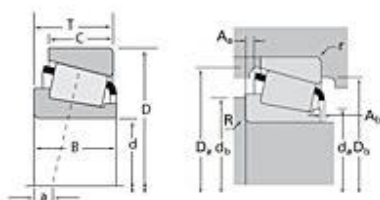


# TIMKEN

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## Timken Part Number 2788 - 2720, 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>	2700
<b>Cone Part Number</b>	2788
<b>Cup Part Number</b>	2720
<b>Design Units</b>	Imperial
<b>Bearing Weight</b>	1.10 lb 0.500 Kg
<b>Cage Type</b>	Stamped Steel

### Dimensions

<b>d - Bore</b>	1.5 in 38.1 mm
<b>D - Cup Outer Diameter</b>	3 in 76.2 mm

<b>B - Cone Width</b>	1.0100 in 25.654 mm
<b>C - Cup Width</b>	0.7500 in 19.050 mm
<b>T - Bearing Width</b>	0.9375 in 23.813 mm

#### Abutment and Fillet Dimensions

<b>R - Cone Backface "To Clear" Radius<sup>1</sup></b>	0.14 in 3.560 mm
<b>r - Cup Backface "To Clear" Radius<sup>2</sup></b>	0.130 in 3.30 mm
<b>da - Cone Frontface Backing Diameter</b>	1.71 in 43.43 mm
<b>db - Cone Backface Backing Diameter</b>	1.97 in 50.04 mm
<b>Da - Cup Frontface Backing Diameter</b>	2.80 in 71.10 mm
<b>Db - Cup Backface Backing Diameter</b>	2.60 in 66.04 mm
<b>Ab - Cage-Cone Frontface Clearance</b>	0.06 in 1.5 mm
<b>Aa - Cage-Cone Backface Clearance</b>	0.04 in 1 mm
<b>a - Effective Center Location<sup>3</sup></b>	-0.32 in -8.10 mm

#### Basic Load Ratings

<b>C90 - Dynamic Radial Rating (90 million revolutions)<sup>4</sup></b>	5060 lbf 22500 N
<b>C1 - Dynamic Radial Rating (1 million revolutions)<sup>5</sup></b>	19500 lbf 86900 N
<b>C0 - Static Radial Rating</b>	23000 lbf 102000 N
<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	2630 lbf 11700 N

## Factors

<b>K - Factor<sup>7</sup></b>	1.93
<b>e - ISO Factor<sup>8</sup></b>	0.3
<b>Y - ISO Factor<sup>9</sup></b>	1.98
<b>G1 - Heat Generation Factor (Roller-Raceway)</b>	28.7
<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	12.2
<b>Cg - Geometry Factor</b>	0.0725

<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.

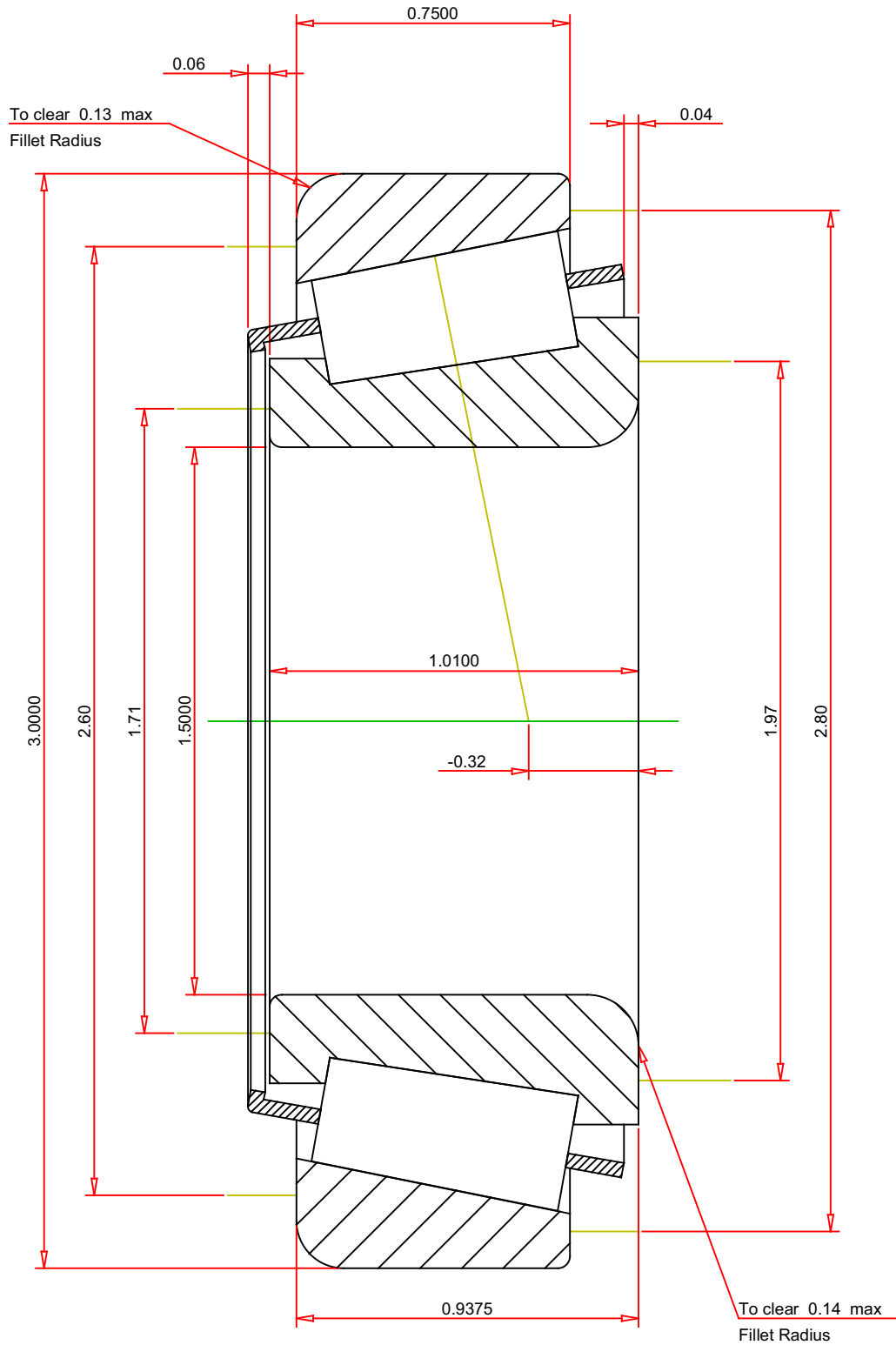
<sup>5</sup> Based on  $1 \times 10^6$  revolutions  $L_{10}$  life, for the ISO life calculation method.

<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	0.3
ISO Factor - Y	1.98
Bearing Weight	1.1 lb
Number of Rollers Per Row	17
Effective Center Location	-0.32 inch

**TIMIKEN**®

**2788 - 2720**  
**TS BEARING ASSEMBLY**

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

K Factor	1.93
Dynamic Radial Rating - C90	5060 lbf
Dynamic Thrust Rating - Ca90	2630 lbf
Static Radial Rating - C0	23000 lbf
Dynamic Radial Rating - C1	19500 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**