


The Timken Company

4500 Mt Pleasant St. NW

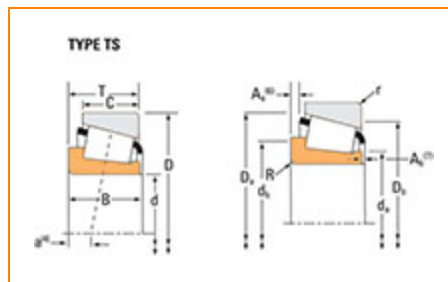
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Part Number 02475, Tapered Roller Bearings - Single Cones - Imperial

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	02400
Cone Part Number	02475
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	25000 lbf 111000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	6470 lbf 28800 N



Dimensions

d - Cone Bore	1 1/4 in 31.75 mm
B - Cone Width	0.8750 in 22.225 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.140 in 3.6 mm
da - Cone Frontface Backing Diameter	1.52 in 38.5 mm
db - Cone Backface Backing Diameter	1.75 in 44.5 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	-0.20 in -5.1 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	3720 lbf 16500 N
C1 - Dynamic Radial Rating (1 million revolutions)⁶	14300 lbf 63800 N
C0 - Static Radial Rating	15800 lbf 70200 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	2650 lbf 11800 N

Factors

K - Factor⁸	1.4
G1 - Heat Generation Factor (Roller-Raceway)	17.5
G2 - Heat Generation Factor (Rib-Roller End)	8.48
Cg - Geometry Factor⁹	0.0681

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.

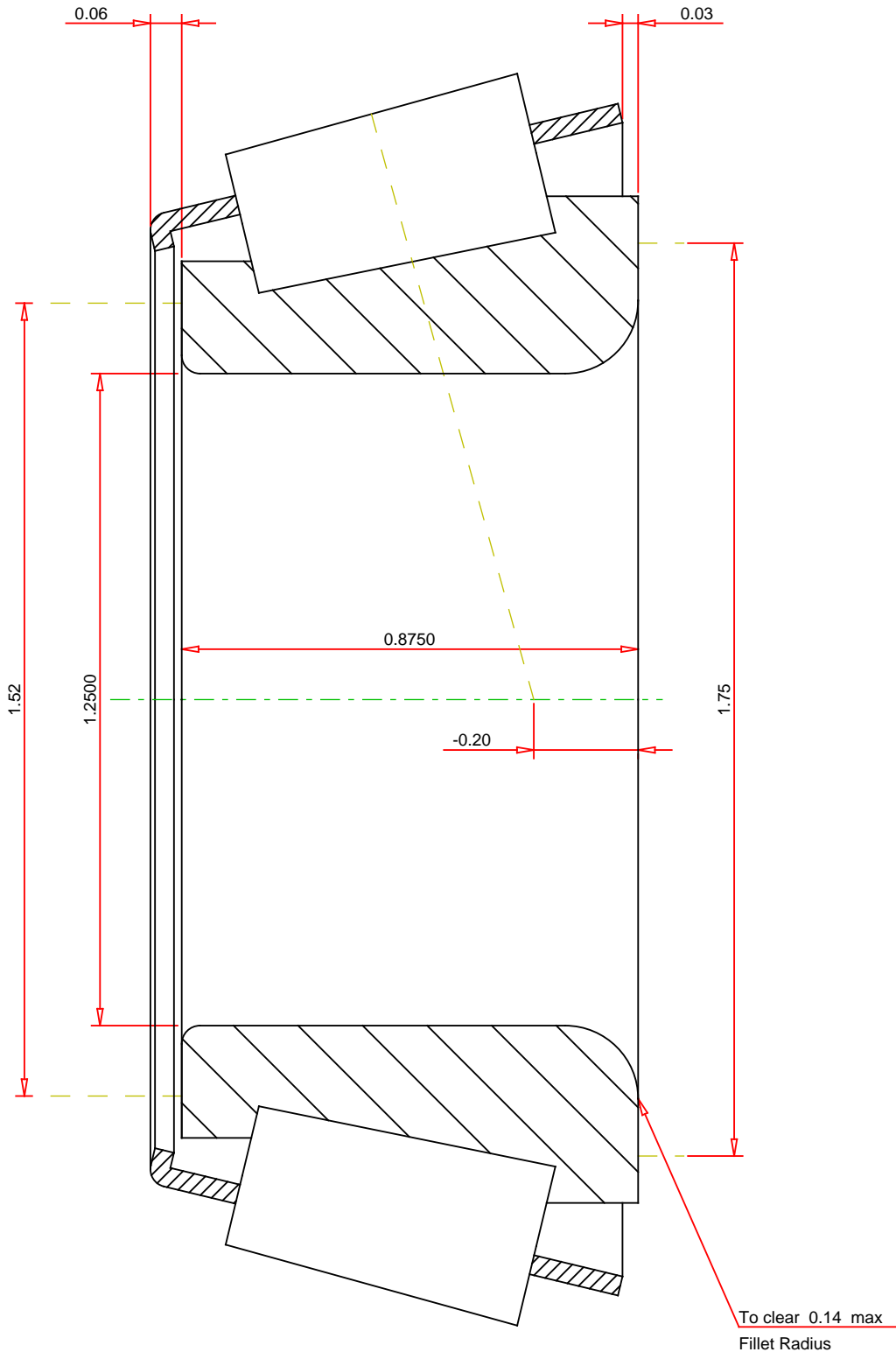
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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

16

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

02475

Tapered Roller Bearings - Single Cones - Imperial

K Factor	1.4
Dynamic Radial Rating - C90	16500 lbf
Dynamic Thrust Rating - Ca90	11800 lbf
Dynamic Radial Rating - C1	63800 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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