


The Timken Company

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Part Number 23944EMW509C08, 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	220 mm
Cage Type	EM
Cage Material	Brass
Superseded Part	23944YMW509C08

Dimensions

D - Outer Diameter	300 mm 11.811 in
 d - Inner Ring Width	60 mm 2.3622 in

B - Outer Ring Width	60 mm 2.3622 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	239.000 mm 9.400 in
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Da - Outer Ring Backing Diameter	283 mm 11.2000 in
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Basic Load Ratings

C0 - Static Radial Rating	1210000 N 272000 lbf
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C1(2) - Dynamic Radial Rating (Two-Rows)	739000 N 166000 lbf
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Factors

e - ISO Factor³	0.17
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Y0 - ISO Factor⁴	3.85
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Y1 - ISO Factor⁵	3.94
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Y2 - ISO Factor⁶	5.87
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Reference Thermal Speed Rating (Grease)	1400 rpm
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Reference Thermal Speed Rating (Oil)⁷	1700 rpm
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Cg - Geometry Factor⁸	0.1064
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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.

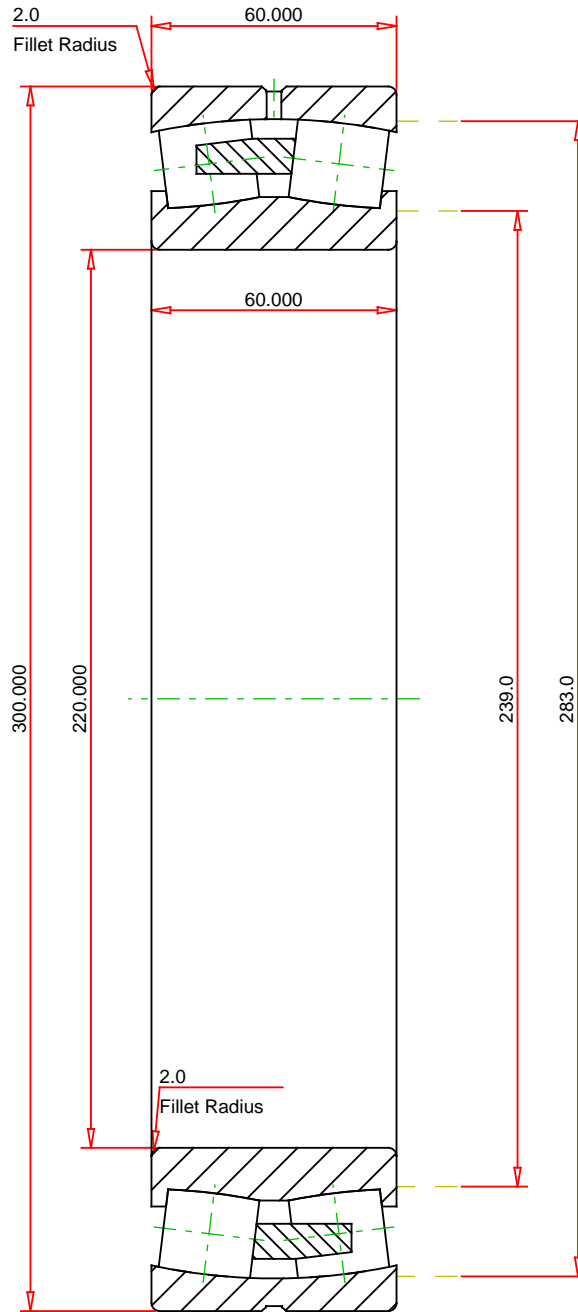
⁴ These factors apply for both inch and metric calculations. See engineering

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	34
ISO Factor e	0.17
ISO Factor Y0	3.85
ISO Factor Y1	3.94
ISO Factor Y2	5.87
Bearing Weight	12.0 kg
Cage Type	EM
Cage Material	Brass



23944EMW509C08
SRB ASSEMBLY

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

Dynamic Radial Rating (Two Rows)	739000	N
Static Radial Rating	1210000	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