



The Timken Company

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N. Canton, OH 44720

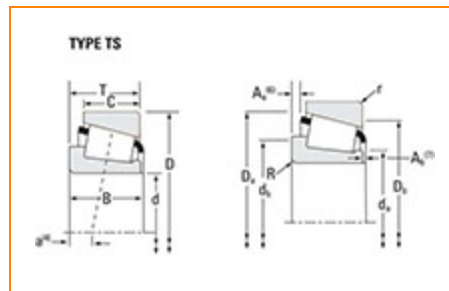
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Part Number HH228349 - HH228310, Tapered Roller Bearings - TS (Tapered Single)

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 | HH228300 |
| Cone Part Number | HH228349 |
| Cup Part Number | HH228310 |
| Design Units | Imperial |
| Bearing Weight | 17.9 Kg 39.4 lb |
| Cage Type | Stamped Steel |

Dimensions

127 mm

| | |
|-------------------------------|--------------------------|
| d - Bore | 127.0000 mm 5 in |
| D - Cup Outer Diameter | 254.000 mm 10.0000 in |
| B - Cone Width | 82.550 mm 3.2500 in |
| C - Cup Width | 61.913 mm 2.4375 in |
| T - Bearing Width | 77.788 mm 3.0625 in |

Abutment and Fillet Dimensions

| | |
|--|----------------------|
| R - Cone Backface "To Clear" Radius¹ | 9.650 mm 0.380 in |
| r - Cup Backface "To Clear" Radius² | 6.35 mm 0.250 in |
| da - Cone Frontface Backing Diameter | 148.08 mm 6.77 in |
| db - Cone Backface Backing Diameter | 164.08 mm 6.46 in |
| Da - Cup Frontface Backing Diameter | 233.93 mm 9.21 in |
| Db - Cup Backface Backing Diameter | 223.01 mm 8.78 in |
| Ab - Cage-Cone Frontface Clearance | 1.3 mm 0.05 in |
| Aa - Cage-Cone Backface Clearance | 6.3 mm 0.25 in |
| a - Effective Center Location³ | -23.4 mm -0.92 in |

Basic Load Ratings

| | |
|---|-------------------------|
| C90 - Dynamic Radial Rating (90 million revolutions)⁴ | 53000 lbf 236000 N |
| C1 - Dynamic Radial Rating (1 million revolutions)⁵ | 205000 lbf 910000 N |
| C0 - Static Radial Rating | 279000 lbf 1240000 N |
| C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶ | 29200 lbf 130000 N |

Factors

| | |
|---|-------|
| K - Factor⁷ | 1.82 |
| e - ISO Factor⁸ | 0.32 |
| Y - ISO Factor⁹ | 1.87 |
| G1 - Heat Generation Factor (Roller-Raceway) | 530 |
| G2 - Heat Generation Factor (Rib-Roller End) | 44.8 |
| Cg - Geometry Factor¹⁰ | 0.133 |

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.

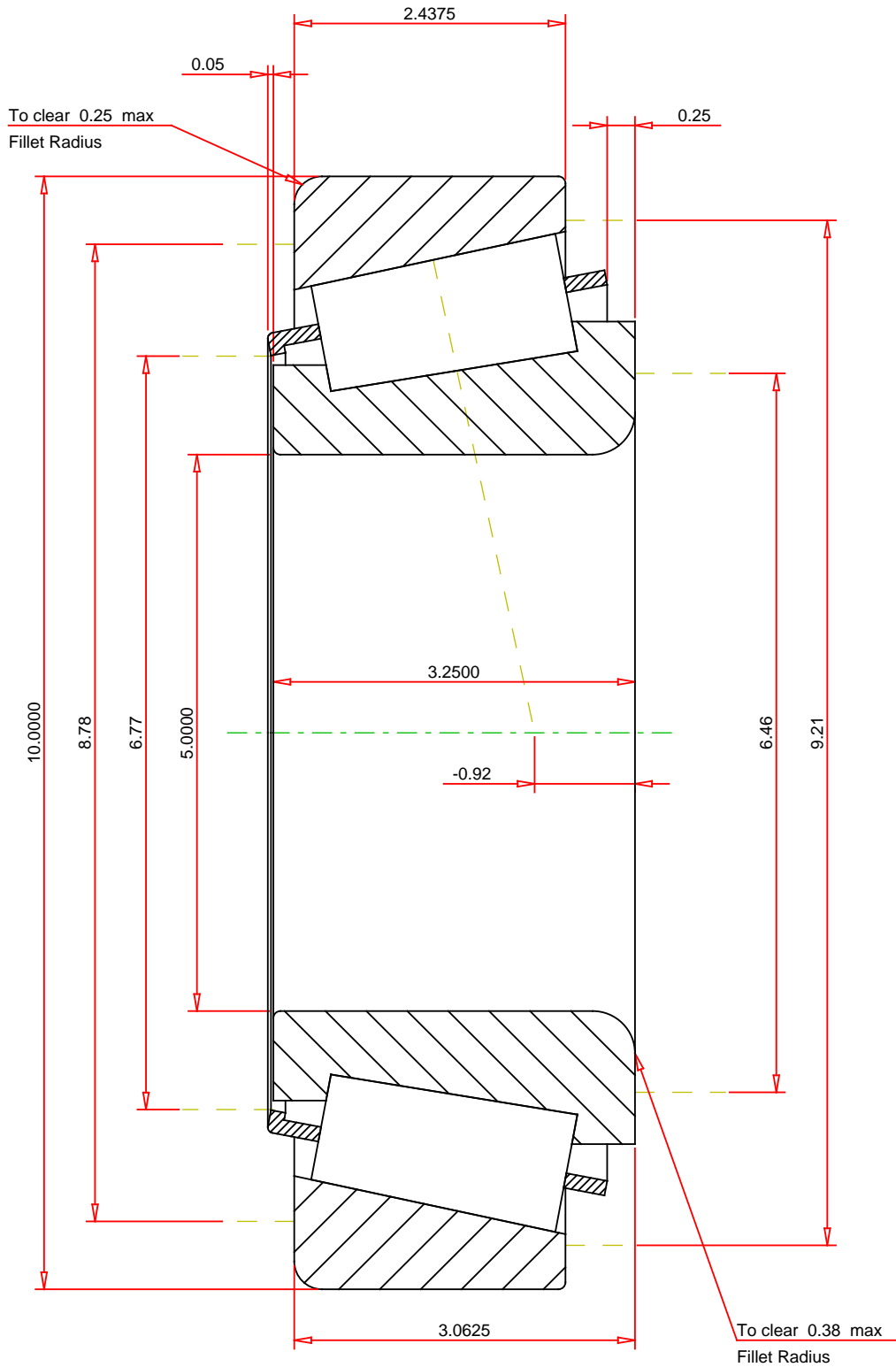
⁷ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

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¹⁰ Geometry constant for Lubrication Life Adjustment Factor a_3 .



IMPERIAL UNITS

ISO Factor - e 0.32
ISO Factor - Y 1.87
Bearing Weight 39.4 lb
Number of Rollers Per Row 17
Effective Center Location -0.92 inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HH228349 - HH228310
TS BEARING ASSEMBLY

K Factor 1.82
Dynamic Radial Rating - C90 53000 lbf
Dynamic Thrust Rating - Ca90 29200 lbf
Static Radial Rating - C0 279000 lbf
Dynamic Radial Rating - C1 205000 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