



The Timken Company

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Part Number 22312EMW33C7, 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	60 mm
Cage Type	EM
Cage Material	Brass
Superseded Part	22312YMW33C7

Dimensions

D - Outer Diameter	130 mm
B' - Inner Ring Width	46 mm
B - Outer Ring Width	46 mm



Abutment and Fillet Dimensions

R - Inner Ring "To Clear" Radius¹	2 mm
r - Outer Ring "To Clear" Radius²	2 mm
da - Inner Ring Backing Diameter	77.00 mm
Da - Outer Ring Backing Diameter	117.000 mm

Basic Load Ratings

C0 - Static Radial Rating	307000 N
C1(2) - Dynamic Radial Rating (Two-Rows)	306000 N

Factors

e - ISO Factor³	0.34
Y0 - ISO Factor⁴	1.93
Y1 - ISO Factor⁵	1.98
Y2 - ISO Factor⁶	2.94
Reference Thermal Speed Rating (Grease)	4100 rpm
Reference Thermal Speed Rating (Oil)⁷	4900 rpm
Cg - Geometry Factor⁸	0.0532

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.

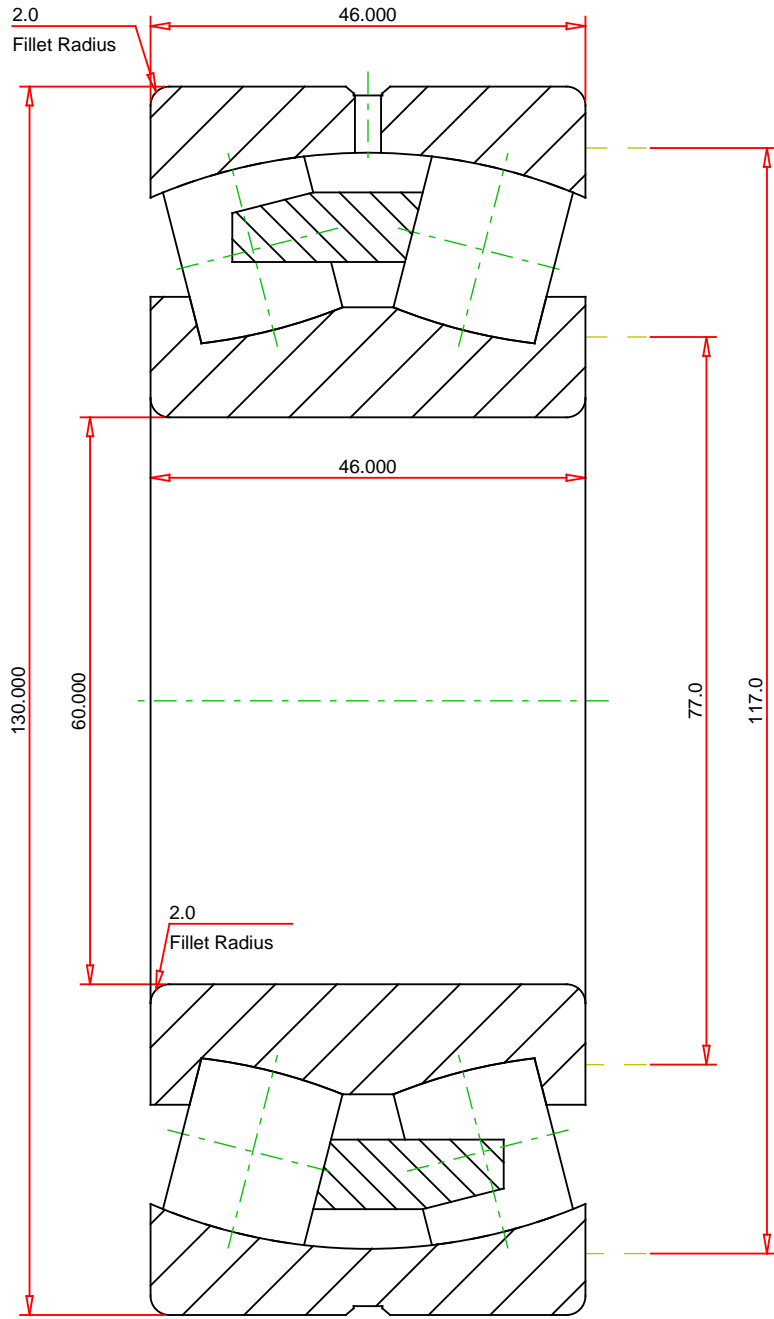
⁴ These factors apply for both inch and metric calculations. See engineering

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⁷ See thermal speed ratings in the engineering section.

⁸ Geometry constant for Lubrication Life Adjustment Factor a_3 .



METRIC UNITS

Number of Rollers Per Row	14
ISO Factor e	0.34
ISO Factor Y0	1.93
ISO Factor Y1	1.98
ISO Factor Y2	2.94
Bearing Weight	3.0 kg
Cage Type	EM
Cage Material	Brass

TIMKEN®

22312EMW33C7
SRB ASSEMBLY

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

Dynamic Radial Rating (Two Rows)	306000	N
Static Radial Rating	307000	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