


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 23080EMBW509C08C3, 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	400 mm
Cage Type	EMB
Cage Material	Brass
Superseded Part	23080YMBW509C08C3

Dimensions

D - Outer Diameter	600 mm 23.6220 in
 - Inner Ring Width	148 mm 5.827 in

B - Outer Ring Width	148 mm 5.8270 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	444 mm 17.5000 in
---	----------------------

Da - Outer Ring Backing Diameter	555.000 mm 21.9000 in
---	--------------------------

Basic Load Ratings

C0 - Static Radial Rating	5980000 N 1340000 lbf
----------------------------------	--------------------------

C1(2) - Dynamic Radial Rating (Two-Rows)	3630000 N 815000 lbf
---	-------------------------

Factors

e - ISO Factor³	0.23
-----------------------------------	------

Y0 - ISO Factor⁴	2.92
------------------------------------	------

Y1 - ISO Factor⁵	2.98
------------------------------------	------

Y2 - ISO Factor⁶	4.44
------------------------------------	------

Reference Thermal Speed Rating (Grease)	660 rpm
--	---------

Reference Thermal Speed Rating (Oil)⁷	760 rpm
---	---------

Cg - Geometry Factor⁸	0.1473
---	--------

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.

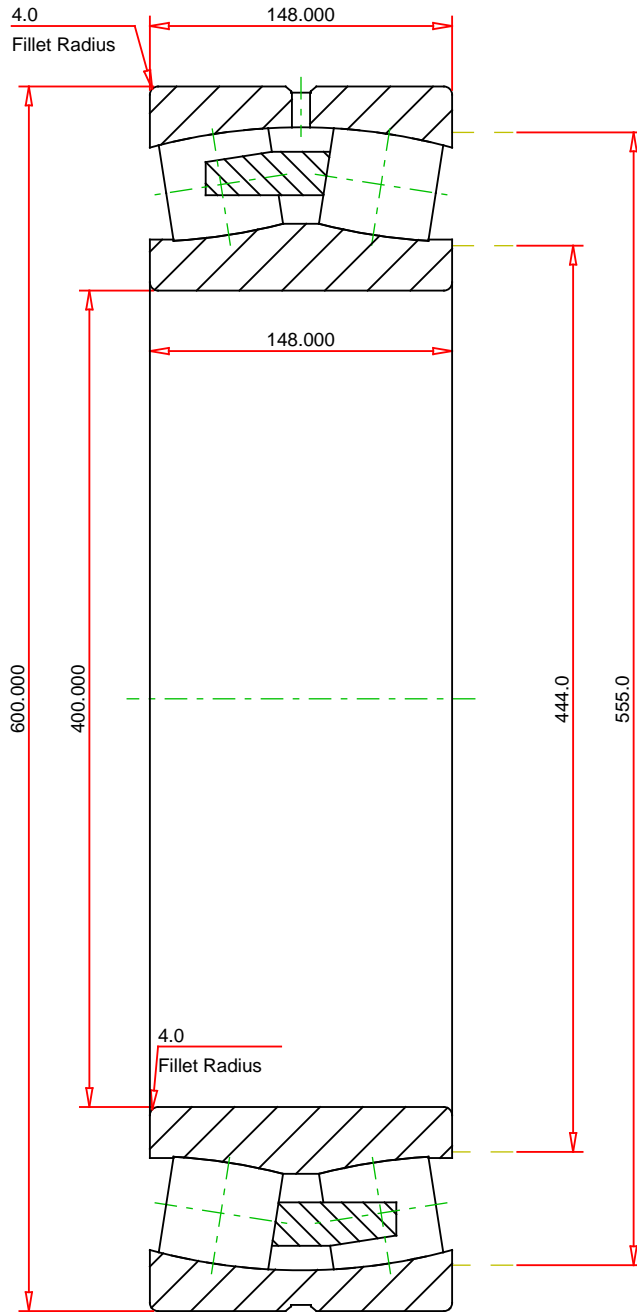
⁴ These factors apply for both inch and metric calculations. See engineering

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	27
ISO Factor e	0.23
ISO Factor Y0	2.92
ISO Factor Y1	2.98
ISO Factor Y2	4.44
Bearing Weight	148.7 kg
Cage Type	EMB
Cage Material	Brass

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

23080EMBW509C08C3 SRB ASSEMBLY	
Dynamic Radial Rating (Two Rows)	3630000 N
Static Radial Rating	5980000 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