


The Timken Company

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Part Number 23164EMBW507C08C3, 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 | 320.000 mm |
| Cage Type | EMB |
| Cage Material | Brass |
| Superseded Part | 23164YMBW507C08C3 |

Dimensions

| | |
|--|----------------------|
| D - Outer Diameter | 540 mm 21.2600 in |
|  Inner Ring Width | 176 mm 6.929 in |

| | |
|-----------------------------|---------------------|
| B - Outer Ring Width | 176 mm 6.9290 in |
|-----------------------------|---------------------|

Abutment and Fillet Dimensions

| | |
|---|------------------|
| R - Inner Ring "To Clear" Radius¹ | 4 mm 0.160 in |
|---|------------------|

| | |
|---|-----------------|
| r - Outer Ring "To Clear" Radius² | 4 mm 0.16 in |
|---|-----------------|

| | |
|---|-------------------------|
| da - Inner Ring Backing Diameter | 364.000 mm 14.300 in |
|---|-------------------------|

| | |
|---|----------------------|
| Da - Outer Ring Backing Diameter | 490 mm 19.3000 in |
|---|----------------------|

Basic Load Ratings

| | |
|----------------------------------|--------------------------|
| C0 - Static Radial Rating | 5950000 N 1340000 lbf |
|----------------------------------|--------------------------|

| | |
|---|-------------------------|
| C1(2) - Dynamic Radial Rating (Two-Rows) | 3990000 N 898000 lbf |
|---|-------------------------|

Factors

| | |
|-----------------------------------|------|
| e - ISO Factor³ | 0.31 |
|-----------------------------------|------|

| | |
|------------------------------------|-----|
| Y0 - ISO Factor⁴ | 2.1 |
|------------------------------------|-----|

| | |
|------------------------------------|------|
| Y1 - ISO Factor⁵ | 2.14 |
|------------------------------------|------|

| | |
|------------------------------------|------|
| Y2 - ISO Factor⁶ | 3.19 |
|------------------------------------|------|

| | |
|--|---------|
| Reference Thermal Speed Rating (Grease) | 620 rpm |
|--|---------|

| | |
|---|---------|
| Reference Thermal Speed Rating (Oil)⁷ | 690 rpm |
|---|---------|

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|---|--------|
| Cg - Geometry Factor⁸ | 0.1313 |
|---|--------|

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.

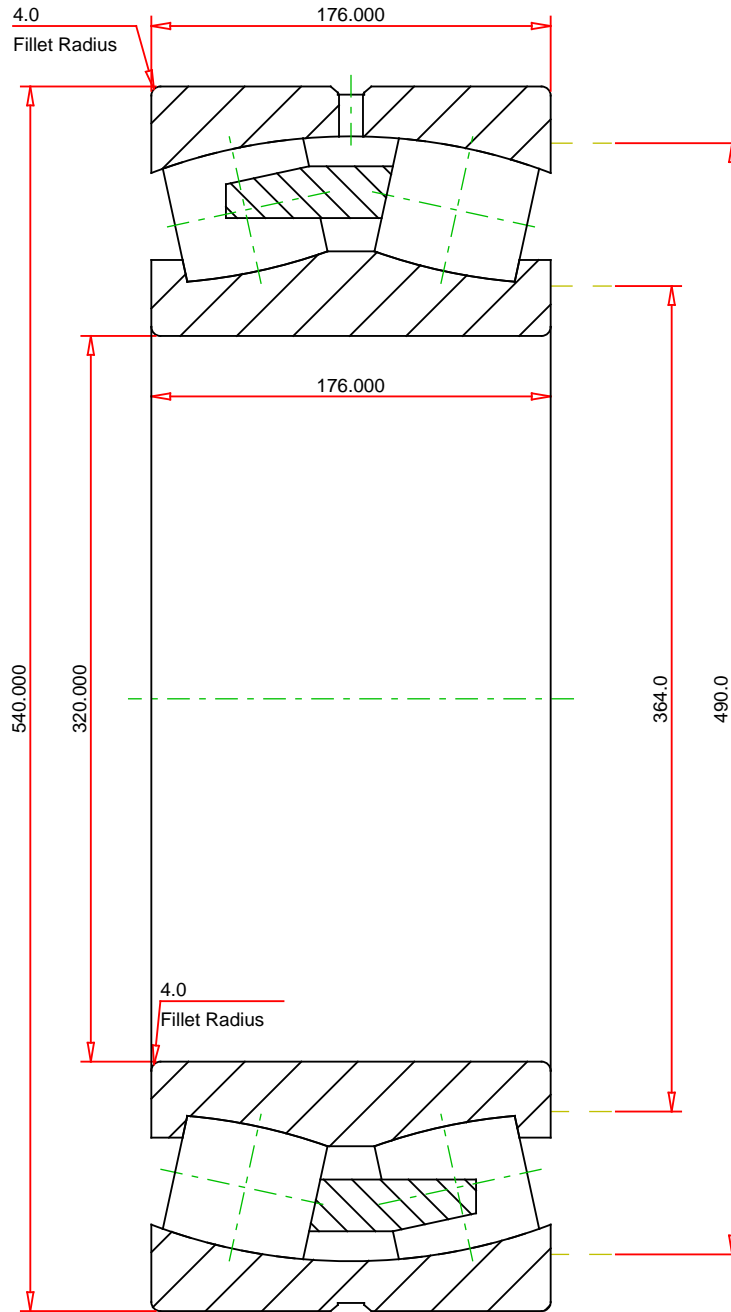
⁴ These factors apply for both inch and metric calculations. See engineering

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 | 21 |
| ISO Factor e | 0.31 |
| ISO Factor Y0 | 2.10 |
| ISO Factor Y1 | 2.14 |
| ISO Factor Y2 | 3.19 |
| Bearing Weight | 167.1 kg |
| Cage Type | EMB |
| Cage Material | Brass |

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

| | |
|----------------------------------|-----------|
| 23164EMBW507C08C3 | |
| SRB ASSEMBLY | |
| Dynamic Radial Rating (Two Rows) | 3990000 N |
| Static Radial Rating | 5950000 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