


**The Timken Company**

4500 Mt Pleasant St. NW

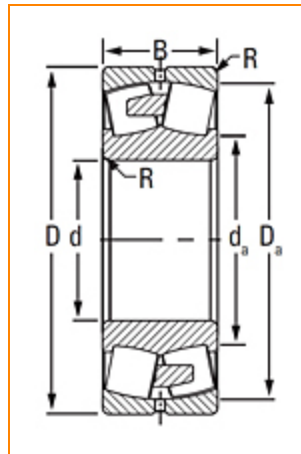
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## Part Number 22318EMW33, Spherical Roller Bearings - Brass Cage

Spherical bearings are designed to manage high radial loads even when misalignment, poor lubrication, contamination, extreme speeds or critical application stresses are present.



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

### Specifications

|                        |            |
|------------------------|------------|
| <b>Design Unit</b>     | Metric     |
| <b>d - Bore</b>        | 90 mm      |
| <b>Cage Type</b>       | EM         |
| <b>Cage Material</b>   | Brass      |
| <b>Superseded Part</b> | 22318YMW33 |

### Dimensions

|                                                                                                              |                     |
|--------------------------------------------------------------------------------------------------------------|---------------------|
| <b>D - Outer Diameter</b>                                                                                    | 190 mm<br>7.4803 in |
|  <b>- Inner Ring Width</b> | 64 mm<br>2.5197 in  |

## B - Outer Ring Width

64 mm  
2.5197 in

## Abutment and Fillet Dimensions

### R - Inner Ring "To Clear" Radius<sup>1</sup>

2.5 mm  
0.100 in

### r - Outer Ring "To Clear" Radius<sup>2</sup>

2.5 mm  
0.1 in

### da - Inner Ring Backing Diameter

116 mm  
4.6000 in

### Da - Outer Ring Backing Diameter

171.000 mm  
6.7000 in

## Basic Load Ratings

### C0 - Static Radial Rating

659000 N  
148000 lbf

### C1(2) - Dynamic Radial Rating (Two-Rows)

606000 N  
136000 lbf

## Factors

### e - ISO Factor<sup>3</sup>

0.32

### Y0 - ISO Factor<sup>4</sup>

2.04

### Y1 - ISO Factor<sup>5</sup>

2.09

### Y2 - ISO Factor<sup>6</sup>

3.11

### Reference Thermal Speed Rating (Grease)

2900 rpm

### Reference Thermal Speed Rating (Oil)<sup>7</sup>

3400 rpm

**Cg - Geometry Factor<sup>8</sup>**

0.0685

<sup>1</sup> Maximum housing fillet radius that bearing corners will clear.

<sup>2</sup> Maximum shaft fillet radius that bearing corners will clear.

<sup>3</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

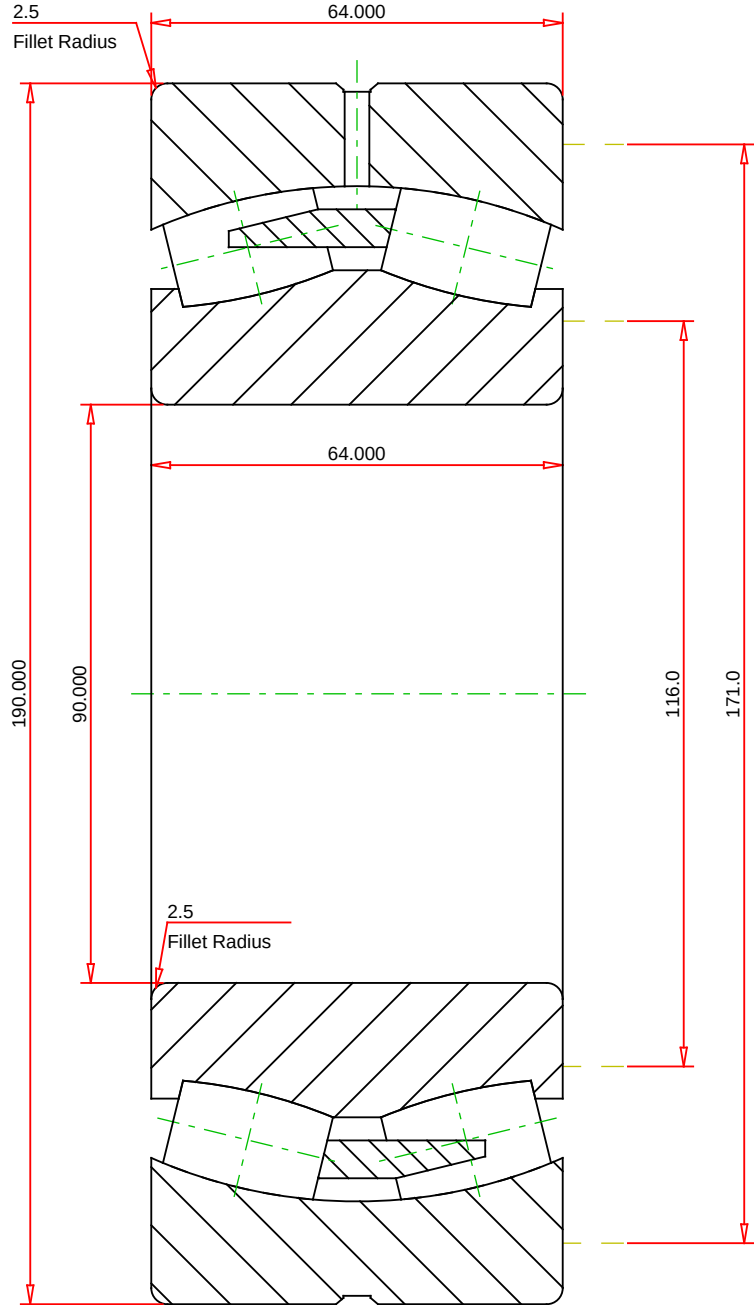
<sup>4</sup> These factors apply for both inch and metric calculations. See engineering

<sup>5</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>6</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>7</sup> See thermal speed ratings in the engineering section.

<sup>8</sup> Geometry constant for Lubrication Life Adjustment Factor  $a_3$ .



METRIC UNITS

|                           |        |
|---------------------------|--------|
| Number of Rollers Per Row | 30     |
| ISO Factor e              | 0.32   |
| ISO Factor Y0             | 2.04   |
| ISO Factor Y1             | 2.09   |
| ISO Factor Y2             | 3.11   |
| Bearing Weight            | 8.8 kg |
| Cage Type                 | EM     |
| Cage Material             | Brass  |



THE TIMKEN COMPANY

NORTH CANTON, OHIO USA

|                                  |        |   |
|----------------------------------|--------|---|
| 22318EMW33<br>SRB ASSEMBLY       |        |   |
| Dynamic Radial Rating (Two Rows) | 606000 | N |
| Static Radial Rating             | 659000 | 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