



**The Timken Company**

4500 Mt Pleasant St. NW

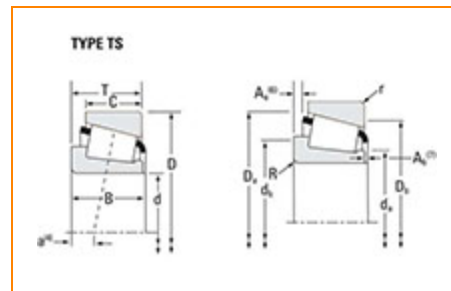
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## Timken Part Number H212749 - H212710, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	H212700
Cone Part Number	H212749
Cup Part Number	H212710
Design Units	Imperial
Bearing Weight	2.1 Kg 4.7 lb
Cage Type	Stamped Steel

### Dimensions

<b>d - Bore</b>	65.987 mm 2.5979 in
<b>D - Cup Outer Diameter</b>	123.975 mm 4.8809 in
<b>B - Cone Width</b>	41.501 mm 1.6339 in
<b>C - Cup Width</b>	34 mm 1.3386 in
<b>T - Bearing Width</b>	41.501 mm 1.6339 in

### Abutment and Fillet Dimensions

<b>R - Cone Backface "To Clear" Radius<sup>1</sup></b>	7.110 mm 0.280 in
<b>r - Cup Backface "To Clear" Radius<sup>2</sup></b>	3.56 mm 0.140 in
<b>da - Cone Frontface Backing Diameter</b>	76.96 mm 3.66 in
<b>db - Cone Backface Backing Diameter</b>	90.93 mm 3.58 in
<b>Da - Cup Frontface Backing Diameter</b>	118.62 mm 4.67 in
<b>Db - Cup Backface Backing Diameter</b>	108.97 mm 4.29 in
<b>Ab - Cage-Cone Frontface Clearance</b>	3.8 mm 0.15 in
<b>Aa - Cage-Cone Backface Clearance</b>	1 mm 0.04 in
<b>a - Effective Center Location<sup>3</sup></b>	-11.9 mm -0.47 in

## Basic Load Ratings

<b>C90 - Dynamic Radial Rating (90 million revolutions)<sup>4</sup></b>	14500 lbf 64700 N
<b>C1 - Dynamic Radial Rating (1 million revolutions)<sup>5</sup></b>	56100 lbf 249000 N
<b>C0 - Static Radial Rating</b>	71700 lbf 319000 N
<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	8280 lbf 36800 N

## Factors

<b>K - Factor<sup>7</sup></b>	1.76
<b>e - ISO Factor<sup>8</sup></b>	0.33
<b>Y - ISO Factor<sup>9</sup></b>	1.8
<b>G1 - Heat Generation Factor (Roller-Raceway)</b>	105.5
<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	23.6
<b>C<sub>g</sub> - Geometry Factor</b>	0.0791

<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.

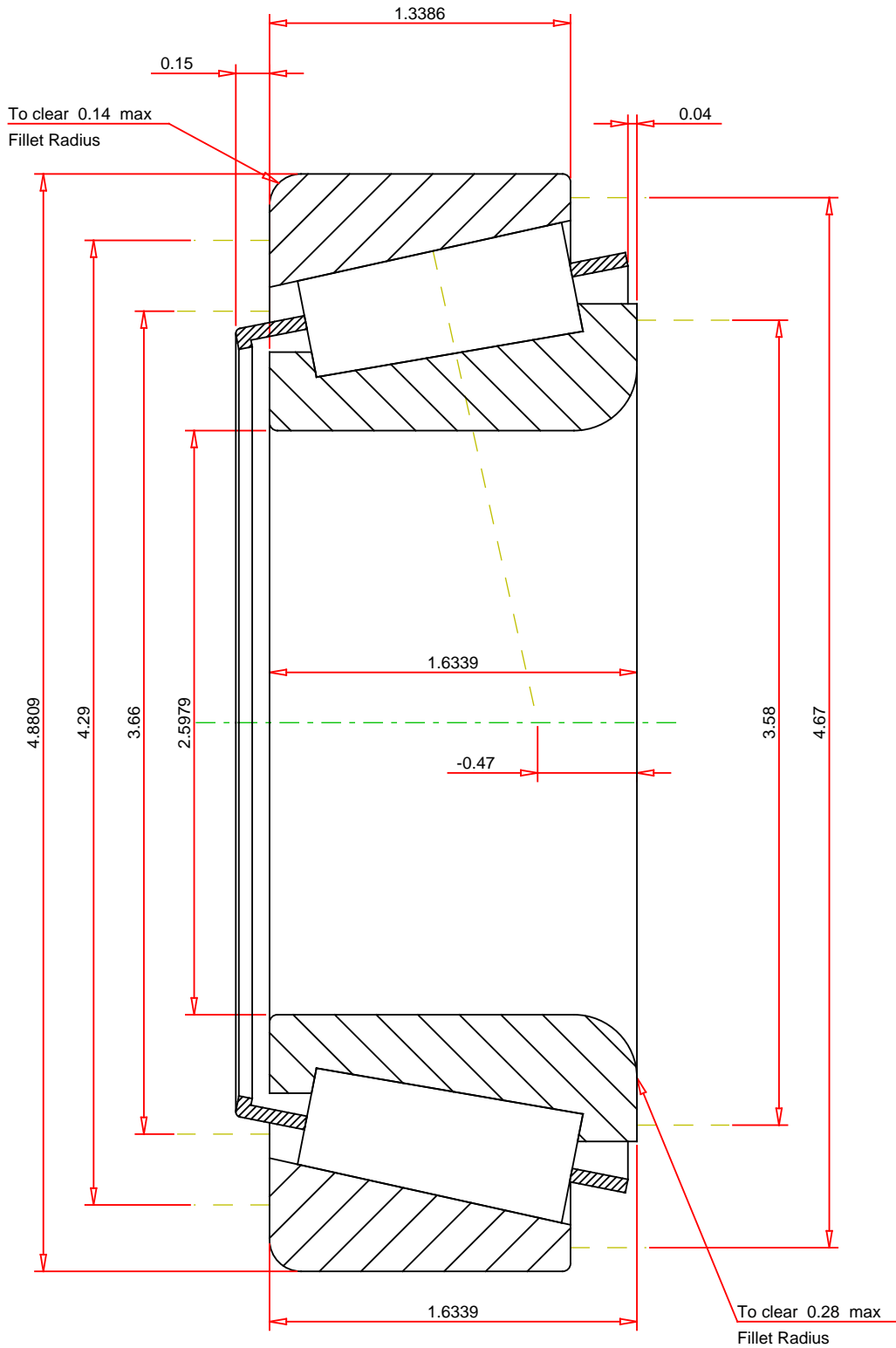
<sup>6</sup> Based on  $90 \times 10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values for a single-row,  $C_{90(2)}$  is the two-row radial value.

<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	0.33
ISO Factor - Y	1.8
Bearing Weight	4.7 lb
Number of Rollers Per Row	17
Effective Center Location	-0.47 inch

**TIMKEN**®

**H212749 - H212710  
TS BEARING ASSEMBLY**

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

K Factor	1.76
Dynamic Radial Rating - C90	14500 lbf
Dynamic Thrust Rating - Ca90	8280 lbf
Static Radial Rating - C0	71700 lbf
Dynamic Radial Rating - C1	56100 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**