


The Timken Company

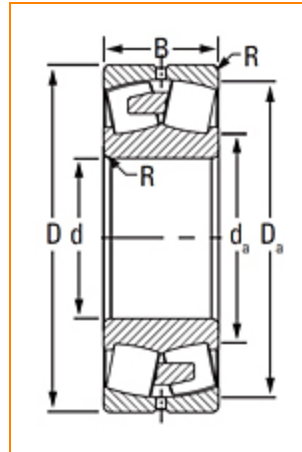
4500 Mt Pleasant St. NW

N. Canton, OH 44720

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Part Number 22310EMW33, 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	50 mm
Cage Type	EM
Cage Material	Brass
Superseded Part	22310YMW33

Dimensions

D - Outer Diameter	110 mm 4.3307 in
 - Inner Ring Width	40 mm 1.5748 in

B - Outer Ring Width	40 mm 1.5748 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	65.00 mm 2.600 in
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Da - Outer Ring Backing Diameter	98.000 mm 3.900 in
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Basic Load Ratings

C0 - Static Radial Rating	227000 N 51000 lbf
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C1(2) - Dynamic Radial Rating (Two-Rows)	225000 N 50600 lbf
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Factors

e - ISO Factor³	0.36
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Y0 - ISO Factor⁴	1.85
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Y1 - ISO Factor⁵	1.89
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Y2 - ISO Factor⁶	2.81
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Reference Thermal Speed Rating (Grease)	4700 rpm
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Reference Thermal Speed Rating (Oil)⁷	5600 rpm
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Cg - Geometry Factor⁸	0.0549
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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.

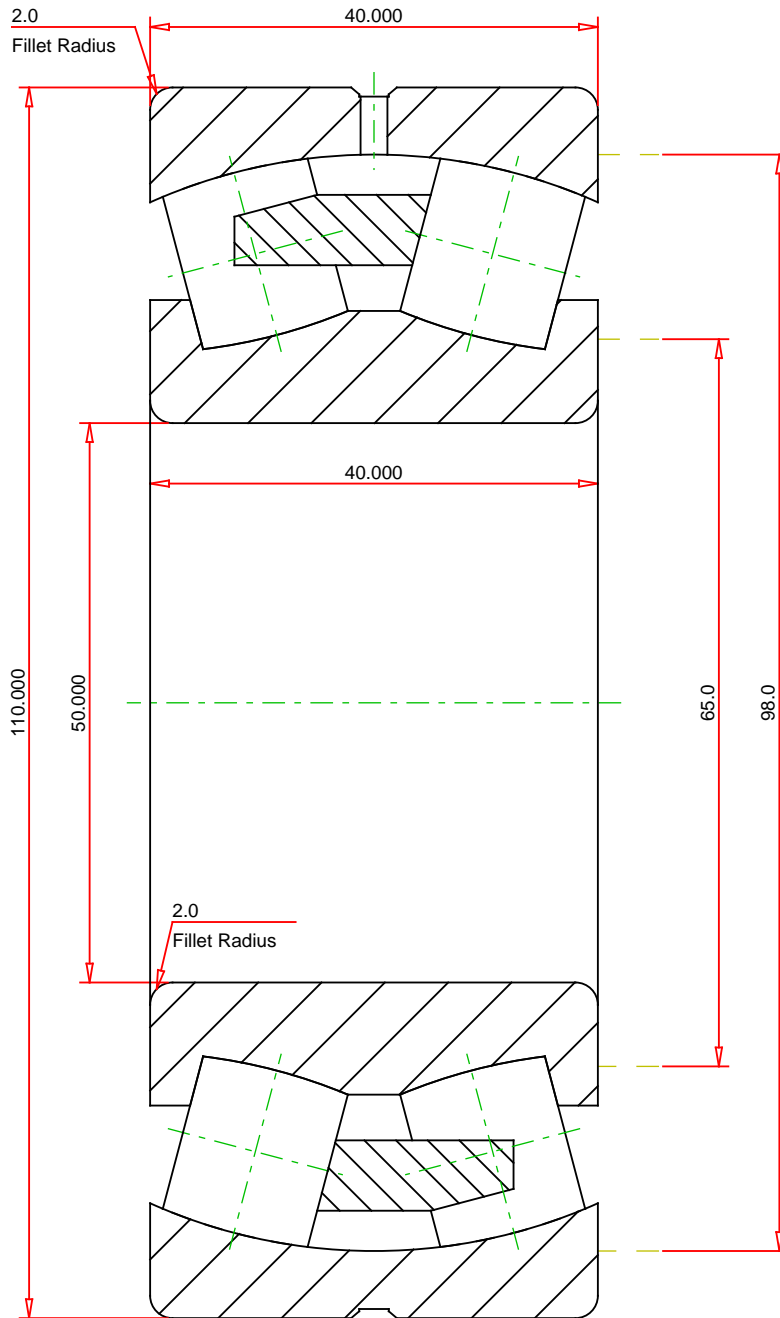
⁴ These factors apply for both inch and metric calculations. See engineering

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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	15
ISO Factor e	0.36
ISO Factor Y0	1.85
ISO Factor Y1	1.89
ISO Factor Y2	2.81
Bearing Weight	1.9 kg
Cage Type	EM
Cage Material	Brass

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

22310EMW33
SRB ASSEMBLY

Dynamic Radial Rating (Two Rows)	225000	N
Static Radial Rating	227000	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