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## Part Number 24080EMBW33W45AC3, 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.




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### Specifications

|                        |                   |
|------------------------|-------------------|
| <b>Design Unit</b>     | Metric            |
| <b>d - Bore</b>        | 400 mm            |
| <b>Cage Type</b>       | EMB               |
| <b>Cage Material</b>   | Brass             |
| <b>Superseded Part</b> | 24080YMBW33W45AC3 |

### Dimensions

|   |                      |
|---|----------------------|
| <b>D - Outer Diameter</b>   | 600 mm<br>23.6220 in |
|  <b>d' - Inner Ring Width</b> | 200 mm<br>7.874 in   |

|                             |                    |
|-----------------------------|--------------------|
| <b>B - Outer Ring Width</b> | 200 mm<br>7.874 in |
|-----------------------------|--------------------|

## Abutment and Fillet Dimensions

|   |                  |
|---|------------------|
| <b>R - Inner Ring "To Clear" Radius<sup>1</sup></b> | 4 mm<br>0.160 in |
|---|------------------|

|   |                 |
|---|-----------------|
| <b>r - Outer Ring "To Clear" Radius<sup>2</sup></b> | 4 mm<br>0.16 in |
|---|-----------------|

|   |                      |
|---|----------------------|
| <b>da - Inner Ring Backing Diameter</b> | 442 mm<br>17.4000 in |
|---|----------------------|

|   |                          |
|---|--------------------------|
| <b>Da - Outer Ring Backing Diameter</b> | 555.000 mm<br>21.9000 in |
|---|--------------------------|

## Basic Load Ratings

|                                  |                          |
|----------------------------------|--------------------------|
| <b>C0 - Static Radial Rating</b> | 8480000 N<br>1910000 lbf |
|----------------------------------|--------------------------|

|   |                          |
|---|--------------------------|
| <b>C1(2) - Dynamic Radial Rating (Two-Rows)</b> | 4790000 N<br>1080000 lbf |
|---|--------------------------|

## Factors

|                                   |     |
|-----------------------------------|-----|
| <b>e - ISO Factor<sup>3</sup></b> | 0.3 |
|-----------------------------------|-----|

|                                    |      |
|------------------------------------|------|
| <b>Y0 - ISO Factor<sup>4</sup></b> | 2.19 |
|------------------------------------|------|

|                                    |      |
|------------------------------------|------|
| <b>Y1 - ISO Factor<sup>5</sup></b> | 2.24 |
|------------------------------------|------|

|                                    |      |
|------------------------------------|------|
| <b>Y2 - ISO Factor<sup>6</sup></b> | 3.33 |
|------------------------------------|------|

|  |         |
|--|---------|
| <b>Reference Thermal Speed Rating (Grease)</b> | 460 rpm |
|--|---------|

|   |         |
|---|---------|
| <b>Reference Thermal Speed Rating (Oil)<sup>7</sup></b> | 510 rpm |
|---|---------|

|   |        |
|---|--------|
| <b>Cg - Geometry Factor<sup>8</sup></b> | 0.1472 |
|---|--------|

<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.

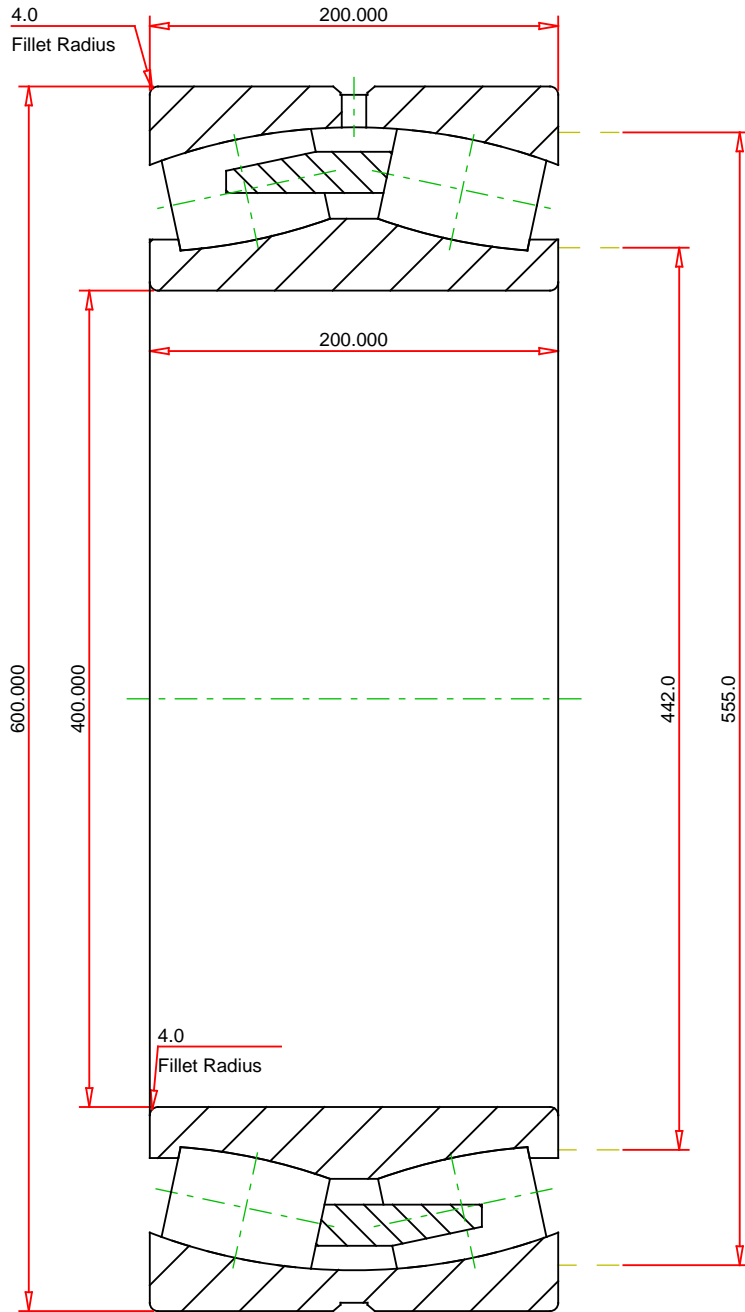
<sup>4</sup> These factors apply for both inch and metric calculations. See engineering

<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 a3l.



METRIC UNITS

|                           |          |
|---------------------------|----------|
| Number of Rollers Per Row | 27       |
| ISO Factor e              | 0.30     |
| ISO Factor Y0             | 2.19     |
| ISO Factor Y1             | 2.24     |
| ISO Factor Y2             | 3.33     |
| Bearing Weight            | 200.0 kg |
| Cage Type                 | EMB      |
| Cage Material             | Brass    |

**TIMKEN**®

**24080EMBW33W45AC3**  
SRB ASSEMBLY

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

|                                  |         |   |
|----------------------------------|---------|---|
| Dynamic Radial Rating (Two Rows) | 4790000 | N |
| Static Radial Rating             | 8480000 | 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**