



The Timken Company

4500 Mt Pleasant St. NW

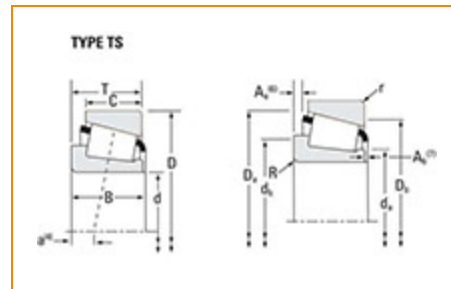
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Timken Part Number 56425 - 56650, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	56000
Cone Part Number	56425
Cup Part Number	56650
Design Units	Imperial
Bearing Weight	2.6 Kg 5.8 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	107.95 mm 4.25 in
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D - Cup Outer Diameter	165.1 mm 6.5 in
B - Cone Width	36.513 mm 1.4375 in
C - Cup Width	26.988 mm 1.0625 in
T - Bearing Width	36.513 mm 1.4375 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius²	3.3 mm 0.130 in
da - Cone Frontface Backing Diameter	117.09 mm 5.47 in
db - Cone Backface Backing Diameter	122.94 mm 4.84 in
Da - Cup Frontface Backing Diameter	160.00 mm 6.30 in
Db - Cup Backface Backing Diameter	149.10 mm 5.87 in
Ab - Cage-Cone Frontface Clearance	2 mm 0.08 in
Aa - Cage-Cone Backface Clearance	3.6 mm 0.14 in
a - Effective Center Location³	2 mm 0.08 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	13200 lbf 58700 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	50900 lbf 226000 N
C0 - Static Radial Rating	79700 lbf 355000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	11200 lbf 50000 N

Factors

K - Factor⁷	1.18
e - ISO Factor⁸	0.5
Y - ISO Factor⁹	1.21
G1 - Heat Generation Factor (Roller-Raceway)	191
G2 - Heat Generation Factor (Rib-Roller End)	47.7
C_g - Geometry Factor¹⁰	0.158

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.

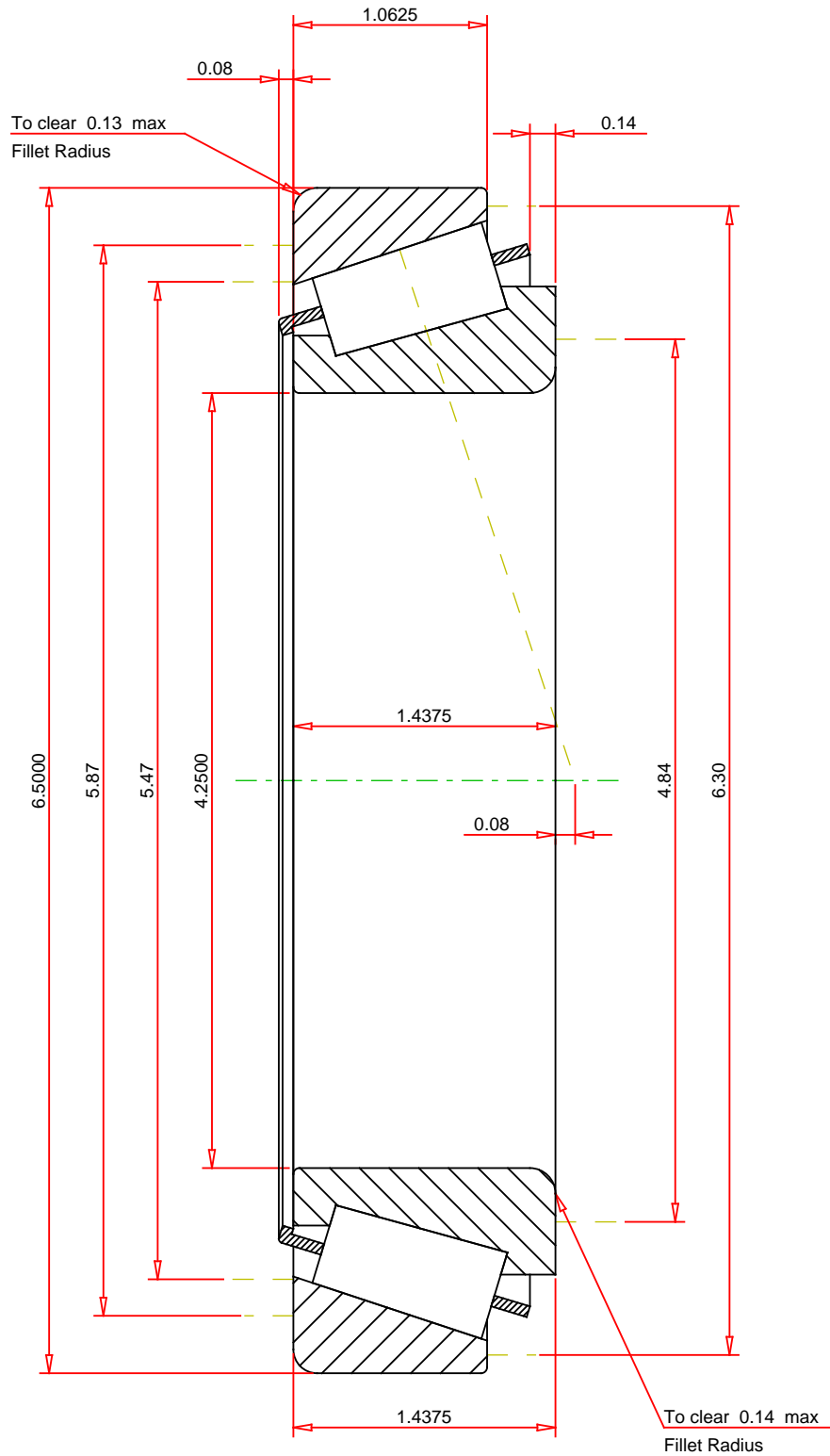
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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.

¹⁰ Geometry constant for Lubrication Life Adjustment Factor a3l.



IMPERIAL UNITS

ISO Factor - e	0.5
ISO Factor - Y	1.21
Bearing Weight	5.8 lb
Number of Rollers Per Row	27
Effective Center Location	0.08 inch

TIMKEN®

56425 - 56650
TS BEARING ASSEMBLY

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

K Factor	1.18
Dynamic Radial Rating - C90	13200 lbf
Dynamic Thrust Rating - Ca90	11200 lbf
Static Radial Rating - C0	79700 lbf
Dynamic Radial Rating - C1	50900 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