


**The Timken Company**

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## Part Number JM718149A - JM718110, Tapered Roller Bearings - TS (Tapered Single) Metric

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>	M718100
<b>Cone Part Number</b>	JM718149A
<b>Cup Part Number</b>	JM718110
<b>Design Unit</b>	Metric
<b>Bearing Weight</b>	2.1 Kg 4.7 lb
<b>Cage Material</b>	Stamped Steel
<b>Full Timken Part Number</b>	M718100

### Dimensions



00 mm

<b>d - Bore</b>	70 mm 3.5433 in
<b>D - Cup Outer Diameter</b>	145 mm 5.7087 in
<b>B - Cone Width</b>	34.000 mm 1.3386 in
<b>C - Cup Width</b>	27 mm 1.063 in
<b>T - Bearing Width</b>	35.000 mm 1.3780 in

## Abutment and Fillet Dimensions

<b>R - Cone Backface "To Clear" Radius<sup>1</sup></b>	6.1 mm 0.24 in
<b>r - Cup Backface "To Clear" Radius<sup>2</sup></b>	2.54 mm 0.1 in
<b>da - Cone Frontface Backing Diameter</b>	99 mm 3.9 in
<b>db - Cone Backface Backing Diameter</b>	112 mm 4.41 in
<b>Da - Cup Frontface Backing Diameter</b>	138.94 mm 5.47 in
<b>Db - Cup Backface Backing Diameter</b>	131.06 mm 5.16 in
<b>Ab - Cage-Cone Frontface Clearance</b>	4.6 mm 0.18 in
<b>Aa - Cage-Cone Backface Clearance</b>	1.5 mm 0.06 in
<b>a - Effective Center Location<sup>3</sup></b>	-2 mm -0.08 in

## Basic Load Ratings

<b>C90 - Dynamic Radial Rating (90 million revolutions)<sup>4</sup></b>	57700 N 13000 lbf
<b>C1 - Dynamic Radial Rating (1 million revolutions)<sup>5</sup></b>	222000 N 50000 lbf
<b>C0 - Static Radial Rating</b>	313000 N 70500 lbf
<b>C<sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions)<sup>6</sup></b>	43900 N 9860 lbf

## Factors

<b>K - Factor<sup>7</sup></b>	1.31
<b>e - ISO Factor<sup>8</sup></b>	0.44
<b>Y - ISO Factor<sup>9</sup></b>	1.35
<b>G1 - Heat Generation Factor (Roller-Raceway)</b>	138
<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	35.1
<b>Cg - Geometry Factor<sup>10</sup></b>	0.0946

<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.

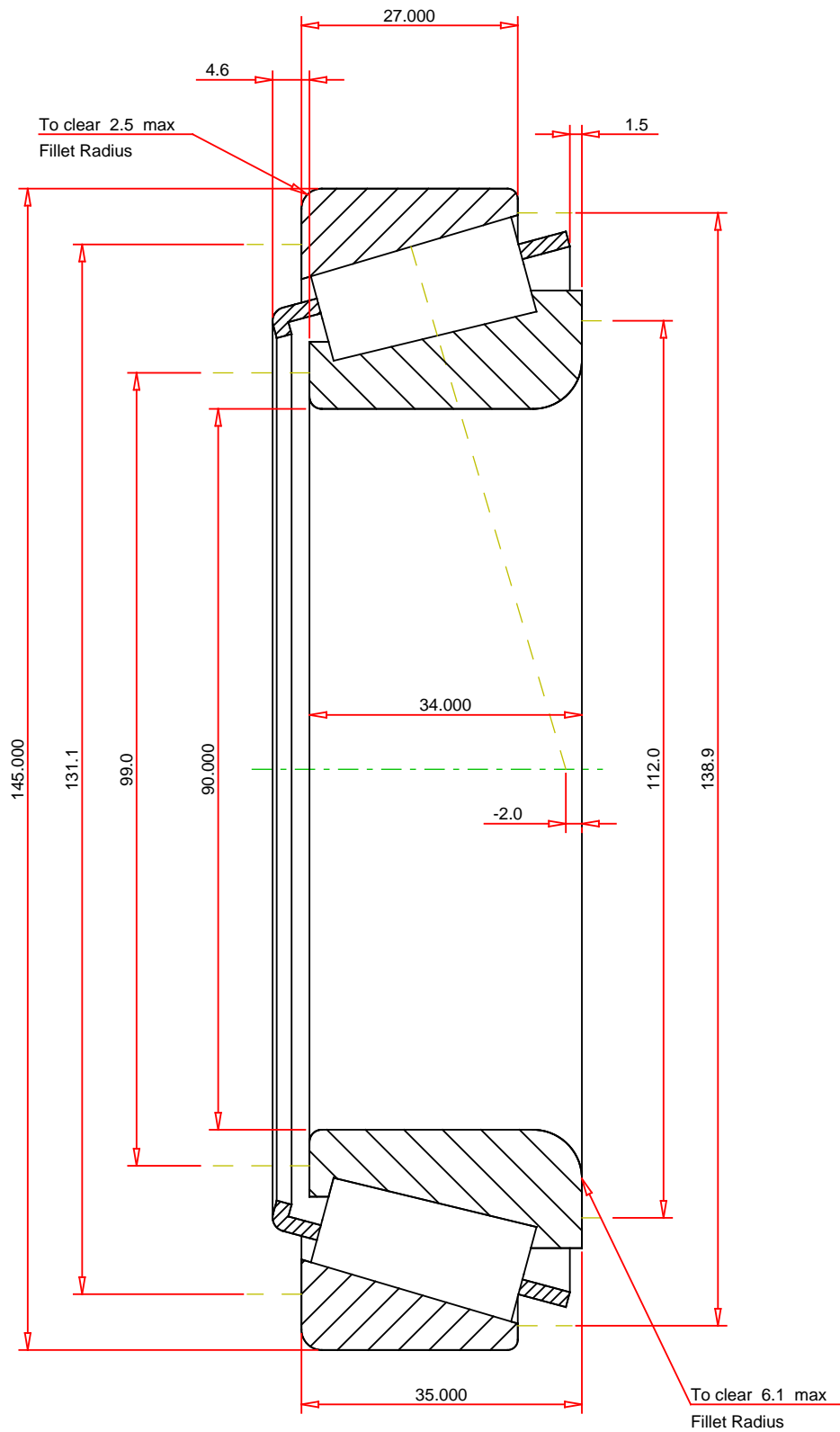
<sup>7</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<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.

<sup>10</sup> Geometry constant for Lubrication Life Adjustment Factor  $a_3$ .



METRIC UNITS

ISO Factor - e	0.44
ISO Factor - Y	1.35
Bearing Weight	2.1 kg
Number of Rollers Per Row	22
Effective Center Location	-2 mm



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

<b>JM718149A - JM718110</b>		
Tapered Roller Bearings - TS (Tapered Single)		
Metric		
K Factor	1.31	
Dynamic Radial Rating - C90	57700	N
Dynamic Thrust Rating - Ca90	43900	N
Static Radial Rating - C0	313000	N
Dynamic Radial Rating - C1	222000	N

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.

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