


The Timken Company

4500 Mt Pleasant St. NW

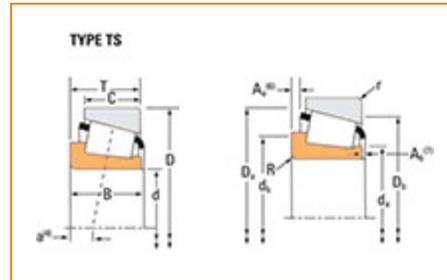
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Part Number 665A, Tapered Roller Bearings - Single Cones - Imperial

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 | 655 |
| Cone Part Number | 665A |
| Design Units | Imperial |
| Cage Type | Stamped Steel |
| C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹ | 430000 N |
| C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)² | 112000 N |

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|----------------------|-----------|
| d - Cone Bore | 85.725 mm |
|----------------------|-----------|

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|-----------------------|-----------|
| B - Cone Width | 41.275 mm |
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Abutment and Fillet Dimensions

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|--|--------|
| R - Cone Backface "To Clear" Radius³ | 6.4 mm |
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|---|-------|
| da - Cone Frontface Backing Diameter | 95 mm |
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|--|--------|
| db - Cone Backface Backing Diameter | 107 mm |
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|---|--------|
| Ab - Cage-Cone Frontface Clearance | 2.5 mm |
|---|--------|

| | |
|--|--------|
| Aa - Cage-Cone Backface Clearance | 4.3 mm |
|--|--------|

| | |
|--|---------|
| a - Effective Center Location⁴ | -7.9 mm |
|--|---------|

Basic Load Ratings

| | |
|---|---------|
| C90 - Dynamic Radial Rating (90 million revolutions)⁵ | 64000 N |
|---|---------|

| | |
|---|----------|
| C1 - Dynamic Radial Rating (1 million revolutions)⁶ | 247000 N |
|---|----------|

| | |
|----------------------------------|----------|
| C0 - Static Radial Rating | 335000 N |
|----------------------------------|----------|

| | |
|---|---------|
| C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷ | 44800 N |
|---|---------|

Factors

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|---|--------|
| K - Factor⁸ | 1.43 |
| G1 - Heat Generation Factor (Roller-Raceway) | 136.6 |
| G2 - Heat Generation Factor (Rib-Roller End) | 27.3 |
| Cg - Geometry Factor⁹ | 0.0919 |

¹ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

² 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.

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

⁴ Negative value indicates effective center inside cone backface.

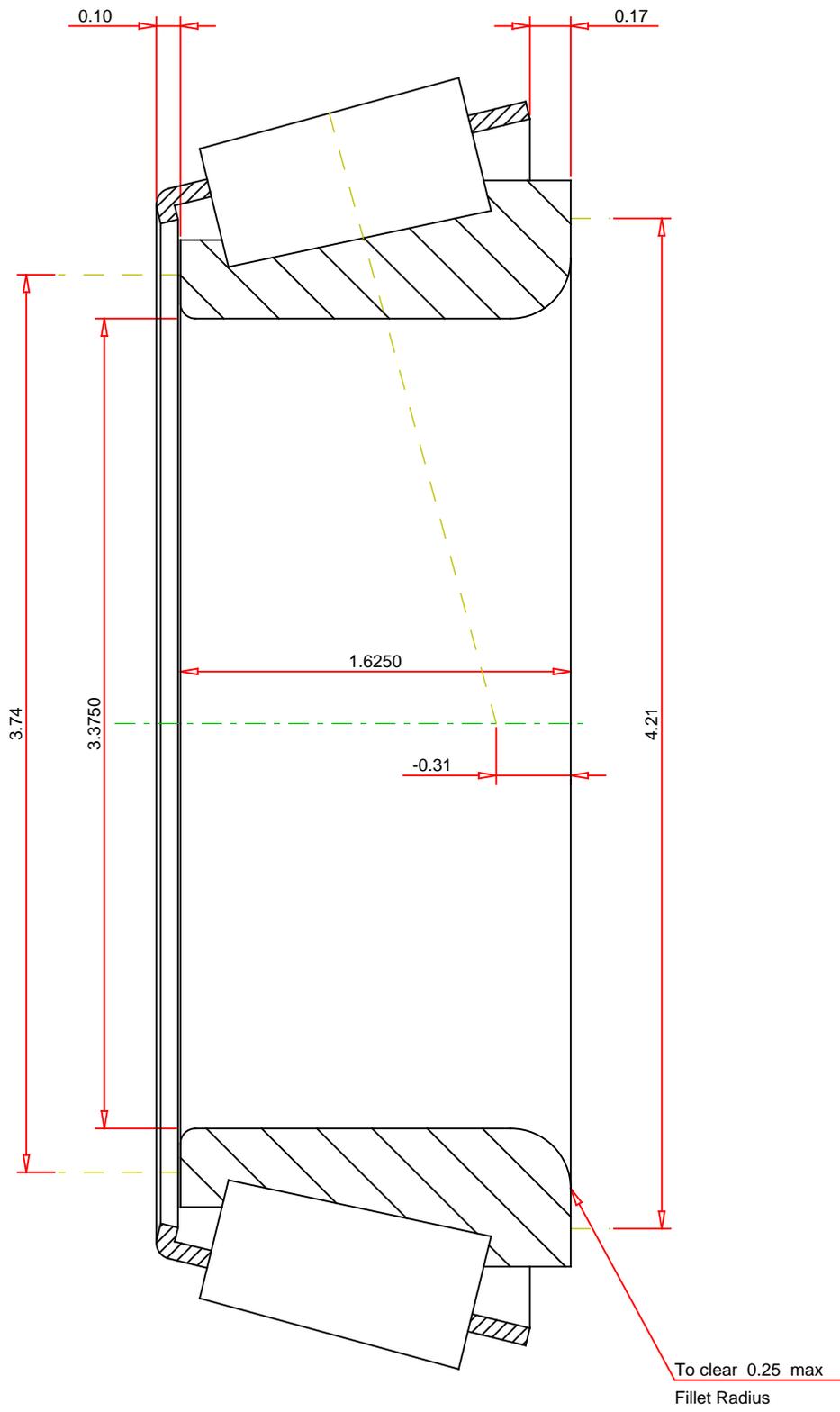
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

⁶ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

⁷ 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.

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 a_3 .



IMPERIAL UNITS

| | |
|---------------------------|----|
| Number of Rollers Per Row | 20 |
|---------------------------|----|

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

| | |
|---|------------|
| 665A | |
| Tapered Roller Bearings - Single Cones - Imperial | |
| K Factor | 1.43 |
| Dynamic Radial Rating - C90 | 64000 lbf |
| Dynamic Thrust Rating - Ca90 | 44800 lbf |
| Dynamic Radial Rating - C1 | 247000 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.

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