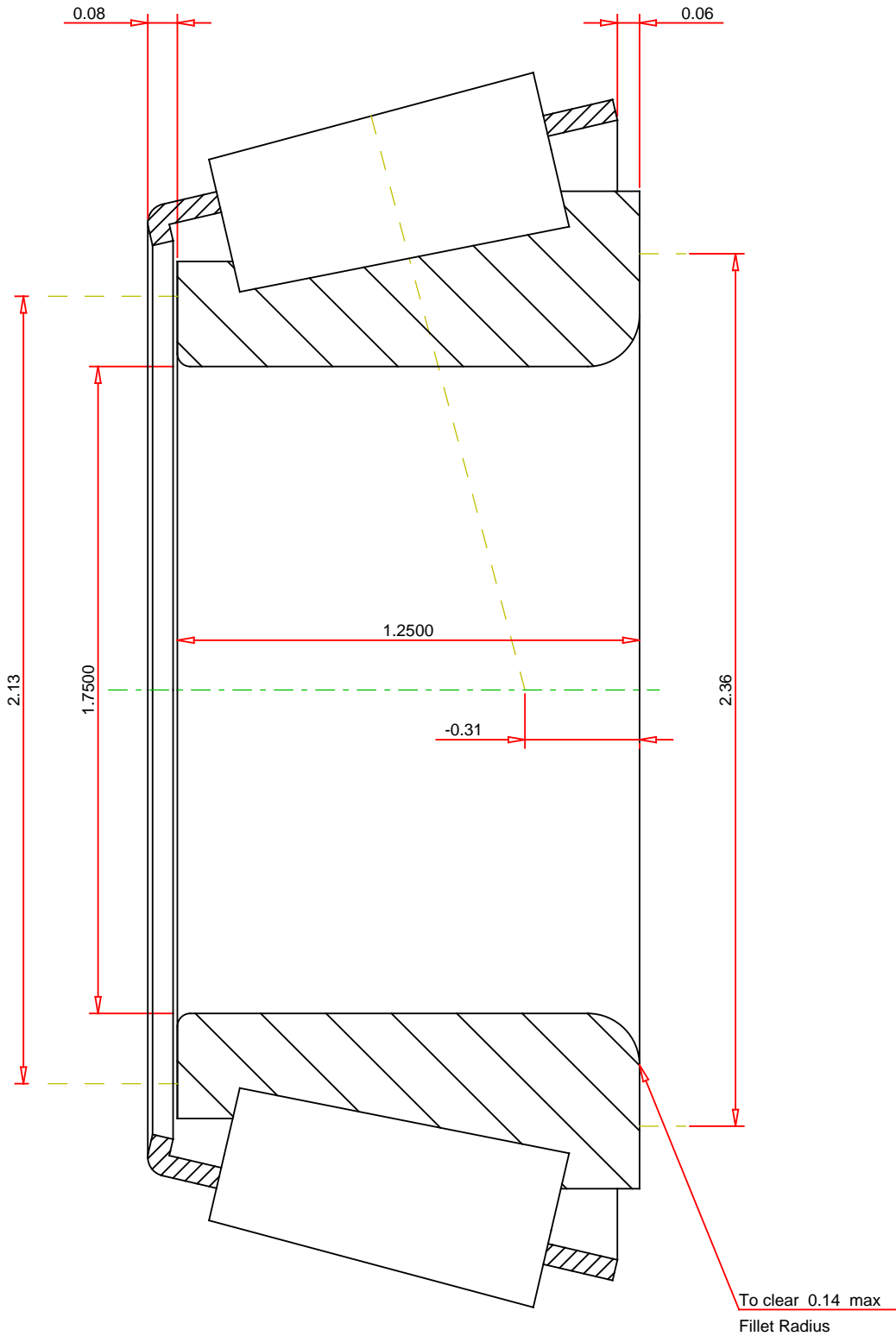
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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

46176

Tapered Roller Bearings - Single Cones - Imperial

K Factor	1.45	
Dynamic Radial Rating - C90	7540	lbf
Dynamic Thrust Rating - Ca90	5190	lbf
Dynamic Radial Rating - C1	29100	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.

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