



**The Timken Company**

4500 Mt Pleasant St. NW

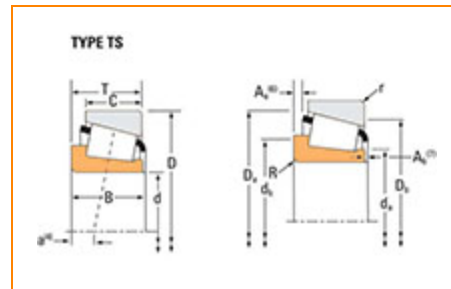
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## Part Number X30208M, Tapered Roller Bearings - Single Cones - Metric

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

Series	30208
Cone Part Number	X30208M
Design Units	METRIC
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions) <sup>1</sup>	27800 lbf 123000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions) <sup>2</sup>	7190 lbf 32000 N

### Dimensions

<b>d - Bore</b>	40 mm 1.5748 in
<b>B - Cone Width</b>	18 mm 0.7087 in
<b>WPD</b>	72.8 mm 2.86 in
<b>DD</b>	66.6 mm 2.62 in

### Abutment and Fillet Dimensions

<b>R - Cone Backface "To Clear" Radius<sup>3</sup></b>	1.5 mm 0.06 in
<b>da - Cone Frontface Backing Diameter</b>	47.5 mm 1.87 in
<b>db - Cone Backface Backing Diameter</b>	49.5 mm 1.95 in
<b>Ab - Cage-Cone Frontface Clearance</b>	3.6 mm 0.14 in
<b>Aa - Cage-Cone Backface Clearance</b>	0 mm 0 in
<b>a - Effective Center Location<sup>4</sup></b>	-3 mm -0.12 in

### Basic Load Ratings

<b>C90 - Dynamic Radial Rating (90 million revolutions)<sup>5</sup></b>	18400 N 4130 lbf
<b>C1 - Dynamic Radial Rating (1 million revolutions)<sup>6</sup></b>	70900 N 15900 lbf
<b>C0 - Static Radial Rating</b>	74700 N 16800 lbf

<b>C<sub>a90</sub> - Dynamic Thrust Rating</b>	11800 N
<b>(90 million revolutions)<sup>7</sup></b>	2650 lbf

## Factors

<b>K - Factor<sup>8</sup></b>	1.56
<b>G1 - Heat Generation Factor (Roller-Raceway)</b>	22.5
<b>G2 - Heat Generation Factor (Rib-Roller End)</b>	14.3
<b>C<sub>g</sub> - Geometry Factor<sup>9</sup></b>	0.0712

<sup>1</sup> Based on  $1 \times 10^6$  revolutions  $L_{10}$  life, for the ISO life calculation method.

<sup>2</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>3</sup> These maximum fillet radii will be cleared by the bearing corners.

<sup>4</sup> Negative value indicates effective center inside cone backface.

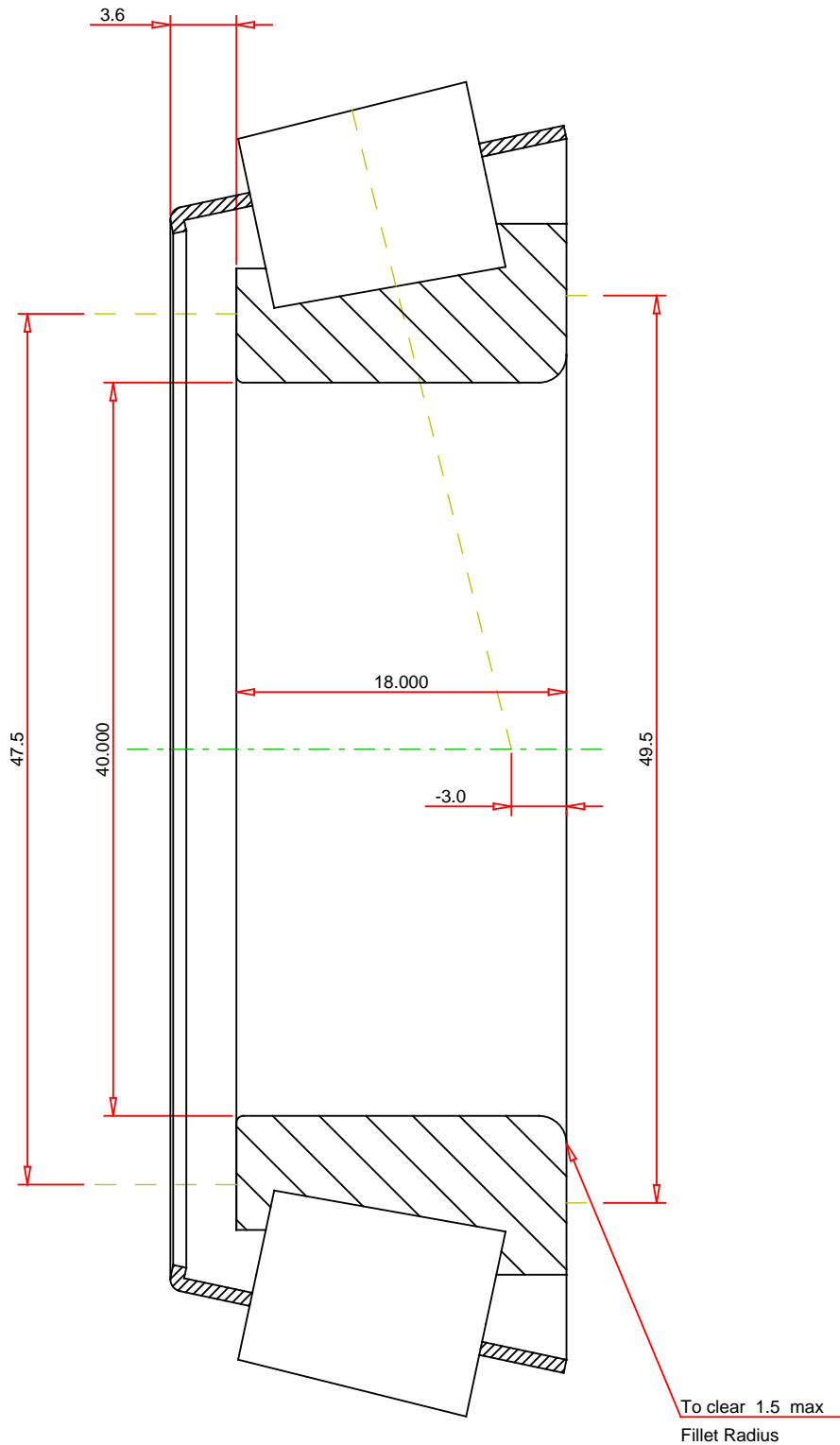
<sup>5</sup> Based on  $90 \times 10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values.

<sup>6</sup> Based on  $1 \times 10^6$  revolutions  $L_{10}$  life, for the ISO life calculation method.

<sup>7</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>8</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>9</sup> Geometry constant for Lubrication Life Adjustment Factor a3l.



METRIC UNITS

Number of Rollers Per Row

17

**TIMKEN**®

**X30208M**  
SINGLE TAPERED CONE

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

K Factor	1.56	
Dynamic Radial Rating - C90	18400	N
Dynamic Thrust Rating - Ca90	11800	N
Dynamic Radial Rating - C1	70900	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.

**FOR DISCUSSION ONLY**