


The Timken Company

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Part Number 22238EMBW33, 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	190 mm
Cage Type	EMB
Cage Material	Brass
Superseded Part	22238YMBW33

Dimensions

D - Outer Diameter	340 mm 13.3858 in
 - Inner Ring Width	92 mm 3.622 in

B - Outer Ring Width	92 mm 3.622 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	226.000 mm 8.900 in
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Da - Outer Ring Backing Diameter	310 mm 12.2000 in
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Basic Load Ratings

C0 - Static Radial Rating	1960000 N 440000 lbf
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C1(2) - Dynamic Radial Rating (Two-Rows)	1550000 N 348000 lbf
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Factors

e - ISO Factor³	0.25
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Y0 - ISO Factor⁴	2.62
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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)	1500 rpm
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Reference Thermal Speed Rating (Oil)⁷	1800 rpm
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Cg - Geometry Factor⁸	0.0967
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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.

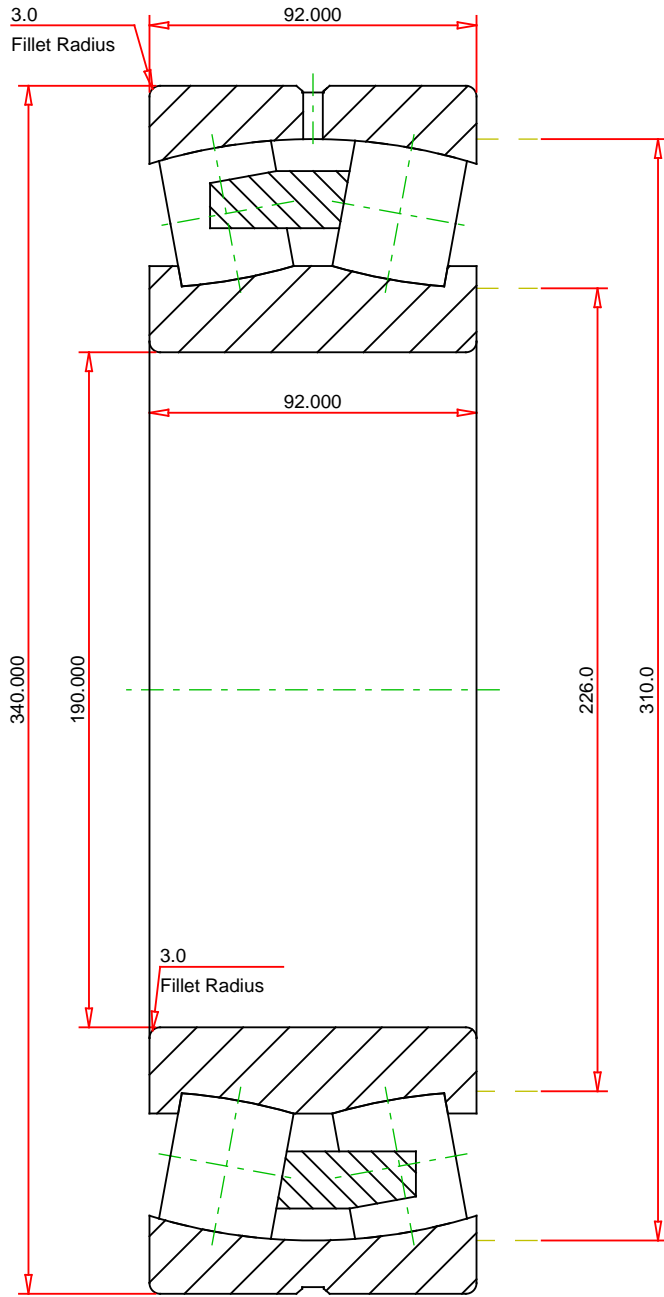
⁴ These factors apply for both inch and metric calculations. See engineering

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	2.62
ISO Factor Y1	2.67
ISO Factor Y2	3.98
Bearing Weight	36.0 kg
Cage Type	EMB
Cage Material	Brass

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

22238EMBW33	
SRB ASSEMBLY	
Dynamic Radial Rating (Two Rows)	1550000 N
Static Radial Rating	1960000 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