

# Marino\WARE® Product Submittal Data

**PRODUCT NAME:** 1400JR300-97

**05.42.00 Cold-Formed Metal Joist Framing**

**MARINO\WARE PART #** 140RX12

## PROPERTIES:

<b>A. Web (in)</b>	14"	<b>Yield Strength F<sub>y</sub> (KSI)</b>	50
<b>B. Flange (in)</b>	3"	<b>Tensile Strength F<sub>u</sub> (KSI)</b>	65
<b>C. Lip (in)</b>	0.75"	<b>Design Thickness (in)</b>	0.1017
<b>Mils</b>	97	<b>Minimum Thickness (in)</b>	0.0966
<b>Available Finish</b>	G60, G90	<b>Gauge</b>	12

## SECTION PROPERTIES

### GROSS SECTION PROPERTIES

Weight of Member: (lb/ft)	5.70
Cross Sectional Area: <b>A</b> (in <sup>2</sup> )	1.25
Moment of Inertia: <b>I<sub>x</sub></b> (in <sup>4</sup> )	50.9
Section Modulus: <b>S<sub>x</sub></b> (in <sup>3</sup> )	7.27
Radius of Gyration: <b>R<sub>x</sub></b> (in)	6.37
Gross Moment of Inertia: <b>I<sub>y</sub></b> (in <sup>4</sup> )	1.45
Gross Radius of Gyration: <b>R<sub>y</sub></b> (in)	1.08

### EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: <b>I<sub>xe</sub></b> (in <sup>4</sup> )	50.9
Section Modulus: <b>S<sub>xe</sub></b> (in <sup>3</sup> )	6.79
Allowable Bending Moment: <b>M<sub>a</sub></b> (in-k)	203.0
Allowable Shear Force: <b>V<sub>a</sub></b> (K)	5.55

### TORSIONAL SECTION PROPERTIES

St. Venant Torsional Constant: <b>J<sub>x1000</sub></b> (in <sup>4</sup> )	4.32
Torsional Warping Constant: <b>C<sub>w</sub></b> (in <sup>6</sup> )	69.6
Radius of Gyration on the Centroid Principal axis: <b>R<sub>o</sub></b> (in)	6.83

## CODES & STANDARDS

- Framing meets ASTM A 1003, A 653, & C 955
- Tested to ASTM E 119, & E 492/E 989
- UL Fire Test Data: G563, G577, L567, & L580
- Intertek (Warnock Hersey) Fire Data: WHI 3099463, WHI 3101528

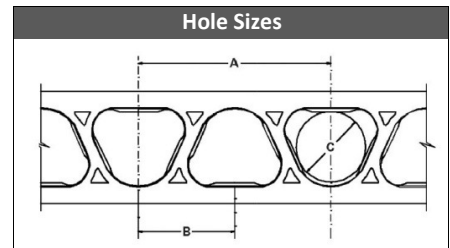
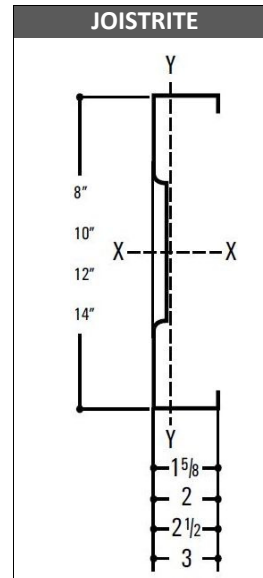
## GREEN INFO LEED® v3

Available LEED® points in the following categories:

- MR Credit 2 - Construction Waste Management (1-2 points)
- MR Credit 4 - Recycled Content (1-2 points)
- MR Credit 5 - Regional Materials (1-2 points)

- Total Recycled Content: 34.9%
- Post Consumer Content: 24.3%
- Pre Consumer (Post Industrial) Content: 9.4%

- Also available in 9-1/4" and 11-1/4" Depths



Section	A (in)	B (in)	C
8"	14	7	5.5
10"	28	14	7.2
12"	35	17.5	9.2
14"	35	17.5	9.2



For more information, please contact Marino\WARE Technical Services at 866-545-1545.

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# Marino\WARE® Product Submittal Data

SPAN TABLES SECTION ID	15 psf Dead Load plus 40 psf Live Load						40 psf Dead Load plus 40 psf Live Load						15 psf Dead Load plus 60 psf Live Load					
	L/360			L/480			L/360			L/480			L/360			L/480		
	Single Span Joist Spacing (in.) o.c.			Single Span Joist Spacing (in.) o.c.			Single Span Joist Spacing (in.) o.c.			Single Span Joist Spacing (in.) o.c.			Single Span Joist Spacing (in.) o.c.			Single Span Joist Spacing (in.) o.c.		
	12	16	24	12	16	24	12	16	24	12	16	24	12	16	24	12	16	24
800JR200-43	17.0	14.8	12.0	16.1	14.6	12.0	14.1	12.3	10.0	14.1	12.3	10.0	14.6	12.6	10.3	14.0	12.6	10.3
800JR200-54	19.0	17.3	15.1	17.3	15.7	13.7	17.3	15.7	13.7	17.3	15.7	13.7	16.6	15.1	13.2	15.1	13.7	12.0
800JR200-68	20.4	18.5	16.2	18.5	16.8	14.7	18.5	16.8	14.7	18.5	16.8	14.7	17.8	16.2	14.1	16.2	14.7	12.8
800JR200-97	22.6	20.5	17.9	20.6	18.7	16.3	20.6	18.7	16.3	20.6	18.7	16.3	19.7	17.9	15.7	17.9	16.3	14.2
800JR250-43	17.7	15.3	12.5	16.7	15.2	12.5	14.7	12.7	10.4	14.7	12.7	10.4	15.1	13.1	10.7	14.6	13.1	10.7
800JR250-54	19.8	18.0	14.3	18.0	16.3	14.3	18.0	16.3	13.9	18.0	16.3	13.9	17.3	15.7	13.7	15.7	14.3	12.5
800JR250-68	21.3	19.4	15.4	19.4	17.6	15.4	19.4	17.6	15.4	19.4	17.6	15.4	18.6	16.9	14.8	16.9	15.4	13.4
800JR250-97	23.7	21.5	17.1	21.5	19.5	17.1	21.5	19.6	17.1	21.5	19.6	17.1	20.7	18.8	16.4	18.8	17.1	14.9
800JR300-43	18.1	15.7	12.8	17.2	15.6	12.8	15.0	13.0	10.5	15.0	13.0	10.5	15.5	13.4	11.0	15.0	13.4	11.0
800JR300-54	20.2	18.4	16.1	18.4	16.7	14.6	18.4	16.7	14.0	18.4	16.7	14.0	17.7	16.1	14.0	16.1	14.6	12.7
800JR300-68	21.9	19.9	17.4	19.9	18.1	15.8	19.9	18.1	15.8	19.9	18.1	15.8	19.1	17.4	15.2	17.4	15.8	13.8
800JR300-97	24.7	22.4	19.6	22.4	20.4	17.8	22.4	20.4	17.8	22.4	20.4	17.8	21.5	19.6	17.1	19.6	17.8	15.5
100JR200-54	22.4	20.3	17.8	20.3	18.5	16.2	20.4	18.5	15.7	20.4	18.5	15.7	19.6	17.8	15.5	17.8	16.2	14.1
100JR200-68	24.0	21.8	19.1	21.8	19.8	17.3	21.9	19.9	17.3	21.9	19.9	17.3	21.0	19.1	16.7	19.1	17.3	15.1
100JR200-97	26.7	24.2	21.2	24.2	22.0	19.2	24.3	22.0	19.3	24.3	22.0	19.3	23.3	21.2	18.5	21.2	19.2	16.8
100JR250-54	23.3	21.1	18.5	21.1	19.2	16.8	21.2	19.2	15.9	21.2	19.2	15.9	20.3	18.5	16.1	18.5	16.8	14.7
100JR250-68	25.1	22.8	19.9	22.8	20.7	18.1	22.8	20.7	17.9	22.8	20.7	17.9	21.9	19.9	17.4	19.9	18.1	15.8
100JR250-97	27.9	25.4	22.1	25.4	23.30	20.1	25.4	23.1	20.1	25.4	23.1	20.1	24.4	22.1	19.3	22.1	20.1	17.6
100JR300-54	23.8	21.6	18.9	21.6	19.6	17.2	21.6	19.6	13.0	21.6	19.6	16.00	20.8	18.9	16.5	18.9	17.2	15.0
100JR300-68	25.8	23.4	20.5	23.4	21.3	18.6	23.4	21.3	18.2	23.4	21.3	18.2	22.5	20.5	17.9	20.5	18.6	16.2
100JR300-97	29.0	26.4	23.0	26.4	24.0	20.9	26.4	24.0	20.9	26.4	24.0	20.9	25.4	23.0	20.1	23.0	20.9	18.3
120JR200-54	25.7	23.3	20.0	23.3	21.2	18.5	23.3	20.7	13.8	23.3	20.7	13.8	22.4	20.4	14.7	20.4	18.5	14.7
120JR200-68	27.6	25.0	21.9	25.0	22.8	19.9	25.1	22.8	19.9	25.1	22.8	19.9	24.1	21.9	19.1	21.9	19.9	17.4
120JR200-97	30.6	27.8	24.3	27.8	25.3	22.1	27.8	25.3	22.1	27.8	25.3	22.1	26.8	24.3	21.2	24.3	22.1	19.3
120JR250-54	26.7	24.2	20.0	24.2	22.0	19.2	24.2	20.7	13.8	24.2	20.7	13.8	23.3	21.2	14.7	21.2	19.2	14.7
120JR250-68	28.7	26.1	22.8	26.1	23.7	20.7	26.1	23.7	20.1	26.1	23.7	20.1	25.1	22.8	19.9	22.8	20.7	18.1
120JR250-97	32.0	29.0	25.4	29.0	26.4	23.0	29.1	26.4	23.1	29.1	26.4	23.1	27.9	25.4	22.2	25.4	23.0	20.1
120JR300-54	27.2	24.7	20.0	24.7	22.5	19.6	24.7	20.7	13.8	24.7	20.7	13.8	23.8	21.6	14.7	21.6	19.6	14.7
120JR300-68	29.5	26.8	23.4	26.8	24.3	21.3	26.8	24.3	20.3	26.8	24.3	20.3	25.7	23.4	20.4	23.4	21.3	18.6
120JR300-97	33.2	30.2	26.3	30.2	27.4	23.9	30.2	27.4	24.0	30.2	27.4	24.0	29.0	26.3	23.0	26.3	23.9	20.9
140JR200-68	31.9	29.0	25.3	29.0	26.3	23.0	29.0	26.3	23.0	29.0	26.3	23.0	27.9	25.3	22.1	25.3	23.0	20.1
140JR200-97	35.5	32.3	28.2	32.3	29.3	25.6	32.3	29.3	25.6	32.3	29.3	25.6	31.0	28.2	24.6	28.2	25.6	22.4
140JR250-68	33.1	30.1	26.3	30.1	27.3	23.9	30.1	27.3	23.1	30.1	27.3	23.1	28.9	26.3	22.9	26.3	23.9	20.8
140JR250-97	36.9	33.5	29.3	33.5	30.4	26.6	33.5	30.5	26.6	33.5	30.5	26.6	32.2	29.3	25.6	29.3	26.6	23.2
140JR300-68	33.8	30.8	26.9	30.8	27.9	24.4	30.8	27.9	23.4	30.8	27.9	23.4	29.6	26.9	23.5	26.9	24.4	21.3
140JR300-97	38.2	34.7	30.3	34.7	31.5	27.5	34.7	31.5	27.5	27.9	31.5	27.5	33.3	30.3	26.5	30.3	27.5	24.0

Notes:

1. Applications involving multiple spans, cantilevers, concentrated loads, impact loading should be reviewed separately.
2. Web stiffeners are required at all support support and concentrated load locations.
3. Joists shall be restrained against rotation at each end and attached to track components or restrained by the installation of continuous solid blocking.
4. Minimum end bearing shall be 1-1/2".
5. Deflections and stress were calculated w/o regard to composite contribution of facing materials.
6. The compression flange of the section should be braced by the attachment of continuous diaphragm-rated sheathing or decking. Mechanical bridging shall be installed at intervals no to exceed 7' on center. Bridging shall be installed before loading the roof/floor system
7. Calculations were based on the use of the net effective structural properties on page 3 of the JoistRite Technical Guide.
8. Contact Marino\WARE for uniform load capacities of framing components not shown in these tables.
9. Full load capacity used in conjunction with WHI Report 3101528 fire rated assembly.
10. A 30% reduction in load capacity when used with UL 580 is necessary.



For more information, please contact Marino\WARE Technical Services at 866-545-1545.

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# Marino\WARE® Product Submittal Data

SPAN TABLES	40 PSF Dead Load plus 60 psf Live Load						15 psf Dead Load plus 125 psf Live Load						40 psf dead Load plus 125 psf Live Load					
	L/360			L/480			L/360			L/480			L/360			L/480		
	Single Span			Single Span			Single Span			Single Span			Single Span			Single Span		
	Joist Spacing (in.)o.c.			Joist Spacing (in.)o.c.			Joist Spacing (in.)o.c.			Joist Spacing (in.)o.c.			Joist Spacing (in.)o.c.			Joist Spacing (in.)o.c.		
SECTION ID	12	16	24	12	16	24	12	16	24	12	16	24	12	16	24	12	16	24
800JR200-43	12.7	11.0	8.4	12.7	11.0	8.4	10.7	9.0	6.0	10.7	9.0	6.0	9.8	7.6	5.1	9.8	7.6	5.1
800JR200-54	16.0	14.6	12.3	15.1	13.7	12.0	13.0	11.8	9.4	11.8	10.7	9.4	13.0	11.7	9.5	11.8	10.7	9.4
800JR200-68	17.2	15.6	13.6	16.2	14.7	12.8	13.9	12.7	10.0	12.7	11.5	10.0	13.9	12.7	10.8	12.7	11.5	10.0
800JR200-97	19.1	17.3	15.1	18.0	16.3	14.2	15.5	14.0	11.1	14.0	12.8	11.1	15.5	14.0	12.3	14.0	12.8	11.1
800JR250-43	13.1	11.4	8.4	13.1	11.4	8.4	11.1	9.0	6.0	11.1	9.0	6.0	10.2	7.6	5.1	10.2	7.6	5.1
800JR250-54	16.7	15.2	12.4	15.7	14.3	12.4	13.5	12.3	10.5	12.3	11.2	9.8	13.5	11.8	9.7	12.3	11.2	9.7
800JR250-68	18.0	16.3	14.0	16.9	15.4	13.4	14.6	13.2	11.6	13.2	12.0	10.5	14.6	13.2	10.9	13.2	12.0	10.5
800JR250-97	20.0	18.2	15.9	18.8	17.1	14.9	16.2	14.7	12.9	14.7	13.4	11.7	16.2	14.7	12.9	14.7	13.4	11.7
800JR300-43	13.4	11.6	8.4	13.4	11.6	8.4	11.3	9.0	6.0	11.3	9.0	6.0	10.2	7.6	5.1	10.2	7.6	5.1
800JR300-54	17.1	15.4	12.6	16.1	14.6	12.6	13.8	12.6	10.6	12.6	11.4	10.0	13.8	12.0	9.8	12.6	11.4	9.8
800JR300-68	18.5	16.8	14.2	17.4	15.8	13.8	15.0	13.6	11.9	13.6	12.4	10.8	15.0	13.6	11.1	13.6	12.4	10.8
800JR300-97	20.8	18.9	16.5	19.6	17.8	15.5	16.9	15.3	13.4	15.3	13.9	12.2	16.9	15.3	13.4	15.3	13.9	12.2
100JR200-54	18.9	17.2	13.3	17.8	16.2	13.3	15.3	13.9	9.5	13.9	12.6	9.5	15.3	12.1	8.1	13.9	12.1	8.1
100JR200-68	20.3	18.4	15.9	19.1	17.3	15.2	16.4	14.9	13.0	14.9	13.6	11.9	16.4	14.9	12.4	14.9	13.6	11.9
100JR200-97	22.5	20.5	17.9	21.2	19.3	16.8	18.3	16.6	14.5	16.6	15.1	13.2	18.3	16.6	14.5	16.6	15.1	13.2
100JR250-54	19.6	17.4	13.3	18.5	16.8	13.3	15.9	14.2	9.5	14.5	13.1	9.5	15.6	12.1	8.1	14.5	12.1	8.1
100JR250-68	21.2	19.2	16.0	19.9	18.1	15.8	17.2	15.6	13.5	15.6	14.2	12.4	17.2	15.3	12.5	15.6	14.2	12.4
100JR250-97	23.6	21.4	18.7	22.2	20.1	17.6	19.1	17.3	15.1	17.3	15.8	13.8	19.1	17.3	15.1	17.3	15.8	13.8
100JR300-54	20.1	17.6	13.3	18.9	17.2	13.3	16.3	14.2	9.5	14.8	13.4	9.5	15.8	12.1	8.1	14.8	12.1	8.1
100JR300-68	21.7	19.8	16.3	20.5	18.6	16.2	17.6	16.0	13.7	16.0	14.6	12.7	17.6	15.5	12.7	16.0	14.6	12.7
100JR300-97	24.5	22.3	19.4	23.1	20.9	18.3	19.9	18.0	15.8	18.0	16.4	14.3	19.9	18.0	15.8	18.0	16.4	14.3
120JR200-54	21.7	16.5	11.0	20.4	16.5	11.0	15.7	11.8	7.9	15.7	11.8	7.9	13.4	10.0	6.7	13.4	10.0	6.7
120JR200-68	23.3	21.1	17.9	21.9	19.9	17.4	18.9	17.1	15.0	17.1	15.6	13.6	18.9	17.0	13.4	17.1	15.6	13.4
120JR200-97	25.8	23.5	20.5	24.3	22.1	19.3	20.9	19.0	16.6	19.0	17.3	15.1	20.9	19.0	16.3	19.0	17.3	15.1
120JR250-54	22.0	16.5	11.0	21.2	16.5	11.0	15.7	11.8	7.9	15.7	11.8	7.9	13.4	10.0	6.7	13.4	10.0	6.7
120JR250-68	24.2	22.0	17.9	22.8	20.7	17.9	19.7	17.9	15.2	17.9	16.2	14.2	19.7	17.1	13.4	17.9	16.2	13.4
120JR250-97	27.0	24.5	21.4	25.4	23.1	20.1	21.9	19.9	17.4	19.9	18.0	15.8	21.9	19.9	17.2	19.9	18.0	15.8
120JR300-54	22.0	16.5	11.0	21.6	16.5	11.0	15.7	11.8	7.9	15.7	11.8	7.9	13.4	10.0	6.7	13.4	10.0	6.7
120JR300-68	24.9	22.3	18.2	23.4	21.3	18.2	20.2	18.3	15.4	18.3	16.6	14.5	20.0	17.3	13.4	18.3	16.6	13.4
120JR300-97	28.0	25.5	22.2	26.4	24.0	20.9	22.7	20.6	18.0	20.6	18.7	16.4	22.7	20.6	17.7	20.6	18.7	16.4
140JR200-68	26.9	24.5	18.9	25.3	23.0	18.9	21.8	19.8	13.5	19.8	18.0	13.5	21.8	17.2	11.5	19.8	17.2	11.5
140JR200-97	30.0	27.2	23.8	28.2	25.6	22.4	24.3	22.1	19.3	22.1	20.1	17.5	24.3	22.1	18.8	22.1	20.1	17.5
140JR250-68	27.9	25.3	18.9	26.3	23.9	18.9	22.6	20.3	13.5	20.6	18.7	13.5	22.6	17.2	11.5	20.6	17.2	11.5
140JR250-97	31.1	28.3	24.7	29.3	26.6	23.2	25.2	22.9	20.0	22.9	20.8	18.2	25.2	22.9	19.8	22.9	20.8	18.2
140JR300-68	28.6	25.7	18.9	26.9	24.4	18.9	23.2	20.3	13.5	21.0	19.1	13.5	22.9	17.2	11.5	21.0	17.2	11.5
140JR300-97	32.2	29.2	25.6	30.3	27.5	24.0	26.1	23.7	20.7	23.7	21.5	18.8	26.1	23.7	20.2	23.7	21.5	18.8

**Notes:**

1. Applications involving multiple spans, cantilevers, concentrated loads, impact loading should be reviewed separately.
2. Web stiffeners are required at all support and concentrated load locations.
3. Joists shall be restrained against rotation at each end and attached to track components or restrained by the installation of continuous solid blocking.
4. Minimum end bearing shall be 1-1/2".
5. Deflections and stress were calculated w/o regard to composite contribution of facing materials.
6. The compression flange of the section should be braced by the attachment of continuous diaphragm-rated sheathing or decking. Mechanical bridging shall be installed at intervals no to exceed 7' on center. Bridging shall be installed before loading the roof/floor system.
7. Calculations were based on the use of the net effective structural properties on page 3 of the JoistRite Technical Guide.
8. Contact Marino\WARE for uniform load capacities of framing components not shown in these tables.
9. Full load capacity used in conjunction with WHI Report 3101528 fire rated assembly.
10. A 30% reduction in load capacity when used with UL 580 is necessary.



For more information, please contact Marino\WARE Technical Services at 866-545-1545.

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