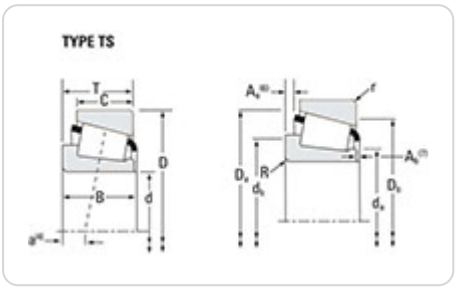
**The Timken Company**
4500 Mt Pleasant St. NW
N. Canton, OH 44720
**Phone:** (234) 262-3000
**E-Mail:** CustomerCAD@timken.com (mailto:CustomerCAD@timken.com) • **Web site:** www.timken.com (http://www.timken.com)



# Part Number 33207, Tapered Roller Bearings - TS (Tapered Single) Metric






## Key Features

- Available in single, double and multi-row configurations, as well as proprietary sizes
- Designed in collaboration with OE engineers to design, engineer and test bearings for premium performance in many applications
- Power dense designs allow for heavier loads and can help extend bearing life
- Optimized internal geometry lowers torque and operating temperatures to extend lubrication system life

- Can be designed to withstand high-corrosive, high-temperature and vacuum or low-lubrication environments with proprietary enhancements

## Key Dimensions

| | |
|---|---|
| **Cone Part Number** | X33207 |
| **Cup Part Number** | Y33207 |
| **Bore (d)** | 35.000 mm<br>1.3780 in |
| **O.D. (D)** | 72.000 mm<br>2.8346 in |
| **Width (T)** | 28.000 mm<br>1.1024 in |
| **Dynamic Radial Load Rating - 1M Revs (C1)** [1] | 118000 N<br>26600 lbf |
| **Dynamic Radial Load Rating - 90M Revs (C90)** [2] | 30700 N<br>6900 lbf |
| **e Factor** [3] | 0.35 |
| **K Factor** [4] | 1.65 |
| **Series** | 33207 |
| **Y Factor** [5] | 1.7 |

# Other Dimensions

| | |
|---|---|
| **Inner Ring Width (B)** | 28.000 mm<br>1.1024 in |
| **Outer Ring Width (C)** | 22.000 mm<br>0.8661 in |
| **Effective Center Location**[6] | -9.4 mm<br>-0.37 in |
| **Max Shaft Fillet Radius**[7] | 1.520 mm<br>0.060 in |
| **Max Housing Fillet Radius**[8] | 1.52 mm<br>0.06 in |
| **Shaft Backing Shoulder Diameter - Frontface (da)** | 42 mm<br>1.65 in |
| **Shaft Backing Shoulder Diameter - Backface (db)** | 45.5 mm<br>1.79 in |
| **Housing Backing Shoulder Diameter - Frontface (Da)** | 68.10 mm<br>2.72 in |
| **Housing Backing Shoulder Diameter - Backface (Db)** | 62.99 mm<br>2.48 in |
| **Cage Location Relative to Backface (Aa)** | 1.5 mm<br>0.06 in |
| **Cage Location Relative to Frontface (Ab)** | 2.8 mm<br>0.11 in |
| **Weight** | 0.50 Kg<br>1.2 lb |

# Ratings

| | |
|---|---|
| **Dynamic Axial Rating - 90M Revs (Ca90)**[9] | 18600 N<br>4170 lbf |
| **Static Radial Load Rating (C0)** | 116000 N<br>26200 lbf |

# Factors

| | |
|---|---|
| **G1 Factor** | 27.5 |
| **G2 Factor** | 11.1 |
| **Geometry Factor (Cg)**[10] | 0.0754 |

[1] Based on 1 x $10^6$ revolutions $L_{10}$ life, for the ISO life calculation method.

[2] Based on 90 x $10^6$ revolutions $L_{10}$ life, for The Timken Company life calculation method. $C_{90}$ and $C_{a90}$ are radial and thrust values.

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

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

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

[6] Negative value indicates effective center inside cone backface.

[7] These maximum fillet radii will be cleared by the bearing corners.

[8] These maximum fillet radii will be cleared by the bearing corners.

[9] Based on 90 x $10^6$ 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.

[10] Geometry constant for Lubrication Life Adjustment Factor a3l.