


The Timken Company

4500 Mt Pleasant St. NW

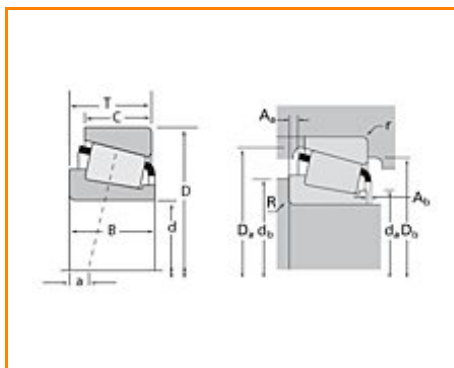
N. Canton, OH 44720

Phone: (234) 262-3000

E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number 25570 - 25520, 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.



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

Specifications

Series	25500
Cone Part Number	25570
Cup Part Number	25520
Design Units	Imperial
Bearing Weight	0.700 Kg 1.40 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	36.513 mm 1.4375 in
-----------------	------------------------

D - Cup Outer Diameter	82.931 mm 3.2650 in
B - Cone Width	25.400 mm 1.0000 in
C - Cup Width	19.050 mm 0.7500 in
T - Bearing Width	23.813 mm 0.9375 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius²	0.76 mm 0.030 in
da - Cone Frontface Backing Diameter	44.96 mm 1.77 in
db - Cone Backface Backing Diameter	51.05 mm 2.01 in
Da - Cup Frontface Backing Diameter	77.00 mm 3.05 in
Db - Cup Backface Backing Diameter	73.91 mm 2.91 in
Ab - Cage-Cone Frontface Clearance	1.5 mm 0.06 in
Aa - Cage-Cone Backface Clearance	0.3 mm 0.01 in
a - Effective Center Location³	-6.4 mm -0.25 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	23500 N 5270 lbf
---	---------------------

C1 - Dynamic Radial Rating (1 million revolutions)⁵	90500 N 20300 lbf
---	----------------------

C0 - Static Radial Rating	111000 N 24900 lbf
----------------------------------	-----------------------

C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	13500 N 3020 lbf
---	---------------------

Factors

K - Factor⁷	1.74
-------------------------------	------

e - ISO Factor⁸	0.33
-----------------------------------	------

Y - ISO Factor⁹	1.79
-----------------------------------	------

G1 - Heat Generation Factor (Roller-Raceway)	35.2
---	------

G2 - Heat Generation Factor (Rib-Roller End)	14.3
---	------

Cg - Geometry Factor	0.0801
-----------------------------	--------

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.

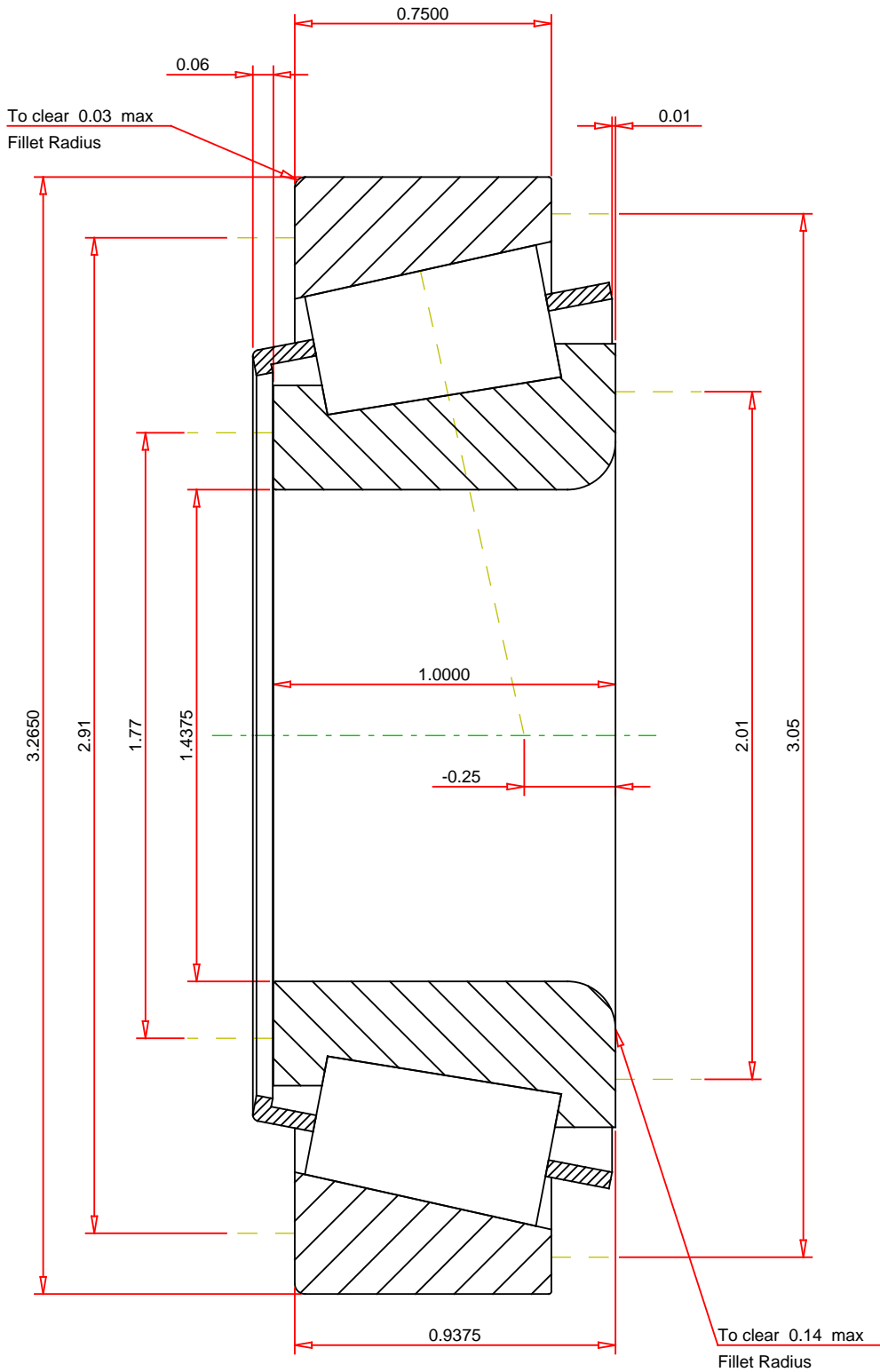
⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

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

<div>ISO Factor - e0.33</div> <div>ISO Factor - Y1.79</div> <div>Bearing Weight1.4 lb</div> <div>Number of Rollers Per Row18</div> <div>Effective Center Location-0.25 inch</div>		<div>TIMKEN®</div> <div>THE TIMKEN COMPANY</div> <div>NORTH CANTON, OHIO USA</div>		<div>25570 - 25520</div> <div>TS BEARING ASSEMBLY</div>	
				<div>K Factor1.74</div> <div>Dynamic Radial Rating - C9023500 lbf</div> <div>Dynamic Thrust Rating - Ca9013500 lbf</div> <div>Static Radial Rating - C0111000 lbf</div> <div>Dynamic Radial Rating - C190500 lbf</div>	