


The Timken Company

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Part Number 22320EMW33W800C4, 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

| | |
|------------------------|------------|
| Design Unit | Metric |
| d - Bore | 100 mm |
| Cage Type | EM |
| Cage Material | Brass |
| Superseded Part | 22320YMW22 |

Dimensions

| | |
|--|-------------------------|
| D - Outer Diameter | 214.993 mm 8.4643 in |
|  - Inner Ring Width | 73 mm 2.874 in |

| | |
|-----------------------------|--------------------|
| B - Outer Ring Width | 73 mm 2.8740 in |
|-----------------------------|--------------------|

Abutment and Fillet Dimensions

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|---|--------------------|
| R - Inner Ring "To Clear" Radius¹ | 2.5 mm 0.100 in |
|---|--------------------|

| | |
|---|------------------|
| r - Outer Ring "To Clear" Radius² | 2.5 mm 0.1 in |
|---|------------------|

| | |
|---|---------------------|
| da - Inner Ring Backing Diameter | 131 mm 5.1000 in |
|---|---------------------|

| | |
|---|-------------------------|
| Da - Outer Ring Backing Diameter | 193.000 mm 7.6000 in |
|---|-------------------------|

Basic Load Ratings

| | |
|----------------------------------|------------------------|
| C0 - Static Radial Rating | 853000 N 192000 lbf |
|----------------------------------|------------------------|

| | |
|---|------------------------|
| C1(2) - Dynamic Radial Rating (Two-Rows) | 768000 N 173000 lbf |
|---|------------------------|

Factors

| | |
|-----------------------------------|------|
| e - ISO Factor³ | 0.33 |
|-----------------------------------|------|

| | |
|------------------------------------|------|
| Y0 - ISO Factor⁴ | 2.02 |
|------------------------------------|------|

| | |
|------------------------------------|------|
| Y1 - ISO Factor⁵ | 2.06 |
|------------------------------------|------|

| | |
|------------------------------------|------|
| Y2 - ISO Factor⁶ | 3.07 |
|------------------------------------|------|

| | |
|--|----------|
| Reference Thermal Speed Rating (Grease) | 2500 rpm |
|--|----------|

| | |
|---|----------|
| Reference Thermal Speed Rating (Oil)⁷ | 2900 rpm |
|---|----------|

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|---|--------|
| Cg - Geometry Factor⁸ | 0.0746 |
|---|--------|

¹ Maximum housing fillet radius that bearing corners will clear.

² Maximum shaft fillet radius that bearing corners will clear.

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

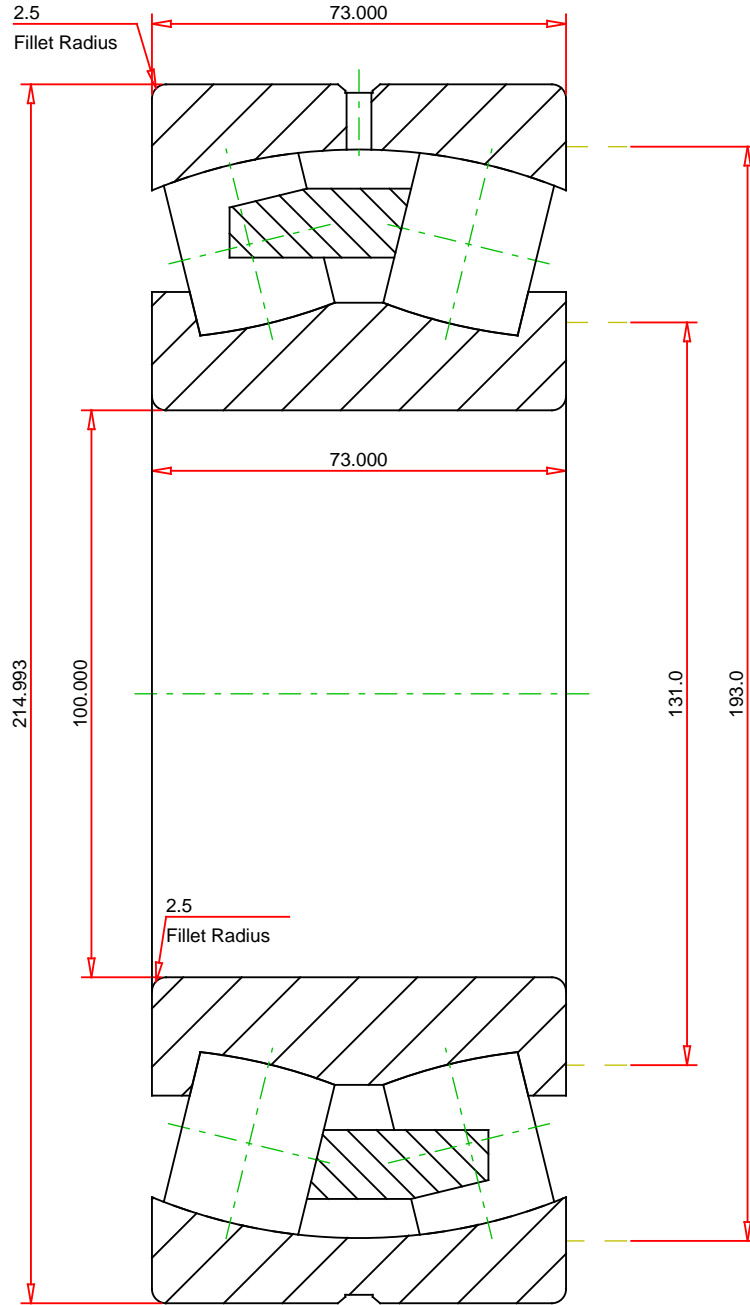
⁴ These factors apply for both inch and metric calculations. See engineering

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

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

⁷ See thermal speed ratings in the engineering section.

⁸ Geometry constant for Lubrication Life Adjustment Factor a3l.



METRIC UNITS

| | |
|---------------------------|-------|
| Number of Rollers Per Row | 15 |
| ISO Factor e | 0.33 |
| ISO Factor Y0 | 2.02 |
| ISO Factor Y1 | 2.06 |
| ISO Factor Y2 | 3.07 |
| Bearing Weight | kg |
| Cage Type | EM |
| Cage Material | Brass |

TIMKEN®

22320EMW33W800C4
SRB ASSEMBLY

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

| | | |
|----------------------------------|--------|---|
| Dynamic Radial Rating (Two Rows) | 768000 | N |
| Static Radial Rating | 853000 | 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