


The Timken Company

4500 Mt Pleasant St. NW

N. Canton, OH 44720

Phone: (234) 262-3000

E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com
Part Number 22312EMW33W800C4, 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	60 mm
Cage Type	EM
Cage Material	Brass
Superseded Part	22312YMW33W800C4

Dimensions

D - Outer Diameter	129.993 mm 5.1178 in
 b' - Inner Ring Width	46 mm 1.811 in

B - Outer Ring Width	46 mm 1.811 in
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Abutment and Fillet Dimensions

R - Inner Ring "To Clear" Radius¹	2 mm 0.080 in
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r - Outer Ring "To Clear" Radius²	2 mm 0.080 in
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da - Inner Ring Backing Diameter	77.00 mm 3.000 in
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Da - Outer Ring Backing Diameter	117.000 mm 4.600 in
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Basic Load Ratings

C0 - Static Radial Rating	307000 N 69000 lbf
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C1(2) - Dynamic Radial Rating (Two-Rows)	306000 N 68800 lbf
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Factors

e - ISO Factor³	0.34
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Y0 - ISO Factor⁴	1.93
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Y1 - ISO Factor⁵	1.98
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Y2 - ISO Factor⁶	2.94
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Reference Thermal Speed Rating (Grease)	4100 rpm
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Reference Thermal Speed Rating (Oil)⁷	4900 rpm
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Cg - Geometry Factor⁸	0.0532
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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.

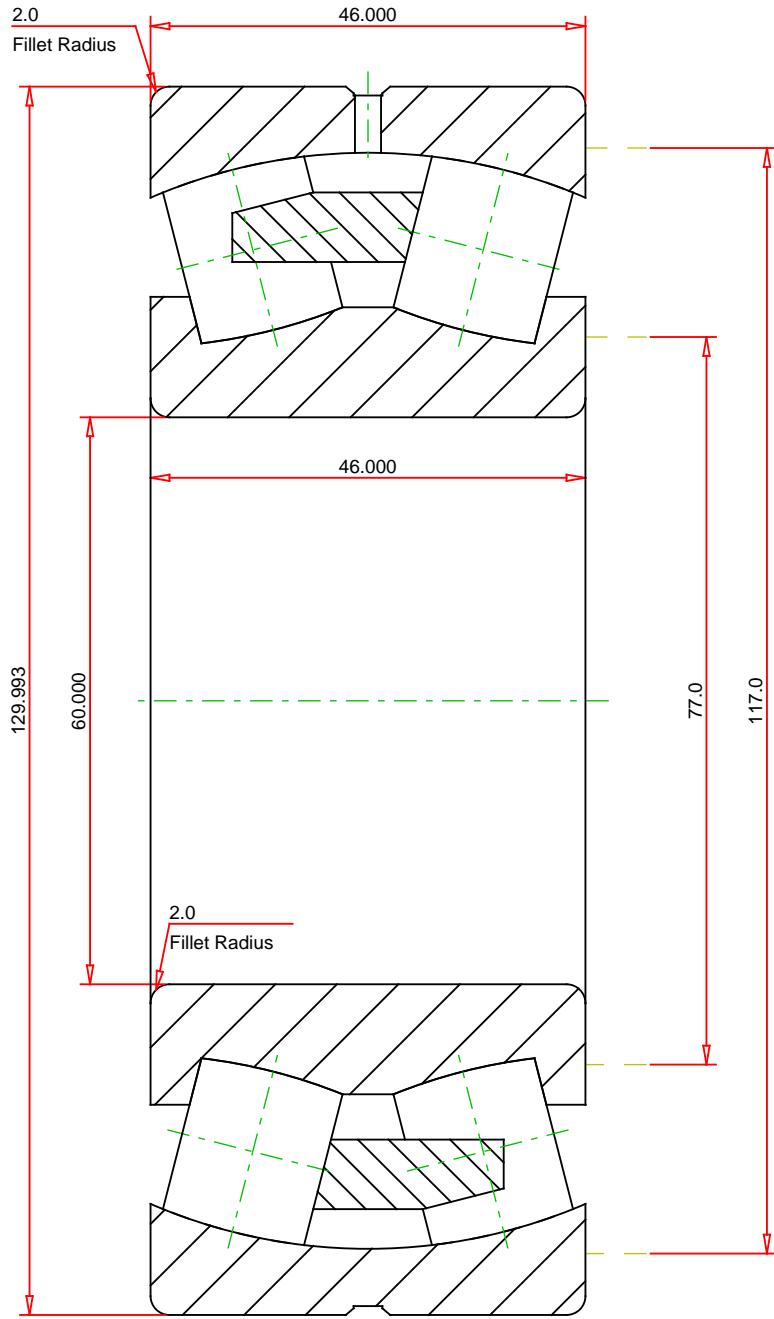
⁴ These factors apply for both inch and metric calculations. See engineering

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

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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	14
ISO Factor e	0.34
ISO Factor Y0	1.93
ISO Factor Y1	1.98
ISO Factor Y2	2.94
Bearing Weight	3.0 kg
Cage Type	EM
Cage Material	Brass



22312EMW33W800C4
SRB ASSEMBLY

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

Dynamic Radial Rating (Two Rows)	306000	N
Static Radial Rating	307000	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