


The Timken Company

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Part Number 32007X, 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.



[Specifications](#) | [Dimensions](#) | [Abutment and Fillet Dimensions](#) | [Basic Load Ratings](#) | [Factors](#)

Specifications

| | |
|--------------------------------|---------------|
| Series | 32007X |
| Cone Part Number | X32007X |
| Cup Part Number | Y32007X |
| Design Unit | Metric |
| Cage Material | Stamped Steel |
| Full Timken Part Number | 32007X |

Dimensions


d - Bore

35 mm

1.3780 in

| | |
|-------------------------------|------------------------|
| D - Cup Outer Diameter | 62 mm 2.4409 in |
| B - Cone Width | 18 mm 0.7087 in |
| C - Cup Width | 14 mm 0.5512 in |
| T - Bearing Width | 18.000 mm 0.7087 in |

Abutment and Fillet Dimensions

| | |
|--|---------------------|
| R - Cone Backface "To Clear" Radius¹ | 1.020 mm 0.04 in |
| r - Cup Backface "To Clear" Radius² | 1.02 mm 0.04 in |
| da - Cone Frontface Backing Diameter | 41.5 mm 1.63 in |
| db - Cone Backface Backing Diameter | 43.0 mm 1.69 in |
| Da - Cup Frontface Backing Diameter | 59.90 mm 2.36 in |
| Db - Cup Backface Backing Diameter | 55.12 mm 2.17 in |
| Ab - Cage-Cone Frontface Clearance | 1.8 mm 0.07 in |
| Aa - Cage-Cone Backface Clearance | 0.3 mm 0.01 in |
| a - Effective Center Location³ | -2.5 mm -0.1 in |

Basic Load Ratings

| | |
|---|----------------------|
| C90 - Dynamic Radial Rating (90 million revolutions)⁴ | 14600 N 3290 lbf |
| C1 - Dynamic Radial Rating (1 million revolutions)⁵ | 56500 N 12700 lbf |
| C0 - Static Radial Rating | 57600 N 12900 lbf |
| C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶ | 11400 N 2560 lbf |

Factors

| | |
|---|--------|
| K - Factor⁷ | 1.29 |
| e - ISO Factor⁸ | 0.45 |
| Y - ISO Factor⁹ | 1.32 |
| G1 - Heat Generation Factor (Roller-Raceway) | 16.7 |
| G2 - Heat Generation Factor (Rib-Roller End) | 15.7 |
| Cg - Geometry Factor¹⁰ | 0.0691 |

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.

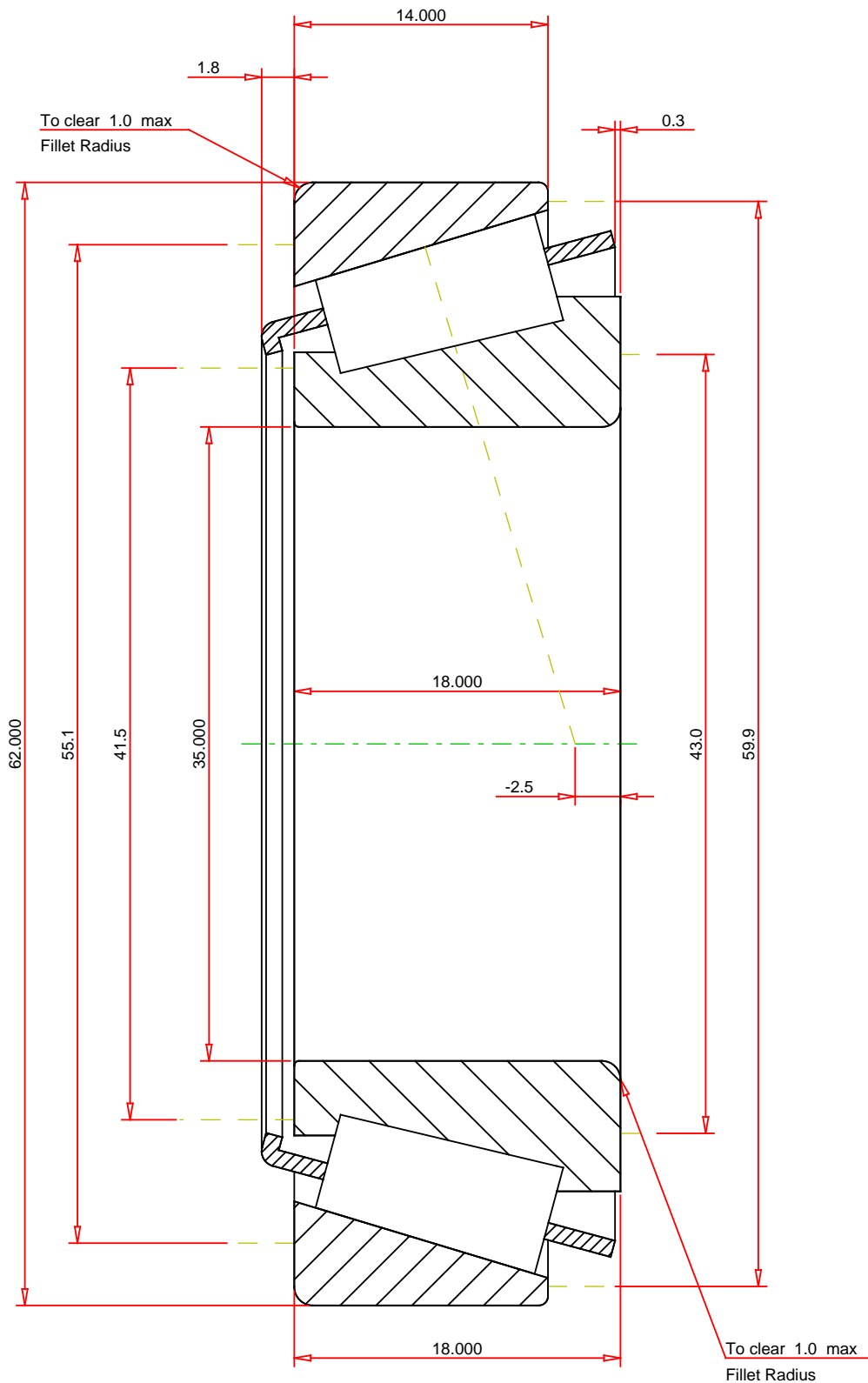
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 .



METRIC UNITS

| | |
|---------------------------|---------|
| ISO Factor - e | 0.45 |
| ISO Factor - Y | 1.32 |
| Bearing Weight | 0.2 kg |
| Number of Rollers Per Row | 20 |
| Effective Center Location | -2.5 mm |

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

X32007X - Y32007X
Tapered Roller Bearings - TS (Tapered Single)
Metric

| | | |
|------------------------------|-------|---|
| K Factor | 1.29 | |
| Dynamic Radial Rating - C90 | 14600 | N |
| Dynamic Thrust Rating - Ca90 | 11400 | N |
| Static Radial Rating - C0 | 57600 | N |
| Dynamic Radial Rating - C1 | 56500 | 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.

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