


**The Timken Company**

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**Part Number 22309EJW33W21F, Spherical Roller Bearings - Steel 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**

<b>UPC Code</b>	087796233874
<b>Design Unit</b>	Metric
<b>d - Bore</b>	45 mm
<b>Lubrication Type</b>	Standard Grease
<b>Cage Type</b>	EJ
<b>Cage Material</b>	Steel
<b>Superseded Part</b>	22309CJW33W21F

**Factors**


<b>e - ISO Factor<sup>1</sup></b>	0.36
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<b>Y0 - ISO Factor<sup>2</sup></b>	1.86
<b>Y1 - ISO Factor<sup>3</sup></b>	1.9
<b>Y2 - ISO Factor<sup>4</sup></b>	2.83
<b>Reference Thermal Speed Rating (Grease)</b>	5100 rpm
<b>Reference Thermal Speed Rating (Oil)<sup>5</sup></b>	6100 rpm
<b>Cg - Geometry Factor<sup>6</sup></b>	0.049

## Dimensions

<b>D - Outer Diameter</b>	100 mm 3.937 in
<b>B' - Inner Ring Width</b>	36 mm 1.4173 in
<b>B - Outer Ring Width</b>	36 mm 1.4173 in

## Abutment and Fillet Dimensions

<b>R - Inner Ring "To Clear" Radius<sup>7</sup></b>	1.5 mm 0.060 in
<b>r - Outer Ring "To Clear" Radius<sup>8</sup></b>	1.5 mm 0.06 in
<b>da - Inner Ring Backing Diameter</b>	58.000 mm 2.300 in
<b>Da - Outer Ring Backing Diameter</b>	90.000 mm 3.500 in

## Basic Load Ratings

<b>C0 - Static Radial Rating</b>	190000 N 42700 lbf
<b>C1(2) - Dynamic Radial Rating (Two-Rows)</b>	182000 N 40800 lbf

<sup>1</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>2</sup> These factors apply for both inch and metric calculations. See engineering

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

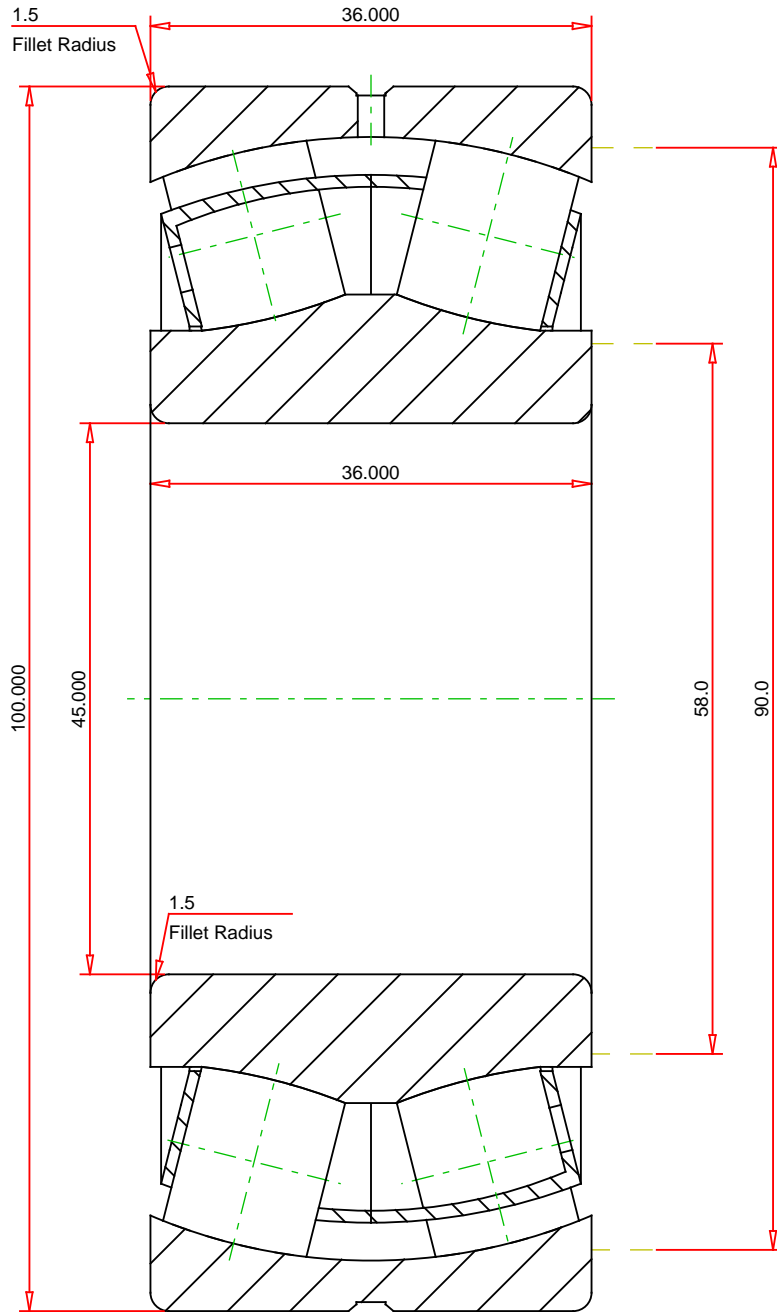
<sup>4</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>5</sup> See thermal speed ratings in the engineering section.

<sup>6</sup> Geometry constant for Lubrication Life Adjustment Factor  $a_3$ .

<sup>7</sup> Maximum housing fillet radius that bearing corners will clear.

<sup>8</sup> These maximum fillet radii will be cleared by the bearing corners.



METRIC UNITS

Number of Rollers Per Row	14
ISO Factor e	0.36
ISO Factor Y0	1.86
ISO Factor Y1	1.90
ISO Factor Y2	2.83
Bearing Weight	kg
Cage Type	EJ
Cage Material	Steel

**TIMKEN**®

22309EJW33W21F  
SRB ASSEMBLY

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

Dynamic Radial Rating (Two Rows)	182000	N
Static Radial Rating	190000	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**