


**The Timken Company**

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## Timken Part Number LM249748 - LM249710CD, Tapered Roller Bearings - TDO (Tapered Double Outer) Imperial

The configuration of the TDO provides a wide effective bearing spread, making it ideal for applications in which overturning moments are a significant load component. TDO bearings can be used in fixed positions or allowed to float in the housing bore.



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

### Specifications

<b>Series</b>	LM249700
<b>Cone Part Number</b>	LM249748
<b>Cup Part Number</b>	LM249710CD
<b>Design Units</b>	Imperial
<b>Bearing Weight</b>	48.99 lb 22.222 Kg
<b>Cage Type</b>	Stamped Steel
<b>Ab - Cage-Cone Frontface Clearance</b>	0.17 in 4.3 mm

### Dimensions

<b>d - Bore</b>	10.0000 in 254.000 mm
<b>D - Cup Outer Diameter</b>	13.6875 in 347.663 mm
<b>B - Cone Width</b>	1.6875 in 42.863 mm
<b>C - Double Cup Width</b>	2.75 in 69.85 mm
<b>T - Bearing Width across Cones</b>	3.75 in 95.25 mm

### Abutment and Fillet Dimensions

<b>R - Cone Backface "To Clear" Radius<sup>1</sup></b>	0.14 in 3.600 mm
<b>r - Cup Frontface "To Clear" Radius<sup>2</sup></b>	0.06 in 1.5 mm
<b>db - Cone Backface Backing Diameter</b>	10.71 in 272.00 mm
<b>Da - Cup Frontface Backing Diameter</b>	13.15 in 334.00 mm
<b>Aa - Cage-Cone Backface Clearance</b>	0.11 in 2.8 mm

### Basic Load Ratings

<b>C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)<sup>3</sup></b>	35700 lbf 159000 N
<b>C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)<sup>4</sup></b>	240000 lbf 1070000 N

<b>C<sub>90(2)</sub> - Dynamic Radial Rating (Two-Row, 90 million revolutions)<sup>5</sup></b>	62200 lbf 277000 N
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<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	20300 lbf 90500 N
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## Factors

<b>K - Factor<sup>7</sup></b>	1.76
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<b>e - ISO Factor<sup>8</sup></b>	0.7
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<b>Y1 - ISO Factor<sup>9</sup></b>	0.97 1.44
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<b>Y2 - ISO Factor<sup>10</sup></b>	1.44
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<b>G1 - Heat Generation Factor (Roller-Raceway)<sup>11</sup></b>	1000
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<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	166
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<b>C<sub>g</sub> - Geometry Factor<sup>12</sup></b>	0.129
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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> 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>4</sup> Based on  $1 \times 10^6$  revolutions  $L_{10}$  life, for the ISO life calculation method.

<sup>5</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>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.

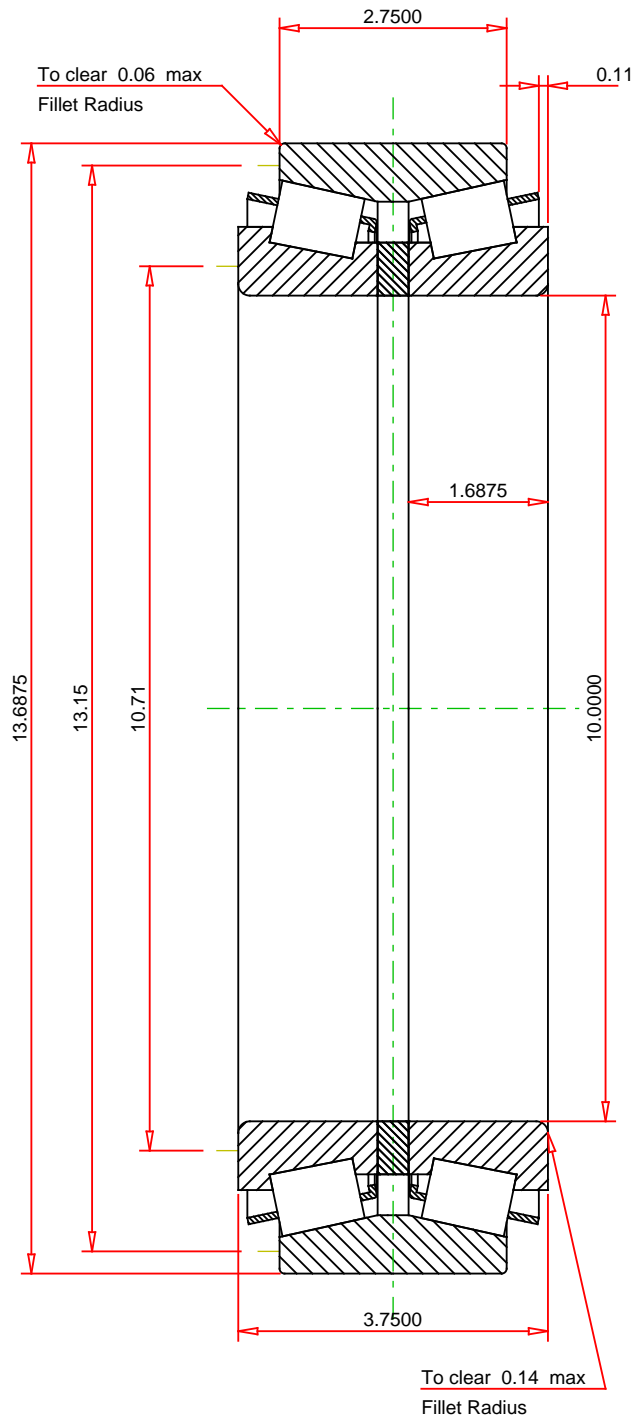
<sup>9</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction

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<sup>10</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>11</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>12</sup> Geometry constant for Lubrication Life Adjustment Factor  $a_3$ .



IMPERIAL UNITS

ISO Factor - e		0.7	<div>TIMKEN®</div>	LM249748 - LM249710CD	
ISO Factor - Y1		0.97		TDO BEARING ASSEMBLY	
ISO Factor - Y2		1.44			
Bearing Weight		48.99 lb			
Number of Rollers Per Row		33			
			<div>THE TIMKEN COMPANY</div> <div>NORTH CANTON, OHIO USA</div>	K Factor1.76	
				Dynamic Radial Rating - C90	35700 lbf
				Dynamic Thrust Rating - Ca90	20300 lbf
				Dynamic Radial Rating - C90(2)	62200 lbf
				Radial Rating - C1	240000 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