


**The Timken Company**

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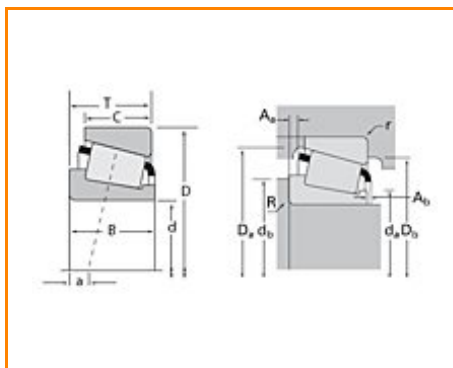
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## Timken Part Number 59162 - 59412, Tapered Roller Bearings - TS (Tapered Single) Imperial

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>	59000
<b>Cone Part Number</b>	59162
<b>Cup Part Number</b>	59412
<b>Design Units</b>	Imperial
<b>Bearing Weight</b>	1.600 Kg 3.50 lb
<b>Cage Type</b>	Stamped Steel

### Dimensions

<b>d - Bore</b>	41.275 mm 1.6250 in
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<b>D - Cup Outer Diameter</b>	104.775 mm 4.1250 in
<b>B - Cone Width</b>	36.513 mm 1.4375 in
<b>C - Cup Width</b>	28.575 mm 1.1250 in
<b>T - Bearing Width</b>	36.513 mm 1.4375 in

## Abutment and Fillet Dimensions

<b>R - Cone Backface "To Clear" Radius<sup>1</sup></b>	1.520 mm 0.06 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>	54.10 mm 2.13 in
<b>db - Cone Backface Backing Diameter</b>	55.88 mm 2.20 in
<b>Da - Cup Frontface Backing Diameter</b>	99.10 mm 3.94 in
<b>Db - Cup Backface Backing Diameter</b>	91.95 mm 3.62 in
<b>Ab - Cage-Cone Frontface Clearance</b>	2.3 mm 0.09 in
<b>Aa - Cage-Cone Backface Clearance</b>	2.8 mm 0.11 in
<b>a - Effective Center Location<sup>3</sup></b>	-9.7 mm -0.38 in

## Basic Load Ratings

<b>C90 - Dynamic Radial Rating (90 million revolutions)<sup>4</sup></b>	52400 N 11800 lbf
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<b>C1 - Dynamic Radial Rating (1 million revolutions)<sup>5</sup></b>	202000 N 45500 lbf
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<b>C0 - Static Radial Rating</b>	202000 N 45400 lbf
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<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	36100 N 8110 lbf
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## Factors

<b>K - Factor<sup>7</sup></b>	1.45
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<b>e - ISO Factor<sup>8</sup></b>	0.40
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<b>Y - ISO Factor<sup>9</sup></b>	1.49
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<b>G1 - Heat Generation Factor (Roller-Raceway)</b>	57.3
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<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	15.2
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<b>Cg - Geometry Factor</b>	0.0999
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<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.

