



The Timken Company

4500 Mt Pleasant St. NW

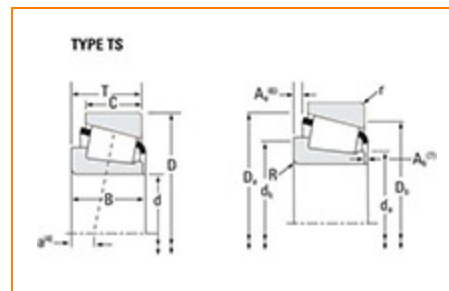
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Part Number 65237 - 65500, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	65000
Cone Part Number	65237
Cup Part Number	65500
Design Units	Imperial
Bearing Weight	2.6 Kg 5.7 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	60.325 mm 2.3750 in
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D - Cup Outer Diameter	127 mm 5 in
B - Cone Width	44.45 mm 1.75 in
C - Cup Width	34.925 mm 1.3750 in
T - Bearing Width	44.450 mm 1.7500 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	71.12 mm 2.8 in
db - Cone Backface Backing Diameter	82.04 mm 3.23 in
Da - Cup Frontface Backing Diameter	119.89 mm 4.72 in
Db - Cup Backface Backing Diameter	106.93 mm 4.21 in
Ab - Cage-Cone Frontface Clearance	2 mm 0.08 in
Aa - Cage-Cone Backface Clearance	3.3 mm 0.13 in
a - Effective Center Location³	-9.4 mm -0.37 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	14200 lbf 63100 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	54700 lbf 243000 N
C0 - Static Radial Rating	66700 lbf 297000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	11800 lbf 52700 N

Factors

K - Factor⁷	1.2
e - ISO Factor⁸	0.49
Y - ISO Factor⁹	1.23
G1 - Heat Generation Factor (Roller-Raceway)	83.2
G2 - Heat Generation Factor (Rib-Roller End)	17.2
C_g - Geometry Factor¹⁰	0.0827

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.

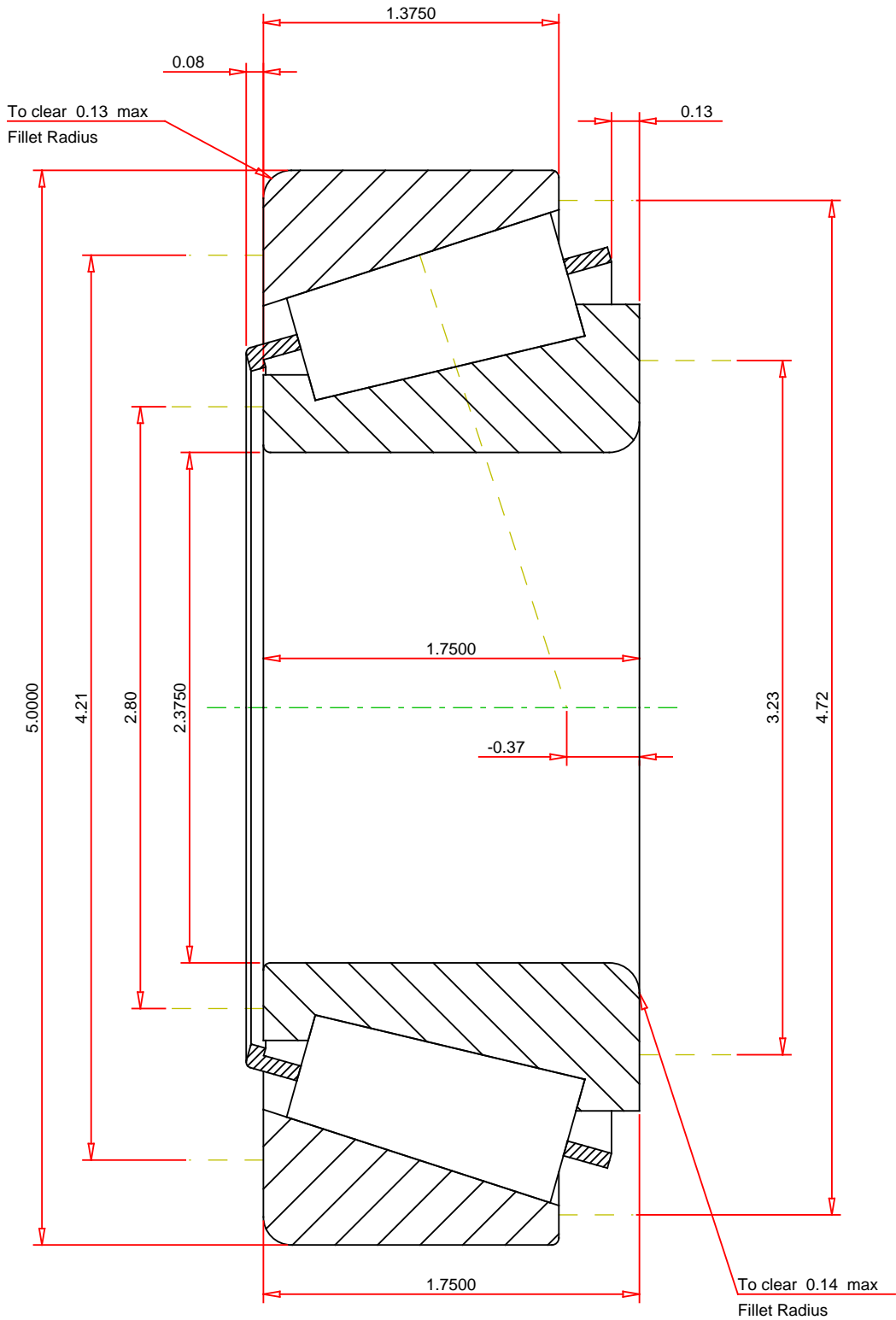
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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	0.49
ISO Factor - Y	1.23
Bearing Weight	5.7 lb
Number of Rollers Per Row	16
Effective Center Location	-0.37 inch

TIMKEN®

65237 - 65500
TS BEARING ASSEMBLY

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

K Factor	1.2
Dynamic Radial Rating - C90	14200 lbf
Dynamic Thrust Rating - Ca90	11800 lbf
Static Radial Rating - C0	66700 lbf
Dynamic Radial Rating - C1	54700 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