


**The Timken Company**

4500 Mt Pleasant St. NW

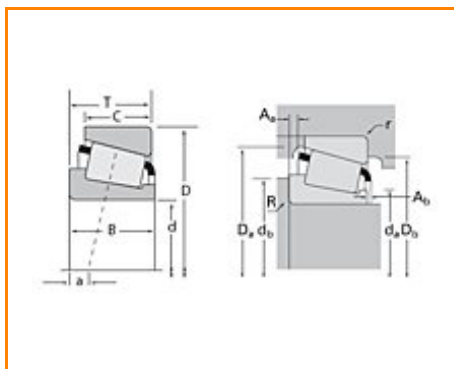
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## Timken Part Number HH221442 - HH221410, Tapered Roller Bearings - TS (Tapered Single) Imperial

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.



[Specifications](#) | [Dimensions](#) | [Abutment and Fillet Dimensions](#) | [Basic Load Ratings](#) | [Factors](#)

### Specifications

<b>Series</b>	HH221400
<b>Cone Part Number</b>	HH221442
<b>Cup Part Number</b>	HH221410
<b>Design Units</b>	Imperial
<b>Bearing Weight</b>	7.200 Kg 15.90 lb
<b>Cage Type</b>	Stamped Steel

### Dimensions

<b>d - Bore</b>	98.425 mm 3.8750 in
<b>D - Cup Outer Diameter</b>	190.5 mm 7.5 in
<b>B - Cone Width</b>	57.531 mm 2.2650 in
<b>C - Cup Width</b>	46.038 mm 1.8125 in
<b>T - Bearing Width</b>	57.150 mm 2.2500 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>	113.03 mm 5.24 in
<b>db - Cone Backface Backing Diameter</b>	119.13 mm 4.69 in
<b>Da - Cup Frontface Backing Diameter</b>	179.10 mm 7.06 in
<b>Db - Cup Backface Backing Diameter</b>	170.94 mm 6.73 in
<b>Ab - Cage-Cone Frontface Clearance</b>	4.1 mm 0.16 in
<b>Aa - Cage-Cone Backface Clearance</b>	2 mm 0.08 in
<b>a - Effective Center Location<sup>3</sup></b>	-15 mm -0.59 in

## Basic Load Ratings

<b>C90 - Dynamic Radial Rating (90 million revolutions)<sup>4</sup></b>	138000 N 31100 lbf
<b>C1 - Dynamic Radial Rating (1 million revolutions)<sup>5</sup></b>	534000 N 120000 lbf
<b>C0 - Static Radial Rating</b>	692000 N 156000 lbf
<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	79300 N 17800 lbf

## Factors

<b>K - Factor<sup>7</sup></b>	1.74
<b>e - ISO Factor<sup>8</sup></b>	0.33
<b>Y - ISO Factor<sup>9</sup></b>	1.79
<b>G1 - Heat Generation Factor (Roller-Raceway)</b>	266
<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	28.4
<b>Cg - Geometry Factor</b>	0.107

<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.

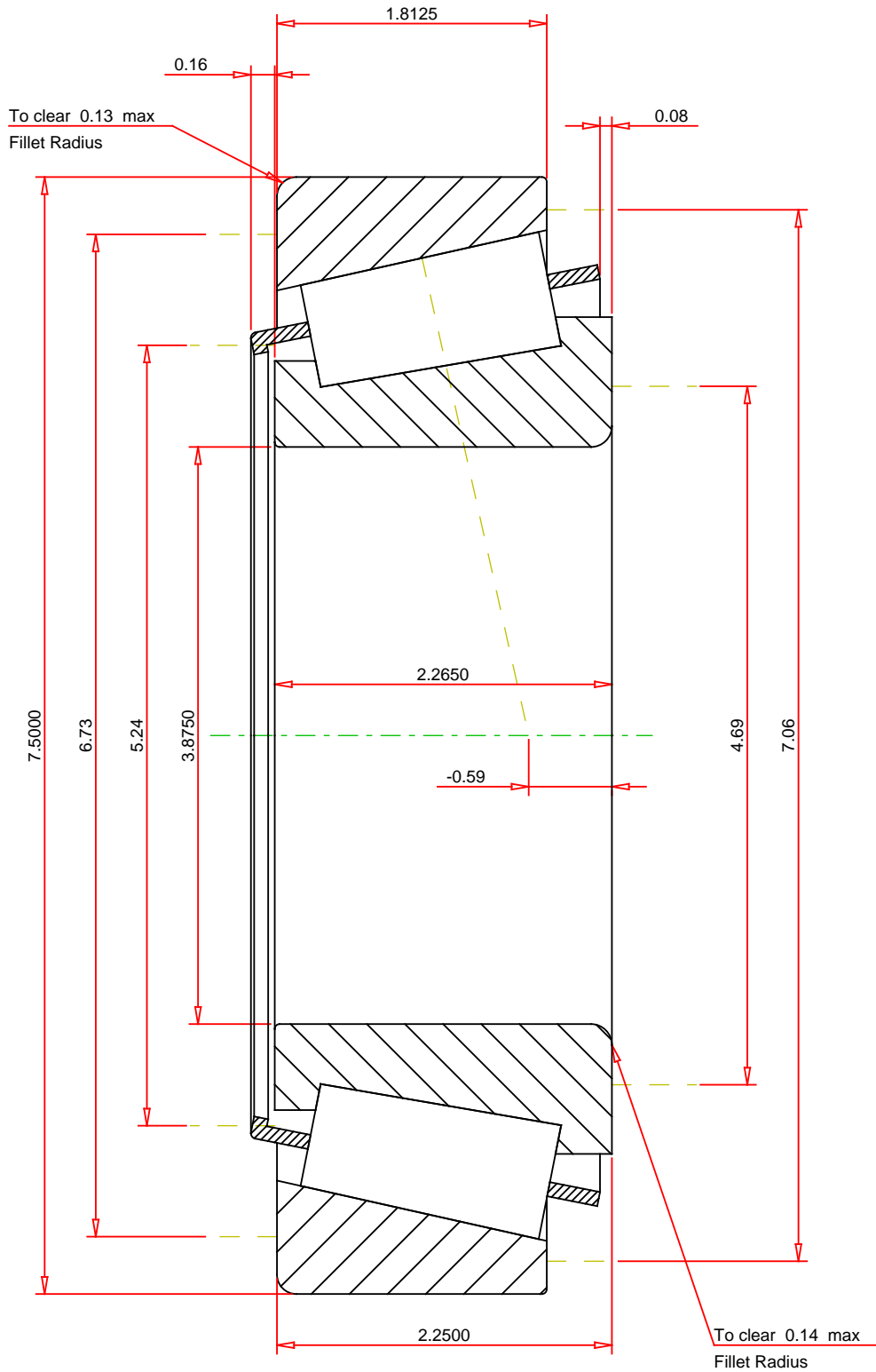
<sup>6</sup> Based on  $90 \times 10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values for a single-row,  $C_{90(2)}$  is the two-row radial value.

<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

<div>ISO Factor - e0.33</div> <div>ISO Factor - Y1.79</div> <div>Bearing Weight15.9 lb</div> <div>Number of Rollers Per Row17</div> <div>Effective Center Location-0.59 inch</div>		<div>TIMKEN®</div> <div>THE TIMKEN COMPANY</div> <div>NORTH CANTON, OHIO USA</div>		<div>HH221442 - HH221410</div> <div>TS BEARING ASSEMBLY</div>	
				<div>K Factor1.74</div> <div>Dynamic Radial Rating - C90138000 lbf</div> <div>Dynamic Thrust Rating - Ca9079300 lbf</div> <div>Static Radial Rating - C0692000 lbf</div> <div>Dynamic Radial Rating - C1534000 lbf</div>	