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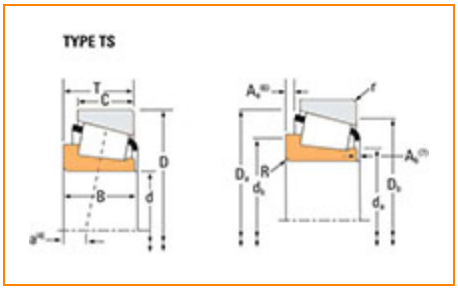
# Part Number 28137, Tapered Roller Bearings - Single Cones - Imperial

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** | 28000 |
| **Cone Part Number** | 28137 |
| **Design Units** | Imperial |
| **Cage Type** | Stamped Steel |
| **C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[1]** | 131000 N |
| **C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[2]** | 34000 N |

## Dimensions

| | |
|---|---|
| **d - Cone Bore** | 34.925 mm |
| **B - Cone Width** | 20.940 mm |

## Abutment and Fillet Dimensions

| | |
|---|---|
| **R - Cone Backface "To Clear" Radius[3]** | 1.5 mm |
| **da - Cone Frontface Backing Diameter** | 41 mm |
| **db - Cone Backface Backing Diameter** | 43.5 mm |
| **Ab - Cage-Cone Frontface Clearance** | 1.8 mm |
| **Aa - Cage-Cone Backface Clearance** | 1.5 mm |
| **a - Effective Center Location[4]** | -4.8 mm |

## Basic Load Ratings

| | |
|---|---|
| **C90 - Dynamic Radial Rating (90 million revolutions)[5]** | 19500 N |
| **C1 - Dynamic Radial Rating (1 million revolutions)[6]** | 75200 N |
| **C0 - Static Radial Rating** | 68900 N |
| **$C_{a90}$ - Dynamic Thrust Rating (90 million revolutions)[7]** | 13400 N |

## Factors

| | |
|---|---|
| **K - Factor[8]** | 1.45 |
| **G1 - Heat Generation Factor (Roller-Raceway)** | 20.7 |
| **G2 - Heat Generation Factor (Rib-Roller End)** | 12.5 |
| **Cg - Geometry Factor[9]** | 0.0709 |

[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 for a single-row, $C_{90(2)}$ is the two-row radial value.

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

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

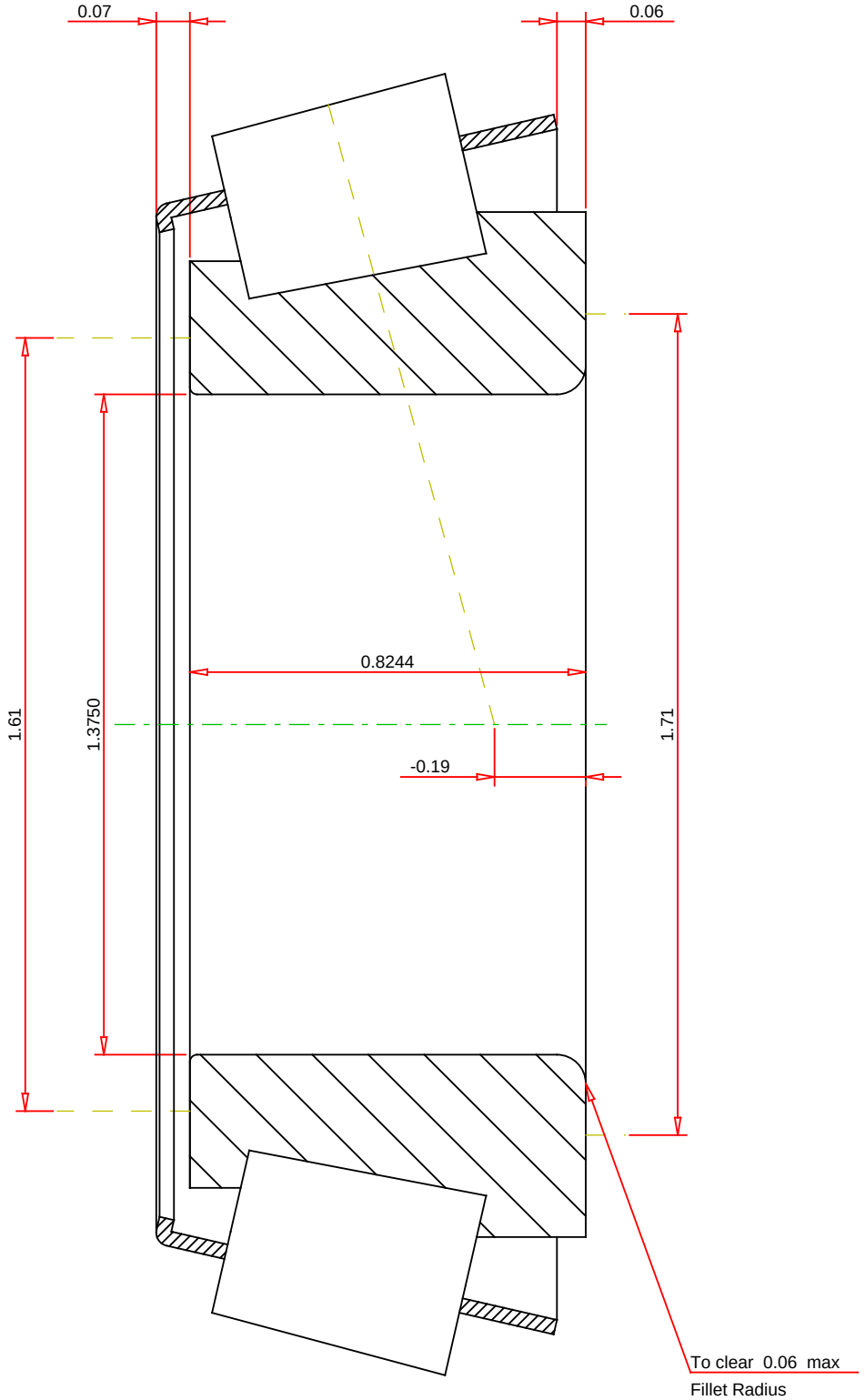
[5] Based on 90 x $10^6$ revolutions $L_{10}$ life, for The Timken Company life calculation method. $C_{90}$ and $C_{a90}$ are radial and thrust values.

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

[7] 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.

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

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




IMPERIAL UNITS

| | |
|---|---|
| Number of Rollers Per Row | 17 |

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

28137
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| | | |
|---|---|---|
| K Factor | 1.45 | |
| Dynamic Radial Rating - C90 | 4390 | lbf |
| Dynamic Thrust Rating - Ca90 | 3020 | lbf |
| Dynamic Radial Rating - C1 | 16900 | lbf |



FOR DISCUSSION ONLY