

# TIMKEN

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## Timken Part Number 67885 - 67820, Tapered Roller Bearings - TS (Tapered Single) 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.



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### Specifications

<b>Series</b>	67800
<b>Cone Part Number</b>	67885
<b>Cup Part Number</b>	67820
<b>Design Units</b>	Imperial
<b>Bearing Weight</b>	8 Kg 17.60 lb
<b>Cage Type</b>	Stamped Steel

### Dimensions

<b>d - Bore</b>	190.5 mm 7.5 in
<b>D - Cup Outer Diameter</b>	266.7 mm 10.5 in

<b>B - Cone Width</b>	46.833 mm 1.8438 in
<b>C - Cup Width</b>	38.100 mm 1.5000 in
<b>T - Bearing Width</b>	47.625 mm 1.8750 in

#### Abutment and Fillet Dimensions

<b>R - Cone Backface "To Clear" Radius<sup>1</sup></b>	3.560 mm 0.14 in
<b>r - Cup Backface "To Clear" Radius<sup>2</sup></b>	3.30 mm 0.130 in
<b>da - Cone Frontface Backing Diameter</b>	202.95 mm 8.98 in
<b>db - Cone Backface Backing Diameter</b>	209.04 mm 8.23 in
<b>Da - Cup Frontface Backing Diameter</b>	259.10 mm 10.25 in
<b>Db - Cup Backface Backing Diameter</b>	246.13 mm 9.69 in
<b>Ab - Cage-Cone Frontface Clearance</b>	2.8 mm 0.11 in
<b>Aa - Cage-Cone Backface Clearance</b>	4.6 mm 0.18 in
<b>a - Effective Center Location<sup>3</sup></b>	10.20 mm 0.40 in

#### Basic Load Ratings

<b>C90 - Dynamic Radial Rating (90 million revolutions)<sup>4</sup></b>	108000 N 24300 lbf
<b>C1 - Dynamic Radial Rating (1 million revolutions)<sup>5</sup></b>	416000 N 93600 lbf
<b>C0 - Static Radial Rating</b>	835000 N 188000 lbf
<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	88200 N 19800 lbf

## Factors

<b>K - Factor<sup>7</sup></b>	1.22
<b>e - ISO Factor<sup>8</sup></b>	0.48
<b>Y - ISO Factor<sup>9</sup></b>	1.26
<b>G1 - Heat Generation Factor (Roller-Raceway)</b>	728
<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	147
<b>Cg - Geometry Factor</b>	0.131

<sup>1</sup> These maximum fillet radii will be cleared by the bearing corners.

<sup>2</sup> These maximum fillet radii will be cleared by the bearing corners.

<sup>3</sup> Negative value indicates effective center inside cone backface.

<sup>4</sup> Based on  $90 \times 10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values.

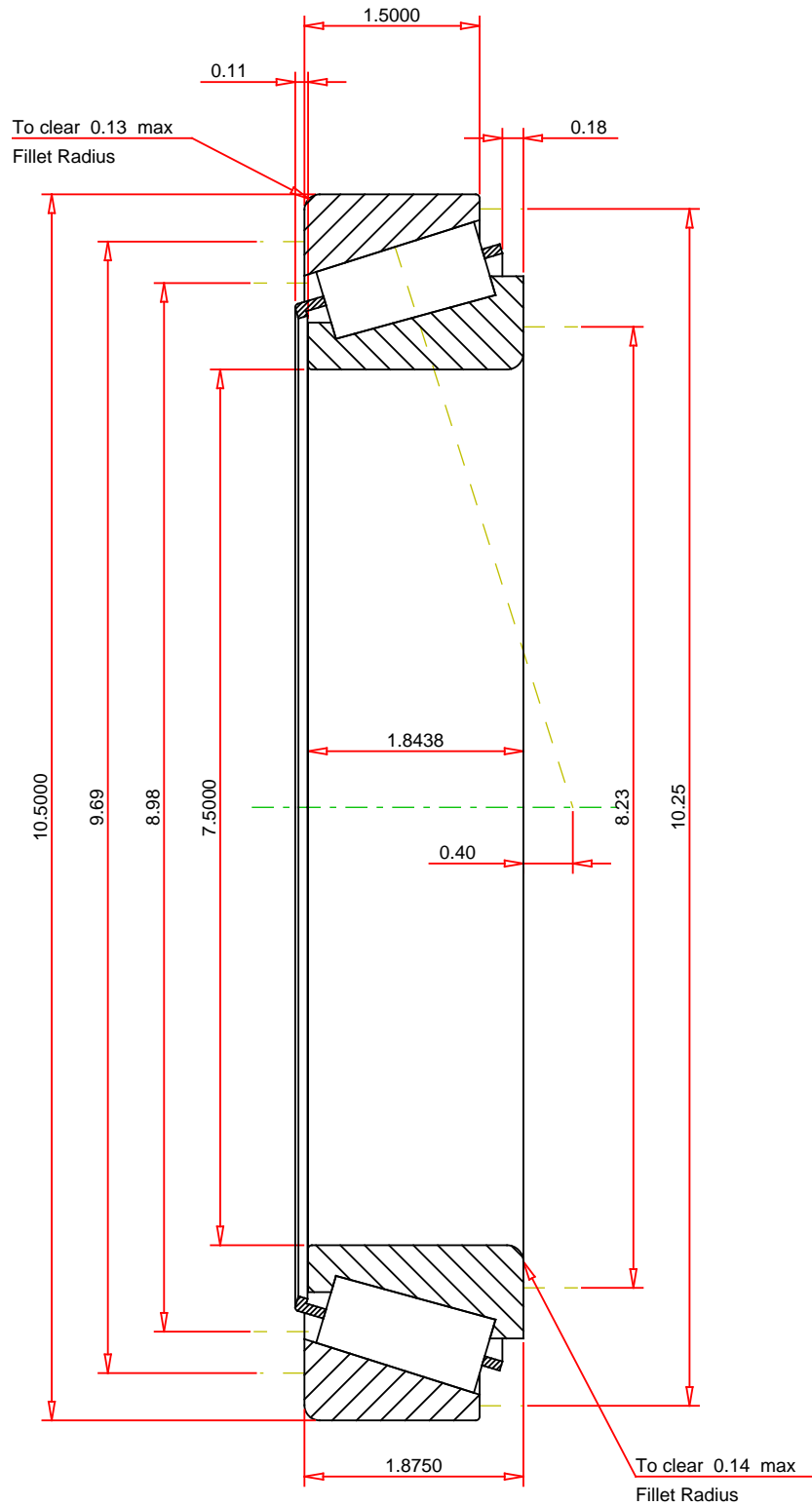
<sup>5</sup> Based on  $1 \times 10^6$  revolutions  $L_{10}$  life, for the ISO life calculation method.

<sup>6</sup> Based on  $90 \times 10^6$  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.

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

<sup>8</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>9</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.



**IMPERIAL UNITS**

ISO Factor - e	0.48
ISO Factor - Y	1.26
Bearing Weight	17.6 lb
Number of Rollers Per Row	39
Effective Center Location	0.4 inch

**TIMKEN**®

**67885 - 67820  
TS BEARING ASSEMBLY**

**THE TIMKEN COMPANY**  
NORTH CANTON, OHIO USA

K Factor	1.22
Dynamic Radial Rating - C90	108000 lbf
Dynamic Thrust Rating - Ca90	88200 lbf
Static Radial Rating - C0	835000 lbf
Dynamic Radial Rating - C1	416000 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.

**FOR DISCUSSION ONLY**