



**The Timken Company**

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## Part Number 27695 - 27620RB, 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>	27600
<b>Cone Part Number</b>	27695
<b>Cup Part Number</b>	27620RB
<b>Design Unit</b>	Inch
<b>Bearing Weight</b>	2.1 lb 1 Kg
<b>Cage Material</b>	Stamped Steel

### Dimensions



- Bore

3.3455 in  
84.976 mm

<b>D - Cup Outer Diameter</b>	4.9375 in 125.413 mm
<b>B - Cone Width</b>	1.0000 in 25.400 mm
<b>C - Cup Width</b>	0.7813 in 19.845 mm
<b>T - Bearing Width</b>	1.0001 in 25.403 mm

## Abutment and Fillet Dimensions

<b>R - Cone Backface "To Clear" Radius<sup>1</sup></b>	0.2 in 5.1 mm
<b>r - Cup Backface "To Clear" Radius<sup>2</sup></b>	0.06 in 1.52 mm
<b>da - Cone Frontface Backing Diameter</b>	3.58 in 91 mm
<b>db - Cone Backface Backing Diameter</b>	3.94 in 100 mm
<b>Da - Cup Frontface Backing Diameter</b>	4.75 in 119.90 mm
<b>Db - Cup Backface Backing Diameter</b>	4.53 in 115.06 mm
<b>Ab - Cage-Cone Frontface Clearance</b>	0.09 in 2.3 mm
<b>Aa - Cage-Cone Backface Clearance</b>	0.05 in 1.3 mm
<b>a - Effective Center Location<sup>3</sup></b>	0.02 in 0.5 mm

## Basic Load Ratings

<b>C90 - Dynamic Radial Rating (90 million revolutions)<sup>4</sup></b>	6830 lbf 30400 N
<b>C1 - Dynamic Radial Rating (1 million revolutions)<sup>5</sup></b>	26300 lbf 117000 N
<b>C0 - Static Radial Rating</b>	39900 lbf 178000 N
<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	4860 lbf 21600 N

## Factors

<b>K - Factor<sup>7</sup></b>	1.4
<b>e - ISO Factor<sup>8</sup></b>	0.42
<b>Y - ISO Factor<sup>9</sup></b>	1.44
<b>G1 - Heat Generation Factor (Roller-Raceway)</b>	98.2
<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	41.8
<b>Cg - Geometry Factor<sup>10</sup></b>	0.120

<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.

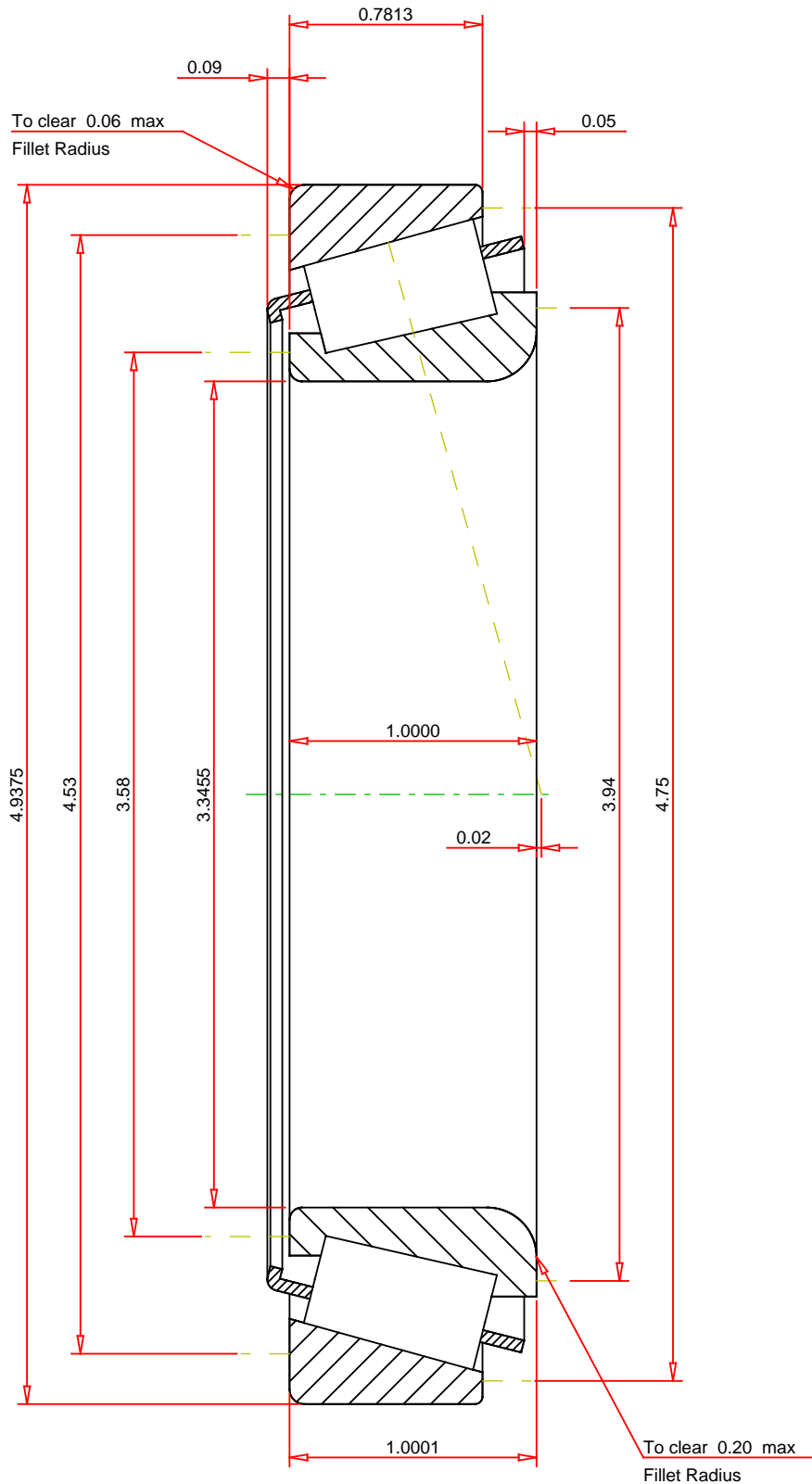
<sup>6</sup> Based on  $90 \times 10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values for a single-row,  $C_{90(2)}$  is the two-row radial value.

<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.

<sup>10</sup> Geometry constant for Lubrication Life Adjustment Factor  $a_3$ .



## IMPERIAL UNITS

ISO Factor - e 0.42  
ISO Factor - Y 1.44  
Bearing Weight 2.1 lb  
Number of Rollers Per Row 27  
Effective Center Location 0.02 inch

**TIMKEN®**

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

**27695 - 27620RB**  
Tapered Roller Bearings - TS (Tapered Single)  
Imperial

K Factor	1.4
Dynamic Radial Rating - C90	6830 lbf
Dynamic Thrust Rating - Ca90	4860 lbf
Static Radial Rating - C0	39900 lbf
Dynamic Radial Rating - C1	26300 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**