



**The Timken Company**

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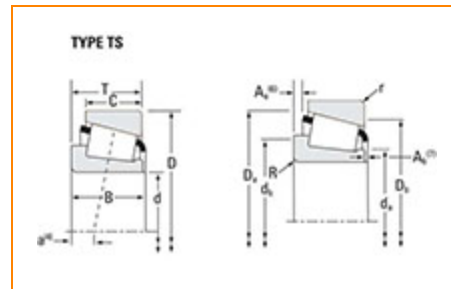
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## Part Number 6580V - 6536V, Tapered Roller Bearings - TS (Tapered Single) Imperial

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

Series	6500
Cone Part Number	6580V
Cup Part Number	6536V
Design Units	Imperial
Bearing Weight	4.7 Kg 10.3 lb
Cage Type	Stamped Steel

### Dimensions

d - Bore	88.900 mm 3.5000 in
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<b>D - Cup Outer Diameter</b>	161.925 mm 6.3750 in
<b>B - Cone Width</b>	55.100 mm 2.1693 in
<b>C - Cup Width</b>	42.863 mm 1.6875 in
<b>T - Bearing Width</b>	53.978 mm 2.1251 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>	0.76 mm 0.03 in
<b>da - Cone Frontface Backing Diameter</b>	101.85 mm 4.69 in
<b>db - Cone Backface Backing Diameter</b>	108.97 mm 4.29 in
<b>Da - Cup Frontface Backing Diameter</b>	154.43 mm 6.08 in
<b>Db - Cup Backface Backing Diameter</b>	144.02 mm 5.67 in
<b>Ab - Cage-Cone Frontface Clearance</b>	1.5 mm 0.06 in
<b>Aa - Cage-Cone Backface Clearance</b>	3.8 mm 0.15 in
<b>a - Effective Center Location<sup>3</sup></b>	-13.2 mm -0.52 in

## Basic Load Ratings

<b>C90 - Dynamic Radial Rating (90 million revolutions)<sup>4</sup></b>	25600 lbf 114000 N
<b>C1 - Dynamic Radial Rating (1 million revolutions)<sup>5</sup></b>	98800 lbf 439000 N
<b>C0 - Static Radial Rating</b>	118000 lbf 523000 N
<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	17600 lbf 78100 N

## Factors

<b>K - Factor<sup>7</sup></b>	1.46
<b>e - ISO Factor<sup>8</sup></b>	0.4
<b>Y - ISO Factor<sup>9</sup></b>	1.5
<b>G1 - Heat Generation Factor (Roller-Raceway)</b>	198.6
<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	33.5
<b>C<sub>g</sub> - Geometry Factor<sup>10</sup></b>	0.104

<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.

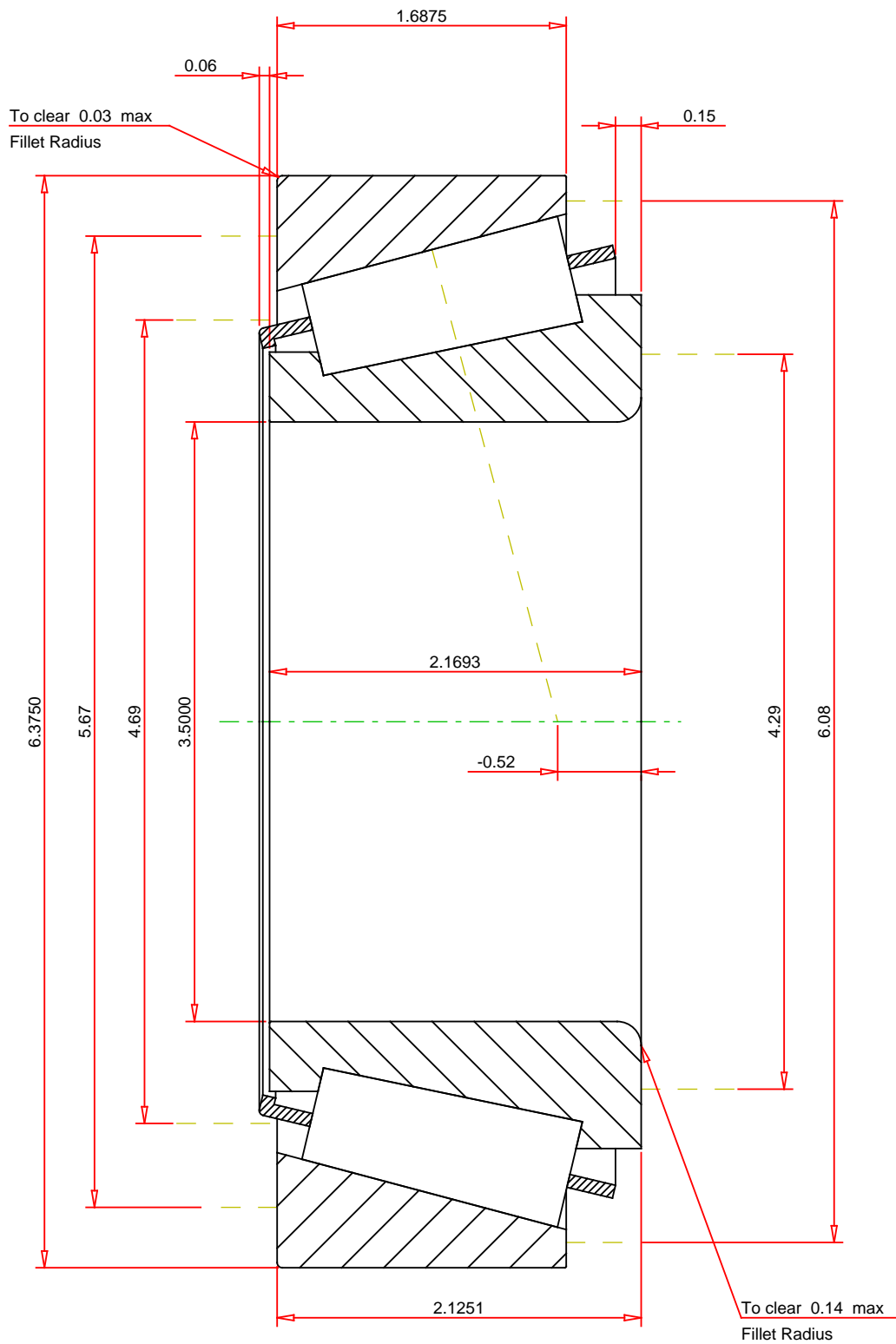
<sup>6</sup> Based on  $90 \times 10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values for a single-row,  $C_{90(2)}$  is the two-row radial value.

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

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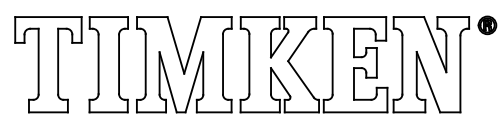
<sup>9</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>10</sup> Geometry constant for Lubrication Life Adjustment Factor a3l.



**IMPERIAL UNITS**

ISO Factor - e	0.4
ISO Factor - Y	1.5
Bearing Weight	10.3 lb
Number of Rollers Per Row	19
Effective Center Location	-0.52 inch



**6580V - 6536V  
TS BEARING ASSEMBLY**

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

K Factor	1.46
Dynamic Radial Rating - C90	25600 lbf
Dynamic Thrust Rating - Ca90	17600 lbf
Static Radial Rating - C0	118000 lbf
Dynamic Radial Rating - C1	98800 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**