



Expanding Your Solutions



Sure-Span[®]

Light Gauge Steel Floor Joist System
Product Guide 2019

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The technical information supplied by this publication is intended ONLY to assist the professional architects and/or engineers in the selection or analysis of CEMCO Sure-Span® Cold-Formed Steel Floor Joist System, and does not replace the professional judgments of a qualified architect and/or engineer. Because physical properties vary from competitive products, information from this publication should be used ONLY with CEMCO stud and track sections. CEMCO assumes no liability for failure resulting from the use of its drawings, computations, or for failure resulting from the use of alternative materials, or improper application or installation. Although the data found herein are derived from the sources believed to be reliable, no warranty, express or implied is made to the adequacy, completeness, legality, reliability, or usefulness of any information.

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Introduction

Sure-Span® Steel Floor Joist System

CEMCO's Sure-Span® steel floor joist system is a patented, tested, and approved solution for commercial, mid-rise, and residential floor framing assemblies. Sure-Span floor joists are manufactured with extra-large openings (punch-outs) to allow for mechanical, electrical, and plumbing access without damaging the structural integrity of the floor framing system commonly seen with typical c-shaped joists that require cutting of the joist to accommodate these lines. Sure-Span provides long and sturdy floor spans, along with fire-resistant and sound-reducing solutions for architects, engineers, and developers.

Material Specifications for SSCJ (Joists) and SSTT (Rim-Track)

All CEMCO Sure-Span products are manufactured from hot-dipped galvanized steel meeting or exceeding the following ASTM, AISI, and UL standards.

- C955 (Structural Product)
- C1007 (Installation)
- A924/A924M (Coating)
- A653/A653M (Steel)
- A1003/A1003M (Steel)
- AISI S100-2016: Design of Cold-Formed Steel Structural Members
- UL® testing standards and UL® Certified Products and Follow-Up Service (FUS)
- UL G556, G557, G560, G565, G574, G580, G588, G595, H503, H508, P546, P561, P562
- US Patent No. 20090064611A1

LEED v4 for Building and Design Construction

- MR Prerequisite: Construction and Demolition Waste Management Planning.
- MR Credit: Construction and Demolition Waste Management.
- MR Credit: Building Product Disclosure and Optimization – Sourcing of Raw Materials, Option 2.
- MR Credit: Building Product Disclosure and Optimization – Environmental Product Declarations, Options 1 & 2.
- MR Credit: Building Product Disclosure and Optimization – Material Ingredients, Option 1.
- MR Credit: Building Life-Cycle Impact Reduction, Option 4.

California's Proposition 65 Warning

California's Safe Drinking Water and Toxic Enforcement Act of 1986 – commonly referred to as Proposition 65 ("Prop 65") (27 Cal. Code Reg. § 25600, et seq.) – has recently changed, requiring manufacturers to provide a warning based on its knowledge about the presence of one or more of the almost 900 listed chemicals which are known to the State of California to cause cancer and birth defects, or other reproductive harm. With a few exceptions, manufacturers operating in the state of California as well as those entities who distribute, import, package, and/or supply products into the State of California are now required provide a "clear and reasonable" warning to consumers that their products may contain one or more of these listed chemicals or compounds. The complete list is available at www.P65Warnings.ca.gov.

In compliance with the new requirements, we are notifying each of our customers that CEMCO products contain Nickel (metallic) and/or other chemicals listed which are known to the State of California to cause cancer and birth defects or other reproductive harm. Safety data sheets from our major suppliers are available from CEMCO on our website at www.cemcosteel.com.



CEMCO assumes no liability for failure resulting from the use of its drawings, or for failure resulting from the use of alternate materials, or improper application or installation. This drawing is supplied solely to assist in the selection and application of CEMCO products. This drawing is generic in nature and should not be used in design or construction without an independent evaluation by a qualified Architect or Engineer of Record.

Product Information for SSCJ (Joists) and SSTT (Rim Track)

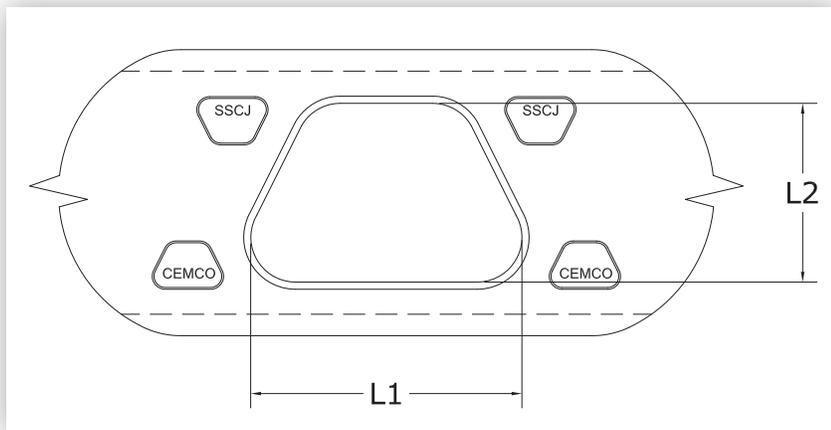
- **Thicknesses ranging from 43 mils (18 ga.) to 97 mils (12 ga.)**
- **SSCJ Joists are available in the following configurations:**
 - 7-1/4", 8", 9-1/4", & 11-1/4" depths with 1-3/4" flanges
 - 10", 12", & 14" depths with 2" flanges
 - First punch-out is located at 18" from one end, and 48" on-center after that
- **SSTT Rim Tracks are available in the following configurations:**
 - 7-1/4", 8", 9-1/4", 10", 11-1/4", 12", & 14" web depths with 2" legs
 - Pre-Spaced/Pre-Attached clips at 12", 16", or 24" on-center
 - All Rim Tracks available in either 16' or 32' lengths
- **Grades of Steel**
 - F_y (min. yield strength) = 33 KSI
 - > 43 mils (18 ga.)
 - ~ SSCJ Joists and SSTT Rim Tracks
 - ~ SB Sure-Bridge clips
 - ~ Corner/Utility clips
 - F_y (min. yield strength) = 50 KSI
 - > 54 mils (16 ga.)
 - ~ SSCJ Joists and SSTT Rim Tracks
 - ~ Corner/Utility clips
 - > 68 mils (14 ga.)
 - ~ SSCJ Joists and SSTT Rim Tracks
 - ~ Corner/Utility clips
 - > 97 mils (12 ga.)
 - ~ SSCJ Joists and SSTT Rim Tracks
 - ~ Corner/Utility clips

Steel Thickness

| Minimum Base Metal Thickness (mil) | Design Thickness (in.) ¹ | Minimum Thickness (in.) ^{1,2} | Color Code |
|------------------------------------|-------------------------------------|--|------------|
| 43 | 0.0451" (1.15 mm) | 0.0428" (1.09 mm) | Yellow |
| 54 | 0.0566" (1.44 mm) | 0.0538" (1.37 mm) | Green |
| 68 | 0.0713" (1.81 mm) | 0.0677" (1.72 mm) | Orange |
| 97 | 0.1017" (2.58 mm) | 0.0966" (2.45 mm) | Red |

1) Uncoated steel thickness. Thickness is for carbon sheet steel.

2) Minimum thickness represents 95% of the design thickness and is the minimum acceptable thickness delivered to the job site, based on Section A4.3 of the AISI S100-2012.

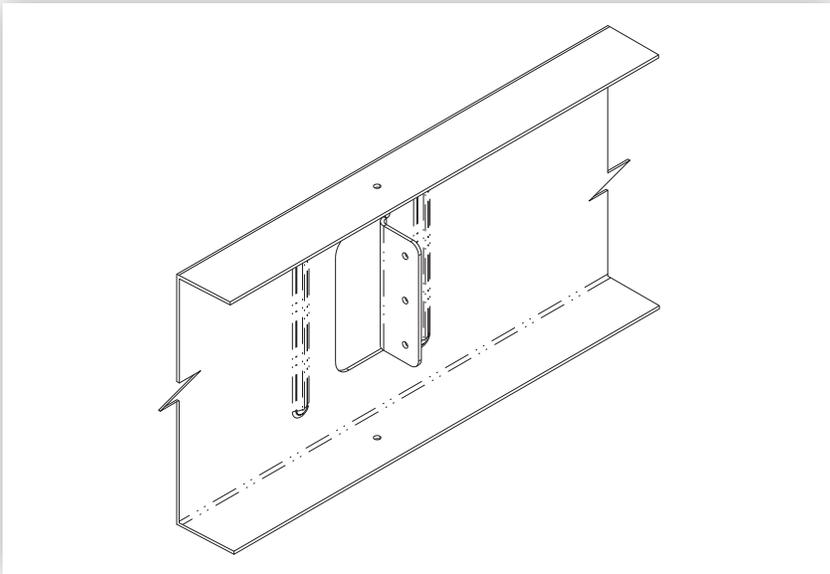


Detail of SSCJ Punch-Outs

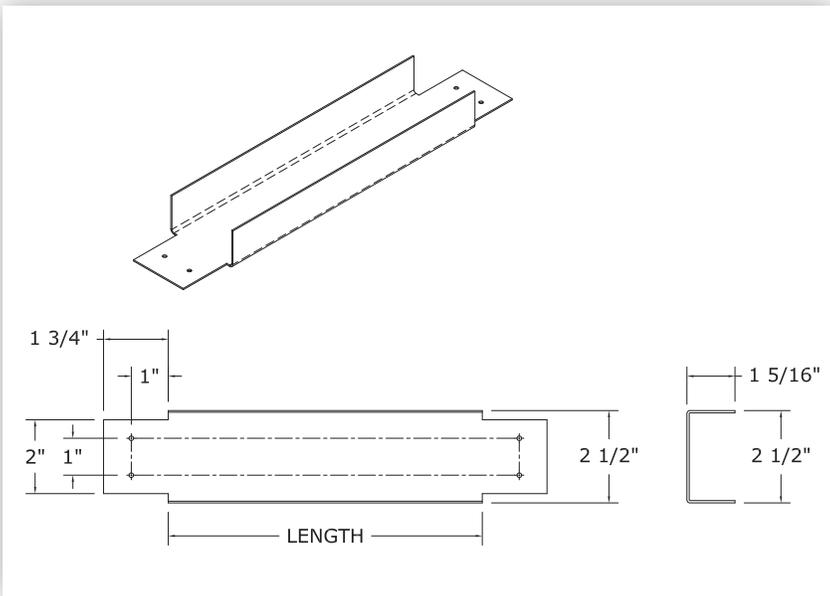
SSCJ Punch-Out Dimensions

| Section | L1 (in.) | L2 (in.) | Spacing Between Punch-Outs (in.) |
|------------------|----------|----------|----------------------------------|
| 725SSCJ175 - XX | 7-5/32 | 4-1/4 | 48 |
| 800SSCJ175 - XX | 7-5/32 | 4-1/4 | 48 |
| 925SSCJ175 - XX | 9-15/32 | 6-1/4 | 48 |
| 1000SSCJ200 - XX | 9-15/32 | 6-1/4 | 48 |
| 1125SSCJ175 - XX | 9-15/32 | 6-1/4 | 48 |
| 1200SSCJ200 - XX | 9-1/32 | 8 | 48 |
| 1400SSCJ200 - XX | 11-1/16 | 10 | 48 |

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Detail of SSTT



Detail of Sure Bridging

Sure-Bridging for 1-3/4" Flange Joists

| Thickness (mils) | Part No. | Length | Joist Spacing |
|------------------|-----------|--------|---------------|
| 43 | 175SB4312 | 10" | 12" O.C. |
| | 175SB4316 | 14" | 16" O.C. |
| | 175SB4324 | 22" | 24" O.C. |

Sure-Bridging for 2" Flange Joists

| Thickness (mils) | Part No. | Length | Joist Spacing |
|------------------|-----------|---------|---------------|
| 43 | 200SB4312 | 9-3/4" | 12" O.C. |
| | 200SB4316 | 13-3/4" | 16" O.C. |
| | 200SB4324 | 21-3/4" | 24" O.C. |

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Definitions of Structural Properties Notations

| Symbol | Definition |
|------------|---|
| I_x | Full Moment of Inertia about the X axis (strong axis) |
| I_y | Full Moment of Inertia about the Y axis (weak axis) |
| S_x | Full Section Modulus about the X axis |
| S_y | Full Section Modulus about the Y axis |
| R_x, R_y | Radius of Gyration about the X and Y axis, respectively |
| X_o | Distance between Centroid and Shear Center |
| J | St. Venant's Torsion Constant |

| Symbol | Definition |
|-----------|---|
| C_w | Torsion Warping Constant |
| R_o | Polar Radius of Gyration about the Shear Center |
| β | Torsional-Flexural Constant |
| A_N | Cross-sectional Area at Punch-out |
| I_{xN} | Moment of Inertia at Punch-out about the X axis |
| M_{ALL} | Allowable Moment for fully braced joist |
| V_{ALL} | Allowable shear |

Notes

- The minimum yield strength, F_y , is 33 ksi for 18 gauge and 50 ksi for 16, 14, and 12 gauge steel.
- Punch-out Depth = 4.25" (web depth 7.25", 8")
 = 6.25" (web depth 9.25", 10" and 11.25")
 = 8" (web depth 12")
 = 10" (web depth 14")
- For Allowable Stress Design (ASD) method, use a factor of safety of 1.67 for both moment and shear capacities. These factors of safety are as per AISI S100-2016.
- Allowable moment, M_{ALL} , and shear, V_{ALL} , capacities for joists are obtained by applying factors of safety to the least nominal capacities (between full and net capacities).



| Section Designation | Dim. | | Gross Section Properties | | | | | | | | | | | Net Section Properties (at Punch-Outs) | | | | | Allowable Capacities | | | | Effective Section Properties | | | |
|---------------------|-----------------------|---------------------------|--------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|----------------------|----------------------|----------------------|------------------------------|------------------------------------|--|-------|------------------------------------|-------------------------------------|-----------------------|-------------------------------------|-----------------------|-------------------------|---------------------|------------------------------|---------------------|-------------------------------------|--------------------------------------|
| | Flange Width, w (in.) | Design Thickness, t (in.) | Weight (plf) | Area (in. ²) | I _x (in. ⁴) | I _y (in. ⁴) | S _x (in. ³) | S _y (in. ³) | R _x (in.) | R _y (in.) | Torsional Properties | | | | | A _n (in. ²) | I _{xn} (in. ⁴) | r _{xn} (in.) | I _{yn} (in. ⁴) | r _{yn} (in.) | M _{ap} (k-in.) | V _{ap} (k) | M _{af} (k-in.) | V _{af} (k) | S _{xe} (in. ³) | S _{xen} (in. ³) |
| | | | | | | | | | | | X _o (in.) | J x 1000 (in. ⁴) | C _w (in. ⁶) | R _o (in.) | β | | | | | | | | | | | |
| 7.25" Depth | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 725SSCJ175-43 | 1.75 | 0.0451 | 1.826 | 0.537 | 3.998 | 0.225 | 1.103 | 0.175 | 2.728 | 0.647 | -1.204 | 0.364 | 2.468 | 3.051 | 0.844 | 0.376 | 3.878 | 3.213 | 0.160 | 0.653 | 17.426 | 0.900 | 19.679 | 1.163 | 0.996 | 1.056 |
| 725SSCJ175-54 | 1.75 | 0.0566 | 2.276 | 0.700 | 4.951 | 0.275 | 1.366 | 0.214 | 2.719 | 0.641 | -1.190 | 0.715 | 3.003 | 3.037 | 0.846 | 0.466 | 4.796 | 3.209 | 0.195 | 0.648 | 32.771 | 1.637 | 37.575 | 2.316 | 1.255 | 1.311 |
| 725SSCJ175-68 | 1.75 | 0.0713 | 2.841 | 0.836 | 6.124 | 0.334 | 1.689 | 0.260 | 2.707 | 0.633 | -1.173 | 1.416 | 3.626 | 3.017 | 0.849 | 0.577 | 5.920 | 3.203 | 0.236 | 0.64 | 52.100 | 1.931 | 48.844 | 4.679 | 1.631 | 1.633 |
| 8.00" Depth | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 800SSCJ175-43 | 1.75 | 0.0451 | 1.941 | 0.571 | 5.069 | 0.231 | 1.267 | 0.176 | 2.980 | 0.636 | -1.149 | 0.387 | 3.047 | 3.256 | 0.875 | 0.410 | 4.950 | 3.471 | 0.175 | 0.654 | 24.153 | 1.319 | 21.978 | 1.051 | 1.112 | 1.222 |
| 800SSCJ175-54 | 1.75 | 0.0566 | 2.421 | 0.712 | 6.282 | 0.282 | 1.571 | 0.215 | 2.970 | 0.630 | -1.136 | 0.760 | 3.710 | 3.242 | 0.877 | 0.508 | 6.127 | 3.472 | 0.214 | 0.648 | 45.750 | 2.433 | 42.027 | 2.091 | 1.404 | 1.528 |
| 800SSCJ175-68 | 1.75 | 0.0713 | 3.023 | 0.889 | 7.777 | 0.344 | 1.944 | 0.262 | 2.958 | 0.622 | -1.118 | 1.507 | 4.484 | 3.222 | 0.880 | 0.631 | 7.573 | 3.466 | 0.259 | 0.641 | 63.683 | 2.934 | 54.937 | 4.220 | 1.835 | 1.893 |
| 9.25" Depth | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 925SSCJ175-54 | 1.75 | 0.0566 | 2.661 | 0.783 | 8.951 | 0.293 | 1.935 | 0.217 | 3.382 | 0.612 | -1.056 | 0.836 | 5.090 | 3.595 | 0.914 | 0.466 | 8.218 | 4.200 | 0.195 | 0.648 | 43.982 | 1.637 | 49.446 | 1.799 | 1.652 | 1.759 |
| 925SSCJ175-68 | 1.75 | 0.0713 | 3.326 | 0.978 | 11.095 | 0.357 | 2.399 | 0.264 | 3.368 | 0.604 | -1.039 | 1.658 | 6.159 | 3.576 | 0.916 | 0.577 | 10.153 | 4.195 | 0.236 | 0.64 | 69.243 | 1.931 | 65.091 | 3.627 | 2.174 | 2.195 |
| 925SSCJ175-97 | 1.75 | 0.1017 | 4.666 | 1.372 | 15.297 | 0.472 | 3.308 | 0.350 | 3.339 | 0.587 | -1.004 | 4.731 | 8.056 | 3.535 | 0.919 | 0.794 | 13.895 | 4.183 | 0.309 | 0.624 | 105.47 | 2.368 | 97.422 | 10.708 | 3.254 | 3.004 |
| 10.00" Depth | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1000SSCJ200-54 | 2.00 | 0.0566 | 2.902 | 0.853 | 11.542 | 0.411 | 2.308 | 0.266 | 3.677 | 0.694 | -1.196 | 0.911 | 8.211 | 3.929 | 0.907 | 0.537 | 10.809 | 4.488 | 0.294 | 0.74 | 62.946 | 2.433 | 56.383 | 1.660 | 1.883 | 2.102 |
| 1000SSCJ200-68 | 2.00 | 0.0713 | 3.629 | 1.067 | 14.327 | 0.502 | 2.866 | 0.324 | 3.664 | 0.686 | -1.178 | 1.809 | 9.973 | 3.909 | 0.909 | 0.666 | 13.385 | 4.483 | 0.357 | 0.733 | 88.863 | 2.934 | 76.371 | 3.345 | 2.551 | 2.677 |
| 1000SSCJ200-97 | 2.00 | 0.1017 | 5.098 | 1.500 | 19.813 | 0.669 | 3.963 | 0.433 | 3.635 | 0.668 | -1.142 | 5.170 | 13.154 | 3.868 | 0.913 | 0.921 | 18.411 | 4.471 | 0.473 | 0.716 | 127.030 | 3.798 | 114.860 | 9.862 | 3.836 | 3.682 |
| 11.25" Depth | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1125SSCJ175-54 | 1.75 | 0.0566 | 3.046 | 0.896 | 14.516 | 0.307 | 2.581 | 0.220 | 4.025 | 0.585 | -0.952 | 0.957 | 7.842 | 4.177 | 0.948 | 0.579 | 13.783 | 4.879 | 0.238 | 0.641 | 67.472 | 3.760 | 61.281 | 1.471 | 2.047 | 2.254 |
| 1125SSCJ175-68 | 1.75 | 0.0713 | 3.811 | 1.121 | 18.023 | 0.373 | 3.204 | 0.268 | 4.010 | 0.577 | -0.935 | 1.900 | 9.500 | 4.158 | 0.949 | 0.720 | 17.081 | 4.872 | 0.289 | 0.634 | 87.802 | 4.605 | 81.336 | 2.961 | 2.717 | 2.933 |
| 1125SSCJ175-97 | 1.75 | 0.1017 | 5.358 | 1.576 | 24.935 | 0.494 | 4.433 | 0.355 | 3.978 | 0.560 | -0.902 | 5.433 | 12.459 | 4.117 | 0.952 | 0.997 | 23.533 | 4.857 | 0.381 | 0.618 | 144.880 | 6.181 | 124.190 | 8.714 | 4.148 | 4.127 |
| 12.00" Depth | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1200SSCJ200-54 | 2.00 | 0.0566 | 3.287 | 0.967 | 18.062 | 0.429 | 3.010 | 0.269 | 4.323 | 0.666 | -1.087 | 1.032 | 12.315 | 4.507 | 0.942 | 0.551 | 16.312 | 5.442 | 0.301 | 0.74 | 78.565 | 2.698 | 57.295 | 1.102 | 2.292 | 2.624 |
| 1200SSCJ200-68 | 2.00 | 0.0713 | 4.114 | 1.210 | 22.454 | 0.524 | 3.742 | 0.328 | 4.308 | 0.658 | -1.070 | 2.050 | 14.973 | 4.487 | 0.943 | 0.684 | 20.215 | 5.437 | 0.366 | 0.732 | 111.840 | 3.268 | 93.622 | 2.770 | 3.127 | 3.369 |
| 1200SSCJ200-97 | 2.00 | 0.1017 | 5.790 | 1.703 | 31.140 | 0.699 | 5.190 | 0.438 | 4.276 | 0.641 | -1.036 | 5.871 | 19.795 | 4.446 | 0.946 | 0.947 | 27.854 | 5.425 | 0.485 | 0.716 | 160.150 | 4.274 | 143.110 | 8.145 | 4.78 | 4.642 |
| 14.00" Depth | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1400SSCJ200-68 | 2.00 | 0.0713 | 4.600 | 1.353 | 32.997 | 0.541 | 4.714 | 0.331 | 4.939 | 0.632 | -0.981 | 2.292 | 21.157 | 5.075 | 0.963 | 0.684 | 28.282 | 6.430 | 0.366 | 0.732 | 134.120 | 3.268 | 110.840 | 2.364 | 3.702 | 4.040 |
| 1400SSCJ200-97 | 2.00 | 0.1017 | 6.481 | 1.906 | 45.872 | 0.721 | 6.553 | 0.442 | 4.905 | 0.615 | -0.948 | 6.572 | 28.014 | 5.034 | 0.965 | 0.947 | 38.999 | 6.419 | 0.485 | 0.719 | 192.200 | 4.274 | 171.410 | 6.938 | 5.725 | 5.571 |

Notations

- I_x Full Moment of Inertia about the X axis
- I_y Full Moment of Inertia about the Y axis
- S_x Full Section Modulus about the X axis
- S_y Full Section Modulus about the Y axis
- R_x, R_y Radius of Gyration about the X and Y axis, respectively
- X_o Distance between Centroid and Shear Center
- J St. Venant's Torsion Constant
- C_w Torsional Warping Constant
- R_o Polar Radius of Gyration about the Shear Center
- β Torsional-Flexural Constant
- A_n Net Area at Punch-out
- I_{xn}, I_{yn} Moment of Inertia at Punch-out about the X axis
- r_{xn}, r_{yn} Net Section Radius of Gyration about the X and Y axes, respectively
- M_{ap} Fully-braced Allowable Moment at Punch-out
- V_{ap} Allowable Shear at Punch-out
- M_{af} Fully-braced Allowable Moment at Full Section
- V_{af} Allowable Shear at Full Section
- S_{xe} Effective Section Modulus about the X axis at Full Section
- S_{xen} Effective Section Modulus about the X axis at Net Section

Notes

1. The yield strength, F_y, is 33 ksi for 18 gauge and 50 ksi for 16, 14, and 12 gauge steel.
2. Tabulated weight values based on 4'-0" o.c. punch-out progression.
3. Punch-out Depth = 4.25" (web depth 7.25" and 8")
 6.25" (web depth 9.25", 10", and 11.25")
 8.00" (web depth 12")
 10.00" (web depth 14")
4. For Allowable Stress Design (ASD) method, factors of safety of 1.67 and 1.6 respectively, are used for moment and shear capacities as per AISI S100-2016.

| Section Designation | Dimensions | | | Gross Section Properties | | | | | | | | | | | | | Capacities | | | |
|---------------------|------------|-------|---------|--------------------------|-------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|----------------------|----------------------|----------------------|------------------------------|------------------------------------|----------------------|-------|-------------------------|---------------------|-------------------------|---------------------|
| | H (in.) | Gauge | t (in.) | Weight (plf) | Area (in ²) | I _x (in. ⁴) | I _y (in. ⁴) | S _x (in. ³) | S _y (in. ³) | R _x (in.) | R _y (in.) | Torsional Properties | | | | | M _{at} (k-in.) | V _{at} (k) | M _{af} (k-in.) | V _{af} (k) |
| | | | | | | | | | | | | X _o (in.) | J x 1000 (in. ⁴) | C _w (in. ⁶) | R _o (in.) | β | | | | |
| 7.25" Depth | | | | | | | | | | | | | | | | | | | | |
| 725SST200-43 | 7.340 | 18 | 0.0451 | 1.636 | 0.481 | 3.484 | 0.117 | 0.949 | 0.388 | 2.691 | 0.494 | -0.793 | 0.326 | 1.139 | 2.848 | 0.922 | 11.086 | 0.638 | 12.125 | 1.149 |
| 725SST200-54 | 7.363 | 16 | 0.0566 | 2.050 | 0.603 | 4.367 | 0.146 | 1.186 | 0.476 | 2.691 | 0.492 | -0.791 | 0.644 | 1.418 | 2.848 | 0.923 | 21.318 | 0.999 | 23.330 | 2.279 |
| 725SST200-68 | 7.393 | 14 | 0.0713 | 2.576 | 0.758 | 5.490 | 0.182 | 1.485 | 0.582 | 2.692 | 0.490 | -0.787 | 1.284 | 1.765 | 2.847 | 0.923 | 31.451 | 1.569 | 34.359 | 4.584 |
| 8.00" Depth | | | | | | | | | | | | | | | | | | | | |
| 800SST200-43 | 8.090 | 18 | 0.0451 | 1.751 | 0.515 | 4.419 | 0.120 | 1.093 | 0.422 | 2.929 | 0.482 | -0.754 | 0.349 | 1.432 | 3.063 | 0.939 | 12.624 | 0.737 | 13.718 | 1.039 |
| 800SST200-54 | 8.113 | 16 | 0.0566 | 2.194 | 0.645 | 5.539 | 0.149 | 1.366 | 0.517 | 2.930 | 0.481 | -0.751 | 0.689 | 1.782 | 3.062 | 0.940 | 24.267 | 1.156 | 26.388 | 2.061 |
| 800SST200-68 | 8.143 | 14 | 0.0713 | 2.758 | 0.811 | 6.963 | 0.186 | 1.710 | 0.631 | 2.930 | 0.478 | -0.748 | 1.375 | 2.218 | 3.061 | 0.940 | 35.798 | 1.822 | 38.868 | 4.143 |
| 9.25" Depth | | | | | | | | | | | | | | | | | | | | |
| 925SST200-54 | 9.363 | 16 | 0.0566 | 2.435 | 0.716 | 7.902 | 0.153 | 1.688 | 0.584 | 3.322 | 0.463 | -0.694 | 0.765 | 2.494 | 3.425 | 0.959 | 28.935 | 1.361 | 31.290 | 1.777 |
| 925SST200-68 | 9.393 | 14 | 0.0713 | 3.061 | 0.900 | 9.932 | 0.191 | 2.115 | 0.711 | 3.321 | 0.461 | -0.691 | 1.526 | 3.104 | 3.423 | 0.959 | 42.704 | 2.149 | 46.111 | 3.570 |
| 925SST200-97 | 9.453 | 12 | 0.1017 | 4.348 | 1.279 | 14.096 | 0.266 | 2.982 | 0.947 | 3.320 | 0.456 | -0.684 | 4.409 | 4.314 | 3.420 | 0.960 | 76.736 | 4.330 | 82.570 | 10.464 |
| 10.00" Depth | | | | | | | | | | | | | | | | | | | | |
| 1000SST200-54 | 10.113 | 16 | 0.0566 | 2.676 | 0.787 | 10.301 | 0.228 | 2.037 | 0.740 | 3.618 | 0.538 | -0.820 | 0.840 | 4.300 | 3.749 | 0.952 | 31.363 | 0.921 | 34.953 | 1.641 |
| 1000SST200-68 | 10.143 | 14 | 0.0713 | 3.364 | 0.989 | 12.950 | 0.284 | 2.554 | 0.905 | 3.618 | 0.536 | -0.816 | 1.677 | 5.361 | 3.747 | 0.953 | 46.460 | 1.449 | 51.663 | 3.296 |
| 1000SST200-97 | 10.203 | 12 | 0.1017 | 4.781 | 1.406 | 18.393 | 0.397 | 3.605 | 1.217 | 3.617 | 0.531 | -0.810 | 4.848 | 7.479 | 3.744 | 0.953 | 84.119 | 2.896 | 93.086 | 9.655 |
| 11.25" Depth | | | | | | | | | | | | | | | | | | | | |
| 1125SST200-54 | 11.363 | 16 | 0.0566 | 2.820 | 0.829 | 12.870 | 0.159 | 2.265 | 0.688 | 3.939 | 0.438 | -0.619 | 0.886 | 3.913 | 4.012 | 0.976 | 34.449 | 1.115 | 38.408 | 1.456 |
| 1125SST200-68 | 11.393 | 14 | 0.0713 | 3.546 | 1.043 | 16.174 | 0.198 | 2.839 | 0.835 | 3.938 | 0.435 | -0.616 | 1.767 | 4.871 | 4.010 | 0.976 | 50.972 | 1.760 | 56.710 | 2.923 |
| 1125SST200-97 | 11.453 | 12 | 0.1017 | 5.040 | 1.482 | 22.954 | 0.275 | 4.008 | 1.105 | 3.935 | 0.431 | -0.610 | 5.111 | 6.772 | 4.005 | 0.977 | 92.082 | 3.539 | 101.970 | 8.552 |
| 12.00" Depth | | | | | | | | | | | | | | | | | | | | |
| 1200SST200-54 | 12.113 | 16 | 0.0566 | 3.060 | 0.900 | 16.177 | 0.236 | 2.671 | 0.864 | 4.239 | 0.512 | -0.739 | 0.961 | 6.547 | 4.334 | 0.971 | 38.248 | 0.969 | 42.614 | 1.091 |
| 1200SST200-68 | 12.143 | 14 | 0.0713 | 3.849 | 1.132 | 20.336 | 0.294 | 3.350 | 1.054 | 4.238 | 0.509 | -0.736 | 1.918 | 8.164 | 4.332 | 0.971 | 56.706 | 1.914 | 63.060 | 2.737 |
| 1200SST200-97 | 12.203 | 12 | 0.1017 | 5.472 | 1.609 | 28.881 | 0.410 | 4.733 | 1.409 | 4.236 | 0.505 | -0.729 | 5.549 | 11.391 | 4.328 | 0.972 | 102.860 | 3.858 | 113.920 | 8.004 |
| 14.00" Depth | | | | | | | | | | | | | | | | | | | | |
| 1400SST200-68 | 14.143 | 14 | 0.0713 | 4.334 | 1.275 | 29.986 | 0.301 | 4.241 | 1.197 | 4.850 | 0.486 | -0.670 | 2.160 | 11.622 | 4.920 | 0.981 | 66.361 | 2.244 | 73.476 | 2.340 |
| 1400SST200-97 | 14.203 | 12 | 0.1017 | 6.164 | 1.813 | 42.587 | 0.421 | 5.997 | 1.593 | 4.847 | 0.482 | -0.664 | 6.250 | 16.219 | 4.916 | 0.982 | 120.820 | 4.539 | 133.230 | 6.835 |

Notations

| | |
|---------------------------------|---|
| I _x | Full Moment of Inertia about the X axis |
| I _y | Full Moment of Inertia about the Y axis |
| S _x | Full Section Modulus about the X axis |
| S _y | Full Section Modulus about the Y axis |
| R _x , R _y | Radius of Gyration about the X and Y axis, respectively |
| X _o | Distance between Centroid and Shear Center |
| J | St. Venant's Torsion Constant |
| C _w | Torsional Warping Constant |
| R _o | Polar Radius of Gyration about the Shear Center |
| β | Torsional-Flexural Constant |
| I _{xn} | Moment of Inertia at Slit about the X axis |
| A _n | Cross-sectional Area at Punch-Out |
| M _{at} | Fully-braced Allowable Moment at Emboss Slit |
| V _{at} | Allowable Shear at Slit |
| M _{af} | Fully-braced Allowable Moment at Full Section |
| V _{af} | Allowable Shear at Full Section |

Notes

1. The yield strength, F_y, is 33 ksi for 18 gauge and 50 ksi for 16, 14, and 12 gauge steel.
2. Tabulated weight values based on 4'-0" o.c. punch-out progression.



| Joist Designation | 10 psf Dead Load and 40 psf Live Load | | | | | | | |
|-------------------|--|---------|---------|---------|--|---------|---------|---------|
| | TL Deflection = L/240, LL Deflection = L/360 Single Span • Spacing (in.) o.c. | | | | TL Deflection = L/240, LL Deflection = L/480 Single Span • Spacing (in.) o.c. | | | |
| | 12 | 16 | 19.2 | 24 | 12 | 16 | 19.2 | 24 |
| 725SSCJ175-43 | 15' 3" | 13' 2" | 12' 1" | 10' 9" | 14' 10" | 13' 2" | 12' 1" | 10' 9" |
| 725SSCJ175-54 | 17' 7" | 15' 11" | 15' 0" | 13' 11" | 15' 11" | 14' 6" | 13' 8" | 12' 8" |
| 725SSCJ175-68 | 18' 10" | 17' 1" | 16' 1" | 14' 11" | 17' 1" | 15' 7" | 14' 8" | 13' 7" |
| 800SSCJ175-43 | 17' 1" | 14' 10" | 13' 6" | 12' 1" | 16' 1" | 14' 7" | 13' 6" | 12' 1" |
| 800SSCJ175-54 | 19' 0" | 17' 3" | 16' 3" | 15' 1" | 17' 3" | 15' 8" | 14' 9" | 13' 8" |
| 800SSCJ175-68 | 20' 5" | 18' 6" | 17' 5" | 16' 2" | 18' 6" | 16' 10" | 15' 10" | 14' 9" |
| 925SSCJ175-54 | 21' 5" | 19' 5" | 18' 3" | 17' 0" | 19' 5" | 17' 8" | 16' 7" | 15' 5" |
| 925SSCJ175-68 | 23' 0" | 20' 10" | 19' 8" | 18' 3" | 20' 10" | 19' 0" | 17' 10" | 16' 7" |
| 925SSCJ175-97 | 25' 7" | 23' 3" | 21' 10" | 20' 4" | 23' 3" | 21' 1" | 19' 10" | 18' 5" |
| 1000SSCJ200-54 | 23' 3" | 21' 2" | 19' 11" | 18' 6" | 21' 2" | 19' 3" | 18' 1" | 16' 9" |
| 1000SSCJ200-68 | 25' 0" | 22' 9" | 21' 5" | 19' 10" | 22' 9" | 20' 8" | 19' 5" | 18' 0" |
| 1000SSCJ200-97 | 27' 10" | 25' 4" | 23' 10" | 22' 1" | 25' 4" | 23' 0" | 21' 8" | 20' 1" |
| 1125SSCJ175-54 | 25' 1" | 22' 10" | 21' 6" | 19' 11" | 22' 10" | 20' 9" | 19' 6" | 18' 1" |
| 1125SSCJ175-68 | 27' 0" | 24' 6" | 23' 1" | 21' 5" | 24' 6" | 22' 3" | 21' 0" | 19' 6" |
| 1125SSCJ175-97 | 30' 1" | 27' 4" | 25' 9" | 23' 11" | 27' 4" | 24' 10" | 23' 4" | 21' 8" |
| 1200SSCJ200-54 | 27' 0" | 23' 11" | 21' 10" | 19' 7" | 24' 7" | 22' 4" | 21' 0" | 19' 6" |
| 1200SSCJ200-68 | 29' 1" | 26' 5" | 24' 10" | 23' 1" | 26' 5" | 24' 0" | 22' 7" | 20' 11" |
| 1200SSCJ200-97 | 32' 5" | 29' 5" | 27' 8" | 25' 9" | 29' 5" | 26' 9" | 25' 2" | 23' 4" |
| 1400SSCJ200-68 | 33' 0" | 30' 0" | 28' 3" | 26' 3" | 30' 0" | 27' 3" | 25' 8" | 23' 10" |
| 1400SSCJ200-97 | 36' 10" | 33' 6" | 31' 6" | 29' 3" | 33' 6" | 30' 5" | 28' 8" | 26' 7" |

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Span Table Notes

- Spans are based on continuous lateral support of compression flange.
- Clip angle must be attached to the hard side of joist.
- Spans are not valid if any portion of the Sure-Span® flared hole falls over a bearing support.
- Minimum F_y is 33 ksi for 18 gauge, 50 ksi for 16, 14, and 12 gauge steel.
- The minimum bearing joist length is 1.625'. Please consult CEMCO Design Engineer for use of smaller bearing joist length.
- Recommended bridging/blocking is 8' - 0" on-center maximum.
- Rim Track is to have continuous bearing support along the length (i.e. top of wall installation). Please consult CEMCO Design Engineer for all other support conditions.
- If an additional concentrated load is located at the end bearings of joist, web crippling must be checked separately.

- Leading edge of first hole shall be typically 10" minimum from edge of bearing support.
- TL = Total Load; LL = Live Load
- Applications involving multiple spans, cantilevers, concentrated loads, impact loading, and etc., should be investigated separately.
- Deflection and stress calculations did not consider composite action of sheathing materials.
- Values in 'Tables' are subject to change contingent upon authorized national/international evaluating agency's approval.

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| Joist Designation | 15 psf Dead Load and 125 psf Live Load | | | | | | | |
|-------------------|--|---------|---------|---------|--|---------|---------|---------|
| | TL Deflection = L/240, LL Deflection = L/360 Single Span • Spacing (in.) o.c. | | | | TL Deflection = L/240, LL Deflection = L/480 Single Span • Spacing (in.) o.c. | | | |
| | 12 | 16 | 19.2 | 24 | 12 | 16 | 19.2 | 24 |
| 725SSCJ175-43 | 9' 1" | 7' 11" | 7' 2" | 6' 5" | 9' 1" | 7' 11" | 7' 2" | 6' 5" |
| 725SSCJ175-54 | 12' 0" | 10' 10" | 9' 11" | 8' 10" | 10' 11" | 9' 11" | 9' 4" | 8' 8" |
| 725SSCJ175-68 | 12' 11" | 11' 9" | 11' 0" | 10' 3" | 11' 9" | 10' 8" | 10' 0" | 9' 4" |
| 800SSCJ175-43 | 10' 3" | 8' 10" | 8' 1" | 7' 3" | 10' 3" | 8' 10" | 8' 1" | 7' 3" |
| 800SSCJ175-54 | 13' 0" | 11' 10" | 11' 1" | 10' 0" | 11' 10" | 10' 9" | 10' 1" | 9' 4" |
| 800SSCJ175-68 | 13' 11" | 12' 8" | 11' 11" | 11' 1" | 12' 8" | 11' 6" | 10' 10" | 10' 1" |
| 925SSCJ175-54 | 14' 8" | 13' 3" | 12' 2" | 10' 10" | 13' 3" | 12' 1" | 11' 4" | 10' 7" |
| 925SSCJ175-68 | 15' 9" | 14' 3" | 13' 5" | 12' 5" | 14' 3" | 13' 0" | 12' 2" | 11' 4" |
| 925SSCJ175-97 | 17' 6" | 15' 11" | 14' 11" | 13' 11" | 15' 11" | 14' 5" | 13' 7" | 12' 7" |
| 1000SSCJ200-54 | 15' 11" | 14' 2" | 12' 11" | 11' 7" | 14' 6" | 13' 2" | 12' 4" | 11' 6" |
| 1000SSCJ200-68 | 17' 1" | 15' 7" | 14' 8" | 13' 6" | 15' 7" | 14' 1" | 13' 3" | 12' 4" |
| 1000SSCJ200-97 | 19' 1" | 17' 4" | 16' 4" | 15' 2" | 17' 4" | 15' 9" | 14' 10" | 13' 9" |
| 1125SSCJ175-54 | 17' 1" | 14' 10" | 13' 6" | 12' 1" | 15' 7" | 14' 2" | 13' 4" | 12' 1" |
| 1125SSCJ175-68 | 18' 6" | 16' 9" | 15' 7" | 13' 11" | 16' 9" | 15' 3" | 14' 4" | 13' 4" |
| 1125SSCJ175-97 | 20' 7" | 18' 8" | 17' 7" | 16' 4" | 18' 8" | 17' 0" | 16' 0" | 14' 10" |
| 1200SSCJ200-54 | 16' 6" | 14' 4" | 13' 1" | 11' 8" | 16' 6" | 14' 4" | 13' 1" | 11' 8" |
| 1200SSCJ200-68 | 19' 10" | 18' 1" | 16' 8" | 14' 11" | 18' 1" | 16' 5" | 15' 5" | 14' 4" |
| 1200SSCJ200-97 | 22' 2" | 20' 2" | 18' 11" | 17' 7" | 20' 2" | 18' 4" | 17' 3" | 16' 0" |
| 1400SSCJ200-68 | 22' 7" | 19' 11" | 18' 2" | 16' 3" | 20' 6" | 18' 8" | 17' 7" | 16' 3" |
| 1400SSCJ200-97 | 25' 3" | 22' 11" | 21' 7" | 20' 0" | 22' 11" | 20' 10" | 19' 7" | 18' 2" |

The technical information contained in these 'Tables' was prepared to assist professional engineers and architects in the selection of the Sure-Span® Floor Joist System and should only be used with the guidance and judgment of such architect or engineer.

Span Table Notes

- Spans are based on continuous lateral support of compression flange.
- Clip angle must be attached to the hard side of joist.
- Spans are not valid if any portion of the Sure-Span® flared hole falls over a bearing support.
- Minimum F_y is 33 ksi for 18 gauge, 50 ksi for 16,14, and 12 gauge steel.
- The minimum bearing joist length is 1.625'. Please consult CEMCO Design Engineer for use of smaller bearing joist length.
- Recommended bridging/blocking is 8' - 0" on-center maximum.
- Rim Track is to have continuous bearing support along the length (i.e. top of wall installation). Please consult CEMCO Design Engineer for all other support conditions.
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- Leading edge of first hole shall be typically 10" minimum from inside face of bearing support.
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- Applications involving multiple spans, cantilevers, concentrated loads, impact loading, and etc., should be investigated separately.
- Deflection and stress calculations did not consider composite action of sheathing materials.
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| Joist Designation | 15 psf Dead Load and 40 psf Live Load | | | | | | | |
|-------------------|--|---------|---------|---------|--|---------|---------|---------|
| | TL Deflection = L/240, LL Deflection = L/360 Single Span • Spacing (in.) o.c. | | | | TL Deflection = L/240, LL Deflection = L/480 Single Span • Spacing (in.) o.c. | | | |
| | 12 | 16 | 19.2 | 24 | 12 | 16 | 19.2 | 24 |
| 725SSCJ175-43 | 14' 6" | 12' 7" | 11' 6" | 10' 3" | 14' 6" | 12' 7" | 11' 6" | 10' 3" |
| 725SSCJ175-54 | 17' 7" | 15' 11" | 15' 0" | 13' 11" | 15' 11" | 14' 6" | 13' 8" | 12' 8" |
| 725SSCJ175-68 | 18' 10" | 17' 1" | 16' 1" | 14' 11" | 17' 1" | 15' 7" | 14' 8" | 13' 7" |
| 800SSCJ175-43 | 16' 4" | 14' 2" | 12' 11" | 11' 6" | 16' 1" | 14' 2" | 12' 11" | 11' 6" |
| 800SSCJ175-54 | 19' 0" | 17' 3" | 16' 3" | 15' 1" | 17' 3" | 15' 8" | 14' 9" | 13' 8" |
| 800SSCJ175-68 | 20' 5" | 18' 6" | 17' 5" | 16' 2" | 18' 6" | 16' 10" | 15' 10" | 14' 9" |
| 925SSCJ175-54 | 21' 5" | 19' 5" | 18' 3" | 17' 0" | 19' 5" | 17' 8" | 16' 7" | 15' 5" |
| 925SSCJ175-68 | 23' 0" | 20' 10" | 19' 8" | 18' 3" | 20' 10" | 19' 0" | 17' 10" | 16' 7" |
| 925SSCJ175-97 | 25' 7" | 23' 3" | 21' 10" | 20' 4" | 23' 3" | 21' 1" | 19' 10" | 18' 5" |
| 1000SSCJ200-54 | 23' 3" | 21' 2" | 19' 11" | 18' 6" | 21' 2" | 19' 3" | 18' 1" | 16' 9" |
| 1000SSCJ200-68 | 25' 0" | 22' 9" | 21' 5" | 19' 10" | 22' 9" | 20' 8" | 19' 5" | 18' 0" |
| 1000SSCJ200-97 | 27' 10" | 25' 4" | 23' 10" | 22' 1" | 25' 4" | 23' 0" | 21' 8" | 20' 1" |
| 1125SSCJ175-54 | 25' 1" | 22' 10" | 21' 6" | 19' 3" | 22' 10" | 20' 9" | 19' 6" | 18' 1" |
| 1125SSCJ175-68 | 27' 0" | 24' 6" | 23' 1" | 21' 5" | 24' 6" | 22' 3" | 21' 0" | 19' 6" |
| 1125SSCJ175-97 | 30' 1" | 27' 4" | 25' 9" | 23' 11" | 27' 4" | 24' 10" | 23' 4" | 21' 8" |
| 1200SSCJ200-54 | 26' 4" | 22' 10" | 20' 10" | 18' 8" | 24' 7" | 22' 4" | 20' 10" | 18' 8" |
| 1200SSCJ200-68 | 29' 1" | 26' 5" | 24' 10" | 23' 1" | 26' 5" | 24' 0" | 22' 7" | 20' 11" |
| 1200SSCJ200-97 | 32' 5" | 29' 5" | 27' 8" | 25' 9" | 29' 5" | 26' 9" | 25' 2" | 23' 4" |
| 1400SSCJ200-68 | 33' 0" | 30' 0" | 28' 3" | 25' 11" | 30' 0" | 27' 3" | 25' 8" | 23' 10" |
| 1400SSCJ200-97 | 36' 10" | 33' 6" | 31' 6" | 29' 3" | 33' 6" | 30' 5" | 28' 8" | 26' 7" |

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- Spans are not valid if any portion of the Sure-Span® flared hole falls over a bearing support.
- F_y is 33 ksi for 18 gauge, 50 ksi for 16, 14, and 12 gauge steel.
- The minimum bearing stud flange width is 1.625". Please consult CEMCO Design Engineer for use of smaller bearing stud flanges width.
- Recommended bridging/blocking is 8'-0" on center, maximum.
- Rim Track is to have continuous bearing support along the length (i.e. top of wall installation). Please consult CEMCO Design Engineer for all other support conditions.
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| Joist Designation | 20 psf Dead Load and 125 psf Live Load | | | | | | | |
|-------------------|--|---------|---------|---------|--|---------|---------|---------|
| | TL Deflection = L/240, LL Deflection = L/360 Single Span • Spacing (in.) o.c. | | | | TL Deflection = L/240, LL Deflection = L/480 Single Span • Spacing (in.) o.c. | | | |
| | 12 | 16 | 19.2 | 24 | 12 | 16 | 19.2 | 24 |
| 725SSCJ175-43 | 8' 11" | 7' 9" | 7' 1" | 6' 4" | 8' 11" | 7' 9" | 7' 1" | 6' 4" |
| 725SSCJ175-54 | 12' 0" | 10' 8" | 9' 8" | 8' 8" | 10' 11" | 9' 11" | 9' 4" | 8' 8" |
| 725SSCJ175-68 | 12' 11" | 11' 9" | 11' 0" | 10' 3" | 11' 9" | 10' 8" | 10' 0" | 9' 4" |
| 800SSCJ175-43 | 10' 1" | 8' 8" | 7' 11" | 7' 1" | 10' 1" | 8' 8" | 7' 11" | 7' 1" |
| 800SSCJ175-54 | 13' 0" | 11' 10" | 11' 0" | 9' 10" | 11' 10" | 10' 9" | 10' 1" | 9' 4" |
| 800SSCJ175-68 | 13' 11" | 12' 8" | 11' 11" | 11' 1" | 12' 8" | 11' 6" | 10' 10" | 10' 1" |
| 925SSCJ175-54 | 14' 8" | 13' 1" | 11' 11" | 10' 8" | 13' 3" | 12' 1" | 11' 4" | 10' 7" |
| 925SSCJ175-68 | 15' 9" | 14' 3" | 13' 5" | 12' 3" | 14' 3" | 13' 0" | 12' 2" | 11' 4" |
| 925SSCJ175-97 | 17' 6" | 15' 11" | 14' 11" | 13' 11" | 15' 11" | 14' 5" | 13' 7" | 12' 7" |
| 1000SSCJ200-54 | 15' 11" | 13' 11" | 12' 9" | 11' 5" | 14' 6" | 13' 2" | 12' 4" | 11' 5" |
| 1000SSCJ200-68 | 17' 1" | 15' 7" | 14' 8" | 13' 3" | 15' 7" | 14' 1" | 13' 3" | 12' 4" |
| 1000SSCJ200-97 | 19' 1" | 17' 4" | 16' 4" | 15' 2" | 17' 4" | 15' 9" | 14' 10" | 13' 9" |
| 1125SSCJ175-54 | 16' 9" | 14' 6" | 13' 3" | 11' 10" | 15' 7" | 14' 2" | 13' 3" | 11' 10" |
| 1125SSCJ175-68 | 18' 6" | 16' 9" | 15' 3" | 13' 8" | 16' 9" | 15' 3" | 14' 4" | 13' 4" |
| 1125SSCJ175-97 | 20' 7" | 18' 8" | 17' 7" | 16' 4" | 18' 8" | 17' 0" | 16' 0" | 14' 10" |
| 1200SSCJ200-54 | 16' 3" | 14' 1" | 12' 10" | 11' 6" | 16' 3" | 14' 1" | 12' 10" | 11' 6" |
| 1200SSCJ200-68 | 19' 10" | 18' 0" | 16' 5" | 14' 8" | 18' 1" | 16' 5" | 15' 5" | 14' 4" |
| 1200SSCJ200-97 | 22' 2" | 20' 2" | 18' 11" | 17' 7" | 20' 2" | 18' 4" | 17' 3" | 16' 0" |
| 1400SSCJ200-68 | 22' 7" | 19' 7" | 17' 10" | 16' 0" | 20' 6" | 18' 8" | 17' 7" | 16' 0" |
| 1400SSCJ200-97 | 25' 3" | 22' 11" | 21' 7" | 19' 10" | 22' 11" | 20' 10" | 19' 7" | 18' 2" |

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|-------------------|--|---------|---------|---------|--|---------|---------|---------|
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| | 12 | 16 | 19.2 | 24 | 12 | 16 | 19.2 | 24 |
| 725SSCJ175-43 | 13' 11" | 12' 1" | 11' 0" | 9' 10" | 13' 11" | 12' 1" | 11' 0" | 9' 10" |
| 725SSCJ175-54 | 17' 7" | 15' 11" | 15' 0" | 13' 6" | 15' 11" | 14' 6" | 13' 8" | 12' 8" |
| 725SSCJ175-68 | 18' 10" | 17' 1" | 16' 1" | 14' 11" | 17' 1" | 15' 7" | 14' 8" | 13' 7" |
| 800SSCJ175-43 | 15' 8" | 13' 6" | 12' 4" | 11' 1" | 15' 8" | 13' 6" | 12' 4" | 11' 1" |
| 800SSCJ175-54 | 19' 0" | 17' 3" | 16' 3" | 15' 1" | 17' 3" | 15' 8" | 14' 9" | 13' 8" |
| 800SSCJ175-68 | 20' 5" | 18' 6" | 17' 5" | 16' 2" | 18' 6" | 16' 10" | 15' 10" | 14' 9" |
| 925SSCJ175-54 | 21' 5" | 19' 5" | 18' 3" | 16' 7" | 19' 5" | 17' 8" | 16' 7" | 15' 5" |
| 925SSCJ175-68 | 23' 0" | 20' 10" | 19' 8" | 18' 3" | 20' 10" | 19' 0" | 17' 10" | 16' 7" |
| 925SSCJ175-97 | 25' 7" | 23' 3" | 21' 10" | 20' 4" | 23' 3" | 21' 1" | 19' 10" | 18' 5" |
| 1000SSCJ200-54 | 23' 3" | 21' 2" | 19' 9" | 17' 8" | 21' 2" | 19' 3" | 18' 1" | 16' 9" |
| 1000SSCJ200-68 | 25' 0" | 22' 9" | 21' 5" | 19' 10" | 22' 9" | 20' 8" | 19' 5" | 18' 0" |
| 1000SSCJ200-97 | 27' 10" | 25' 4" | 23' 10" | 22' 1" | 25' 4" | 23' 0" | 21' 8" | 20' 1" |
| 1125SSCJ175-54 | 25' 1" | 22' 7" | 20' 8" | 18' 5" | 22' 10" | 20' 9" | 19' 6" | 18' 1" |
| 1125SSCJ175-68 | 27' 0" | 24' 6" | 23' 1" | 21' 3" | 24' 6" | 22' 3" | 21' 0" | 19' 6" |
| 1125SSCJ175-97 | 30' 1" | 27' 4" | 25' 9" | 23' 11" | 27' 4" | 24' 10" | 23' 4" | 21' 8" |
| 1200SSCJ200-54 | 25' 3" | 21' 10" | 19' 11" | 17' 10" | 24' 7" | 21' 10" | 19' 11" | 17' 10" |
| 1200SSCJ200-68 | 29' 1" | 26' 5" | 24' 10" | 22' 10" | 26' 5" | 24' 0" | 22' 7" | 20' 11" |
| 1200SSCJ200-97 | 32' 5" | 29' 5" | 27' 8" | 25' 9" | 29' 5" | 26' 9" | 25' 2" | 23' 4" |
| 1400SSCJ200-68 | 33' 0" | 30' 0" | 27' 9" | 24' 10" | 30' 0" | 27' 3" | 25' 8" | 23' 10" |
| 1400SSCJ200-97 | 36' 10" | 33' 6" | 31' 6" | 29' 3" | 33' 6" | 30' 5" | 28' 8" | 26' 7" |

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| Joist Designation | 25 psf Dead Load and 125 psf Live Load | | | | | | | |
|-------------------|--|---------|---------|---------|--|---------|---------|---------|
| | TL Deflection = L/240, LL Deflection = L/360 Single Span • Spacing (in.) o.c. | | | | TL Deflection = L/240, LL Deflection = L/480 Single Span • Spacing (in.) o.c. | | | |
| | 12 | 16 | 19.2 | 24 | 12 | 16 | 19.2 | 24 |
| 725SSCJ175-43 | 8' 10" | 7' 7" | 6' 11" | 6' 3" | 8' 10" | 7' 7" | 6' 11" | 6' 3" |
| 725SSCJ175-54 | 12' 0" | 10' 5" | 9' 6" | 8' 6" | 10' 11" | 9' 11" | 9' 4" | 8' 6" |
| 725SSCJ175-68 | 12' 11" | 11' 9" | 11' 0" | 10' 3" | 11' 9" | 10' 8" | 10' 0" | 9' 4" |
| 800SSCJ175-43 | 9' 11" | 8' 7" | 7' 10" | 7' 0" | 9' 11" | 8' 7" | 7' 10" | 7' 0" |
| 800SSCJ175-54 | 13' 0" | 11' 10" | 10' 10" | 9' 8" | 11' 10" | 10' 9" | 10' 1" | 9' 4" |
| 800SSCJ175-68 | 13' 11" | 12' 8" | 11' 11" | 11' 1" | 12' 8" | 11' 6" | 10' 10" | 10' 1" |
| 925SSCJ175-54 | 14' 8" | 12' 10" | 11' 9" | 10' 6" | 13' 3" | 12' 1" | 11' 4" | 10' 6" |
| 925SSCJ175-68 | 15' 9" | 14' 3" | 13' 5" | 12' 0" | 14' 3" | 13' 0" | 12' 2" | 11' 4" |
| 925SSCJ175-97 | 17' 6" | 15' 11" | 14' 11" | 13' 11" | 15' 11" | 14' 5" | 13' 7" | 12' 7" |
| 1000SSCJ200-54 | 15' 10" | 13' 9" | 12' 6" | 11' 2" | 14' 6" | 13' 2" | 12' 4" | 11' 2" |
| 1000SSCJ200-68 | 17' 1" | 15' 7" | 14' 7" | 13' 0" | 15' 7" | 14' 1" | 13' 3" | 12' 4" |
| 1000SSCJ200-97 | 19' 1" | 17' 4" | 16' 4" | 15' 2" | 17' 4" | 15' 9" | 14' 10" | 13' 9" |
| 1125SSCJ175-54 | 16' 6" | 14' 4" | 13' 1" | 11' 8" | 15' 7" | 14' 2" | 13' 1" | 11' 8" |
| 1125SSCJ175-68 | 18' 6" | 16' 6" | 15' 0" | 13' 5" | 16' 9" | 15' 3" | 14' 4" | 13' 4" |
| 1125SSCJ175-97 | 20' 7" | 18' 8" | 17' 7" | 16' 4" | 18' 8" | 17' 0" | 16' 0" | 14' 10" |
| 1200SSCJ200-54 | 15' 11" | 13' 10" | 12' 7" | 11' 3" | 15' 11" | 13' 10" | 12' 7" | 11' 3" |
| 1200SSCJ200-68 | 19' 10" | 17' 8" | 16' 2" | 14' 5" | 18' 1" | 16' 5" | 15' 5" | 14' 4" |
| 1200SSCJ200-97 | 22' 2" | 20' 2" | 18' 11" | 17' 7" | 20' 2" | 18' 4" | 17' 3" | 16' 0" |
| 1400SSCJ200-68 | 22' 2" | 19' 3" | 17' 7" | 15' 8" | 20' 6" | 18' 8" | 17' 7" | 15' 8" |
| 1400SSCJ200-97 | 25' 3" | 22' 11" | 21' 7" | 19' 6" | 22' 11" | 20' 10" | 19' 7" | 18' 2" |

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- Applications involving multiple spans, cantilevers, concentrated loads, impact loading, and etc., should be investigated separately.
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| Joist Designation | 25 psf Dead Load and 40 psf Live Load | | | | | | | |
|-------------------|--|---------|---------|---------|--|---------|---------|---------|
| | TL Deflection = L/240, LL Deflection = L/360 Single Span • Spacing (in.) o.c. | | | | TL Deflection = L/240, LL Deflection = L/480 Single Span • Spacing (in.) o.c. | | | |
| | 12 | 16 | 19.2 | 24 | 12 | 16 | 19.2 | 24 |
| 725SSCJ175-43 | 13' 4" | 11' 7" | 10' 7" | 9' 5" | 13' 4" | 11' 7" | 10' 7" | 9' 5" |
| 725SSCJ175-54 | 17' 1" | 15' 6" | 14' 6" | 13' 0" | 15' 11" | 14' 6" | 13' 8" | 12' 8" |
| 725SSCJ175-68 | 18' 4" | 16' 8" | 15' 8" | 14' 7" | 17' 1" | 15' 7" | 14' 8" | 13' 7" |
| 800SSCJ175-43 | 15' 0" | 13' 0" | 11' 10" | 10' 7" | 15' 0" | 13' 0" | 11' 10" | 10' 7" |
| 800SSCJ175-54 | 18' 6" | 16' 10" | 15' 10" | 14' 8" | 17' 3" | 15' 8" | 14' 9" | 13' 8" |
| 800SSCJ175-68 | 19' 10" | 18' 1" | 17' 0" | 15' 9" | 18' 6" | 16' 10" | 15' 10" | 14' 9" |
| 925SSCJ175-54 | 20' 10" | 18' 11" | 17' 10" | 15' 11" | 19' 5" | 17' 8" | 16' 7" | 15' 5" |
| 925SSCJ175-68 | 22' 4" | 20' 4" | 19' 1" | 17' 9" | 20' 10" | 19' 0" | 17' 10" | 16' 7" |
| 925SSCJ175-97 | 24' 11" | 22' 7" | 21' 3" | 19' 9" | 23' 3" | 21' 1" | 19' 10" | 18' 5" |
| 1000SSCJ200-54 | 22' 8" | 20' 7" | 19' 0" | 17' 0" | 21' 2" | 19' 3" | 18' 1" | 16' 9" |
| 1000SSCJ200-68 | 24' 4" | 22' 2" | 20' 10" | 19' 4" | 22' 9" | 20' 8" | 19' 5" | 18' 0" |
| 1000SSCJ200-97 | 27' 2" | 24' 8" | 23' 2" | 21' 6" | 25' 4" | 23' 0" | 21' 8" | 20' 1" |
| 1125SSCJ175-54 | 24' 6" | 21' 9" | 19' 10" | 17' 9" | 22' 10" | 20' 9" | 19' 6" | 17' 9" |
| 1125SSCJ175-68 | 26' 4" | 23' 11" | 22' 6" | 20' 5" | 24' 6" | 22' 3" | 21' 0" | 19' 6" |
| 1125SSCJ175-97 | 29' 4" | 26' 7" | 25' 1" | 23' 3" | 27' 4" | 24' 10" | 23' 4" | 21' 8" |
| 1200SSCJ200-54 | 24' 3" | 21' 0" | 19' 2" | 17' 2" | 24' 3" | 21' 0" | 19' 2" | 17' 2" |
| 1200SSCJ200-68 | 28' 4" | 25' 8" | 24' 2" | 21' 11" | 26' 5" | 24' 0" | 22' 7" | 20' 11" |
| 1200SSCJ200-97 | 31' 7" | 28' 8" | 27' 0" | 25' 0" | 29' 5" | 26' 9" | 25' 2" | 23' 4" |
| 1400SSCJ200-68 | 32' 2" | 29' 2" | 26' 8" | 23' 10" | 30' 0" | 27' 3" | 25' 8" | 23' 10" |
| 1400SSCJ200-97 | 35' 11" | 32' 7" | 30' 8" | 28' 6" | 33' 6" | 30' 5" | 28' 8" | 26' 7" |

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- F_y is 33 ksi for 18 gauge, 50 ksi for 16, 14, and 12 gauge steel.
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| Joist Designation | 40 psf Dead Load and 125 psf Live Load | | | | | | | |
|-------------------|--|---------|---------|---------|--|---------|---------|---------|
| | TL Deflection = L/240, LL Deflection = L/360 Single Span • Spacing (in.) o.c. | | | | TL Deflection = L/240, LL Deflection = L/480 Single Span • Spacing (in.) o.c. | | | |
| | 12 | 16 | 19.2 | 24 | 12 | 16 | 19.2 | 24 |
| 725SSCJ175-43 | 8' 5" | 7' 3" | 6' 8" | 5' 11" | 8' 5" | 7' 3" | 6' 8" | 5' 11" |
| 725SSCJ175-54 | 11' 6" | 10' 0" | 9' 1" | 8' 2" | 10' 11" | 9' 11" | 9' 1" | 8' 2" |
| 725SSCJ175-68 | 12' 11" | 11' 9" | 11' 0" | 9' 11" | 11' 9" | 10' 8" | 10' 0" | 9' 4" |
| 800SSCJ175-43 | 9' 5" | 8' 2" | 7' 5" | 6' 8" | 9' 5" | 8' 2" | 7' 5" | 6' 8" |
| 800SSCJ175-54 | 13' 0" | 11' 3" | 10' 4" | 9' 3" | 11' 10" | 10' 9" | 10' 1" | 9' 3" |
| 800SSCJ175-68 | 13' 11" | 12' 8" | 11' 11" | 11' 1" | 12' 8" | 11' 6" | 10' 10" | 10' 1" |
| 925SSCJ175-54 | 14' 2" | 12' 3" | 11' 2" | 9' 12" | 13' 3" | 12' 1" | 11' 2" | 10' 0" |
| 925SSCJ175-68 | 15' 9" | 14' 1" | 12' 10" | 11' 6" | 14' 3" | 13' 0" | 12' 2" | 11' 4" |
| 925SSCJ175-97 | 17' 6" | 15' 11" | 14' 11" | 13' 11" | 15' 11" | 14' 5" | 13' 7" | 12' 7" |
| 1000SSCJ200-54 | 15' 1" | 13' 1" | 11' 11" | 10' 8" | 14' 6" | 13' 1" | 11' 11" | 10' 8" |
| 1000SSCJ200-68 | 17' 1" | 15' 3" | 13' 11" | 12' 5" | 15' 7" | 14' 1" | 13' 3" | 12' 4" |
| 1000SSCJ200-97 | 19' 1" | 17' 4" | 16' 4" | 15' 2" | 17' 4" | 15' 9" | 14' 10" | 13' 9" |
| 1125SSCJ175-54 | 15' 9" | 13' 8" | 12' 5" | 11' 2" | 15' 7" | 13' 8" | 12' 5" | 11' 2" |
| 1125SSCJ175-68 | 18' 2" | 15' 8" | 14' 4" | 12' 10" | 16' 9" | 15' 3" | 14' 4" | 12' 10" |
| 1125SSCJ175-97 | 20' 7" | 18' 8" | 17' 7" | 15' 10" | 18' 8" | 17' 0" | 16' 0" | 14' 10" |
| 1200SSCJ200-54 | 15' 3" | 13' 2" | 12' 0" | 10' 9" | 15' 3" | 13' 2" | 12' 0" | 10' 9" |
| 1200SSCJ200-68 | 19' 5" | 16' 10" | 15' 5" | 13' 9" | 18' 1" | 16' 5" | 15' 5" | 13' 9" |
| 1200SSCJ200-97 | 22' 2" | 20' 2" | 18' 11" | 17' 0" | 20' 2" | 18' 4" | 17' 3" | 16' 0" |
| 1400SSCJ200-68 | 21' 2" | 18' 4" | 16' 9" | 15' 0" | 20' 6" | 18' 4" | 16' 9" | 15' 0" |
| 1400SSCJ200-97 | 25' 3" | 22' 9" | 20' 10" | 18' 7" | 22' 11" | 20' 10" | 19' 7" | 18' 2" |

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| | 12 | 16 | 19.2 | 24 | 12 | 16 | 19.2 | 24 |
| 725SSCJ175-43 | 12' 1" | 10' 5" | 9' 6" | 8' 6" | 12' 1" | 10' 5" | 9' 6" | 8' 6" |
| 725SSCJ175-54 | 15' 11" | 14' 4" | 13' 1" | 11' 8" | 15' 11" | 14' 4" | 13' 1" | 11' 8" |
| 725SSCJ175-68 | 17' 1" | 15' 7" | 14' 8" | 13' 7" | 17' 1" | 15' 7" | 14' 8" | 13' 7" |
| 800SSCJ175-43 | 13' 6" | 11' 9" | 10' 8" | 9' 7" | 13' 6" | 11' 9" | 10' 8" | 9' 7" |
| 800SSCJ175-54 | 17' 3" | 15' 8" | 14' 9" | 13' 3" | 17' 3" | 15' 8" | 14' 9" | 13' 3" |
| 800SSCJ175-68 | 18' 6" | 16' 10" | 15' 10" | 14' 9" | 18' 6" | 16' 10" | 15' 10" | 14' 9" |
| 925SSCJ175-54 | 19' 5" | 17' 7" | 16' 1" | 14' 4" | 19' 5" | 17' 7" | 16' 1" | 14' 4" |
| 925SSCJ175-68 | 20' 10" | 19' 0" | 17' 10" | 16' 6" | 20' 10" | 19' 0" | 17' 10" | 16' 6" |
| 925SSCJ175-97 | 23' 3" | 21' 1" | 19' 10" | 18' 5" | 23' 3" | 21' 1" | 19' 10" | 18' 5" |
| 1000SSCJ200-54 | 21' 2" | 18' 9" | 17' 2" | 15' 4" | 21' 2" | 18' 9" | 17' 2" | 15' 4" |
| 1000SSCJ200-68 | 22' 9" | 20' 8" | 19' 5" | 17' 10" | 22' 9" | 20' 8" | 19' 5" | 17' 10" |
| 1000SSCJ200-97 | 25' 4" | 23' 0" | 21' 8" | 20' 1" | 25' 4" | 23' 0" | 21' 8" | 20' 1" |
| 1125SSCJ175-54 | 22' 7" | 19' 7" | 17' 10" | 16' 0" | 22' 7" | 19' 7" | 17' 10" | 16' 0" |
| 1125SSCJ175-68 | 24' 6" | 22' 3" | 20' 7" | 18' 5" | 24' 6" | 22' 3" | 20' 7" | 18' 5" |
| 1125SSCJ175-97 | 27' 4" | 24' 10" | 23' 4" | 21' 8" | 27' 4" | 24' 10" | 23' 4" | 21' 8" |
| 1200SSCJ200-54 | 21' 10" | 18' 11" | 17' 3" | 15' 5" | 21' 10" | 18' 11" | 17' 3" | 15' 5" |
| 1200SSCJ200-68 | 26' 5" | 24' 0" | 22' 1" | 19' 9" | 26' 5" | 24' 0" | 22' 1" | 19' 9" |
| 1200SSCJ200-97 | 29' 5" | 26' 9" | 25' 2" | 23' 4" | 29' 5" | 26' 9" | 25' 2" | 23' 4" |
| 1400SSCJ200-68 | 30' 0" | 26' 4" | 24' 0" | 21' 6" | 30' 0" | 26' 4" | 24' 0" | 21' 6" |
| 1400SSCJ200-97 | 33' 6" | 30' 5" | 28' 8" | 26' 7" | 33' 6" | 30' 5" | 28' 8" | 26' 7" |

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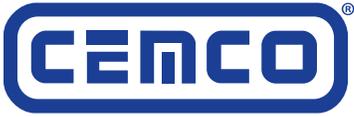
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| Section Designation | End-One-Flange, EOF (lbs.) | | | Interior-One-Flange, IOF (lbs.) | | | End-Two-Flange, ETF (lbs.) | | | Interior-Two-Flange, ITF (lbs.) | | |
|---------------------|----------------------------|------|------|---------------------------------|------|------|----------------------------|------|------|---------------------------------|------|------|
| | Bearing Length (in.) | | | Bearing Length (in.) | | | Bearing Length (in.) | | | Bearing Length (in.) | | |
| | 2 | 4 | 6 | 2 | 4 | 6 | 2 | 4 | 6 | 2 | 4 | 6 |
| 7.25" Depth | | | | | | | | | | | | |
| 725SSCJ175-43 | 314 | 406 | 476 | 635 | 761 | 859 | 196 | 216 | 232 | 504 | 608 | 689 |
| 725SSCJ175-54 | 723 | 925 | 1081 | 1473 | 1750 | 1963 | 514 | 563 | 599 | 1193 | 1426 | 1605 |
| 725SSCJ175-68 | 1096 | 1392 | 1618 | 2253 | 2650 | 2955 | 867 | 942 | 1000 | 1800 | 2129 | 2382 |
| 8.00" Depth | | | | | | | | | | | | |
| 800SSCJ175-43 | 309 | 399 | 467 | 630 | 755 | 852 | 186 | 205 | 220 | 504 | 608 | 688 |
| 800SSCJ175-54 | 712 | 911 | 1064 | 1463 | 1738 | 1950 | 493 | 539 | 575 | 1192 | 1425 | 1605 |
| 800SSCJ175-68 | 1083 | 1374 | 1598 | 3421 | 2635 | 2938 | 837 | 909 | 965 | 1798 | 2128 | 2382 |
| 9.25" Depth | | | | | | | | | | | | |
| 925SSCJ175-54 | 695 | 890 | 1040 | 1449 | 1721 | 1930 | 459 | 503 | 536 | 1192 | 1424 | 1602 |
| 925SSCJ175-68 | 1061 | 1346 | 1566 | 2221 | 2612 | 2912 | 791 | 859 | 911 | 1797 | 2127 | 2380 |
| 925SSCJ175-97 | 2022 | 2533 | 2924 | 4291 | 4973 | 5495 | 1765 | 1899 | 2000 | 3399 | 3961 | 4393 |
| 10.00" Depth | | | | | | | | | | | | |
| 1000SSCJ200-54 | 686 | 878 | 1025 | 1441 | 1711 | 1919 | 440 | 481 | 514 | 1191 | 1424 | 1602 |
| 1000SSCJ200-68 | 1049 | 1330 | 1547 | 2209 | 2599 | 2897 | 764 | 831 | 881 | 1796 | 2126 | 2378 |
| 1000SSCJ200-97 | 2003 | 2508 | 2896 | 4273 | 4952 | 5472 | 1722 | 1852 | 1951 | 3399 | 3960 | 4391 |
| 11.25" Depth | | | | | | | | | | | | |
| 1125SSCJ175-54 | 671 | 859 | 1003 | 1426 | 1695 | 1902 | 409 | 448 | 478 | 1190 | 1423 | 1601 |
| 1125SSCJ175-68 | 1028 | 1306 | 1518 | 2191 | 2578 | 2873 | 723 | 786 | 833 | 1795 | 2124 | 2377 |
| 1125SSCJ175-97 | 1973 | 2471 | 2853 | 4245 | 4919 | 5435 | 1654 | 1778 | 1873 | 3395 | 3958 | 4388 |
| 12.00" Depth | | | | | | | | | | | | |
| 1200SSCJ200-54 | 662 | 848 | 989 | 1418 | 1686 | 1891 | 392 | 429 | 458 | 1189 | 1422 | 1600 |
| 1200SSCJ200-68 | 1017 | 1291 | 1501 | 2180 | 2565 | 2860 | 699 | 760 | 806 | 1794 | 2124 | 2376 |
| 1200SSCJ200-97 | 1957 | 2449 | 2828 | 4229 | 4900 | 5415 | 1615 | 1736 | 1829 | 3394 | 3956 | 4388 |
| 14.00" Depth | | | | | | | | | | | | |
| 1400SSCJ200-68 | 988 | 1255 | 1459 | 2154 | 2534 | 2826 | 638 | 694 | 737 | 1793 | 2122 | 2373 |
| 1400SSCJ200-97 | 1913 | 2395 | 2765 | 4187 | 4851 | 5362 | 1514 | 1629 | 1716 | 3392 | 3952 | 4384 |

Notes

1. Allowable web crippling capacities are obtained by applying the factors of safety recommended on Table G5-2 of AISI S100-2016, for the various types of loading configurations
2. Calculated nominal web crippling capacities are checked against tested ultimate capacities to verify congruency.



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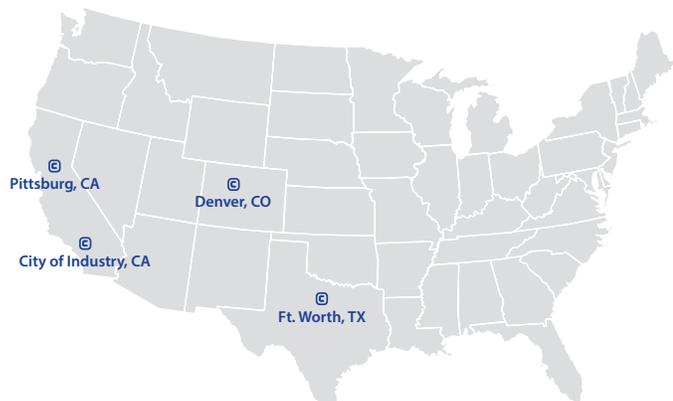
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