



**The Timken Company**

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## Part Number 22316KEMW33, 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

<b>Design Unit</b>	Metric
<b>d - Bore</b>	80 mm
<b>Bore_Taper</b>	1/12
<b>Cage Type</b>	EM
<b>Cage Material</b>	Brass
<b>Superseded Part</b>	22316KYMW33

### Dimensions



**D - Outer Diameter**

170 mm  
6.6929 in

<b>B' - Inner Ring Width</b>	58 mm 2.2835 in
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<b>B - Outer Ring Width</b>	58 mm 2.2835 in
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## Abutment and Fillet Dimensions

<b>R - Inner Ring "To Clear" Radius<sup>1</sup></b>	2 mm 0.080 in
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<b>r - Outer Ring "To Clear" Radius<sup>2</sup></b>	2 mm 0.080 in
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<b>da - Inner Ring Backing Diameter</b>	103 mm 4.1000 in
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<b>Da - Outer Ring Backing Diameter</b>	153.000 mm 6.000 in
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## Basic Load Ratings

<b>C0 - Static Radial Rating</b>	534000 N 120000 lbf
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<b>C1(2) - Dynamic Radial Rating (Two-Rows)</b>	499000 N 112000 lbf
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## Factors

<b>e - ISO Factor<sup>3</sup></b>	0.33
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<b>Y0 - ISO Factor<sup>4</sup></b>	2.01
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<b>Y1 - ISO Factor<sup>5</sup></b>	2.06
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<b>Y2 - ISO Factor<sup>6</sup></b>	3.06
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<b>Reference Thermal Speed Rating (Grease)</b>	3300 rpm
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<b>Reference Thermal Speed Rating (Oil)<sup>7</sup></b>	3800 rpm
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<b>Cg - Geometry Factor<sup>8</sup></b>	0.0638
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<sup>1</sup> Maximum housing fillet radius that bearing corners will clear.

<sup>2</sup> Maximum shaft fillet radius that bearing corners will clear.

<sup>3</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

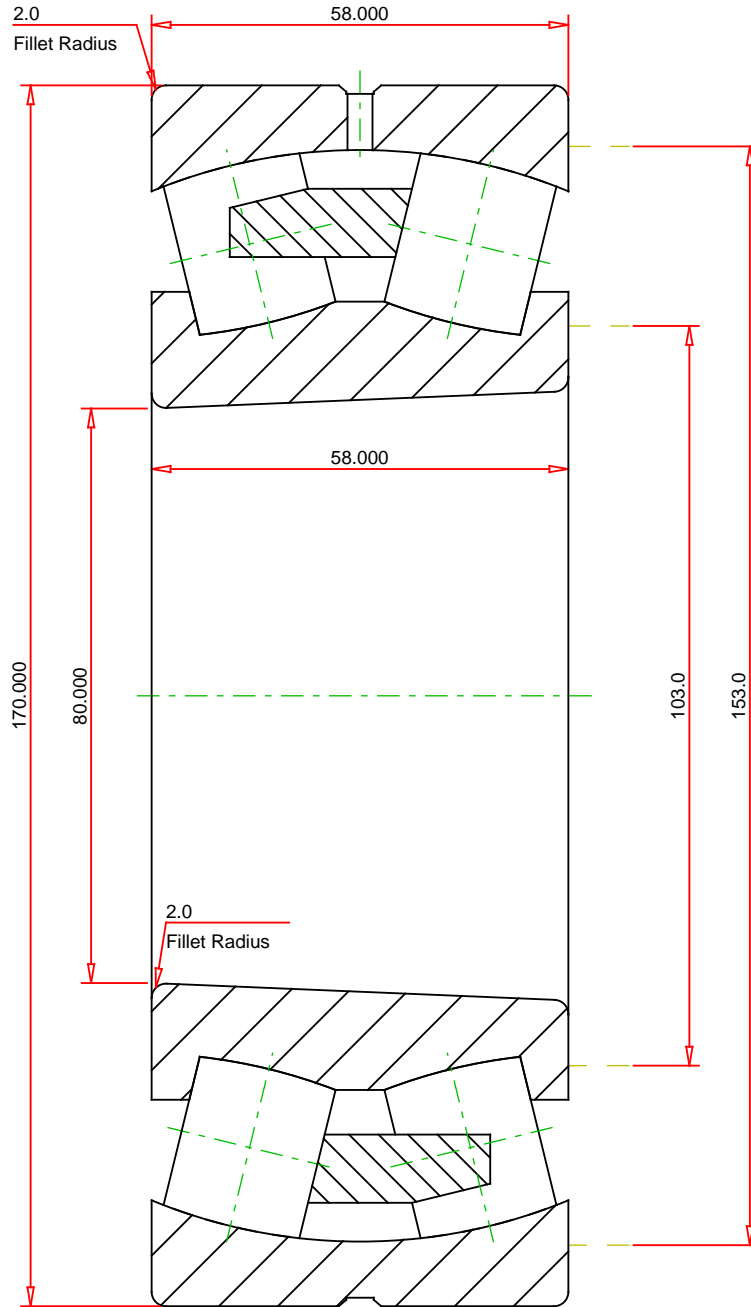
<sup>4</sup> These factors apply for both inch and metric calculations. See engineering

<sup>5</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>6</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>7</sup> See thermal speed ratings in the engineering section.

<sup>8</sup> Geometry constant for Lubrication Life Adjustment Factor a3l.



METRIC UNITS

Number of Rollers Per Row	15
ISO Factor e	0.33
ISO Factor Y0	2.01
ISO Factor Y1	2.06
ISO Factor Y2	3.06
Bearing Weight	6.4 kg
Cage Type	EM
Cage Material	Brass
Bore Taper	1/12



22316KEMW33  
SRB ASSEMBLY

**THE TIMKEN COMPANY**  
NORTH CANTON, OHIO USA

Dynamic Radial Rating (Two Rows)	499000	N
Static Radial Rating	534000	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**