


The Timken Company

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Part Number 23980EMBW509C08, 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

Design Unit	Metric
d - Bore	400 mm
Cage Type	EMB
Cage Material	Brass
Superseded Part	23980YMBW509C08

Dimensions

D - Outer Diameter	540 mm 21.2600 in
 - Inner Ring Width	106 mm 4.173 in

B - Outer Ring Width	106 mm 4.1730 in
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Abutment and Fillet Dimensions

R - Inner Ring "To Clear" Radius¹	3 mm 0.120 in
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r - Outer Ring "To Clear" Radius²	3 mm 0.12 in
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da - Inner Ring Backing Diameter	436 mm 17.2000 in
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Da - Outer Ring Backing Diameter	511.000 mm 20.1000 in
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Basic Load Ratings

C0 - Static Radial Rating	4020000 N 903000 lbf
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C1(2) - Dynamic Radial Rating (Two-Rows)	2180000 N 489000 lbf
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Factors

e - ISO Factor³	0.17
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Y0 - ISO Factor⁴	3.9
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Y1 - ISO Factor⁵	3.99
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Y2 - ISO Factor⁶	5.94
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Reference Thermal Speed Rating (Grease)	690 rpm
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Reference Thermal Speed Rating (Oil)⁷	810 rpm
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Cg - Geometry Factor⁸	0.1464
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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.

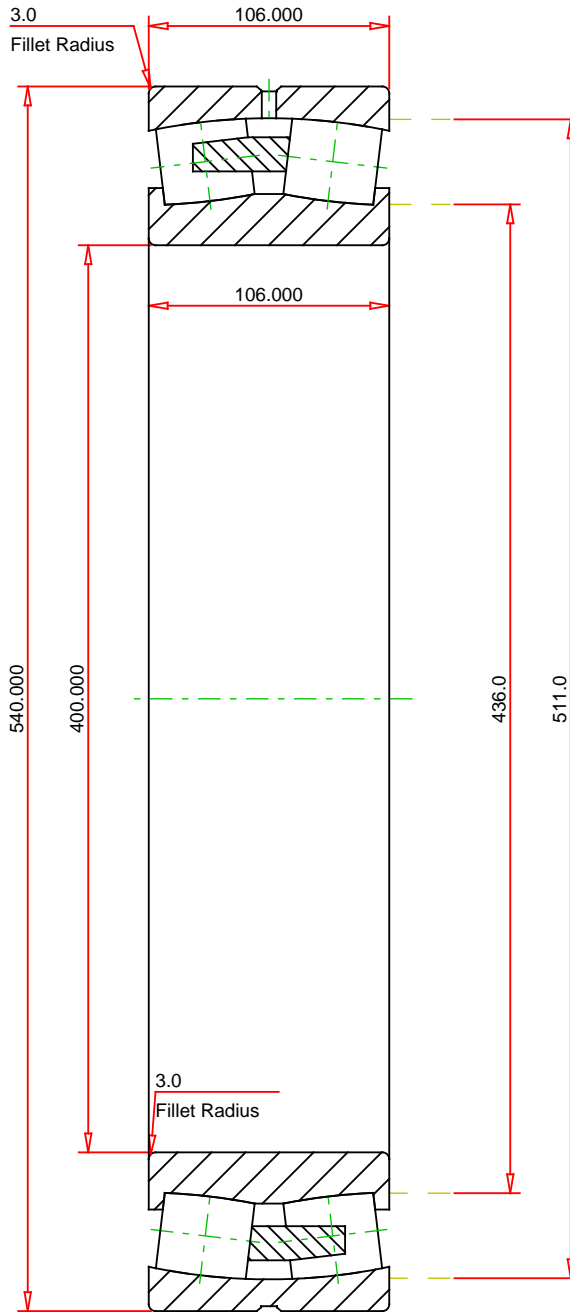
⁴ These factors apply for both inch and metric calculations. See engineering

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	36
ISO Factor e	0.17
ISO Factor Y0	3.90
ISO Factor Y1	3.99
ISO Factor Y2	5.94
Bearing Weight	69.2 kg
Cage Type	EMB
Cage Material	Brass

TIMKEN®

23980EMBW509C08
SRB ASSEMBLY

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

Dynamic Radial Rating (Two Rows)	2180000	N
Static Radial Rating	4020000	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.

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