01 Feb 1995

Metal stud manufacturer's association catalog

Metal Stud Manufacturer's Association

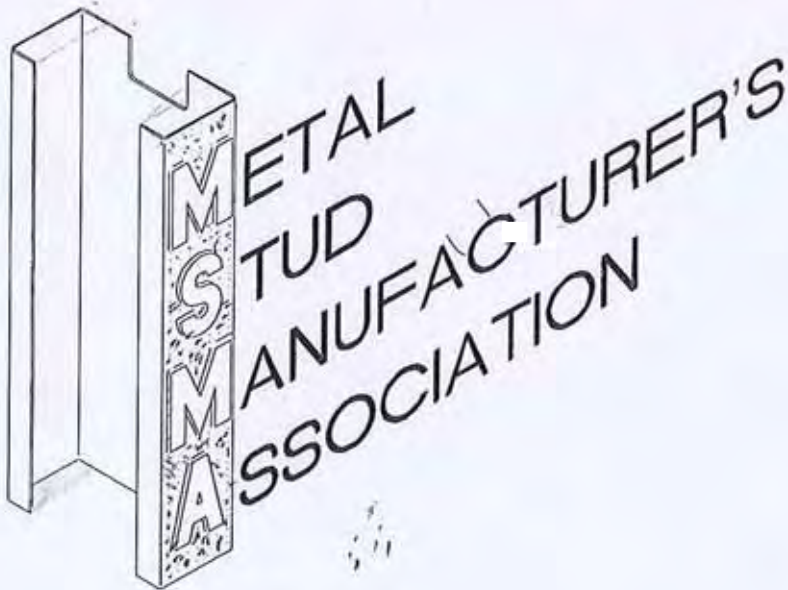Follow this and additional works at: https://scholarsmine.mst.edu/ccfss-library

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METAL STUD MANUFACTURER'S ASSOCIATION

American Studco, Inc.

Angeles Metal Systems

California Metal Systems, Inc.

Consolidated Fabricators Corp.

Design Shapes in Steel

Kirii (U.S.A.), Inc. (DBA Studco of Hawaii, Inc.)

Knorr Steel Framing Systems

Scafco Corporation

United Construction Supply

Western Metal Lath

ICBO ER No. 4943
June 1992

(Rev. February 1995)

AMERICAN STUDCO

ANGELES METAL SYSTEMS

CALIFORNIA METAL SYSTEMS, INC.

CONSOLIDATED FABRICATORS CORP.

DESIGN SHAPES IN STEEL

KIRII (U.S.A.), INC. (DBA STUDCO OF HAWAII, INC.)

KNORR STEEL FRAMING SYSTEMS

SCAFCO CORPORATION

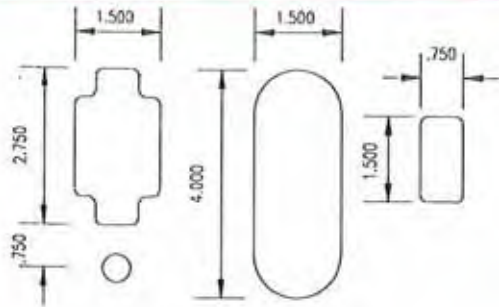UNITED CONSTRUCTION SUPPLY

WESTERN METAL LATH

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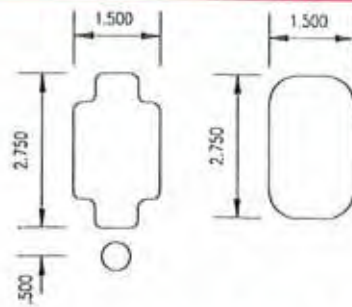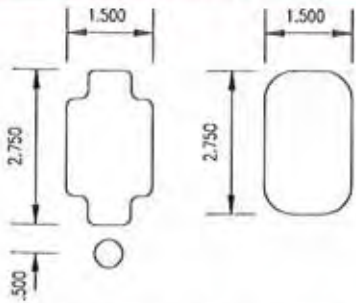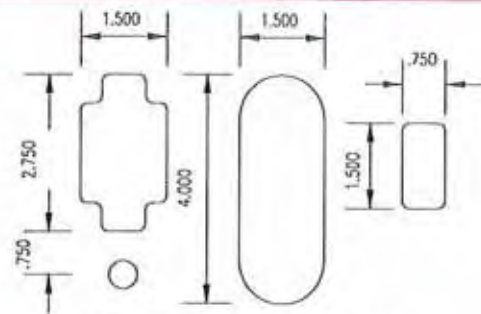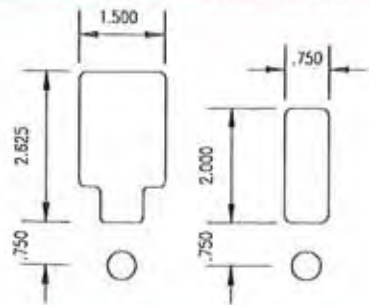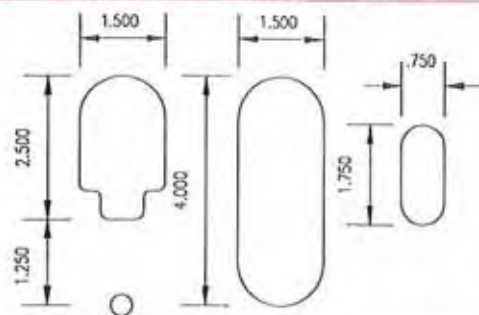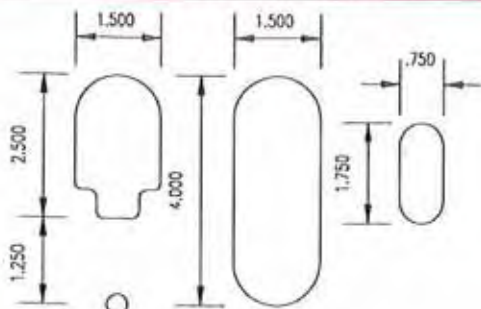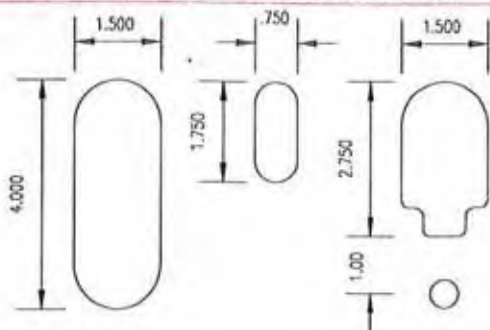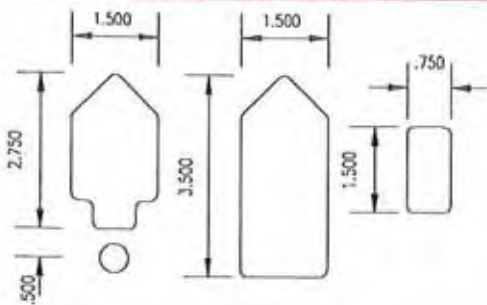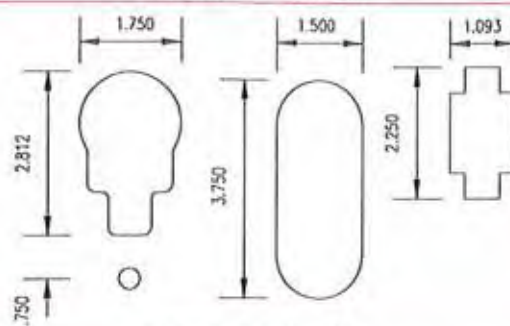
INTRODUCTION

The Metal Stud Manufacturer's Association, MSMA, is a group of metal stud producers who have formed an association to standardize the light gauge steel framing industry. The information in this brochure represents this standardization. Common section designators for the various stud types and common gauge thicknesses have been adopted by members of the MSMA. Because of this commonality a 600XC18, (for example) is the same section regardless of which manufacturer produces it, eliminating confusion about what an XC section or No. 18 gauge means between manufacturers.

The light weight, cold-formed steel members manufactured by MSMA members provide a variety of products that are easily assembled into a versatile, efficient and structurally sound framing system. Quality control is stressed in all phases of the manufacturing process so the highest possible quality available is delivered to the job site.

The structural shapes manufactured are easily used for non-load and load-bearing wall assemblies, floor and ceiling joist assemblies, and panelization systems. They can be used as the main support structural system or as a supplement to heavy structural steel or concrete construction.

All products covered in this evaluation report manufactured by MSMA members are engineered to meet the 1986 Edition of the AISI publication "**Specification for the Design of Cold-Formed Steel Structural Members**", including the 1989 amendments.

CODE APPROVAL

Products manufactured by members of the Metal Stud Manufacturer's Association, MSMA, comply with the Uniform Building Code. See ICBO ES Evaluation Report No. 4943.

MATERIAL SPECIFICATIONS

Galvanized steel products manufactured by MSMA members are formed from steel with a minimum yield stress of 33ksi (ASTM A446 Grade A) or 50 ksi (ASTM A446 Grade D.) Galvanized coatings meet the ASTM A525 specification.

Carbon sheet steel products manufactured by MSMA members are formed from steel with a minimum yield stress of 33 ksi or 50 ksi (ASTM A570) and are provided with a rust inhibitive coating.

PRODUCT IDENTIFICATION

MSMA products carry a three-part identification code which identifies the size (158 - 1 5/8", 250 - 2 1/2", 400 - 4", 1000 - 10", etc), style (XC - "C"-shaped stud, IU-channel stud, MJ-joist, ST-Track, etc.) and gauge thickness of each member. An example of the coding system is as follows:

Section: **358XC16**

358: Size = 3 5/8"
XC: Style = C-shaped stud, 1 5/8" flanges
16: 16 gauge (t=0.0566")

TECHNICAL ASSISTANCE

Professional technical assistance is available through any MSMA member to its customers. Using software developed specifically for the MSMA, a manufacturer's technical representative can analyze load conditions, deflection criteria and lateral bracing conditions not presented in this brochure. Computerized design can assist an MSMA customer with the most economical product selection for the specific application.

Contact the manufacturer for this assistance.

Note:

All data, specifications and details contained in this publication are intended as a general guide for using MSMA products. These products should not be used in design or construction without an independent evaluation by a qualified engineer or architect to verify the suitability of a particular product for use in a structure. The MSMA and its members assume no liability for failure resulting from the use or misapplication of computations, detail drawings and specifications contained herein.

This publication contains the latest information available at the time of printing. The MSMA and its members reserve the right to make modifications and/or change materials of any of their products without prior notice or obligation. For the latest information regarding a particular manufacturer's products contact that manufacturer.

Section Type														
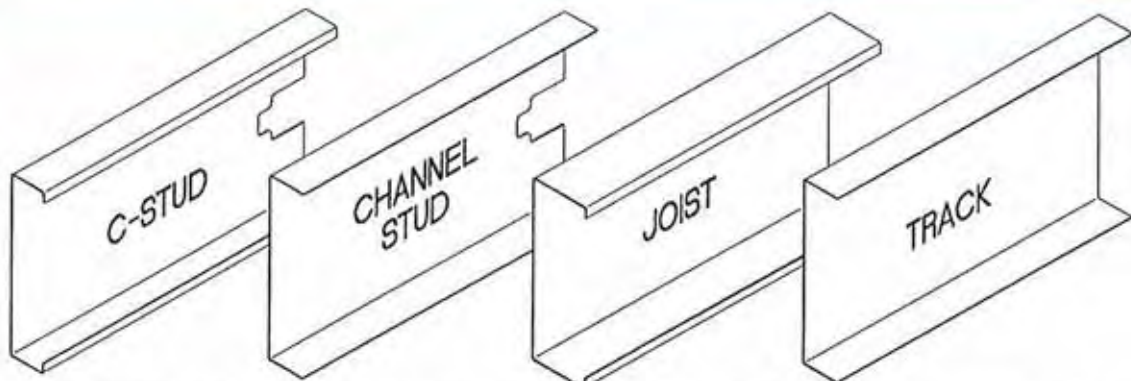
C-STUD   CHANNEL STUD   JOIST   TRACK

Designator	IC	SC	CC	XC		EU	IU	SU		EJ	MJ	WJ		ST	MT	WT	DT
Flange Width	1.25"	1.375"	1.375"	1.625"		1"	1.25"	1.375"		2"	2.5"	3"		1"	1.25"	1.5"	2"

The structural properties included in this brochure have been computed based on the American Iron and Steel Institute "Specification for the Design of Cold-Formed Structural Members", 1986 edition, including the 1989 amendments.

Thickness - Steel Components[1]

Gauge	Design Thickness (in)	Minimum Thickness[2] (in)
25	.0188	.0179
22	.0283	.0269
20	.0346	.0329
18	.0451	.0428
16	.0566	.0538
14	.0713	.0677
12	.1017	.0966

[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 A3.4 of the 1986 AISI Code.

Definition of Structural Property Symbols

Gross Properties

I_{xx}: Moment of inertia of the gross section about the X-X axis (strong axis).

R_x: Radius of gyration of the gross section about the X-X axis.

I_{yy}: Moment of inertia of the gross section about the Y-Y axis (weak axis).

R_y: Radius of gyration of the gross section about the Y-Y axis.

Effective Properties

S_{xx}: Effective section modulus about the X-X axis (strong axis).

I_{xx}: Moment of inertia for deflection calculations based on "Procedure 1 for Deflection Determination" of the 1986 AISI Specification.

Y_{cg}: Maximum distance from the outside of either flange to the center of gravity of the effective section.

M_a: Allowable Bending Moment - Based on the effective section modulus and the allowable stress including the strength increase from cold-work of forming (AISI A5.2.2) where applicable.

Torsional Properties

J: St. Venant Torsion Constant

C_w: Torsional warping constant of the section

X_o: Distance from the shear center to the centroid along the principal X-axis.

R_o: Polar radius of gyration of the section about the centroidal principal axis.

$$\beta = 1 - (X_o/R_o)^2$$
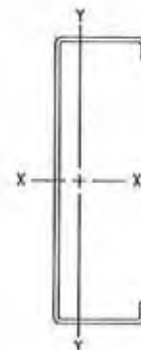
STRUCTURAL PROPERTIES   25GA. IC SECTIONS

SECTION	GROSS PROPERTIES						EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
	Area (in²)	Weight (lb/ft)	I_{xx} (in⁴)	R_x (in)	I_{yy} (in⁴)	R_y (in)	S_{xx} (in³)	I_{xx} (in⁴)	Y_{cg} (in)	Mo (ft-lb)	J (10⁻³in⁴)	C_w	X_0 (in)	R_0 (in)	β
158IC25	0.078	0.26	0.037	0.686	0.014	0.430	0.028	0.029	0.964	46	0.009	0.008	−1.007	1.293	0.393
250IC25	0.094	0.32	0.096	1.011	0.017	0.421	0.052	0.079	1.437	85	0.011	0.020	−0.881	1.405	0.607
350IC25	0.113	0.38	0.208	1.359	0.018	0.404	0.074	0.172	2.073	123	0.013	0.043	−0.774	1.616	0.770
358IC25	0.115	0.39	0.226	1.402	0.019	0.402	0.077	0.188	2.158	127	0.014	0.047	−0.763	1.646	0.785
400IC25•	0.122	0.42	0.285	1.528	0.019	0.395	0.085	0.240	2.415	140	0.014	0.059	−0.731	1.739	0.823

NOTES: 1. For deflection calculations, use the effective moment of inertia.
2. • Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)
3. Tabulated areas are based on the full un-reduced cross section of the studs away from web punchouts.
4. Properties based on Fy=33 ksi.

0.125" Min.

1.25"

Web Height
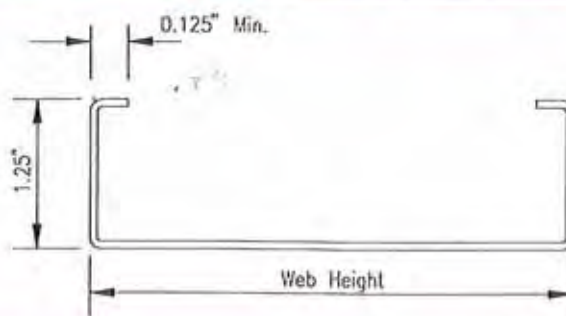
ALLOWABLE WALL HEIGHTS   5psf LATERAL LOAD   25GA. IC SECTIONS

STUD SPACING (in.)	L/120 DEFLECTION					L/240 DEFLECTION				
	STUD DEPTH (in.)					STUD DEPTH (in.)				
	1 5/8"	2 1/2"	3 1/2"	3 5/8"	4"	1 5/8"	2 1/2"	3 1/2"	3 5/8"	4"
12	9' 1"	12' 8"	16' 2"	16' 5"	17' 3"	7' 3"	10' 1"	13' 2"	13' 6"	14' 7"
16	8' 3"	11' 6"	14' 0"	14' 3"	14'11"	6' 7"	9' 2"	12' 0"	12' 3"	13' 3"
24	7' 0"	9' 6"	11' 5"	11' 7"	12' 2"	5' 9"	8' 0"	10' 6"	10' 8"	11' 7"

NOTES: 1. Heights based on properly attached sheathing on each flange over the entire length of the stud.
2. Lateral load multiplied by 0.75 for strength determination per AISI A4.4

CEILING SPANS   25GA. IC SECTIONS

SECTION	No. of Spans	3 p.s.f.			10 p.s.f.								
		Compression Flange Unsupported			Lateral Support Of Compression Flange								
					Unsupported			At Midspan			*At Third Points		
		Joist Spacing			Joist Spacing			Joist Spacing			Joist Spacing		
		12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158IC25	1	7' 6"	6'10"	5'11"	5' 0"	4' 6"	3'11"	5' 0"	4' 6"	3'11"	5' 0"	4' 6"	3'11"
	2	10' 1"	9' 1"	7'10"	6' 1"	5' 3"	4' 3"	6' 1"	5' 3"	4' 3"	6' 1"	5' 3"	4' 3"
250IC25	1	8' 6"	7'11"	7' 1"	6' 2"	5' 8"	4'11"	7' 0"	6' 4"	5' 6"	7' 0"	6' 4"	5' 6"
	2	11' 7"	10' 8"	9' 7"	8' 2"	7' 1"	5' 9"	8' 2"	7' 1"	5' 9"	8' 2"	7' 1"	5' 9"
350IC25	1	9' 5"	8' 9"	7'11"	6'11"	6' 5"	5' 8"	8' 9"	7'10"	6' 6"	9' 1"	8' 2"	6' 9"
	2	12' 9"	11'10"	10' 7"	9' 3"	8' 6"	7' 0"	9'10"	8' 6"	7' 0"	9'10"	8' 6"	7' 0"
358IC25	1	9' 7"	8'10"	8' 0"	7' 0"	6' 6"	5' 9"	8'11"	7'11"	6' 8"	9' 4"	8' 4"	6'10"
	2	12'10"	11'11"	10' 9"	9' 5"	8' 8"	7' 1"	10' 0"	8' 8"	7' 1"	10' 0"	8' 8"	7' 1"
400IC25	1	9'10"	9' 2"	8' 3"	7' 3"	6' 8"	5'11"	9' 3"	8' 3"	6'11"	9'11"	8' 8"	7' 3"
	2	13' 3"	12' 3"	11' 1"	9' 8"	9' 0"	7' 5"	10' 7"	9' 1"	7' 5"	10' 7"	9' 1"	7' 5"

IC SECTION

NOTES: 1. One (1) span indicates a single, Two (2) indicates two equal spans with a joist continuous over center support.
2. Lateral support of compression flange may be achieved with approved, attached covering or mechanical bracing. (See page 50 and 52 for typical mechanical bracing configurations.)
3. Spans based on a deflection limit of L/360.
4. * Values also applicable for continuous support of the compression flange provided by properly attached sheathing material.

See Note 1. Below For Yield Strengths

SECTION	GROSS PROPERTIES						EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
	Area (in^2)	Weight (lb/ft)	I_{xx} (in^4)	R_x (in)	I_{yy} (in^4)	R_y (in)	S_{xx} (in^3)	I_{xx} (in^4)	Y_{cg} (in)	M_a $(ft-lb)$	J $(10^{-3}in^4)$	C_w	X_0 (in)	R_0 (in)	β
158IC20	0.159	0.54	0.071	0.670	0.036	0.475	0.087	0.071	0.817	158	0.064	0.027	−1.194	1.449	0.321
158IC18	0.203	0.69	0.089	0.663	0.044	0.467	0.110	0.089	0.812	205	0.137	0.034	−1.195	1.444	0.315
158IC16	0.251	0.85	0.109	0.657	0.054	0.462	0.133	0.109	0.815	377	0.268	0.040	−1.184	1.430	0.315
158IC14	0.311	1.06	0.132	0.651	0.064	0.455	0.162	0.132	0.812	472	0.528	0.047	−1.169	1.413	0.316
250IC20	0.189	0.64	0.191	1.005	0.042	0.471	0.151	0.191	1.258	274	0.076	0.060	−1.051	1.529	0.527
250IC18	0.242	0.82	0.241	0.997	0.052	0.463	0.193	0.241	1.250	360	0.164	0.075	−1.049	1.520	0.524
250IC16	0.301	1.02	0.296	0.991	0.063	0.458	0.235	0.296	1.254	667	0.321	0.090	−1.037	1.506	0.526
250IC14	0.374	1.27	0.362	0.984	0.076	0.451	0.290	0.362	1.250	843	0.633	0.107	−1.022	1.489	0.528
350IC20	0.224	0.76	0.418	1.366	0.047	0.458	0.236	0.418	1.760	428	0.089	0.121	−0.930	1.715	0.706
350IC18	0.287	0.98	0.529	1.357	0.058	0.450	0.302	0.529	1.750	564	0.195	0.151	−0.925	1.703	0.705
350IC16	0.357	1.22	0.651	1.350	0.071	0.445	0.369	0.651	1.756	1049	0.382	0.181	−0.914	1.690	0.708
350IC14	0.445	1.51	0.802	1.342	0.085	0.438	0.458	0.802	1.750	1334	0.754	0.217	−0.899	1.674	0.711
358IC20	0.228	0.78	0.454	1.410	0.048	0.456	0.247	0.454	1.823	448	0.091	0.130	−0.917	1.742	0.723
358IC18	0.293	1.00	0.574	1.400	0.059	0.449	0.317	0.574	1.813	592	0.199	0.162	−0.912	1.730	0.722
358IC16	0.364	1.24	0.708	1.394	0.071	0.443	0.388	0.708	1.818	1101	0.389	0.196	−0.901	1.718	0.725
358IC14	0.454	1.54	0.872	1.385	0.086	0.436	0.481	0.872	1.813	1400	0.769	0.234	−0.886	1.701	0.729
400IC20	0.241	0.82	0.572	1.540	0.049	0.451	0.282	0.572	2.011	512	0.096	0.161	−0.880	1.830	0.769
400IC18	0.310	1.05	0.725	1.530	0.061	0.443	0.363	0.725	2.000	677	0.210	0.201	−0.875	1.817	0.768
400IC16	0.386	1.31	0.895	1.523	0.074	0.437	0.444	0.895	2.006	1261	0.412	0.243	−0.864	1.805	0.771
400IC14	0.481	1.64	1.103	1.514	0.089	0.430	0.551	1.103	2.000	1605	0.815	0.291	−0.850	1.789	0.774
600IC20	0.311	1.06	1.513	2.207	0.055	0.419	0.504	1.513	3.000	830	0.124	0.396	−0.729	2.362	0.905
600IC18	0.400	1.36	1.926	2.194	0.068	0.412	0.642	1.926	3.000	1199	0.271	0.497	−0.723	2.347	0.905
600IC16	0.499	1.70	2.385	2.186	0.082	0.406	0.789	2.385	3.008	2242	0.533	0.602	−0.712	2.335	0.907
600IC14	0.623	2.12	2.952	2.176	0.099	0.399	0.984	2.952	3.000	2865	1.056	0.725	−0.699	2.320	0.909
800IC20•	0.380	1.29	3.074	2.845	0.058	0.392	0.662	3.074	4.276	1090	0.152	0.759	−0.625	2.939	0.955
800IC18	0.490	1.67	3.927	2.830	0.072	0.384	0.982	3.927	4.000	1617	0.332	0.956	−0.618	2.922	0.955
800IC16	0.612	2.08	4.873	2.821	0.088	0.378	1.218	4.873	4.000	3039	0.654	1.161	−0.609	2.911	0.956
800IC14	0.766	2.61	6.049	2.810	0.105	0.371	1.512	6.049	4.000	4402	1.298	1.400	−0.597	2.897	0.958

NOTES:
1. Effective properties based on $F_y=50ksi$ for 14 and 16 gauge sections, $F_y=33ksi$ for 18 and 20 gauge sections. 14 and 16 gauge sections may be produced with $F_y=33ksi$. For 33ksi 14 and 16 gauge sections, multiply allowable moment by 0.66.
   (Contact manufacturer for availability)
2. Effective properties and allowable Moment incorporate the strength increase from cold-work of forming where applicable. (AISI A5.2.2)
3. For deflection calculations, use the effective moment of inertia.
4. • Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)
5. Tabulated areas are based on the full un-reduced cross section of the studs away from web punchouts.
6. For weak-axis orientations, technical assistance is req'd. Contact the manufacturer for this assistance.

STRUCTURAL PROPERTIES

SC SECTIONS

See Note 1. Below For Yield Strengths

SECTION	GROSS PROPERTIES						EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
	Area (in²)	Weight (lb/ft)	I_{xx} (in⁴)	R_x (in)	I_{yy} (in⁴)	R_y (in)	S_{xx} (in³)	I_{xx} (in⁴)	Y_{cg} (in)	M_a (ft-lb)	J (10⁻³in⁴)	C_w	X_0 (in)	R_0 (in)	β
158SC20	0.163	0.56	0.074	0.673	0.041	0.498	0.088	0.074	0.806	145	0.065	0.031	−1.256	1.510	0.308
158SC18	0.208	0.71	0.092	0.666	0.050	0.491	0.111	0.092	0.797	205	0.141	0.038	−1.257	1.505	0.302
158SC16	0.258	0.88	0.113	0.661	0.061	0.485	0.134	0.113	0.806	378	0.276	0.045	−1.246	1.492	0.302
158SC14	0.320	1.09	0.137	0.654	0.073	0.478	0.164	0.137	0.791	473	0.543	0.053	−1.232	1.474	0.302
250SC20	0.194	0.66	0.198	1.010	0.048	0.495	0.153	0.198	1.245	252	0.077	0.068	−1.110	1.581	0.507
250SC18	0.248	0.84	0.249	1.003	0.059	0.488	0.195	0.249	1.232	360	0.168	0.084	−1.108	1.572	0.503
250SC16	0.308	1.05	0.306	0.997	0.072	0.482	0.238	0.306	1.245	668	0.329	0.101	−1.096	1.558	0.505
250SC14	0.383	1.30	0.375	0.990	0.086	0.475	0.293	0.375	1.222	843	0.649	0.120	−1.081	1.541	0.508
350SC20	0.228	0.78	0.431	1.374	0.053	0.483	0.238	0.431	1.747	393	0.091	0.135	−0.984	1.757	0.686
350SC18	0.293	1.00	0.545	1.364	0.066	0.475	0.305	0.545	1.730	564	0.199	0.169	−0.980	1.746	0.685
350SC16	0.364	1.24	0.672	1.358	0.080	0.469	0.374	0.672	1.746	1051	0.389	0.204	−0.969	1.733	0.688
350SC14	0.454	1.54	0.827	1.350	0.097	0.462	0.464	0.827	1.717	1333	0.769	0.244	−0.954	1.716	0.691
358SC20	0.233	0.79	0.468	1.418	0.054	0.481	0.250	0.468	1.809	412	0.093	0.146	−0.971	1.784	0.704
358SC18	0.299	1.02	0.592	1.408	0.067	0.473	0.320	0.592	1.792	591	0.202	0.182	−0.966	1.772	0.703
358SC16	0.372	1.26	0.730	1.402	0.081	0.468	0.392	0.730	1.809	1103	0.397	0.220	−0.955	1.759	0.705
358SC14	0.463	1.58	0.899	1.394	0.098	0.460	0.487	0.899	1.779	1400	0.784	0.263	−0.940	1.743	0.709
400SC20	0.246	0.84	0.589	1.549	0.055	0.475	0.286	0.589	1.997	470	0.098	0.180	−0.933	1.869	0.751
400SC18	0.315	1.07	0.747	1.538	0.069	0.467	0.366	0.747	1.979	676	0.214	0.226	−0.928	1.856	0.750
400SC16	0.393	1.34	0.922	1.532	0.084	0.462	0.449	0.922	1.997	1263	0.419	0.273	−0.917	1.844	0.753
400SC14	0.490	1.67	1.136	1.523	0.101	0.454	0.558	1.136	1.965	1605	0.830	0.327	−0.902	1.828	0.756
600SC20	0.315	1.07	1.551	2.219	0.062	0.444	0.505	1.551	2.998	832	0.126	0.444	−0.776	2.392	0.895
600SC18	0.406	1.38	1.975	2.207	0.077	0.436	0.647	1.975	2.977	1196	0.275	0.558	−0.769	2.377	0.895
600SC16	0.506	1.72	2.446	2.199	0.094	0.430	0.797	2.446	2.999	2240	0.540	0.677	−0.759	2.366	0.897
600SC14	0.632	2.15	3.030	2.189	0.113	0.423	0.996	3.030	2.960	2863	1.071	0.816	−0.746	2.351	0.899
800SC20∗	0.384	1.31	3.142	2.860	0.066	0.415	0.661	3.142	4.275	1089	0.153	0.851	−0.666	2.966	0.950
800SC18	0.496	1.69	4.015	2.846	0.082	0.407	0.989	4.015	4.052	1628	0.336	1.074	−0.660	2.949	0.950
800SC16	0.619	2.11	4.983	2.837	0.100	0.401	1.224	4.983	3.985	3054	0.661	1.305	−0.650	2.938	0.951
800SC14	0.775	2.64	6.187	2.826	0.120	0.394	1.529	6.187	3.956	4396	1.313	1.576	−0.638	2.924	0.952

NOTES:
1. Effective properties based on F_y=50ksi for 14 and 16 gauge sections, F_y=33ksi for 18 and 20 gauge sections. 14 and 16 gauge sections may be produced with F_y=33ksi. For 33ksi 14 and 16 gauge sections, multiply allowable moment by 0.66. (Contact manufacturer for availability)
2. Effective properties and allowable Moment incorporate the strength increase from cold-work of forming where applicable. (AISI A5.2.2)
3. For deflection calculations, use the effective moment of inertia.
4. ∗ Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)
5. Tabulated areas are based on the full un-reduced cross section of the studs away from web punchouts.
6. For weak-axis orientations, technical assistance is req'd. Contact the manufacturer for this assistance.

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See Note 1. Below For Yield Strengths

SECTION	GROSS PROPERTIES						EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
	Area (in^2)	Weight (lb/ft)	I_{xx} (in^4)	R_x (in)	I_{yy} (in^4)	R_y (in)	S_{xx} (in^3)	I_{xx} (in^4)	Y_{cg} (in)	M_a (ft-lb)	J (10^{-3}in^4)	C_w	X_0 (in)	R_0 (in)	β
158CC20	0.168	0.57	0.077	0.677	0.045	0.518	0.091	0.077	0.828	150	0.067	0.034	−1.316	1.568	0.296
158CC18	0.214	0.73	0.096	0.670	0.056	0.511	0.117	0.096	0.819	216	0.145	0.042	−1.317	1.563	0.290
158CC16	0.265	0.90	0.117	0.665	0.068	0.505	0.139	0.117	0.827	392	0.283	0.050	−1.306	1.550	0.290
158CC14	0.329	1.12	0.143	0.658	0.082	0.498	0.175	0.143	0.813	504	0.558	0.059	−1.291	1.532	0.290
250CC20	0.198	0.67	0.205	1.016	0.053	0.516	0.157	0.205	1.273	259	0.079	0.075	−1.167	1.631	0.488
250CC18	0.253	0.86	0.258	1.008	0.066	0.509	0.203	0.258	1.260	375	0.172	0.094	−1.164	1.622	0.485
250CC16	0.315	1.07	0.317	1.003	0.080	0.503	0.243	0.317	1.273	684	0.336	0.113	−1.153	1.609	0.487
250CC14	0.392	1.33	0.388	0.996	0.096	0.496	0.310	0.388	1.251	892	0.664	0.134	−1.138	1.591	0.489
350CC20	0.233	0.79	0.444	1.381	0.059	0.504	0.244	0.444	1.779	401	0.093	0.151	−1.038	1.800	0.668
350CC18	0.299	1.02	0.562	1.372	0.074	0.497	0.316	0.562	1.763	584	0.202	0.189	−1.033	1.788	0.666
350CC16	0.372	1.26	0.693	1.366	0.090	0.491	0.381	0.693	1.780	1070	0.397	0.228	−1.022	1.775	0.669
350CC14	0.463	1.58	0.854	1.358	0.108	0.484	0.487	0.854	1.751	1401	0.784	0.273	−1.007	1.759	0.672
358CC20	0.237	0.81	0.482	1.426	0.060	0.502	0.255	0.482	1.843	421	0.095	0.162	−1.024	1.826	0.686
358CC18	0.304	1.04	0.610	1.417	0.074	0.495	0.331	0.610	1.826	612	0.206	0.203	−1.019	1.814	0.684
358CC16	0.379	1.29	0.753	1.410	0.091	0.489	0.399	0.753	1.843	1122	0.404	0.246	−1.008	1.801	0.687
358CC14	0.472	1.61	0.928	1.402	0.109	0.482	0.511	0.928	1.814	1470	0.800	0.295	−0.993	1.785	0.690
400CC20	0.250	0.85	0.606	1.557	0.062	0.497	0.292	0.606	2.032	480	0.100	0.201	−0.985	1.908	0.734
400CC18	0.321	1.09	0.769	1.548	0.077	0.489	0.378	0.769	2.014	699	0.218	0.252	−0.980	1.896	0.733
400CC16	0.400	1.36	0.950	1.541	0.093	0.483	0.456	0.950	2.033	1283	0.427	0.305	−0.968	1.883	0.736
400CC14	0.499	1.70	1.171	1.533	0.113	0.476	0.585	1.171	2.001	1682	0.845	0.366	−0.954	1.867	0.739
600CC20	0.319	1.09	1.590	2.232	0.069	0.465	0.512	1.590	3.039	843	0.127	0.494	−0.821	2.423	0.885
600CC18	0.411	1.40	2.026	2.219	0.086	0.457	0.665	2.026	3.018	1229	0.279	0.623	−0.815	2.408	0.885
600CC16	0.513	1.75	2.510	2.212	0.105	0.451	0.807	2.510	3.040	2269	0.548	0.756	−0.805	2.397	0.887
600CC14	0.641	2.18	3.109	2.202	0.126	0.444	1.035	3.109	3.001	2976	1.087	0.913	−0.791	2.382	0.890
800CC20♦	0.388	1.32	3.211	2.875	0.074	0.436	0.663	3.211	4.343	1091	0.155	0.949	−0.708	2.993	0.944
800CC18	0.502	1.71	4.105	2.861	0.092	0.428	1.026	4.105	4.000	1690	0.340	1.199	−0.701	2.977	0.945
800CC16	0.626	2.13	5.096	2.853	0.112	0.422	1.247	5.096	4.031	3111	0.669	1.458	−0.692	2.965	0.946
800CC14	0.784	2.67	6.329	2.842	0.135	0.415	1.581	6.329	4.002	4544	1.328	1.765	−0.679	2.951	0.947

NOTES:
1. Effective properties based on F_y=50ksi for 14 and 16 gauge sections, F_y=33ksi for 18 and 20 gauge sections. 14 and 16 gauge sections may be produced with F_y=33ksi. For 33ksi 14 and 16 gauge sections, multiply allowable moment by 0.66. (Contact manufacturer for availability)
2. Effective properties and allowable Moment incorporate the strength increase from cold−work of forming where applicable. (AISI A5.2.2)
3. For deflection calculations, use the effective moment of inertia.
4. ♦ Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)
5. Tabulated areas are based on the full un−reduced cross section of the studs away from web punchouts.
6. For weak−axis orientations, technical assistance is req'd. Contact the manufacturer for this assistance.
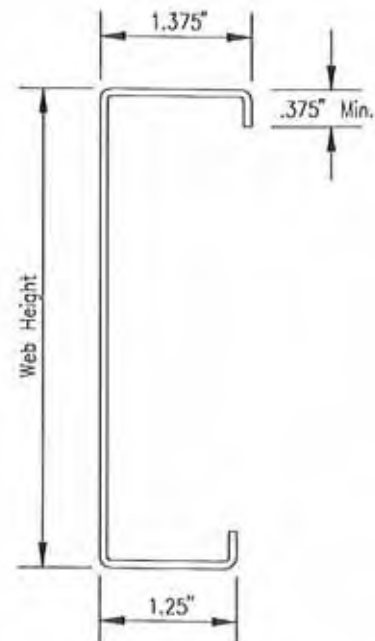

1.375"

.375" Min.

Web Height

See Note 1. Below For Yield Strengths

SECTION	GROSS PROPERTIES						EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
	Area (in²)	Weight (lb/ft)	I_{xx} (in⁴)	R_x (in)	I_{yy} (in⁴)	R_y (in)	S_{xx} (in³)	I_{xx} (in⁴)	Y_{cg} (in)	Ma (ft-lb)	J (10⁻³in⁴)	C_w	X_0 (in)	R_0 (in)	β
158XC20	0.185	0.63	0.088	0.689	0.067	0.603	0.094	0.088	0.863	155	0.074	0.050	-1.560	1.809	0.256
158XC18	0.237	0.80	0.110	0.682	0.084	0.596	0.130	0.110	0.830	214	0.160	0.063	-1.562	1.805	0.252
158XC16	0.294	1.00	0.135	0.677	0.102	0.590	0.153	0.135	0.844	381	0.314	0.075	-1.550	1.792	0.251
158XC14	0.365	1.24	0.164	0.671	0.124	0.583	0.194	0.164	0.830	547	0.618	0.089	-1.536	1.774	0.251
250XC20	0.215	0.73	0.231	1.035	0.079	0.605	0.162	0.231	1.321	266	0.086	0.112	-1.400	1.843	0.423
250XC18	0.276	0.94	0.292	1.028	0.099	0.598	0.223	0.292	1.277	367	0.187	0.140	-1.398	1.835	0.420
250XC16	0.343	1.17	0.359	1.023	0.120	0.592	0.264	0.359	1.296	659	0.367	0.169	-1.386	1.821	0.421
250XC14	0.427	1.45	0.441	1.016	0.146	0.585	0.337	0.441	1.277	949	0.724	0.202	-1.371	1.803	0.422
350XC20	0.250	0.85	0.496	1.409	0.089	0.596	0.250	0.496	1.838	412	0.100	0.223	-1.257	1.980	0.597
350XC18	0.321	1.09	0.630	1.400	0.111	0.588	0.344	0.630	1.785	566	0.218	0.281	-1.253	1.969	0.595
350XC16	0.400	1.36	0.777	1.394	0.135	0.582	0.410	0.777	1.808	1023	0.427	0.340	-1.241	1.955	0.597
350XC14	0.499	1.70	0.959	1.387	0.165	0.575	0.523	0.959	1.785	1474	0.845	0.410	-1.226	1.938	0.600
358XC20	0.254	0.87	0.538	1.454	0.090	0.594	0.262	0.538	1.903	432	0.101	0.241	-1.242	2.002	0.615
358XC18	0.327	1.11	0.683	1.445	0.112	0.586	0.360	0.683	1.848	592	0.222	0.303	-1.238	1.991	0.614
358XC16	0.407	1.38	0.843	1.439	0.137	0.580	0.429	0.843	1.872	1071	0.435	0.367	-1.226	1.978	0.616
358XC14	0.507	1.73	1.040	1.432	0.167	0.573	0.548	1.040	1.848	1544	0.860	0.442	-1.211	1.961	0.619
400XC20	0.267	0.91	0.674	1.588	0.093	0.589	0.299	0.674	2.095	493	0.107	0.298	-1.198	2.075	0.667
400XC18	0.344	1.17	0.857	1.579	0.116	0.581	0.410	0.857	2.038	675	0.233	0.375	-1.193	2.063	0.665
400XC16	0.428	1.46	1.060	1.573	0.141	0.575	0.490	1.060	2.063	1223	0.457	0.455	-1.182	2.050	0.668
400XC14	0.534	1.82	1.309	1.565	0.172	0.567	0.625	1.309	2.038	1762	0.905	0.549	-1.167	2.033	0.671
600XC20	0.336	1.14	1.744	2.276	0.104	0.557	0.512	1.744	3.149	842	0.134	0.733	-1.012	2.553	0.843
600XC18	0.434	1.48	2.226	2.265	0.131	0.548	0.712	2.226	3.047	1173	0.294	0.926	-1.006	2.538	0.843
600XC16	0.541	1.84	2.760	2.258	0.159	0.543	0.859	2.760	3.077	2143	0.578	1.129	-0.995	2.526	0.845
600XC14	0.677	2.30	3.422	2.249	0.194	0.535	1.094	3.422	3.048	3085	1.147	1.369	-0.981	2.511	0.847
800XC20•	0.406	1.38	3.486	2.931	0.112	0.525	0.664	3.486	4.469	1094	0.162	1.409	-0.880	3.105	0.920
800XC18	0.524	1.78	4.462	2.918	0.140	0.517	1.068	4.462	4.065	1759	0.355	1.785	-0.874	3.090	0.920
800XC16	0.655	2.23	5.542	2.910	0.171	0.511	1.300	5.542	4.092	3243	0.699	2.180	-0.864	3.078	0.921
800XC14	0.819	2.79	6.889	2.900	0.208	0.504	1.659	6.889	4.054	4678	1.389	2.649	-0.851	3.063	0.923

NOTES: 1. Effective properties based on F_y=50ksi for 14 and
16 gauge sections, F_y=33ksi for 18 and 20 gauge
sections. 14 and 16 gauge sections may be produced
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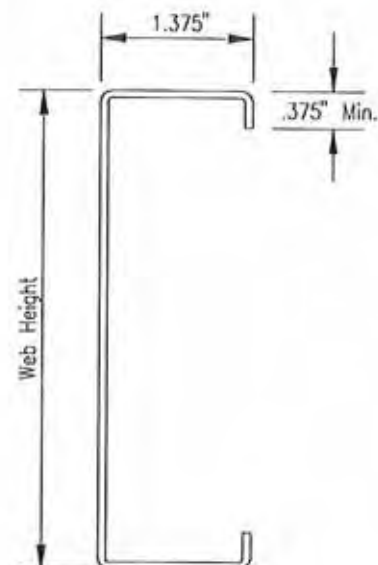Contact the manufacturer for this assistance.

See Note 1. Below For Yield Strengths

SECTION	GROSS PROPERTIES						EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
	Area (in²)	Weight (lb/ft)	I_{xx} (in⁴)	R_x (in)	I_{yy} (in⁴)	R_y (in)	S_{xx} (in³)	I_{xx} (in⁴)	Y_{cg} (in)	M_a (ft-lb)	J (10⁻³in⁴)	C_w	X_0 (in)	R_0 (in)	β
158EU20	0.121	0.41	0.053	0.663	0.013	0.323	0.049	0.048	0.904	81	0.048	0.006	−0.675	1.000	0.544
158EU18	0.155	0.53	0.067	0.657	0.016	0.322	0.071	0.066	0.862	116	0.105	0.007	−0.681	0.999	0.536
158EU16	0.193	0.66	0.082	0.652	0.020	0.320	0.088	0.081	0.857	219	0.206	0.009	−0.679	0.994	0.534
158EU14	0.240	0.82	0.100	0.646	0.024	0.317	0.118	0.100	0.827	294	0.407	0.011	−0.676	0.987	0.531
250EU20	0.151	0.51	0.143	0.973	0.014	0.310	0.090	0.131	1.361	148	0.060	0.016	−0.577	1.173	0.758
250EU18	0.194	0.66	0.181	0.966	0.018	0.308	0.128	0.178	1.310	210	0.132	0.020	−0.580	1.168	0.754
250EU16	0.242	0.82	0.224	0.961	0.023	0.306	0.159	0.221	1.304	397	0.259	0.024	−0.577	1.162	0.753
250EU14	0.303	1.03	0.276	0.954	0.028	0.304	0.212	0.276	1.268	529	0.513	0.030	−0.574	1.155	0.753
350EU20	0.186	0.63	0.317	1.307	0.016	0.292	0.148	0.293	1.874	243	0.074	0.035	−0.497	1.428	0.879
350EU18	0.239	0.81	0.404	1.299	0.020	0.291	0.207	0.397	1.818	341	0.162	0.044	−0.498	1.422	0.877
350EU16	0.299	1.02	0.501	1.294	0.025	0.289	0.259	0.494	1.812	646	0.319	0.054	−0.496	1.416	0.877
350EU14	0.374	1.27	0.620	1.287	0.031	0.287	0.343	0.620	1.771	855	0.634	0.066	−0.492	1.408	0.878
358EU20	0.190	0.65	0.345	1.348	0.016	0.290	0.156	0.320	1.938	257	0.076	0.038	−0.488	1.463	0.888
358EU18	0.245	0.83	0.440	1.340	0.020	0.289	0.218	0.432	1.881	359	0.166	0.048	−0.490	1.456	0.887
358EU16	0.306	1.04	0.545	1.335	0.025	0.287	0.273	0.538	1.875	680	0.327	0.059	−0.487	1.449	0.887
358EU14	0.383	1.30	0.675	1.328	0.031	0.285	0.361	0.675	1.833	899	0.649	0.072	−0.484	1.442	0.887
400EU20	0.203	0.69	0.438	1.469	0.016	0.284	0.181	0.407	2.129	298	0.081	0.047	−0.465	1.567	0.912
400EU18	0.262	0.89	0.559	1.461	0.021	0.283	0.252	0.549	2.071	416	0.178	0.061	−0.466	1.559	0.911
400EU16	0.327	1.11	0.693	1.456	0.026	0.281	0.316	0.684	2.064	788	0.349	0.074	−0.463	1.553	0.911
400EU14	0.410	1.39	0.860	1.449	0.032	0.279	0.417	0.860	2.022	1040	0.694	0.091	−0.460	1.545	0.911
600EU20	0.272	0.93	1.196	2.097	0.018	0.256	0.325	1.130	3.214	535	0.109	0.122	−0.372	2.145	0.970
600EU18	0.352	1.20	1.535	2.087	0.023	0.254	0.472	1.510	3.079	777	0.239	0.156	−0.371	2.135	0.970
600EU16	0.440	1.50	1.909	2.082	0.028	0.252	0.591	1.885	3.072	1474	0.470	0.192	−0.369	2.129	0.970
600EU14	0.552	1.88	2.376	2.074	0.035	0.250	0.773	2.376	3.024	1928	0.936	0.236	−0.366	2.121	0.970
800EU20•	0.341	1.16	2.498	2.706	0.019	0.234	0.416	2.415	4.635	685	0.136	0.236	−0.310	2.733	0.987
800EU18	0.442	1.51	3.215	2.696	0.024	0.232	0.733	3.172	4.123	1207	0.300	0.303	−0.310	2.723	0.987
800EU16	0.554	1.88	4.005	2.689	0.029	0.230	0.942	3.961	4.076	2350	0.591	0.373	−0.307	2.717	0.987
800EU14	0.695	2.36	4.997	2.682	0.036	0.228	1.224	4.997	4.026	3053	1.178	0.458	−0.304	2.708	0.987

NOTES: 1. Effective properties based on F_y=50ksi for 14 and 16 gauge sections, F_y=33ksi for 18 and 20 gauge sections. 14 and 16 gauge sections may be produced with F_y=33ksi. For 33ksi 14 and 16 gauge sections, multiply allowable moment by 0.66. (Contact manufacturer for availability)

2. Effective properties and allowable Moment incorporate the strength increase from cold-work of forming where applicable. (AISI A5.2.2)

3. For deflection calculations, use the effective moment of inertia.

4. • Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)

5. Tabulated areas are based on the full un-reduced cross section of the studs away from web punchouts.

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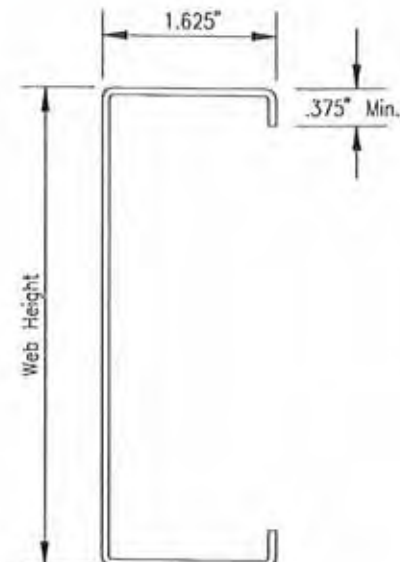
See Note 1. Below For Yield Strengths

SECTION	GROSS PROPERTIES						EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
	Area (in^2)	Weight (lb/ft)	I_{xx} (in^4)	R_x (in)	I_{yy} (in^4)	R_y (in)	S_{xx} (in^3)	I_{xx} (in^4)	Y_{cg} (in)	M_a (ft-lb)	J $(10^{-3}in^4)$	C_w	X_0 (in)	R_0 (in)	β
158IU20	0.138	0.47	0.064	0.681	0.023	0.410	0.051	0.054	0.950	85	0.055	0.010	−0.901	1.201	0.438
158IU18	0.177	0.60	0.081	0.675	0.030	0.408	0.075	0.075	0.905	124	0.120	0.013	−0.907	1.202	0.431
158IU16	0.221	0.75	0.099	0.670	0.036	0.406	0.094	0.092	0.899	234	0.236	0.016	−0.905	1.197	0.428
158IU14	0.276	0.94	0.122	0.664	0.045	0.403	0.128	0.120	0.864	319	0.468	0.020	−0.903	1.191	0.425
250IU20	0.168	0.57	0.169	1.003	0.027	0.399	0.094	0.145	1.419	155	0.067	0.029	−0.785	1.334	0.654
250IU18	0.217	0.74	0.215	0.996	0.034	0.397	0.136	0.200	1.365	223	0.147	0.037	−0.789	1.332	0.649
250IU16	0.271	0.92	0.266	0.991	0.042	0.396	0.169	0.248	1.358	423	0.289	0.045	−0.786	1.326	0.648
250IU14	0.338	1.15	0.328	0.985	0.052	0.393	0.229	0.323	1.315	572	0.573	0.055	−0.783	1.319	0.647
350IU20	0.203	0.69	0.369	1.349	0.030	0.382	0.155	0.321	1.943	255	0.081	0.063	−0.687	1.561	0.806
350IU18	0.262	0.89	0.472	1.342	0.038	0.380	0.219	0.440	1.881	361	0.178	0.081	−0.690	1.556	0.804
350IU16	0.327	1.11	0.585	1.336	0.047	0.379	0.274	0.548	1.874	685	0.349	0.100	−0.687	1.550	0.803
350IU14	0.410	1.39	0.725	1.330	0.058	0.376	0.368	0.712	1.825	918	0.694	0.123	−0.684	1.542	0.803
358IU20	0.207	0.70	0.401	1.391	0.030	0.380	0.163	0.350	2.008	269	0.083	0.069	−0.677	1.593	0.819
358IU18	0.268	0.91	0.512	1.384	0.038	0.378	0.231	0.478	1.946	380	0.181	0.088	−0.679	1.587	0.817
358IU16	0.334	1.14	0.635	1.378	0.047	0.376	0.289	0.596	1.938	721	0.357	0.109	−0.676	1.581	0.817
358IU14	0.419	1.42	0.788	1.372	0.059	0.374	0.387	0.775	1.889	966	0.709	0.133	−0.673	1.573	0.817
400IU20	0.220	0.75	0.506	1.516	0.031	0.373	0.190	0.443	2.202	312	0.088	0.087	−0.648	1.690	0.853
400IU18	0.285	0.97	0.647	1.508	0.039	0.372	0.267	0.605	2.138	439	0.193	0.111	−0.649	1.684	0.851
400IU16	0.356	1.21	0.803	1.503	0.049	0.370	0.334	0.756	2.130	834	0.380	0.137	−0.647	1.678	0.851
400IU14	0.445	1.52	0.997	1.496	0.060	0.368	0.446	0.981	2.079	1114	0.755	0.168	−0.643	1.670	0.852
600IU20	0.289	0.98	1.350	2.160	0.034	0.341	0.324	1.220	3.354	534	0.115	0.225	−0.528	2.250	0.945
600IU18	0.375	1.28	1.735	2.151	0.043	0.340	0.495	1.637	3.155	815	0.254	0.289	−0.529	2.241	0.944
600IU16	0.469	1.60	2.158	2.146	0.054	0.338	0.621	2.047	3.147	1549	0.501	0.356	−0.526	2.235	0.945
600IU14	0.588	2.00	2.689	2.139	0.066	0.336	0.820	2.648	3.090	2046	0.996	0.439	−0.523	2.227	0.945
800IU20•	0.359	1.22	2.772	2.781	0.035	0.315	0.421	2.583	4.775	693	0.143	0.438	−0.448	2.834	0.975
800IU18	0.465	1.58	3.572	2.771	0.046	0.313	0.738	3.411	4.268	1215	0.315	0.562	−0.447	2.825	0.975
800IU16	0.582	1.98	4.451	2.766	0.056	0.312	0.948	4.262	4.219	2365	0.621	0.695	−0.445	2.818	0.975
800IU14	0.731	2.49	5.557	2.758	0.070	0.309	1.289	5.480	4.096	3216	1.238	0.857	−0.441	2.810	0.975

NOTES:
1. Effective properties based on F_y=50ksi for 14 and 16 gauge sections, F_y=33ksi for 18 and 20 gauge sections. 14 and 16 gauge sections may be produced with F_y=33ksi. For 33ksi 14 and 16 gauge sections, multiply allowable moment by 0.66. (Contact manufacturer for availability)
2. Effective properties and allowable Moment incorporate the strength increase from cold-work of forming where applicable. (AISI A5.2.2)
3. For deflection calculations, use the effective moment of inertia.
4. • Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)
5. Tabulated areas are based on the full un-reduced cross section of the studs away from web punchouts.
6. For weak-axis orientations, technical assistance is req'd. Contact the manufacturer for this assistance.
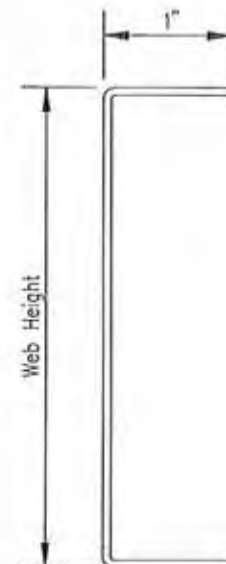
See Note 1. Below For Yield Strengths

SECTION	GROSS PROPERTIES						EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
	Area (in^2)	Weight (lb/ft)	I_{xx} (in^4)	R_x (in)	I_{yy} (in^4)	R_y (in)	S_{xx} (in^3)	I_{xx} (in^4)	Y_{cg} (in)	Mo (ft-lb)	J $(10^{-3}in^4)$	C_w	X_0 (in)	R_0 (in)	β
158SU20	0.147	0.50	0.069	0.688	0.030	0.452	0.052	0.057	0.971	86	0.059	0.014	−1.016	1.308	0.396
158SU18	0.189	0.64	0.088	0.683	0.038	0.450	0.077	0.079	0.925	127	0.128	0.017	−1.023	1.309	0.390
158SU16	0.235	0.80	0.108	0.678	0.047	0.448	0.096	0.097	0.920	240	0.251	0.021	−1.021	1.305	0.388
158SU14	0.294	1.00	0.132	0.671	0.058	0.446	0.132	0.127	0.883	329	0.498	0.026	−1.019	1.299	0.385
250SU20	0.177	0.60	0.182	1.015	0.035	0.443	0.096	0.151	1.447	159	0.071	0.037	−0.892	1.422	0.606
250SU18	0.228	0.78	0.232	1.009	0.044	0.441	0.139	0.209	1.391	228	0.155	0.048	−0.897	1.420	0.601
250SU16	0.285	0.97	0.287	1.004	0.055	0.440	0.174	0.261	1.385	433	0.304	0.058	−0.894	1.415	0.600
250SU14	0.356	1.21	0.355	0.998	0.068	0.437	0.236	0.341	1.339	589	0.604	0.071	−0.891	1.408	0.599
350SU20	0.211	0.72	0.395	1.366	0.038	0.427	0.158	0.334	1.976	260	0.084	0.082	−0.787	1.633	0.768
350SU18	0.273	0.93	0.505	1.360	0.049	0.425	0.224	0.459	1.913	369	0.185	0.105	−0.789	1.629	0.765
350SU16	0.341	1.16	0.626	1.355	0.061	0.423	0.281	0.573	1.905	701	0.365	0.130	−0.787	1.623	0.765
350SU14	0.428	1.45	0.777	1.348	0.076	0.421	0.378	0.748	1.854	943	0.724	0.159	−0.783	1.615	0.765
358SU20	0.216	0.73	0.428	1.409	0.039	0.424	0.167	0.363	2.041	274	0.086	0.089	−0.775	1.663	0.783
358SU18	0.279	0.95	0.549	1.402	0.050	0.423	0.236	0.499	1.977	388	0.189	0.114	−0.778	1.658	0.780
358SU16	0.348	1.19	0.680	1.397	0.062	0.421	0.296	0.623	1.970	737	0.372	0.141	−0.775	1.652	0.780
358SU14	0.436	1.49	0.844	1.391	0.077	0.419	0.398	0.813	1.918	992	0.740	0.173	−0.772	1.645	0.780
400SU20	0.229	0.78	0.540	1.536	0.040	0.418	0.193	0.460	2.236	318	0.091	0.112	−0.743	1.757	0.821
400SU18	0.296	1.01	0.692	1.529	0.051	0.416	0.273	0.631	2.171	449	0.201	0.144	−0.746	1.751	0.819
400SU16	0.370	1.26	0.858	1.524	0.064	0.415	0.342	0.788	2.163	853	0.395	0.178	−0.743	1.745	0.819
400SU14	0.463	1.58	1.066	1.517	0.079	0.412	0.458	1.028	2.109	1143	0.785	0.219	−0.739	1.737	0.819
600SU20	0.298	1.01	1.427	2.188	0.044	0.385	0.324	1.262	3.420	534	0.119	0.291	−0.612	2.304	0.929
600SU18	0.386	1.31	1.835	2.180	0.057	0.383	0.505	1.695	3.193	832	0.262	0.374	−0.613	2.297	0.929
600SU16	0.483	1.64	2.283	2.174	0.070	0.381	0.634	2.121	3.185	1581	0.516	0.462	−0.610	2.290	0.929
600SU14	0.606	2.06	2.846	2.167	0.087	0.379	0.839	2.754	3.124	2094	1.027	0.570	−0.606	2.282	0.929
800SU20•	0.367	1.25	2.910	2.815	0.047	0.356	0.423	2.661	4.843	696	0.147	0.568	−0.521	2.885	0.967
800SU18	0.476	1.62	3.750	2.806	0.060	0.355	0.738	3.522	4.340	1216	0.323	0.731	−0.521	2.876	0.967
800SU16	0.596	2.03	4.674	2.800	0.074	0.353	0.948	4.401	4.291	2366	0.637	0.904	−0.519	2.870	0.967
800SU14	0.748	2.55	5.837	2.793	0.092	0.351	1.316	5.669	4.134	3284	1.268	1.117	−0.515	2.862	0.968

NOTES:
1. Effective properties based on F_y=50ksi for 14 and 16 gauge sections, F_y=33ksi for 18 and 20 gauge sections. 14 and 16 gauge sections may be produced with F_y=33ksi. For 33ksi 14 and 16 gauge sections, multiply allowable moment by 0.66. (Contact manufacturer for availability)
2. Effective properties and allowable Moment incorporate the strength increase from cold-work of forming where applicable. (AISI A5.2.2)
3. For deflection calculations, use the effective moment of inertia.
4. • Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)
5. Tabulated areas are based on the full un-reduced cross section of the studs away from web punchouts.
6. For weak-axis orientations, technical assistance is req'd. Contact the manufacturer for this assistance.
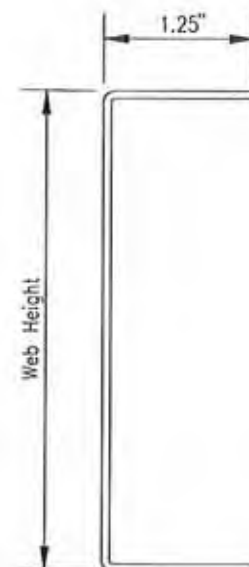

1.375"

Web Height

See Note 1. Below For Yield Strengths

SECTION	GROSS PROPERTIES						EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
	Area (in^2)	Weight (lb/ft)	I_{xx} (in^4)	R_x (in)	I_{yy} (in^4)	R_y (in)	S_{xx} (in^3)	I_{xx} (in^4)	Y_{cg} (in)	M_a $(ft-lb)$	J $(10^{-3}in^4)$	C_w	X_0 (in)	R_0 (in)	β
400EJ18	0.389	1.32	1.017	1.617	0.214	0.742	0.450	1.017	2.101	741	0.264	0.735	−1.617	2.405	0.548
400EJ16	0.499	1.70	1.289	1.607	0.286	0.757	0.581	1.289	2.088	1448	0.533	1.067	−1.697	2.457	0.523
400EJ14	0.623	2.12	1.596	1.600	0.351	0.750	0.769	1.596	2.034	2123	1.056	1.297	−1.683	2.440	0.525
400EJ12	0.858	2.92	2.130	1.576	0.455	0.728	1.065	2.130	2.000	3071	2.957	1.696	−1.677	2.414	0.517
600EJ18	0.479	1.63	2.600	2.330	0.243	0.713	0.777	2.600	3.127	1279	0.325	1.754	−1.390	2.805	0.755
600EJ16	0.612	2.08	3.312	2.326	0.327	0.731	1.003	3.312	3.113	2503	0.654	2.458	−1.460	2.842	0.736
600EJ14	0.766	2.61	4.115	2.318	0.402	0.724	1.322	4.115	3.047	3649	1.298	3.001	−1.446	2.826	0.738
600EJ12	1.061	3.61	5.556	2.288	0.522	0.701	1.852	5.556	3.000	5342	3.658	3.962	−1.433	2.790	0.736
800EJ18	0.569	1.94	5.140	3.005	0.264	0.681	1.128	5.140	4.205	1857	0.386	3.336	−1.224	3.315	0.864
800EJ16	0.725	2.47	6.559	3.007	0.356	0.700	1.481	6.559	4.158	3695	0.774	4.607	−1.287	3.345	0.852
800EJ14	0.909	3.09	8.166	2.998	0.437	0.693	1.971	8.166	4.055	5441	1.540	5.639	−1.274	3.330	0.854
800EJ12	1.265	4.30	11.104	2.963	0.568	0.670	2.776	11.104	4.000	8007	4.360	7.494	−1.258	3.288	0.854
1000EJ16	0.838	2.85	11.256	3.664	0.376	0.670	1.812	11.256	5.466	4522	0.895	7.589	−1.154	3.899	0.912
1000EJ14	1.051	3.58	14.035	3.654	0.462	0.663	2.753	14.035	5.036	6869	1.781	9.301	−1.141	3.885	0.914
1000EJ12	1.468	5.00	19.182	3.615	0.601	0.640	3.836	19.182	5.000	11065	5.061	12.419	−1.124	3.839	0.914
1200EJ16•	0.952	3.24	17.631	4.304	0.392	0.642	2.152	17.631	6.822	5369	1.016	11.455	−1.047	4.476	0.945
1200EJ14	1.194	4.06	22.006	4.293	0.481	0.635	3.268	22.006	6.305	8155	2.023	14.051	−1.035	4.462	0.946
1200EJ12	1.671	5.69	30.195	4.250	0.626	0.612	5.033	30.195	6.000	14515	5.762	18.824	−1.017	4.413	0.947

SECTION															
400MJ18	0.434	1.48	1.193	1.659	0.367	0.920	0.487	1.159	2.169	801	0.294	1.250	−2.075	2.811	0.455
400MJ16	0.555	1.89	1.509	1.648	0.488	0.937	0.621	1.492	2.163	1550	0.593	1.799	−2.163	2.876	0.435
400MJ14	0.695	2.36	1.871	1.641	0.601	0.930	0.782	1.871	2.152	1950	1.177	2.196	−2.147	2.858	0.436
400MJ12	0.959	3.26	2.516	1.619	0.790	0.908	1.203	2.516	2.042	3381	3.308	2.904	−2.144	2.836	0.429
600MJ18	0.524	1.78	3.000	2.392	0.421	0.896	0.834	2.893	3.212	1374	0.355	2.977	−1.812	3.132	0.665
600MJ16	0.669	2.28	3.811	2.387	0.561	0.916	1.067	3.758	3.207	2662	0.714	4.142	−1.891	3.180	0.647
600MJ14	0.837	2.85	4.742	2.380	0.691	0.909	1.343	4.742	3.194	3350	1.419	5.078	−1.876	3.163	0.648
600MJ12	1.163	3.96	6.440	2.353	0.911	0.885	2.052	6.440	3.057	5770	4.009	6.771	−1.864	3.130	0.645
800MJ18	0.614	2.09	5.854	3.087	0.458	0.864	1.177	5.728	4.349	1938	0.416	5.661	−1.615	3.590	0.797
800MJ16	0.782	2.66	7.452	3.087	0.613	0.885	1.525	7.363	4.319	3805	0.835	7.763	−1.687	3.628	0.784
800MJ14	0.980	3.33	9.287	3.079	0.755	0.878	2.003	9.287	4.223	4997	1.660	9.538	−1.672	3.612	0.786
800MJ12	1.366	4.65	12.690	3.048	0.996	0.854	3.040	12.690	4.068	8547	4.710	12.791	−1.657	3.573	0.785
1000MJ16	0.895	3.05	12.655	3.760	0.651	0.853	1.880	12.634	5.631	4689	0.956	12.796	−1.527	4.147	0.864
1000MJ14	1.122	3.82	15.792	3.751	0.802	0.846	2.661	15.792	5.329	6640	1.902	15.744	−1.513	4.132	0.866
1000MJ12	1.570	5.34	21.673	3.716	1.059	0.822	4.165	21.673	5.076	11708	5.412	21.201	−1.496	4.089	0.866
1200MJ16•	1.008	3.43	19.650	4.415	0.681	0.822	2.239	19.650	6.990	5585	1.077	19.342	−1.396	4.702	0.912
1200MJ14	1.265	4.30	24.542	4.405	0.839	0.815	3.137	24.542	6.657	7826	2.144	23.819	−1.383	4.688	0.913
1200MJ12	1.773	6.03	33.795	4.366	1.108	0.791	5.426	33.795	6.082	15254	6.113	32.173	−1.365	4.642	0.914

NOTES:
1. Effective properties based on F_y=50ksi for 12, 14 and 16 gauge sections, F_y=33ksi for 18 gauge sections. 14 and 16 gauge sections may be produced with F_y=33ksi. For 33ksi 14 and 16 gauge sections, multiply allowable moment by 0.66. (Contact manufacturer for availability)
2. Effective properties and allowable Moment incorporate the strength increase from cold-work of forming where applicable. (AISI A5.2.2)
3. For deflection calculations, use the effective moment of inertia.
4. • Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)
5. Tabulated areas are based on the full un-reduced cross section of the joist member.
6. For weak-axis orientations, technical assistance is req'd. Contact the manufacturer for this assistance.

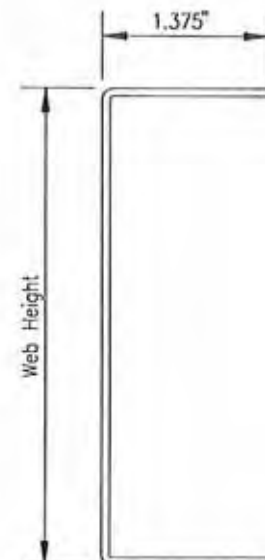### See Note 1. Below For Yield Strengths

SECTION	GROSS PROPERTIES						EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
	Area (in²)	Weight (lb/ft)	I_{xx} (in⁴)	R_x (in)	I_{yy} (in⁴)	R_y (in)	S_{xx} (in³)	I_{xx} (in⁴)	Y_{cg} (in)	M_a (ft–lb)	J (10⁻³in⁴)	C_w	X_0 (in)	R_0 (in)	β
400WJ16	0.612	2.08	1.729	1.681	0.758	1.113	0.644	1.607	2.245	1608	0.654	2.773	−2.634	3.317	0.369
400WJ14	0.766	2.61	2.146	1.674	0.937	1.106	0.848	2.082	2.199	2117	1.298	3.395	−2.618	3.299	0.370
400WJ12	1.061	3.61	2.902	1.654	1.243	1.082	1.283	2.873	2.107	3200	3.658	4.524	−2.616	3.278	0.363
600WJ16	0.725	2.47	4.311	2.438	0.873	1.097	1.105	4.005	3.312	2758	0.774	6.382	−2.332	3.548	0.568
600WJ14	0.909	3.09	5.368	2.431	1.079	1.090	1.447	5.160	3.256	3610	1.540	7.845	−2.317	3.531	0.569
600WJ12	1.265	4.30	7.325	2.407	1.437	1.066	2.177	7.237	3.140	5433	4.360	10.535	−2.307	3.500	0.566
800WJ16	0.838	2.85	8.344	3.155	0.957	1.068	1.537	7.843	4.495	3834	0.895	11.952	−2.101	3.938	0.715
800WJ14	1.051	3.58	10.408	3.147	1.183	1.061	2.146	9.965	4.296	5354	1.781	14.724	−2.086	3.922	0.717
800WJ12	1.468	5.00	14.277	3.119	1.578	1.037	3.213	14.094	4.164	8016	5.061	19.876	−2.072	3.885	0.716
1000WJ16	0.952	3.24	14.055	3.843	1.021	1.036	1.905	13.409	5.819	4752	1.016	19.703	−1.916	4.417	0.812
1000WJ14	1.194	4.06	17.549	3.834	1.263	1.028	2.795	17.029	5.448	6974	2.023	24.306	−1.902	4.402	0.813
1000WJ12	1.671	5.69	24.164	3.802	1.684	1.004	4.386	23.849	5.181	10944	5.762	32.932	−1.885	4.361	0.813
1200WJ16٭	1.065	3.62	21.668	4.511	1.072	1.003	2.275	20.797	7.188	5677	1.137	29.802	−1.764	4.946	0.873
1200WJ14	1.336	4.55	27.078	4.501	1.325	0.996	3.309	26.586	6.771	8256	2.265	36.798	−1.750	4.931	0.874
1200WJ12	1.875	6.38	37.394	4.466	1.767	0.971	5.698	36.909	6.195	14216	6.463	49.995	−1.732	4.888	0.874

NOTES:
1. Effective properties based on F_y=50ksi for 12, 14 and 16 gauge sections, F_y=33ksi for 18 gauge sections. 14 and 16 gauge sections may be produced with F_y=33ksi. For 33ksi 14 and 16 gauge sections, multiply allowable moment by 0.66. (Contact manufacturer for availability)
2. Effective properties and allowable Moment incorporate the strength increase from cold-work of forming where applicable. (AISI A5.2.2)
3. For deflection calculations, use the effective moment of inertia.
4. ٭ Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)
5. Tabulated areas are based on the full un-reduced cross section of the joist member.
6. For weak-axis orientations, technical assistance is req'd. Contact the manufacturer for this assistance.

Stiffener Lip – 0.625" minimum for 12, 14 and 16 gauge
0.50" minimum for 18 gauge

EJ SECTION

MJ SECTION

WJ SECTION

See Note 1. Below For Yield Strengths

SECTION	Web Ht. (in)	Area (in²)	Weight (lb/ft)	I_{xx} (in⁴)	R_x (in)	I_{yy} (in⁴)	R_y (in)	S_{xx} (in³)	I_{xx} (in⁴)	Y_{cg} (in)	Mo (ft–lb)	J (10⁻³in⁴)	C_w	X_0 (in)	R_0 (in)	β
				GROSS PROPERTIES				EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
158ST20	1.757	0.125	0.43	0.063	0.711	0.013	0.322	0.055	0.058	0.973	90	0.050	0.007	−0.658	1.021	0.584
158ST18	1.809	0.163	0.56	0.086	0.724	0.017	0.319	0.082	0.084	0.956	134	0.111	0.009	−0.656	1.028	0.592
158ST16	1.832	0.205	0.70	0.108	0.727	0.021	0.317	0.103	0.107	0.963	258	0.218	0.012	−0.651	1.026	0.597
158ST14	1.861	0.257	0.88	0.138	0.731	0.025	0.314	0.142	0.138	0.946	353	0.436	0.015	−0.645	1.024	0.604
158ST12	2.016	0.367	1.25	0.215	0.766	0.034	0.306	0.214	0.215	1.008	616	1.265	0.023	−0.642	1.045	0.623
250ST20	2.632	0.155	0.53	0.161	1.018	0.015	0.307	0.097	0.148	1.429	159	0.062	0.018	−0.565	1.204	0.780
250ST18	2.684	0.203	0.69	0.214	1.029	0.019	0.305	0.141	0.210	1.404	232	0.137	0.024	−0.563	1.212	0.784
250ST16	2.707	0.254	0.86	0.270	1.031	0.023	0.303	0.178	0.266	1.410	445	0.271	0.029	−0.558	1.211	0.788
250ST14	2.736	0.320	1.09	0.342	1.035	0.029	0.300	0.241	0.342	1.387	601	0.542	0.037	−0.552	1.210	0.792
250ST12	2.891	0.456	1.55	0.516	1.064	0.039	0.292	0.357	0.516	1.445	1030	1.572	0.056	−0.548	1.232	0.802
350ST20	3.632	0.190	0.65	0.346	1.350	0.016	0.290	0.156	0.321	1.942	257	0.076	0.038	−0.488	1.464	0.889
350ST18	3.684	0.248	0.84	0.458	1.359	0.021	0.288	0.223	0.449	1.911	368	0.168	0.050	−0.486	1.472	0.891
350ST16	3.707	0.311	1.06	0.576	1.361	0.025	0.286	0.282	0.568	1.916	703	0.332	0.062	−0.482	1.472	0.893
350ST14	3.736	0.391	1.33	0.727	1.364	0.031	0.283	0.377	0.727	1.889	940	0.662	0.077	−0.476	1.472	0.895
350ST12	3.891	0.558	1.90	1.076	1.389	0.042	0.275	0.553	1.076	1.945	1595	1.922	0.114	−0.471	1.493	0.900
358ST20	3.757	0.194	0.66	0.376	1.390	0.016	0.288	0.164	0.349	2.006	271	0.078	0.041	−0.480	1.499	0.897
358ST18	3.809	0.253	0.86	0.496	1.400	0.021	0.286	0.235	0.487	1.974	386	0.172	0.054	−0.478	1.506	0.899
358ST16	3.832	0.318	1.08	0.624	1.402	0.026	0.284	0.296	0.616	1.980	739	0.339	0.067	−0.474	1.506	0.901
358ST14	3.861	0.400	1.36	0.788	1.404	0.032	0.281	0.395	0.788	1.952	987	0.678	0.084	−0.468	1.507	0.903
358ST12	4.016	0.570	1.94	1.164	1.429	0.043	0.273	0.580	1.164	2.008	1673	1.966	0.123	−0.463	1.527	0.908
400ST20	4.132	0.207	0.71	0.474	1.511	0.016	0.282	0.190	0.440	2.197	313	0.083	0.051	−0.457	1.604	0.919
400ST18	4.184	0.270	0.92	0.624	1.520	0.021	0.280	0.270	0.613	2.164	445	0.183	0.067	−0.455	1.611	0.920
400ST16	4.207	0.339	1.15	0.785	1.522	0.026	0.278	0.341	0.774	2.169	850	0.362	0.084	−0.451	1.611	0.922
400ST14	4.236	0.427	1.45	0.991	1.524	0.032	0.275	0.454	0.991	2.140	1132	0.723	0.104	−0.446	1.611	0.923
400ST12	4.391	0.608	2.07	1.457	1.548	0.044	0.268	0.664	1.457	2.195	1914	2.098	0.153	−0.441	1.631	0.927
600ST20	6.132	0.277	0.94	1.263	2.137	0.018	0.254	0.331	1.196	3.305	544	0.110	0.128	−0.367	2.183	0.972
600ST18	6.184	0.361	1.23	1.657	2.144	0.023	0.252	0.495	1.630	3.171	815	0.244	0.168	−0.365	2.189	0.972
600ST16	6.207	0.452	1.54	2.081	2.145	0.028	0.250	0.624	2.055	3.176	1556	0.483	0.208	−0.361	2.190	0.973
600ST14	6.236	0.569	1.94	2.623	2.147	0.035	0.247	0.821	2.623	3.142	2048	0.964	0.258	−0.357	2.190	0.973
600ST12	6.391	0.812	2.76	3.806	2.165	0.047	0.241	1.191	3.806	3.195	3435	2.799	0.369	−0.352	2.207	0.975
800ST20•	8.132	0.346	1.18	2.606	2.745	0.019	0.232	0.422	2.523	4.730	695	0.138	0.245	−0.307	2.772	0.988
800ST18	8.184	0.451	1.53	3.411	2.751	0.024	0.230	0.745	3.371	4.252	1227	0.306	0.319	−0.305	2.777	0.988
800ST16	8.207	0.565	1.92	4.281	2.752	0.030	0.229	0.960	4.240	4.218	2395	0.604	0.395	−0.302	2.778	0.988
800ST14	8.236	0.712	2.42	5.393	2.753	0.036	0.226	1.283	5.393	4.144	3202	1.206	0.489	−0.298	2.778	0.988
800ST12	8.391	1.015	3.45	7.779	2.768	0.049	0.220	1.854	7.779	4.195	5348	3.500	0.692	−0.293	2.792	0.989
1000ST18•	10.184	0.541	1.84	6.066	3.349	0.025	0.213	0.889	6.057	5.679	1464	0.367	0.523	−0.262	3.366	0.994
1000ST16	10.207	0.679	2.31	7.612	3.349	0.030	0.212	1.140	7.612	5.642	2845	0.725	0.648	−0.260	3.366	0.994
1000ST14	10.236	0.854	2.91	9.587	3.350	0.037	0.209	1.841	9.587	5.145	4593	1.448	0.802	−0.256	3.366	0.994
1000ST12	10.391	1.219	4.15	13.782	3.363	0.051	0.204	2.653	13.782	5.195	7651	4.201	1.124	−0.252	3.378	0.994
1200ST16•	12.207	0.792	2.69	12.300	3.941	0.031	0.198	1.339	12.300	7.105	3341	0.846	0.967	−0.228	3.953	0.997
1200ST14	12.236	0.997	3.39	15.489	3.942	0.038	0.196	2.108	15.489	6.561	5260	1.689	1.196	−0.225	3.953	0.997
1200ST12	12.391	1.422	4.84	22.222	3.953	0.052	0.191	3.587	22.222	6.195	10346	4.903	1.669	−0.221	3.964	0.997

NOTES:
1. Effective properties based on F_y=50ksi for 12, 14 and 16 gauge sections, F_y=33ksi for 18 and 20 gauge sections. 14 and 16 gauge sections may be produced with F_y=33ksi. For 33ksi 14 and 16 gauge sections, multiply allowable moment by 0.66. (Contact manufacturer for availability)
2. Effective properties and allowable Moment incorporate the strength increase from cold-work of forming where applicable. (AISI A5.2.2)
3. For deflection calculations, use the effective moment of inertia.
4. • Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)
5. Tabulated areas are based on the full un-reduced cross section of the studs away from web punchouts.
6. For weak-axis orientations, technical assistance is req'd. Contact the manufacturer for this assistance.
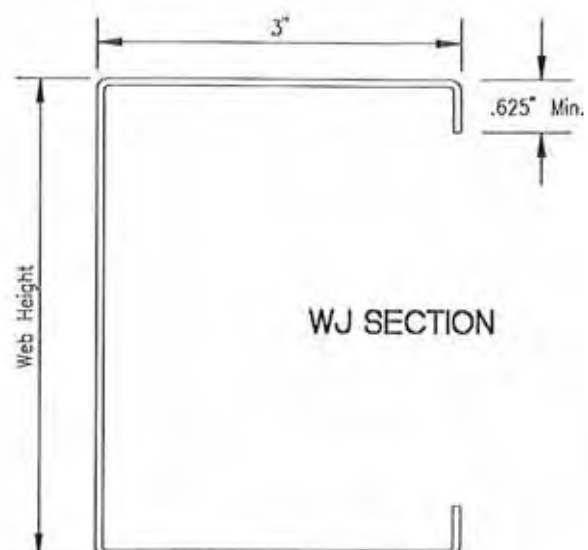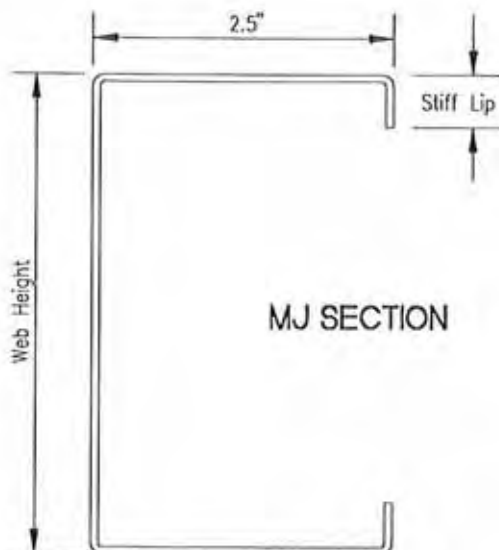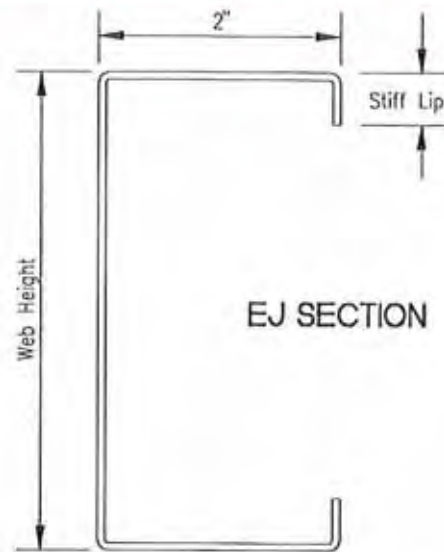
Web Height

STRUCTURAL PROPERTIES

See Note 1. Below For Yield Strengths

SECTION	GROSS PROPERTIES							EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
	Web Ht. (in)	Area (in²)	Weight (lb/ft)	I_{xx} (in⁴)	R_x (in)	I_{yy} (in⁴)	R_y (in)	S_{xx} (in³)	I_{xx} (in⁴)	Y_{cg} (in)	M_a (ft-lb)	J (10⁻³in⁴)	C_w	X_0 (in)	R_0 (in)	β
158MT20	1.757	0.143	0.48	0.076	0.731	0.024	0.409	0.057	0.064	1.022	94	0.057	0.013	−0.881	1.215	0.475
158MT18	1.809	0.186	0.63	0.103	0.745	0.031	0.406	0.087	0.095	1.002	143	0.126	0.017	−0.879	1.222	0.482
158MT16	1.832	0.233	0.79	0.130	0.749	0.038	0.404	0.110	0.121	1.009	275	0.249	0.021	−0.874	1.219	0.487
158MT14	1.861	0.293	1.00	0.166	0.753	0.047	0.402	0.153	0.163	0.987	383	0.496	0.027	−0.867	1.216	0.492
158MT12	2.016	0.418	1.42	0.262	0.792	0.065	0.394	0.260	0.262	1.008	731	1.440	0.044	−0.863	1.236	0.512
250MT20	2.632	0.173	0.59	0.190	1.049	0.027	0.397	0.102	0.164	1.489	167	0.069	0.032	−0.770	1.361	0.680
250MT18	2.684	0.225	0.77	0.254	1.061	0.035	0.394	0.150	0.235	1.460	247	0.153	0.043	−0.768	1.368	0.685
250MT16	2.707	0.282	0.96	0.320	1.064	0.043	0.392	0.190	0.299	1.466	473	0.302	0.054	−0.763	1.367	0.688
250MT14	2.736	0.355	1.21	0.405	1.068	0.054	0.389	0.260	0.399	1.436	648	0.602	0.068	−0.757	1.366	0.693
250MT12	2.891	0.507	1.72	0.615	1.102	0.074	0.382	0.426	0.615	1.445	1197	1.747	0.104	−0.753	1.388	0.706
350MT20	3.632	0.207	0.71	0.402	1.393	0.030	0.379	0.164	0.351	2.011	270	0.083	0.069	−0.676	1.594	0.820
350MT18	3.684	0.270	0.92	0.532	1.403	0.038	0.377	0.236	0.497	1.976	389	0.183	0.092	−0.674	1.602	0.823
350MT16	3.707	0.339	1.15	0.670	1.406	0.048	0.375	0.299	0.629	1.980	745	0.362	0.114	−0.670	1.602	0.825
350MT14	3.736	0.427	1.45	0.847	1.409	0.059	0.372	0.404	0.833	1.945	1009	0.723	0.143	−0.664	1.601	0.828
350MT12	3.891	0.608	2.07	1.258	1.438	0.081	0.365	0.647	1.258	1.945	1819	2.098	0.213	−0.659	1.623	0.835
358MT20	3.757	0.212	0.72	0.436	1.435	0.030	0.377	0.172	0.381	2.076	284	0.084	0.075	−0.666	1.626	0.832
358MT18	3.809	0.276	0.94	0.576	1.445	0.039	0.375	0.248	0.538	2.040	408	0.187	0.099	−0.664	1.634	0.835
358MT16	3.832	0.346	1.18	0.725	1.447	0.048	0.373	0.314	0.681	2.044	782	0.370	0.124	−0.660	1.634	0.837
358MT14	3.861	0.435	1.48	0.916	1.451	0.060	0.370	0.424	0.901	2.009	1058	0.738	0.155	−0.654	1.634	0.840
358MT12	4.016	0.621	2.11	1.359	1.479	0.082	0.363	0.677	1.359	2.008	1903	2.142	0.230	−0.649	1.656	0.846
400MT20	4.132	0.225	0.76	0.546	1.559	0.031	0.371	0.199	0.480	2.270	328	0.090	0.094	−0.638	1.725	0.863
400MT18	4.184	0.293	1.00	0.721	1.569	0.040	0.369	0.285	0.675	2.232	470	0.199	0.124	−0.636	1.733	0.865
400MT16	4.207	0.367	1.25	0.907	1.571	0.049	0.366	0.360	0.854	2.236	899	0.392	0.154	−0.632	1.733	0.867
400MT14	4.236	0.462	1.57	1.145	1.574	0.061	0.364	0.486	1.127	2.199	1211	0.783	0.193	−0.626	1.733	0.869
400MT12	4.391	0.659	2.24	1.691	1.602	0.084	0.356	0.770	1.691	2.195	2165	2.273	0.285	−0.621	1.754	0.875
600MT20	6.132	0.294	1.00	1.424	2.201	0.034	0.339	0.331	1.291	3.445	545	0.117	0.236	−0.522	2.288	0.948
600MT18	6.184	0.383	1.30	1.870	2.209	0.044	0.337	0.519	1.766	3.248	855	0.260	0.310	−0.520	2.294	0.949
600MT16	6.207	0.480	1.63	2.348	2.211	0.054	0.335	0.655	2.229	3.251	1634	0.513	0.385	−0.516	2.295	0.949
600MT14	6.236	0.605	2.06	2.961	2.213	0.067	0.332	0.870	2.917	3.209	2172	1.025	0.480	−0.511	2.295	0.950
600MT12	6.391	0.863	2.94	4.309	2.235	0.091	0.326	1.348	4.309	3.195	3791	2.974	0.693	−0.506	2.314	0.952
800MT20•	8.132	0.363	1.24	2.890	2.821	0.036	0.313	0.428	2.696	4.870	704	0.145	0.455	−0.443	2.873	0.976
800MT18	8.184	0.473	1.61	3.784	2.828	0.046	0.311	0.751	3.621	4.396	1237	0.321	0.593	−0.441	2.879	0.977
800MT16	8.207	0.594	2.02	4.751	2.829	0.057	0.309	0.967	4.559	4.362	2413	0.634	0.737	−0.438	2.879	0.977
800MT14	8.236	0.747	2.54	5.987	2.830	0.070	0.307	1.351	5.905	4.215	3370	1.267	0.917	−0.434	2.880	0.977
800MT12	8.391	1.066	3.63	8.652	2.849	0.096	0.301	2.062	8.652	4.195	5798	3.676	1.308	−0.428	2.896	0.978
1000MT18•	10.184	0.563	1.92	6.646	3.434	0.047	0.290	0.905	6.462	5.817	1491	0.382	0.978	−0.383	3.468	0.988
1000MT16	10.207	0.707	2.41	8.341	3.435	0.059	0.288	1.162	8.130	5.779	2899	0.755	1.215	−0.381	3.468	0.988
1000MT14	10.236	0.890	3.03	10.508	3.436	0.073	0.286	1.884	10.390	5.265	4700	1.508	1.510	−0.377	3.468	0.988
1000MT12	10.391	1.270	4.32	15.128	3.452	0.100	0.280	2.912	15.128	5.195	8186	4.377	2.139	−0.372	3.483	0.989
1200MT16•	12.207	0.820	2.79	13.344	4.034	0.060	0.271	1.370	13.136	7.238	3419	0.876	1.823	−0.337	4.057	0.993
1200MT14	12.236	1.033	3.51	16.808	4.035	0.074	0.268	2.161	16.769	6.686	5393	1.750	2.264	−0.333	4.057	0.993
1200MT12	12.391	1.473	5.01	24.142	4.049	0.102	0.263	3.897	24.142	6.195	10955	5.078	3.192	−0.329	4.070	0.993

NOTES:
1. Effective properties based on F_y=50ksi for 12, 14 and 16 gauge sections, F_y=33ksi for 18 and 20 gauge sections. 14 and 16 gauge sections may be produced with F_y=33ksi. For 33ksi 14 and 16 gauge sections, multiply allowable moment by 0.66. (Contact manufacturer for availability)
2. Effective properties and allowable Moment incorporate the strength increase from cold-work of forming where applicable. (AISI A5.2.2)
3. For deflection calculations, use the effective moment of inertia.
4. • Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)
5. Tabulated areas are based on the full un-reduced cross section of the studs away from web punchouts.
6. For weak-axis orientations, technical assistance is req'd. Contact the manufacturer for this assistance.

1.25"

Web Height

See Note 1. Below For Yield Strengths

SECTION	Web Ht. (in)	Area (in²)	Weight (lb/ft)	I_{xx} (in⁴)	R_x (in)	I_{yy} (in⁴)	R_y (in)	S_{xx} (in³)	I_{xr} (in⁴)	Y_{cg} (in)	Mo (ft-lb)	J (10⁻³in⁴)	C_w	X_0 (in)	R_0 (in)	β
158WT20	1.757	0.160	0.54	0.089	0.746	0.039	0.494	0.059	0.070	1.065	98	0.064	0.021	−1.110	1.426	0.394
158WT18	1.809	0.208	0.71	0.121	0.761	0.050	0.492	0.091	0.105	1.045	149	0.141	0.028	−1.108	1.431	0.401
158WT16	1.832	0.261	0.89	0.153	0.765	0.063	0.490	0.115	0.134	1.052	288	0.279	0.036	−1.102	1.428	0.404
158WT14	1.861	0.329	1.12	0.195	0.770	0.078	0.487	0.162	0.182	1.027	404	0.557	0.045	−1.095	1.424	0.409
158WT12	2.016	0.469	1.59	0.308	0.811	0.108	0.480	0.290	0.308	1.030	724	1.616	0.073	−1.092	1.442	0.427
250WT20	2.632	0.190	0.65	0.219	1.074	0.045	0.485	0.105	0.177	1.545	174	0.076	0.053	−0.985	1.536	0.589
250WT18	2.684	0.248	0.84	0.293	1.087	0.058	0.483	0.156	0.257	1.514	257	0.168	0.071	−0.983	1.543	0.594
250WT16	2.707	0.311	1.06	0.370	1.091	0.072	0.481	0.198	0.327	1.520	494	0.332	0.089	−0.977	1.541	0.598
250WT14	2.736	0.391	1.33	0.469	1.095	0.089	0.478	0.274	0.441	1.487	683	0.662	0.113	−0.971	1.539	0.602
250WT12	2.891	0.558	1.90	0.714	1.132	0.124	0.471	0.471	0.714	1.472	1176	1.922	0.173	−0.966	1.561	0.617
350WT20	3.632	0.225	0.76	0.458	1.428	0.049	0.469	0.170	0.378	2.077	280	0.090	0.113	−0.876	1.740	0.747
350WT18	3.684	0.293	1.00	0.607	1.440	0.064	0.467	0.246	0.539	2.039	405	0.199	0.150	−0.873	1.747	0.750
350WT16	3.707	0.367	1.25	0.764	1.442	0.079	0.465	0.312	0.683	2.044	777	0.392	0.188	−0.869	1.747	0.753
350WT14	3.736	0.462	1.57	0.967	1.446	0.099	0.462	0.425	0.912	2.004	1060	0.783	0.236	−0.862	1.746	0.756
350WT12	3.891	0.659	2.24	1.441	1.478	0.136	0.455	0.710	1.441	1.976	1772	2.273	0.354	−0.857	1.768	0.765
358WT20	3.757	0.229	0.78	0.496	1.471	0.050	0.467	0.179	0.410	2.143	294	0.091	0.123	−0.864	1.769	0.762
358WT18	3.809	0.299	1.02	0.656	1.483	0.064	0.465	0.259	0.583	2.104	426	0.202	0.163	−0.862	1.776	0.765
358WT16	3.832	0.374	1.27	0.826	1.485	0.080	0.462	0.327	0.739	2.109	816	0.400	0.203	−0.857	1.776	0.767
358WT14	3.861	0.471	1.60	1.044	1.489	0.099	0.460	0.445	0.985	2.068	1111	0.798	0.255	−0.851	1.775	0.770
358WT12	4.016	0.672	2.29	1.554	1.521	0.138	0.452	0.743	1.554	2.039	1853	2.317	0.382	−0.845	1.798	0.779
400WT20	4.132	0.242	0.82	0.619	1.599	0.051	0.460	0.207	0.515	2.339	340	0.097	0.154	−0.830	1.860	0.801
400WT18	4.184	0.315	1.07	0.818	1.610	0.066	0.458	0.297	0.729	2.299	489	0.214	0.203	−0.828	1.867	0.803
400WT16	4.207	0.396	1.35	1.029	1.613	0.082	0.456	0.376	0.923	2.303	937	0.422	0.254	−0.823	1.867	0.805
400WT14	4.236	0.498	1.69	1.300	1.616	0.102	0.453	0.510	1.228	2.261	1271	0.844	0.318	−0.818	1.867	0.808
400WT12	4.391	0.710	2.42	1.925	1.646	0.141	0.446	0.843	1.925	2.227	2102	2.448	0.472	−0.812	1.889	0.815
600WT20	6.132	0.311	1.06	1.585	2.257	0.057	0.426	0.330	1.377	3.576	544	0.124	0.388	−0.691	2.398	0.917
600WT18	6.184	0.406	1.38	2.082	2.266	0.073	0.424	0.539	1.886	3.325	887	0.275	0.509	−0.688	2.406	0.918
600WT16	6.207	0.509	1.73	2.616	2.268	0.091	0.422	0.680	2.383	3.328	1697	0.543	0.635	−0.684	2.406	0.919
600WT14	6.236	0.640	2.18	3.300	2.270	0.113	0.419	0.909	3.139	3.280	2268	1.085	0.793	−0.679	2.406	0.920
600WT12	6.391	0.914	3.11	4.812	2.295	0.156	0.413	1.457	4.812	3.231	3635	3.150	1.152	−0.674	2.427	0.923
800WT20•	8.132	0.380	1.29	3.173	2.888	0.060	0.397	0.431	2.855	5.006	710	0.152	0.749	−0.593	2.975	0.960
800WT18	8.184	0.496	1.69	4.158	2.896	0.077	0.395	0.753	3.849	4.538	1240	0.336	0.978	−0.591	2.982	0.961
800WT16	8.207	0.622	2.12	5.221	2.897	0.096	0.393	0.969	4.847	4.505	2417	0.664	1.218	−0.587	2.982	0.961
800WT14	8.236	0.783	2.66	6.581	2.899	0.119	0.390	1.404	6.294	4.292	3504	1.327	1.521	−0.583	2.983	0.962
800WT12	8.391	1.117	3.80	9.526	2.920	0.165	0.384	2.207	9.526	4.234	5507	3.851	2.183	−0.577	3.001	0.963
1000WT18•	10.184	0.586	1.99	7.225	3.511	0.080	0.370	0.915	6.826	5.957	1507	0.397	1.620	−0.518	3.569	0.979
1000WT16	10.207	0.735	2.50	9.070	3.512	0.100	0.368	1.175	8.592	5.920	2931	0.785	2.017	−0.515	3.569	0.979
1000WT14	10.236	0.926	3.15	11.429	3.514	0.124	0.366	1.894	11.019	5.410	4726	1.569	2.515	−0.511	3.569	0.980
1000WT12	10.391	1.320	4.49	16.474	3.532	0.171	0.360	3.093	16.474	5.236	7718	4.552	3.585	−0.506	3.586	0.980
1200WT16•	12.207	0.848	2.89	14.389	4.118	0.103	0.348	1.390	13.817	7.378	3468	0.906	3.038	−0.459	4.158	0.988
1200WT14	12.236	1.068	3.64	18.127	4.119	0.127	0.345	2.192	17.702	6.825	5469	1.810	3.785	−0.455	4.159	0.988
1200WT12	12.391	1.524	5.19	26.062	4.136	0.176	0.340	4.115	26.062	6.237	10268	5.253	5.369	−0.450	4.174	0.988

NOTES:
1. Effective properties based on F_y=50ksi for 12, 14 and 16 gauge sections, F_y=33ksi for 18 and 20 gauge sections. 14 and 16 gauge sections may be produced with F_y=33ksi. For 33ksi 14 and 16 gauge sections, multiply allowable moment by 0.66. (Contact manufacturer for availability)
2. Effective properties and allowable Moment incorporate the strength increase from cold-work of forming where applicable. (AISI A5.2.2)
3. For deflection calculations, use the effective moment of inertia.
4. • Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)
5. Tabulated areas are based on the full un-reduced cross section of the studs away from web punchouts.
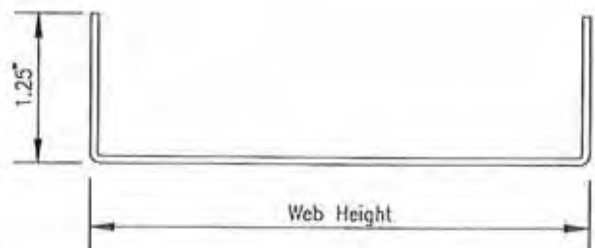6. For weak-axis orientations, technical assistance is req'd. Contact the manufacturer for this assistance.

Web Height

See Note 1. Below For Yield Strengths

SECTION	GROSS PROPERTIES							EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
	Web Ht. (in)	Area (in²)	Weight (lb/ft)	I_{xx} (in⁴)	R_x (in)	I_{yy} (in⁴)	R_y (in)	S_{xx} (in³)	I_{xx} (in⁴)	Y_{cg} (in)	M_a (ft-lb)	J (10⁻³in⁴)	C_w	X_0 (in)	R_0 (in)	β
158DT20	1.757	0.194	0.66	0.115	0.768	0.085	0.660	0.062	0.080	1.139	103	0.078	0.046	−1.579	1.876	0.291
158DT18	1.809	0.253	0.86	0.156	0.784	0.110	0.658	0.096	0.121	1.120	158	0.172	0.063	−1.577	1.880	0.296
158DT16	1.832	0.318	1.08	0.197	0.788	0.137	0.656	0.122	0.155	1.127	305	0.339	0.079	−1.571	1.876	0.299
158DT14	1.861	0.400	1.36	0.252	0.794	0.171	0.653	0.173	0.214	1.101	433	0.678	0.101	−1.564	1.871	0.302
158DT12	2.016	0.570	1.94	0.402	0.839	0.239	0.647	0.322	0.386	1.097	804	1.966	0.163	−1.560	1.886	0.316
250DT20	2.632	0.225	0.76	0.278	1.112	0.097	0.658	0.111	0.200	1.643	183	0.090	0.117	−1.431	1.928	0.449
250DT18	2.684	0.293	1.00	0.371	1.126	0.126	0.656	0.166	0.294	1.612	273	0.199	0.156	−1.429	1.934	0.454
250DT16	2.707	0.367	1.25	0.469	1.130	0.157	0.654	0.210	0.374	1.618	525	0.392	0.197	−1.423	1.932	0.457
250DT14	2.736	0.462	1.57	0.595	1.135	0.196	0.652	0.293	0.511	1.582	732	0.783	0.248	−1.416	1.928	0.461
250DT12	2.891	0.659	2.24	0.912	1.176	0.274	0.645	0.521	0.878	1.556	1299	2.273	0.385	−1.411	1.947	0.475
350DT20	3.632	0.259	0.88	0.570	1.483	0.108	0.647	0.179	0.424	2.195	295	0.103	0.247	−1.296	2.073	0.609
350DT18	3.684	0.338	1.15	0.756	1.496	0.140	0.644	0.261	0.610	2.156	430	0.229	0.328	−1.294	2.080	0.613
350DT16	3.707	0.424	1.44	0.953	1.499	0.175	0.642	0.331	0.774	2.161	825	0.453	0.411	−1.289	2.079	0.616
350DT14	3.736	0.534	1.82	1.206	1.503	0.218	0.640	0.455	1.046	2.117	1134	0.904	0.518	−1.282	2.077	0.619
350DT12	3.891	0.761	2.59	1.806	1.541	0.305	0.633	0.781	1.740	2.074	1949	2.624	0.781	−1.277	2.098	0.630
358DT20	3.757	0.264	0.90	0.616	1.528	0.110	0.645	0.188	0.459	2.263	310	0.105	0.267	−1.281	2.096	0.626
358DT18	3.809	0.344	1.17	0.816	1.541	0.142	0.643	0.274	0.659	2.223	451	0.233	0.355	−1.279	2.103	0.630
358DT16	3.832	0.431	1.47	1.028	1.544	0.177	0.640	0.347	0.837	2.228	866	0.460	0.445	−1.274	2.102	0.633
358DT14	3.861	0.542	1.85	1.300	1.548	0.221	0.638	0.477	1.129	2.183	1189	0.919	0.560	−1.267	2.100	0.636
358DT12	4.016	0.774	2.63	1.944	1.585	0.308	0.631	0.816	1.873	2.139	2037	2.668	0.842	−1.262	2.122	0.646
400DT20	4.132	0.277	0.94	0.764	1.662	0.113	0.639	0.218	0.576	2.466	359	0.110	0.334	−1.239	2.169	0.674
400DT18	4.184	0.361	1.23	1.011	1.674	0.146	0.637	0.315	0.822	2.424	519	0.244	0.442	−1.237	2.177	0.677
400DT16	4.207	0.452	1.54	1.272	1.677	0.182	0.634	0.399	1.042	2.428	995	0.483	0.554	−1.232	2.176	0.680
400DT14	4.236	0.569	1.94	1.609	1.681	0.227	0.632	0.545	1.402	2.381	1359	0.964	0.697	−1.225	2.174	0.682
400DT12	4.391	0.812	2.76	2.393	1.717	0.317	0.625	0.925	2.307	2.331	2307	2.799	1.042	−1.220	2.197	0.692
600DT20	6.132	0.346	1.18	1.906	2.348	0.126	0.604	0.329	1.534	3.810	541	0.138	0.842	−1.057	2.645	0.840
600DT18	6.184	0.451	1.53	2.507	2.358	0.163	0.602	0.570	2.097	3.473	939	0.306	1.108	−1.054	2.653	0.842
600DT16	6.207	0.565	1.92	3.151	2.361	0.203	0.600	0.720	2.651	3.476	1796	0.604	1.385	−1.050	2.652	0.843
600DT14	6.236	0.712	2.42	3.978	2.364	0.254	0.597	0.968	3.521	3.422	2414	1.206	1.738	−1.044	2.652	0.845
600DT12	6.391	1.015	3.45	5.817	2.394	0.354	0.591	1.585	5.624	3.353	3955	3.500	2.543	−1.038	2.675	0.849
800DT20•	8.132	0.415	1.41	3.740	3.002	0.135	0.571	0.435	3.143	5.255	716	0.166	1.632	−0.924	3.193	0.916
800DT18	8.184	0.541	1.84	4.905	3.011	0.175	0.569	0.753	4.258	4.803	1240	0.367	2.137	−0.922	3.200	0.917
800DT16	8.207	0.679	2.31	6.161	3.013	0.218	0.567	0.968	5.367	4.772	2414	0.725	2.670	−0.918	3.200	0.918
800DT14	8.236	0.854	2.91	7.770	3.016	0.272	0.564	1.488	6.968	4.448	3714	1.448	3.344	−0.912	3.201	0.919
800DT12	8.391	1.219	4.15	11.273	3.041	0.379	0.557	2.383	10.927	4.367	5946	4.201	4.839	−0.906	3.222	0.921
1000DT18•	10.184	0.631	2.15	8.384	3.645	0.183	0.539	0.926	7.480	6.228	1525	0.428	3.558	−0.820	3.775	0.953
1000DT16	10.207	0.792	2.69	10.528	3.646	0.228	0.537	1.188	9.421	6.191	2965	0.846	4.443	−0.816	3.775	0.953
1000DT14	10.236	0.997	3.39	13.270	3.648	0.284	0.534	1.898	12.140	5.695	4736	1.689	5.559	−0.812	3.776	0.954
1000DT12	10.391	1.422	4.84	19.165	3.671	0.396	0.528	3.318	18.620	5.377	8278	4.903	7.987	−0.806	3.795	0.955
1200DT16•	12.207	0.905	3.08	16.478	4.267	0.236	0.510	1.414	15.035	7.654	3528	0.966	6.725	−0.736	4.360	0.971
1200DT14	12.236	1.140	3.88	20.765	4.269	0.294	0.508	2.224	19.349	7.107	5548	1.931	8.410	−0.732	4.361	0.972
1200DT12	12.391	1.625	5.53	29.902	4.289	0.409	0.502	4.389	29.112	6.384	10950	5.604	12.024	−0.726	4.379	0.973

NOTES:
1. Effective properties based on F_y=50ksi for 12, 14 and 16 gauge sections, F_y=33ksi for 18 and 20 gauge sections. 14 and 16 gauge sections may be produced with F_y=33ksi. For .33ksi 14 and 16 gauge sections, multiply allowable moment by 0.66. (Contact manufacturer for availability)
2. Effective properties and allowable Moment incorporate the strength increase from cold-work of forming where applicable. (AISI A5.2.2)
3. For deflection calculations, use the effective moment of inertia.
4. • Web height to thickness exceeds 200. Web stiffener required at support points. (AISI B1.2)
5. Tabulated areas are based on the full un-reduced cross section of the studs away from web punchouts.
6. For weak-axis orientations, technical assistance is req'd. Contact the manufacturer for this assistance.
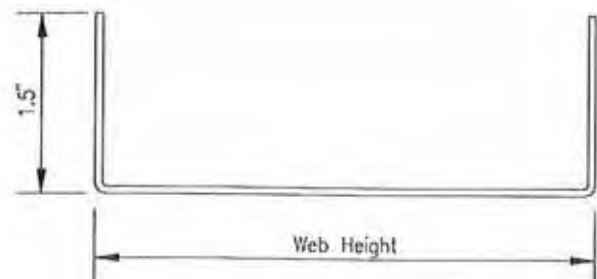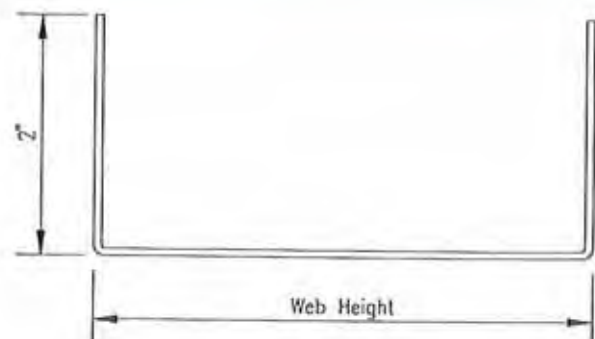
Web Height

ALLOWABLE WALL HEIGHTS

L/120 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158IC20	12'3"	11'2"	9'9"	8'6"	7'9"	6'9"	7'9"	7'0"	6'1"	7'2"	6'6"	5'8"	6'9"	6'1"	5'3"	6'1"	5'7"	4'7"
158IC18	13'3"	12'0"	10'6"	9'2"	8'4"	7'3"	8'4"	7'7"	6'7"	7'9"	7'0"	6'1"	7'3"	6'7"	5'9"	6'7"	6'0"	5'2"
158IC16	14'2"	12'10"	11'2"	9'9"	8'11"	7'9"	8'11"	8'1"	7'1"	8'3"	7'6"	6'6"	7'9"	7'1"	6'2"	7'1"	6'5"	5'7"
158IC14	15'1"	13'8"	12'0"	10'5"	9'6"	8'3"	9'6"	8'7"	7'6"	8'10"	8'0"	7'0"	8'3"	7'6"	6'7"	7'6"	6'10"	6'0"
250IC20	17'1"	15'6"	13'7"	11'10"	10'9"	9'5"	10'9"	9'9"	8'6"	10'0"	9'1"	7'7"	9'5"	8'6"	6'11"	8'6"	7'4"	6'0"
250IC18	18'5"	16'9"	14'8"	12'9"	11'7"	10'2"	11'7"	10'6"	9'2"	10'9"	9'9"	8'6"	10'2"	9'2"	7'11"	9'2"	8'4"	6'11"
250IC16	19'9"	17'11"	15'8"	13'8"	12'5"	10'10"	12'5"	11'3"	9'10"	11'6"	10'6"	9'2"	10'10"	9'10"	8'7"	9'10"	8'11"	7'10"
250IC14	21'2"	19'2"	16'9"	14'8"	13'4"	11'7"	13'4"	12'1"	10'7"	12'4"	11'3"	9'9"	11'7"	10'7"	9'2"	10'7"	9'7"	8'4"
350IC20	22'2"	20'2"	17'7"	15'4"	13'11"	12'2"	13'11"	12'8"	10'8"	12'11"	11'8"	9'6"	12'2"	10'8"	8'8"	10'8"	9'2"	7'6"
350IC18	24'0"	21'9"	19'0"	16'7"	15'1"	13'2"	15'1"	13'8"	12'0"	14'0"	12'9"	10'11"	13'2"	12'0"	10'0"	12'0"	10'7"	8'8"
350IC16	25'9"	23'4"	20'5"	17'10"	16'2"	14'2"	16'2"	14'8"	12'10"	15'0"	13'8"	11'11"	14'2"	12'10"	11'2"	12'10"	11'8"	10'2"
350IC14	27'7"	25'0"	21'10"	19'1"	17'4"	15'2"	17'4"	15'9"	13'9"	16'1"	14'7"	12'9"	15'2"	13'9"	12'0"	13'9"	12'6"	10'11"
358IC20	22'9"	20'8"	18'1"	15'9"	14'4"	12'6"	14'4"	13'0"	10'11"	13'4"	11'11"	9'9"	12'6"	10'11"	8'11"	10'11"	9'5"	7'8"
358IC18	24'8"	22'5"	19'7"	17'1"	15'6"	13'7"	15'6"	14'1"	12'4"	14'5"	13'1"	11'2"	13'7"	12'4"	10'3"	12'4"	10'10"	8'10"
358IC16	26'5"	24'0"	21'0"	18'4"	16'8"	14'6"	16'8"	15'1"	13'2"	15'5"	14'0"	12'3"	14'6"	13'2"	11'6"	13'2"	12'0"	10'6"
358IC14	28'4"	25'9"	22'6"	19'8"	17'10"	15'7"	17'10"	16'2"	14'2"	16'7"	15'0"	13'2"	15'7"	14'2"	12'4"	14'2"	12'10"	11'3"
400IC20	24'7"	22'4"	19'6"	17'1"	15'6"	13'5"	15'6"	14'1"	11'8"	14'5"	12'9"	10'5"	13'5"	11'8"	9'6"	11'8"	10'1"	8'3"
400IC18	26'6"	24'2"	21'2"	18'6"	16'9"	14'8"	16'9"	15'3"	13'4"	15'7"	14'2"	12'0"	14'8"	13'4"	10'11"	13'4"	11'7"	9'6"
400IC16	28'7"	26'0"	22'8"	19'10"	18'0"	15'9"	18'0"	16'4"	14'3"	16'8"	15'2"	13'3"	15'9"	14'3"	12'6"	14'3"	13'0"	11'4"
400IC14	30'8"	27'10"	24'4"	21'3"	19'4"	16'10"	19'4"	17'6"	15'4"	17'11"	16'3"	14'2"	16'10"	15'4"	13'4"	15'4"	13'11"	12'2"
600IC20	34'1"	30'11"	27'0"	23'7"	21'0"	17'2"	21'0"	18'2"	14'10"	18'9"	16'3"	13'3"	17'2"	14'10"	12'1"	14'10"	12'10"	10'6"
600IC18	36'11"	33'7"	29'4"	25'7"	23'3"	20'4"	23'3"	21'1"	17'10"	21'7"	19'7"	15'11"	20'4"	17'10"	14'7"	17'10"	15'5"	12'7"
600IC16	39'8"	36'0"	31'6"	27'6"	25'0"	21'10"	25'0"	22'8"	19'10"	23'2"	21'1"	18'5"	21'10"	19'10"	17'4"	19'10"	18'0"	15'9"
600IC14	42'7"	38'8"	33'9"	29'6"	26'10"	23'5"	26'10"	24'4"	21'3"	24'11"	22'7"	19'9"	23'5"	21'3"	18'7"	21'3"	19'4"	16'10"
800IC20	43'2"	39'2"	34'1"	27'10"	24'1"	19'8"	24'1"	20'10"	17'0"	21'6"	18'8"	15'2"	19'8"	17'0"	13'11"	17'0"	14'9"	12'0"
800IC18	46'10"	42'7"	37'2"	32'5"	29'4"	23'11"	29'4"	25'5"	20'9"	26'3"	22'8"	18'6"	23'11"	20'9"	16'11"	20'9"	17'11"	14'8"
800IC16	50'4"	45'9"	39'11"	34'11"	31'8"	27'8"	31'8"	28'9"	25'2"	29'5"	26'9"	23'4"	27'8"	25'2"	21'11"	25'2"	22'10"	19'11"
800IC14	54'1"	49'2"	42'11"	37'6"	34'1"	29'9"	34'1"	30'11"	27'0"	31'7"	28'9"	25'1"	29'9"	27'0"	23'7"	27'0"	24'7"	21'5"

L/120 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158SC20	12'5"	11'3"	9'10"	8'7"	7'10"	6'10"	7'10"	7'1"	6'2"	7'3"	6'7"	5'6"	6'10"	6'2"	5'0"	6'2"	5'4"	4'4"
158SC18	13'5"	12'2"	10'7"	9'3"	8'5"	7'4"	8'5"	7'8"	6'8"	7'10"	7'1"	6'2"	7'4"	6'8"	5'10"	6'8"	6'1"	5'2"
158SC16	14'4"	13'0"	11'4"	9'11"	9'0"	7'10"	9'0"	8'2"	7'2"	8'4"	7'7"	6'7"	7'10"	7'2"	6'3"	7'2"	6'6"	5'8"
158SC14	15'3"	13'11"	12'1"	10'7"	9'7"	8'5"	9'7"	8'9"	7'7"	8'11"	8'1"	7'1"	8'5"	7'7"	6'8"	7'7"	6'11"	6'0"
250SC20	17'3"	15'8"	13'8"	12'0"	10'10"	9'5"	10'10"	9'10"	8'2"	10'1"	8'11"	7'3"	9'5"	8'2"	6'8"	8'2"	7'1"	5'9"
250SC18	18'8"	16'11"	14'10"	12'11"	11'9"	10'3"	11'9"	10'8"	9'4"	10'11"	9'11"	8'8"	10'3"	9'4"	8'0"	9'4"	8'5"	6'11"
250SC16	20'0"	18'2"	15'10"	13'10"	12'7"	11'0"	12'7"	11'5"	10'0"	11'8"	10'7"	9'3"	11'0"	10'0"	8'8"	10'0"	9'1"	7'11"
250SC14	21'5"	19'5"	17'0"	14'10"	13'5"	11'9"	13'5"	12'3"	10'8"	12'6"	11'4"	9'11"	11'9"	10'8"	9'4"	10'8"	9'8"	8'6"
350SC20	22'5"	20'4"	17'9"	15'6"	14'1"	11'9"	14'1"	12'6"	10'2"	12'11"	11'2"	9'1"	11'9"	10'2"	8'4"	10'2"	8'10"	7'2"
350SC18	24'3"	22'0"	19'3"	16'9"	15'3"	13'4"	15'3"	13'10"	12'1"	14'2"	12'10"	10'11"	13'4"	12'1"	10'0"	12'1"	10'7"	8'8"
350SC16	26'0"	23'7"	20'7"	18'0"	16'4"	14'3"	16'4"	14'10"	13'0"	15'2"	13'9"	12'0"	14'3"	13'0"	11'4"	13'0"	11'9"	10'3"
350SC14	27'10"	25'4"	22'1"	19'4"	17'6"	15'4"	17'6"	15'11"	13'11"	16'3"	14'9"	12'11"	15'4"	13'11"	12'2"	13'11"	12'8"	11'0"
358SC20	23'0"	20'11"	18'3"	15'11"	14'6"	12'1"	14'6"	12'9"	10'5"	13'3"	11'5"	9'4"	12'1"	10'5"	8'6"	10'5"	9'0"	7'4"
358SC18	24'11"	22'7"	19'9"	17'3"	15'8"	13'8"	15'8"	14'3"	12'5"	14'7"	13'3"	11'2"	13'8"	12'5"	10'3"	12'5"	10'10"	8'10"
358SC16	26'9"	24'3"	21'2"	18'6"	16'10"	14'8"	16'10"	15'3"	13'4"	15'7"	14'2"	12'5"	14'8"	13'4"	11'8"	13'4"	12'1"	10'7"
358SC14	28'8"	26'0"	22'9"	19'10"	18'0"	15'9"	18'0"	16'4"	14'4"	16'9"	15'2"	13'3"	15'9"	14'4"	12'6"	14'4"	13'0"	11'4"
400SC20	24'10"	22'7"	19'9"	17'3"	15'8"	12'11"	15'8"	13'8"	11'2"	14'1"	12'3"	10'0"	12'11"	11'2"	9'1"	11'2"	9'8"	7'11"
400SC18	26'11"	24'5"	21'4"	18'8"	16'11"	14'9"	16'11"	15'5"	13'5"	15'9"	14'3"	12'0"	14'9"	13'5"	10'11"	13'5"	11'7"	9'5"
400SC16	28'10"	26'3"	22'11"	20'0"	18'2"	15'10"	18'2"	16'6"	14'5"	16'10"	15'4"	13'5"	15'10"	14'5"	12'7"	14'5"	13'1"	11'5"
400SC14	31'0"	28'2"	24'7"	21'5"	19'6"	17'0"	19'6"	17'8"	15'6"	18'1"	16'5"	14'4"	17'0"	15'6"	13'6"	15'6"	14'1"	12'3"
600SC20	34'4"	31'2"	27'2"	23'10"	21'0"	17'2"	21'0"	18'2"	14'10"	18'10"	16'3"	13'3"	17'2"	14'10"	12'1"	14'10"	12'10"	10'6"
600SC18	37'3"	33'10"	29'7"	25'10"	23'5"	20'6"	23'5"	21'4"	17'10"	21'9"	19'6"	15'11"	20'6"	17'10"	14'7"	17'10"	15'5"	12'7"
600SC16	40'0"	36'4"	31'9"	27'9"	25'2"	22'0"	25'2"	22'10"	20'0"	23'4"	21'3"	18'6"	22'0"	20'0"	17'5"	20'0"	18'2"	15'10"
600SC14	42'11"	39'0"	34'1"	29'9"	27'0"	23'7"	27'0"	24'7"	21'5"	25'1"	22'10"	19'11"	23'7"	21'5"	18'9"	21'5"	19'6"	17'0"
800SC20	43'6"	39'6"	34'0"	27'9"	24'1"	19'8"	24'1"	20'10"	17'0"	21'6"	18'7"	15'2"	19'8"	17'0"	13'10"	17'0"	14'9"	12'0"
800SC18	47'2"	42'10"	37'5"	32'8"	29'5"	24'0"	29'5"	25'6"	20'10"	26'4"	22'9"	18'7"	24'0"	20'10"	17'0"	20'10"	18'0"	14'8"
800SC16	50'8"	46'1"	40'3"	35'2"	31'11"	27'11"	31'11"	29'0"	25'4"	29'8"	26'11"	23'6"	27'11"	25'4"	22'1"	25'4"	23'0"	20'1"
800SC14	54'6"	49'6"	43'3"	37'9"	34'4"	30'0"	34'4"	31'2"	27'3"	31'10"	28'11"	25'3"	30'0"	27'3"	23'9"	27'3"	24'9"	21'7"

1. Heights based on properly attached sheathing on each flange over the entire length of the stud.
2. Lateral load multiplied by 0.75 for strength determination per AISI A4.4
3. Heights for 14 and 16 gauge studs based on F_y =50ksi.
4. End reaction=Load(psf)·Spacing(in)·Height from table(ft)/24. Check web crippling table for allowable reaction.
5. Heights based on web punch-outs a minimum of 1.5 times the web height from the edge of bearing. (See page 52 for detail)

L/120 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158CC20	12'7"	11'5"	10'0"	8'9"	7'11"	6'11"	7'11"	7'2"	6'3"	7'4"	6'8"	5'7"	6'11"	6'3"	5'1"	6'3"	5'5"	4'5"
158CC18	13'7"	12'4"	10'9"	9'5"	8'6"	7'5"	8'6"	7'9"	6'9"	7'11"	7'2"	6'3"	7'5"	6'9"	5'11"	6'9"	6'2"	5'4"
158CC16	14'6"	13'2"	11'6"	10'1"	9'1"	8'0"	9'1"	8'3"	7'3"	8'6"	7'8"	6'9"	8'0"	7'3"	6'4"	7'3"	6'7"	5'9"
158CC14	15'6"	14'1"	12'3"	10'9"	9'9"	8'6"	9'9"	8'10"	7'9"	9'0"	8'2"	7'2"	8'6"	7'9"	6'9"	7'9"	7'0"	6'1"
250CC20	17'6"	15'10"	13'10"	12'1"	11'0"	9'7"	11'0"	10'0"	8'5"	10'2"	9'1"	7'5"	9'7"	8'3"	6'9"	8'3"	7'2"	5'10"
250CC18	18'10"	17'2"	15'0"	13'1"	11'10"	10'4"	11'10"	10'9"	9'5"	11'0"	10'0"	8'9"	10'4"	9'5"	8'1"	9'5"	8'7"	7'0"
250CC16	20'3"	18'4"	16'0"	14'0"	12'9"	11'1"	12'9"	11'7"	10'1"	11'10"	10'9"	9'4"	11'1"	10'1"	8'10"	10'1"	9'2"	8'0"
250CC14	21'8"	19'8"	17'2"	15'0"	13'7"	11'11"	13'7"	12'4"	10'10"	12'8"	11'6"	10'0"	11'11"	10'10"	9'5"	10'10"	9'10"	8'7"
350CC20	22'7"	20'7"	17'11"	15'8"	14'3"	11'11"	14'3"	12'8"	10'4"	13'1"	11'4"	9'3"	11'11"	10'4"	8'5"	10'4"	8'11"	7'3"
350CC18	24'6"	22'3"	19'5"	17'0"	15'5"	13'5"	15'5"	14'0"	12'3"	14'4"	13'0"	11'1"	13'5"	12'3"	10'2"	12'3"	10'9"	8'9"
350CC16	26'3"	23'10"	20'10"	18'2"	16'6"	14'5"	16'6"	15'0"	13'1"	15'4"	13'11"	12'2"	14'5"	13'1"	11'5"	13'1"	11'11"	10'5"
350CC14	28'2"	25'7"	22'4"	19'6"	17'9"	15'6"	17'9"	16'1"	14'1"	16'5"	14'11"	13'0"	15'6"	14'1"	12'3"	14'1"	12'9"	11'2"
358CC20	23'3"	21'1"	18'5"	16'1"	14'8"	12'2"	14'8"	12'11"	10'7"	13'4"	11'7"	9'5"	12'2"	10'7"	8'7"	10'7"	9'2"	7'5"
358CC18	25'2"	22'10"	20'0"	17'5"	15'10"	13'10"	15'10"	14'5"	12'7"	14'8"	13'4"	11'5"	13'10"	12'7"	10'5"	12'7"	11'0"	9'0"
358CC16	27'0"	24'6"	21'5"	18'8"	17'0"	14'10"	17'0"	15'5"	13'6"	15'9"	14'4"	12'6"	14'10"	13'6"	11'9"	13'6"	12'3"	10'8"
358CC14	28'11"	26'3"	22'11"	20'1"	18'3"	15'11"	18'3"	16'7"	14'5"	16'11"	15'4"	13'5"	15'11"	14'5"	12'7"	14'5"	13'1"	11'5"
400CC20	25'1"	22'10"	19'11"	17'5"	15'10"	13'0"	15'10"	13'10"	11'3"	14'3"	12'4"	10'1"	13'0"	11'3"	9'2"	11'3"	9'9"	8'0"
400CC18	27'2"	24'8"	21'7"	18'10"	17'1"	14'11"	17'1"	15'6"	13'7"	15'11"	14'5"	12'2"	14'11"	13'7"	11'1"	13'7"	11'9"	9'7"
400CC16	29'2"	26'6"	23'2"	20'2"	18'4"	16'0"	18'4"	16'8"	14'7"	17'0"	15'6"	13'6"	16'0"	14'7"	12'9"	14'7"	13'3"	11'7"
400CC14	31'3"	28'5"	24'10"	21'8"	19'8"	17'2"	19'8"	17'11"	15'7"	18'3"	16'7"	14'6"	17'2"	15'7"	13'8"	15'7"	14'2"	12'5"
600CC20	34'8"	31'6"	27'6"	24'0"	21'2"	17'3"	21'2"	18'4"	14'11"	18'11"	16'5"	13'4"	17'3"	14'11"	12'2"	14'11"	12'11"	10'7"
600CC18	37'7"	34'1"	29'10"	26'0"	23'8"	20'8"	23'8"	21'6"	18'1"	21'11"	19'9"	16'2"	20'8"	18'1"	14'9"	18'1"	15'8"	12'9"
600CC16	40'4"	36'8"	32'0"	27'11"	25'5"	22'2"	25'5"	23'1"	20'2"	23'7"	21'5"	18'8"	22'2"	20'2"	17'7"	20'2"	18'4"	16'0"
600CC14	43'4"	39'4"	34'4"	30'0"	27'3"	23'10"	27'3"	24'9"	21'8"	25'4"	23'0"	20'1"	23'10"	21'8"	18'11"	21'8"	19'8"	17'2"
800CC20	43'9"	39'9"	34'1"	27'10"	24'1"	19'8"	24'1"	20'10"	17'0"	21'6"	18'8"	15'3"	19'8"	17'0"	13'11"	17'0"	14'9"	12'0"
800CC18	47'6"	43'2"	37'9"	32'11"	29'11"	24'6"	29'11"	26'0"	21'2"	26'10"	23'3"	18'11"	24'6"	21'2"	17'4"	21'2"	18'4"	15'0"
800CC16	51'1"	46'5"	40'6"	35'5"	32'2"	28'1"	32'2"	29'3"	25'6"	29'10"	27'1"	23'8"	28'1"	25'6"	22'3"	25'6"	23'2"	20'3"
800CC14	54'11"	49'11"	43'7"	38'1"	34'7"	30'2"	34'7"	31'5"	27'5"	32'1"	29'2"	25'6"	30'2"	27'5"	24'0"	27'5"	24'11"	21'9"

XC SECTIONS

L/120 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158XC20	13'2"	11'11"	10'5"	9'1"	8'3"	7'3"	8'3"	7'6"	6'5"	7'8"	7'0"	5'9"	7'3"	6'5"	5'3"	6'5"	5'6"	4'6"
158XC18	14'2"	12'11"	11'3"	9'10"	8'11"	7'10"	8'11"	8'1"	7'1"	8'3"	7'6"	6'7"	7'10"	7'1"	6'2"	7'1"	6'5"	5'4"
158XC16	15'2"	13'10"	12'1"	10'6"	9'7"	8'4"	9'7"	8'8"	7'7"	8'10"	8'1"	7'0"	8'4"	7'7"	6'7"	7'7"	6'11"	6'0"
158XC14	16'3"	14'9"	12'10"	11'3"	10'2"	8'11"	10'2"	9'3"	8'1"	9'6"	8'7"	7'6"	8'11"	8'1"	7'1"	8'1"	7'4"	6'5"
250XC20	18'2"	16'6"	14'5"	12'7"	11'5"	9'8"	11'5"	10'3"	8'5"	10'7"	9'2"	7'6"	9'8"	8'5"	6'10"	8'5"	7'3"	5'11"
250XC18	19'8"	17'10"	15'7"	13'7"	12'4"	10'10"	12'4"	11'3"	9'10"	11'6"	10'5"	8'10"	10'10"	9'10"	8'0"	9'10"	8'6"	6'11"
250XC16	21'1"	19'2"	16'9"	14'7"	13'3"	11'7"	13'3"	12'1"	10'6"	12'4"	11'2"	9'9"	11'7"	10'6"	9'2"	10'6"	9'7"	8'4"
250XC14	22'7"	20'6"	17'11"	15'8"	14'2"	12'5"	14'2"	12'11"	11'3"	13'2"	12'0"	10'5"	12'5"	11'3"	9'10"	11'3"	10'3"	8'11"
350XC20	23'6"	21'4"	18'7"	16'3"	14'9"	12'1"	14'9"	12'10"	10'5"	13'3"	11'5"	9'4"	12'1"	10'5"	8'6"	10'5"	9'0"	7'4"
350XC18	25'5"	23'1"	20'2"	17'7"	16'0"	14'0"	16'0"	14'6"	12'3"	14'10"	13'5"	10'11"	14'0"	12'3"	10'0"	12'3"	10'7"	8'8"
350XC16	27'3"	24'9"	21'8"	18'11"	17'2"	15'0"	17'2"	15'7"	13'7"	15'11"	14'6"	12'8"	15'0"	13'7"	11'11"	13'7"	12'4"	10'10"
350XC14	29'3"	26'7"	23'3"	20'3"	18'5"	16'1"	18'5"	16'9"	14'7"	17'1"	15'6"	13'7"	16'1"	14'7"	12'9"	14'7"	13'3"	11'7"
358XC20	24'1"	21'11"	19'2"	16'8"	15'2"	12'4"	15'2"	13'1"	10'8"	13'6"	11'9"	9'7"	12'4"	10'8"	8'9"	10'8"	9'3"	7'7"
358XC18	26'1"	23'9"	20'9"	18'1"	16'5"	14'4"	16'5"	14'11"	12'6"	15'3"	13'9"	11'2"	14'4"	12'6"	10'3"	12'6"	10'10"	8'10"
358XC16	28'0"	25'5"	22'3"	19'5"	17'8"	15'5"	17'8"	16'0"	14'0"	16'4"	14'10"	13'0"	15'5"	14'0"	12'3"	14'0"	12'8"	11'1"
358XC14	30'1"	27'4"	23'10"	20'10"	18'11"	16'6"	18'11"	17'2"	15'0"	17'7"	15'11"	13'11"	16'6"	15'0"	13'1"	15'0"	13'8"	11'11"
400XC20	26'0"	23'8"	20'8"	18'0"	16'2"	13'2"	16'2"	14'0"	11'5"	14'6"	12'6"	10'3"	13'2"	11'5"	9'4"	11'5"	9'11"	8'1"
400XC18	28'2"	25'7"	22'4"	19'6"	17'9"	15'5"	17'9"	16'1"	13'4"	16'6"	14'8"	11'11"	15'5"	13'4"	10'11"	13'4"	11'7"	9'5"
400XC16	30'3"	27'6"	24'0"	21'0"	19'0"	16'8"	19'0"	17'4"	15'1"	17'8"	16'1"	14'0"	16'8"	15'1"	13'2"	15'1"	13'9"	12'0"
400XC14	32'5"	29'6"	25'9"	22'6"	20'5"	17'10"	20'5"	18'7"	16'2"	19'0"	17'3"	15'1"	17'10"	16'2"	14'2"	16'2"	14'9"	12'10"
600XC20	35'9"	32'5"	28'4"	24'5"	21'2"	17'3"	21'2"	18'4"	14'11"	18'11"	16'5"	13'4"	17'3"	14'11"	12'2"	14'11"	12'11"	10'7"
600XC18	38'9"	35'2"	30'9"	26'10"	24'5"	20'5"	24'5"	21'7"	17'7"	22'4"	19'4"	15'9"	20'5"	17'8"	14'5"	17'8"	15'3"	12'6"
600XC16	41'8"	37'10"	33'0"	28'10"	26'3"	22'11"	26'3"	23'10"	20'10"	24'4"	22'1"	19'4"	22'11"	20'10"	18'2"	20'10"	18'11"	16'6"
600XC14	44'9"	40'8"	35'6"	31'0"	28'2"	24'7"	28'2"	25'7"	22'4"	26'2"	23'9"	20'9"	24'7"	22'4"	19'6"	22'4"	20'4"	17'9"
800XC20	45'0"	40'11"	34'1"	27'10"	24'1"	19'8"	24'1"	20'11"	17'0"	21'7"	18'8"	15'3"	19'8"	17'0"	13'11"	17'0"	14'9"	12'0"
800XC18	48'10"	44'5"	38'9"	33'10"	30'7"	25'0"	30'7"	26'6"	21'7"	27'4"	23'8"	19'4"	25'0"	21'7"	17'8"	21'7"	18'9"	15'3"
800XC16	52'6"	47'9"	41'8"	36'5"	33'1"	28'11"	33'1"	30'1"	26'3"	30'8"	27'11"	24'4"	28'11"	26'3"	22'11"	26'3"	23'10"	20'9"
800XC14	56'6"	51'4"	44'10"	39'2"	35'7"	31'1"	35'7"	32'4"	28'3"	33'0"	30'0"	26'2"	31'1"	28'3"	24'8"	28'3"	25'8"	22'5"

1. Heights based on properly attached sheathing on each flange over the entire length of the stud.
2. Lateral load multiplied by 0.75 for strength determination per AISI A4.4.
3. Heights for 14 and 16 gauge studs based on Fy=50ksi.
4. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
5. Heights based on web punch-outs a minimum of 1.5 times the web height from the edge of bearing. (See page 52 for detail)

L/240 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158IC20	9'9"	8'10"	7'9"	6'9"	6'1"	5'4"	6'1"	5'7"	4'10"	5'8"	5'2"	4'6"	5'4"	4'10"	4'5"	4'10"	4'5"	3'10"
158IC18	10'6"	9'6"	8'4"	7'3"	6'7"	5'9"	6'7"	6'0"	5'3"	6'1"	5'7"	4'10"	5'9"	5'3"	4'7"	5'3"	4'9"	4'2"
158IC16	11'2"	10'2"	8'11"	7'9"	7'1"	6'2"	7'1"	6'5"	5'7"	6'6"	5'11"	5'2"	6'2"	5'7"	4'10"	5'7"	5'1"	4'5"
158IC14	12'0"	10'10"	9'6"	8'3"	7'6"	6'7"	7'6"	6'10"	6'0"	7'0"	6'4"	5'6"	6'7"	6'0"	5'2"	6'0"	5'5"	4'9"
250IC20	13'7"	12'4"	10'9"	9'5"	8'6"	7'5"	8'6"	7'9"	6'9"	7'11"	7'2"	6'3"	7'5"	6'9"	5'11"	6'9"	6'2"	5'4"
250IC18	14'6"	13'3"	11'7"	10'2"	9'2"	8'0"	9'2"	8'4"	7'4"	8'6"	7'9"	6'9"	8'0"	7'4"	6'4"	7'4"	6'7"	5'9"
250IC16	15'8"	14'3"	12'5"	10'10"	9'10"	8'7"	9'10"	8'11"	7'10"	9'2"	8'4"	7'3"	8'7"	7'10"	6'10"	7'10"	7'1"	6'2"
250IC14	16'9"	15'3"	13'4"	11'7"	10'7"	9'2"	10'7"	9'7"	8'4"	9'9"	8'11"	7'9"	9'2"	8'4"	7'4"	8'4"	7'7"	6'8"
350IC20	17'7"	16'0"	13'11"	12'2"	11'1"	9'8"	11'1"	10'1"	8'9"	10'3"	9'4"	8'2"	9'8"	8'9"	7'8"	8'9"	8'0"	5'11"
350IC18	19'0"	17'3"	15'1"	13'2"	12'0"	10'5"	12'0"	10'10"	9'6"	11'1"	10'1"	8'10"	10'5"	9'6"	8'3"	9'6"	8'7"	7'6"
350IC16	20'5"	18'6"	16'2"	14'2"	12'10"	11'2"	12'10"	11'8"	10'2"	11'11"	10'10"	9'5"	11'2"	10'2"	8'11"	10'2"	9'3"	8'1"
350IC14	21'10"	19'10"	17'4"	15'2"	13'9"	12'0"	13'9"	12'6"	10'11"	12'9"	11'7"	10'2"	12'0"	10'11"	9'6"	10'11"	9'11"	8'8"
358IC20	18'1"	16'5"	14'4"	12'6"	11'4"	9'11"	11'4"	10'4"	9'0"	10'7"	9'7"	8'4"	9'11"	9'0"	7'10"	9'0"	8'2"	7'2"
358IC18	19'7"	17'9"	15'6"	13'7"	12'4"	10'9"	12'4"	11'2"	9'9"	11'5"	10'4"	9'1"	10'9"	9'9"	8'6"	9'9"	8'10"	7'9"
358IC16	21'0"	19'1"	16'8"	14'6"	13'2"	11'6"	13'2"	12'0"	10'6"	12'3"	11'1"	9'9"	11'6"	10'6"	9'2"	10'6"	9'6"	8'4"
358IC14	22'6"	20'5"	17'10"	15'7"	14'2"	12'4"	14'2"	12'10"	11'3"	13'2"	11'11"	10'5"	12'4"	11'3"	9'10"	11'3"	10'2"	8'11"
400IC20	19'6"	17'9"	15'6"	13'6"	12'3"	10'9"	12'3"	11'2"	9'9"	11'5"	10'4"	9'1"	10'9"	9'9"	8'6"	9'9"	8'10"	7'9"
400IC18	21'2"	19'2"	16'9"	14'8"	13'4"	11'7"	13'4"	12'1"	10'7"	12'4"	11'3"	9'9"	11'7"	10'7"	9'3"	10'7"	9'7"	8'4"
400IC16	22'8"	20'7"	18'0"	15'9"	14'3"	12'6"	14'3"	13'0"	11'4"	13'3"	12'0"	10'6"	12'6"	11'4"	9'11"	11'4"	10'3"	9'0"
400IC14	24'4"	22'1"	19'4"	16'10"	15'4"	13'4"	15'4"	13'11"	12'2"	14'2"	12'11"	11'3"	13'4"	12'2"	10'7"	12'2"	11'0"	9'8"
600IC20	27'0"	24'7"	21'5"	18'9"	17'0"	14'10"	17'0"	15'5"	13'6"	15'9"	14'4"	12'6"	14'10"	13'6"	11'9"	13'6"	12'3"	10'6"
600IC18	29'4"	26'7"	23'3"	20'4"	18'5"	16'1"	18'5"	16'9"	14'8"	17'1"	15'7"	13'7"	16'1"	14'8"	12'9"	14'8"	13'3"	11'7"
600IC16	31'6"	28'7"	25'0"	21'10"	19'10"	17'4"	19'10"	18'0"	15'9"	18'5"	16'8"	14'7"	17'4"	15'9"	13'9"	15'9"	14'3"	12'6"
600IC14	33'9"	30'8"	26'10"	23'5"	21'3"	18'7"	21'3"	19'4"	16'10"	19'9"	17'11"	15'8"	18'7"	16'10"	14'9"	16'10"	15'4"	13'5"
800IC20	34'3"	31'1"	27'2"	23'9"	21'7"	18'10"	21'7"	19'7"	17'0"	20'0"	18'2"	15'2"	18'10"	17'0"	13'11"	17'0"	14'9"	12'0"
800IC18	37'2"	33'9"	29'6"	25'9"	23'5"	20'5"	23'5"	21'3"	18'7"	21'9"	19'9"	17'3"	20'5"	18'7"	16'2"	18'7"	16'10"	14'8"
800IC16	39'11"	36'3"	31'8"	27'8"	25'2"	21'11"	25'2"	22'10"	19'11"	23'4"	21'2"	18'6"	21'11"	19'11"	17'5"	19'11"	18'1"	15'10"
800IC14	42'11"	39'0"	34'1"	29'9"	27'0"	23'7"	27'0"	24'7"	21'5"	25'1"	22'9"	19'11"	23'7"	21'5"	18'9"	21'5"	19'6"	17'0"

SC SECTIONS

L/240 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158SC20	9'10"	8'11"	7'10"	6'10"	6'2"	5'5"	6'2"	5'7"	4'11"	5'9"	5'3"	4'7"	5'5"	4'11"	4'3"	4'11"	4'5"	3'11"
158SC18	10'7"	9'8"	8'5"	7'4"	6'8"	5'10"	6'8"	6'1"	5'3"	6'2"	5'7"	4'11"	5'10"	5'3"	4'7"	5'3"	4'10"	4'2"
158SC16	11'4"	10'4"	9'0"	7'10"	7'2"	6'3"	7'2"	6'6"	5'8"	6'7"	6'0"	5'3"	6'3"	5'8"	4'11"	5'8"	5'2"	4'6"
158SC14	12'1"	11'0"	9'7"	8'5"	7'7"	6'8"	7'7"	6'11"	6'0"	7'1"	6'5"	5'7"	6'8"	6'0"	5'3"	6'0"	5'6"	4'9"
250SC20	13'8"	12'5"	10'10"	9'6"	8'7"	7'6"	8'7"	7'10"	6'10"	8'0"	7'3"	6'4"	7'6"	6'10"	6'0"	6'10"	6'2"	5'5"
250SC18	14'10"	13'5"	11'9"	10'3"	9'4"	8'1"	9'4"	8'5"	7'5"	8'8"	7'10"	6'10"	8'1"	7'5"	6'5"	7'5"	6'8"	5'10"
250SC16	15'10"	14'5"	12'7"	11'0"	10'0"	8'8"	10'0"	9'1"	7'11"	9'3"	8'5"	7'4"	8'8"	7'11"	6'11"	7'11"	7'2"	6'3"
250SC14	17'0"	15'5"	13'5"	11'9"	10'8"	9'4"	10'8"	9'8"	8'6"	9'11"	9'0"	7'10"	9'4"	8'6"	7'5"	8'6"	7'8"	6'8"
350SC20	17'9"	16'2"	14'1"	12'4"	11'2"	9'9"	11'2"	10'2"	8'10"	10'4"	9'5"	8'3"	9'9"	8'10"	7'9"	8'10"	8'1"	7'0"
350SC18	19'3"	17'6"	15'3"	13'4"	12'1"	10'7"	12'1"	11'0"	9'7"	11'3"	10'2"	8'11"	10'7"	9'7"	8'4"	9'7"	8'9"	7'7"
350SC16	20'7"	18'9"	16'4"	14'3"	13'0"	11'4"	13'0"	11'9"	10'3"	12'0"	10'11"	9'7"	11'4"	10'3"	9'0"	10'3"	9'4"	8'2"
350SC14	22'1"	20'1"	17'6"	15'4"	13'11"	12'2"	13'11"	12'8"	11'0"	12'11"	11'9"	10'3"	12'2"	11'0"	9'8"	11'0"	10'0"	8'9"
358SC20	18'3"	16'7"	14'6"	12'8"	11'6"	10'0"	11'6"	10'5"	9'1"	10'8"	9'8"	8'5"	10'0"	9'1"	7'11"	9'1"	8'3"	7'3"
358SC18	19'9"	17'11"	15'8"	13'8"	12'5"	10'10"	12'5"	11'3"	9'10"	11'6"	10'6"	9'2"	10'10"	9'10"	8'7"	9'10"	8'11"	7'10"
358SC16	21'2"	19'3"	16'10"	14'8"	13'4"	11'8"	13'4"	12'1"	10'7"	12'5"	11'3"	9'10"	11'8"	10'7"	9'3"	10'7"	9'7"	8'5"
358SC14	22'9"	20'8"	18'0"	15'9"	14'4"	12'6"	14'4"	13'0"	11'4"	13'3"	12'1"	10'6"	12'6"	11'4"	9'11"	11'4"	10'4"	9'0"
400SC20	19'9"	17'11"	15'8"	13'8"	12'5"	10'10"	12'5"	11'3"	9'10"	11'6"	10'6"	9'2"	10'10"	9'10"	8'7"	9'10"	8'11"	7'10"
400SC18	21'4"	19'5"	16'11"	14'9"	13'5"	11'9"	13'5"	12'2"	10'8"	12'6"	11'4"	9'11"	11'9"	10'8"	9'4"	10'8"	9'8"	8'5"
400SC16	22'11"	20'10"	18'2"	15'10"	14'5"	12'7"	14'5"	13'1"	11'5"	13'5"	12'2"	10'7"	12'7"	11'5"	10'0"	11'5"	10'5"	9'1"
400SC14	24'7"	22'4"	19'6"	17'0"	15'6"	13'6"	15'6"	14'1"	12'3"	14'4"	13'0"	11'5"	13'6"	12'3"	10'8"	12'3"	11'2"	9'9"
600SC20	27'3"	24'9"	21'7"	18'11"	17'2"	15'0"	17'2"	15'7"	13'7"	15'11"	14'6"	12'8"	15'0"	13'7"	11'11"	13'7"	12'4"	10'6"
600SC18	29'7"	26'10"	23'5"	20'6"	18'7"	16'3"	18'7"	16'11"	14'9"	17'3"	15'8"	13'8"	16'3"	14'9"	12'11"	14'9"	13'5"	11'8"
600SC16	31'9"	28'10"	25'2"	22'0"	20'0"	17'5"	20'0"	18'2"	15'10"	18'6"	16'10"	14'8"	17'5"	15'10"	13'10"	15'10"	14'5"	12'7"
600SC14	34'1"	30'11"	27'0"	23'7"	21'5"	18'9"	21'5"	19'6"	17'0"	19'11"	18'1"	15'10"	18'9"	17'0"	14'10"	17'0"	15'5"	13'6"
800SC20	34'6"	31'4"	27'4"	23'11"	21'9"	19'0"	21'9"	19'9"	17'0"	20'2"	18'4"	15'2"	19'0"	17'0"	13'10"	17'0"	14'9"	12'0"
800SC18	37'5"	34'0"	29'8"	25'11"	23'7"	20'7"	23'7"	21'5"	18'8"	21'11"	19'10"	17'4"	20'7"	18'8"	16'4"	18'8"	17'0"	14'8"
800SC16	40'3"	36'7"	31'11"	27'11"	25'4"	22'1"	25'4"	23'0"	20'1"	23'6"	21'4"	18'8"	22'1"	20'1"	17'7"	20'1"	18'3"	15'11"
800SC14	43'3"	39'3"	34'4"	30'0"	27'3"	23'9"	27'3"	24'9"	21'7"	25'3"	23'0"	20'1"	23'9"	21'7"	18'10"	21'7"	19'7"	17'2"

1. Heights based on properly attached sheathing on each flange over the entire length of the stud.
2. Lateral load multiplied by 0.75 for strength determination per AISI A4.4
3. Heights for 14 and 16 gauge studs based on F_y =50ksi.
4. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
5. Heights based on web punch-outs a minimum of 1.5 times the web height from the edge of bearing. (See page 52 for detail)

ALLOWABLE WALL HEIGHTS

CC SECTIONS

L/240 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158CC20	10'0"	9'1"	7'11"	6'11"	6'5"	5'6"	6'3"	5'8"	5'0"	5'10"	5'3"	4'7"	5'6"	5'0"	4'4"	5'0"	4'6"	3'11"
158CC18	10'9"	9'9"	8'6"	7'5"	6'9"	5'11"	6'9"	6'2"	5'4"	6'3"	5'8"	5'0"	5'11"	5'4"	4'8"	5'4"	4'10"	4'3"
158CC16	11'6"	10'5"	9'1"	8'0"	7'3"	6'4"	7'3"	6'7"	5'9"	6'9"	6'1"	5'4"	6'4"	5'9"	5'0"	5'9"	5'2"	4'6"
158CC14	12'3"	11'2"	9'9"	8'6"	7'9"	6'9"	7'9"	7'0"	6'1"	7'2"	6'6"	5'8"	6'9"	6'1"	5'4"	6'1"	5'7"	4'10"
250CC20	13'10"	12'7"	11'0"	9'7"	8'9"	7'7"	8'9"	7'11"	6'11"	8'1"	7'4"	6'5"	7'7"	6'11"	6'0"	6'11"	6'3"	5'6"
250CC18	15'0"	13'7"	11'10"	10'4"	9'5"	8'3"	9'5"	8'7"	7'6"	8'9"	7'11"	6'11"	8'3"	7'6"	6'6"	7'6"	6'9"	5'11"
250CC16	16'0"	14'7"	12'9"	11'1"	10'1"	8'10"	10'1"	9'2"	8'0"	9'4"	8'6"	7'5"	8'10"	8'0"	7'0"	8'0"	7'3"	6'4"
250CC14	17'2"	15'7"	13'7"	11'11"	10'10"	9'5"	10'10"	9'10"	8'7"	10'0"	9'1"	7'11"	9'5"	8'7"	7'6"	8'7"	7'9"	6'9"
350CC20	17'11"	16'4"	14'3"	12'5"	11'3"	9'10"	11'3"	10'3"	8'11"	10'6"	9'6"	8'4"	9'10"	8'11"	7'10"	8'11"	8'2"	7'1"
350CC18	19'5"	17'8"	15'5"	13'5"	12'3"	10'8"	12'3"	11'1"	9'8"	11'4"	10'4"	9'0"	10'8"	9'8"	8'6"	9'8"	8'10"	7'8"
350CC16	20'10"	18'11"	16'6"	14'5"	13'1"	11'5"	13'1"	11'11"	10'5"	12'2"	11'1"	9'8"	11'5"	10'5"	9'1"	10'5"	9'5"	8'3"
350CC14	22'4"	20'3"	17'9"	15'6"	14'1"	12'3"	14'1"	12'9"	11'2"	13'0"	11'10"	10'4"	12'3"	11'2"	9'9"	11'2"	10'1"	8'10"
358CC20	18'5"	16'9"	14'8"	12'9"	11'7"	10'2"	11'7"	10'6"	9'2"	10'9"	9'9"	8'6"	10'2"	9'2"	8'0"	9'2"	8'4"	7'4"
358CC18	20'0"	18'2"	15'10"	13'10"	12'7"	11'0"	12'7"	11'5"	10'0"	11'8"	10'7"	9'3"	11'0"	10'0"	8'8"	10'0"	9'1"	7'11"
358CC16	21'5"	19'5"	17'0"	14'10"	13'6"	11'9"	13'6"	12'3"	10'8"	12'6"	11'4"	9'11"	11'9"	10'8"	9'4"	10'8"	9'8"	8'6"
358CC14	22'11"	20'10"	18'3"	15'11"	14'5"	12'7"	14'5"	13'1"	11'5"	13'5"	12'2"	10'8"	12'7"	11'5"	10'0"	11'5"	10'5"	9'1"
400CC20	19'11"	18'1"	15'10"	13'10"	12'6"	10'11"	12'6"	11'5"	9'11"	11'8"	10'7"	9'3"	10'11"	9'11"	8'8"	9'11"	9'0"	7'11"
400CC18	21'7"	19'7"	17'1"	14'11"	13'7"	11'10"	13'7"	12'4"	10'9"	12'7"	11'5"	10'0"	11'10"	10'9"	9'5"	10'9"	9'9"	8'6"
400CC16	23'2"	21'0"	18'4"	16'0"	14'7"	12'9"	14'7"	13'3"	11'7"	13'6"	12'3"	10'9"	12'9"	11'7"	10'1"	11'7"	10'6"	9'2"
400CC14	24'10"	22'7"	19'8"	17'2"	15'7"	13'8"	15'7"	14'2"	12'5"	14'6"	13'2"	11'6"	13'8"	12'5"	10'10"	12'5"	11'3"	9'10"
600CC20	27'6"	25'0"	21'10"	19'0"	17'4"	15'1"	17'4"	15'9"	13'9"	16'1"	14'7"	12'9"	15'1"	13'9"	12'0"	13'9"	12'6"	10'7"
600CC18	29'10"	27'1"	23'8"	20'8"	18'9"	16'5"	18'9"	17'0"	14'11"	17'5"	15'10"	13'10"	16'5"	14'11"	13'0"	14'11"	13'6"	11'10"
600CC16	32'0"	29'1"	25'5"	22'2"	20'2"	17'7"	20'2"	18'4"	16'0"	18'8"	17'0"	14'10"	17'7"	16'0"	13'11"	16'0"	14'6"	12'8"
600CC14	34'4"	31'3"	27'3"	23'10"	21'8"	18'11"	21'8"	19'8"	17'2"	20'1"	18'3"	15'11"	18'11"	17'2"	15'0"	17'2"	15'7"	13'7"
800CC20	34'9"	31'7"	27'7"	24'1"	21'10"	19'1"	21'10"	19'10"	17'0"	20'4"	18'5"	15'3"	19'1"	17'0"	13'11"	17'0"	14'9"	12'0"
800CC18	37'9"	34'3"	29'11"	26'2"	23'9"	20'9"	23'9"	21'7"	18'10"	22'0"	20'0"	17'6"	20'9"	18'10"	16'5"	18'10"	17'1"	14'11"
800CC16	40'6"	36'10"	32'2"	28'1"	25'6"	22'3"	25'6"	23'2"	20'3"	23'8"	21'6"	18'10"	22'3"	20'3"	17'8"	20'3"	18'5"	16'1"
800CC14	43'7"	39'7"	34'7"	30'2"	27'5"	24'0"	27'5"	24'11"	21'9"	25'6"	23'2"	20'2"	24'0"	21'9"	19'0"	21'9"	19'9"	17'3"

XC SECTIONS

L/240 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158XC20	10'5"	9'6"	8'3"	7'3"	6'7"	5'9"	6'7"	5'11"	5'2"	6'1"	5'6"	4'10"	5'9"	5'2"	4'6"	5'2"	4'9"	4'1"
158XC18	11'3"	10'3"	8'11"	7'10"	7'1"	6'2"	7'1"	6'5"	5'7"	6'7"	6'0"	5'2"	6'2"	5'7"	4'11"	5'7"	5'1"	4'5"
158XC16	12'1"	10'11"	9'7"	8'4"	7'7"	6'7"	7'7"	6'11"	6'0"	7'0"	6'5"	5'7"	6'7"	6'0"	5'3"	6'0"	5'5"	4'9"
158XC14	12'10"	11'8"	10'2"	8'11"	8'1"	7'1"	8'1"	7'4"	6'5"	7'6"	6'10"	5'11"	7'1"	6'5"	5'7"	6'5"	5'10"	5'1"
250XC20	14'5"	13'1"	11'5"	10'0"	9'1"	7'11"	9'1"	8'3"	7'2"	8'5"	7'8"	6'8"	7'11"	7'2"	6'3"	7'2"	6'6"	5'8"
250XC18	15'7"	14'2"	12'4"	10'10"	9'10"	8'7"	9'10"	8'11"	7'9"	9'1"	8'3"	7'3"	8'7"	7'9"	6'9"	7'9"	7'1"	6'2"
250XC16	16'9"	15'2"	13'3"	11'7"	10'6"	9'2"	10'6"	9'7"	8'4"	9'9"	8'10"	7'9"	9'2"	8'4"	7'3"	8'4"	7'7"	6'7"
250XC14	17'11"	16'3"	14'2"	12'5"	11'3"	9'10"	11'3"	10'3"	8'11"	10'5"	9'6"	8'3"	9'10"	8'11"	7'10"	8'11"	8'1"	7'1"
350XC20	18'7"	16'11"	14'9"	12'11"	11'9"	10'3"	11'9"	10'8"	9'3"	10'10"	9'11"	8'7"	10'3"	9'3"	8'1"	9'3"	8'5"	7'4"
350XC18	20'2"	18'4"	16'0"	14'0"	12'8"	11'1"	12'8"	11'6"	10'1"	11'9"	10'8"	9'4"	11'1"	10'1"	8'9"	10'1"	9'2"	8'0"
350XC16	21'8"	19'6"	17'2"	15'0"	13'7"	11'11"	13'7"	12'4"	10'10"	12'8"	11'6"	10'0"	11'11"	10'10"	9'5"	10'10"	9'10"	8'7"
350XC14	23'3"	21'1"	18'5"	16'1"	14'7"	12'9"	14'7"	13'3"	11'7"	13'7"	12'4"	10'9"	12'9"	11'7"	10'1"	11'7"	10'6"	9'2"
358XC20	19'2"	17'5"	15'2"	13'3"	12'0"	10'6"	12'0"	10'11"	9'7"	11'2"	10'2"	8'10"	10'6"	9'7"	8'4"	9'7"	8'8"	7'7"
358XC18	20'9"	18'10"	16'5"	14'4"	13'0"	11'5"	13'0"	11'10"	10'4"	12'1"	11'0"	9'7"	11'5"	10'4"	9'0"	10'4"	9'5"	8'2"
358XC16	22'3"	20'2"	17'8"	15'5"	14'0"	12'3"	14'0"	12'8"	11'1"	13'0"	11'10"	10'4"	12'3"	11'1"	9'8"	11'1"	10'1"	8'10"
358XC14	23'10"	21'8"	18'11"	16'6"	15'0"	13'1"	15'0"	13'8"	11'11"	13'11"	12'8"	11'1"	13'1"	11'11"	10'5"	11'11"	10'10"	9'5"
400XC20	20'8"	18'9"	16'4"	14'4"	13'0"	11'4"	13'0"	11'10"	10'4"	12'1"	10'11"	9'7"	11'4"	10'4"	9'0"	10'4"	9'4"	8'1"
400XC18	22'4"	20'4"	17'9"	15'6"	14'1"	12'3"	14'1"	12'9"	11'2"	13'0"	11'10"	10'4"	12'3"	11'2"	9'9"	11'2"	10'2"	8'10"
400XC16	24'0"	21'10"	19'0"	16'8"	15'1"	13'2"	15'1"	13'9"	12'0"	14'0"	12'9"	11'1"	13'2"	12'0"	10'6"	12'0"	10'11"	9'6"
400XC14	25'9"	23'5"	20'5"	17'10"	16'2"	14'2"	16'2"	14'9"	12'10"	15'1"	13'8"	11'11"	14'2"	12'10"	11'3"	12'10"	11'8"	10'2"
600XC20	28'4"	25'9"	22'6"	19'8"	17'10"	15'7"	17'10"	16'2"	14'2"	16'7"	15'0"	13'2"	15'7"	14'2"	12'2"	14'2"	12'10"	10'7"
600XC18	30'9"	27'11"	24'5"	21'4"	19'4"	16'11"	19'4"	17'7"	15'4"	18'0"	16'4"	14'3"	16'11"	15'4"	13'5"	15'4"	13'11"	12'2"
600XC16	33'0"	30'0"	26'3"	22'11"	20'10"	18'2"	20'10"	18'11"	16'6"	19'4"	17'6"	15'4"	18'2"	16'6"	14'5"	16'6"	15'0"	13'1"
600XC14	35'6"	32'3"	28'2"	24'7"	22'4"	19'6"	22'4"	20'4"	17'9"	20'9"	18'10"	16'5"	19'6"	17'9"	15'6"	17'9"	16'1"	14'1"
800XC20	35'9"	32'5"	28'4"	24'1"	22'6"	19'8"	22'6"	20'5"	17'0"	20'10"	18'8"	15'3"	19'8"	17'0"	13'11"	17'0"	14'9"	12'0"
800XC18	38'9"	35'3"	30'9"	26'11"	24'5"	21'4"	24'5"	22'2"	19'4"	22'6"	20'7"	18'0"	21'4"	19'4"	16'11"	19'4"	17'7"	15'3"
800XC16	41'8"	37'10"	33'1"	28'11"	26'3"	22'11"	26'3"	23'10"	20'10"	24'4"	22'2"	19'4"	22'11"	20'10"	18'2"	20'10"	18'11"	16'6"
800XC14	44'10"	40'9"	35'7"	31'1"	28'3"	24'8"	28'3"	25'8"	22'5"	26'2"	23'10"	20'9"	24'8"	22'5"	19'7"	22'5"	20'4"	17'9"

1. Heights based on properly attached sheathing on each flange over the entire length of the stud.
2. Lateral load multiplied by 0.75 for strength determination per AISI A4.4
3. Heights for 14 and 16 gauge studs based on F_y=50ksi.
4. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
5. Heights based on web punch-outs a minimum of 1.5 times the web height from the edge of bearing. (See page 52 for detail)

L/120 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158EU20	10'9"	9'9"	8'7"	7'6"	6'6"	5'4"	6'6"	5'8"	4'7"	5'10"	5'0"	4'1"	5'4"	4'7"	3'9"	4'7"	4'0"	3'3"
158EU18	11'11"	10'10"	9'6"	8'3"	7'6"	6'5"	7'6"	6'9"	5'6"	7'0"	6'1"	4'11"	6'5"	5'6"	4'6"	5'6"	4'9"	3'11"
158EU16	12'10"	11'8"	10'2"	8'10"	8'1"	7'0"	8'1"	7'4"	6'5"	7'6"	6'9"	5'11"	7'0"	6'5"	5'7"	6'5"	5'10"	5'1"
158EU14	13'9"	12'6"	10'11"	9'6"	8'8"	7'7"	8'8"	7'10"	6'10"	8'0"	7'3"	6'4"	7'7"	6'10"	6'0"	6'10"	6'3"	5'5"
250EU20	15'1"	13'8"	11'11"	10'3"	8'10"	7'3"	8'10"	7'8"	6'3"	7'11"	6'10"	5'7"	7'3"	6'3"	5'1"	6'3"	5'5"	4'5"
250EU18	16'8"	15'2"	13'3"	11'6"	10'6"	8'7"	10'6"	9'1"	7'5"	9'5"	8'2"	6'8"	8'7"	7'5"	6'1"	7'5"	6'5"	5'5"
250EU16	17'11"	16'3"	14'2"	12'5"	11'3"	9'10"	11'3"	10'3"	8'11"	10'5"	9'6"	8'3"	9'10"	8'11"	7'10"	8'11"	8'1"	7'1"
250EU14	19'4"	17'6"	15'4"	13'4"	12'2"	10'7"	12'2"	11'0"	9'8"	11'3"	10'3"	8'11"	10'7"	9'8"	8'5"	9'8"	8'9"	7'8"
350EU20	19'8"	17'11"	15'8"	13'1"	11'4"	9'3"	11'4"	9'10"	8'0"	10'2"	8'9"	7'2"	9'3"	8'0"	6'6"	8'0"	6'11"	5'8"
350EU18	21'9"	19'9"	17'3"	15'1"	13'5"	11'0"	13'5"	11'8"	9'6"	12'0"	10'5"	8'6"	11'0"	9'6"	7'9"	9'6"	8'3"	6'8"
350EU16	23'5"	21'3"	18'7"	16'3"	14'9"	12'11"	14'9"	13'5"	11'8"	13'8"	12'5"	10'10"	12'11"	11'8"	10'3"	11'8"	10'7"	9'3"
350EU14	25'3"	23'0"	20'1"	17'6"	15'11"	13'11"	15'11"	14'5"	12'7"	14'9"	13'5"	11'9"	13'11"	12'7"	11'0"	12'7"	11'6"	10'0"
358EU20	20'3"	18'5"	16'1"	13'6"	11'8"	9'6"	11'8"	10'1"	8'3"	10'5"	9'0"	7'4"	9'6"	8'3"	6'9"	8'3"	7'1"	5'10"
358EU18	22'5"	20'4"	17'9"	15'6"	13'10"	11'3"	13'10"	11'11"	9'9"	12'4"	10'8"	8'8"	11'3"	9'9"	7'11"	9'9"	8'5"	6'11"
358EU16	24'1"	21'11"	19'2"	16'8"	15'2"	13'3"	15'2"	13'9"	12'0"	14'1"	12'10"	11'2"	13'3"	12'0"	10'6"	12'0"	10'11"	9'6"
358EU14	26'0"	23'8"	20'8"	18'0"	16'5"	14'4"	16'5"	14'11"	13'0"	15'2"	13'10"	12'1"	14'4"	13'0"	11'4"	13'0"	11'10"	10'4"
400EU20	22'0"	19'11"	17'5"	14'6"	12'7"	10'3"	12'7"	10'11"	8'11"	11'3"	9'9"	7'11"	10'3"	8'11"	7'3"	8'11"	7'8"	6'3"
400EU18	24'3"	22'1"	19'3"	16'10"	14'10"	12'1"	14'10"	12'10"	10'6"	13'3"	11'6"	9'4"	12'1"	10'6"	8'7"	10'6"	9'1"	7'5"
400EU16	26'2"	23'9"	20'9"	18'1"	16'5"	14'4"	16'5"	14'11"	13'1"	15'3"	13'10"	12'1"	14'4"	13'1"	11'5"	13'1"	11'10"	10'2"
400EU14	28'2"	25'7"	22'5"	19'7"	17'9"	15'6"	17'9"	16'2"	14'1"	16'6"	15'0"	13'1"	15'6"	14'1"	12'4"	14'1"	12'9"	11'2"
600EU20	30'11"	28'1"	23'10"	19'6"	16'10"	13'9"	16'10"	14'7"	11'11"	15'1"	13'0"	10'8"	13'9"	11'11"	9'9"	11'11"	10'4"	8'5"
600EU18	34'0"	30'11"	27'0"	23'6"	20'4"	16'7"	20'4"	17'7"	14'4"	18'2"	15'9"	12'10"	16'7"	14'4"	11'9"	14'4"	12'5"	10'2"
600EU16	36'8"	33'4"	29'1"	25'5"	23'1"	20'2"	23'1"	21'0"	18'4"	21'5"	19'5"	17'0"	20'2"	18'4"	16'0"	18'4"	16'8"	14'0"
600EU14	39'7"	36'0"	31'5"	27'5"	24'11"	21'9"	24'11"	22'8"	19'9"	23'2"	21'0"	18'4"	21'9"	19'9"	17'3"	19'9"	18'0"	15'8"
800EU20	38'2"	33'7"	27'0"	22'0"	19'1"	15'7"	19'1"	16'6"	13'6"	17'1"	14'9"	12'1"	15'7"	13'6"	11'0"	13'6"	11'8"	9'6"
800EU18	43'7"	39'7"	34'7"	29'3"	25'4"	20'8"	25'4"	21'11"	17'11"	22'8"	19'7"	16'0"	20'8"	17'11"	14'7"	17'11"	15'6"	12'8"
800EU16	47'0"	42'8"	37'3"	32'7"	29'7"	25'10"	29'7"	26'10"	23'6"	27'5"	24'11"	21'9"	25'10"	23'6"	20'5"	23'6"	21'4"	17'8"
800EU14	50'9"	46'1"	40'3"	35'2"	31'11"	27'11"	31'11"	29'0"	25'4"	29'8"	26'11"	23'6"	27'11"	25'4"	22'2"	25'4"	23'0"	20'1"

L/120 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158IU20	11'2"	10'2"	8'10"	7'9"	6'8"	5'5"	6'8"	5'9"	4'9"	6'0"	5'2"	4'3"	5'5"	4'9"	3'10"	4'9"	4'1"	3'4"
158IU18	12'6"	11'4"	9'11"	8'8"	7'10"	6'7"	7'10"	7'0"	5'8"	7'3"	6'3"	5'1"	6'7"	5'8"	4'8"	5'8"	4'11"	4'0"
158IU16	13'5"	12'2"	10'7"	9'3"	8'5"	7'4"	8'5"	7'8"	6'6"	7'10"	7'1"	6'2"	7'4"	6'8"	5'10"	6'8"	6'1"	5'3"
158IU14	14'7"	13'3"	11'7"	10'1"	9'2"	8'0"	9'2"	8'4"	7'3"	8'6"	7'9"	6'9"	8'0"	7'3"	6'4"	7'3"	6'7"	5'9"
250IU20	15'7"	14'2"	12'4"	10'6"	9'1"	7'5"	9'1"	7'10"	6'5"	8'1"	7'0"	5'9"	7'5"	6'5"	5'3"	6'5"	5'6"	4'6"
250IU18	17'4"	15'9"	13'9"	12'0"	10'10"	8'10"	10'10"	9'5"	7'8"	9'9"	8'5"	6'10"	8'10"	7'8"	6'3"	7'8"	6'8"	5'5"
250IU16	18'8"	16'11"	14'9"	12'11"	11'9"	10'3"	11'9"	10'8"	9'4"	10'11"	9'11"	8'8"	10'3"	9'4"	8'1"	9'4"	8'5"	7'4"
250IU14	20'4"	18'6"	16'2"	14'1"	12'10"	11'2"	12'10"	11'7"	10'2"	11'11"	10'9"	9'5"	11'2"	10'2"	8'10"	10'2"	9'3"	8'1"
350IU20	20'4"	18'5"	16'1"	13'5"	11'7"	9'6"	11'7"	10'1"	8'2"	10'5"	9'0"	7'4"	9'6"	8'2"	6'8"	8'2"	7'1"	5'9"
350IU18	22'7"	20'6"	17'11"	15'7"	13'10"	11'3"	13'10"	12'0"	9'9"	12'4"	10'8"	8'9"	11'3"	9'9"	8'0"	9'9"	8'5"	6'11"
350IU16	24'3"	22'1"	19'3"	16'10"	15'3"	13'4"	15'3"	13'11"	12'1"	14'2"	12'11"	11'3"	13'4"	12'1"	10'7"	12'1"	11'0"	9'6"
350IU14	26'6"	24'1"	21'0"	18'4"	16'8"	14'7"	16'8"	15'2"	13'3"	15'6"	14'1"	12'3"	14'7"	13'3"	11'7"	13'3"	12'0"	10'6"
358IU20	20'11"	19'0"	16'7"	13'9"	11'11"	9'9"	11'11"	10'4"	8'5"	10'8"	9'3"	7'6"	9'9"	8'5"	6'10"	8'5"	7'4"	5'11"
358IU18	23'2"	21'1"	18'5"	16'1"	14'2"	11'7"	14'2"	12'3"	10'0"	12'8"	11'0"	9'0"	11'7"	10'0"	8'2"	10'0"	8'8"	7'1"
358IU16	25'0"	22'8"	19'10"	17'4"	15'9"	13'9"	15'9"	14'3"	12'6"	14'7"	13'3"	11'7"	13'9"	12'6"	10'11"	12'6"	11'4"	9'9"
358IU14	27'3"	24'9"	21'7"	18'11"	17'2"	15'0"	17'2"	15'7"	13'7"	15'11"	14'5"	12'7"	15'0"	13'7"	11'11"	13'7"	12'4"	10'9"
400IU20	22'7"	20'6"	17'11"	14'10"	12'10"	10'6"	12'10"	11'2"	9'1"	11'6"	9'11"	8'1"	10'6"	9'1"	7'5"	9'1"	7'10"	6'5"
400IU18	25'1"	22'9"	19'11"	17'5"	15'3"	12'5"	15'3"	13'3"	10'9"	13'8"	11'10"	9'8"	12'5"	10'9"	8'10"	10'9"	9'4"	7'7"
400IU16	27'0"	24'7"	21'5"	18'9"	17'0"	14'10"	17'0"	15'5"	13'6"	15'9"	14'4"	12'6"	14'10"	13'6"	11'9"	13'6"	12'3"	10'6"
400IU14	29'6"	26'9"	23'5"	20'5"	18'7"	16'2"	18'7"	16'10"	14'9"	17'3"	15'8"	13'8"	16'2"	14'9"	12'10"	14'9"	13'4"	11'8"
600IU20	31'8"	28'10"	23'10"	19'5"	16'10"	13'9"	16'10"	14'7"	11'11"	15'1"	13'0"	10'8"	13'9"	11'11"	9'8"	11'11"	10'4"	8'5"
600IU18	35'0"	31'9"	27'9"	24'0"	20'10"	17'0"	20'10"	18'0"	14'8"	18'7"	16'1"	13'2"	17'0"	14'8"	12'0"	14'8"	12'9"	10'5"
600IU16	37'8"	34'3"	29'11"	26'1"	23'9"	20'9"	23'9"	21'7"	18'10"	22'0"	20'0"	17'6"	20'9"	18'10"	16'5"	18'10"	17'1"	14'4"
600IU14	41'1"	37'4"	32'7"	28'6"	25'10"	22'7"	25'10"	23'6"	20'6"	24'0"	21'10"	19'0"	22'7"	20'6"	17'11"	20'6"	18'8"	16'3"
800IU20	38'5"	33'3"	27'2"	22'2"	19'2"	15'8"	19'2"	16'7"	13'7"	17'2"	14'10"	12'1"	15'8"	13'7"	11'1"	13'7"	11'9"	9'7"
800IU18	44'8"	40'7"	35'5"	29'4"	25'5"	20'9"	25'5"	22'0"	17'11"	22'9"	19'8"	16'1"	20'9"	17'11"	14'8"	17'11"	15'7"	12'8"
800IU16	48'2"	43'9"	38'2"	33'4"	30'4"	26'6"	30'4"	27'6"	24'1"	28'2"	25'7"	22'4"	26'6"	24'1"	20'6"	24'1"	21'8"	17'9"
800IU14	52'4"	47'7"	41'6"	36'3"	32'11"	28'9"	32'11"	29'11"	26'2"	30'7"	27'9"	24'3"	28'9"	26'2"	22'10"	26'2"	23'9"	20'8"

1. Heights based on properly attached sheathing on each flange over the entire length of the stud.
2. Lateral load multiplied by 0.75 for strength determination per AISI A4.4
3. Heights for 14 and 16 gauge studs based on $F_y=50$ksi.
4. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
5. Heights based on web punch-outs a minimum of 1.5 times the web height from the edge of bearing. (See page 52 for detail)

ALLOWABLE WALL HEIGHTS — SU SECTIONS

L/120 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158SU20	11'4"	10'4"	9'0"	7'10"	6'9"	5'6"	6'9"	5'10"	4'9"	6'0"	5'3"	4'3"	5'6"	4'9"	3'11"	4'9"	4'1"	3'4"
158SU18	12'8"	11'6"	10'1"	8'9"	8'0"	6'8"	8'0"	7'1"	5'9"	7'4"	6'4"	5'2"	6'8"	5'9"	4'8"	5'9"	5'0"	4'1"
158SU16	13'8"	12'5"	10'10"	9'5"	8'7"	7'6"	8'7"	7'9"	6'10"	7'11"	7'3"	6'4"	7'6"	6'10"	5'11"	6'10"	6'2"	5'5"
158SU14	14'11"	13'6"	11'10"	10'4"	9'4"	8'2"	9'4"	8'6"	7'5"	8'8"	7'11"	6'11"	8'2"	7'5"	6'6"	7'5"	6'9"	5'11"
250SU20	15'10"	14'4"	12'6"	10'7"	9'2"	7'6"	9'2"	7'11"	6'6"	8'2"	7'1"	5'9"	7'6"	6'6"	5'3"	6'6"	5'7"	4'7"
250SU18	17'7"	16'0"	14'0"	12'2"	11'0"	9'0"	11'0"	9'6"	7'9"	9'10"	8'6"	6'11"	9'0"	7'9"	6'4"	7'9"	6'9"	5'6"
250SU16	18'11"	17'2"	15'0"	13'1"	11'11"	10'5"	11'11"	10'10"	9'5"	11'1"	10'0"	8'9"	10'5"	9'5"	8'3"	9'5"	8'7"	7'6"
250SU14	20'9"	18'10"	16'5"	14'4"	13'0"	11'5"	13'0"	11'10"	10'4"	12'1"	11'0"	9'7"	11'5"	10'4"	9'0"	10'4"	9'5"	8'2"
350SU20	20'7"	18'8"	16'4"	13'7"	11'9"	9'7"	11'9"	10'2"	8'3"	10'6"	9'1"	7'5"	9'7"	8'3"	6'9"	8'3"	7'2"	5'10"
350SU18	22'11"	20'9"	18'2"	15'10"	14'0"	11'5"	14'0"	12'1"	9'11"	12'6"	10'10"	8'10"	11'5"	9'11"	8'1"	9'11"	8'7"	7'0"
350SU16	24'8"	22'5"	19'7"	17'1"	15'6"	13'6"	15'6"	14'1"	12'4"	14'5"	13'1"	11'5"	13'6"	12'4"	10'9"	12'4"	11'2"	9'7"
350SU14	26'11"	24'6"	21'4"	18'8"	16'11"	14'10"	16'11"	15'5"	13'5"	15'9"	14'3"	12'6"	14'10"	13'5"	11'9"	13'5"	12'3"	10'8"
358SU20	21'2"	19'3"	16'9"	13'11"	12'1"	9'10"	12'1"	10'5"	8'6"	10'9"	9'4"	7'7"	9'10"	8'6"	6'11"	8'6"	7'4"	6'0"
358SU18	23'6"	21'4"	18'8"	16'4"	14'4"	11'9"	14'4"	12'5"	10'2"	12'10"	11'1"	9'1"	11'9"	10'2"	8'3"	10'2"	8'9"	7'2"
358SU16	25'4"	23'0"	20'1"	17'7"	15'11"	13'11"	15'11"	14'6"	12'8"	14'10"	13'5"	11'9"	13'11"	12'8"	11'0"	12'8"	11'6"	9'10"
358SU14	27'8"	25'2"	22'0"	19'2"	17'5"	15'3"	17'5"	15'10"	13'10"	16'2"	14'8"	12'10"	15'3"	13'10"	12'1"	13'10"	12'7"	11'0"
400SU20	22'11"	20'10"	18'2"	15'0"	13'0"	10'7"	13'0"	11'3"	9'2"	11'7"	10'1"	8'2"	10'7"	9'2"	7'6"	9'2"	7'11"	6'6"
400SU18	25'5"	23'1"	20'2"	17'7"	15'5"	12'7"	15'5"	13'4"	10'11"	13'10"	11'11"	9'9"	12'7"	10'11"	8'11"	10'11"	9'5"	7'8"
400SU16	27'5"	24'11"	21'9"	19'0"	17'3"	15'1"	17'3"	15'8"	13'8"	16'0"	14'6"	12'8"	15'1"	13'8"	11'11"	13'8"	12'5"	10'7"
400SU14	29'11"	27'2"	23'9"	20'9"	18'10"	16'5"	18'10"	17'1"	14'11"	17'6"	15'11"	13'10"	16'5"	14'11"	13'1"	14'11"	13'7"	11'10"
600SU20	32'1"	29'2"	23'10"	19'5"	16'10"	13'9"	16'10"	14'7"	11'11"	15'1"	13'0"	10'8"	13'9"	11'11"	9'8"	11'11"	10'3"	8'5"
600SU18	35'5"	32'2"	28'1"	24'3"	21'0"	17'2"	21'0"	18'2"	14'10"	18'10"	16'3"	13'3"	17'2"	14'10"	12'1"	14'10"	12'10"	10'6"
600SU16	38'2"	34'8"	30'3"	26'5"	24'0"	21'0"	24'0"	21'10"	19'1"	22'3"	20'3"	17'8"	21'0"	19'1"	16'8"	19'1"	17'4"	14'6"
600SU14	41'7"	37'10"	33'0"	28'10"	26'2"	22'11"	26'2"	23'10"	20'9"	24'4"	22'1"	19'3"	22'11"	20'9"	18'2"	20'9"	18'11"	16'6"
800SU20	38'6"	33'4"	27'3"	22'3"	19'3"	15'8"	19'3"	16'8"	13'7"	17'2"	14'11"	12'2"	15'8"	13'7"	11'1"	13'7"	11'9"	9'7"
800SU18	45'2"	41'0"	35'10"	29'4"	25'5"	20'9"	25'5"	22'0"	18'0"	22'9"	19'8"	16'1"	20'9"	18'0"	14'8"	18'0"	15'7"	12'8"
800SU16	48'8"	44'2"	38'7"	33'9"	30'8"	26'9"	30'8"	27'10"	24'4"	28'5"	25'10"	22'5"	26'9"	24'4"	20'6"	24'4"	21'9"	17'9"
800SU14	52'11"	48'1"	42'0"	36'8"	33'4"	29'1"	33'4"	30'3"	26'5"	30'11"	28'1"	24'7"	29'1"	26'5"	23'1"	26'5"	24'0"	20'11"

1. Heights based on properly attached sheathing on each flange over the entire length of the stud.
2. Lateral load multiplied by 0.75 for strength determination per AISI A4.4
3. Heights for 14 and 16 gauge studs based on $F_y = 50$ksi.
4. End reaction = Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
5. Heights based on web punch-outs a minimum of 1.5 times the web height from the edge of bearing. (See page 52 for detail)

ALLOWABLE WALL HEIGHTS

EU SECTIONS

L/240 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158EU20	8'7"	7'9"	6'9"	5'11"	5'4"	4'8"	5'4"	4'10"	4'5"	5'0"	4'6"	3'11"	4'8"	4'3"	3'9"	4'3"	3'10"	3'3"
158EU18	9'6"	8'7"	7'6"	6'7"	5'11"	5'2"	5'11"	5'5"	4'9"	5'6"	5'0"	4'4"	5'2"	4'9"	4'1"	4'9"	4'3"	3'9"
158EU16	10'2"	9'3"	8'1"	7'0"	6'5"	5'7"	6'5"	5'10"	5'1"	5'11"	5'5"	4'8"	5'7"	5'1"	4'5"	5'1"	4'7"	4'0"
158EU14	10'11"	9'11"	8'8"	7'7"	6'10"	6'0"	6'10"	6'3"	5'5"	6'4"	5'9"	5'1"	6'0"	5'5"	4'9"	5'5"	4'11"	4'4"
250EU20	11'11"	10'10"	9'6"	8'3"	7'6"	6'7"	7'6"	6'10"	5'11"	7'0"	6'4"	5'6"	6'7"	5'11"	5'1"	5'11"	5'5"	4'5"
250EU18	13'3"	12'0"	10'6"	9'2"	8'4"	7'3"	8'4"	7'7"	6'7"	7'9"	7'0"	6'1"	7'3"	6'7"	5'9"	6'7"	6'0"	5'3"
250EU16	14'2"	12'11"	11'3"	9'10"	8'11"	7'10"	8'11"	8'1"	7'1"	8'3"	7'6"	6'7"	7'10"	7'1"	6'2"	7'1"	6'5"	5'7"
250EU14	15'4"	13'11"	12'2"	10'7"	9'8"	8'5"	9'8"	8'9"	7'8"	8'11"	8'1"	7'1"	8'5"	7'8"	6'8"	7'8"	6'11"	6'1"
350EU20	15'8"	14'2"	12'5"	10'10"	9'10"	8'7"	9'10"	8'11"	7'10"	9'1"	8'3"	7'2"	8'7"	7'10"	6'6"	7'10"	6'11"	5'8"
350EU18	17'3"	15'8"	13'9"	12'0"	10'10"	9'6"	10'10"	9'10"	8'7"	10'1"	9'2"	8'0"	9'6"	8'7"	7'6"	8'7"	7'10"	6'8"
350EU16	18'7"	16'11"	14'9"	12'11"	11'8"	10'3"	11'8"	10'7"	9'3"	10'10"	9'10"	8'7"	10'3"	9'3"	8'1"	9'3"	8'5"	7'4"
350EU14	20'1"	18'3"	15'11"	13'11"	12'7"	11'0"	12'7"	11'6"	10'0"	11'9"	10'8"	9'3"	11'0"	10'0"	8'9"	10'0"	9'1"	7'11"
358EU20	16'1"	14'7"	12'9"	11'2"	10'1"	8'10"	10'1"	9'2"	8'0"	9'5"	8'6"	7'4"	8'10"	8'0"	6'6"	8'0"	7'1"	5'10"
358EU18	17'9"	16'2"	14'1"	12'4"	11'2"	9'9"	11'2"	10'2"	8'10"	10'5"	9'5"	8'3"	9'9"	8'10"	7'9"	8'10"	8'1"	6'11"
358EU16	19'2"	17'5"	15'2"	13'3"	12'0"	10'6"	12'0"	10'11"	9'7"	11'2"	10'2"	8'10"	10'6"	9'7"	8'4"	9'7"	8'8"	7'7"
358EU14	20'8"	18'9"	16'5"	14'4"	13'0"	11'4"	13'0"	11'10"	10'4"	12'1"	10'11"	9'7"	11'4"	10'4"	9'0"	10'4"	9'4"	8'2"
400EU20	17'5"	15'10"	13'10"	12'1"	11'0"	9'7"	11'0"	9'11"	8'8"	10'2"	9'5"	7'11"	9'7"	8'8"	7'3"	8'8"	7'8"	6'3"
400EU18	19'3"	17'6"	15'3"	13'4"	12'1"	10'7"	12'1"	11'0"	9'7"	11'3"	10'3"	8'11"	10'7"	9'7"	8'5"	9'7"	8'9"	7'5"
400EU16	20'9"	18'10"	16'5"	14'4"	13'1"	11'5"	13'1"	11'10"	10'4"	12'1"	11'0"	9'7"	11'5"	10'4"	9'0"	10'4"	9'5"	8'2"
400EU14	22'5"	20'4"	17'9"	15'6"	14'1"	12'4"	14'1"	12'9"	11'2"	13'1"	11'10"	10'4"	12'4"	11'2"	9'9"	11'2"	10'2"	8'10"
600EU20	24'6"	22'3"	19'5"	17'0"	15'5"	13'6"	15'5"	14'0"	11'11"	14'4"	13'0"	10'8"	13'6"	11'11"	9'9"	11'11"	10'4"	8'5"
600EU18	27'0"	24'6"	21'5"	18'9"	17'0"	14'10"	17'0"	15'5"	13'6"	15'9"	14'4"	12'6"	14'10"	13'6"	11'9"	13'6"	12'3"	10'2"
600EU16	29'1"	26'5"	23'1"	20'2"	18'4"	16'0"	18'4"	16'8"	14'6"	17'0"	15'5"	13'6"	16'0"	14'6"	12'8"	14'6"	13'2"	11'6"
600EU14	31'5"	28'7"	24'11"	21'9"	19'9"	17'3"	19'9"	18'0"	15'8"	18'4"	16'8"	14'7"	17'3"	15'8"	13'8"	15'8"	14'3"	12'5"
800EU20	31'7"	28'8"	25'1"	21'11"	19'1"	15'7"	19'1"	16'6"	13'6"	17'1"	14'9"	12'1"	15'7"	13'6"	11'0"	13'6"	11'8"	9'6"
800EU18	34'7"	31'5"	27'6"	24'0"	21'9"	19'0"	21'9"	19'9"	17'3"	20'3"	18'4"	16'0"	19'0"	17'3"	14'7"	17'3"	15'6"	12'8"
800EU16	37'3"	33'10"	29'7"	25'10"	23'6"	20'6"	23'6"	21'4"	18'7"	21'9"	19'9"	17'3"	20'6"	18'7"	16'3"	18'7"	16'11"	14'9"
800EU14	40'3"	36'7"	31'11"	27'11"	25'4"	22'2"	25'4"	23'0"	20'1"	23'6"	21'5"	18'3"	22'2"	20'1"	17'7"	20'1"	18'3"	15'11"

IU SECTIONS

L/240 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158IU20	8'10"	8'1"	7'0"	6'2"	5'7"	4'10"	5'7"	5'1"	4'5"	5'2"	4'8"	4'1"	4'10"	4'5"	3'10"	4'5"	4'0"	3'4"
158IU18	9'11"	9'0"	7'10"	6'10"	6'3"	5'5"	6'3"	5'8"	4'11"	5'9"	5'3"	4'7"	5'5"	4'11"	4'4"	4'11"	4'6"	3'11"
158IU16	10'7"	9'8"	8'5"	7'4"	6'8"	5'10"	6'8"	6'1"	5'3"	6'2"	5'7"	4'11"	5'10"	5'3"	4'7"	5'3"	4'10"	4'2"
158IU14	11'7"	10'6"	9'2"	8'0"	7'3"	6'4"	7'3"	6'7"	5'9"	6'9"	6'2"	5'4"	6'4"	5'9"	5'0"	5'9"	5'3"	4'7"
250IU20	12'4"	11'3"	9'10"	8'7"	7'9"	6'9"	7'9"	7'1"	6'2"	7'2"	6'7"	5'9"	6'9"	6'2"	5'3"	6'2"	5'6"	4'6"
250IU18	13'9"	12'6"	10'11"	9'6"	8'8"	7'7"	8'6"	7'10"	6'10"	8'0"	7'3"	6'4"	7'7"	6'10"	6'0"	6'10"	6'3"	5'5"
250IU16	14'9"	13'5"	11'9"	10'3"	9'4"	8'1"	9'4"	8'5"	7'4"	8'8"	7'10"	6'10"	8'1"	7'4"	6'5"	7'4"	6'8"	5'10"
250IU14	16'2"	14'8"	12'10"	11'2"	10'2"	8'10"	10'2"	9'3"	8'1"	9'5"	8'7"	7'6"	8'10"	8'1"	7'0"	8'1"	7'4"	6'5"
350IU20	16'1"	14'8"	12'9"	11'2"	10'2"	8'10"	10'2"	9'2"	8'0"	9'5"	8'6"	7'4"	8'10"	8'0"	6'8"	8'0"	7'1"	5'9"
350IU18	17'11"	16'3"	14'2"	12'5"	11'3"	9'10"	11'3"	10'3"	8'11"	10'5"	9'6"	8'3"	9'10"	8'11"	7'9"	8'11"	8'1"	6'11"
350IU16	19'3"	17'6"	15'3"	13'4"	12'1"	10'7"	12'1"	11'0"	9'7"	11'3"	10'3"	8'11"	10'7"	9'7"	8'5"	9'7"	8'9"	7'7"
350IU14	21'0"	19'1"	16'8"	14'7"	13'3"	11'7"	13'3"	12'0"	10'6"	12'3"	11'2"	9'9"	11'7"	10'6"	9'2"	10'6"	9'6"	8'4"
358IU20	16'7"	15'1"	13'2"	11'6"	10'5"	9'1"	10'5"	9'6"	8'3"	9'8"	8'9"	7'6"	9'1"	8'3"	6'10"	8'3"	7'4"	5'11"
358IU18	18'5"	16'9"	14'7"	12'9"	11'7"	10'1"	11'7"	10'6"	9'2"	10'9"	9'9"	8'6"	10'1"	9'2"	8'0"	9'2"	8'4"	7'1"
358IU16	19'10"	18'0"	15'9"	13'9"	12'6"	10'11"	12'6"	11'4"	9'11"	11'7"	10'6"	9'2"	10'11"	9'11"	8'8"	9'11"	9'0"	7'10"
358IU14	21'7"	19'8"	17'2"	15'0"	13'7"	11'11"	13'7"	12'4"	10'9"	12'7"	11'6"	10'0"	11'11"	10'9"	9'5"	10'9"	9'10"	8'7"
400IU20	17'11"	16'4"	14'3"	12'5"	11'3"	9'10"	11'3"	10'3"	8'11"	10'6"	9'6"	8'1"	9'10"	8'11"	7'5"	8'11"	7'10"	6'5"
400IU18	19'11"	18'1"	15'9"	13'9"	12'6"	10'11"	12'6"	11'4"	9'11"	11'7"	10'7"	9'3"	10'11"	9'11"	8'8"	9'11"	9'0"	7'7"
400IU16	21'5"	19'6"	17'0"	14'10"	13'6"	11'9"	13'6"	12'3"	10'8"	12'6"	11'4"	9'11"	11'9"	10'8"	9'4"	10'8"	9'7"	8'6"
400IU14	23'5"	21'3"	18'7"	16'2"	14'9"	12'10"	14'9"	13'4"	11'8"	13'8"	12'5"	10'10"	12'10"	11'8"	10'2"	11'8"	10'7"	9'3"
600IU20	25'2"	22'10"	19'11"	17'5"	15'10"	13'9"	15'10"	14'5"	11'11"	14'8"	13'0"	10'8"	13'9"	11'11"	9'8"	11'11"	10'4"	8'5"
600IU18	27'9"	25'2"	22'0"	19'3"	17'6"	15'3"	17'6"	15'10"	13'10"	16'3"	14'9"	12'10"	15'3"	13'10"	12'0"	13'10"	12'7"	10'5"
600IU16	29'11"	27'2"	23'9"	20'9"	18'10"	16'5"	18'10"	17'1"	14'11"	17'6"	15'10"	13'10"	16'5"	14'11"	13'0"	14'11"	13'7"	11'10"
600IU14	32'7"	29'7"	25'10"	22'7"	20'6"	17'11"	20'6"	18'8"	16'3"	19'0"	17'4"	15'1"	17'11"	16'3"	14'3"	16'3"	14'9"	12'11"
800IU20	32'4"	29'4"	25'8"	22'2"	19'2"	15'8"	19'2"	16'7"	13'7"	17'2"	14'10"	12'1"	15'8"	13'7"	11'1"	13'7"	11'9"	9'7"
800IU18	35'5"	32'3"	28'2"	24'7"	22'4"	19'6"	22'4"	20'3"	17'8"	20'9"	18'10"	16'1"	19'6"	17'8"	14'8"	17'8"	15'7"	12'8"
800IU16	38'2"	34'8"	30'4"	26'6"	24'1"	21'0"	24'1"	21'10"	19'1"	22'4"	20'3"	17'8"	21'0"	19'1"	16'8"	19'1"	17'4"	15'2"
800IU14	41'6"	37'9"	32'11"	28'9"	26'2"	22'10"	26'2"	23'9"	20'9"	24'3"	22'1"	19'3"	22'10"	20'9"	18'1"	20'9"	18'10"	16'5"

1. Heights based on properly attached sheathing on each flange over the entire length of the stud.
2. Lateral load multiplied by 0.75 for strength determination per AISI A4.4
3. Heights for 14 and 16 guage studs based on Fy=50ksi.
4. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
5. Heights based on web punch-outs a minimum of 1.5 times the web height from the edge of bearing. (See page 52 for detail)

L/240 DEFLECTION

SECTION	5 psf			15 psf			20 psf			25 psf			30 psf			40 psf		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158SU20	9'0"	8'2"	7'2"	6'3"	5'8"	4'11"	5'8"	5'2"	4'6"	5'3"	4'9"	4'2"	4'11"	4'6"	3'11"	4'6"	4'1"	3'4"
158SU18	10'1"	9'2"	8'0"	7'0"	6'4"	5'6"	6'4"	5'9"	5'0"	5'10"	5'4"	4'8"	5'6"	5'0"	4'4"	5'0"	4'7"	4'0"
158SU16	10'10"	9'10"	8'7"	7'6"	6'10"	5'11"	6'10"	6'2"	5'5"	6'4"	5'9"	5'0"	5'11"	5'5"	4'8"	5'5"	4'11"	4'3"
158SU14	11'10"	10'9"	9'4"	8'2"	7'5"	6'6"	7'5"	6'9"	5'11"	6'11"	6'3"	5'6"	6'6"	5'11"	5'2"	5'11"	5'4"	4'8"
250SU20	12'6"	11'5"	9'11"	8'8"	7'11"	6'10"	7'11"	7'2"	6'3"	7'4"	6'8"	5'9"	6'10"	6'3"	5'3"	6'3"	5'7"	4'7"
250SU18	14'0"	12'8"	11'1"	9'8"	8'9"	7'8"	8'9"	8'0"	7'0"	8'2"	7'5"	6'5"	7'8"	7'0"	6'1"	7'0"	6'4"	5'6"
250SU16	15'0"	13'8"	11'11"	10'5"	9'5"	8'3"	9'5"	8'7"	7'6"	8'9"	8'0"	6'11"	8'3"	7'6"	6'6"	7'6"	6'10"	5'11"
250SU14	16'5"	14'11"	13'0"	11'5"	10'4"	9'0"	10'4"	9'5"	8'2"	9'7"	8'9"	7'7"	9'0"	8'2"	7'2"	8'2"	7'5"	6'6"
350SU20	16'4"	14'10"	12'11"	11'4"	10'3"	9'0"	10'3"	9'4"	8'2"	9'6"	8'8"	7'5"	9'0"	8'2"	6'9"	8'2"	7'2"	5'10"
350SU18	18'2"	16'6"	14'5"	12'7"	11'5"	10'0"	11'5"	10'4"	9'1"	10'7"	9'7"	8'5"	10'0"	9'1"	7'11"	9'1"	8'3"	7'0"
350SU16	19'7"	17'9"	15'6"	13'6"	12'4"	10'9"	12'4"	11'2"	9'9"	11'5"	10'4"	9'1"	10'9"	9'9"	8'6"	9'9"	8'10"	7'9"
350SU14	21'4"	19'5"	16'11"	14'10"	13'5"	11'9"	13'5"	12'3"	10'8"	12'6"	11'4"	9'11"	11'9"	10'8"	9'4"	10'8"	9'8"	8'5"
358SU20	16'9"	15'3"	13'4"	11'7"	10'7"	9'3"	10'7"	9'7"	8'4"	9'10"	8'11"	7'7"	9'3"	8'4"	6'11"	8'4"	7'4"	6'0"
358SU18	18'8"	16'11"	14'10"	12'11"	11'9"	10'3"	11'9"	10'8"	9'4"	10'11"	9'11"	8'8"	10'3"	9'4"	8'2"	9'4"	8'5"	7'2"
358SU16	20'1"	18'3"	15'11"	13'11"	12'8"	11'0"	12'8"	11'6"	10'0"	11'9"	10'8"	9'4"	11'0"	10'0"	8'9"	10'0"	9'1"	7'11"
358SU14	22'0"	19'11"	17'5"	15'3"	13'10"	12'1"	13'10"	12'7"	11'0"	12'10"	11'8"	10'2"	12'1"	11'0"	9'7"	11'0"	9'11"	8'8"
400SU20	18'2"	16'6"	14'5"	12'7"	11'5"	10'0"	11'5"	10'5"	9'1"	10'7"	9'8"	8'2"	10'0"	9'1"	7'6"	9'1"	7'11"	6'6"
400SU18	20'2"	18'4"	16'0"	14'0"	12'8"	11'1"	12'8"	11'6"	10'1"	11'9"	10'8"	9'4"	11'1"	10'1"	8'9"	10'1"	9'2"	7'8"
400SU16	21'9"	19'9"	17'3"	15'1"	13'8"	11'11"	13'8"	12'5"	10'10"	12'8"	11'6"	10'1"	11'11"	10'10"	9'6"	10'10"	9'10"	8'7"
400SU14	23'9"	21'7"	18'10"	16'5"	14'11"	13'1"	14'11"	13'7"	11'10"	13'10"	12'7"	11'0"	13'1"	11'10"	10'4"	11'10"	10'9"	9'5"
600SU20	25'5"	23'1"	20'2"	17'8"	16'0"	13'9"	16'0"	14'7"	11'11"	14'10"	13'0"	10'8"	13'9"	11'11"	9'8"	11'11"	10'3"	8'5"
600SU18	28'1"	25'6"	22'3"	19'5"	17'8"	15'5"	17'8"	16'1"	14'0"	16'5"	14'11"	13'0"	15'5"	14'0"	12'1"	14'0"	12'9"	10'6"
600SU16	30'3"	27'6"	24'0"	21'0"	19'1"	16'8"	19'1"	17'4"	15'1"	17'8"	16'1"	14'0"	16'8"	15'1"	13'2"	15'1"	13'9"	12'0"
600SU14	33'0"	30'0"	26'2"	22'11"	20'9"	18'2"	20'9"	18'11"	16'6"	19'3"	17'6"	15'4"	18'2"	16'6"	14'5"	16'6"	15'0"	13'1"
800SU20	32'8"	29'8"	25'11"	22'3"	19'3"	15'8"	19'3"	16'8"	13'7"	17'2"	14'11"	12'2"	15'8"	13'7"	11'1"	13'7"	11'9"	9'7"
800SU18	35'10"	32'7"	28'5"	24'10"	22'7"	19'8"	22'7"	20'6"	17'11"	20'11"	19'0"	16'1"	19'8"	17'11"	14'8"	17'11"	15'7"	12'8"
800SU16	38'7"	35'1"	30'8"	26'9"	24'4"	21'3"	24'4"	22'1"	19'3"	22'7"	20'6"	17'11"	21'3"	19'3"	16'10"	19'3"	17'6"	15'4"
800SU14	42'0"	38'2"	33'4"	29'1"	26'5"	23'1"	26'5"	24'0"	21'0"	24'7"	22'4"	19'6"	23'1"	21'0"	18'4"	21'0"	19'1"	16'8"

1. Heights based on properly attached sheathing on each flange over the entire length of the stud.
2. Lateral load multiplied by 0.75 for strength determination per AISI A4.4
3. Heights for 14 and 16 gauge studs based on $F_y=50ksi$.
4. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
5. Heights based on web punch-outs a minimum of 1.5 times the web height from the edge of bearing. (See page 52 for detail)

COMBINED LOADS — IC SECTIONS

LATERAL AND AXIAL. Allowable Axial Load In kips (1000lb)

5psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158IC20	0.41	0.36•	0.29□	0.27□	0.22□		0.26□	0.21□													
158IC18	0.56	0.55	0.46•	0.40•	0.35□	0.28□	0.44□	0.39□													
158IC16	0.77	0.77	0.77•	0.60•	0.59•	0.51□	0.61•	0.55□	0.46□												
158IC14	1.06	1.06	1.06	0.81	0.81•	0.73□				0.42□											
250IC20	0.89	0.89	0.86	0.79	0.72	0.59•	0.58•	0.50•	0.36□	0.41□	0.32□										
250IC18	1.21	1.21	1.21	1.06	1.06	0.91	0.85	0.76•	0.60□	0.61•	0.52□	0.36□	0.43□	0.34□							
250IC16	1.64	1.64	1.64	1.41	1.41	1.41	1.18	1.18	1.07•	0.97•	0.89•	0.75□	0.73□	0.65□							
250IC14	2.29	2.29	2.29	1.91	1.91	1.91	1.56	1.56	1.50•	1.27	1.23•	1.07□	0.99•	0.90□	0.75□	0.75□	0.67□				
350IC20	1.24	1.24	1.24	1.17	1.17	1.14	1.09	1.04	0.87	0.91	0.80•	0.61□	0.70•	0.58•	0.38□	0.52□	0.40□				
350IC18	1.77	1.77	1.77	1.66	1.66	1.66	1.51	1.51	1.36	1.34	1.21	1.00•	1.04	0.91•	0.69□	0.79•	0.66□	0.44□	0.59□	0.47□	
350IC16	2.27	2.27	2.27	2.18	2.18	2.18	1.96	1.96	1.96	1.72	1.72	1.67	1.48	1.47	1.28•	1.25•	1.14•	0.95□	0.99□	0.88□	0.70□
350IC14	2.73	2.73	2.73	2.73	2.73	2.73	2.61	2.61	2.61	2.25	2.25	2.25	1.91	1.91	1.78•	1.62	1.56•	1.35□	1.34•	1.22□	1.02□
358IC20	1.28	1.28	1.28	1.22	1.22	1.20	1.13	1.11	0.93	0.98	0.87	0.67•	0.76•	0.64•	0.43□	0.57•	0.45□	0.25□	0.42□	0.30□	
358IC18	1.83	1.83	1.83	1.73	1.73	1.73	1.60	1.60	1.47	1.44	1.33	1.10•	1.15	1.01•	0.78□	0.88•	0.74□	0.51□	0.66□	0.53□	
358IC16	2.31	2.31	2.31	2.31	2.31	2.31	2.10	2.10	2.10	1.85	1.85	1.83	1.61	1.61	1.41•	1.38	1.26•	1.06□	1.10•	0.98□	0.79□
358IC14	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.42	2.42	2.42	2.07	2.07	1.96•	1.76	1.72•	1.50□	1.47•	1.35•	1.14□
400IC20	1.38	1.38	1.38	1.33	1.33	1.33	1.26	1.26	1.13	1.17	1.06	0.85•	0.95	0.82•	0.60□	0.74•	0.61□	0.38□	0.56□	0.43□	
400IC18	1.86	1.86	1.86	1.86	1.86	1.86	1.79	1.79	1.75	1.65	1.62	1.39	1.44	1.30	1.04•	1.15	1.00•	0.74□	0.90•	0.75□	0.49□
400IC16	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.24	2.24	2.24	1.99	1.99	1.85•	1.73	1.66	1.43•	1.45•	1.32•	1.09□
400IC14	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.57	2.57	2.55	2.21	2.21	1.99•	1.90	1.79•	1.55□
600IC20	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.26	1.27	1.27	1.12	1.27	1.19	0.96	1.20	1.05	0.79•
600IC18	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.59	1.74	1.68	1.40
600IC16	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
600IC14	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04
800IC20	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.06	1.14	1.13	0.95
800IC18	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.56
800IC16	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
800IC14	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85

15psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158IC20																					
158IC18	0.35□	0.25□																			
158IC16	0.68□	0.59□																			
158IC14	1.00•	0.90□	0.70□	0.60□																	
250IC20	0.72	0.58•	0.34□	0.41□	0.26□		0.39□														
250IC18	1.11	0.96	0.69•	0.71•	0.54□	0.23□	0.88□	0.72□													
250IC16	1.64	1.64	1.43•	1.30•	1.15□	0.87□	0.88□	0.72□													
250IC14	2.29	2.29	2.16	1.87	1.70•	1.38□	1.29□	1.11□													
350IC20	1.24	1.13	0.89	0.95	0.77•	0.45□	0.64□	0.43□													
350IC18	1.77	1.77	1.49	1.52	1.32	0.95•	1.10•	0.86•	0.43□	0.71□	0.46□										
350IC16	2.27	2.27	2.27	2.18	2.18	1.92•	1.90	1.70•	1.34□	1.43•	1.21□	0.83□	1.03□	0.81□							
350IC14	2.73	2.73	2.73	2.73	2.73	2.63	2.61	2.45	2.05•	2.04•	1.80□	1.37□	1.50□	1.26□							
358IC20	1.28	1.19	0.95	1.02	0.84•	0.52□	0.70•	0.49□													
358IC18	1.83	1.83	1.59	1.62	1.42	1.04•	1.20•	0.96•	0.52□	0.81□	0.55□										
358IC16	2.31	2.31	2.31	2.31	2.31	2.08	2.06	1.86•	1.48□	1.57•	1.35□	0.95□	1.15□	0.92□							
358IC14	2.77	2.77	2.77	2.77	2.77	2.74	2.77	2.66	2.24•	2.24•	1.99•	1.54□	1.67□	1.42□							
400IC20	1.38	1.36	1.13	1.20	1.03	0.71•	0.89•	0.67•	0.28□	0.58□	0.34□										
400IC18	1.86	1.86	1.74	1.85	1.66	1.30	1.48	1.23•	0.78□	1.07•	0.79□	0.30□	0.71□	0.42□							
400IC16	2.39	2.39	2.39	2.39	2.39	2.32	2.39	2.26	1.88•	2.03•	1.78•	1.34□	1.55□	1.29□							
400IC14	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.59•	2.84	2.56•	2.07□	2.22•	1.93□	1.42□	1.67□	1.38□				
600IC20	1.27	1.27	1.27	1.27	1.27	1.09	1.24	1.09	0.82	1.07	0.88	0.51•	0.87	0.63•							
600IC18	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.47	1.71	1.52	1.16	1.51	1.26	0.81□	1.28•	0.99•	0.46□	1.03•	0.70□	
600IC16	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.20	2.30	2.27	1.91•	2.27	2.03•	1.59□	2.05•	1.77□	1.26□
600IC14	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	2.82	3.04	2.94	2.46•	2.94	2.63•	2.07□
800IC20	1.14	1.14	1.14	1.14	1.14	1.12	1.14	1.13	0.94	1.12	0.99	0.73	0.99	0.82	0.49	0.84	0.63	0.23•	0.68	0.43•	
800IC18	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.56	1.59	1.59	1.36	1.59	1.44	1.12	1.46	1.26	0.86•	1.30	1.05	0.58□
800IC16	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.10	2.12	2.12	1.90	2.12	2.04	1.67•
800IC14	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.69

NOTES:

1. Allowable loads based on mechanical bracing of the weak axis at 60" O.C. maximum and properly attached sheathing on both sides of the stud. (See page 52 for details)
2. Lateral and axial load multiplied by 0.75 for strength determination as per AISI A4.4
3. Allowable loads for 16 and 14 gauge are based on 50ksi yield stress, loads for 18 and 20 gauge are based on 33ksi yield stress.
4. Deflection limitations unless otherwise marked are for L/360; • for L/240; □ for L/120.
5. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
6. For construction loads, the 5psf lateral load tables may be used for studs with mechanical bracing only, spaced at a maximum of 60" O.C.

LATERAL AND AXIAL   Allowable Axial Load In kips (1000lb)   20psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158IC20																					
158IC18	0.25□																				
158IC16	0.59□	0.48□																			
158IC14	0.90□	0.76□																			
250IC20	0.58•	0.42□																			
250IC18	0.96	0.78•	0.44□	0.54□	0.33□																
250IC16	1.64	1.51•	1.22□	1.15□	0.96□																
250IC14	2.29	2.25	1.91•	1.70•	1.48□	1.10□	1.11□	0.89□													
350IC20	1.13	0.96	0.66•	0.77•	0.55•																
350IC18	1.77	1.58	1.23	1.32	1.07•	0.61□	0.86•	0.57□													
350IC16	2.27	2.27	2.21	2.18	2.02	1.64•	1.70•	1.45□	1.01□	1.21□	0.95□										
350IC14	2.73	2.73	2.73	2.73	2.73	2.34•	2.45	2.18•	1.68□	1.80□	1.51□										
358IC20	1.19	1.03	0.72•	0.84•	0.62•	0.22□	0.49□	0.23□													
358IC18	1.83	1.68	1.33	1.42	1.17•	0.70□	0.96•	0.66□													
358IC16	2.31	2.31	2.29	2.31	2.18	1.80•	1.86•	1.60•	1.15□	1.35□	1.07□										
358IC14	2.77	2.77	2.77	2.77	2.77	2.46•	2.66	2.38•	1.87□	1.99•	1.68□	1.15□	1.42□	1.11□							
400IC20	1.36	1.21	0.91	1.03	0.81•	0.41□	0.67•	0.41□													
400IC18	1.86	1.82	1.51	1.66	1.42	0.96•	1.23•	0.93•	0.38□	0.79□	0.46□										
400IC16	2.39	2.39	2.39	2.39	2.39	2.05•	2.26	2.01•	1.53□	1.78•	1.48□	0.94□	1.29□	0.97□							
400IC14	2.91	2.91	2.91	2.91	2.91	2.77	2.91	2.71	2.23•	2.56•	2.23□	1.64□	1.93□	1.58□							
600IC20	1.27	1.27	1.18	1.27	1.15	0.89	1.09	0.91	0.55•	0.88	0.63•										
600IC18	1.74	1.74	1.74	1.74	1.74	1.55	1.74	1.56	1.20	1.52	1.27	0.81•	1.26	0.96•	0.39□	0.99•	0.63□				
600IC16	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.25	2.30	2.29	1.93•	2.27	2.03•	1.57□	2.03•	1.74•	1.19□	1.77□	1.42□	
600IC14	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	2.85	3.04	2.95	2.45•	2.94	2.61•	2.01□	2.63•	2.25□	1.56□
800IC20	1.14	1.14	1.14	1.14	1.14	0.99	1.13	1.00	0.75	0.99	0.81	0.47	0.82	0.60							
800IC18	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.38	1.59	1.44	1.11	1.44	1.23	0.81	1.26	0.99	0.48•	1.05	0.73•	
800IC16	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.10	2.12	2.12	1.87	2.12	2.00	1.61•	2.04	1.79•	1.32□
800IC14	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.64	2.85	2.81	2.35•

25psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158IC20																					
158IC18																					
158IC16	0.51□																				
158IC14	0.80□	0.64□																			
250IC20	0.46□	0.26□																			
250IC18	0.82•	0.60□	0.21□	0.38□																	
250IC16	1.54	1.36•	1.02□	1.01□	0.79□																
250IC14	2.29	2.08•	1.68□	1.53□	1.28□																
350IC20	1.00	0.81	0.44•	0.61•	0.35□																
350IC18	1.63	1.41	0.99•	1.13•	0.83•	0.30□	0.64□	0.31□													
350IC16	2.27	2.27	2.02	2.07	1.83•	1.38□	1.51□	1.23□	1.35□	1.58□	1.24□										
350IC14	2.73	2.73	2.67	2.73	2.54	2.07•	2.25•	1.92□	1.90•	2.31•	1.92□										
358IC20	1.07	0.87	0.50•	0.67•	0.41□																
358IC18	1.72	1.50	1.09•	1.23	0.93•	0.39□	0.73□	0.39□													
358IC16	2.31	2.31	2.11	2.23	1.99•	1.53□	1.67•	1.37□	0.84□	1.14□	0.83□										
358IC14	2.77	2.77	2.77	2.77	2.65	2.19•	2.45•	2.12•	1.53□	1.76□	1.41□										
400IC20	1.24	1.06	0.70•	0.86	0.60•																
400IC18	1.85	1.66	1.28	1.48	1.18•	0.65□	1.00•	0.64□													
400IC16	2.39	2.39	2.33	2.39	2.23	1.80•	2.07•	1.76•	1.21□	1.55□	1.20□										
400IC14	2.91	2.91	2.91	2.91	2.91	2.52•	2.78	2.47•	1.90•	2.31•	1.92□	1.24□	1.66□	1.27□							
600IC20	1.27	1.27	1.05	1.18	1.02	0.70	0.95	0.73	0.29•	0.69•	0.40•										
600IC18	1.74	1.74	1.71	1.74	1.67	1.36	1.60	1.38	0.94•	1.34	1.04•	0.48□	1.03•	0.67□	0.23•						
600IC16	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.05	2.30	2.11	1.67•	2.09	1.80•	1.25□	1.81•	1.46□	0.81□	1.50□	1.10□	
600IC14	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	2.99	3.04	3.04	2.57•	3.01	2.70•	2.10□	2.69•	2.31□	1.60□	2.34□	1.89□	
800IC20	1.14	1.14	1.10	1.14	1.08	0.86	1.04	0.88	0.56	0.86	0.64	0.23•	0.65	0.38•							
800IC18	1.59	1.59	1.59	1.59	1.59	1.49	1.59	1.50	1.20	1.48	1.28	0.87	1.28	1.02	0.51•	1.06	0.73•				
800IC16	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	1.93	2.12	2.03	1.64	2.05	1.80	1.32•	1.85	1.55•	0.98□
800IC14	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.68	2.85	2.82	2.36•	2.85	2.58•	2.01□

NOTES:
1. Allowable loads based on mechanical bracing of the weak axis at 60° O.C. maximum and properly attached sheathing on both sides of the stud. (See page 52 for details)
2. Lateral and axial load multiplied by 0.75 for strength determination as per AISI A4.4
3. Allowable loads for 16 and 14 gauge are based on 50ksi yield stress, loads for 18 and 20 gauge are based on 33ksi yield stress.
4. Deflection limitations unless otherwise marked are for L/360; • for L/240; □ for L/120.
5. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
6. For construction loads, the 5psf lateral load tables may be used for studs with mechanical bracing only, spaced at a maximum of 60° O.C.

COMBINED LOADS   IC SECTIONS

LATERAL AND AXIAL   Allowable Axial Load In kips (1000lb)   30psf LATERAL

SECTION	8FT. 12in	16in	24in	10FT. 12in	16in	24in	12FT. 12in	16in	24in	14FT. 12in	16in	24in	16FT. 12in	16in	24in	18FT. 12in	16in	24in	20FT. 12in	16in	24in
158IC20 158IC18 158IC16 158IC14	0.70o																				
250IC20 250IC18 250IC16 250IC14	0.34o 0.69• 1.43• 2.16	0.44o 1.22o 1.91•	0.83o 1.46o	0.87o 1.38o	1.10o																
350IC20 350IC18 350IC16 350IC14	0.89 1.49 2.27 2.73	0.66• 1.23 2.21 2.73	0.23o 0.75• 1.84• 2.49	0.45o 0.95• 1.92• 2.63	0.61o 1.64• 2.34•	1.13o 1.81o	1.34o 2.05•	1.01o 1.68o	1.04o	1.37o											
358IC20 358IC18 358IC16 358IC14	0.95 1.59 2.31 2.77	0.72• 1.33 2.29 2.77	0.30o 0.85• 1.93 2.60	0.52o 1.04• 2.08 2.74	0.22o 0.70o 1.80• 2.46•	1.27o 1.93o	1.48o 2.24•	1.15o 1.87o	1.20o	1.54o	1.15o										
400IC20 400IC18 400IC16 400IC14	1.13 1.74 2.39 2.91	0.91 1.51 2.39 2.91	0.49• 1.07 2.16 2.89	0.71• 1.30 2.32 2.91	0.41o 0.96• 2.05• 2.77	0.35o 1.56o 2.28•	0.78o 1.88• 2.59•	0.38o 1.53o 2.23•	0.90o 1.58o	1.34o 2.07o	0.94o 1.64o										
600IC20 600IC18 600IC16 600IC14	1.27 1.74 2.30 3.04	1.18 1.74 2.30 3.04	0.93 1.60 2.30 3.04	1.09 1.74 2.30 3.04	0.89 1.55 2.30 3.04	0.52 1.18 2.24 3.04	0.82 1.47 2.30 3.04	0.55• 1.20 2.25 3.04	0.69• 1.86 2.79	1.16 2.20 3.04	0.81• 1.93• 2.85	1.42o 2.30•	1.91• 2.82	1.57o 2.45•	0.94o 1.77o	1.59o 2.46•	1.19o 2.01o	1.21o	2.07o	1.56o	
800IC20 800IC18 800IC16 800IC14	1.14 1.59 2.12 2.85	1.14 1.59 2.12 2.85	1.01 1.59 2.12 2.85	1.12 1.59 2.12 2.85	0.99 1.59 2.12 2.85	0.72 1.36 2.12 2.85	0.94 1.56 2.12 2.85	0.75 1.38 2.12 2.85	0.38 1.03 2.04 2.85	0.73 1.36 2.12 2.85	0.47 1.11 2.10 2.85	0.64 1.75 2.79	1.12 2.10 2.85	0.81 1.87 2.85	0.21• 1.42• 2.46	0.86• 1.90 2.85	0.48• 1.61• 2.64	1.05o 2.09•	1.67• 2.69	1.32o 2.35•	0.65o 1.69o

40psf LATERAL

SECTION	8FT. 12in	16in	24in	10FT. 12in	16in	24in	12FT. 12in	16in	24in	14FT. 12in	16in	24in	16FT. 12in	16in	24in	18FT. 12in	16in	24in	20FT. 12in	16in	24in
158IC20 158IC18 158IC16 158IC14																					
250IC20 250IC18 250IC16 250IC14	0.44o 1.22o 1.91•	0.96o 1.60o	1.05o	1.10o																	
350IC20 350IC18 350IC16 350IC14	0.66• 1.23 2.21 2.73	0.37• 0.91• 1.96 2.61	0.30o 1.48• 2.15•	0.61o 1.64• 2.34•	1.29o 1.98o	0.67o 1.32o	1.01o 1.68o	1.25o													
358IC20 358IC18 358IC16 358IC14	0.72• 1.33 2.29 2.77	0.43• 1.01• 2.05 2.71	0.40o 1.58• 2.26•	0.70o 1.80• 2.46•	0.29o 1.44o 2.10•	0.80o 1.45o	1.15o 1.87o	0.75o 1.42o													
400IC20 400IC18 400IC16 400IC14	0.91 1.51 2.39 2.91	0.63• 1.21 2.27 2.91	0.65• 1.85• 2.58	0.96• 2.05• 2.77	0.54o 1.72• 2.44•	1.11o 1.82o	1.53o 2.23•	1.10o 1.79o	1.00o	1.64o											
600IC20 600IC18 600IC16 600IC14	1.18 1.74 2.30 3.04	1.02 1.67 2.30 3.04	0.69 1.36 2.30 3.04	0.89 1.55 2.30 3.04	0.64 1.30 2.30 3.04	0.82 1.98 2.91	1.20 2.25 3.04	0.86• 1.99 2.92	0.21o 1.49• 2.39•	0.81• 1.93• 2.85	0.37o 1.59o 2.48•	0.94o 1.78o	1.57• 2.45•	1.15o 1.99o	1.13o	2.01o	1.47o				
800IC20 800IC18 800IC16 800IC14	1.14 1.59 2.12 2.85	1.07 1.59 2.12 2.85	0.84 1.48 2.12 2.85	0.99 1.59 2.12 2.85	0.81 1.44 2.12 2.85	0.46 1.11 2.11 2.85	0.75 1.38 2.12 2.85	0.50 1.14 2.12 2.85	0.68 1.79 2.82	1.11 2.10 2.85	0.80 1.87 2.85	1.40• 2.46	1.87 2.85	1.57• 2.60	0.98o 2.04•	1.61• 2.64	1.23• 2.27•	0.51o 1.57o	1.32o 2.35•	0.87o 1.91o	1.07o

NOTES:

1. Allowable loads based on mechanical bracing of the weak axis at 60" O.C. maximum and properly attached sheathing on both sides of the stud. (See page 52 for details)
2. Lateral and axial load multiplied by 0.75 for strength determination as per AISI A4.4
3. Allowable loads for 16 and 14 gauge are based on 50ksi yield stress,
   loads for 18 and 20 gauge are based on 33ksi yield stress.
4. Deflection limitations unless otherwise marked are for L/360; • for L/240; o for L/120.
5. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
6. For construction loads, the 5psf lateral load tables may be used for studs with mechanical bracing only, spaced at a maximum of 60" O.C.

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LATERAL AND AXIAL   Allowable Axial Load In kips (1000lb)   5psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158SC20	0.40	0.36•	0.28□	0.26□	0.21□																
158SC18	0.57	0.56	0.47•	0.41•	0.36□	0.26□	0.27□	0.21□													
158SC16	0.78	0.78	0.78•	0.62•	0.60•	0.52□	0.45□	0.41□													
158SC14	1.08	1.08	1.08	0.82	0.82•	0.74□	0.62•	0.57□	0.47□	0.44□											
250SC20	0.92	0.92	0.86	0.80	0.72	0.58•	0.58	0.49•	0.33□	0.39□	0.30□										
250SC18	1.25	1.25	1.25	1.09	1.08	0.93	0.87	0.78•	0.61□	0.63•	0.53□	0.37□	0.44□	0.35□							
250SC16	1.68	1.68	1.68	1.44	1.44	1.44	1.20	1.20	1.09•	1.00•	0.91•	0.77□	0.75□	0.67□							
250SC14	2.32	2.32	2.32	1.94	1.94	1.94	1.59	1.59	1.54•	1.30	1.26•	1.09•	1.02•	0.93□	0.77□	0.77□	0.69□				
350SC20	1.31	1.31	1.31	1.23	1.23	1.16	1.13	1.05	0.86	0.91	0.79	0.58•	0.69•	0.56•	0.34□	0.50□	0.38□				
350SC18	1.85	1.85	1.85	1.73	1.73	1.73	1.57	1.57	1.41	1.38	1.26	1.03•	1.07	0.94•	0.71□	0.82•	0.68□	0.46□	0.61□	0.48□	
350SC16	2.46	2.46	2.46	2.27	2.27	2.27	2.03	2.03	2.03	1.78	1.78	1.73	1.53	1.51	1.32•	1.29	1.18•	0.98□	1.02•	0.91□	0.72□
350SC14	3.12	3.12	3.12	3.05	3.05	3.05	2.69	2.69	2.69	2.31	2.31	2.31	1.97	1.97	1.83•	1.66	1.61•	1.39□	1.38•	1.26•	1.05□
358SC20	1.35	1.35	1.35	1.28	1.28	1.23	1.19	1.12	0.93	0.98	0.86	0.64•	0.75•	0.62•	0.40□	0.56•	0.43□	0.20□	0.40□	0.27□	
358SC18	1.92	1.92	1.92	1.81	1.81	1.81	1.66	1.66	1.53	1.49	1.38	1.14•	1.18	1.05•	0.80□	0.91•	0.77□	0.53□	0.68□	0.55□	
358SC16	2.59	2.59	2.59	2.41	2.41	2.41	2.17	2.17	2.17	1.92	1.92	1.89	1.66	1.66	1.46•	1.42	1.30•	1.10□	1.13•	1.02□	0.82□
358SC14	3.18	3.18	3.18	3.18	3.18	3.18	2.87	2.87	2.87	2.49	2.49	2.49	2.13	2.13	2.02•	1.81	1.77	1.54•	1.52•	1.39•	1.18□
400SC20	1.47	1.47	1.47	1.41	1.41	1.41	1.33	1.33	1.14	1.19	1.06	0.84•	0.95	0.81•	0.57□	0.73•	0.59□	0.34□	0.54□	0.40□	
400SC18	2.08	2.08	2.08	2.00	2.00	2.00	1.88	1.88	1.83	1.72	1.69	1.44	1.49	1.34	1.07•	1.19	1.03•	0.76□	0.93•	0.77□	0.51□
400SC16	2.70	2.70	2.70	2.70	2.70	2.70	2.55	2.55	2.55	2.33	2.33	2.33	2.06	2.06	1.91•	1.79	1.72	1.48•	1.49	1.36•	1.12□
400SC14	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.05	3.05	3.05	2.65	2.65	2.62	2.28	2.28	2.05•	1.95	1.85•	1.59□
600SC20	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.42	1.43	1.43	1.26	1.43	1.33	1.08	1.33	1.17	0.88•
600SC18	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.77	1.95	1.86	1.55
600SC16	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58
600SC14	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41
800SC20	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.19	1.29	1.27	1.06
800SC18	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.75
800SC16	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38
800SC14	3.19	3.19	3.19	3.19	3.19	3.19	3.19-	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19

15psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158SC20																					
158SC18	0.36□	0.25□																			
158SC16	0.69□	0.60□																			
158SC14	1.02•	0.91□	0.72□	0.62□																	
250SC20	0.70	0.56•	0.29□	0.38□	0.21□																
250SC18	1.14	0.99	0.71•	0.73•	0.55□	0.24□	0.40□														
250SC16	1.68	1.68	1.46•	1.33•	1.17•	0.90□	0.91□	0.74□													
250SC14	2.32	2.32	2.20	1.91	1.73•	1.41□	1.32□	1.14□													
350SC20	1.28	1.14	0.86	0.94	0.75•	0.39□	0.60•	0.37□													
350SC18	1.85	1.85	1.56	1.58	1.37	0.99•	1.14•	0.89•	0.45□	0.74□	0.48□										
350SC16	2.46	2.46	2.46	2.27	2.27	2.00•	1.97	1.76•	1.39□	1.48•	1.25□	0.86□	1.06□	0.84□							
350SC14	3.12	3.12	3.12	3.05	3.05	2.92	2.69	2.53	2.11•	2.10•	1.85□	1.41□	1.55□	1.30□							
358SC20	1.35	1.21	0.94	1.02	0.82	0.45□	0.67•	0.43□													
358SC18	1.92	1.92	1.67	1.69	1.48	1.09•	1.25•	0.99•	0.54□	0.84□	0.56□										
358SC16	2.59	2.59	2.59	2.41	2.41	2.17	2.14	1.93•	1.54□	1.63•	1.39□	0.98□	1.19□	0.95□							
358SC14	3.18	3.18	3.18	3.18	3.18	3.11	2.87	2.75	2.32•	2.31•	2.05•	1.59□	1.72□	1.46□							
400SC20	1.47	1.40	1.14	1.22	1.02	0.66•	0.87•	0.63•													
400SC18	2.08	2.08	1.94	1.98	1.78	1.39	1.55	1.29•	0.81□	1.11•	0.82□	0.31□	0.73□	0.43□							
400SC16	2.70	2.70	2.70	2.70	2.70	2.59	2.55	2.41	2.00•	2.11•	1.85•	1.39□	1.60•	1.33□							
400SC14	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	2.92•	2.97	2.68•	2.16□	2.28•	1.98□	1.46□	1.72□	1.42□				
600SC20	1.43	1.43	1.43	1.43	1.43	1.22	1.39	1.23	0.92	1.20	0.98	0.57•	0.97	0.71•	0.21□	0.73•	0.42□				
600SC18	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.64	1.91	1.70	1.29	1.68	1.40	0.90•	1.42•	1.09•	0.50□	1.14•	0.77□	
600SC16	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.46	2.58	2.53	2.13•	2.52	2.26•	1.76□	2.27•	1.95•	1.38□
600SC14	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.14	3.41	3.27	2.72•	3.26	2.91•	2.28□
800SC20	1.29	1.29	1.29	1.29	1.29	1.26	1.29	1.28	1.06	1.26	1.11	0.82	1.11	0.92	0.55	0.95	0.71	0.25•	0.77	0.48•	
800SC18	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.76	1.78	1.78	1.53	1.78	1.62	1.26	1.64	1.41	0.97	1.46	1.18	0.65•
800SC16	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.36	2.38	2.38	2.12	2.38	2.28	1.87•
800SC14	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	2.99

NOTES:
1. Allowable loads based on mechanical bracing of the weak axis at 60" O.C. maximum and properly attached sheathing on both sides of the stud.(See page 52 for details)
2. Lateral and axial load multiplied by 0.75 for strength determination as per AISI A4.4
3. Allowable loads for 16 and 14 gauge are based on 50ksi yield stress, loads for 18 and 20 gauge are based on 33ksi yield stress.
4. Deflection limitations unless otherwise marked are for L/360; • for L/240; □ for L/120.
5. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
6. For construction loads, the 5psf lateral load tables may be used for studs with mechanical bracing only, spaced at a maximum of 60" O.C.

LATERAL AND AXIAL   Allowable Axial Load In kips (1000lb)

20psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158SC20																					
158SC18	0.25□																				
158SC16	0.60□	0.49□																			
158SC14	0.91□	0.78□																			
250SC20	0.56•	0.37□																			
250SC18	0.99	0.80•	0.45□	0.55□	0.34□																
250SC16	1.68	1.54•	1.25□	1.17•	0.98□	0.65□	0.74□														
250SC14	2.32	2.28	1.94•	1.73•	1.51□	1.12□	1.14□	0.91□													
350SC20	1.14	0.95	0.61•	0.75•	0.50•																
350SC18	1.85	1.66	1.29	1.37	1.11•	0.63□	0.89•	0.59□													
350SC16	2.46	2.46	2.39	2.27	2.10	1.71•	1.76•	1.51□	1.05□	1.25□	0.98□										
350SC14	3.12	3.12	3.12	3.05	3.03	2.59•	2.53	2.24•	1.74□	1.85□	1.55□										
358SC20	1.21	1.03	0.68•	0.82	0.57•																
358SC18	1.92	1.76	1.40	1.48	1.22•	0.73□	0.99•	0.68□													
358SC16	2.59	2.59	2.56	2.41	2.27	1.87•	1.93•	1.66•	1.19□	1.39□	1.11□										
358SC14	3.18	3.18	3.18	3.18	3.18	2.78•	2.75	2.46•	1.94□	2.05•	1.73□	1.19□	1.46□	1.15□							
400SC20	1.40	1.22	0.88	1.02	0.78•	0.32□	0.63•	0.33□													
400SC18	2.08	2.03	1.68	1.78	1.51	1.03•	1.29•	0.97•	0.39□	0.82□	0.47□										
400SC16	2.70	2.70	2.70	2.70	2.70	2.30	2.41	2.13•	1.63□	1.85•	1.53□	0.98□	1.33□	1.01□							
400SC14	3.33	3.33	3.33	3.33	3.33	3.15	3.33	3.06	2.51•	2.68•	2.33•	1.71□	1.98□	1.63□							
600SC20	1.43	1.43	1.33	1.43	1.29	1.00	1.23	1.02	0.62•	0.98	0.71•										
600SC18	1.95	1.95	1.95	1.95	1.95	1.74	1.95	1.74	1.34	1.70	1.42	0.90•	1.40	1.06•	0.43□	1.09•	0.69□				
600SC16	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.52	2.58	2.56	2.16•	2.53	2.26•	1.75□	2.25•	1.92•	1.31□	1.95•	1.56□	0.88□
600SC14	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.18	3.41	3.28	2.73•	3.27	2.90•	2.23□	2.91•	2.48□	1.71□
800SC20	1.29	1.29	1.29	1.29	1.29	1.11	1.28	1.13	0.84	1.11	0.91	0.53	0.92	0.67							
800SC18	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.56	1.78	1.62	1.26	1.62	1.38	0.92	1.41	1.11	0.55•	1.18	0.83•	
800SC16	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.36	2.38	2.38	2.09	2.38	2.24	1.80•	2.28	2.00	1.47•
800SC14	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	2.94	3.19	3.13	2.61•

25psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158SC20																					
158SC18																					
158SC16	0.52□																				
158SC14	0.81□	0.66□																			
250SC20	0.42•	0.20□																			
250SC18	0.84•	0.62□	0.22□	0.39□																	
250SC16	1.58	1.39•	1.04□	1.03□	0.81□																
250SC14	2.32	2.11•	1.71□	1.56□	1.31□																
350SC20	1.00	0.78	0.36•	0.56•	0.27□																
350SC18	1.70	1.47	1.03•	1.17•	0.87•	0.31□	0.66□	0.32□													
350SC16	2.46	2.46	2.18	2.15	1.90•	1.43□	1.57•	1.27□	0.75□	1.05□											
350SC14	3.12	3.12	3.04	3.05	2.81	2.29•	2.31•	1.98□	1.39□	1.62□	1.28□										
358SC20	1.07	0.85	0.43•	0.63•	0.34□																
358SC18	1.81	1.58	1.14	1.28	0.97□	0.40□	0.76□	0.40□													
358SC16	2.59	2.59	2.36	2.33	2.07•	1.59□	1.73•	1.42□	0.88□	1.18□	0.86□										
358SC14	3.18	3.18	3.15	3.18	3.00	2.47•	2.53•	2.19•	1.58□	1.81□	1.45□										
400SC20	1.26	1.05	0.64	0.84	0.54•																
400SC18	2.07	1.85	1.43	1.58	1.26•	0.69□	1.04•	0.67□													
400SC16	2.70	2.70	2.61	2.70	2.49	2.01•	2.20•	1.87□	1.28□	1.61□	1.25□										
400SC14	3.33	3.33	3.33	3.33	3.33	2.86•	3.14	2.78•	2.13□	2.41•	2.01□	1.30□	1.71□	1.31□							
600SC20	1.43	1.43	1.19	1.33	1.15	0.79	1.07	0.82	0.33•	0.77•	0.44•										
600SC18	1.95	1.95	1.92	1.95	1.88	1.53	1.80	1.54	1.05•	1.49	1.15•	0.53□	1.14•	0.74□							
600SC16	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.30	2.58	2.36	1.86•	2.33	2.00•	1.39□	2.00•	1.61□	0.89□	1.66□	1.21□	
600SC14	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.34	3.41	3.40	2.87•	3.36	3.00•	2.33□	2.99•	2.55•	1.76□	2.58□	2.08□	
800SC20	1.29	1.29	1.24	1.29	1.21	0.96	1.17	0.99	0.63	0.96	0.72	0.25	0.73	0.42							
800SC18	1.78	1.78	1.78	1.78	1.78	1.67	1.78	1.69	1.36	1.67	1.44	0.99	1.44	1.15	0.58•	1.19	0.83•				
800SC16	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.16	2.38	2.27	1.84	2.29	2.01	1.48•	2.07	1.73•	1.10□
800SC14	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	2.98	3.19	3.15	2.63•	3.19	2.86	2.23•

NOTES:
1. Allowable loads based on mechanical bracing of the weak axis at 60" O.C. maximum and properly attached sheathing on both sides of the stud. (See page 52 for details)
2. Lateral and axial load multiplied by 0.75 for strength determination as per AISI A4.4
3. Allowable loads for 16 and 14 gauge are based on 50ksi yield stress, loads for 18 and 20 gauge are based on 33ksi yield stress.
4. Deflection limitations unless otherwise marked are for L/360; • for L/240; □ for L/120.
5. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
6. For construction loads, the 5psf lateral load tables may be used for studs with mechanical bracing only, spaced at a maximum of 60" O.C.

LATERAL AND AXIAL   Allowable Axial Load In kips (1000lb)   30psf LATERAL

SECTION	8FT			10FT			12FT			14FT			16FT			18FT			20FT		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158SC20																					
158SC18																					
158SC16																					
158SC14	0.72□																				
250SC20	0.29□																				
250SC18	0.71•	0.45□																			
250SC16	1.46•	1.25□	0.85□	0.90□	0.65□																
250SC14	2.20	1.94•	1.48□	1.41□	1.12□																
350SC20	0.86	0.61•																			
350SC18	1.55	1.29	0.78•	0.99•	0.63□																
350SC16	2.45	2.39	1.98•	2.00•	1.71•	1.18□	1.39□	1.05□													
350SC14	3.12	3.12	2.83	2.92	2.59•	1.99□	2.11•	1.74□	1.07□	1.41□											
358SC20	0.94	0.68•																			
358SC18	1.67	1.40	0.89•	1.09•	0.73□																
358SC16	2.59	2.56	2.15	2.17	1.87•	1.33□	1.54•	1.19□													
358SC14	3.18	3.18	2.95	3.11	2.78•	2.18□	2.32•	1.94□	1.25□	1.59□	1.19□										
400SC20	1.14	0.88	0.41•	0.66•	0.32□																
400SC18	1.94	1.68	1.18	1.39	1.03•	0.37□	0.81□	0.39□													
400SC16	2.70	2.70	2.43	2.59	2.30	1.74•	2.00•	1.63□	0.96□	1.39□	0.98□										
400SC14	3.33	3.33	3.29	3.33	3.15	2.58•	2.92•	2.51•	1.77□	2.16□	1.71□										
600SC20	1.43	1.33	1.05	1.22	1.00	0.58	0.92	0.62•													
600SC18	1.95	1.95	1.79	1.95	1.74	1.32	1.64	1.34	0.77•	1.29	0.90•										
600SC16	2.58	2.58	2.58	2.58	2.58	2.51	2.58	2.52	2.08	2.46	2.16•	1.58□	2.13•	1.75□	1.04□	1.76□	1.31□				
600SC14	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.11	3.41	3.18	2.56•	3.14	2.73•	1.96□	2.72•	2.23□	1.33□	2.28□	1.71□	
800SC20	1.29	1.29	1.14	1.26	1.11	0.81	1.06	0.84	0.42	0.82	0.53										
800SC18	1.78	1.78	1.78	1.78	1.78	1.53	1.76	1.56	1.16	1.53	1.26	0.73	1.26	0.92	0.25•	0.97	0.55•				
800SC16	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.29	2.38	2.36	1.96	2.36	2.09	1.59•	2.12	1.80•	1.17□	1.87•	1.47•	0.73□
800SC14	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.11	3.19	3.19	2.74	3.19	2.94	2.33•	2.99	2.61•	1.87□

40psf LATERAL

SECTION	8FT			10FT			12FT			14FT			16FT			18FT			20FT		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158SC20																					
158SC18																					
158SC16																					
158SC14																					
250SC20																					
250SC18	0.45□																				
250SC16	1.25□	0.98□																			
250SC14	1.94•	1.63□	1.07□	1.12□																	
350SC20	0.61•	0.28•																			
350SC18	1.29	0.95•	0.31□	0.63□	0.21□																
350SC16	2.39	2.12	1.60•	1.71•	1.35□	0.69□	1.05□														
350SC14	3.12	2.97	2.43•	2.59•	2.19•	1.45□	1.74□	1.28□													
358SC20	0.68•	0.35•																			
358SC18	1.40	1.05•	0.41□	0.73□	0.30□																
358SC16	2.56	2.29	1.77•	1.87•	1.50□	0.83□	1.19□	0.77□													
358SC14	3.18	3.09	2.57•	2.78•	2.37•	1.63□	1.94□	1.47□													
400SC20	0.88	0.56•																			
400SC18	1.68	1.35	0.72•	1.03•	0.58□																
400SC16	2.70	2.55	2.07•	2.30	1.92•	1.23□	1.63□	1.17□													
400SC14	3.33	3.33	2.93	3.15	2.76•	2.06□	2.51•	2.01□	1.12□	1.71□	1.17□										
600SC20	1.33	1.15	0.78	1.00	0.72																
600SC18	1.95	1.88	1.52	1.74	1.46	0.92	1.34	0.96•	0.23•	0.90•	0.41□										
600SC16	2.58	2.58	2.58	2.58	2.58	2.21	2.52	2.22	1.66•	2.16•	1.77•	1.04□	1.75•	1.27□							
600SC14	3.41	3.41	3.41	3.41	3.41	3.26	3.41	3.26	2.66•	3.18	2.77•	1.98□	2.73•	2.21□	1.25□	2.23□	1.61□				
800SC20	1.29	1.21	0.95	1.11	0.91	0.52	0.84	0.56													
800SC18	1.78	1.78	1.66	1.78	1.63	1.26	1.56	1.29	0.77	1.26	0.90	0.22•	0.92	0.47•							
800SC16	2.38	2.38	2.38	2.38	2.38	2.37	2.38	2.38	2.00	2.36	2.09	1.58•	2.09	1.75•	1.10□	1.80•	1.38•	0.58□	1.47•	0.97□	1.18□
800SC14	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.15	3.19	3.19	2.74	3.19	2.90	2.27•	2.94	2.53•	1.74□	2.61•	2.11□	1.18□

NOTES:
1. Allowable loads based on mechanical bracing of the weak axis at 60" O.C. maximum and properly attached sheathing on both sides of the stud.(See page 52 for details)
2. Lateral and axial load multiplied by 0.75 for strength determination as per AISI A4.4
3. Allowable loads for 16 and 14 gauge are based on 50ksi yield stress.
   loads for 18 and 20 gauge are based on 33ksi yield stress.
4. Deflection limitations unless otherwise marked are for L/360; • for L/240; □ for L/120.
5. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
6. For construction loads, the 5psf lateral load tables may be used for studs with mechanical bracing only, spaced at a maximum of 60" O.C.

LATERAL AND AXIAL   Allowable Axial Load In kips (1000lb)   5psf LATERAL

SECTION	8FT.			10FT.			12FT.			14FT.			16FT.			18FT.			20FT.		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158CC20	0.42	0.37•	0.29□	0.28□	0.22□																
158CC18	0.58	0.58	0.49•	0.43•	0.38□	0.28□	0.28□	0.23□													
158CC16	0.79	0.79	0.79	0.63	0.62•	0.54□	0.47□	0.43□													
158CC14	1.09	1.09	1.09	0.84	0.84•	0.78□	0.65•	0.60□	0.51□	0.46□	0.41□										
250CC20	0.95	0.95	0.90	0.83	0.75	0.61•	0.60	0.51•	0.35□	0.41□	0.32□										
250CC18	1.28	1.28	1.28	1.12	1.12	0.98	0.91	0.82•	0.65□	0.66•	0.57□	0.40□	0.47□	0.38□							
250CC16	1.71	1.71	1.71	1.47	1.47	1.47	1.23	1.23	1.13•	1.03	0.95•	0.80□	0.78•	0.70□	0.55□	0.59□	0.51□				
250CC14	2.36	2.36	2.36	1.98	1.98	1.98	1.63	1.63	1.60•	1.33	1.31•	1.15□	1.07•	0.98□	0.82□	0.81□	0.73□				
350CC20	1.38	1.38	1.38	1.29	1.29	1.22	1.18	1.10	0.91	0.95	0.83	0.61•	0.72•	0.59•	0.37□	0.53□	0.40□		0.64□	0.52□	
350CC18	1.94	1.94	1.94	1.80	1.80	1.80	1.63	1.63	1.49	1.44	1.32	1.09•	1.13	0.99•	0.76□	0.86•	0.72□	0.50□			
350CC16	2.57	2.57	2.57	2.36	2.36	2.36	2.11	2.11	2.11	1.84	1.84	1.79	1.58	1.57	1.37•	1.34	1.23•	1.03□	1.06•	0.95□	0.76□
350CC14	3.47	3.47	3.47	3.15	3.15	3.15	2.77	2.77	2.77	2.38	2.38	2.38	2.02	2.02	1.92•	1.71	1.68•	1.47□	1.44•	1.32•	1.11□
358CC20	1.43	1.43	1.43	1.34	1.34	1.30	1.24	1.18	0.98	1.03	0.90	0.68•	0.79	0.66•	0.43□	0.58•	0.45□	0.22□	0.42□	0.29□	
358CC18	2.01	2.01	2.01	1.89	1.89	1.89	1.73	1.73	1.61	1.55	1.45	1.21•	1.24	1.10•	0.85□	0.95•	0.81•	0.57□	0.72•	0.59□	0.36□
358CC16	2.71	2.71	2.71	2.51	2.51	2.51	2.25	2.25	2.25	1.98	1.98	1.96	1.71	1.71	1.51•	1.47	1.35•	1.14□	1.17•	1.06□	0.85□
358CC14	3.57	3.57	3.57	3.34	3.34	3.34	2.97	2.97	2.97	2.57	2.57	2.57	2.19	2.19	2.11•	1.86	1.85	1.62•	1.59	1.46•	1.24□
400CC20	1.55	1.55	1.55	1.48	1.48	1.48	1.39	1.39	1.20	1.25	1.12	0.89•	0.99	0.85•	0.60□	0.76•	0.62•	0.36□	0.57□	0.43□	
400CC18	2.19	2.19	2.19	2.10	2.10	2.10	1.96	1.96	1.93	1.79	1.77	1.52	1.55	1.41	1.14•	1.24	1.09•	0.81□	0.97•	0.82□	0.55□
400CC16	2.99	2.99	2.99	2.86	2.86	2.86	2.66	2.66	2.66	2.41	2.41	2.41	2.13	2.13	1.98	1.85	1.78	1.54•	1.55	1.41•	1.17□
400CC14	3.74	3.74	3.74	3.74	3.74	3.74	3.56	3.56	3.56	3.15	3.15	3.15	2.74	2.74	2.74	2.35	2.35	2.15•	2.01	1.93•	1.67□
600CC20	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.39	1.58	1.47	1.19	1.47	1.29	0.97•
600CC18	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	1.97	2.17	2.06	1.73
600CC16	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86
600CC14	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77
800CC20	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.33	1.44	1.41	1.18
800CC18	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.96
800CC16	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63
800CC14	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53

15psf LATERAL

SECTION	8FT.			10FT.			12FT.			14FT.			16FT.			18FT.			20FT.		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158CC20																					
158CC18	0.38□	0.28□																			
158CC16	0.72•	0.63□	0.46□	0.43□																	
158CC14	1.06•	0.96□	0.77□	0.66□																	
250CC20	0.74	0.59•	0.32□	0.41□	0.24□																
250CC18	1.19	1.04	0.76•	0.78•	0.60□	0.28□	0.44□														
250CC16	1.71	1.71	1.51•	1.38•	1.22•	0.94□	0.94□	0.78□													
250CC14	2.36	2.36	2.28	1.98	1.81•	1.49□	1.39□	1.21□													
350CC20	1.36	1.21	0.93	1.00	0.80•	0.43□	0.64•	0.41□													
350CC18	1.94	1.94	1.66	1.67	1.46	1.07•	1.21•	0.96•	0.51□	0.79□	0.53□										
350CC16	2.57	2.57	2.57	2.36	2.36	2.09	2.05	1.84•	1.45□	1.54•	1.31□	0.91□	1.11•	0.88□							
350CC14	3.47	3.47	3.47	3.15	3.15	3.06	2.77	2.65	2.23•	2.20•	1.95•	1.52□	1.63□	1.39□							
358CC20	1.43	1.28	1.00	1.08	0.87	0.50•	0.71•	0.47□													
358CC18	2.01	2.01	1.77	1.78	1.57	1.18•	1.32	1.07•	0.61□	0.90□	0.62□										
358CC16	2.71	2.71	2.71	2.51	2.51	2.27	2.23	2.01•	1.61□	1.70•	1.46□	1.04□	1.24□	1.00□							
358CC14	3.57	3.57	3.57	3.34	3.34	3.31	2.97	2.89	2.46•	2.42•	2.16•	1.70□	1.81□	1.55□							
400CC20	1.55	1.48	1.21	1.30	1.09	0.71•	0.93	0.68•	0.23□	0.58□	0.30□										
400CC18	2.19	2.19	2.06	2.10	1.89	1.49	1.64	1.38•	0.89□	1.19•	0.89□	0.37□	0.79□	0.48□							
400CC16	2.99	2.99	2.99	2.86	2.86	2.76	2.66	2.52	2.10•	2.19	1.93•	1.46□	1.67•	1.39□	0.91□	1.22□	0.95□				
400CC14	3.74	3.74	3.74	3.74	3.74	3.74	3.56	3.56	3.16•	3.11	2.82•	2.30□	2.40•	2.10□	1.58□	1.81□	1.52□				
600CC20	1.58	1.58	1.58	1.58	1.58	1.36	1.55	1.37	1.02	1.33	1.09	0.65•	1.08	0.79•	0.25□	0.82•	0.48□				
600CC18	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	1.84	2.13	1.90	1.45	1.87	1.57	1.02•	1.58	1.23•	0.59□	1.28	0.88□	
600CC16	2.86	2.86	2.86	2.86	2.85	2.86	2.86	2.86	2.86	2.86	2.85	2.72	2.85	2.80	2.35•	2.78	2.49•	1.95□	2.49•	2.15•	1.53□
600CC14	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.50	3.77	3.63	3.04•	3.61	3.23•	2.55□
800CC20	1.44	1.44	1.44	1.44	1.44	1.41	1.44	1.42	1.18	1.40	1.23	0.91	1.24	1.02	0.61	1.05	0.78	0.28□	0.85	0.53•	
800CC18	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.98	1.98	1.72	1.98	1.82	1.44	1.84	1.60	1.12	1.65	1.35	0.78•
800CC16	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.61	2.63	2.63	2.36	2.63	2.53	2.08□
800CC14	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.33

NOTES:

1. Allowable loads based on mechanical bracing of the weak axis at 60° O.C. maximum and properly attached sheathing on both sides of the stud. (See page 52 for details)
2. Lateral and axial load multiplied by 0.75 for strength determination as per AISI A4.4
3. Allowable loads for 16 and 14 gauge are based on 50ksi yield stress, loads for 18 and 20 gauge are based on 33ksi yield stress.
4. Deflection limitations unless otherwise marked are for L/360; • for L/240; □ for L/120.
5. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
6. For construction loads, the 5psf lateral load tables may be used for studs with mechanical bracing only, spaced at a maximum of 60° O.C.

COMBINED LOADS   CC SECTIONS

LATERAL AND AXIAL   Allowable Axial Load In kips (1000lb)   20psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158CC20																					
158CC18	0.28□																				
158CC16	0.63□	0.52□																			
158CC14	0.96□	0.83□																			
250CC20	0.59•	0.41□																			
250CC18	1.04	0.85•	0.51□	0.60□	0.38□																
250CC16	1.71	1.59	1.30•	1.22•	1.03□	0.69□	0.78□														
250CC14	2.36	2.36	2.03•	1.81•	1.59□	1.21□	1.21□	0.99□													
350CC20	1.21	1.02	0.66•	0.80•	0.55•																
350CC18	1.94	1.76	1.39	1.46	1.19•	0.71□	0.96•	0.65□													
350CC16	2.57	2.57	2.51	2.36	2.20	1.79•	1.84•	1.58□	1.11□	1.31□	1.03□										
350CC14	3.47	3.47	3.47	3.15	3.15	2.74•	2.65	2.37•	1.86□	1.95•	1.65□	1.13□	1.39□	1.09□							
358CC20	1.28	1.09	0.74	0.87	0.62•																
358CC18	2.01	1.87	1.50	1.57	1.30	0.81•	1.07•	0.75□													
358CC16	2.71	2.71	2.69	2.51	2.38	1.97•	2.01•	1.74•	1.26□	1.46□	1.17□										
358CC14	3.57	3.57	3.57	3.34	3.34	2.98	2.89	2.60•	2.07□	2.16•	1.84□	1.30□	1.55□	1.24□							
400CC20	1.48	1.30	0.95	1.09	0.84•	0.36□	0.68•	0.37□													
400CC18	2.19	2.15	1.80	1.89	1.62	1.12•	1.38•	1.05•	0.46□	0.89□	0.53□										
400CC16	2.99	2.99	2.99	2.86	2.86	2.45	2.52	2.23•	1.71□	1.93•	1.61□	1.04□	1.39□	1.06□							
400CC14	3.74	3.74	3.74	3.74	3.74	3.56	3.56	3.31	2.74•	2.82•	2.47•	1.85□	2.10□	1.74□							
600CC20	1.58	1.58	1.48	1.58	1.44	1.12	1.37	1.14	0.69	1.09	0.79□	0.23□	0.79•	0.43□							
600CC18	2.17	2.17	2.17	2.17	2.17	1.94	2.17	1.95	1.51	1.90	1.59	1.03•	1.57	1.20•	0.52□	1.23•	0.80□				
600CC16	2.86	2.86	2.86	2.86	2.86	2.86	2.85	2.86	2.79	2.86	2.83	2.39•	2.80	2.50	1.93•	2.49•	2.12•	1.45□	2.15•	1.72□	0.98□
600CC14	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.55	3.77	3.66	3.06•	3.63	3.23•	2.51□	3.23•	2.77□	1.95□
800CC20	1.44	1.44	1.44	1.44	1.44	1.24	1.42	1.26	0.94	1.23	1.02	0.59	1.02	0.74	0.21•	0.78	0.45•				
800CC18	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.76	1.98	1.82	1.43	1.82	1.56	1.06	1.60	1.28	0.67•	1.35	0.96•	0.25□
800CC16	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.62	2.63	2.63	2.33	2.63	2.48	2.00•	2.53	2.22	1.65•
800CC14	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.27	3.53	3.48	2.92•

25psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158CC20																					
158CC18																						
158CC16	0.54□																					
158CC14	0.86□	0.71□																				
250CC20	0.45•	0.23□																				
250CC18	0.90•	0.67□	0.27□	0.43□																	
250CC16	1.63	1.44•	1.09□	1.07□	0.85□																
250CC14	2.36	2.20•	1.80□	1.64•	1.39□	0.96□	1.04□														
350CC20	1.07	0.84	0.40•	0.61•	0.31□																
350CC18	1.81	1.57	1.12•	1.26•	0.94•	0.38□	0.73□	0.38□													
350CC16	2.57	2.57	2.29	2.25	1.99•	1.51□	1.64•	1.34□	0.80□	1.10□											
350CC14	3.47	3.47	3.42	3.15	2.95	2.43•	2.44•	2.11□	1.52□	1.73□	1.38□										
358CC20	1.14	0.91	0.48•	0.68•	0.38□																
358CC18	1.92	1.68	1.23	1.37	1.05•	0.48□	0.83□	0.47□													
358CC16	2.71	2.71	2.48	2.43	2.17•	1.68□	1.81•	1.49□	0.93□	1.24□	0.91□										
358CC14	3.57	3.57	3.57	3.34	3.20	2.67•	2.67•	2.32•	1.71□	1.92□	1.56□										
400CC20	1.35	1.13	0.70	0.90	0.59•																
400CC18	2.19	1.97	1.54	1.68	1.35	0.78•	1.13•	0.75□													
400CC16	2.99	2.99	2.91	2.86	2.65	2.15•	2.30•	1.95•	1.36□	1.68□	1.31□										
400CC14	3.74	3.74	3.74	3.74	3.74	3.25	3.39	3.02•	2.35□	2.55•	2.15□	1.43□	1.83□	1.42□							
600CC20	1.58	1.58	1.33	1.48	1.28	0.89	1.19	0.91	0.38•	0.86	0.50•										
600CC18	2.17	2.17	2.15	2.17	2.10	1.72	2.01	1.73	1.20	1.67	1.31•	0.63□	1.29•	0.85□							
600CC16	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.55	2.86	2.61	2.07•	2.57	2.21•	1.54□	2.21•	1.78□	1.00□	1.82□	1.34□	
600CC14	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.73	3.77	3.77	3.22•	3.73	3.35•	2.63□	3.33•	2.86•	2.01□	2.88•	2.34□	1.40□
800CC20	1.44	1.44	1.38	1.44	1.35	1.07	1.30	1.10	0.70	1.07	0.80	0.28	0.81	0.47							
800CC18	1.98	1.98	1.98	1.98	1.98	1.88	1.98	1.90	1.54	1.87	1.63	1.15	1.63	1.31	0.70•	1.35	0.97•	0.24□	1.05•	0.60•	
800CC16	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.40	2.63	2.52	2.05	2.54	2.24	1.66•	2.30	1.93•	1.24□
800CC14	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.33	3.53	3.50	2.94•	3.53	3.19	2.51•

NOTES:
1. Allowable loads based on mechanical bracing of the weak axis at 60" O.C. maximum and properly attached sheathing on both sides of the stud. (See page 52 for details)
2. Lateral and axial load multiplied by 0.75 for strength determination as per AISI A4.4
3. Allowable loads for 16 and 14 gauge are based on 50ksi yield stress.
   loads for 18 and 20 gauge are based on 33ksi yield stress.
4. Deflection limitations unless otherwise marked are for L/360; • for L/240; □ for L/120.
5. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
6. For construction loads, the 5psf lateral load tables may be used for studs with mechanical bracing only, spaced at a maximum of 60" O.C.

LATERAL AND AXIAL — Allowable Axial Load In kips (1000lb)

30psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158CC20																					
158CC18																					
158CC16	0.46□																				
158CC14	0.77□																				
250CC20	0.32□																				
250CC18	0.76•	0.51□																			
250CC16	1.51•	1.30•	0.90□	0.94□	0.69□																
250CC14	2.28	2.03•	1.59□	1.49□	1.21□																
350CC20	0.93	0.66•																			
350CC18	1.66	1.39	0.87•	1.07•	0.71□																
350CC16	2.57	2.51	2.09•	2.09	1.79•	1.25□	1.45□	1.11□													
350CC14	3.47	3.47	3.19	3.06	2.74•	2.14□	2.23•	1.86□	1.20□	1.52□	1.13□										
358CC20	1.00	0.74	0.24•	0.50•																	
358CC18	1.77	1.50	0.98•	1.18•	0.81•																
358CC16	2.71	2.69	2.27	2.27	1.97•	1.41□	1.61□	1.26□													
358CC14	3.57	3.57	3.36	3.31	2.98	2.37•	2.46•	2.07□	1.38□	1.70□	1.30□										
400CC20	1.21	0.95	0.46•	0.71•	0.36□																
400CC18	2.08	1.80	1.29	1.49	1.12•	0.45□	0.89□	0.46□													
400CC16	2.99	2.99	2.70	2.76	2.45	1.87•	2.10•	1.71□	1.03□	1.46□	1.04□										
400CC14	3.74	3.74	3.73	3.74	3.56	2.95•	3.16•	2.74•	1.98□	2.30□	1.85□										
600CC20	1.58	1.48	1.18	1.36	1.12	0.66	1.02	0.69													
600CC18	2.17	2.17	2.00	2.17	1.94	1.49	1.84	1.51	0.89•	1.45	1.03•	0.25□	1.02•	0.52□							
600CC16	2.86	2.86	2.86	2.86	2.86	2.79	2.86	2.79	2.31	2.72	2.39•	1.76□	2.35•	1.93•	1.17□	1.95□	1.45□				
600CC14	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.49	3.77	3.55	2.89•	3.50	3.06•	2.23□	3.04•	2.51□	1.55□	2.55□	1.95□	
800CC20	1.44	1.44	1.27	1.41	1.24	0.91	1.18	0.94	0.47	0.91	0.59										
800CC18	1.98	1.98	1.98	1.98	1.98	1.73	1.97	1.76	1.33	1.72	1.43	0.86	1.44	1.06	0.35•	1.12	0.67•				
800CC16	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.55	2.63	2.62	2.19	2.61	2.33	1.78•	2.36	2.00•	1.32□	2.08•	1.65•	0.85□
800CC14	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.47	3.53	3.53	3.07	3.53	3.27	2.62•	3.33	2.92•	2.13□

40psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158CC20																					
158CC18																					
158CC16																					
158CC14																					
250CC20																					
250CC18	0.51□																				
250CC16	1.30•	1.03□	0.54□	0.69□																	
250CC14	2.03•	1.73□	1.18□	1.21□																	
350CC20	0.66•	0.32•																			
350CC18	1.39	1.04•	0.39□	0.71□	0.27□																
350CC16	2.51	2.23	1.70•	1.79•	1.42□	0.75□	1.11□														
350CC14	3.47	3.34	2.77•	2.74•	2.34•	1.60□	1.86□	1.41□													
358CC20	0.74	0.40•																			
358CC18	1.50	1.15•	0.50□	0.81□	0.37□																
358CC16	2.69	2.41	1.87•	1.97•	1.59□	0.90□	1.26□	0.83□													
358CC14	3.57	3.50	2.94•	2.98	2.57•	1.81□	2.07□	1.60□													
400CC20	0.95	0.62•																			
400CC18	1.80	1.46	0.81•	1.12•	0.66□																
400CC16	2.99	2.84	2.31	2.45	2.06•	1.34□	1.71□	1.24□													
400CC14	3.74	3.74	3.35	3.56	3.15•	2.38□	2.74•	2.22□	1.30□	1.85□	1.30□										
600CC20	1.48	1.28	0.88	1.12	0.81	0.21□	0.69	0.27•													
600CC18	2.17	2.10	1.72	1.94	1.64	1.06	1.51	1.10•	0.31□	1.03•	0.50□										
600CC16	2.86	2.86	2.86	2.86	2.86	2.46	2.79	2.47	1.85•	2.39•	1.96•	1.17□	1.93•	1.41□	0.47□	1.45□	0.86□				
600CC14	3.77	3.77	3.77	3.77	3.77	3.65	3.77	3.65	3.01•	3.55	3.11•	2.27□	3.06•	2.50□	1.48□	2.51□	1.86□				
800CC20	1.44	1.34	1.06	1.24	1.02	0.58	0.94	0.63													
800CC18	1.98	1.98	1.87	1.98	1.83	1.44	1.76	1.47	0.91	1.43	1.05	0.32•	1.06	0.59•							
800CC16	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.24	2.62	2.33	1.77	2.33	1.96	1.24•	2.00•	1.55•	0.68□	1.65•	1.11□	
800CC14	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.52	3.53	3.53	3.07	3.53	3.24	2.56•	3.27	2.83•	1.99□	2.92•	2.38□	1.39□

NOTES:
1. Allowable loads based on mechanical bracing of the weak axis at 60" O.C. maximum and properly attached sheathing on both sides of the stud. (See page 52 for details)
2. Lateral and axial load multiplied by 0.75 for strength determination as per AISI A4.4
3. Allowable loads for 16 and 14 gauge are based on 50ksi yield stress, loads for 18 and 20 gauge are based on 33ksi yield stress.
4. Deflection limitations unless otherwise marked are for L/360; • for L/240, □ for L/120.
5. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
6. For construction loads, the 5psf lateral load tables may be used for studs with mechanical bracing only, spaced at a maximum of 60" O.C.

LATERAL AND AXIAL Allowable Axial Load In kips (1000lb) **5psf LATERAL**

SECTION	8FT.			10FT.			12FT.			14FT.			16FT.			18FT.			20FT.		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158XC20	0.46	0.42	0.33•	0.31•	0.26□		0.32□	0.26□													
158XC18	0.63	0.62	0.53•	0.47•	0.42•	0.31□	0.52•	0.47□	0.37□	0.37□											
158XC16	0.84	0.84	0.84	0.68	0.68•	0.58□	0.52•	0.47□	0.37□	0.53□	0.48□										
158XC14	1.15	1.15	1.15	0.91	0.91	0.88•	0.72•	0.68□	0.59□												
250XC20	1.06	1.06	1.01	0.93	0.85	0.69	0.68	0.58•	0.41□	0.47•	0.37□										
250XC18	1.41	1.41	1.41	1.23	1.23	1.07	1.00	0.90	0.71•	0.73•	0.62•	0.43□	0.52□	0.41□							
250XC16	1.85	1.85	1.85	1.59	1.59	1.59	1.35	1.35	1.23•	1.13	1.04•	0.87□	0.86•	0.76□	0.60□	0.65□	0.56□				
250XC14	2.50	2.50	2.50	2.11	2.11	2.11	1.76	1.76	1.76	1.45	1.45	1.30•	1.20•	1.11•	0.94□	0.93□	0.84□				
350XC20	1.63	1.63	1.63	1.51	1.51	1.43	1.36	1.28	1.06	1.09	0.96	0.71•	0.83	0.68•	0.44□	0.60•	0.46□	0.22□	0.43□	0.29□	
350XC18	2.26	2.26	2.26	2.08	2.08	2.08	1.87	1.87	1.67	1.62	1.47	1.21	1.25	1.10	0.83•	0.95•	0.80•	0.54□	0.71•	0.56□	0.31□
350XC16	2.97	2.97	2.97	2.69	2.69	2.69	2.38	2.38	2.38	2.07	2.07	1.98	1.77	1.74	1.51•	1.48	1.35•	1.12□	1.17•	1.05□	0.82□
350XC14	3.92	3.92	3.92	3.52	3.52	3.52	3.08	3.08	3.08	2.65	2.65	2.65	2.25	2.25	2.17	1.91	1.90	1.67•	1.63	1.51•	1.28□
358XC20	1.70	1.70	1.70	1.58	1.58	1.53	1.44	1.37	1.15	1.18	1.04	0.79•	0.90	0.76•	0.50□	0.67•	0.52□	0.27□	0.48□	0.34□	
358XC18	2.35	2.35	2.35	2.19	2.19	2.19	1.98	1.98	1.81	1.75	1.62	1.34	1.38	1.22	0.94•	1.05	0.89•	0.62□	0.79•	0.64□	0.38□
358XC16	3.16	3.16	3.16	2.88	2.88	2.88	2.56	2.56	2.56	2.23	2.23	2.18	1.92	1.91	1.67•	1.63	1.49•	1.25□	1.30•	1.16•	0.92□
358XC14	4.16	4.16	4.16	3.76	3.76	3.76	3.31	3.31	3.31	2.86	2.86	2.86	2.44	2.44	2.39	2.08	2.08	1.85•	1.77	1.66•	1.42□
400XC20	1.83	1.83	1.83	1.77	1.77	1.77	1.64	1.64	1.43	1.45	1.31	1.04	1.14	0.99	0.70•	0.88	0.71•	0.43□	0.55•	0.49□	0.22□
400XC18	2.57	2.57	2.57	2.45	2.45	2.45	2.28	2.28	2.21	2.06	2.00	1.71	1.75	1.57	1.25•	1.38	1.20•	0.88□	1.07•	0.89•	0.58□
400XC16	3.57	3.57	3.57	3.34	3.34	3.34	3.05	3.05	3.05	2.73	2.73	2.73	2.41	2.41	2.20	2.08	1.97	1.68•	1.71	1.55•	1.27□
400XC14	4.87	4.87	4.87	4.49	4.49	4.49	4.03	4.03	4.03	3.54	3.54	3.54	3.05	3.05	3.05	2.62	2.62	2.44•	2.25	2.19	1.91•
600XC20	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.04	2.04	2.01	2.00	2.00	1.74	1.93	1.77	1.43	1.71	1.50	1.12•
600XC18	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.88	2.88	2.81	2.76	2.76	2.41	2.60	2.40	1.98
600XC16	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.16	4.16	4.16	3.87	3.87	3.87	3.54	3.54	3.44
600XC14	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.26	5.26	5.26	4.81	4.81	4.81
800XC20	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.81	1.99	1.93	1.61
800XC18	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.78
800XC16	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90
800XC14	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17

15psf LATERAL

SECTION	8FT.			10FT.			12FT.			14FT.			16FT.			18FT.			20FT.		
	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158XC20	0.21□																				
158XC18	0.41□	0.30□																			
158XC16	0.76•	0.66□	0.49□	0.46□																	
158XC14	1.15•	1.06•	0.87□	0.75□	0.64□																
250XC20	0.84	0.68•	0.38□	0.47•	0.28□																
250XC18	1.30	1.13	0.82•	0.85•	0.64□	0.29□	0.47□	0.26□													
250XC16	1.85	1.85	1.62	1.48	1.31•	0.99□	1.02□	0.83□													
250XC14	2.50	2.50	2.48	2.11	2.00•	1.67□	1.56•	1.37□	1.03□	1.08□	0.89□										
350XC20	1.62	1.45	1.12	1.18	0.95	0.53•	0.76•	0.49□													
350XC18	2.26	2.25	1.90	1.90	1.64	1.18•	1.35	1.06•	0.54□	0.86•	0.56□										
350XC16	2.97	2.97	2.97	2.69	2.69	2.33	2.28	2.03•	1.58□	1.69•	1.42□	0.96□	1.20□	0.94□							
350XC14	3.92	3.92	3.92	3.52	3.52	3.49	3.08	3.00	2.56•	2.49	2.23•	1.76□	1.87•	1.60□	1.13□	1.37□	1.11□				
358XC20	1.70	1.54	1.21	1.28	1.05	0.61•	0.84•	0.57•													
358XC18	2.35	2.35	2.03	2.04	1.78	1.31•	1.48	1.18•	0.64□	0.98•	0.66□										
358XC16	3.16	3.16	3.16	2.88	2.88	2.55	2.49	2.23	1.77•	1.87•	1.59•	1.10□	1.35□	1.07□							
358XC14	4.16	4.16	4.16	3.76	3.76	3.76	3.31	3.28	2.81•	2.74	2.46•	1.98□	2.07•	1.78□	1.29□	1.53□	1.26□				
400XC20	1.83	1.76	1.45	1.55	1.31	0.87•	1.11	0.82•	0.30□	0.69•	0.38□										
400XC18	2.57	2.57	2.38	2.42	2.16	1.69	1.87	1.55	0.97•	1.32•	0.97□	0.36□	0.85□	0.50□							
400XC16	3.57	3.57	3.57	3.34	3.34	3.15	3.05	2.83	2.33•	2.43	2.12•	1.57□	1.83•	1.51□	0.95□	1.32□	1.01□				
400XC14	4.87	4.87	4.87	4.49	4.49	4.49	4.03	4.03	3.65	3.53	3.22	2.66•	2.73•	2.40•	1.84□	2.07□	1.75□				
600XC20	2.06	2.06	2.06	2.06	2.06	1.75	2.00	1.76	1.31	1.69	1.39	0.82•	1.34	0.97•	0.31□	0.98•	0.57□				
600XC18	2.94	2.94	2.94	2.94	2.94	2.89	2.94	2.88	2.40	2.80	2.47	1.84	2.37	1.96	1.22•	1.90	1.44•	0.62□	1.43•	0.94□	
600XC16	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	3.84	4.16	3.87	3.18•	3.59	3.17	2.41•	2.94	2.50•	1.71□
600XC14	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.05	5.26	4.94	4.14•	4.53	4.06•	3.22□
800XC20	1.99	1.99	1.99	1.99	1.99	1.94	1.99	1.96	1.62	1.93	1.70	1.25	1.69	1.40	0.83	1.43	1.07	0.39•	1.15	0.72•	
800XC18	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.48	2.82	2.61	2.08	2.63	2.28	1.63	2.34	1.93	1.16•
800XC16	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.87	3.90	3.90	3.49	3.90	3.71	3.05
800XC14	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	4.83

NOTES:
1. Allowable loads based on mechanical bracing of the weak axis at 60" O.C. maximum and properly attached sheathing on both sides of the stud. (See page 52 for details)
2. Lateral and axial load multiplied by 0.75 for strength determination as per AISI A4.4
3. Allowable loads for 16 and 14 gauge are based on 50ksi yield stress.
   loads for 18 and 20 gauge are based on 33ksi yield stress.
4. Deflection limitations unless otherwise marked are for L/360; • for L/240; □ for L/120.
5. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
6. For construction loads, the 5psf lateral load tables may be used for studs with mechanical bracing only, spaced at a maximum of 60" O.C.

COMBINED LOADS

LATERAL AND AXIAL

Allowable Axial Load In kips (1000lb)

20psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158XC20																					
158XC18	0.30□																				
158XC16	0.66□	0.54□																			
158XC14	1.06•	0.93□	0.70□	0.64□																	
250XC20	0.68•	0.48•																			
250XC18	1.13	0.92•	0.54□	0.64□	0.40□																
250XC16	1.85	1.70	1.38•	1.31•	1.09□	0.72□	0.83□	0.61□													
250XC14	2.50	2.50	2.24•	2.00•	1.78•	1.38□	1.37□	1.14□													
350XC20	1.45	1.22	0.81	0.95	0.66•																
350XC18	2.25	2.01	1.57	1.64	1.33	0.76•	1.06•	0.70□													
350XC16	2.97	2.97	2.84	2.69	2.46	1.98•	2.03•	1.73•	1.19□	1.42□	1.11□										
350XC14	3.92	3.92	3.92	3.52	3.52	3.14	3.00	2.70•	2.15□	2.23•	1.91□	1.34□	1.60□	1.28□							
358XC20	1.54	1.32	0.90	1.05	0.75•	0.22□	0.57•	0.24□													
358XC18	2.35	2.15	1.70	1.78	1.46	0.88•	1.18•	0.81□													
358XC16	3.16	3.16	3.08	2.88	2.68	2.19•	2.23	1.92•	1.35□	1.59•	1.26□	0.68□	1.07□	0.74□							
358XC14	4.16	4.16	4.16	3.76	3.76	3.42	3.28	2.96•	2.39□	2.46•	2.12□	1.53□	1.78□	1.45□							
400XC20	1.76	1.55	1.15	1.31	1.02	0.47•	0.82•	0.47□													
400XC18	2.57	2.49	2.06	2.16	1.84	1.24•	1.55	1.16•	0.46□	0.97•	0.55□										
400XC16	3.57	3.57	3.57	3.34	3.28	2.77	2.83	2.49	1.87•	2.12•	1.75□	1.09□	1.51□	1.13□							
400XC14	4.87	4.87	4.87	4.49	4.49	4.32	4.03	3.81	3.18•	3.22	2.84•	2.16□	2.40•	2.02□	1.34□	1.75□	1.37□				
600XC20	2.06	2.06	1.92	2.06	1.86	1.45	1.76	1.46	0.89	1.39	1.00	0.29•	0.97•	0.52□							
600XC18	2.94	2.94	2.94	2.94	2.94	2.55	2.88	2.56	1.94	2.47	2.04	1.25•	1.96	1.46•	0.55□	1.44•	0.88□				
600XC16	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	3.97	4.23	4.02	3.31	3.87	3.41	2.55•	3.17	2.65•	1.74□	2.50•	1.96□	1.03□
600XC14	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.17	5.56	5.27	4.40•	4.94	4.40□	3.42□	4.06•	3.48•	2.48□
800XC20	1.99	1.99	1.99	1.99	1.99	1.71	1.96	1.73	1.29	1.70	1.39	0.81	1.40	1.01	0.29•	1.07	0.61•				
800XC18	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.53	2.82	2.62	2.08	2.61	2.25	1.57	2.28	1.84	1.02•	1.93	1.41•	0.46□
800XC16	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.89	3.90	3.90	3.46	3.90	3.67	2.97	3.71	3.27	2.45•
800XC14	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	4.77	5.17	5.04	4.22•

25psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158XC20																					
158XC18																					
158XC16	0.57□	0.43□																			
158XC14	0.96□	0.81□																			
250XC20	0.52•	0.29□																			
250XC18	0.97•	0.72•	0.27□	0.46□																	
250XC16	1.75	1.54•	1.15□	1.15□	0.90□																
250XC14	2.50	2.40	2.00•	1.83•	1.57□	1.12□	1.19□	0.93□													
350XC20	1.28	1.01	0.51•	0.73•	0.40□																
350XC18	2.07	1.79	1.25	1.41	1.04•	0.37□	0.79□	0.38□													
350XC16	2.97	2.97	2.59	2.52	2.21	1.65•	1.80•	1.45□	0.82□	1.18□	0.82□										
350XC14	3.92	3.92	3.92	3.52	3.37	2.81•	2.77•	2.42•	1.78□	1.98□	1.61□										
358XC20	1.37	1.11	0.61•	0.82•	0.48•																
358XC18	2.20	1.92	1.39	1.54	1.17•	0.49□	0.90•	0.48□													
358XC16	3.16	3.16	2.82	2.74	2.43	1.85•	1.99•	1.63□	0.97□	1.34□	0.96□										
358XC14	4.16	4.16	4.16	3.76	3.66	3.09•	3.04	2.67•	2.01□	2.20□	1.81□										
400XC20	1.61	1.35	0.86	1.09	0.74•																
400XC18	2.55	2.27	1.75	1.92	1.53	0.83•	1.25•	0.80□													
400XC16	3.57	3.57	3.39	3.34	3.02	2.41•	2.57	2.17•	1.45□	1.84•	1.40□	0.65□	1.22□	0.78□							
400XC14	4.87	4.87	4.87	4.49	4.49	3.96	3.89	3.49•	2.75□	2.93•	2.49□	1.71□	2.11□	1.67□							
600XC20	2.06	2.06	1.72	1.92	1.65	1.14	1.54	1.17	0.48•	1.10	0.64•										
600XC18	2.94	2.94	2.86	2.94	2.78	2.23	2.64	2.24	1.50	2.15	1.64	0.71•	1.58•	0.99•							
600XC16	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	3.59	4.11	3.66	2.82•	3.52	2.97•	1.97□	2.78•	2.18•	1.12□	2.09□	1.47□	
600XC14	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.47	5.56	5.51	4.68	5.39	4.82	3.80•	4.53	3.89•	2.77□	3.62•	2.96□	1.82□
800XC20	1.99	1.99	1.91	1.99	1.86	1.48	1.79	1.51	0.97	1.47	1.10	0.39	1.11	0.65							
800XC18	2.82	2.82	2.82	2.82	2.82	2.71	2.82	2.73	2.24	2.68	2.34	1.68	2.34	1.90	1.08•	1.95	1.42	0.44•	1.54•	0.92•	
800XC16	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.58	3.90	3.74	3.05	3.75	3.31	2.48•	3.38	2.85•	1.87□
800XC14	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	4.87	5.17	5.10	4.28	5.14	4.52	3.64•

NOTES:
1. Allowable loads based on mechanical bracing of the weak axis at 60° O.C. maximum and properly attached sheathing on both sides of the stud. (See page 52 for details)
2. Lateral and axial load multiplied by 0.75 for strength determination as per AISI A4.4
3. Allowable loads for 16 and 14 gauge are based on 50ksi yield stress, loads for 18 and 20 gauge are based on 33ksi yield stress.
4. Deflection limitations unless otherwise marked are for L/360; • for L/240; □ for L/120.
5. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
6. For construction loads, the 5psf lateral load tables may be used for studs with mechanical bracing only, spaced at a maximum of 60° O.C.

LATERAL AND AXIAL — Allowable Axial Load In kips (1000lb)

30psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158XC20																					
158XC18																					
158XC16	0.49a																				
158XC14	0.87a	0.70a																			
250XC20	0.38a																				
250XC18	0.82*	0.54a																			
250XC16	1.62	1.38*	0.94a	0.99a	0.72a																
250XC14	2.48	2.24*	1.78a	1.67a	1.38a																
350XC20	1.12	0.81	0.23*	0.53*																	
350XC18	1.90	1.57	0.95*	1.18*	0.76*																
350XC16	2.97	2.84	2.34	2.33	1.98*	1.34a	1.58a	1.19a													
350XC14	3.92	3.92	3.68	3.49	3.14	2.50*	2.56*	2.15a	1.44a	1.76a	1.34a										
358XC20	1.21	0.90	0.32*	0.61*																	
358XC18	2.03	1.70	1.08*	1.31*	0.88*																
358XC16	3.16	3.08	2.57	2.55	2.19*	1.52a	1.77*	1.35a	0.62a	1.10a	0.68a										
358XC14	4.16	4.16	3.98	3.76	3.42	2.76*	2.81*	2.39a	1.65a	1.96a	1.53a										
400XC20	1.45	1.15	0.58*	0.87*	0.47*																
400XC18	2.38	2.06	1.45	1.69	1.24*	0.44a	0.97*	0.46a													
400XC16	3.57	3.57	3.14	3.15	2.77	2.07*	2.33*	1.87*	1.06a	1.57a	1.09a										
400XC14	4.87	4.87	4.87	4.49	4.32	3.61*	3.65	3.18*	2.35a	2.66*	2.16a	1.29a	1.84a	1.34a							
600XC20	2.06	1.92	1.52	1.76	1.45	0.85	1.31	0.89													
600XC18	2.94	2.94	2.65	2.89	2.56	1.92	2.40	1.94	1.07*	1.84	1.25*										
600XC16	4.23	4.23	4.23	4.23	4.23	3.99	4.23	3.97	3.22	3.84	3.31	2.35*	3.18*	2.55*	1.43a	2.41*	1.74a	0.56a	1.71a	1.03a	
600XC14	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.11	5.56	5.17	4.21*	5.05	4.40*	3.23a	4.14*	3.42a	2.16a	3.22a	2.48a	
800XC20	1.99	1.99	1.76	1.94	1.71	1.25	1.62	1.29	0.65	1.25	0.81										
800XC18	2.82	2.82	2.82	2.82	2.82	2.50	2.82	2.53	1.94	2.48	2.08	1.30	2.08	1.57	0.60*	1.63	1.02*				
800XC16	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.80	3.90	3.89	3.27	3.87	3.45	2.67*	3.49	2.97	2.01*	3.06	2.45*	1.33a
800XC14	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.09	5.17	5.17	4.49	5.17	4.77	3.82*	4.83	4.22*	3.09a

40psf LATERAL

SECTION	8FT 12in	8FT 16in	8FT 24in	10FT 12in	10FT 16in	10FT 24in	12FT 12in	12FT 16in	12FT 24in	14FT 12in	14FT 16in	14FT 24in	16FT 12in	16FT 16in	16FT 24in	18FT 12in	18FT 16in	18FT 24in	20FT 12in	20FT 16in	20FT 24in
158XC20																					
158XC18																					
158XC16																					
158XC14	0.70a																				
250XC20																					
250XC18	0.54a																				
250XC16	1.38*	1.08a	0.54a	0.72a																	
250XC14	2.24*	1.93*	1.37a	1.38a	1.03a																
350XC20	0.81	0.42*																			
350XC18	1.57	1.15	0.38*	0.76*	0.25a																
350XC16	2.84	2.51	1.87*	1.98*	1.54a	0.76a	1.19a	0.71a													
350XC14	3.92	3.84	3.22	3.14	2.70*	1.91a	2.15a	1.67a													
358XC20	0.90	0.51*																			
358XC18	1.70	1.28	0.51*	0.88*	0.36a																
358XC16	3.08	2.73	2.08*	2.19*	1.74*	0.92a	1.35a	0.85a													
358XC14	4.16	4.14	3.51	3.42	2.98*	2.16a	2.39a	1.89a													
400XC20	1.15	0.77																			
400XC18	2.06	1.65	0.87*	1.24*	0.70*																
400XC16	3.57	3.31	2.65	2.77	2.30*	1.43a	1.87*	1.32a	0.35a	1.09a											
400XC14	4.87	4.87	4.41	4.32	3.84	2.95*	3.18*	2.61a	1.61a	2.16a	1.57a										
600XC20	1.92	1.65	1.13	1.45	1.04	0.27*	0.89	0.35*													
600XC18	2.94	2.79	2.24	2.56	2.13	1.30	1.94	1.35	0.26*	1.25*	0.53a										
600XC16	4.23	4.23	4.23	4.23	4.16	3.47	3.97	3.46	2.50*	3.31	2.66*	1.46a	2.55*	1.79a	0.43a	1.74a	0.93a				
600XC14	5.56	5.56	5.56	5.56	5.56	5.38	5.56	5.35	4.42	5.17	4.52	3.33*	4.40*	3.61*	2.19a	3.42a	2.56a				
800XC20	1.99	1.86	1.47	1.71	1.40	0.80	1.29	0.86													
800XC18	2.82	2.82	2.70	2.82	2.64	2.10	2.53	2.14	1.37	2.08	1.56	0.56*	1.57	0.92*							
800XC16	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.35	3.89	3.48	2.67	3.46	2.93	1.91*	2.97	2.32*	1.11a	2.45*	1.69a	0.31a
800XC14	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	4.51	5.17	4.74	3.75*	4.77	4.13*	2.93a	4.22*	3.46*	2.06a

NOTES:
1. Allowable loads based on mechanical bracing of the weak axis at 60" O.C. maximum and properly attached sheathing on both sides of the stud. (See page 52 for details)
2. Lateral and axial load multiplied by 0.75 for strength determination as per AISI A4.4
3. Allowable loads for 16 and 14 gauge are based on 50ksi yield stress,
   loads for 18 and 20 gauge are based on 33ksi yield stress.
4. Deflection limitations unless otherwise marked are for L/360; * for L/240; a for L/120.
5. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.
6. For construction loads, the 5psf lateral load tables may be used for studs with mechanical bracing only, spaced at a maximum of 60" O.C.

LATERAL AND AXIAL **SHEATHING BOTH SIDES**

SECTION	Lateral Load=5psf 8ft 12in	8ft 16in	8ft 24in	9ft 12in	9ft 16in	9ft 24in	Lateral Load=15psf 8ft 12in	8ft 16in	8ft 24in	9ft 12in	9ft 16in	9ft 24in	Lateral Load=20psf 8ft 12in	8ft 16in	8ft 24in	9ft 12in	9ft 16in	9ft 24in	Lateral Load=30psf 8ft 12in	8ft 16in	8ft 24in	9ft 12in	9ft 16in	9ft 24in
350IC20	2.12	2.12	2.12	2.04	2.04	2.04	2.06	1.84	1.42	1.76	1.50	1.03•	1.84	1.55	1.04•	1.50	1.18•	0.61□	1.42	1.04•	0.35□	1.03•	0.61□	
350IC18	2.82	2.90	2.90	2.79	2.79	2.79	2.82	2.78	2.32	2.66	2.37	1.84	2.72	2.47	1.90	2.37	2.01	1.37•	2.27	1.90	1.13•	1.84	1.37•	0.53□
358IC20	2.15	2.15	2.15*	2.08	2.08	2.08	2.14	1.92	1.51	1.85	1.59	1.13•	1.92	1.64	1.14•	1.59	1.28	0.71•	1.51	1.14•	0.46□	1.13•	0.71•	
358IC18	2.88	2.95	2.95	2.85	2.85	2.85	2.88	2.90	2.45	2.78	2.50	1.97	2.83	2.59	2.03	2.50	2.14	1.50•	2.40	2.03	1.27•	1.97	1.50•	0.66□
400IC20	2.23	2.23	2.23	2.17	2.17	2.17	2.23	2.13	1.76	2.08	1.84	1.40	2.13	1.88	1.41	1.84	1.54	0.99•	1.76	1.41	0.75•	1.40	0.99•	0.25□
400IC18	3.01	3.08	3.08	2.90	2.99	2.99	3.01	3.08	2.78	2.90	2.83	2.34	3.01	2.91	2.39	2.76	2.50	1.88	2.73	2.39	1.67	2.28	1.88	1.06•
600IC20	2.37	2.39	2.39	2.37	2.39	2.39	2.37	2.39	2.39	2.37	2.39	2.23	2.37	2.39	2.20	2.37	2.33	1.93	2.37	2.20	1.73	2.21	1.93	1.34
600IC18	3.13	3.33	3.33	3.09	3.32	3.33	3.13	3.33	3.33	3.09	3.32	3.33	3.13	3.33	3.33	3.09	3.32	3.20	3.13	3.33	3.00	3.09	3.19	2.61
800IC18	2.82	3.30	3.32	2.78	3.29	3.32	2.82	3.30	3.32	2.78	3.29	3.32	2.82	3.30	3.32	2.78	3.29	3.32	2.82	3.30	3.32	2.78	3.29	3.12
350SC20	2.19	2.19	2.19	2.11	2.11	2.06	2.06	1.81	1.35	1.74	1.46	0.94•	1.81	1.50	0.94•	1.46	1.11•	0.48□	1.35	0.94•				
350SC18	2.88	2.98	2.98	2.74	2.87	2.87	2.88	2.86	2.39	2.63	2.44	1.89	2.77	2.54	1.95	2.34	2.07	1.41•	2.32	1.95	1.16•	1.82	1.41•	0.55□
358SC20	2.21	2.22	2.22	2.14	2.14	2.14	2.13	1.90	1.45	1.84	1.55	1.04•	1.89	1.60	1.04•	1.55	1.21	0.58•	1.45	1.04•	0.29□	1.04•	0.58•	
358SC18	2.94	3.04	3.04	2.92	2.93	2.93	2.94	2.98	2.52	2.85	2.57	2.03	2.89	2.67	2.09	2.56	2.20	1.54•	2.45	2.09	1.31•	2.02	1.54•	0.68□
400SC20	2.30	2.30	2.30	2.24	2.24	2.24	2.30	2.13	1.71	2.08	1.81	1.32	2.13	1.85	1.32	1.81	1.48	0.88•	1.71	1.32	0.60•	1.32	0.88•	
400SC18	3.07	3.16	3.16	2.96	3.08	3.08	3.07	3.16	2.86	2.96	2.92	2.41	3.07	3.00	2.46	2.81	2.57	1.94	2.78	2.46	1.71	2.33	1.94	1.09•
600SC20	2.44	2.48	2.48	2.44	2.47	2.47	2.44	2.48	2.48	2.44	2.47	2.31	2.44	2.48	2.28	2.44	2.41	1.99	2.44	2.28	1.80	2.28	1.99	1.39
600SC18	3.18	3.41	3.45	3.14	3.41	3.44	3.18	3.41	3.45	3.14	3.41	3.44	3.18	3.41	3.45	3.14	3.41	3.30	3.18	3.41	3.11	3.14	3.27	2.69
800SC18	2.88	3.38	3.45	2.84	3.38	3.45	2.88	3.38	3.45	2.84	3.38	3.45	2.88	3.38	3.45	2.84	3.38	3.45	2.88	3.38	3.45	2.84	3.38	3.25
350CC20	2.25	2.25	2.25	2.17	2.17	2.14	2.14	1.89	1.42	1.82	1.53	1.00•	1.89	1.57	1.00•	1.53	1.17•	0.54□	1.42	1.00•	0.24□	1.00•	0.54□	
350CC18	2.93	3.07	3.07	2.79	2.95	2.95	2.93	2.98	2.51	2.71	2.55	2.00	2.86	2.66	2.07	2.43	2.18	1.51•	2.41	2.07	1.28•	1.91	1.51•	0.65□
358CC20	2.26	2.27	2.27	2.21	2.21	2.21	2.20	1.97	1.52	1.91	1.62	1.11•	1.96	1.66	1.10	1.62	1.27	0.64•	1.51	1.10•	0.35□	1.11•	0.64•	
358CC18	2.99	3.11	3.12	2.98	3.02	3.02	2.99	3.09	2.64	2.95	2.68	2.14	2.98	2.78	2.21	2.66	2.32	1.65•	2.54	2.20	1.42•	2.12	1.65•	0.79□
400CC20	2.32	2.33	2.33	2.27	2.29	2.29	2.32	2.18	1.77	2.13	1.88	1.38	2.17	1.90	1.38	1.86	1.54	0.93•	1.76	1.38	0.65•	1.37	0.93•	
400CC18	3.13	3.25	3.25	3.02	3.17	3.17	3.13	3.25	2.98	3.02	3.03	2.52	3.13	3.12	2.58	2.90	2.69	2.05	2.88	2.58	1.83	2.42	2.05	1.20•
600CC20	2.44	2.48	2.48	2.44	2.47	2.47	2.44	2.48	2.48	2.44	2.47	2.32	2.44	2.48	2.30	2.44	2.42	2.01	2.44	2.30	1.82	2.29	2.01	1.42
600CC18	3.24	3.50	3.57	3.19	3.49	3.54	3.24	3.50	3.57	3.19	3.49	3.54	3.24	3.50	3.57	3.19	3.49	3.42	3.24	3.50	3.25	3.19	3.38	2.82
800CC18	2.94	3.47	3.57	2.90	3.46	3.57	2.94	3.47	3.57	2.90	3.46	3.57	2.94	3.47	3.57	2.90	3.46	3.57	2.94	3.47	3.57	2.90	3.46	3.41

Section groups (left to right): IC SECTION, SC SECTION, CC SECTION.

NOTES:
1. Loads based on 3/8" to 5/8" gypsum board attached to both sides of each stud with a maximum fastener spacing of 12", fasteners must be No.6 or larger screws.
2. Bracing may be required for construction loads or in service if properly attached gypsum board is not in place.
3. Gypsum board must retain adequate strength and stiffness for the service life of the wall.
4. Lateral and axial loads multiplied by 0.75 for strength determination as per AISI A4.4.
5. Deflection limitations, unless otherwise marked, are for L/360; • for L/240; □ for L/120.
6. End reaction=Load(psf)•Spacing(in)•Height from table(ft)/24. Check web crippling table for allowable reaction.

Design Loads (lb/ft²)	Jst Spc.	600XC SECTION Single Span			Two Equal Spans			800XC SECTION Single Span			Two Equal Spans		
		18ga.	16ga.	14ga.	18ga.	16ga.	14ga.	18ga.	16ga.	14ga.	18ga.	16ga.	14ga.
DL = 10	12	16'11"	18'2"	19'6"	17'8"	23'10"	26'2"	21'4"	22'11"	24'8"	21'7"	29'4"	33'1"
LL = 20	16	15'3"	16'6"	17'9"	15'3"	20'8"	23'9"	18'9"	20'10"	22'5"	18'9"	25'5"	30'0"
TL = 30	24	12'6"	14'5"	15'6"	12'6"	16'10"	20'3"	15'3"	18'2"	19'7"	15'3"	20'9"	24'11"
DL = 10	12	15'8"	16'10"	18'1"	16'4"	22'1"	24'4"	19'9"	21'3"	22'11"	20'0"	27'2"	30'8"
LL = 25	16	14'2"	15'4"	16'5"	14'2"	19'1"	22'1"	17'4"	19'4"	20'9"	17'4"	23'6"	27'11"
TL = 35	24	11'6"	13'4"	14'4"	11'6"	15'7"	18'9"	14'2"	16'11"	18'2"	14'2"	19'3"	23'1"
DL = 10	12	13'5"	14'5"	15'6"	13'8"	18'6"	20'9"	16'9"	18'2"	19'7"	16'9"	22'9"	26'3"
LL = 40	16	11'10"	13'1"	14'1"	11'10"	16'0"	18'10"	14'6"	16'6"	17'9"	14'6"	19'8"	23'8"
TL = 50	24	9'8"	11'5"	12'3"	9'8"	13'1"	15'8"	11'10"	14'5"	15'6"	10'8"	16'1"	19'4"
DL = 10	12	12'5"	13'4"	14'4"	12'6"	16'10"	19'3"	15'3"	16'11"	18'2"	15'3"	20'9"	24'4"
LL = 50	16	10'9"	12'2"	13'1"	10'9"	14'7"	17'6"	13'3"	15'4"	16'6"	13'3"	18'0"	21'7"
TL = 60	24	8'10"	10'7"	11'5"	8'10"	11'11"	14'4"	10'8"	13'5"	14'5"	8'11"	14'5"	17'7"
DL = 10	12	11'6"	12'7"	13'6"	11'6"	15'7"	18'2"	14'2"	15'11"	17'1"	14'2"	19'3"	22'11"
LL = 60	16	10'0"	11'5"	12'3"	10'0"	13'6"	16'3"	12'3"	14'5"	15'6"	12'3"	16'8"	20'0"
TL = 70	24	8'2"	10'0"	10'9"	7'7"	11'0"	13'3"	9'2"	12'7"	13'7"	7'7"	12'4"	16'4"
DL = 20	12	14'5"	15'10"	17'0"	14'5"	19'6"	22'10"	17'8"	20'0"	21'6"	17'8"	24'0"	28'10"
LL = 25	16	12'6"	14'5"	15'6"	12'6"	16'10"	20'3"	15'3"	18'2"	19'7"	15'3"	20'9"	24'11"
TL = 45	24	10'2"	12'7"	13'6"	10'2"	13'9"	16'6"	12'6"	15'11"	17'1"	11'11"	16'11"	20'4"
DL = 20	12	12'6"	14'5"	15'6"	12'6"	16'10"	20'3"	15'3"	18'2"	19'7"	15'3"	20'9"	24'11"
LL = 40	16	10'9"	13'1"	14'1"	10'9"	14'7"	17'6"	13'3"	16'6"	17'9"	13'3"	18'0"	21'7"
TL = 60	24	8'10"	11'5"	12'3"	8'10"	11'11"	14'4"	10'8"	14'5"	15'6"	8'11"	14'5"	17'7"
DL = 20	12	11'6"	13'4"	14'4"	11'6"	15'7"	18'9"	14'2"	16'11"	18'2"	14'2"	19'3"	23'1"
LL = 50	16	10'0"	12'2"	13'1"	10'0"	13'6"	16'3"	12'3"	15'4"	16'6"	11'5"	16'8"	20'0"
TL = 70	24	8'2"	10'7"	11'5"	7'7"	11'0"	13'3"	9'2"	13'5"	14'5"	7'7"	12'4"	16'4"
DL = 20	12	10'9"	12'7"	13'6"	10'9"	14'7"	17'6"	13'3"	15'11"	17'1"	13'3"	18'0"	21'7"
LL = 60	16	9'4"	11'5"	12'3"	9'4"	12'8"	15'2"	11'5"	14'5"	15'6"	10'0"	15'7"	18'8"
TL = 80	24	7'7"	10'0"	10'9"	6'8"	10'4"	12'5"	8'0"	12'7"	13'7"	6'8"	10'10"	15'3"
DL = 20	12	8'10"	10'7"	11'5"	8'10"	11'11"	14'4"	10'8"	13'5"	14'5"	8'11"	14'5"	17'7"
LL = 100	16	7'7"	9'8"	10'4"	6'8"	10'4"	12'5"	8'0"	12'2"	13'1"	6'8"	10'10"	15'3"
TL = 120	24	5'2"	8'5"	9'0"	4'5"	7'2"	10'1"	5'4"	10'4"	11'5"	4'5"	7'2"	10'11"

NOTES: 1. Joist spans based on:

L/240 deflection limit for DL+LL; L/360 deflection limit for LL

Allowable moment — Assuming continuous lateral support of the compression flange provided by properly attached flooring material (i.e. metal deck, plywood, etc.), using F_y=50ksi for 12, 14 and 16 gauge joists and F_y=33ksi for 18 gauge joists.
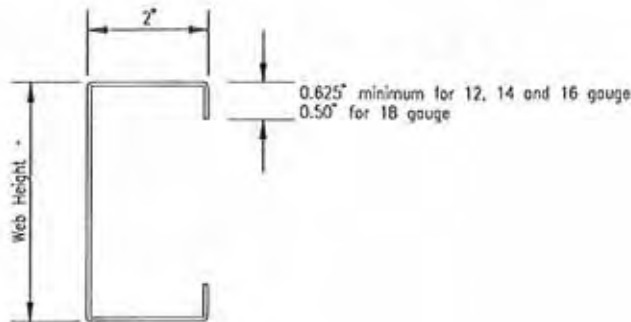
Combined bending and shear.

Combined bending and web crippling, using two members back to back, end bearing length of 1in. and interior bearing length of 3.5in. Check end reactions with web crippling tables and interior reactions for combined bending and web crippling to determine if two members back to back are required at support points. (See page 51 for example calculations.)

Allowable shear and web crippling values based on unpunched joists.

2. Rim Joist/Track must be installed at the ends of all joists.
3. For special loading or support conditions or if punched joists are used, contact manufacturers technical representative.

1.625"   .375" Min.

Web Height

-41-

Design Loads (lb/ft²)	Jst Spc.	400EJ SECTION Single Span 18ga.	16ga.	14ga.	12ga.	Two Equal Spans 18ga.	16ga.	14ga.	12ga.	600EJ SECTION Single Span 18ga.	16ga.	14ga.	12ga.	Two Equal Spans 18ga.	16ga.	14ga.	12ga.
DL = 10	12	13'0"	14'1"	15'1"	16'8"	14'0"	18'11"	20'3"	22'4"	17'10"	19'4"	20'9"	22'11"	18'5"	25'10"	27'10"	30'9"
LL = 20	16	11'10"	12'9"	13'9"	15'2"	12'2"	17'0"	18'5"	20'4"	15'11"	17'6"	18'10"	20'10"	15'11"	22'4"	25'3"	27'11"
TL = 30	24	9'11"	11'2"	12'0"	13'3"	9'11"	13'10"	16'1"	17'9"	13'0"	15'4"	16'6"	18'2"	13'0"	18'3"	22'0"	24'5"
DL = 10	12	12'1"	13'1"	14'0"	15'5"	13'0"	17'6"	18'10"	20'9"	16'6"	17'11"	19'3"	21'4"	17'1"	23'11"	25'10"	28'7"
LL = 25	16	11'0"	11'10"	12'9"	14'0"	11'3"	15'9"	17'1"	18'10"	14'9"	16'3"	17'6"	19'4"	14'9"	20'8"	23'6"	25'11"
TL = 35	24	9'2"	10'4"	11'2"	12'3"	9'2"	12'10"	14'11"	16'5"	12'1"	14'3"	15'3"	16'11"	12'1"	16'10"	20'5"	22'8"
DL = 10	12	10'4"	11'2"	12'0"	13'3"	10'10"	15'0"	16'1"	17'9"	14'1"	15'4"	16'6"	18'2"	14'3"	20'0"	22'1"	24'5"
LL = 40	16	9'4"	10'2"	10'11"	12'0"	9'5"	13'2"	14'7"	16'1"	12'4"	13'11"	14'11"	16'6"	12'4"	17'3"	20'1"	22'2"
TL = 50	24	7'8"	8'10"	9'6"	10'6"	7'8"	10'9"	12'9"	14'1"	10'1"	12'2"	13'1"	14'5"	10'1"	14'1"	17'1"	19'4"
DL = 10	12	9'7"	10'4"	11'2"	12'3"	9'11"	13'10"	14'11"	16'5"	13'0"	14'3"	15'3"	16'11"	13'0"	18'3"	20'6"	22'8"
LL = 50	16	8'7"	9'5"	10'1"	11'2"	8'7"	12'0"	13'7"	14'11"	11'3"	12'11"	13'11"	15'4"	11'3"	15'9"	18'7"	20'7"
TL = 60	24	7'0"	8'3"	8'10"	9'9"	7'0"	9'9"	11'10"	13'1"	9'2"	11'3"	12'1"	13'5"	8'11"	12'11"	15'7"	18'0"
DL = 10	12	9'0"	9'9"	10'6"	11'6"	9'2"	12'10"	14'1"	15'6"	12'1"	13'4"	14'5"	15'11"	12'1"	16'10"	19'3"	21'4"
LL = 60	16	7'11"	8'10"	9'6"	10'6"	7'11"	11'1"	12'9"	14'1"	10'5"	12'2"	13'1"	14'5"	10'5"	14'7"	17'6"	19'4"
TL = 70	24	6'6"	7'9"	8'4"	9'2"	6'6"	9'1"	11'0"	12'3"	8'6"	10'7"	11'5"	12'7"	7'7"	11'11"	14'5"	16'11"
DL = 20	12	11'4"	12'4"	13'2"	14'7"	11'5"	16'0"	17'9"	19'6"	15'0"	16'10"	18'1"	20'0"	15'0"	21'1"	24'4"	26'10"
LL = 25	16	9'11"	11'2"	12'0"	13'3"	9'11"	13'10"	16'1"	17'9"	13'0"	15'4"	16'6"	18'2"	13'0"	18'3"	22'0"	24'5"
TL = 45	24	8'1"	9'9"	10'6"	11'6"	8'1"	11'4"	13'8"	15'6"	10'7"	13'4"	14'5"	15'11"	10'7"	14'11"	18'0"	21'4"
DL = 20	12	9'11"	11'2"	12'0"	13'3"	9'11"	13'10"	16'1"	17'9"	13'0"	15'4"	16'6"	18'2"	13'0"	18'3"	22'0"	24'5"
LL = 40	16	8'7"	10'2"	10'11"	12'0"	8'7"	12'0"	14'6"	16'1"	11'3"	13'11"	14'11"	16'6"	11'3"	15'9"	19'1"	22'2"
TL = 60	24	7'0"	8'10"	9'6"	10'6"	7'0"	9'9"	11'10"	14'1"	9'2"	12'2"	13'1"	14'5"	8'11"	12'11"	15'7"	18'10"
DL = 20	12	9'2"	10'4"	11'2"	12'3"	9'2"	12'10"	14'11"	16'5"	12'1"	14'3"	15'3"	16'11"	12'1"	16'10"	20'5"	22'8"
LL = 50	16	7'11"	9'5"	10'1"	11'2"	7'11"	11'1"	13'5"	14'11"	10'5"	12'11"	13'11"	15'4"	10'5"	14'7"	17'8"	20'7"
TL = 70	24	6'6"	8'3"	8'10"	9'9"	6'6"	9'1"	11'0"	13'1"	8'6"	11'3"	12'1"	13'5"	7'7"	11'11"	14'5"	17'5"
DL = 20	12	8'7"	9'9"	10'6"	11'6"	8'7"	12'0"	14'1"	15'6"	11'3"	13'4"	14'5"	15'11"	11'3"	15'9"	19'1"	21'4"
LL = 60	16	7'5"	8'10"	9'6"	10'6"	7'5"	10'5"	12'7"	14'1"	9'9"	12'2"	13'1"	14'5"	9'9"	13'8"	16'6"	19'4"
TL = 80	24	6'1"	7'9"	8'4"	9'2"	6'1"	8'6"	10'3"	12'3"	7'9"	10'7"	11'5"	12'7"	6'8"	10'10"	13'6"	16'4"
DL = 20	12	7'0"	8'3"	8'10"	9'9"	7'0"	9'9"	11'10"	13'1"	9'2"	11'3"	12'1"	13'5"	8'11"	12'11"	15'7"	18'0"
LL = 100	16	6'1"	7'6"	8'0"	8'10"	6'1"	8'6"	10'3"	11'10"	7'9"	10'3"	11'0"	12'2"	6'8"	10'10"	13'6"	16'4"
TL = 120	24	4'11"	6'5"	7'0"	7'8"	4'5"	6'11"	8'4"	10'1"	5'2"	8'11"	9'7"	10'8"	4'5"	7'2"	10'11"	13'4"

NOTES: 1. Joist spans based on:

  L/240 deflection limit for DL+LL: L/360 deflection limit for LL

  Allowable moment — Assuming continuous lateral support of the compression flange provided by properly attached flooring material (i.e. metal deck, plywood, etc.), using $F_y = 50$ksi for 12, 14 and 16 gauge joists and $F_y = 33$ksi for 18 gauge joists.

  Combined bending and shear.

  Combined bending and web crippling, using two members back to back, end bearing length of 1in. and interior bearing length of 3.5in. Check end reactions with web crippling tables and interior reactions for combined bending and web crippling to determine if two members back to back are required at support points. (See page 51 for example calculations.)

  Allowable shear and web crippling values based on unpunched joists.

  2. Rim Joist/Track must be installed at the ends of all joists.

  3. For special loading or support conditions or if punched joists are used, contact manufacturers technical representative.

0.625" minimum for 12, 14 and 16 gauge
0.50" for 18 gauge

2"

Web Height

800EJ SECTION

Design Loads (lb/ft²)	Jst Spc.	Single Span				Two Equal Spans			
		18ga.	16ga.	14ga.	12ga.	18ga.	16ga.	14ga.	12ga.
DL = 10 LL = 20 TL = 30	12	22'3"	24'3"	26'1"	28'11"	22'3"	31'4"	35'0"	38'9"
	16	19'3"	22'0"	23'8"	26'3"	19'3"	27'2"	31'9"	35'3"
	24	15'8"	19'3"	20'8"	22'11"	15'8"	22'2"	26'11"	30'9"
DL = 10 LL = 25 TL = 35	12	20'7"	22'6"	24'3"	26'10"	20'7"	29'0"	32'6"	36'0"
	16	17'10"	20'5"	22'0"	24'5"	17'10"	25'2"	29'6"	32'8"
	24	14'6"	17'10"	19'3"	21'3"	14'6"	20'6"	24'11"	28'7"
DL = 10 LL = 40 TL = 50	12	17'2"	19'3"	20'8"	22'11"	17'2"	24'3"	27'9"	30'9"
	16	14'11"	17'6"	18'10"	20'10"	14'11"	21'0"	25'3"	27'11"
	24	12'2"	15'3"	16'5"	18'2"	10'8"	17'2"	20'10"	24'5"
DL = 10 LL = 50 TL = 60	12	15'8"	17'10"	19'3"	21'3"	15'8"	22'2"	25'9"	28'7"
	16	13'7"	16'3"	17'5"	19'4"	13'4"	19'2"	23'3"	25'11"
	24	10'8"	14'2"	15'3"	16'11"	8'11"	14'5"	19'0"	22'8"
DL = 10 LL = 60 TL = 70	12	14'6"	16'10"	18'1"	20'0"	14'6"	20'6"	24'3"	26'10"
	16	12'7"	15'3"	16'5"	18'2"	11'5"	17'9"	21'7"	24'5"
	24	9'2"	13'4"	14'4"	15'11"	7'7"	12'4"	17'7"	21'4"
DL = 20 LL = 25 TL = 45	12	18'2"	21'2"	22'9"	25'3"	18'2"	25'7"	30'7"	33'10"
	16	15'8"	19'3"	20'8"	22'11"	15'8"	22'2"	26'11"	30'9"
	24	12'10"	16'10"	18'1"	20'0"	11'11"	18'1"	21'11"	26'8"
DL = 20 LL = 40 TL = 60	12	15'8"	19'3"	20'8"	22'11"	15'8"	22'2"	26'11"	30'9"
	16	13'7"	17'6"	18'10"	20'10"	13'4"	19'2"	23'3"	27'11"
	24	10'8"	15'3"	16'5"	18'2"	8'11"	14'5"	19'0"	23'1"
DL = 20 LL = 50 TL = 70	12	14'6"	17'10"	19'3"	21'3"	14'6"	20'6"	24'11"	28'7"
	16	12'7"	16'3"	17'5"	19'4"	11'5"	17'9"	21'7"	25'11"
	24	9'2"	14'2"	15'3"	16'11"	7'7"	12'4"	17'7"	21'4"
DL = 20 LL = 60 TL = 80	12	13'7"	16'10"	18'1"	20'0"	13'4"	19'2"	23'3"	26'10"
	16	11'9"	15'3"	16'5"	18'2"	10'0"	16'3"	20'2"	24'5"
	24	8'0"	13'4"	14'4"	15'11"	6'8"	10'10"	16'5"	20'0"
DL = 20 LL = 100 TL = 120	12	10'8"	14'2"	15'3"	16'11"	8'11"	14'5"	19'0"	22'8"
	16	8'0"	12'10"	13'10"	15'4"	6'8"	10'10"	16'5"	20'0"
	24	5'4"	11'1"	12'1"	13'5"	4'5"	7'2"	10'11"	16'4"

1000EJ SECTION

Design Loads (lb/ft²)	Jst Spc.	Single Span			Two Equal Spans		
		16ga.	14ga.	12ga.	16ga.	14ga.	12ga.
DL = 10 LL = 20 TL = 30	12	29'0"	31'3"	34'8"	34'8"	41'11"	46'6"
	16	26'5"	28'5"	31'6"	30'0"	37'0"	42'3"
	24	23'0"	24'10"	27'6"	24'6"	30'3"	36'11"
DL = 10 LL = 25 TL = 35	12	26'11"	29'0"	32'2"	32'1"	38'11"	43'2"
	16	24'6"	26'4"	29'3"	27'10"	34'3"	39'3"
	24	21'5"	23'0"	25'7"	22'8"	28'0"	34'3"
DL = 10 LL = 40 TL = 50	12	23'0"	24'10"	27'6"	26'10"	33'1"	36'11"
	16	20'11"	22'6"	25'0"	23'3"	28'8"	33'6"
	24	18'3"	19'8"	21'10"	17'4"	23'5"	29'4"
DL = 10 LL = 50 TL = 60	12	21'5"	23'0"	25'7"	24'6"	30'3"	34'3"
	16	19'5"	20'11"	23'3"	21'3"	26'2"	31'2"
	24	17'0"	18'3"	20'3"	14'5"	21'4"	27'1"
DL = 10 LL = 60 TL = 70	12	20'1"	21'8"	24'1"	22'8"	28'0"	32'3"
	16	18'3"	19'8"	21'10"	18'7"	24'3"	29'4"
	24	16'0"	17'2"	19'1"	12'4"	18'9"	25'1"
DL = 20 LL = 25 TL = 45	12	25'4"	27'4"	30'4"	28'4"	34'11"	40'8"
	16	23'0"	24'10"	27'6"	24'6"	30'3"	36'11"
	24	20'0"	21'8"	24'1"	19'3"	24'8"	31'4"
DL = 20 LL = 40 TL = 60	12	23'0"	24'10"	27'6"	24'6"	30'3"	36'11"
	16	20'11"	22'6"	25'0"	21'3"	26'2"	33'3"
	24	17'4"	19'8"	21'10"	14'5"	21'4"	27'1"
DL = 20 LL = 50 TL = 70	12	21'5"	23'0"	25'7"	22'8"	28'0"	34'3"
	16	19'5"	20'11"	23'3"	18'7"	24'3"	30'9"
	24	16'0"	18'3"	20'3"	12'4"	18'9"	25'1"
DL = 20 LL = 60 TL = 80	12	20'1"	21'8"	24'1"	21'3"	26'2"	32'3"
	16	18'3"	19'8"	21'10"	16'3"	22'8"	28'9"
	24	15'0"	17'2"	19'1"	10'10"	16'5"	23'6"
DL = 20 LL = 100 TL = 120	12	17'0"	18'3"	20'3"	14'5"	21'4"	27'1"
	16	15'0"	16'7"	18'5"	10'10"	16'5"	23'6"
	24	12'3"	14'6"	16'1"	7'2"	10'11"	19'2"

1200EJ SECTION

Design Loads (lb/ft²)	Jst Spc.	Single Span			Two Equal Spans		
		16ga.	14ga.	12ga.	16ga.	14ga.	12ga.
DL = 10 LL = 20 TL = 30	12	33'9"	36'4"	40'4"	37'10"	46'7"	54'2"
	16	30'8"	33'0"	36'8"	32'9"	40'4"	49'2"
	24	26'9"	28'10"	32'0"	25'8"	32'11"	42'11"
DL = 10 LL = 25 TL = 35	12	31'4"	33'9"	37'6"	35'0"	43'2"	50'3"
	16	28'5"	30'8"	34'0"	30'4"	37'4"	45'8"
	24	24'9"	26'9"	29'9"	23'0"	30'6"	39'10"
DL = 10 LL = 40 TL = 50	12	26'9"	28'10"	32'0"	29'2"	36'1"	42'11"
	16	24'4"	26'2"	29'1"	23'10"	31'3"	39'0"
	24	20'8"	22'10"	25'5"	17'4"	25'6"	34'0"
DL = 10 LL = 50 TL = 60	12	24'10"	26'9"	29'9"	25'8"	32'11"	39'10"
	16	22'7"	24'4"	27'0"	20'11"	28'6"	35'3"
	24	18'11"	21'3"	23'7"	14'5"	21'10"	31'1"
DL = 10 LL = 60 TL = 70	12	23'5"	25'2"	28'0"	23'0"	30'6"	37'6"
	16	21'3"	22'10"	25'5"	18'7"	26'5"	34'1"
	24	17'6"	20'0"	22'2"	12'4"	18'9"	26'9"
DL = 20 LL = 25 TL = 45	12	29'6"	31'9"	35'3"	30'10"	38'0"	47'5"
	16	26'9"	28'10"	32'0"	25'8"	32'11"	42'11"
	24	21'10"	25'2"	28'0"	19'2"	26'11"	35'11"
DL = 20 LL = 40 TL = 60	12	26'9"	28'10"	32'0"	25'8"	32'11"	42'11"
	16	23'2"	26'2"	29'1"	20'11"	28'6"	38'1"
	24	18'11"	22'10"	25'5"	14'5"	21'10"	31'1"
DL = 20 LL = 50 TL = 70	12	24'9"	26'9"	29'9"	23'0"	30'6"	39'10"
	16	21'5"	24'4"	27'0"	18'7"	26'5"	35'3"
	24	17'6"	21'3"	23'7"	12'4"	18'9"	28'9"
DL = 20 LL = 60 TL = 80	12	23'2"	25'2"	28'0"	20'11"	28'6"	37'6"
	16	20'0"	22'10"	25'5"	16'3"	24'7"	32'11"
	24	16'4"	20'0"	22'2"	10'10"	16'5"	26'11"
DL = 20 LL = 100 TL = 120	12	18'11"	21'3"	23'7"	14'5"	21'10"	31'1"
	16	16'4"	19'3"	21'5"	10'10"	16'5"	26'11"
	24	12'3"	16'5"	18'9"	7'2"	10'11"	21'0"

NOTES:

1. Joist spans based on:
   L/240 deflection limit for DD+LL; L/360 deflection limit for LL.

   Allowable moment — Assuming continuous lateral support of the compression flange provided by properly attached flooring material (i.e. metal deck, plywood, etc.), using $F_y = 50$ksi for 12, 14 and 16 gauge joists and $F_y = 33$ksi for 18 gauge joists.
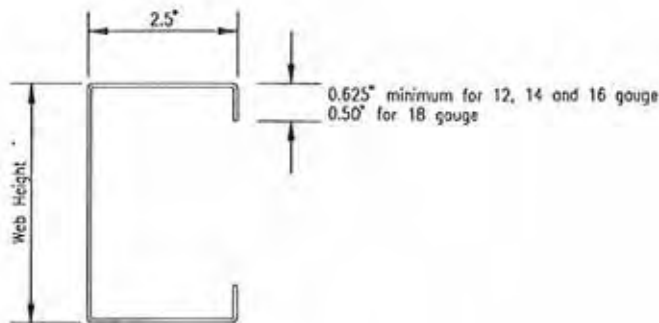
   Combined bending and shear.

   Combined bending and web crippling, using two members back to back, end bearing length of 1in. and interior bearing length of 3.5in. Check end reactions with web crippling tables and interior reactions for combined bending and web crippling to determine if two members back to back are required at support points. (See page 51 for Example calculations.)

   Allowable shear and web crippling values based on unpunched studs.
2. Rim Joist/Track must be installed at the ends of all joists.
3. For special loading or support conditions or if punched joists are used, contact manufacturers technical representative.

0.625" minimum for 12, 14 and 16 gauge
0.50" for 18 gauge

Design Loads (lb/ft²)	Jst Spc.	400MJ Single Span 18ga.	16ga.	14ga.	12ga.	400MJ Two Equal Spans 18ga.	16ga.	14ga.	12ga.	600MJ Single Span 18ga.	16ga.	14ga.	12ga.	600MJ Two Equal Spans 18ga.	16ga.	14ga.	12ga.
DL = 10	12	13'7"	14'9"	15'11"	17'7"	14'7"	19'10"	21'5"	23'7"	18'5"	20'2"	21'9"	24'1"	19'1"	26'7"	29'2"	32'4"
LL = 20	16	12'4"	13'5"	14'6"	16'0"	12'7"	17'7"	19'5"	21'5"	16'6"	18'3"	19'9"	21'11"	16'6"	23'0"	25'10"	29'4"
TL = 30	24	10'4"	11'9"	12'8"	14'0"	10'4"	14'4"	16'1"	18'9"	13'6"	16'0"	17'3"	19'1"	13'6"	18'10"	21'1"	25'8"
DL = 10	12	12'7"	13'9"	14'10"	16'4"	13'6"	18'5"	19'10"	21'11"	17'1"	18'8"	20'2"	22'4"	17'8"	24'7"	27'1"	30'0"
LL = 25	16	11'5"	12'6"	13'5"	14'10"	11'8"	16'3"	18'0"	19'11"	15'4"	17'0"	18'4"	20'4"	15'4"	21'4"	23'11"	27'3"
TL = 35	24	9'6"	10'11"	11'9"	13'0"	9'6"	13'3"	14'11"	17'5"	12'6"	14'10"	16'0"	17'9"	12'6"	17'5"	19'6"	23'10"
DL = 10	12	10'9"	11'9"	12'8"	14'0"	11'3"	15'8"	17'0"	18'9"	14'8"	16'0"	17'3"	19'1"	14'9"	20'7"	23'1"	25'8"
LL = 40	16	9'9"	10'8"	11'6"	12'8"	9'9"	13'7"	15'3"	17'0"	12'10"	14'6"	15'8"	17'4"	12'10"	17'10"	20'0"	23'4"
TL = 50	24	8'0"	9'4"	10'0"	11'1"	8'0"	11'1"	12'5"	14'10"	10'5"	12'8"	13'8"	15'2"	10'5"	14'7"	16'4"	20'4"
DL = 10	12	10'0"	10'11"	11'9"	13'0"	10'4"	14'4"	15'9"	17'5"	13'6"	14'10"	16'0"	17'9"	13'6"	18'10"	21'1"	23'10"
LL = 50	16	8'11"	9'11"	10'8"	11'9"	8'11"	12'5"	13'11"	15'10"	11'8"	13'6"	14'7"	16'1"	11'8"	16'3"	18'3"	21'7"
TL = 60	24	7'3"	8'8"	9'4"	10'3"	7'3"	10'1"	11'4"	13'10"	9'6"	11'9"	12'8"	14'1"	8'11"	13'3"	14'11"	18'11"
DL = 10	12	9'5"	10'3"	11'1"	12'2"	9'6"	13'3"	14'10"	16'4"	12'6"	13'11"	15'1"	16'8"	12'6"	17'5"	19'6"	22'5"
LL = 60	16	8'3"	9'4"	10'0"	11'1"	8'3"	11'6"	12'11"	14'10"	10'10"	12'8"	13'8"	15'2"	10'10"	15'1"	16'11"	20'4"
TL = 70	24	6'9"	8'1"	8'9"	9'8"	6'9"	9'4"	10'6"	13'0"	8'10"	11'1"	11'11"	13'3"	7'7"	12'3"	13'10"	17'9"
DL = 20	12	11'10"	12'11"	13'11"	15'5"	11'11"	16'7"	18'7"	20'8"	15'7"	17'7"	19'0"	21'1"	15'7"	21'9"	24'4"	28'3"
LL = 25	16	10'4"	11'9"	12'8"	14'0"	10'4"	14'4"	16'1"	18'9"	13'6"	16'0"	17'3"	19'1"	13'6"	18'10"	21'1"	25'8"
TL = 45	24	8'5"	10'3"	11'1"	12'2"	8'5"	11'8"	13'1"	16'4"	11'0"	13'11"	15'1"	16'8"	11'0"	15'4"	17'3"	22'5"
DL = 20	12	10'4"	11'9"	12'8"	14'0"	10'4"	14'4"	16'1"	18'9"	13'6"	16'0"	17'3"	19'1"	13'6"	18'10"	21'1"	25'8"
LL = 40	16	8'11"	10'8"	11'6"	12'8"	8'11"	12'5"	13'11"	17'0"	11'8"	14'6"	15'8"	17'4"	11'8"	16'3"	18'3"	23'4"
TL = 60	24	7'3"	9'4"	10'0"	11'1"	7'3"	10'1"	11'4"	14'10"	9'6"	12'8"	13'8"	15'2"	8'11"	13'3"	14'11"	19'7"
DL = 20	12	9'6"	10'11"	11'9"	13'0"	9'6"	13'3"	14'11"	17'5"	12'6"	14'10"	16'0"	17'9"	12'6"	17'5"	19'6"	23'10"
LL = 50	16	8'3"	9'11"	10'8"	11'9"	8'3"	11'6"	12'11"	15'10"	10'10"	13'6"	14'7"	16'1"	10'10"	15'1"	16'11"	21'7"
TL = 70	24	6'9"	8'8"	9'4"	10'3"	6'9"	9'4"	10'6"	13'10"	8'10"	11'9"	12'8"	14'1"	7'7"	12'3"	13'10"	18'1"
DL = 20	12	8'11"	10'3"	11'1"	12'2"	8'11"	12'5"	13'11"	16'4"	11'8"	13'11"	15'1"	16'8"	11'8"	16'3"	18'3"	22'5"
LL = 60	16	7'9"	9'4"	10'0"	11'1"	7'9"	10'9"	12'1"	14'10"	10'1"	12'8"	13'8"	15'2"	10'0"	14'1"	15'10"	20'4"
TL = 80	24	6'3"	8'1"	8'9"	9'8"	6'3"	8'9"	9'10"	13'0"	7'9"	11'1"	11'11"	13'3"	6'8"	10'10"	12'11"	16'11"
DL = 20	12	7'3"	8'8"	9'4"	10'3"	7'3"	10'1"	11'4"	13'10"	9'6"	11'9"	12'8"	14'1"	8'11"	13'3"	14'11"	18'11"
LL = 100	16	6'3"	7'10"	8'5"	9'4"	6'3"	8'9"	9'10"	12'6"	7'9"	10'8"	11'7"	12'9"	6'8"	10'10"	12'11"	16'11"
TL = 120	24	4'11"	6'10"	7'5"	8'2"	4'5"	7'2"	8'0"	10'7"	5'2"	9'4"	10'1"	11'2"	4'5"	7'2"	10'6"	13'10"

NOTES: 1. Joist spans based on:

L/240 deflection limit for DL+LL; L/360 deflection limit for LL

Allowable moment — Assuming continuous lateral support of the compression flange provided by properly attached flooring material (i.e. metal deck, plywood, etc.), using F_y =50ksi for 12, 14 and 16 gauge joists and F_y =33ksi for 18 gauge joists.

Combined bending and shear.

Combined bending and web crippling, using two members back to back, end bearing length of 1in. and interior bearing length of 3.5in. Check end reactions with web crippling tables and interior reactions for combined bending and web crippling to determine if two members back to back are required at support points. (See page 51 for example calculations.)

Allowable shear and web crippling values based on unpunched joists.

2. Rim Joist/Track must be installed at the ends of all joists.

3. For special loading or support conditions or if punched joists are used, contact manufacturers technical representative.

2.5"

0.625" minimum for 12, 14 and 16 gauge
0.50" for 18 gauge

Web Height

800MJ SECTION / 1000MJ SECTION

Design Loads (lb/ft²)	Jst Spc.	800MJ Single Span 18ga.	16ga.	14ga.	12ga.	800MJ Two Equal Spans 18ga.	16ga.	14ga.	12ga.	1000MJ Single Span 16ga.	14ga.	12ga.	1000MJ Two Equal Spans 16ga.	14ga.	12ga.
DL = 10	12	22' 8"	25' 2"	27' 3"	30' 3"	22' 8"	31'10"	36' 6"	40' 6"	30' 2"	32' 6"	36' 2"	35' 4"	42' 0"	48' 5"
LL = 20	16	19' 8"	22'11"	24' 9"	27' 6"	19' 8"	27' 7"	31' 7"	36'10"	27' 5"	29' 6"	32'10"	30' 7"	36' 5"	44' 0"
TL = 30	24	16' 0"	20' 0"	21' 7"	24' 0"	16' 0"	22' 6"	25' 9"	32' 2"	23'11"	25'10"	28' 8"	25' 0"	29' 9"	38' 5"
DL = 10	12	21' 0"	23' 5"	25' 3"	28' 1"	21' 0"	29' 5"	33' 9"	37' 7"	28' 0"	30' 2"	33' 7"	32' 8"	38'11"	45' 0"
LL = 25	16	18' 2"	21' 3"	23' 0"	25' 6"	18' 2"	25' 6"	29' 3"	34' 2"	25' 5"	27' 5"	30' 6"	28' 4"	33' 8"	40'10"
TL = 35	24	14'10"	18' 7"	20' 1"	22' 3"	14'10"	20'10"	23'10"	29'10"	22' 3"	23'11"	26' 7"	23' 1"	27' 6"	35' 8"
DL = 10	12	17' 7"	20' 0"	21' 7"	24' 0"	17' 7"	24' 8"	28' 3"	32' 2"	23'11"	25'10"	28' 8"	27' 4"	32' 7"	38' 5"
LL = 40	16	15' 3"	18' 2"	19' 8"	21' 9"	15' 3"	21' 4"	24' 5"	29' 3"	21' 9"	23' 5"	26' 1"	23' 8"	28' 2"	34'11"
TL = 50	24	12' 5"	15'10"	17' 2"	19' 0"	10' 8"	17' 4"	19'11"	25' 6"	19' 0"	20' 6"	22' 9"	17' 4"	23' 0"	30' 6"
DL = 10	12	16' 0"	18' 7"	20' 1"	22' 3"	16' 0"	22' 6"	25' 9"	29'10"	22' 3"	23'11"	26' 7"	25' 0"	29' 9"	35' 8"
LL = 50	16	13'11"	16'10"	18' 3"	20' 3"	13' 4"	19' 6"	22' 4"	27' 1"	20' 2"	21' 9"	24' 2"	21' 7"	25' 9"	32' 5"
TL = 60	24	10' 8"	14' 9"	15'11"	17' 8"	8'11"	14' 5"	18' 3"	23' 8"	17' 8"	19' 0"	21' 1"	14' 5"	21' 0"	27'11"
DL = 10	12	14'10"	17' 6"	18'10"	20'11"	14'10"	20'10"	23'10"	28' 1"	20'11"	22' 6"	25' 1"	23' 1"	27' 6"	33' 7"
LL = 60	16	12'10"	15'10"	17' 2"	19' 0"	11' 5"	18' 0"	20' 8"	25' 6"	19' 0"	20' 6"	22' 9"	18' 7"	23'10"	30' 6"
TL = 70	24	9' 2"	13'10"	15' 0"	16' 7"	7' 7"	12' 4"	16'10"	22' 1"	16' 4"	17'11"	19'10"	12' 4"	18' 9"	25'10"
DL = 20	12	18' 6"	22' 0"	23' 9"	26' 5"	18' 6"	26' 0"	29' 9"	35' 5"	26' 4"	28' 5"	31' 7"	28'10"	34' 4"	42' 4"
LL = 25	16	16' 0"	20' 0"	21' 7"	24' 0"	16' 0"	22' 6"	25' 9"	32' 2"	23'11"	25'10"	28' 8"	25' 0"	29' 9"	38' 5"
TL = 45	24	13' 1"	17' 6"	18'10"	20'11"	11'11"	18' 4"	21' 0"	27' 6"	20' 4"	22' 6"	25' 1"	19' 3"	24' 3"	32' 3"
DL = 20	12	16' 0"	20' 0"	21' 7"	24' 0"	16' 0"	22' 6"	25' 9"	32' 2"	23'11"	25'10"	28' 8"	25' 0"	29' 9"	38' 5"
LL = 40	16	13'11"	18' 2"	19' 8"	21' 9"	13' 4"	19' 6"	22' 4"	29' 2"	21' 7"	23' 5"	26' 1"	21' 7"	25' 9"	34' 2"
TL = 60	24	10' 8"	15'10"	17' 2"	19' 0"	8'11"	14' 5"	18' 3"	23'10"	17' 8"	20' 6"	22' 9"	14' 5"	21' 0"	27'11"
DL = 20	12	14'10"	18' 7"	20' 1"	22' 3"	14'10"	20'10"	23'10"	29'10"	22' 3"	23'11"	26' 7"	23' 1"	27' 6"	35' 8"
LL = 50	16	12'10"	16'10"	18' 3"	20' 3"	11' 5"	18' 0"	20' 8"	27' 0"	20' 0"	21' 9"	24' 2"	18' 7"	23'10"	31' 8"
TL = 70	24	9' 2"	14' 8"	15'11"	17' 8"	7' 7"	12' 4"	16'10"	22' 1"	16' 4"	19' 0"	21' 1"	12' 4"	18' 9"	25'10"
DL = 20	12	13'11"	17' 6"	18'10"	20'11"	13' 4"	19' 5"	22' 4"	28' 1"	20'11"	22' 6"	25' 1"	21' 7"	25' 9"	33' 7"
LL = 60	16	12' 0"	15'10"	17' 2"	19' 0"	10' 0"	16' 3"	19' 4"	25' 3"	18' 9"	20' 6"	22' 9"	16' 3"	22' 3"	29' 7"
TL = 80	24	8' 0"	13' 9"	15' 0"	16' 7"	6' 8"	10'10"	15' 9"	20' 8"	15' 3"	17'11"	19'10"	10'10"	16' 5"	24' 2"
DL = 20	12	10' 8"	14' 9"	15'11"	17' 8"	8'11"	14' 5"	18' 3"	23' 8"	17' 8"	19' 0"	21' 1"	14' 5"	21' 0"	27'11"
LL = 100	16	8' 0"	13' 4"	14' 5"	16' 0"	6' 8"	10'10"	15' 9"	20' 8"	15' 3"	17' 3"	19' 2"	10'10"	16' 5"	24' 2"
TL = 120	24	5' 4"	11' 3"	12' 7"	14' 0"	4' 5"	7' 2"	10'11"	16'10"	12' 3"	14'10"	16' 9"	7' 2"	10'11"	19' 9"

1200MJ SECTION

Design Loads (lb/ft²)	Jst Spc.	Single Span 16ga.	14ga.	12ga.	Two Equal Spans 16ga.	14ga.	12ga.
DL = 10	12	35' 0"	37' 8"	41'11"	38' 7"	45' 8"	56' 2"
LL = 20	16	31' 9"	34' 3"	38' 1"	33' 5"	39' 6"	51' 1"
TL = 30	24	27' 3"	29'11"	33' 3"	26' 0"	32' 3"	44' 7"
DL = 10	12	32' 6"	35' 0"	38'11"	35' 8"	42' 3"	52' 2"
LL = 25	16	29' 6"	31' 9"	35' 4"	30'11"	36' 7"	47' 5"
TL = 35	24	25' 3"	27' 9"	30'10"	23' 3"	29'10"	41' 5"
DL = 10	12	27' 9"	29'11"	33' 3"	29' 6"	35' 4"	44' 7"
LL = 40	16	25' 3"	27' 2"	30' 3"	24' 1"	30' 7"	40' 6"
TL = 50	24	21' 1"	23' 9"	26' 5"	17' 4"	25' 0"	34'11"
DL = 10	12	25' 9"	27' 9"	30'10"	26' 0"	32' 3"	41' 5"
LL = 50	16	23' 5"	25' 2"	28' 1"	21' 2"	27'11"	37' 7"
TL = 60	24	19' 3"	22' 0"	24' 6"	14' 5"	21'10"	31'10"
DL = 10	12	24' 3"	26' 1"	29' 1"	23' 3"	29'10"	38'11"
LL = 60	16	21'10"	23' 9"	26' 5"	18' 7"	25'10"	35' 5"
TL = 70	24	17'10"	20' 9"	23' 1"	12' 4"	18' 9"	29' 6"
DL = 20	12	30' 7"	32'11"	36' 7"	31' 6"	37' 3"	49' 1"
LL = 25	16	27' 3"	29'11"	33' 3"	26' 0"	32' 3"	44' 7"
TL = 45	24	22' 3"	26' 1"	29' 1"	19' 3"	26' 4"	36' 9"
DL = 20	12	27' 3"	29'11"	33' 3"	26' 0"	32' 3"	44' 7"
LL = 40	16	23' 7"	27' 2"	30' 3"	21' 2"	27'11"	39' 0"
TL = 60	24	19' 3"	22'10"	26' 5"	14' 5"	21'10"	31'10"
DL = 20	12	25' 3"	27' 9"	30'10"	23' 3"	29'10"	41' 5"
LL = 50	16	21'10"	25' 2"	28' 1"	18' 7"	25'10"	36' 1"
TL = 70	24	17'10"	21' 1"	24' 6"	12' 4"	18' 9"	29' 6"
DL = 20	12	23' 7"	26' 1"	29' 1"	21' 2"	27'11"	38'11"
LL = 60	16	20' 5"	23' 9"	26' 5"	16' 3"	24' 2"	33' 9"
TL = 80	24	16' 8"	19' 9"	23' 1"	10'10"	16' 5"	27' 7"
DL = 20	12	19' 3"	22' 0"	24' 6"	14' 5"	21'10"	31'10"
LL = 100	16	16' 8"	19' 9"	22' 3"	10'10"	16' 5"	27' 7"
TL = 120	24	12' 3"	16' 1"	19' 5"	7' 2"	10'11"	21' 0"

NOTES:

1. Joist spans based on:
   L/240 deflection limit for DD+LL; L/360 deflection limit for LL.
   Allowable moment — Assuming continuous lateral support of the compression flange provided by properly attached flooring material (i.e. metal deck, plywood, etc.), using $F_y = 50$ksi for 12, 14 and 16 gauge joists and $F_y = 33$ksi for 18 gauge joists.
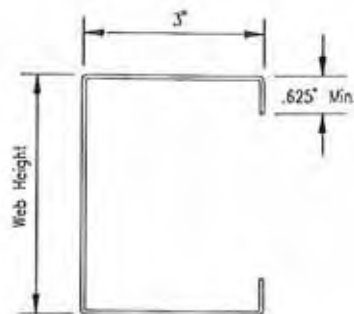   Combined bending and shear.
   Combined bending and web crippling, using two members back to back, end bearing length of 1in. and interior bearing length of 3.5in. Check end reactions with web crippling tables and interior reactions for combined bending and web crippling to determine if two members back to back are required at support points. (See page 51 for Example calculations.)
   Allowable shear and web crippling values based on unpunched studs.
2. Rim Joist/Track must be installed at the ends of all joists.
3. For special loading or support conditions or if punched joists are used, contact manufacturers technical representative.

2.5"

0.625" minimum for 12, 14 and 16 gauge
0.50" for 18 gauge

Web Height

-45-

Design Loads (lb/ft²)	Jst Spc.	400WJ SECTION						600WJ SECTION					
		Single Span			Two Equal Spans			Single Span			Two Equal Spans		
		16ga.	14ga.	12ga.	14ga.	16ga.	12ga.	16ga.	14ga.	12ga.	14ga.	16ga.	12ga.
DL = 10	12	15' 2"	16' 6"	18' 5"	20' 4"	22' 2"	24' 8"	20' 7"	22' 5"	25' 1"	27' 1"	30' 0"	33' 7"
LL = 20	16	13' 9"	15' 0"	16' 9"	17'11"	20' 2"	22' 5"	18' 8"	20' 4"	22' 9"	23' 5"	26'10"	30' 6"
TL = 30	24	12' 0"	13' 1"	14' 7"	14' 7"	16' 9"	19' 7"	16' 4"	17' 9"	19'11"	19' 2"	21'11"	26' 8"
DL = 10	12	14' 1"	15' 4"	17' 1"	18'10"	20' 7"	22'11"	19' 1"	20' 9"	23' 3"	25' 1"	27'10"	31' 2"
LL = 25	16	12' 9"	13'11"	15' 6"	16' 7"	18' 8"	20'10"	17' 4"	18'10"	21' 2"	21' 8"	24'10"	28' 4"
TL = 35	24	11' 2"	12' 2"	13' 7"	13' 6"	15' 6"	18' 2"	15' 2"	16' 6"	18' 5"	17' 9"	20' 3"	24' 9"
DL = 10	12	12' 0"	13' 1"	14' 7"	16' 0"	17' 7"	19' 7"	16' 4"	17' 9"	19'11"	21' 0"	23'10"	26' 8"
LL = 40	16	10'11"	11'11"	13' 3"	13'10"	15'11"	17'10"	14'10"	16' 2"	18' 1"	18' 2"	20' 9"	24' 3"
TL = 50	24	9' 6"	10' 5"	11' 7"	11' 4"	13' 0"	15' 6"	12'11"	14' 1"	15' 9"	14'10"	16'11"	20'10"
DL = 10	12	11' 2"	12' 2"	13' 7"	14' 7"	16' 4"	18' 2"	15' 2"	16' 6"	18' 5"	19' 2"	21'11"	24' 9"
LL = 50	16	10' 2"	11' 1"	12' 4"	12' 8"	14' 6"	16' 6"	13' 9"	15' 0"	16' 9"	16' 7"	19' 0"	22' 6"
TL = 60	24	8'10"	9' 8"	10' 9"	10' 4"	11'10"	14' 5"	12' 0"	13' 1"	14' 8"	13' 6"	15' 6"	19' 0"
DL = 10	12	10' 6"	11' 5"	12' 9"	13' 6"	15' 4"	17' 1"	14' 3"	15' 6"	17' 4"	17' 9"	20' 3"	23' 3"
LL = 60	16	9' 6"	10' 5"	11' 7"	11' 8"	13' 5"	15' 6"	12'11"	14' 1"	15' 9"	15' 4"	17' 7"	21' 2"
TL = 70	24	8' 4"	9' 1"	10' 1"	9' 7"	10'11"	13' 6"	11' 4"	12' 4"	13' 9"	12' 4"	14' 4"	17' 7"
DL = 20	12	13' 3"	14' 5"	16' 1"	16'10"	19' 4"	21' 7"	18' 0"	19' 7"	21'11"	22' 1"	25' 4"	29' 4"
LL = 25	16	12' 0"	13' 1"	14' 7"	14' 7"	16' 9"	19' 7"	16' 4"	17' 9"	19'11"	19' 2"	21'11"	26' 8"
TL = 45	24	10' 6"	11' 5"	12' 9"	11'11"	13' 8"	16'10"	14' 3"	15' 6"	17' 4"	15' 7"	17'10"	21'11"
DL = 20	12	12' 0"	13' 1"	14' 7"	14' 7"	16' 9"	19' 7"	16' 4"	17' 9"	19'11"	19' 2"	21'11"	26' 8"
LL = 40	16	10'11"	11'11"	13' 3"	12' 8"	14' 6"	17'10"	14'10"	16' 2"	18' 1"	16' 7"	19' 0"	23' 3"
TL = 60	24	9' 6"	10' 5"	11' 7"	10' 4"	11'10"	14' 7"	12'11"	14' 1"	15' 9"	13' 6"	15' 6"	19' 0"
DL = 20	12	11' 2"	12' 2"	13' 7"	13' 6"	15' 6"	18' 2"	15' 2"	16' 6"	18' 5"	17' 9"	20' 3"	24' 9"
LL = 50	16	10' 2"	11' 1"	12' 4"	11' 8"	13' 5"	16' 6"	13' 9"	15' 0"	16' 9"	15' 4"	17' 7"	21' 6"
TL = 70	24	8'10"	9' 8"	10' 9"	9' 7"	10'11"	13' 6"	12' 0"	13' 1"	14' 8"	12' 4"	14' 4"	17' 7"
DL = 20	12	10' 6"	11' 5"	12' 9"	12' 8"	14' 6"	17' 1"	14' 3"	15' 6"	17' 4"	16' 7"	19' 0"	23' 3"
LL = 60	16	9' 6"	10' 5"	11' 7"	10'11"	12' 7"	15' 5"	12'11"	14' 1"	15' 9"	14' 4"	16' 5"	20' 2"
TL = 80	24	8' 4"	9' 1"	10' 1"	8'11"	10' 3"	12' 7"	11' 4"	12' 4"	13' 9"	10'10"	13' 5"	16' 5"
DL = 20	12	8'10"	9' 8"	10' 9"	10' 4"	11'10"	14' 5"	12' 0"	13' 1"	14' 8"	13' 6"	15' 6"	19' 0"
LL = 100	16	8' 0"	8' 9"	9' 9"	8'11"	10' 3"	12' 7"	10'11"	11'10"	13' 4"	10'10"	13' 5"	16' 5"
TL = 120	24	7' 0"	7' 8"	8' 6"	7' 2"	8' 4"	10' 3"	9' 6"	10' 4"	11' 7"	7' 2"	10'11"	13' 5"

NOTES: 1. Joist spans based on:

   L/240 deflection limit for DL+LL: L/360 deflection limit for LL
   Allowable moment — Assuming continuous lateral support of the compression flange provided by
   properly attached flooring material (i.e. metal deck, plywood, etc.), using F_y =50ksi for 12, 14 and
   16 gauge joists and F_y =33ksi for 18 gauge joists.
   Combined bending and shear.
   Combined bending and web crippling, using two members back to back, end bearing length of 1in.
   and interior bearing length of 3.5in. Check end reactions with web crippling tables and interior reactions for
   combined bending and web crippling to determine if two members back to back are required at support points.
   (See page 51 for example calculations.)
   Allowable shear and web crippling values based on unpunched joists.
2. Rim Joist/Track must be installed at the ends of all joists.
3. For special loading or support conditions or if punched joists are used, contact manufacturers
   technical representative.

800WJ SECTION

Design Loads (lb/ft²)	Jst Spc.	Single Span 16ga	14ga	12ga	Two Equal Spans 14ga	16ga	12ga
DL = 10, LL = 20, TL = 30	12	25' 9"	27'11"	31' 4"	31'11"	37' 5"	42' 0"
	16	23' 5"	25' 4"	28' 5"	27' 8"	32' 8"	38' 2"
	24	20' 5"	22' 1"	24'10"	22' 7"	26' 8"	32' 8"
DL = 10, LL = 25, TL = 35	12	23'11"	25'11"	29' 1"	29' 7"	34' 9"	39' 0"
	16	21' 8"	23' 6"	26' 5"	25' 7"	30' 3"	35' 5"
	24	18'11"	20' 6"	23' 1"	20'11"	24' 8"	30' 3"
DL = 10, LL = 40, TL = 50	12	20' 5"	22' 1"	24'10"	24' 9"	29' 3"	33' 4"
	16	18' 7"	20' 1"	22' 7"	21' 5"	25' 4"	30' 3"
	24	16' 2"	17' 7"	19' 8"	17' 4"	20' 8"	25' 3"
DL = 10, LL = 50, TL = 60	12	18'11"	20' 6"	23' 1"	22' 7"	26' 8"	30'11"
	16	17' 3"	18' 8"	20'11"	19' 6"	23' 1"	28' 1"
	24	15' 0"	16' 3"	18' 3"	14' 5"	18'10"	23' 1"
DL = 10, LL = 60, TL = 70	12	17'10"	19' 4"	21' 8"	20'11"	24' 8"	29' 1"
	16	16' 2"	17' 7"	19' 8"	18' 1"	21' 5"	26' 2"
	24	14' 2"	15' 4"	17' 2"	12' 4"	17' 5"	21' 4"
DL = 20, LL = 25, TL = 45	12	22' 6"	24' 4"	27' 4"	26' 1"	30'10"	36' 8"
	16	20' 5"	22' 1"	24'10"	22' 7"	26' 8"	32' 8"
	24	17'10"	19' 4"	21' 8"	18' 5"	21' 9"	26' 8"
DL = 20, LL = 40, TL = 60	12	20' 5"	22' 1"	24'10"	22' 7"	26' 8"	32' 8"
	16	18' 7"	20' 1"	22' 7"	19' 6"	23' 1"	28' 5"
	24	15'11"	17' 7"	19' 8"	14' 5"	18'10"	23' 1"
DL = 20, LL = 50, TL = 70	12	18'11"	20' 6"	23' 1"	20'11"	24' 8"	30' 3"
	16	17' 3"	18' 8"	20'11"	18' 1"	21' 5"	26' 2"
	24	14' 9"	16' 3"	18' 3"	12' 4"	17' 5"	21' 4"
DL = 20, LL = 50, TL = 80	12	17'10"	19' 4"	21' 8"	19' 6"	23' 1"	28' 3"
	16	16' 2"	17' 7"	19' 8"	16' 3"	20' 0"	24' 6"
	24	13'10"	15' 4"	17' 2"	10'10"	16' 4"	20' 0"
DL = 20, LL = 100, TL = 120	12	15' 0"	16' 3"	18' 3"	14' 5"	18'10"	23' 1"
	16	13' 8"	14'10"	16' 7"	10'10"	16' 4"	20' 0"
	24	11' 3"	12'11"	14' 6"	7' 2"	10'11"	16' 4"

1000WJ SECTION

Design Loads (lb/ft²)	Jst Spc.	Single Span 16ga	14ga	12ga	Two Equal Spans 14ga	16ga	12ga
DL = 10, LL = 20, TL = 30	12	30' 9"	33' 4"	37' 4"	35' 7"	43' 1"	50' 0"
	16	28' 0"	30' 3"	33'11"	30' 9"	37' 4"	45' 5"
	24	24' 5"	26' 5"	29' 7"	25' 2"	30' 5"	38' 2"
DL = 10, LL = 25, TL = 35	12	28' 7"	30'11"	34' 8"	32'11"	39'11"	46' 5"
	16	26' 0"	28' 1"	31' 6"	28' 6"	34' 6"	42' 2"
	24	22' 8"	24' 7"	27' 6"	23' 3"	28' 2"	35' 4"
DL = 10, LL = 40, TL = 50	12	24' 5"	26' 5"	29' 7"	27' 6"	33' 4"	39' 8"
	16	22' 2"	24' 0"	26'11"	23'10"	28'11"	35' 1"
	24	19' 5"	21' 0"	23' 6"	17' 4"	23' 7"	29' 7"
DL = 10, LL = 50, TL = 60	12	22' 8"	24' 7"	27' 6"	25' 2"	30' 5"	36'10"
	16	20' 7"	22' 4"	25' 0"	21' 6"	26' 4"	33' 0"
	24	17' 9"	19' 6"	21'10"	14' 5"	21' 6"	27' 0"
DL = 10, LL = 60, TL = 70	12	21' 4"	23' 1"	25'10"	23' 3"	28' 2"	34' 8"
	16	19' 5"	21' 0"	23' 6"	18' 7"	24' 5"	30' 7"
	24	16' 5"	18' 4"	20' 6"	12' 4"	18' 9"	25' 0"
DL = 20, LL = 25, TL = 45	12	26'11"	29' 1"	32' 7"	29' 0"	35' 2"	43' 8"
	16	24' 5"	26' 5"	29' 7"	25' 2"	30' 5"	38' 2"
	24	20' 6"	23' 1"	25'10"	19' 3"	24'10"	31' 2"
DL = 20, LL = 40, TL = 60	12	24' 5"	26' 5"	29' 7"	25' 2"	30' 5"	38' 2"
	16	21' 9"	24' 0"	26'11"	21' 6"	26' 4"	33' 0"
	24	17' 9"	21' 0"	23' 6"	14' 5"	21' 6"	27' 0"
DL = 20, LL = 50, TL = 70	12	22' 8"	24' 7"	27' 6"	23' 3"	28' 2"	35' 4"
	16	20' 2"	22' 4"	25' 0"	18' 7"	24' 5"	30' 7"
	24	16' 5"	19' 6"	21'10"	12' 4"	18' 9"	25' 0"
DL = 20, LL = 60, TL = 80	12	21' 4"	23' 1"	25'10"	21' 6"	26' 4"	33' 0"
	16	18'10"	21' 0"	23' 6"	16' 3"	22'10"	28' 7"
	24	15' 4"	18' 4"	20' 6"	10'10"	16' 5"	23' 4"
DL = 20, LL = 100, TL = 120	12	17' 9"	19' 6"	21'10"	14' 5"	21' 6"	27' 0"
	16	15' 4"	17' 8"	19'10"	10'10"	16' 5"	23' 4"
	24	12' 3"	15' 2"	17' 4"	7' 2"	10'11"	19' 1"

1200WJ SECTION

Design Loads (lb/ft²)	Jst Spc.	Single Span 16ga	14ga	12ga	Two Equal Spans 14ga	16ga	12ga
DL = 10, LL = 20, TL = 30	12	35' 8"	38' 8"	43' 2"	38'10"	46'11"	57'11"
	16	32' 5"	35' 2"	39' 5"	33' 8"	40' 7"	52' 7"
	24	27' 6"	30' 8"	34' 3"	26' 1"	33' 2"	43' 6"
DL = 10, LL = 25, TL = 35	12	33' 1"	35'11"	40' 1"	36' 0"	43' 5"	53' 9"
	16	30' 1"	32' 7"	36' 5"	31' 1"	37' 7"	48'10"
	24	25' 5"	28' 6"	31'10"	23' 5"	30' 8"	40' 3"
DL = 10, LL = 40, TL = 50	12	28' 3"	30' 8"	34' 3"	29' 8"	36' 4"	45'11"
	16	25' 8"	27'11"	31' 1"	24' 3"	31' 5"	41' 3"
	24	21' 3"	24' 4"	27' 2"	17' 4"	25' 8"	33' 8"
DL = 10, LL = 50, TL = 60	12	26' 3"	28' 6"	31'10"	26' 1"	33' 2"	42' 8"
	16	23' 9"	25'11"	28'11"	21' 3"	28' 8"	37' 8"
	24	19' 5"	22' 7"	25' 3"	14' 5"	21'10"	30' 9"
DL = 10, LL = 60, TL = 70	12	24' 8"	26'10"	29'11"	23' 5"	30' 8"	40' 1"
	16	22' 0"	24' 4"	27' 2"	18' 7"	26' 7"	34'10"
	24	18' 0"	21' 3"	23' 9"	12' 4"	18' 9"	28' 6"
DL = 20, LL = 25, TL = 45	12	31' 2"	33'10"	37' 8"	31' 9"	38' 3"	50' 3"
	16	27' 6"	30' 8"	34' 3"	26' 1"	33' 2"	43' 6"
	24	22' 5"	26'10"	29'11"	19' 3"	27' 1"	35' 6"
DL = 20, LL = 40, TL = 60	12	27' 6"	30' 8"	34' 3"	26' 1"	33' 2"	43' 6"
	16	23' 9"	27'11"	31' 1"	21' 3"	28' 8"	37' 8"
	24	19' 5"	23' 5"	27' 2"	14' 5"	21'10"	30' 9"
DL = 20, LL = 50, TL = 70	12	25' 5"	28' 6"	31'10"	23' 5"	30' 8"	40' 3"
	16	22' 0"	25'11"	28'11"	18' 7"	26' 7"	34'10"
	24	18' 0"	21' 8"	25' 3"	12' 4"	18' 9"	28' 6"
DL = 20, LL = 60, TL = 80	12	23' 9"	26'10"	29'11"	21' 3"	28' 6"	37' 8"
	16	20' 7"	24' 4"	27' 2"	16' 3"	24' 7"	32' 7"
	24	16'10"	20' 3"	23' 9"	10'10"	16' 5"	26' 7"
DL = 20, LL = 100, TL = 120	12	19' 5"	22' 7"	25' 3"	14' 5"	21'10"	30' 9"
	16	16'10"	20' 3"	22'11"	10'10"	16' 5"	26' 7"
	24	12' 3"	16' 7"	20' 0"	7' 2"	10'11"	21' 0"

NOTES:

1. Joist spans based on:

   L/240 deflection limit for DD+LL; L/360 deflection limit for LL.

   Allowable moment — Assuming continuous lateral support of the compression flange provided by properly attached flooring material (i.e. metal deck, plywood, etc.), using F_y=50ksi for 12, 14 and 16 gauge joists and F_y=33ksi for 18 gauge joists.

   Combined bending and shear.

   Combined bending and web crippling, using two members back to back, end bearing length of 1in. and interior bearing length of 3.5in. Check end reactions with web crippling tables and interior reactions for combined bending and web crippling to determine if two members back to back are required at support points. (See page 51 for Example calculations.)

   Allowable shear and web crippling values based on unpunched studs.

2. Rim Joist/Track must be installed at the ends of all joists.

3. For special loading or support conditions or if punched joists are used, contact manufacturers technical representative.

(Section diagram: Web Height, 3" flange width, .625" Min.)

Allowable Concentrated Loads (lbs)

Web Ht.	Ga.	Condition 1 Bearing Length 1"	3.5"	4"	6"	Condition 2 Bearing Length 3.5"	4"	6"	Condition 3 Bearing Length 1"	3.5"	4"	6"	Condition 4 Bearing Length 3.5"	4"	6"
158	20	224	388	425	576	582	632	831	162	252	270	343	473	480	512
	18	352	540	588	780	851	916	1175	256	372	395	488	797	807	849
	16	732	1019	1101	1431	1665	1778	2231	533	733	773	933	1735	1754	1827
	14	1202	1571	1645	2078	2554	2648	3186	878	1148	1202	1417	2815	2839	2935
250	20	213	368	404	547	561	609	800	151	236	253	320	433	440	469
	18	339	520	566	751	828	891	1142	243	353	376	464	747	757	796
	16	710	988	1068	1388	1629	1739	2182	513	705	744	898	1651	1668	1739
	14	1173	1534	1607	2030	2510	2602	3131	851	1113	1165	1375	2708	2731	2824
350	20	200	346	379	514	536	582	765	139	217	232	295	387	394	419
	18	324	497	541	717	801	861	1105	229	333	353	436	691	700	736
	16	685	954	1031	1340	1587	1695	2126	489	673	710	857	1555	1571	1637
	14	1141	1492	1563	1974	2460	2550	3068	821	1074	1124	1326	2586	2608	2697
358	20	198	343	376	510	533	579	761	137	214	230	291	382	388	413
	18	322	494	537	713	797	858	1100	227	330	351	433	684	693	728
	16	682	949	1026	1333	1582	1689	2119	486	669	705	851	1543	1559	1625
	14	1137	1487	1557	1967	2453	2543	3060	817	1069	1119	1320	2571	2593	2681
400	20	194	334	367	497	524	569	748	133	207	222	282	365	371	395
	18	316	485	528	700	787	847	1086	222	322	342	423	662	671	706
	16	673	936	1012	1315	1566	1672	2098	478	657	693	836	1506	1522	1586
	14	1125	1471	1540	1946	2435	2523	3036	806	1054	1103	1302	2525	2546	2633
	12	2095	2564	2658	3033	4543	4669	5173	1517	1856	1924	2196	5181	5213	5340
600	20	168	290	318	431	475	516	678	108	169	181	230	274	278	296
	18	286	438	477	633	733	789	1012	193	281	298	368	549	556	585
	16	623	867	937	1218	1482	1583	1986	431	592	625	754	1314	1328	1384
	14	1061	1387	1452	1835	2334	2419	2910	746	975	1021	1204	2281	2300	2379
	12	2014	2465	2555	2916	4414	4537	5027	1441	1763	1828	2086	4851	4880	4999
800	20	142	245	269	364	426	462	608	84	131	141	179	183	186	198
	18	255	391	426	565	679	730	937	164	239	254	314	436	442	464
	16	573	798	862	1120	1399	1494	1874	384	528	557	672	1121	1133	1181
	14	997	1303	1364	1724	2232	2314	2784	685	896	938	1107	2037	2054	2124
	12	1933	2366	2452	2798	4286	4405	4880	1365	1670	1731	1976	4520	4548	4658
1000	16	523	728	787	1023	1315	1405	1762	337	464	489	590	929	939	978
	14	932	1219	1276	1613	2131	2209	2658	625	817	855	1009	1793	1808	1870
	12	1852	2267	2350	2681	4157	4272	4733	1289	1577	1635	1866	4189	4215	4318
1200	16	473	659	712	926	1232	1315	1650	290	399	421	508	736	744	775
	14	868	1135	1188	1502	2030	2105	2532	564	738	773	912	1549	1562	1615
	12	1771	2168	2247	2564	4028	4140	4587	1213	1484	1538	1756	3859	3882	3977

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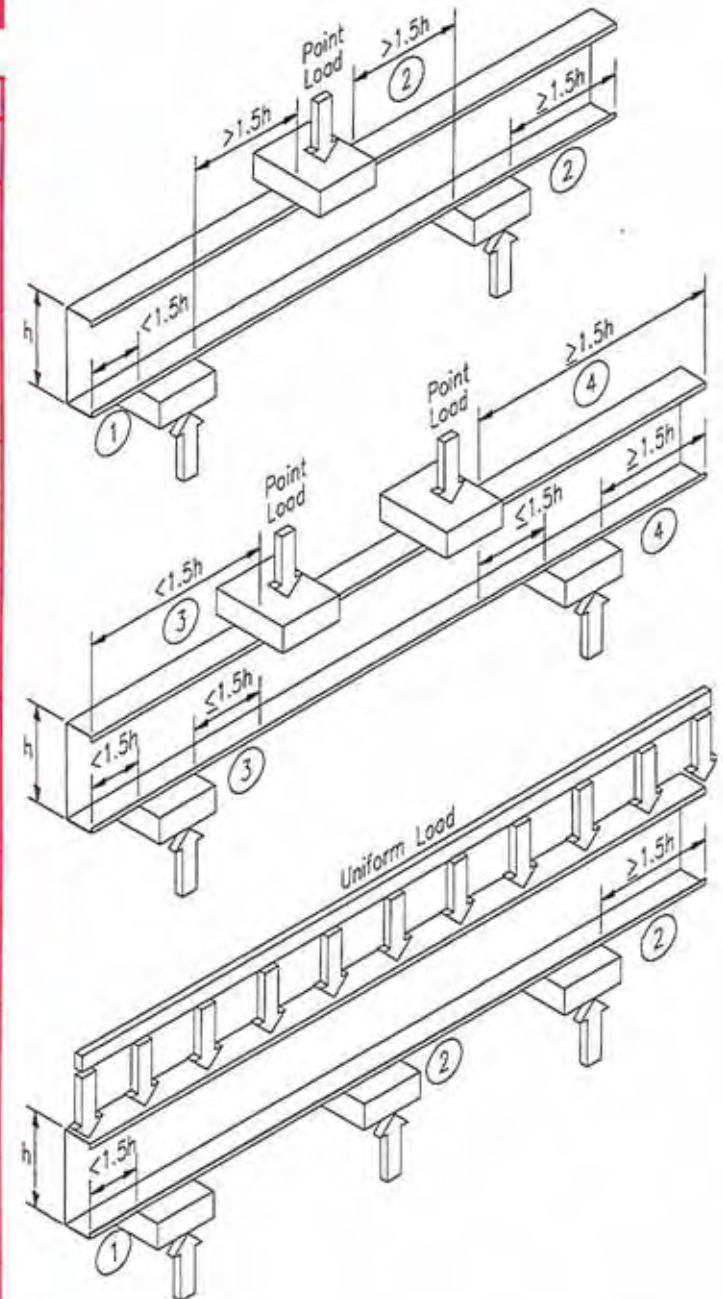
Allowable Concentrated Loads (lbs)

Web Ht.	Ga.	Condition 1				Condition 2			Condition 3				Condition 4		
		Bearing Length				Bearing Length			Bearing Length				Bearing Length		
		1"	3.5"	4"	6"	3.5"	4"	6"	1"	3.5"	4"	6"	3.5"	4"	6"
158	20	350	473	491	554	848	888	1028	242	327	340	383	839	879	1018
	18	556	736	763	856	1341	1402	1614	418	553	573	643	1335	1396	1607
	16	1263	1644	1701	1897	2170	2264	2593	673	876	907	1011	2004	2092	2396
	14	1916	2451	2530	2806	3284	3421	3897	1107	1416	1461	1621	3055	3183	3626
250	20	361	488	506	572	848	888	1028	234	317	329	371	839	879	1017
	18	570	755	782	877	1341	1402	1614	408	540	560	628	1335	1396	1607
	16	1289	1677	1735	1935	2170	2264	2593	661	860	890	992	2004	2092	2396
	14	1947	2490	2571	2851	3284	3421	3897	1090	1395	1440	1597	3055	3183	3626
350	20	374	505	524	592	848	888	1028	226	305	317	358	803	841	973
	18	586	776	804	902	1341	1402	1614	397	525	544	611	1326	1386	1595
	16	1317	1715	1774	1979	2170	2264	2593	646	841	870	971	2004	2092	2396
	14	1982	2535	2617	2902	3284	3421	3897	1072	1371	1415	1570	3055	3183	3626
358	20	375	507	527	595	848	888	1028	225	303	315	356	798	836	968
	18	588	778	806	905	1341	1402	1614	395	523	542	608	1320	1380	1588
	16	1321	1719	1778	1984	2170	2264	2593	645	839	868	968	2004	2092	2396
	14	1986	2540	2623	2909	3284	3421	3897	1069	1368	1412	1566	3055	3183	3626
400	20	380	514	533	602	848	888	1028	221	299	311	351	784	822	951
	18	594	786	815	914	1341	1402	1614	391	518	536	602	1303	1362	1568
	16	1332	1733	1793	2000	2170	2264	2593	639	832	860	960	2004	2092	2396
	14	1999	2557	2640	2928	3284	3421	3897	1062	1359	1403	1556	3055	3183	3626
	12	3769	4699	4837	5316	6321	6565	7416	2376	2962	3049	3351	5960	6191	6993
600	20	398	537	558	630	848	888	1028	204	276	286	323	712	745	863
	18	625	828	858	963	1341	1402	1614	368	488	505	567	1214	1269	1461
	16	1390	1808	1871	2087	2170	2264	2593	610	794	822	916	1901	1984	2272
	14	2069	2647	2732	3030	3284	3421	3897	1025	1311	1353	1501	2996	3120	3555
	12	3864	4817	4958	5450	6321	6565	7416	2318	2890	2975	3270	5960	6191	6993
800	20	398	537	558	630	848	888	1028	187	252	262	296	639	669	774
	18	642	850	881	988	1341	1402	1614	346	458	474	532	1125	1176	1354
	16	1447	1884	1948	2174	2170	2264	2593	581	757	783	873	1795	1873	2145
	14	2139	2736	2825	3133	3284	3421	3897	987	1263	1304	1446	2867	2986	3402
	12	3958	4935	5079	5583	6321	6565	7416	2261	2819	2901	3189	5902	6130	6925
1000	16	1470	1913	1979	2208	2170	2264	2593	552	719	744	830	1688	1762	2018
	14	2209	2826	2917	3235	3284	3421	3897	950	1215	1255	1391	2738	2852	3249
	12	4053	5052	5201	5717	6321	6565	7416	2204	2747	2828	3108	5726	5947	6718
1200	16	1470	1913	1979	2208	2170	2264	2593	524	682	705	786	1582	1651	1891
	14	2245	2871	2964	3288	3284	3421	3897	913	1167	1205	1337	2609	2718	3096
	12	4148	5170	5322	5850	6321	6565	7416	2146	2676	2754	3027	5549	5764	6511

NOTES:

1. Allowable loads based on $F_y = 50$ksi for 12, 14 and 16 gauge, $F_y = 33$ksi for 18 and 20 gauge.
2. For multple web sections, the distance between the web connector and the flange shall be kept to a minimum.

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SECTION	No. Of Spans	3 p.s.f. Compression Flange Unsupported Joist Spacing			10 p.s.f. Lateral Support Of Compression Flange											
					Unsupported Joist Spacing			At Midspan Joist Spacing			*At Third Points Joist Spacing		
		12in	16in	24in	12in	16in	24in	12in	16in	24in	12in	16in	24in
158IC20	1	10' 1"	9' 2"	8' 0"	6' 9"	6' 1"	5' 4"	6' 9"	6' 1"	5' 4"	6' 9"	6' 1"	5' 4"
	2	13' 6"	12' 4"	10' 9"	9' 1"	8' 3"	7' 2"	9' 1"	8' 3"	7' 2"	9' 1"	8' 3"	7' 2"
250IC20	1	11' 8"	10' 9"	9' 7"	8' 4"	7' 9"	6'11"	9' 5"	8' 6"	7' 5"	9' 5"	8' 6"	7' 5"
	2	16' 4"	15' 0"	13' 3"	11' 6"	10' 7"	9' 5"	12' 7"	11' 5"	10' 0"	12' 7"	11' 5"	10' 0"
350IC20	1	12' 8"	11' 8"	10' 6"	9' 1"	8' 5"	7' 7"	12' 2"	11' 1"	9' 8"	12' 2"	11' 1"	9' 8"
	2	17' 6"	16' 1"	14' 4"	12' 5"	11' 6"	10' 3"	16' 4"	14'10"	13' 0"	16' 4"	14'10"	13' 0"
358IC20	1	12'10"	11'10"	10' 7"	9' 3"	8' 6"	7' 8"	12' 6"	11' 4"	9'11"	12' 6"	11' 4"	9'11"
	2	17' 8"	16' 3"	14' 6"	12' 7"	11' 7"	10' 5"	16'10"	15' 3"	13' 4"	16'10"	15' 3"	13' 4"
400IC20	1	13' 1"	12' 1"	10'10"	9' 6"	8' 9"	7'11"	13' 2"	12' 3"	10' 9"	13' 6"	12' 3"	10' 9"
	2	18' 1"	16' 8"	14'10"	12'10"	11'11"	10' 8"	17' 9"	16' 5"	14' 3"	18' 2"	16' 6"	14' 3"
158SC20	1	10' 3"	9' 3"	8' 1"	5'10"	6' 2"	5' 5"	6'10"	6' 2"	5' 5"	6'10"	6' 2"	5' 5"
	2	13' 8"	12' 5"	10'10"	9' 2"	8' 4"	7' 3"	9' 2"	8' 4"	7' 3"	9' 2"	8' 4"	7' 3"
250SC20	1	12' 0"	11' 1"	9'11"	8' 7"	7'11"	7' 1"	9' 6"	8' 7"	7' 6"	9' 6"	8' 7"	7' 6"
	2	16' 9"	15' 5"	13' 8"	11' 9"	10'10"	9' 8"	12' 9"	11' 7"	10' 0"	12' 9"	11' 7"	10' 0"
350SC20	1	13' 0"	12' 0"	10' 9"	9' 5"	8' 8"	7'10"	12' 4"	11' 2"	9' 9"	12' 4"	11' 2"	9' 9"
	2	18' 0"	16' 7"	14' 9"	12' 9"	11'10"	10' 7"	16' 6"	15' 0"	12' 6"	16' 6"	15' 0"	12' 6"
358SC20	1	13' 2"	12' 2"	10'11"	9' 6"	8' 9"	7'11"	12' 8"	11' 6"	10' 0"	12' 8"	11' 6"	10' 0"
	2	18' 2"	16' 8"	14'11"	12'11"	11'11"	10' 8"	17' 0"	15' 5"	12' 9"	17' 0"	15' 5"	12' 9"
400SC20	1	13' 6"	12' 6"	11' 2"	9' 9"	9' 0"	8' 1"	13' 7"	12' 5"	10'10"	13' 8"	12' 5"	10'10"
	2	18' 7"	17' 1"	15' 3"	13' 3"	12' 3"	11' 0"	18' 3"	16' 8"	13' 8"	18' 4"	16' 8"	13' 8"
158CC20	1	10' 4"	9' 5"	8' 2"	6'11"	6' 3"	5' 6"	6'11"	6' 3"	5' 6"	6'11"	6' 3"	5' 6"
	2	13'11"	12' 7"	11' 0"	9' 3"	8' 5"	7' 4"	9' 3"	8' 5"	7' 4"	9' 3"	8' 5"	7' 4"
250CC20	1	12' 4"	11' 4"	10' 2"	8'10"	8' 2"	7' 4"	9' 7"	8' 9"	7' 7"	9' 7"	8' 9"	7' 7"
	2	17' 2"	15' 9"	14' 0"	12' 1"	11' 2"	9'11"	12'10"	11' 8"	10' 2"	12'10"	11' 8"	10' 2"
350CC20	1	13' 4"	12' 4"	11' 1"	9' 8"	8'11"	8' 0"	12' 5"	11' 3"	9'10"	12' 5"	11' 3"	9'10"
	2	18' 5"	17' 0"	15' 1"	13' 1"	12' 1"	10'10"	16' 8"	15' 2"	12' 8"	16' 8"	15' 2"	12' 8"
358CC20	1	13' 6"	12' 6"	11' 2"	9' 9"	9' 0"	8' 1"	12' 9"	11' 7"	10' 2"	12' 9"	11' 7"	10' 2"
	2	18' 7"	17' 1"	15' 3"	13' 3"	12' 3"	10'11"	17' 2"	15' 7"	12'11"	17' 2"	15' 7"	12'11"
400CC20	1	13'10"	12' 9"	11' 6"	10' 0"	9' 3"	8' 4"	13'10"	12' 6"	10'11"	13'10"	12' 6"	10'11"
	2	19' 0"	17' 6"	15' 8"	13' 7"	12' 7"	11' 3"	18' 6"	16'10"	13'10"	18' 6"	16'10"	13'10"

IC SECTION   SC SECTION   CC SECTION

NOTES: 1. One (1) span indicates a single, Two (2) indicates two equal spans with a joist continuous over center support.
2. Lateral support of compression flange may be achieved with approved, attached covering or mechanical bracing. (See below and page 52 for typical mechanical bracing configurations.)
3. Spans based on a deflection limit of L/360.
4. *Values also applicable for continuous support of the compression flange provided by properly attached sheathing material.

Bridging – Secure To Wall

Fasten To Wall Studs

Ceiling Framing Members

Gypsum Ceiling
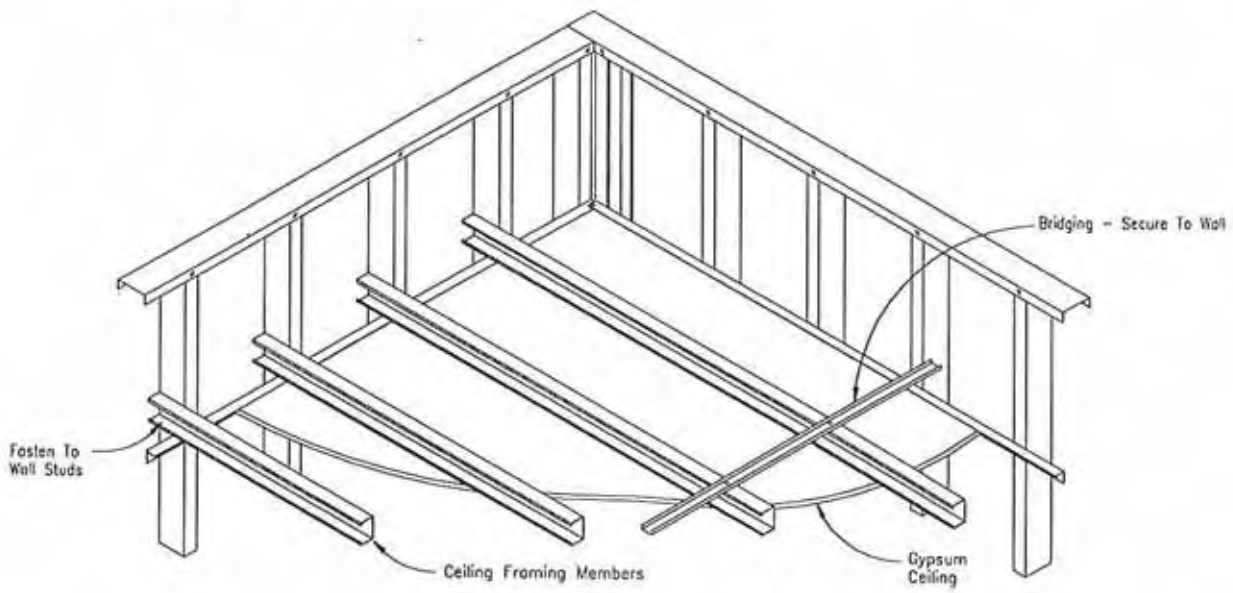
JOIST SPAN - REACTION FORMULAS

End Reactions

Single Span $= \dfrac{\text{T.L.(psf)} \times \text{Span Length(ft)} \times \text{Joist Spacing(in)}}{24}$

Two Equal Spans $= \dfrac{\text{T.L.(psf)} \times \text{Span Length(ft)} \times \text{Joist Spacing(in)}}{32}$

Interior Reactions

Two Equal Spans $= \dfrac{\text{T.L.(psf)} \times \text{Span Length(ft)} \times \text{Joist Spacing(in)}}{9.6}$

Moment @ Support
Two Equal Spans $= \dfrac{\text{T.L.(psf)} \times \text{Span Length(ft)}^2 \times \text{Joist Spacing(in)}}{96}$
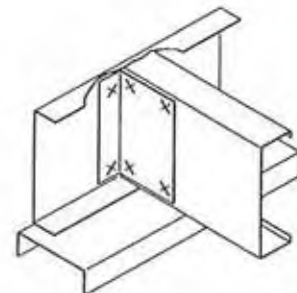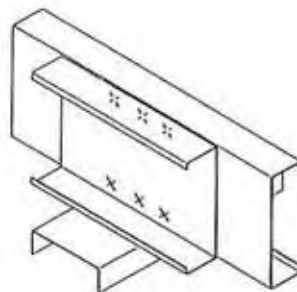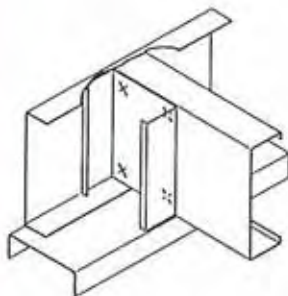
JOIST WEB STIFFENERS

JOIST SPAN EXAMPLE - WEB CRIPPLING

800EJ16 @ 16" O.C., Two Equal Spans
1" End Bearing, 6" Interior Bearing
Loading: 10 psf DL + 40 psf LL = 50 psf TL
Allowable Span = 21'-0" (21.00') (See Page 43)

CHECK END SUPPORT End Reaction $= \dfrac{(50 \text{ psf})(21.00\text{ft})(16" \text{ O.C.})}{32} = 525$ lb

Allowable End Reaction = 573 lb > 525 lb ∴ Web Stiffener NOT Req'd At End Support
(See Page 48, Condition ①)

CHECK INT. SUPPORT Interior Reaction, $P = \dfrac{(50 \text{ psf})(21.00\text{ft})(16" \text{ O.C.})}{9.60} = 1750$ lb

Moment, $M = \dfrac{(50 \text{ psf})(21.00\text{ft})^2 (16" \text{ O.C.})}{96} = 3675$ ft-lb

Allowable Int. Reaction, $P_a = 1874$ lb (See Page 48, Condition ②)
Allowable Moment, $M_a = 3695$ ft-lb (See Page 14)

1st. Check: $P = 1750$ lb $< P_a = 1874$ lb o.k.

2nd. Check $1.2\left(\dfrac{P}{P_a}\right) + \dfrac{M}{M_a} \leq 1.5$

$1.2\left(\dfrac{1750}{1874}\right) + \dfrac{3675}{3695} = 1.12 + 0.99 = 2.11 > 1.5$

∴ Web Stiffeners Req'd At Interior Supports
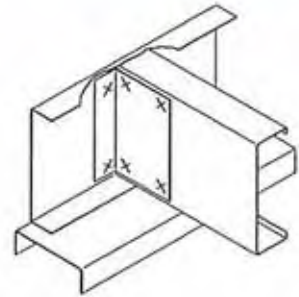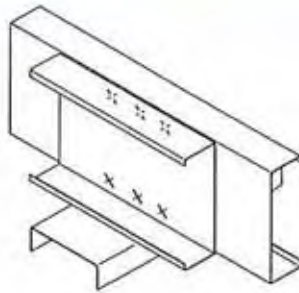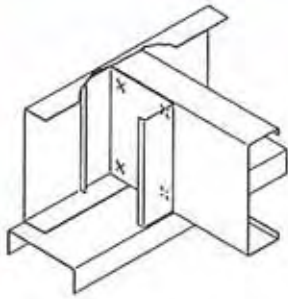
JOIST WEB STIFFENERS
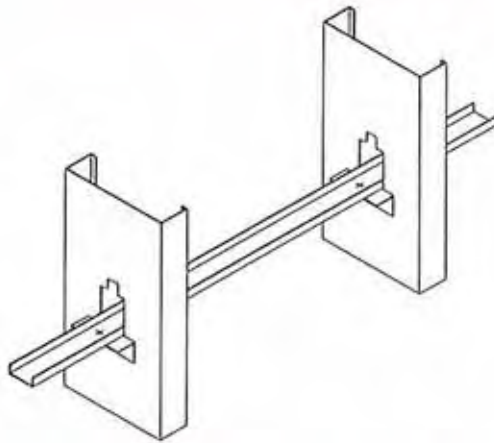
COLD ROLLED LATERAL BRACING

WALL STUD WEB STIFFENER

—Track Blocking—
Size & Ga. To Match
Studs, Place As Req'd
And At Each End
Of Wall

Framed Wall

Finish Surface

Flat Strap

Strap On Side With Sheathing
Req'd Only In Axial Load—Bearing
Applications
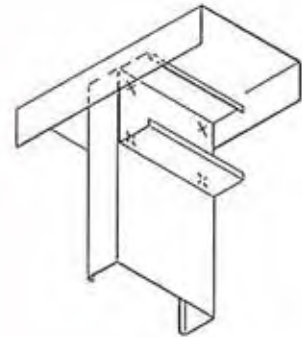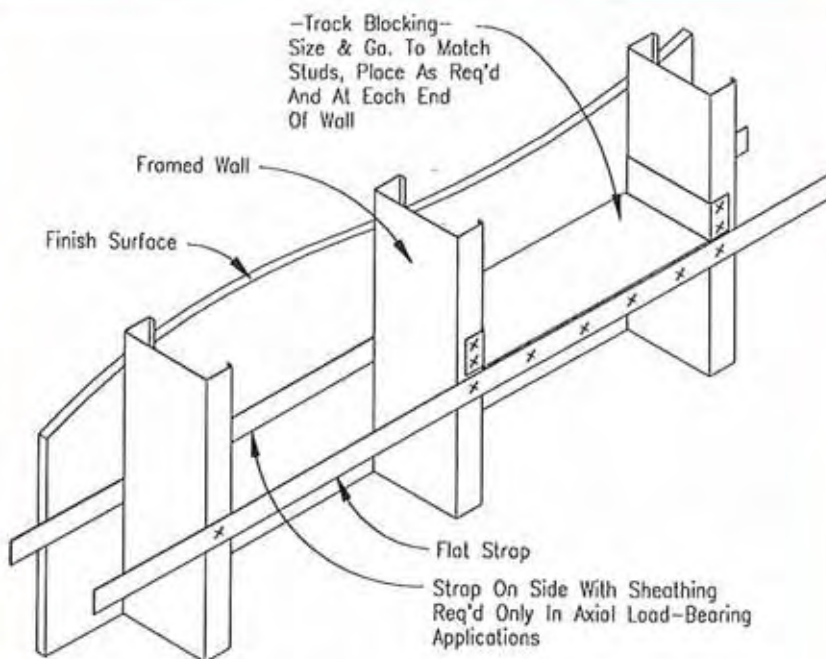
FLAT STRAP LATERAL BRACING
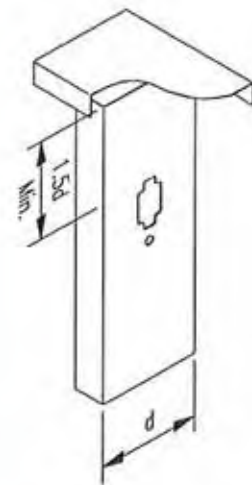
PUNCHOUT LOCATION
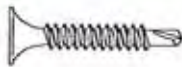
BUGLE HEAD - SELF DRILLING

For drywall attachment to metal studs and joists. Also used for attaching cabinets through gypsum board and insulation board.
Metal thickness — 20, 18 16 and 14 gauge.
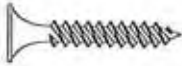
BUGLE HEAD

For drywall attachment to metal studs and joists. Also used for attaching cabinets through gypsum board and insulation board.
Metal thickness — 25 and 20 gauge.
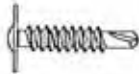
WAFER HEAD - SELF DRILLING

For metal to metal framing connections when drywall, plywood and other similar wall materials are used on metal studs and joists.
Metal thickness — 20, 18, 16 and 14 gauge.
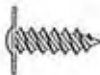
WAFER HEAD

For metal to metal framing connections when drywall, plywood and other similar wall materials are used on metal studs and joists.
Metal thickness — 25 and 20 gauge.
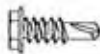
HEX HEAD - SELF DRILLING

For attaching steel deck, backup plates, door frames, lathers channel to metal framing and structural connections.
Metal thickness — 20, 18, 16 and 14 gauge.

PAN HEAD - SELF DRILLING

For attaching steel deck, backup plates, door frames, lathers channel to metal framing and structural connections.
Metal thickness — 18, 16 and 14 gauge.

Screw Size / Section Gauge	No. 12 (d=0.209")		No. 10 (d=0.183")		No. 8 (d=0.161")		No. 6 (d=0.135")	
	Shear	Pullout	Shear	Pullout	Shear	Pullout	Shear	Pullout
25	74	50	69	44	65	39	60	32
20	185	92	173	81	163	71	149	60
18	276	120	258	105	242	93	222	78
16	387	151	363	132	341	116	N/A	N/A
14	548	190	513	166	N/A	N/A	N/A	N/A
Min. Edge Dist. And O.C. Spacing	11/16"		9/16"		1/2"		1/2"	

Notes:
1. All values based on connected parts having a minimum yield stress, F_y=33 ksi and a minimum ultimate stress, F_u=45 ksi.
2. When connecting materials of different gauge thickness, use loads shown for the lighter gauge.
3. Applied shear loads may be multiplied by 0.75 for wind or earthquake loads per AISI A4.4.
4. For screws in tension, the head of the screw, or washer if provided, shall have a minimum diameter of 5/16 inch.

Section Gauge	Weld Size (in)	Fy (ksi)	Fu (ksi)	Allowable Load (lb/in)
18	0.0451	33	45	304
16	0.0566	33	45	382
14	0.0713	33	45	481
16	0.0566	50	65	509
14	0.0713	50	65	642
12	0.1017	50	65	915

Notes:
1. F_y = The minimum yield stress of the connected parts
   F_u = The minimum tensile strength of the connected parts
2. When connecting materials of different thicknesses or tensile strengths, use the lower of the tabulated loads.
3. Welds may be positioned so they are subject to either shear or tensile stress.
4. Applied loads may be multiplied by 0.75 for wind or seismic loads per AISI A4.4.
5. Weld values are based on Section E2 of the AISI Code and AWS D1.3.
6. Weld values are for E60XX electrodes.
7. Weld values are 50% stress values. Twice the tabulated values may be used if special inspection per U.B.C. Section 306 is provided.

IN STONE AGGREGATE CONCRETE [1,2,3]

Shank Dia.	Minimum Penetration	Type Of Loading	Allowable Load Concrete Strength (psi)		
			2000	3000	4000
0.138"	1 1/8"	Shear	–	150	200
		Pullout	–	125	180
0.145"	1 7/32"	Shear	235/226[4]	220	205
		Pullout	115	140	165

Notes:
1. Minimum fastener spacing: 4" O.C.; Minimum Edge Dist. 3"
2. Values may NOT be increased for wind or seismic loads
3. Listed values per Hilti/ICBO Report No. 2388
4. Lower value applies to L.V.F.'s in 20ga steel only and is controlled by allowable bearing stress
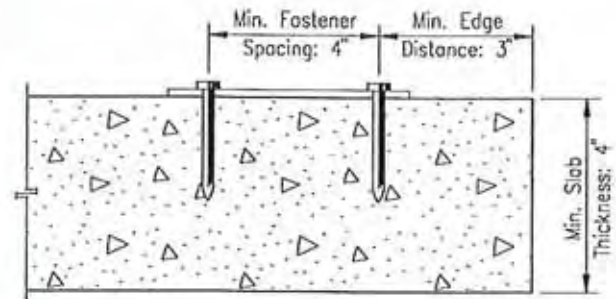
IN STRUCTURAL STEEL [1,2,3]

Section Gauge	Fy (ksi)	Type Of Loading	Shank Diameter					
			0.145"			0.177"		
			Structural Steel Thickness					
			1/4"	3/8"	1/2"	1/4"	3/8"	1/2"
20	33	Shear	226	226	226	276	276	276
		Pullout	210	210	210	305[5]	305[5]	305[5]
18	33	Shear	294	294	294	359	359	359
		Pullout	210	210	210	335	395	395
16	33	Shear	369	369	369	451	451	451
		Pullout	210	210	210	335	395	395
14	33	Shear	465	465	465	568	568	568
		Pullout	210	210	210	335	395	395
16	50	Shear	530[4]	530[4]	530[4]	651	651	651
		Pullout	210	210	210	335	395	395
14	50	Shear	530[4]	530[4]	530[4]	790[4]	810[4]	810[4]
		Pullout	210	210	210	335	395	395
12	50	Shear	530[4]	530[4]	530[4]	790[4]	810[4]	810[4]
		Pullout	120	210	210	335	395	395
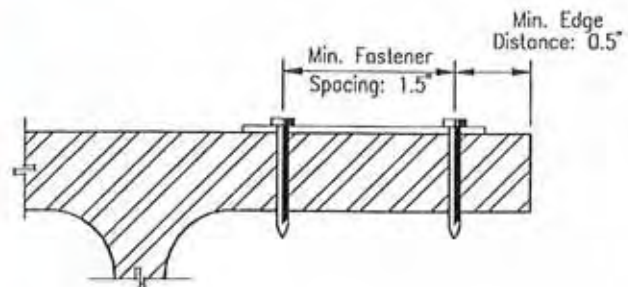
Notes:
1. Full diameter of shank must be driven to penetrate structural steel member
2. Minimum fastener spacing: 1.5" O.C.; Minimum edge distance: 0.5"
3. Values may NOT be increased for wind or seismic loads
4. Noted shear values based on Hilti/ICBO Report No. 2388. All other shear values based on allowable bearing capacity of the gauge steel
5. Noted pullout values based on pull-over of the gauge steel. All other pullout values based on Hilti/ICBO Report No. 2388.

STUD AND/OR JOIST SYSTEMS

PART 1 - GENERAL

1.1 Description

A. Work included: Provide metal studs and/or joists and accessories as indicated on the Drawings, as specified herein, and as needed for a complete and proper installation.

1.2 Quality Assurance

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. In addition to complying with the pertinent codes and regulations of governmental agencies having jurisdiction, comply with pertinent recommendations contained in "Specifications for Metal Lathing and Furring" published by the Metal Lath/Steel Framing Association.

1.3 Submittals

A. Product data: Within ____ calendar days after the Contractor has received the Owner's "Notice to Proceed", submit:

1. Materials list of items proposed to be provided under this section.
2. Manufactures' product information and other data needed to prove compliance with the specified requirements.
3. Manufactures' recommended installation procedures which, when approved by the Architect, will become the basis for accepting or rejecting actual installation procedures used on the Work.

PART 2 - PRODUCTS

2.1 Metal Studs, Joist, and Accessories

A. Galvanized steel must meet the minimum requirements of ASTM A446 Grade D (Fy=50ksi) for 12 gauge, ASTM A446 Grade D (Fy=50ksi) or ASTM A446 Grade A (Fy=33ksi) for 14 and 16 gauge, and ASTM A446 Grade A (Fy=33ksi) for 18 gauge and lighter for the item and use intended. Galvanized coatings must meet the ASTM A525 Specification.

B. Carbon sheet steel must meet the minimum requirements of ASTM A570 Grade 50 ksi for 12 gauge, ASTM A570 Grade 50 ksi or Grade 33 ksi for 14 and 16 gauge and Grade 33 ksi for 18 gauge and lighter members. Carbon sheet steel products must be thoroughly coated with a rust inhibitive paint.

C. All structural members shall be designed in accordance with American Iron and Steel Institute (AISI) "Specification for the Design of Cold-Formed Steel Structural Members" 1986 edition, with 1989 amendments.

D. Metal studs and/or joists:

1. For metal stud walls, unless otherwise shown on the Drawings, provide standard punched steel members of the gauges shown on the Drawings.
2. Use only one type throughout the Work, unless otherwise shown on the Drawings or specifically approved in advance by the Architect.

E. Accessories: Provide all accessories including, but not necessarily limited to, tracks, clips, web stiffeners, anchors, fastening devices, resilient clips, and other accessories required for a complete and proper installation, and as recommended by the manufacturer for the steel members used.

F. Fastening of components shall be with self-drilling screws or welding. Screws or welds shall be of sufficient size to insure the strength of the connection. All welds of galvanized steel shall be touched up with a zinc-rich paint. All welds of carbon sheet steel shall be touched-up with paint.

2.2 Grout

A. Provide a good grade of commercial grout for leveling the floor runner member of steel stud partitions as required.

PART 3 - EXECUTION

3.1 Surface Conditions

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.2 Installation

A. Runners shall be securely anchored to the supporting structure as shown on the Drawings.
B. Abutting lengths of runner shall each be securely anchored to a common structural element, butt-welded, or spliced.
C. Studs shall be plumbed, aligned and securely attached to flanges of both upper and lower runners, except that in the case of interior, non-load bearing walls, studs need not be attached to upper or lower runners.
D. Jack studs or cripples shall be installed below window sills, above window and door heads, and elsewhere to furnish supports, and shall be securely attached to connecting members.
E. Lateral bracing shall be provided by use of gypsum board and gypsum sheathing or by horizontal straps or cold-rolled channels. Bracing shall conform to Section D3 of the AISI Specification.
F. Provisions for structure vertical movement shall be provided where indicated on the Drawings.
G. Handling and lifting of prefabricated panels shall be done in a manner so as not to cause distortion in any member.

3.3 Erection (axial load-bearing)

A. Runners shall be securely anchored to the supporting structure as shown on the Drawings.
B. Complete, uniform and level bearing support shall be provided for the bottom runner.
C. Abutting lengths of runner shall each be securely anchored to a common structural element, butt-welded or spliced.
D. Studs shall be plumbed, aligned and tightly nested in both upper and lower runners with secure attachment to the flanges of each runner.
E. Framing of wall openings shall include headers and supporting studs as shown on the Drawings.
F. Temporary bracing, where required, shall be provided until erection is completed.
G. Resistance to minor-axis bending and rotation shall be provided by gypsum board and gypsum sheathing or other approved materials designed in accordance with Section D3 of AISI Specification.
H. Diagonally braced stud walls, as indicated on the Drawings shall be provided at locations designated as "shear walls" for frame stability and lateral load resistance. Additional studs, when necessary, shall be positioned as indicated on the Drawings to resist the vertical components.
I. Splices in axially loaded studs shall not be permitted.

3.4 Erection (joists)

A. Uniform and level joist bearing shall be provided at foundation walls by means of shims and/or non-setting grout.
B. Joists shall be located directly over bearing studs or a load distribution member shall be provided at the top of the bearing wall.
C. Web stiffeners shall be provided at reaction points and/or at points of concentrated loads where indicated on the Drawings.
D. Joist bridging shall be provided where indicated on the Drawings.
E. Additional joists shall be provided under parallel partitions when the partition length exceeds one-half the joist span, also around all floor and roof openings which interrupt one or more spanning members unless otherwise noted.
F. End blocking shall be provided where joist ends are not otherwise restrained from rotation.

AMERICAN STUDCO
PHOENIX, AZ.
(800) 877-8823

ANGELES METAL SYSTEMS
Commerce, CA
(213) 268-1777

CALIFORNIA METAL SYSTEMS, INC.
WESTMINSTER, CA.
(714) 895-3545

CONSOLIDATED FABRICATORS CORP.
PARAMOUNT, CA.
(213) 586-4525

DESIGN SHAPES IN STEEL
SOUTH EL MONTE, CA.
(818) 579-2032

KIRII (U.S.A.) INC. DBA
(STUDCO OF HAWAII, INC.)
HONOLULU, HI.
(808) 845-9311

KNORR STEEL FRAMING SYSTEMS
SALEM, OR.
(800) 547-7840

SCAFCO CORPORTATION
SPOKANE, WA
(509) 535-1571

UNITED CONSTRUCTION SUPPLY
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WESTERN METAL LATH
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