



The Timken Company

4500 Mt Pleasant St. NW

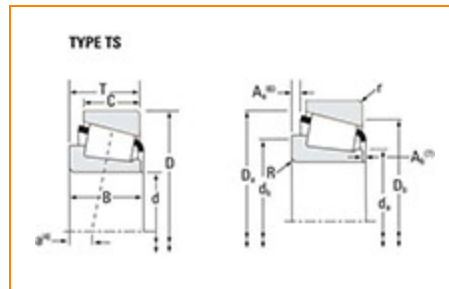
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Part Number H239649 - H239610, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	H239600
Cone Part Number	H239649
Cup Part Number	H239610
Design Units	Imperial
Bearing Weight	25.800 Kg 56.900 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	187.325 mm 7.3750 in
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D - Cup Outer Diameter	319.964 mm 12.5970 in
B - Cone Width	85.725 mm 3.3750 in
C - Cup Width	65.088 mm 2.5625 in
T - Bearing Width	88.900 mm 3.5000 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	5.590 mm 0.220 in
r - Cup Backface "To Clear" Radius²	4.83 mm 0.190 in
da - Cone Frontface Backing Diameter	204.98 mm 9.03 in
db - Cone Backface Backing Diameter	214.12 mm 8.43 in
Da - Cup Frontface Backing Diameter	300.99 mm 11.85 in
Db - Cup Backface Backing Diameter	293.12 mm 11.54 in
Ab - Cage-Cone Frontface Clearance	3.6 mm 0.14 in
Aa - Cage-Cone Backface Clearance	10.7 mm 0.42 in
a - Effective Center Location³	-22.4 mm -0.88 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	61100 lbf 272000 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	236000 lbf 1050000 N
C0 - Static Radial Rating	356000 lbf 1580000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	33400 lbf 148000 N

Factors

K - Factor⁷	1.83
e - ISO Factor⁸	0.32
Y - ISO Factor⁹	1.88
G1 - Heat Generation Factor (Roller-Raceway)	905.7
G2 - Heat Generation Factor (Rib-Roller End)	90.3
Cg - Geometry Factor¹⁰	0.124

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.

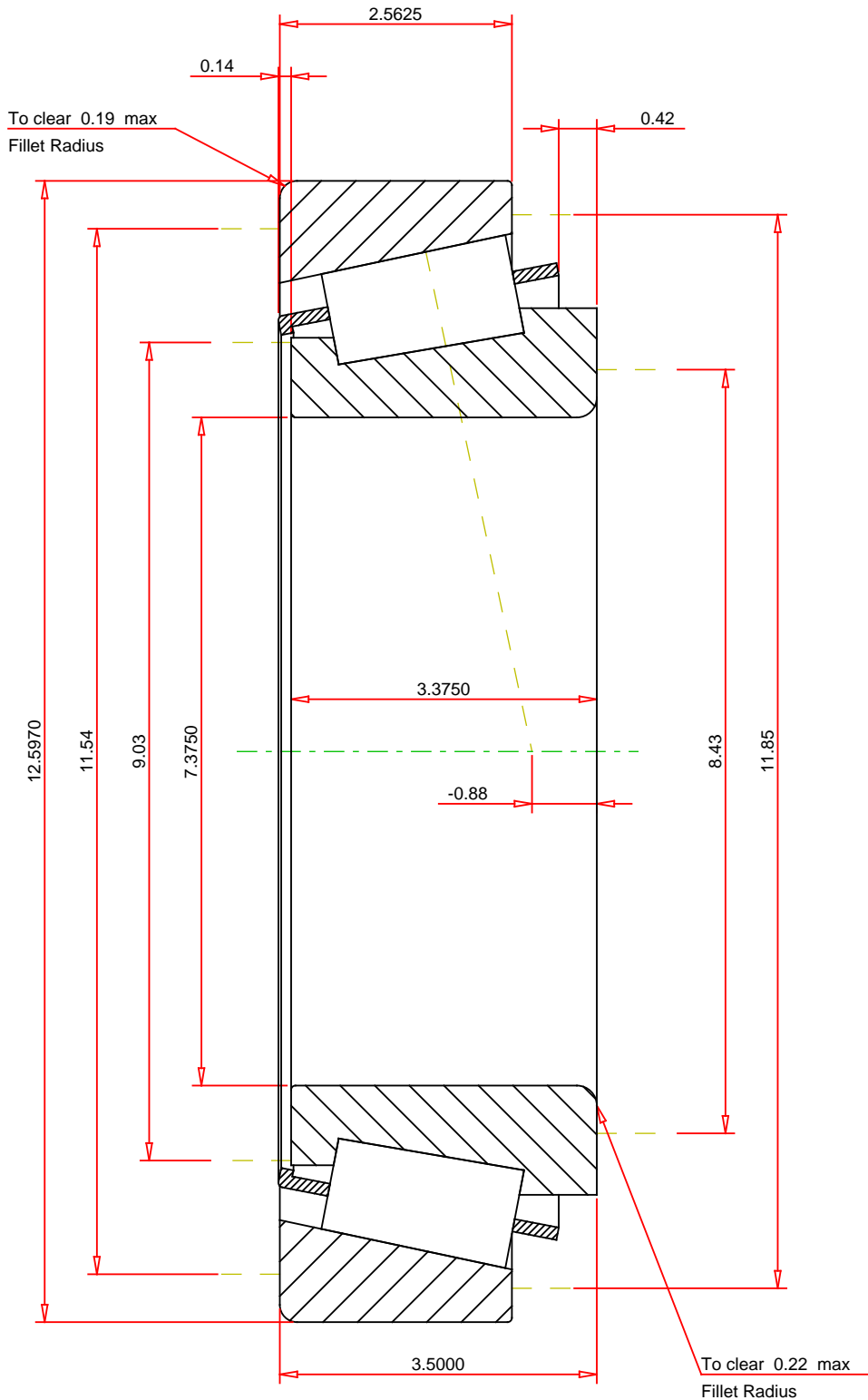
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 a_3 .



IMPERIAL UNITS

ISO Factor - e 0.32
ISO Factor - Y 1.88
Bearing Weight 56.9 lb
Number of Rollers Per Row 19
Effective Center Location -0.88 inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

H239649 - H239610
TS BEARING ASSEMBLY

K Factor 1.83
Dynamic Radial Rating - C90 61100 lbf
Dynamic Thrust Rating - Ca90 33400 lbf
Static Radial Rating - C0 356000 lbf
Dynamic Radial Rating - C1 236000 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