


The Timken Company

4500 Mt Pleasant St. NW

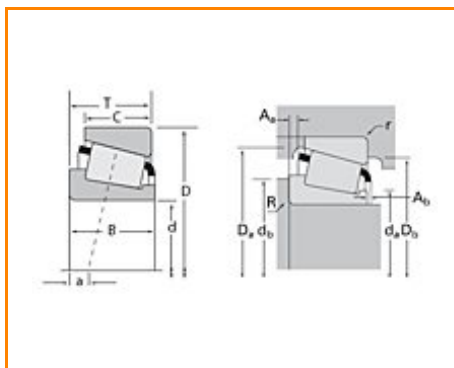
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Timken Part Number 2474 - 2420, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	2400
Cone Part Number	2474
Cup Part Number	2420
Design Units	Imperial
Bearing Weight	0.400 Kg 0.90 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	28.575 mm 1.1250 in
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D - Cup Outer Diameter 68.263 mm
2.6875 in

B - Cone Width 23.813 mm
0.9375 in

C - Cup Width 17.463 mm
0.6875 in

T - Bearing Width 22.225 mm
0.8750 in

Abutment and Fillet Dimensions

**R - Cone Backface "To Clear"
Radius¹** 0.760 mm
0.03 in

**r - Cup Backface "To Clear"
Radius²** 1.52 mm
0.06 in

**da - Cone Frontface Backing
Diameter** 35.05 mm
1.38 in

**db - Cone Backface Backing
Diameter** 36.07 mm
1.42 in

**Da - Cup Frontface Backing
Diameter** 63.00 mm
2.52 in

**Db - Cup Backface Backing
Diameter** 59.94 mm
2.36 in

**Ab - Cage-Cone Frontface
Clearance** 1 mm
0.04 in

**Aa - Cage-Cone Backface
Clearance** 0.3 mm
0.01 in

a - Effective Center Location³ -6.6 mm
-0.26 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	17500 N 3940 lbf
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C1 - Dynamic Radial Rating (1 million revolutions)⁵	67600 N 15200 lbf
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C0 - Static Radial Rating	73300 N 16500 lbf
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	10200 N 2290 lbf
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Factors

K - Factor⁷	1.72
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e - ISO Factor⁸	0.34
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Y - ISO Factor⁹	1.77
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G1 - Heat Generation Factor (Roller-Raceway)	18.8
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G2 - Heat Generation Factor (Rib-Roller End)	10.5
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Cg - Geometry Factor	0.0652
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¹ These maximum fillet radii will be cleared by the bearing corners.

² These maximum fillet radii will be cleared by the bearing corners.

³ Negative value indicates effective center inside cone backface.

⁴ 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.

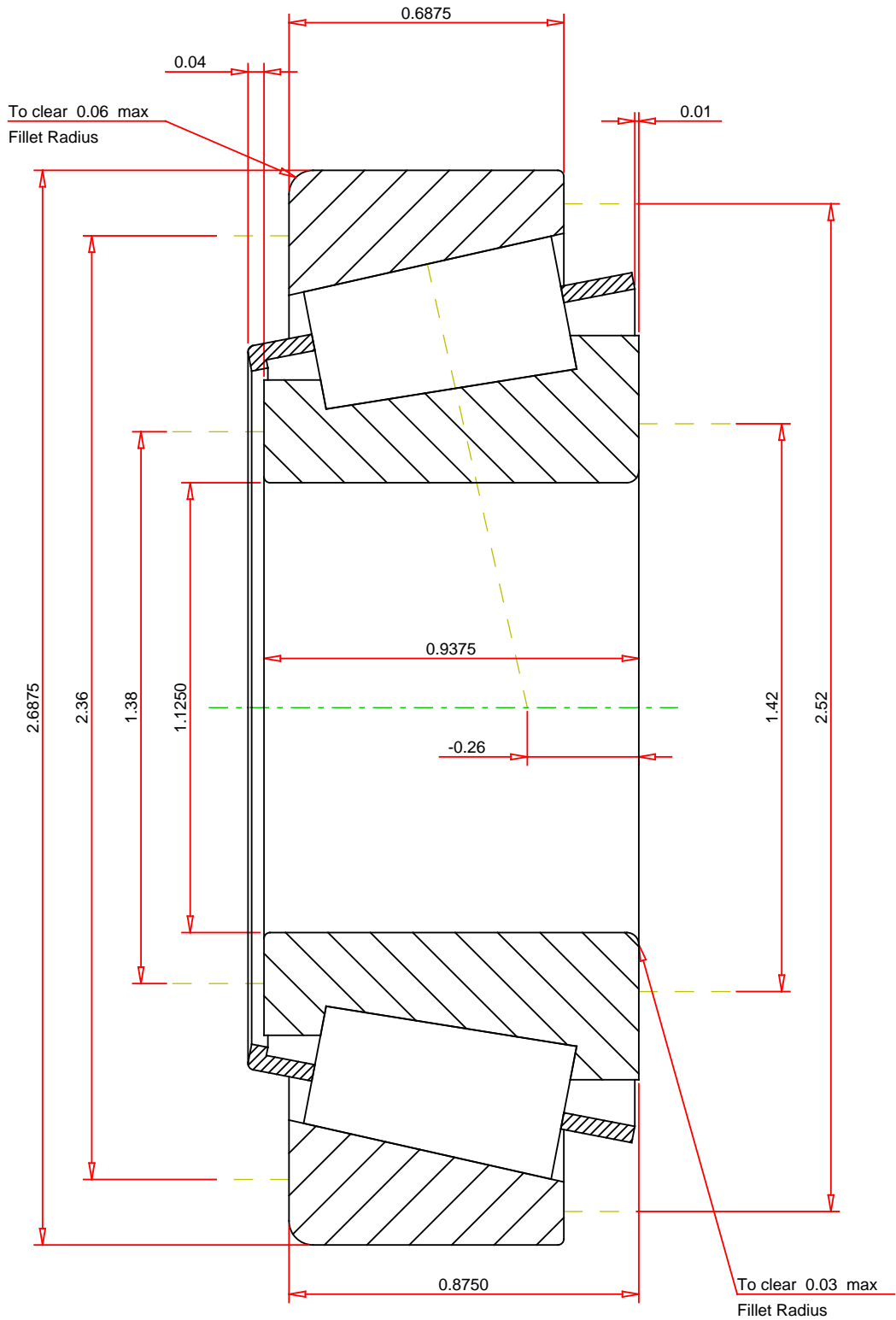
⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

⁶ 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.

⁷ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁸ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁹ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.



IMPERIAL UNITS

ISO Factor - e 0.34
ISO Factor - Y 1.77
Bearing Weight 0.9 lb
Number of Rollers Per Row 15
Effective Center Location -0.26 inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

2474 - 2420 TS BEARING ASSEMBLY

K Factor	1.72
Dynamic Radial Rating - C90	17500 lbf
Dynamic Thrust Rating - Ca90	10200 lbf
Static Radial Rating - C0	73300 lbf
Dynamic Radial Rating - C1	67600 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