


The Timken Company

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Part Number 22228EMW33, 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	140 mm
Cage Type	EM
Cage Material	Brass
Superseded Part	22228YMW33

Dimensions

D - Outer Diameter	250 mm 9.8425 in
 - Inner Ring Width	68 mm 2.6772 in

B - Outer Ring Width	68 mm 2.6772 in
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Abutment and Fillet Dimensions

R - Inner Ring "To Clear" Radius¹	2.5 mm 0.100 in
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r - Outer Ring "To Clear" Radius²	2.5 mm 0.1 in
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da - Inner Ring Backing Diameter	167 mm 6.6000 in
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Da - Outer Ring Backing Diameter	228.000 mm 9.000 in
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Basic Load Ratings

C0 - Static Radial Rating	1060000 N 237000 lbf
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C1(2) - Dynamic Radial Rating (Two-Rows)	863000 N 194000 lbf
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Factors

e - ISO Factor³	0.25
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Y0 - ISO Factor⁴	2.61
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Y1 - ISO Factor⁵	2.67
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Y2 - ISO Factor⁶	3.98
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Reference Thermal Speed Rating (Grease)	2200 rpm
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Reference Thermal Speed Rating (Oil)⁷	2600 rpm
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Cg - Geometry Factor⁸	0.0856
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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.

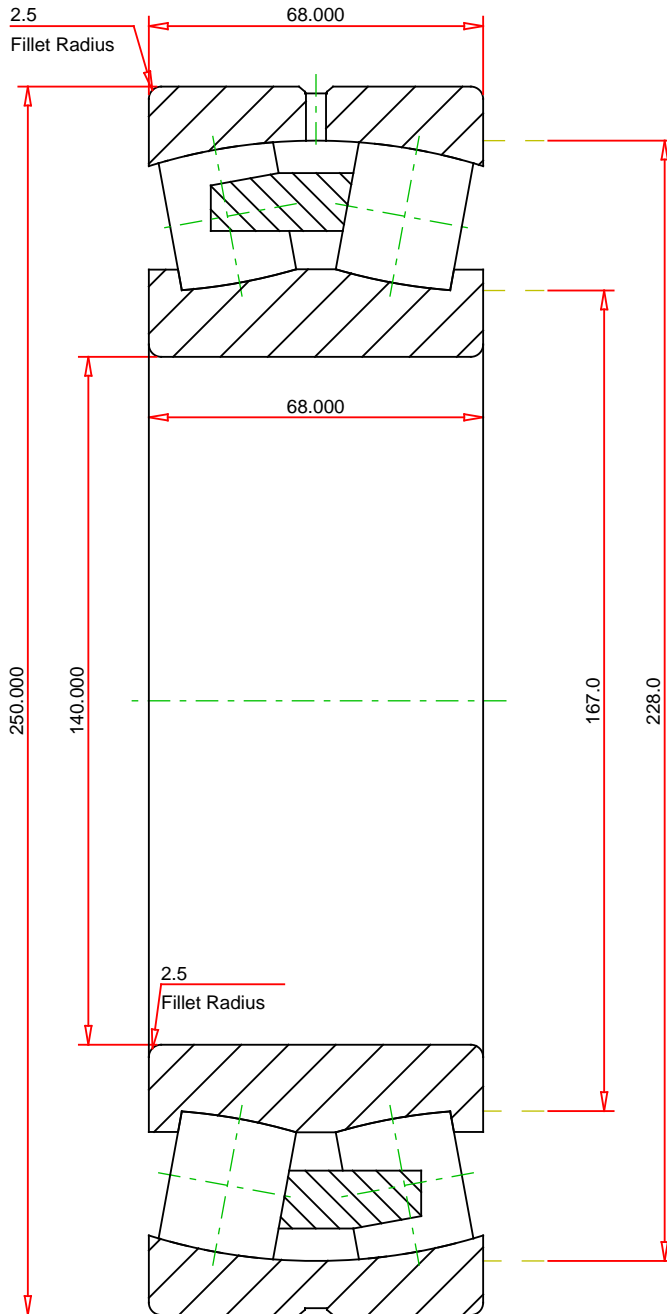
⁴ These factors apply for both inch and metric calculations. See engineering

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	19
ISO Factor e	0.25
ISO Factor Y0	2.61
ISO Factor Y1	2.67
ISO Factor Y2	3.98
Bearing Weight	14.2 kg
Cage Type	EM
Cage Material	Brass

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

22228EMW33 SRB ASSEMBLY	
Dynamic Radial Rating (Two Rows)	863000 N
Static Radial Rating	1060000 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