



The Timken Company

4500 Mt Pleasant St. NW

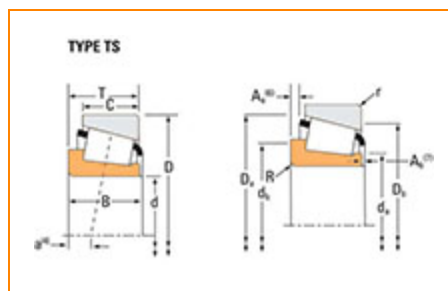
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Part Number 52400, Tapered Roller Bearings - Single Cones - Imperial

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.



[Specifications](#) | [Dimensions](#) | [Abutment and Fillet Dimensions](#) | [Basic Load Ratings](#) | [Factors](#)

Specifications

Series	52000
Cone Part Number	52400
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	87500 lbf 389000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	22700 lbf 101000 N

Dimensions

d - Bore	4.0000 in 101.600 mm
B - Cone Width	1.4219 in 36.116 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.14 in 3.600 mm
da - Cone Frontface Backing Diameter	4.37 in 111 mm
db - Cone Backface Backing Diameter	4.61 in 117 mm
Ab - Cage-Cone Frontface Clearance	0.12 in 3 mm
Aa - Cage-Cone Backface Clearance	0.16 in 4.1 mm
a - Effective Center Location⁴	-0.02 in -0.5 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	13000 lbf 57900 N
C1 - Dynamic Radial Rating (1 million revolutions)⁶	50200 lbf 223000 N
C0 - Static Radial Rating	77000 lbf 343000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	10600 lbf 47100 N

Factors

K - Factor⁸	1.23
G1 - Heat Generation Factor (Roller-Raceway)	175.4
G2 - Heat Generation Factor (Rib-Roller End)	41.7
Cg - Geometry Factor⁹	0.152

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.

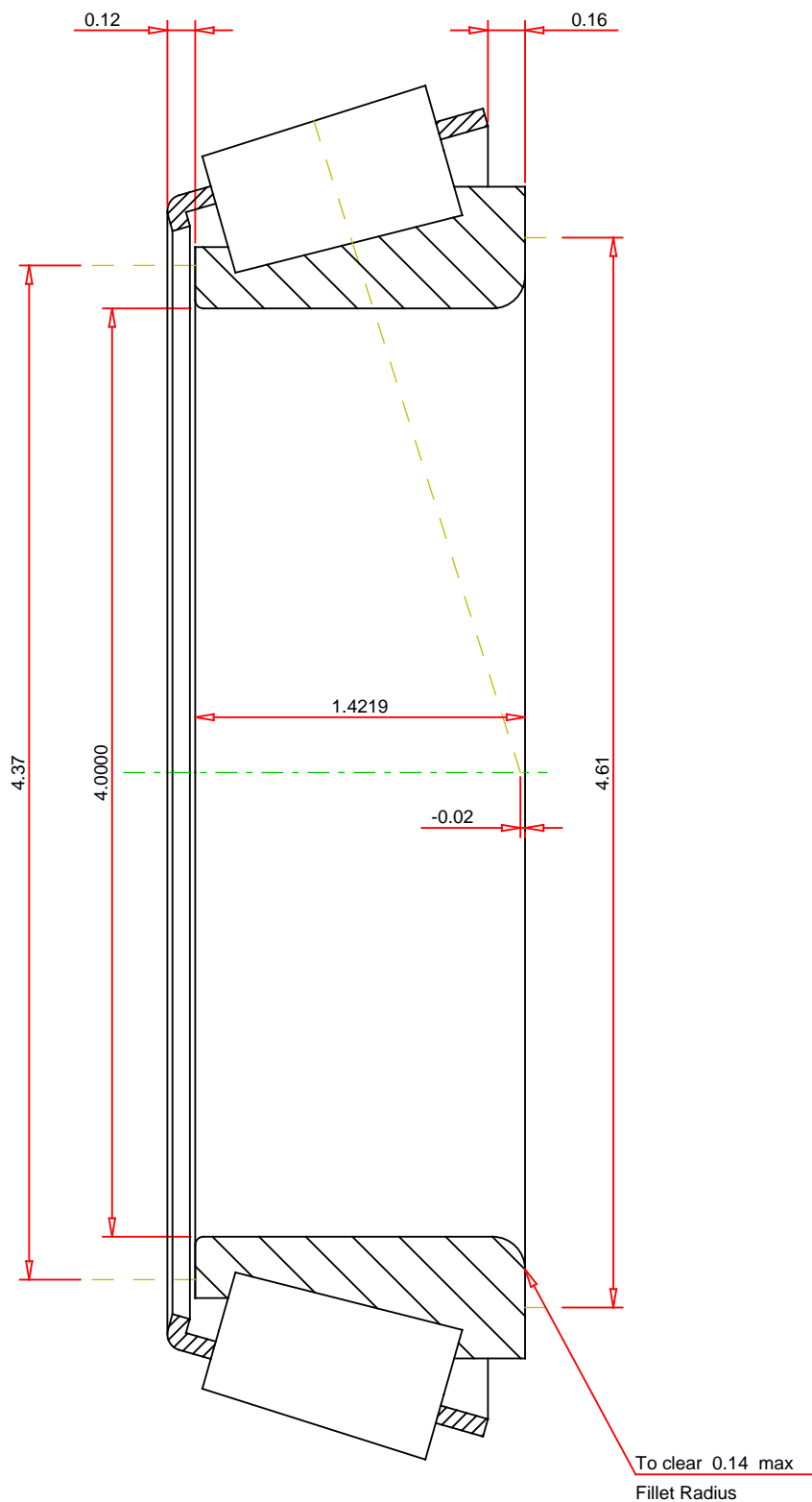
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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 Row26</div>	<div>TIMKEN®</div> <div>THE TIMKEN COMPANY NORTH CANTON, OHIO USA</div>	<div>52400 SINGLE TAPERED CONE</div> <div><div>K Factor1.23</div><div>Dynamic Radial Rating - C9013000 lbf</div><div>Dynamic Thrust Rating - Ca9010600 lbf</div><div>Dynamic Radial Rating - C150200 lbf</div></div>
<div>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.</div>		<div>FOR DISCUSSION ONLY</div>