


**The Timken Company**

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## Part Number 22319EJW33C2, Spherical Roller Bearings - Steel 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](#) | [Factors](#) | [Dimensions](#) | [Abutment and Fillet Dimensions](#) | [Basic Load Ratings](#)

### Specifications

|                         |                 |
|-------------------------|-----------------|
| <b>UPC Code</b>         | 087796031012    |
| <b>Design Unit</b>      | Metric          |
| <b>d - Bore</b>         | 95 mm           |
| <b>Lubrication Type</b> | Standard Grease |
| <b>Cage Type</b>        | EJ              |
| <b>Cage Material</b>    | Steel           |
| <b>Superseded Part</b>  | 22319CJW33C2    |

### Factors



|                                   |      |
|-----------------------------------|------|
| <b>e - ISO Factor<sup>1</sup></b> | 0.32 |
|-----------------------------------|------|

|   |          |
|---|----------|
| <b>Y0 - ISO Factor<sup>2</sup></b>                      | 2.05     |
| <b>Y1 - ISO Factor<sup>3</sup></b>                      | 2.1      |
| <b>Y2 - ISO Factor<sup>4</sup></b>                      | 3.13     |
| <b>Reference Thermal Speed Rating (Grease)</b>          | 2600 rpm |
| <b>Reference Thermal Speed Rating (Oil)<sup>5</sup></b> | 3000 rpm |
| <b>Cg - Geometry Factor<sup>6</sup></b>                 | 0.0716   |

## Dimensions

|                              |                    |
|------------------------------|--------------------|
| <b>D - Outer Diameter</b>    | 200 mm<br>7.874 in |
| <b>B' - Inner Ring Width</b> | 67 mm<br>2.6378 in |
| <b>B - Outer Ring Width</b>  | 67 mm<br>2.6378 in |

## Abutment and Fillet Dimensions

|   |                         |
|---|-------------------------|
| <b>R - Inner Ring "To Clear" Radius<sup>7</sup></b> | 2.5 mm<br>0.100 in      |
| <b>r - Outer Ring "To Clear" Radius<sup>8</sup></b> | 2.5 mm<br>0.1 in        |
| <b>da - Inner Ring Backing Diameter</b>             | 122.0 mm<br>4.8000 in   |
| <b>Da - Outer Ring Backing Diameter</b>             | 180.000 mm<br>7.1000 in |

## Basic Load Ratings

|   |                        |
|---|------------------------|
| <b>C0 - Static Radial Rating</b>                    | 774000 N<br>174000 lbf |
| <b>C1(2) - Dynamic Radial Rating<br/>(Two-Rows)</b> | 694000 N<br>156000 lbf |

<sup>1</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>2</sup> These factors apply for both inch and metric calculations. See engineering

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

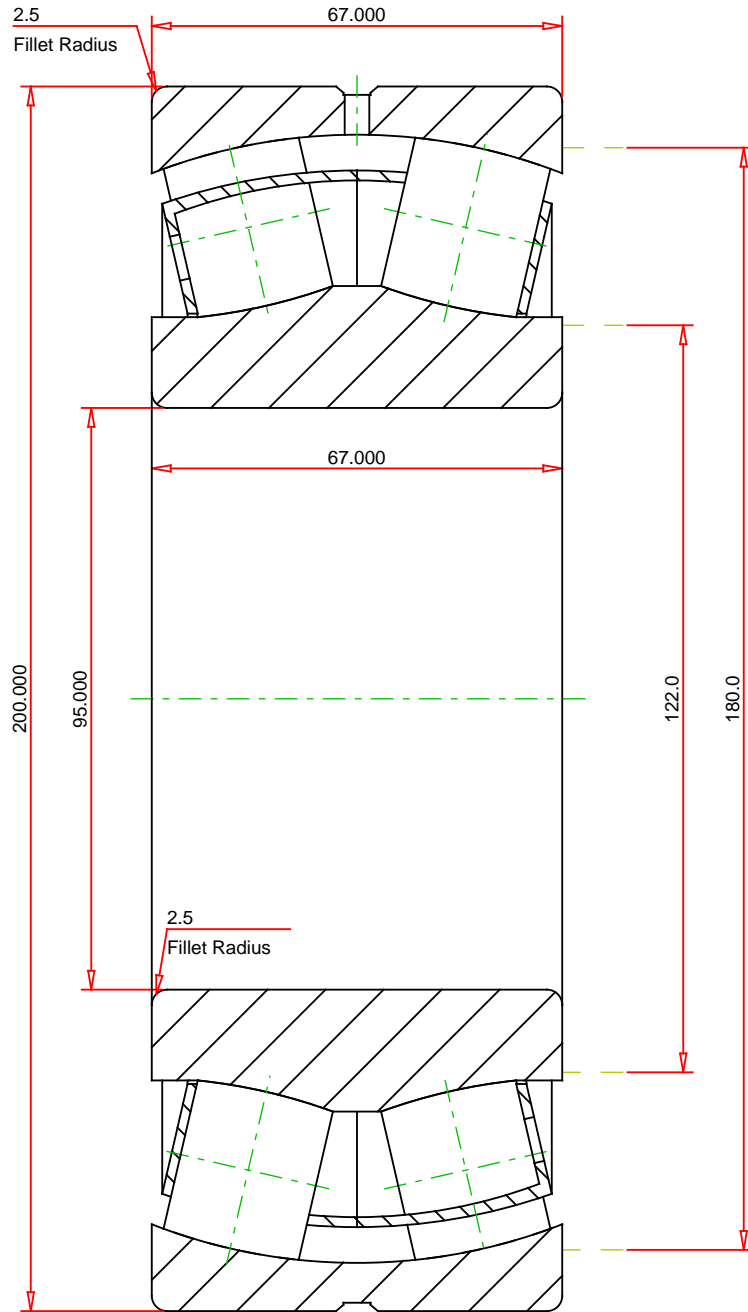
<sup>4</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>5</sup> See thermal speed ratings in the engineering section.

<sup>6</sup> Geometry constant for Lubrication Life Adjustment Factor a3l.

<sup>7</sup> Maximum housing fillet radius that bearing corners will clear.

<sup>8</sup> These maximum fillet radii will be cleared by the bearing corners.



METRIC UNITS

|                           |       |
|---------------------------|-------|
| Number of Rollers Per Row | 15    |
| ISO Factor e              | 0.32  |
| ISO Factor Y0             | 2.05  |
| ISO Factor Y1             | 2.10  |
| ISO Factor Y2             | 3.13  |
| Bearing Weight            | kg    |
| Cage Type                 | EJ    |
| Cage Material             | Steel |

**TIMKEN**®

**22319EJW33C2**  
SRB ASSEMBLY

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

|                                  |        |   |
|----------------------------------|--------|---|
| Dynamic Radial Rating (Two Rows) | 694000 | N |
| Static Radial Rating             | 774000 | 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**