



The Timken Company

4500 Mt Pleasant St. NW

N. Canton, OH 44720

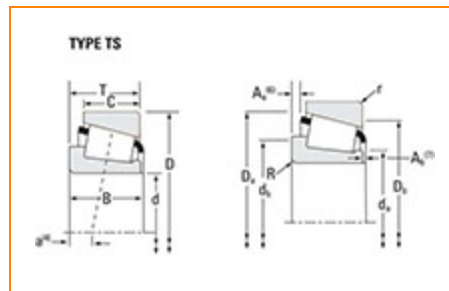
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Part Number JHM840449 - JHM840410, Tapered Roller Bearings - TS (Tapered Single)

Metric

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 | HM840400 |
| Cone Part Number | JHM840449 |
| Cup Part Number | JHM840410 |
| Design Units | METRIC |
| Bearing Weight | 15.300 Kg 33.80 lb |
| Cage Type | Stamped Steel |

Dimensions

200 mm

| | |
|-------------------------------|------------------------|
| d - Bore | 200 mm 7.874 in |
| D - Cup Outer Diameter | 300 mm 11.811 in |
| B - Cone Width | 62 mm 2.4409 in |
| C - Cup Width | 51.000 mm 2.0079 in |
| T - Bearing Width | 65.000 mm 2.5591 in |

Abutment and Fillet Dimensions

| | |
|--|-----------------------|
| R - Cone Backface "To Clear" Radius¹ | 3.560 mm 0.14 in |
| r - Cup Backface "To Clear" Radius² | 2.54 mm 0.1 in |
| da - Cone Frontface Backing Diameter | 214.88 mm 8.46 in |
| db - Cone Backface Backing Diameter | 226.06 mm 8.9 in |
| Da - Cup Frontface Backing Diameter | 290.07 mm 11.42 in |
| Db - Cup Backface Backing Diameter | 273.05 mm 10.75 in |
| Ab - Cage-Cone Frontface Clearance | 7.1 mm 0.28 in |
| Aa - Cage-Cone Backface Clearance | 3.8 mm 0.15 in |
| a - Effective Center Location³ | 8.1 mm 0.32 in |

Basic Load Ratings

| | |
|---|-------------------------|
| C90 - Dynamic Radial Rating (90 million revolutions)⁴ | 180000 N 40500 lbf |
| C1 - Dynamic Radial Rating (1 million revolutions)⁵ | 695000 N 156000 lbf |
| C0 - Static Radial Rating | 1280000 N 287000 lbf |
| C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶ | 161000 N 36200 lbf |

Factors

| | |
|---|-------|
| K - Factor⁷ | 1.12 |
| e - ISO Factor⁸ | 0.52 |
| Y - ISO Factor⁹ | 1.15 |
| G1 - Heat Generation Factor (Roller-Raceway) | 854 |
| G2 - Heat Generation Factor (Rib-Roller End) | 126 |
| C_g - Geometry Factor¹⁰ | 0.143 |

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.

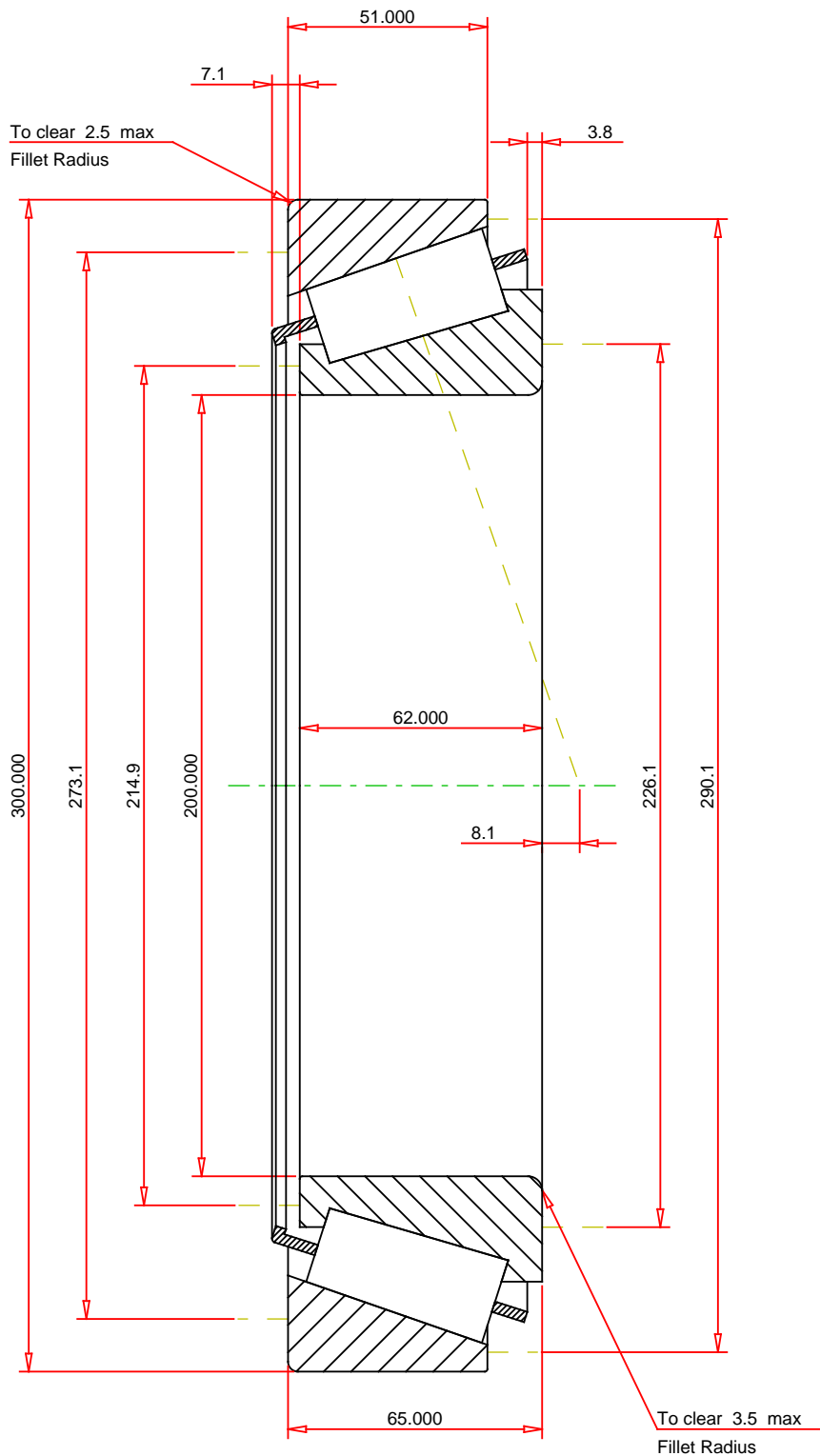
⁷ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁸ These factors apply for both inch and metric calculations. Consult your Timken representative for

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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 .



METRIC UNITS

| | |
|---------------------------|---------|
| ISO Factor - e | 0.52 |
| ISO Factor - Y | 1.15 |
| Bearing Weight | 15.3 kg |
| Number of Rollers Per Row | 27 |
| Effective Center Location | 8.1 mm |

TIMIKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

JHM840449 - JHM840410
TS BEARING ASSEMBLY

| | | |
|------------------------------|---------|---|
| K Factor | 1.12 | |
| Dynamic Radial Rating - C90 | 180000 | N |
| Dynamic Thrust Rating - Ca90 | 161000 | N |
| Static Radial Rating - C0 | 1280000 | N |
| Dynamic Radial Rating - C1 | 695000 | N |

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