HOLLOW STRUCTURAL SECTIONS

Beam Load Tables

Steel Tube Institute
OF NORTH AMERICA

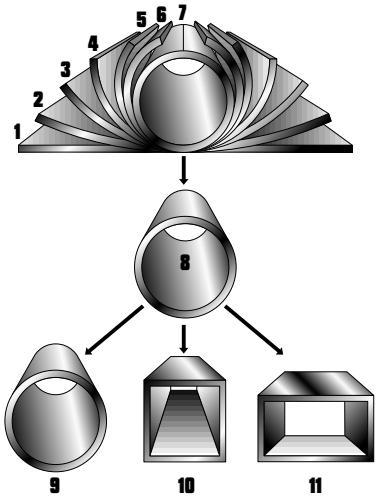
1998 REVISED EDITION

HSS Manufacturing Methods

The transformation of steel strip into hollow structural sections (HSS) is the result of operations including forming, welding and sizing. Currently three methods are being used in North America for the manufacture of HSS. These methods, including two ERW methods and an SAW method, are described below. Both ERW methods meet ASTM A 500 and CSA G-40.21 requirements for the manufacture of HSS, and the ERW sizes included in this publication may be produced to either standard. The SAW method is not included as a manufacturing process in the ASTM or CSA specification. SAW sizes listed in this publication can be specified to meet desired physical and dimensional criteria of ASTM A500 and CSA G-40.21

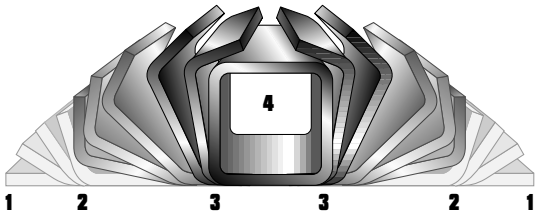
Electric Resistance Welding (ERW) Process

In the tube mill, flat steel strip (1) is formed continuously around its longitudinal axis to produce a round tube. This is done by moving the strip through a progressive set of rolls (2-6). The strip edges (7) are heated by either high frequency induction or contact welding and then forged together by weld rolls to create a continuous longitudinal weld without the addition of filler metal. The weld seam (8) is then cooled and processed through a set of sizing/shaping rolls which cold-form it into a round (9), square (10) or rectangular (11) section.



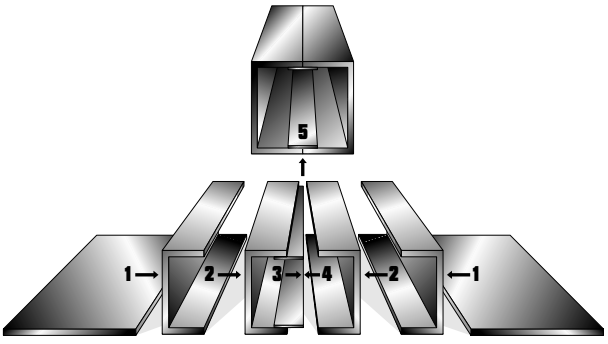
Form-Square Weld-Square (ERW) Process

In the weld mill, driven forming dies progressively shape the flat strip (1) by forming the top two corners (2) of the square or rectangular tube in the initial forming station. Subsequent stations form the bottom two corners (3) of the shape. No cold working of the sides of the shape is performed, and the shape's seam is welded by high-frequency contacts when the tube is near its final shape and size. The welded tube (4) is cooled and then driven through a series of sizing stations which qualifies the tube's final dimensions.



Submerged Arc Weld (SAW) Process

Two identical pieces of flat strip (1) are placed in a press brake and formed into two identical halves (2) of a finished tube size. A backup bar is tack welded to each leg of one of the half-sections (3). The two half-sections are fitted together toe-to-toe (4) and welded by the submerged arc process to complete the square or rectangular section (5).



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(800) 325-4467
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Columbia Structural Tubing
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IPSCO Tubulars Inc.
P.O. Box 18, 2011 7th Avenue
Camanche, IA 52730
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Maruichi American Corp.
P.O. Box 3187
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Please Note:
We've tried to make this brochure as comprehensive and factual as possible. However, some information may have been updated since the time of printing. Your HSS producer is your best source for up-to-date information.

Steel Tube Institute
OF NORTH AMERICA

Foreword

Tables of allowable uniformly distributed loads are presented for rectangular and square hollow structural sections (HSS) manufactured by the electric resistance welding (ERW) and the submerged arc welding (SAW) processes. Tables of maximum unbraced compression flange lengths and tables of midspan deflections for uniformly loaded simple span beams are also included.

The tables of allowable uniformly distributed loads have been calculated in accordance with the 1989 "Specification for Structural Steel Buildings - Allowable Stress Design and Plastic Design" published by the American Institute of Steel Construction. The allowable uniformly distributed loads are based upon section property data for HSS that were recalculated in 1996 to account for today's more precise manufacturing methods. The recalculated section property data for HSS are published in "Hollow Structural Sections - Dimensions and Section Properties" available from the Steel Tube Institute of North America.

Tables are presented for two specified minimum yield stress steels - F_y = 46 ksi and F_y = 50 ksi. Allowable uniform loads for HSS sizes produced by the ERW and SAW manufacturing methods are presented in separate tables.

The allowable uniformly distributed loads are based upon the allowable bending stress, F_b, equal to $0.66F_y$ and $0.60F_y$. The allowable uniformly distributed loads for slender sections are calculated in accordance with AISC "Specification" Appendix B. Slender sections are indicated in the tables with an asterisk (*) immediately following the design wall thickness parameter and a double asterisk (**) immediately following the modified value of S_x.

The tabulated loads include the weight of the HSS beam which must be deducted to determine the net load that the beam will support. It is assumed that the load is applied in the plane of the minor axis and that the HSS beam deflects vertically in the plane of bending only.

Deflections corresponding to the tabulated loads are also given. Deflections caused by actual loading less than the full allowable load may be obtained by multiplying the tabulated deflection by the ratio of the actual load to the tabulated allowable uniform load.

Tabulated values of maximum laterally unsupported lengths, L_c, of compression flanges of HSS beams from 1 1/4 inches through 32 inches in width and for varying ratios of M_1/M_2 are presented for F_y = 46 ksi and F_y = 50 ksi specified minimum yield stress steels - see page xx and page xx. The L_c values are calculated in accordance with AISC "Specification" Sections B5 and F3 which specify that the laterally unsupported length of the compression flange of an HSS beam for which the allowable bending stress may be taken at $0.66F_y$ shall not exceed the value

$$\left(1950+1200\,\frac{M_1}{M_2}\right)\frac{b}{F_y}$$

except that it need not be less than $1200(b/F_y)$.

Refer to Part 2, Beam and Girder Design, in the AISC 9th edition "Manual of Steel Construction" for a discussion of lateral support of beams, beams with concentrated loads and vertical deflection. Symbols used in these tables follow those used in the AISC "Manual"

Tables of deflections for fully stressed, uniformly loaded simple beams from 1 1/4 inches through 32 inches in depth and for varying span lengths are also included. These tables are presented for allowable bending stresses equal to 33 ksi (0.66 x 50 ksi), 30.0 ksi (0.60 x 50 ksi) and 27.6 ksi (0.60 x 46 ksi) - see pages xx - yy. Deflections for allowable bending stress equal to 30.36 ksi (0.60 x 46 ksi) can be obtained by adding approximately 1 % to the deflection values presented in the table for allowable bending stress equal to 30.0 ksi.

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How To Use The Beam Load Tables

Example I

A simply supported 8 in. x 4 in. x 1/4 in. ERW HSS beam of F_y = 46 ksi (ASTM A500 Gr. B) spans 16 feet. The compression flange is braced laterally at 3 feet from each end. Determine the total uniform load capacity and midspan deflection for loading in the plane of the minor axis.

Due to symmetry, $M_1/M_2 = -1.0$ for the 10 ft. center segment of the HSS beam. Enter the F_y = 46 ksi Table of L_c values for $M_1/M_2 = -1.0$ and a flange width equal to 4 inches, and note that L_c = 8.7 ft. < 10.0 ft.; therefore $F_b = 0.60\ F_y$ = 27.6 ksi. Enter the F_y = 46 ksi Load Table for the 8 in. x 4 in. x 1/4 in. HSS. Read across the row at the span equal to 16 feet and note that the total allowable uniform load is 12 kips (in the shaded area) with a corresponding midspan deflection equal to 0.91 in.

Example II

A simply supported 10 in. x 6 in. x 1/4 in. ERW HSS beam of F_y = 50 ksi (ASTM A500 Gr. C) spans 18 feet. The compression flange is braced laterally at the ends. Determine the total uniform load capacity and midspan deflection for loading in the plane of the minor axis.

Due to symmetry, $M_1/M_2 = 0$ for the simply supported HSS beam. Enter the F_y = 50 ksi Table of L_c values for $M_1/M_2 = 0$ and a flange width equal to 6 inches, and note that L_c = 19.5 ft. > 16.0 ft.; therefore $F_b = 0.66F_y$ = 33.0 ksi. Enter the F_y = 50 ksi Load Table for the 10 in. x 6 in. x 1/4 in. HSS. Read across the row at the span equal to 18 feet and note that the total allowable uniform load is 24 kips (in the unshaded area) with a corresponding midspan deflection equal to 1.11 in.

Example III

Select the lightest 7-inch deep, simply supported ERW HSS beam of F_y = 50 ksi (ASTM A500 Gr. C) to span 6 feet and support a load of 5.3 kips per foot (includes estimated weight of HSS beam). The beam is laterally supported for its entire length.

Required total uniform load to be supported is equal to 31.8 kips (5.3 kips/ft. x 6 ft.)

Enter the Fy = 50 ksi Load Table for the 7-inch deep HSS. Read across the rows at the span equal to 6 ft. and note the following:

7 in. x 5 in. x 1/4 in. HSS (19.02 lbs./ft.) can support 37 kips > 31.8 kips - O.K.
7 in. x 5 in. x 3/16 in. HSS (14.53 lbs./ft.) can support 29 kips < 31.8 kips - No Good

7 in. x 4 in. x 1/4 in. HSS (17.32 lbs./ft.) can support 32 kips > 31.8 kips - O.K.
7 in. x 4 in. x 3/16 in. HSS (13.25 lbs./ft.) can support 25 kips < 31.8 kips - No Good

7 in. x 3 in. x 3/8 in. HSS (22.37 lbs./ft.) can support 36 kips > 31.8 kips - O.K.
7 in. x 3 in. x 5/16 in. HSS (19.08 lbs./ft.) can support 31 kips < 31.8 kips - No Good

Select: 7 in. x 4 in. x 1/4 in. HSS (weight = 17.32 lbs./ft.)

Example IV

A simply supported 10 in. x 6 in. x 1/4 in. ERW HSS beam of Fy = 50 ksi (ASTM A500 Gr. C) spans 18 feet and supports a uniformly distributed load of 500 pounds /ft. (Total DL + LL). The compression flange is braced laterally at the ends. Determine the midspan deflection for the applied loading.

Total load supported = 500 pounds/ft. x 18 ft. = 9. kips

Total allowable uniform load equals 24 kips; corresponding midspan deflection equals 1.11 in. (see Example II).

Deflection due to applied loading: = 1.11 in. x $\frac{9\ \text{kips}}{24\ \text{kips}}$ = 0.42 in.

HSS Beam Load Tables/Structural Steel Tubing

L_c

Maximum unbraced length of compression flange, in feet, for which allowable bending stress, F_b, may be taken at 0.66 F_y.

F_y= 46 ksi

M_1/M_2	Flange Width, Inches																												
	1 1/4	1 1/2	1 5/8	1 3/4	2	2 1/4	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	12	14	16	18	20	22	24	26	28	30	32
+1.0	7.1	8.6	9.3	10.0	11.4	12.8	14.3	17.1	20.0	22.8	25.7	28.5	31.4	34.2	39.9	45.7	51.4	57.1	68.5	79.9	91.3								
+0.9	6.9	8.2	8.9	9.6	11.0	12.4	13.7	16.5	19.2	22.0	24.7	27.4	30.2	32.9	38.4	43.9	49.4	54.9	65.9	76.8	87.8	98.8							
+0.8	6.6	7.9	8.6	9.2	10.5	11.9	13.2	15.8	18.5	21.1	23.7	26.4	29.0	31.6	36.9	42.2	47.4	52.7	63.3	73.8	84.3	94.9							
+0.7	6.3	7.6	8.2	8.8	10.1	11.4	12.6	15.2	17.7	20.2	22.7	25.3	27.8	30.3	35.4	40.4	45.5	50.5	60.7	70.8	80.9	91.0							
+0.6	6.0	7.3	7.9	8.5	9.7	10.9	12.1	14.5	16.9	19.3	21.8	24.2	26.6	29.0	33.9	38.7	43.5	48.4	58.0	67.7	77.4	87.1	96.7						
+0.5	5.8	6.9	7.5	8.1	9.2	10.4	11.5	13.9	16.2	18.5	20.8	23.1	25.4	27.7	32.3	37.0	41.6	46.2	55.4	64.7	73.9	83.2	92.4						
+0.4	5.5	6.6	7.2	7.7	8.8	9.9	11.0	13.2	15.4	17.6	19.8	22.0	24.2	26.4	30.8	35.2	39.6	44.0	52.8	61.6	70.4	79.2	88.0	96.8					
+0.3	5.2	6.3	6.8	7.3	8.4	9.4	10.5	12.6	14.6	16.7	18.8	20.9	23.0	25.1	29.3	33.5	37.7	41.8	50.2	58.6	67.0	75.3	83.7	92.1					
+0.2	5.0	6.0	6.4	6.9	7.9	8.9	9.9	11.9	13.9	15.9	17.9	19.8	21.8	23.8	27.8	31.7	35.7	39.7	47.6	55.5	63.5	71.4	79.3	87.3	95.2				
+0.1	4.7	5.6	6.1	6.6	7.5	8.4	9.4	11.3	13.1	15.0	16.9	18.8	20.6	22.5	26.3	30.0	33.8	37.5	45.0	52.5	60.0	67.5	75.0	82.5	90.0	97.5			
0.0	4.4	5.3	5.7	6.2	7.1	7.9	8.8	10.6	12.4	14.1	15.9	17.7	19.4	21.2	24.7	28.3	31.8	35.3	42.4	49.5	56.5	63.6	70.7	77.7	84.8	91.8	98.9		
−0.1	4.1	5.0	5.4	5.8	6.6	7.5	8.3	9.9	11.6	13.3	14.9	16.6	18.2	19.9	23.2	26.5	29.8	33.2	39.8	46.4	53.0	59.7	66.3	72.9	79.6	86.2	92.8	99.5	
−0.2	3.9	4.6	5.0	5.4	6.2	7.0	7.7	9.3	10.8	12.4	13.9	15.5	17.0	18.6	21.7	24.8	27.9	31.0	37.2	43.4	49.6	55.8	62.0	68.2	74.3	80.5	86.7	92.9	99.1
−0.3	3.6	4.3	4.7	5.0	5.8	6.5	7.2	8.6	10.1	11.5	13.0	14.4	15.8	17.3	20.2	23.0	25.9	28.8	34.6	40.3	46.1	51.8	57.6	63.4	69.1	74.9	80.7	86.4	92.2
−0.4	3.3	4.0	4.3	4.7	5.3	6.0	6.7	8.0	9.3	10.7	12.0	13.3	14.6	16.0	18.6	21.3	24.0	26.6	32.0	37.3	42.6	47.9	53.3	58.6	63.9	69.2	74.6	79.9	85.2
−0.5	3.1	3.7	4.0	4.3	4.9	5.5	6.1	7.3	8.6	9.8	11.0	12.2	13.5	14.7	17.1	19.6	22.0	24.5	29.3	34.2	39.1	44.0	48.9	53.8	58.7	63.6	68.5	73.4	78.3
−0.6	2.8	3.3	3.6	3.9	4.5	5.0	5.6	6.7	7.8	8.9	10.0	11.1	12.3	13.4	15.6	17.8	20.1	22.3	26.7	31.2	35.7	40.1	44.6	49.0	53.5	57.9	62.4	66.8	71.3
−0.625 to −1.0	2.7	3.3	3.5	3.8	4.3	4.9	5.4	6.5	7.6	8.7	9.8	10.9	12.0	13.0	15.2	17.4	19.6	21.7	26.1	30.4	34.8	39.1	43.5	47.8	52.2	56.5	60.9	65.2	69.6

F_y= 50 ksi

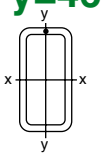
M_1/M_2	Flange Width, Inches																												
	1 1/4	1 1/2	1 5/8	1 3/4	2	2 1/4	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	12	14	16	18	20	22	24	26	28	30	32
+1.0	6.6	7.9	8.5	9.2	10.5	11.8	13.1	15.8	18.4	21.0	23.6	26.3	28.9	31.5	36.8	42.0	47.3	52.5	63.0	73.5	84.0	94.5							
+0.9	6.3	7.6	8.2	8.8	10.1	11.4	12.6	15.2	17.7	20.2	22.7	25.3	27.8	30.3	35.4	40.4	45.5	50.5	60.6	70.7	80.8	90.9							
+0.8	6.1	7.3	7.9	8.5	9.7	10.9	12.1	14.6	17.0	19.4	21.8	24.3	26.7	29.1	34.0	38.8	43.6	48.5	58.2	67.9	77.6	87.3	97.0						
+0.7	5.8	7.0	7.6	8.1	9.3	10.5	11.6	14.0	16.3	18.6	20.9	23.3	25.6	27.9	32.6	37.2	41.9	46.5	55.8	65.1	74.4	83.7	93.0						
+0.6	5.6	6.7	7.2	7.8	8.9	10.0	11.1	13.4	15.6	17.8	20.0	22.3	24.5	26.7	31.2	35.6	40.1	44.5	53.4	62.3	71.2	80.1	89.0	97.9					
+0.5	5.3	6.4	6.9	7.4	8.5	9.6	10.6	12.8	14.9	17.0	19.1	21.3	23.4	25.5	29.8	34.0	38.3	42.5	51.0	59.5	68.0	76.5	85.0	93.5					
+0.4	5.1	6.1	6.6	7.1	8.1	9.1	10.1	12.2	14.2	16.2	18.2	20.3	22.3	24.3	28.4	32.4	36.5	40.5	48.6	56.7	64.8	72.9	81.0	89.1	97.2				
+0.3	4.8	5.8	6.3	6.7	7.7	8.7	9.6	11.6	13.5	15.4	17.3	19.3	21.2	23.1	27.0	30.8	34.6	38.5	46.2	53.9	61.6	69.3	77.0	84.7	92.4				
+0.2	4.6	5.5	5.9	6.4	7.3	8.2	9.1	11.0	12.8	14.6	16.4	18.3	20.1	21.9	25.6	29.2	32.9	36.5	43.8	51.1	58.4	65.7	73.0	80.3	87.6	94.9			
+0.1	4.3	5.2	5.6	6.0	6.9	7.8	8.6	10.4	12.1	13.8	15.5	17.3	19.0	20.7	24.2	27.6	31.1	34.5	41.4	48.3	55.2	62.1	69.0	75.9	82.8	89.7	96.6		
0.0	4.1	4.9	5.3	5.7	6.5	7.3	8.1	9.8	11.4	13.0	14.6	16.3	17.9	19.5	22.8	26.0	29.3	32.5	39.0	45.5	52.0	58.5	65.0	71.5	78.0	84.5	91.0	97.5	
−0.1	3.8	4.6	5.0	5.3	6.1	6.9	7.6	9.2	10.7	12.2	13.7	15.3	16.8	18.3	21.4	24.4	27.5	30.5	36.6	42.7	48.8	54.9	61.0	67.1	73.2	79.3	85.4	91.5	97.6
−0.2	3.6	4.3	4.6	5.0	5.7	6.4	7.1	8.6	10.0	11.4	12.8	14.3	15.7	17.1	19.9	22.8	25.7	28.5	34.2	39.9	45.6	51.3	57.0	62.7	68.4	74.1	79.8	85.5	91.2
−0.3	3.3	4.0	4.3	4.6	5.3	6.0	6.6	8.0	9.3	10.6	11.9	13.3	14.6	15.9	18.6	21.2	23.9	26.5	31.8	37.1	42.4	47.7	53.0	58.3	63.6	68.9	74.2	79.5	84.8
−0.4	3.1	3.7	4.0	4.3	4.9	5.5	6.1	7.4	8.6	9.8	11.0	12.3	13.5	14.7	17.2	19.6	22.1	24.5	29.4	34.3	39.2	44.1	49.0	53.9	58.8	63.7	68.6	73.5	78.4
−0.5	2.8	3.4	3.7	3.9	4.5	5.1	5.6	6.8	7.9	9.0	10.1	11.3	12.4	13.5	15.8	18.0	20.3	22.5	27.0	31.5	36.0	40.5	45.0	49.5	54.0	58.5	63.0	67.5	72.0
−0.6	2.6	3.1	3.3	3.6	4.1	4.6	5.1	6.2	7.2	8.2	9.2	10.3	11.3	12.3	14.4	16.4	18.4	20.5	24.6	28.7	32.8	36.9	41.0	45.1	49.2	53.3	57.4	61.5	65.6
−0.625 to −1.0	2.5	3.0	3.3	3.5	4.0	4.5	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	14.0	16.0	18.0	20.0	24.0	28.0	32.0	36.0	40.0	44.0	48.0	52.0	56.0	60.0	64.0

Note: M_1/M_2 is the ratio of the smaller to larger bending moment at the ends of that portion of the member unbraced in the plane of bending under consideration. M_1/M_2 is positive when the member is bent in reverse curvature and negative when bent in single curvature.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		20 x 12						Nominal Size		20 x 8				
Wall Thickness		1/2	Δ Inches	3/8	Δ Inches	5/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	5/16	Δ Inches
Weight Per Foot		103.30		78.52		65.87		Weight Per Foot		110.36	89.68	68.31	57.36	
Design Wall Thickness		0.465		0.349		0.291*		Design Wall Thickness		0.581	0.465	0.349	0.291	
Span in Feet	4	684	0.03	514	0.02	428	0.02	Span in Feet	4	729	602	469	398	0.03
	5	627	0.04	442	0.04	362	0.03		5	583	482	375	318	0.04
	6	523	0.06	368	0.05	302	0.05		6	486	401	312	265	0.06
	7	448	0.08	315	0.07	259	0.07		7	416	344	268	227	0.08
	8	392	0.10	276	0.09	226	0.09		8	364	301	234	199	0.10
	9	349	0.13	245	0.12	201	0.11		9	324	268	208	177	0.13
	10	314	0.16	221	0.14	181	0.14		10	291	241	187	159	0.16
	11	285	0.19	201	0.17	165	0.17		11	265	219	170	145	0.19
	12	261	0.23	184	0.21	151	0.20		12	243	201	156	133	0.23
	13	241	0.27	170	0.24	139	0.24		13	224	185	144	122	0.27
	14	224	0.31	158	0.28	129	0.27		14	208	172	134	114	0.31
	15	209	0.35	147	0.32	121	0.31		15	194	161	125	106	0.35
	16	196	0.40	138	0.37	113	0.36		16	182	151	117	99	0.40
	17	185	0.45	130	0.41	107	0.40		17	171	142	110	94	0.45
	18	174	0.51	123	0.46	101	0.45		18	162	134	104	88	0.51
	19	165	0.57	116	0.52	95	0.50			147	122	95	80	0.46
	20	157	0.63	110	0.57	91	0.56		20	146	120	94	80	0.63
	21	149	0.69	105	0.63	86	0.61			132	109	85	72	0.57
	22	143	0.76	100	0.69	82	0.67		22	132	109	85	72	0.76
	23	136	0.83	96	0.76	79	0.74			120	100	77	66	0.69
	24	131	0.90	92	0.82	75	0.80		24	121	100	78	66	0.90
	26	121	1.06	85	0.97	70	0.94			110	91	71	60	0.82
	28	112	1.23	–	–	–	–		26	112	93	72	61	1.06
		102	1.12	79	1.12	65	1.09			102	84	66	56	0.97
	30	105	1.41	–	–	–	–		28	104	86	67	57	1.23
		95	1.28	74	1.28	60	1.25			95	78	61	52	1.12
	32	98	1.61	–	–	–	–		30	97	80	62	53	1.41
		89	1.46	69	1.46	57	1.42			88	73	57	48	1.28
	34	92	1.82	–	–	–	–		32	91	75	59	50	1.61
		84	1.65	65	1.65	53	1.61			83	68	53	45	1.46
	36	87	2.04	–	–	–	–		34	86	71	55	47	1.82
		79	1.85	61	1.85	50	1.80			78	64	50	43	1.65
	38	83	2.27	–	–	–	–		36	81	67	52	44	2.04
		75	2.06	58	2.06	48	2.01			74	61	47	40	1.85
	42	75	2.77	–	–	–	–		38	77	63	49	42	2.27
		68	2.52	53	2.52	43	2.45			70	58	45	38	2.06
	46	68	3.32	–	–	–	–		42	69	57	45	38	2.77
		62	3.02	48	3.02	39	2.94			63	52	41	34	2.52
									46	63	52	41	35	3.32
										58	48	37	31	3.02

Web Shear and Property Values

V, kips		342		257		214		V, kips		428	342	257	214	
S_x, In.^{3}		155		120		98.4 **		S_x, In.^{3}		144	119	92.6	78.6	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

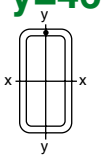
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

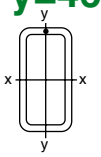
Nominal Size		20 x 4				Nominal Size		18 x 6					
Wall Thickness		1/2	3/8	5/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches
Weight Per Foot		76.07	58.10	48.86		Weight Per Foot		93.34	76.07	58.10	48.86	39.43	
Design Wall Thickness		0.465	0.349	0.291		Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	
Span in Feet	4	424	332	283	0.03	Span in Feet	4	521	433	339	288	235	0.03
	5	339	266	227	0.04		5	417	347	271	231	188	0.04
	6	283	222	189	0.06		6	347	289	226	192	157	0.06
	7	242	190	162	0.08		7	298	248	193	165	134	0.09
	8	212	166	142	0.10		8	261	217	169	144	118	0.11
	10	170	133	113	0.16		9	232	193	150	128	105	0.14
		154	121	103	0.14		10	208	173	135	115	94	0.17
	11	154	121	103	0.19		11	190	158	123	105	86	0.21
		140	110	94	0.17		12	174	144	113	96	78	0.25
	12	141	111	94	0.23		13	160	133	104	89	72	0.29
		128	101	86	0.21		14	149	124	97	82	67	0.34
	13	130	102	87	0.27			135	113	88	75	61	0.31
		119	93	79	0.24		15	139	116	90	77	63	0.39
	14	121	95	81	0.31			126	105	82	70	57	0.36
		110	86	74	0.28		16	130	108	85	72	59	0.45
	15	113	89	76	0.35			118	98	77	66	53	0.41
		103	81	69	0.32		17	123	102	80	68	55	0.50
	16	106	83	71	0.40			111	93	72	62	50	0.46
		96	76	64	0.37		18	116	96	75	64	52	0.57
	18	94	74	63	0.51			105	88	68	58	48	0.51
		86	67	57	0.46		20	104	87	68	58	47	0.70
	20	85	66	57	0.63			95	79	62	52	43	0.63
		77	60	52	0.57		22	95	79	62	52	43	0.84
	22	77	60	52	0.76			86	72	56	48	39	0.77
		70	55	47	0.69		24	87	72	56	48	39	1.01
	24	71	55	47	0.90			79	66	51	44	36	0.91
		64	50	43	0.82		26	80	67	52	44	36	1.18
	26	65	51	44	1.06			73	61	47	40	33	1.07
		59	46	40	0.97		28	74	62	48	41	34	1.37
	28	61	47	40	1.23			68	56	44	37	31	1.24
		55	43	37	1.12		30	69	58	45	38	31	1.57
	30	57	44	38	1.41			63	53	41	35	29	1.43
		51	40	34	1.28		32	65	54	42	36	29	1.79
	34	50	39	33	1.82			59	49	38	33	27	1.62
		45	36	30	1.65		34	61	51	40	34	28	2.02
	38	45	35	30	2.27			56	46	36	31	25	1.83
		41	32	27	2.06		38	55	46	36	30	25	2.52
	42	40	32	27	2.77			50	41	32	28	23	2.29
		37	29	25	2.52		42	50	41	32	27	22	3.08
	46	37	29	25	3.32			45	38	29	25	20	2.80
		34	26	22	3.02								
Web Shear and Property Values													
V, kips		342	257	214		V, kips		385	308	231	193	154	
S_x, In.^{3}		83.8	65.7	56.0		S_x, In.^{3}		103	85.6	66.9	57.0	46.5	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		16 x 12						Nominal Size	16 x 8				
Wall Thickness		1/2	Δ Inches	3/8	Δ Inches	5/16	Δ Inches	Wall Thickness	5/8	1/2	3/8	5/16	Δ Inches
Weight Per Foot		89.68		68.31		57.36		Weight Per Foot	93.34	76.07	58.10	48.86	
Design Wall Thickness		0.465		0.349		0.291 *		Design Wall Thickness	0.581	0.465	0.349	0.291	
Span in Feet	4	548	0.03	403	0.03	332	0.03	Span in Feet 4	516	430	335	285	0.03
	5	457	0.05	323	0.04	265	0.04	5	413	344	268	228	0.05
	6	381	0.07	269	0.06	221	0.06	6	344	286	224	190	0.07
	7	327	0.10	231	0.09	190	0.08	7	295	245	192	163	0.10
	8	286	0.13	202	0.11	166	0.11	8	258	215	168	143	0.13
	9	254	0.16	179	0.14	147	0.14	9	229	191	149	127	0.16
	10	229	0.20	161	0.18	133	0.17	10	206	172	134	114	0.20
	11	208	0.24	147	0.22	121	0.21	11	188	156	122	104	0.24
	12	191	0.28	134	0.26	111	0.25	12	172	143	112	95	0.28
	13	176	0.33	124	0.30	102	0.29	13	159	132	103	88	0.33
	14	163	0.38	115	0.35	95	0.34	14	147	123	96	82	0.38
	15	152	0.44	108	0.40	88	0.39	15	138	115	89	76	0.44
	16	143	0.50	101	0.46	83	0.44	16	129	107	84	71	0.50
	17	135	0.57	95	0.52	78	0.50	17	121	101	79	67	0.57
	18	127	0.64	90	0.58	74	0.56	18	115	95	75	63	0.64
									104	87	68	58	0.58
	19	120	0.71	85	0.64	70	0.62	19	109	90	71	60	0.71
									99	82	64	55	0.64
	20	114	0.79	81	0.71	66	0.69	20	103	86	67	57	0.79
									94	78	61	52	0.71
	21	109	0.87	77	0.79	63	0.76	22	94	78	61	52	0.95
									85	71	55	47	0.86
	22	104	0.95	73	0.86	60	0.84	24	86	72	56	48	1.13
									78	65	51	43	1.03
	23	99	1.04	70	0.94	58	0.92	26	79	66	52	44	1.33
									72	60	47	40	1.21
	24	95	1.13	67	1.03	55	1.00	28	74	61	48	41	1.54
									67	56	44	37	1.40
	25	91	1.23	65	1.12	53	1.08	29	71	59	46	39	1.65
									65	54	42	36	1.50
	26	88	1.33	62	1.21	51	1.17	31	67	55	43	37	1.89
									61	50	39	33	1.71
	27	85	1.43	–	–	–	–	32	65	54	42	36	2.01
		77	1.30	60	1.30	49	1.26		59	49	38	32	1.83
	28	82	1.54	–	–	–	–	34	61	51	39	34	2.27
		74	1.40	58	1.40	47	1.36		55	46	36	31	2.06
	29	79	1.65	–	–	–	–	36	57	48	37	32	2.54
		72	1.50	56	1.50	46	1.45		52	43	34	29	2.31
	30	76	1.77	–	–	–	–	37	56	46	36	31	2.69
		69	1.61	54	1.61	44	1.56		51	42	33	28	2.44
	32	71	2.01	–	–	–	–						
		65	1.83	50	1.83	41	1.77						
	34	67	2.27	–	–	–	–						
		61	2.06	47	2.06	39	2.00						
	36	64	2.54	–	–	–	–						
		58	2.31	45	2.31	37	2.24						
	37	62	2.69	–	–	–	–						
		56	2.44	44	2.44	36	2.37						
Web Shear and Property Values													
V, kips		274		205		171		V, kips	342	274	205	171	
S_x, In.^{3}		113		87.7		72.1 **		S_x, In.^{3}	102	84.9	66.3	56.4	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

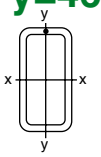
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		16 x 4				Nominal Size		14 x 10							
Wall Thickness		1/2	3/8	5/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	Δ Inches	5/16	Δ Inches	1/4	Δ Inches
Weight Per Foot		62.46	47.90	40.35		Weight Per Foot		93.34	76.07	58.10		48.86		39.43	
Design Wall Thickness		0.465	0.349	0.291		Design Wall Thickness		0.581	0.465	0.349		0.291		0.233 *	
Span in Feet	4	288	228	195	0.03	Span in Feet	4	497	414	323	0.04	250	0.03	195	0.03
	5	230	182	156	0.05		5	398	331	259	0.06	200	0.05	156	0.05
	6	192	152	130	0.07		6	331	276	216	0.08	167	0.07	130	0.07
	7	165	130	111	0.10		7	284	237	185	0.11	143	0.10	111	0.10
	8	144	114	97	0.13		8	248	207	162	0.14	125	0.13	98	0.12
	9	128	101	87	0.16		9	221	184	144	0.18	111	0.17	87	0.16
		116	92	79	0.14		10	199	166	129	0.22	100	0.20	78	0.20
	10	115	91	78	0.20		11	181	151	118	0.27	91	0.25	71	0.24
		105	83	71	0.18		12	166	138	108	0.32	83	0.29	65	0.28
	11	105	83	71	0.24		13	153	127	99	0.38	77	0.34	60	0.33
		95	75	64	0.22		14	142	118	92	0.44	71	0.40	56	0.38
	12	96	76	65	0.28		15	133	110	86	0.50	67	0.46	52	0.44
		87	69	59	0.26		16	124	103	81	0.57	62	0.52	49	0.50
	13	89	70	60	0.33		17	117	97	76	0.65	59	0.59	46	0.56
		81	64	54	0.30		18	110	92	72	0.73	56	0.66	43	0.63
	14	82	65	56	0.38		19	105	87	68	0.81	53	0.74	41	0.70
		75	59	51	0.35		20	99	83	65	0.90	50	0.82	39	0.78
	15	77	61	52	0.44		21	95	79	62	0.99	48	0.90	37	0.86
		70	55	47	0.40		22	90	75	59	1.09	–	–	–	–
	16	72	57	49	0.50			82	68	53	0.99	45	0.99	35	0.95
		65	52	44	0.46		23	86	72	56	1.19	–	–	–	–
	17	68	54	46	0.57			79	65	51	1.08	43	1.08	34	1.03
		62	49	42	0.52		24	83	69	54	1.29	–	–	–	–
	18	64	51	43	0.64			75	63	49	1.17	42	1.17	33	1.12
		58	46	39	0.58		25	80	66	52	1.40	–	–	–	–
	20	58	46	39	0.79			72	60	47	1.27	40	1.27	31	1.22
		52	41	35	0.71		26	76	64	50	1.52	–	–	–	–
	22	52	41	35	0.95			69	58	45	1.38	38	1.38	30	1.32
		48	38	32	0.86		27	74	61	48	1.64	–	–	–	–
	24	48	38	32	1.13			67	56	44	1.49	37	1.49	29	1.42
		44	35	30	1.03		28	71	59	46	1.76	–	–	–	–
	28	41	33	28	1.54			65	54	42	1.60	36	1.60	28	1.53
		37	30	25	1.40		30	66	55	43	2.02	–	–	–	–
	32	36	28	24	2.01			60	50	39	1.84	33	1.84	26	1.76
		33	26	22	1.83		32	62	52	40	2.30	–	–	–	–
	36	32	25	22	2.54			56	47	37	2.09	31	2.09	24	2.00
		29	23	20	2.31										
	37	31	25	21	2.69										
		28	22	19	2.44										
Web Shear and Property Values															
V, kips		274	205	171		V, kips		299	240	180		150		120	
S_x, In.^{3}		56.9	45.0	38.5		S_x, In.^{3}		98.2	81.8	63.9		54.3		42.4 **	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

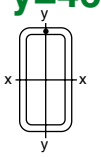
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

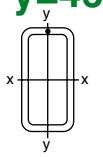
Nominal Size		14 x 6								Nominal Size		14 x 4							
Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches	3/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	5/16	1/4	3/16	Δ Inches	
Weight Per Foot		76.33	62.46	47.90	40.35	32.63		24.73		Weight Per Foot		67.82	55.66	42.79	36.10	29.23	22.18		
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233		0.174		Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	0.174		
Span in Feet	4	345	290	229	196	160	0.04	112	0.03	Span in Feet	4	270	229	182	156	129	99	0.04	
	5	276	232	183	157	128	0.06	89	0.05		5	216	183	146	125	103	79	0.06	
	6	230	194	153	131	107	0.08	75	0.07		6	180	153	121	104	86	66	0.08	
	7	197	166	131	112	92	0.11	64	0.10		7	154	131	104	89	73	56	0.11	
	8	173	145	115	98	80	0.14	56	0.13		8	135	115	91	78	64	49	0.14	
	9	153	129	102	87	71	0.18	50	0.17		9	120	102	81	69	57	44	0.18	
	10	138	116	92	78	64	0.22	45	0.20			109	93	74	63	52	40	0.17	
	11	125	106	83	71	58	0.27	41	0.25		10	108	92	73	63	51	39	0.22	
	12	115	97	76	65	53	0.32	37	0.29			98	83	66	57	47	36	0.20	
	13	106	89	71	60	49	0.38	34	0.34		11	98	83	66	57	47	36	0.27	
	14	99	83	65	56	46	0.44	–	–			89	76	60	52	42	33	0.25	
		90	75	60	51	42	0.40	32	0.40		12	90	76	61	52	43	33	0.32	
	15	92	77	61	52	43	0.50	–	–			82	69	55	47	39	30	0.29	
		84	70	56	47	39	0.46	30	0.46		13	83	71	56	48	40	30	0.38	
	16	86	73	57	49	40	0.57	–	–			75	64	51	44	36	28	0.34	
		78	66	52	45	36	0.52	28	0.52		14	77	65	52	45	37	28	0.44	
	17	81	68	54	46	38	0.65	–	–			70	60	47	41	33	26	0.40	
		74	62	49	42	34	0.59	26	0.59		15	72	61	49	42	34	26	0.50	
	18	77	65	51	44	36	0.73	–	–			65	56	44	38	31	24	0.46	
		70	59	46	40	32	0.66	25	0.66		16	67	57	46	39	32	25	0.57	
	19	73	61	48	41	34	0.81	–	–			61	52	41	36	29	22	0.52	
		66	56	44	37	31	0.74	24	0.74		17	63	54	43	37	30	23	0.65	
	20	69	58	46	39	32	0.90	–	–			58	49	39	33	27	21	0.59	
		63	53	42	36	29	0.82	22	0.82		18	60	51	40	35	29	22	0.73	
	21	66	55	44	37	31	0.99	–	–			54	46	37	32	26	20	0.66	
		60	50	40	34	28	0.90	21	0.90		19	57	48	38	33	27	21	0.81	
	22	63	53	42	36	29	1.09	–	–			52	44	35	30	25	19	0.74	
		57	48	38	32	27	0.99	20	0.99		20	54	46	36	31	26	20	0.90	
	24	58	48	38	33	27	1.29	–	–			49	42	33	28	23	18	0.82	
		52	44	35	30	24	1.17	19	1.17		22	49	42	33	28	23	18	1.09	
	26	53	45	35	30	25	1.52	–	–			45	38	30	26	21	16	0.99	
		48	41	32	27	22	1.38	17	1.38		24	45	38	30	26	21	16	1.29	
	28	49	41	33	28	23	1.76	–	–			41	35	28	24	19	15	1.17	
		45	38	30	25	21	1.60	16	1.60		26	41	35	28	24	20	15	1.52	
	30	46	39	31	26	21	2.02	–	–			38	32	25	22	18	14	1.38	
		42	35	28	24	19	1.84	15	1.84		28	39	33	26	22	18	14	1.76	
	32	43	36	29	24	20	2.30	–	–			35	30	24	20	17	13	1.60	
		39	33	26	22	18	2.09	14	2.09		30	36	31	24	21	17	13	2.02	
												33	28	22	19	16	12	1.84	
											32	34	29	23	20	16	12	2.30	
												31	26	21	18	15	11	2.09	
Web Shear and Property Values																			
V, kips		299	240	180	150	120		90		V, kips		299	240	180	150	120	90		
S_x, In.^{3}		68.2	57.4	45.3	38.7	31.7		24.3		S_x, In.^{3}		53.3	45.3	36.0	30.9	25.4	19.5		

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		12 X 10						
Wall Thickness		1/2	3/8	Δ Inches	5/16	Δ Inches	1/4	Δ Inches
Weight Per Foot		69.27	53.00		44.60		36.03	
Design Wall Thickness		0.465	0.349		0.291		0.233 *	
Span in Feet	4	333	261	0.04	202	0.04	158	0.04
	5	267	209	0.07	162	0.06	126	0.06
	6	222	174	0.09	135	0.09	105	0.08
	7	191	149	0.13	116	0.12	90	0.11
	8	167	131	0.17	101	0.15	79	0.15
	9	148	116	0.21	90	0.19	70	0.18
	10	133	104	0.26	81	0.24	63	0.23
	11	121	95	0.32	74	0.29	57	0.27
	12	111	87	0.38	67	0.34	53	0.33
	13	103	80	0.44	62	0.40	49	0.38
	14	95	75	0.51	58	0.47	45	0.44
	15	89	70	0.59	54	0.54	42	0.51
	16	83	65	0.67	51	0.61	39	0.58
	17	78	61	0.76	48	0.69	37	0.66
	18	74	58	0.85	45	0.77	35	0.73
	19	70	55	0.94	43	0.86	33	0.82
	20	67	52	1.05	40	0.95	32	0.91
	21	64	50	1.15	39	1.05	30	1.00
	22	61	47	1.27	–	–	–	–
		55	43	1.15	37	1.15	29	1.10
	23	58	45	1.38	–	–	–	–
		53	41	1.26	35	1.26	27	1.20
	24	56	44	1.51	–	–	–	–
		51	40	1.37	34	1.37	26	1.31
	25	53	42	1.64	–	–	–	–
		49	38	1.49	32	1.49	25	1.42
	26	51	40	1.77	–	–	–	–
		47	37	1.61	31	1.61	24	1.53
	27	49	39	1.91	–	–	–	–
		45	35	1.73	30	1.73	23	1.65
	28	48	37	2.05	–	–	–	–
		43	34	1.87	29	1.87	23	1.78
Web Shear and Property Values								
V, kips		205	154		129		103	
S_x, In.^{3}		65.9	51.6		44.0		34.3 **	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

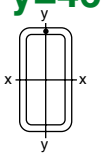
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		12 x 8								
Wall Thickness		5/8	1/2	3/8	5/16	Δ Inches	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		76.33	62.46	47.90	40.35		32.63		24.73	
Design Wall Thickness		0.581	0.465	0.349	0.291		0.233		0.174 *	
Span in Feet	4	334	281	221	189	0.04	141	0.04	101	0.04
	5	268	225	177	151	0.07	113	0.06	81	0.06
	6	223	187	147	126	0.09	94	0.09	67	0.08
	7	191	160	126	108	0.13	80	0.12	58	0.11
	8	167	140	111	95	0.17	70	0.15	50	0.14
	9	149	125	98	84	0.21	63	0.19	45	0.18
	10	134	112	88	76	0.26	56	0.24	40	0.22
	11	122	102	80	69	0.32	51	0.29	37	0.27
	12	111	94	74	63	0.38	47	0.34	34	0.32
	13	103	86	68	58	0.44	43	0.40	31	0.38
	14	96	80	63	54	0.51	40	0.47	29	0.44
	15	89	75	59	50	0.59	38	0.54	27	0.50
	16	84	70	55	47	0.67	35	0.61	25	0.57
	17	79	66	52	45	0.76	33	0.69	24	0.65
	18	74	62	49	42	0.85	–	–	–	–
		68	57	45	38	0.77	31	0.77	22	0.72
	19	70	59	47	40	0.94	–	–	–	–
		64	54	42	36	0.86	30	0.86	21	0.81
	20	67	56	44	38	1.05	–	–	–	–
		61	51	40	34	0.95	28	0.95	20	0.89
	21	64	53	42	36	1.15	–	–	–	–
		58	49	38	33	1.05	27	1.05	19	0.98
	22	61	51	40	34	1.27	–	–	–	–
		55	46	37	31	1.15	26	1.15	18	1.08
	23	58	49	38	33	1.38	–	–	–	–
		53	44	35	30	1.26	24	1.26	18	1.18
	24	56	47	37	32	1.51	–	–	–	–
		51	43	34	29	1.37	23	1.37	17	1.29
	25	54	45	35	30	1.64	–	–	–	–
		49	41	32	28	1.49	23	1.49	16	1.40
	26	51	43	34	29	1.77	–	–	–	–
		47	39	31	26	1.61	22	1.61	15	1.51
	27	50	42	33	28	1.91	–	–	–	–
		45	38	30	25	1.73	21	1.73	15	1.63
	28	48	40	32	27	2.05	–	–	–	–
		43	36	29	25	1.87	20	1.87	14	1.75
Web Shear and Property Values										
V, kips		257	205	154	129		103		77	
S_x, In.^{3}		66.1	55.5	43.7	37.4		30.6		21.9 **	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

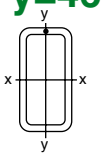
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

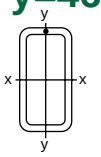
Nominal Size		12 x 6								Nominal Size		12 x 4						
Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches	3/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		67.82	55.66	42.79	36.10	29.23		22.18		Weight Per Foot		59.32	48.85	37.69	31.84	25.82	19.63	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233		0.174		Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	0.174	
Span in Feet	4	270	229	181	155	128	0.04	89	0.04	Span in Feet	4	206	177	142	121	101	77	0.04
	5	216	183	145	124	102	0.07	71	0.06		5	165	141	113	97	81	62	0.07
	6	180	152	121	104	85	0.09	59	0.09		6	138	118	94	81	67	52	0.09
	7	154	131	104	89	73	0.13	51	0.12		7	118	101	81	69	58	44	0.13
	8	135	114	91	78	64	0.17	45	0.15		8	103	88	71	61	50	39	0.17
	9	120	102	81	69	57	0.21	40	0.19		9	92	78	63	54	45	34	0.21
	10	108	91	72	62	51	0.26	36	0.24			83	71	57	49	41	31	0.19
	11	98	83	66	56	46	0.32	32	0.29		10	83	71	57	49	40	31	0.26
	12	90	76	60	52	43	0.38	30	0.34			75	64	52	44	37	28	0.24
	13	83	70	56	48	39	0.44	27	0.40		11	75	64	52	44	37	28	0.32
	14	77	65	52	44	36	0.51	—	—			68	58	47	40	33	26	0.29
		70	59	47	40	33	0.47	25	0.47		12	69	59	47	40	34	26	0.38
	15	72	61	48	41	34	0.59	—	—			63	54	43	37	31	23	0.34
		66	55	44	38	31	0.54	24	0.54		13	64	54	44	37	31	24	0.44
	16	68	57	45	39	32	0.67	—	—			58	49	40	34	28	22	0.40
		61	52	41	35	29	0.61	22	0.61		14	59	50	40	35	29	22	0.51
	17	64	54	43	37	30	0.76	—	—			54	46	37	32	26	20	0.47
		58	49	39	33	27	0.69	21	0.69		15	55	47	38	32	27	21	0.59
	18	60	51	40	35	28	0.85	—	—			50	43	34	29	24	19	0.54
		55	46	37	31	26	0.77	20	0.77		16	52	44	35	30	25	19	0.67
	19	57	48	38	33	27	0.94	—	—			47	40	32	28	23	18	0.61
		52	44	35	30	24	0.86	19	0.86		17	49	42	33	29	24	18	0.76
	20	54	46	36	31	26	1.05	—	—			44	38	30	26	22	17	0.69
		49	42	33	28	23	0.95	18	0.95		18	46	39	31	27	22	17	0.85
	21	51	44	35	30	24	1.15	—	—			42	36	29	25	20	16	0.77
		47	40	31	27	22	1.05	17	1.05		19	43	37	30	26	21	16	0.94
	22	49	42	33	28	23	1.27	—	—			40	34	27	23	19	15	0.86
		45	38	30	26	21	1.15	16	1.15		20	41	35	28	24	20	15	1.05
	23	47	40	32	27	22	1.38	—	—			38	32	26	22	18	14	0.95
		43	36	29	25	20	1.26	16	1.26		21	39	34	27	23	19	15	1.15
	24	45	38	30	26	21	1.51	—	—			36	31	25	21	17	13	1.05
		41	35	27	24	19	1.37	15	1.37		22	38	32	26	22	18	14	1.27
	25	43	37	29	25	20	1.64	—	—			34	29	23	20	17	13	1.15
		39	33	26	23	19	1.49	14	1.49		23	36	31	25	21	18	13	1.38
	26	42	35	28	24	20	1.77	—	—			33	28	22	19	16	12	1.26
		38	32	25	22	18	1.61	14	1.61		24	34	29	24	20	17	13	1.51
	27	40	34	27	23	19	1.91	—	—			31	27	21	18	15	12	1.37
		36	31	24	21	17	1.73	13	1.73		26	32	27	22	19	15	12	1.77
	28	39	33	26	22	18	2.05	—	—			29	25	20	17	14	11	1.61
		35	30	24	20	17	1.87	13	1.87		28	29	25	20	17	14	11	1.61
												27	23	18	16	13	10	1.87
Web Shear and Property Values																		
V, kips		257	205	154	129	103		77		V, kips		257	205	154	129	103	77	
S_x, In.^{3}		53.4	45.2	35.8	30.7	25.2		19.4		S_x, In.^{3}		40.8	34.9	28.0	24.0	19.9	15.3	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

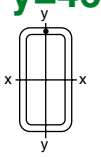
Nominal Size		12 x 3 1/2			Nominal Size		12 x 3				Nominal Size		12 x 2		
Wall Thickness		3/8	5/16	Δ Inches	Wall Thickness		5/16	1/4	3/16	Δ Inches	Wall Thickness		1/4	3/16	Δ Inches
Weight Per Foot		36.41	30.78		Weight Per Foot		29.72	24.12	18.35		Weight Per Foot		22.42	17.08	
Design Wall Thickness		0.349	0.291		Design Wall Thickness		0.291	0.233	0.174		Design Wall Thickness		0.233	0.174	
Span in Feet	4	132	113	0.04	Span in Feet	4	105	87	67	0.04	Span in Feet	4	73	57	0.04
	5	105	91	0.07		5	84	70	54	0.07		5	59	45	0.07
	6	88	76	0.09		6	70	58	45	0.09			53	41	0.06
	7	75	65	0.13		7	60	50	38	0.13		6	49	38	0.09
	8	66	57	0.17			54	45	35	0.12			44	34	0.09
		60	52	0.15		8	52	44	34	0.17		7	42	32	0.13
	9	58	50	0.21			48	40	31	0.15			38	29	0.12
		53	46	0.19		9	47	39	30	0.21		8	37	28	0.17
	10	53	45	0.26			42	35	27	0.19			33	26	0.15
		48	41	0.24		10	42	35	27	0.26		9	33	25	0.21
	11	48	41	0.32			38	32	24	0.24			30	23	0.19
		43	37	0.29		11	38	32	24	0.32		10	29	23	0.26
	12	44	38	0.38			35	29	22	0.29			27	21	0.24
		40	34	0.34		12	35	29	22	0.38		11	27	21	0.32
	13	40	35	0.44			32	26	20	0.34			24	19	0.29
		37	32	0.40		13	32	27	21	0.44		12	24	19	0.38
	14	38	32	0.51			29	24	19	0.40			22	17	0.34
		34	29	0.47		14	30	25	19	0.51		13	23	17	0.44
	15	35	30	0.59			27	23	17	0.47			21	16	0.40
		32	27	0.54		15	28	23	18	0.59		14	21	16	0.51
	16	33	28	0.67			25	21	16	0.54			19	15	0.47
		30	26	0.61		16	26	22	17	0.67		15	20	15	0.59
	17	31	27	0.76			24	20	15	0.61			18	14	0.54
		28	24	0.69		17	25	20	16	0.76		16	18	14	0.67
	18	29	25	0.85			22	19	14	0.69			17	13	0.61
		27	23	0.77		18	23	19	15	0.85		17	17	13	0.76
	19	28	24	0.94			21	18	14	0.77			16	12	0.69
		25	22	0.86		19	22	18	14	0.94		18	16	13	0.85
	20	26	23	1.05			20	17	13	0.86			15	11	0.77
		24	21	0.95		20	21	17	13	1.05		19	15	12	0.94
	21	25	22	1.15			19	16	12	0.95			14	11	0.86
		23	20	1.05		22	19	16	12	1.27		20	15	11	1.05
	22	24	21	1.27			17	14	11	1.15			13	10	0.95
		22	19	1.15		24	17	15	11	1.51		22	13	10	1.27
	24	22	19	1.51			16	13	10	1.37			12	9.4	1.15
		20	17	1.37		26	16	13	10	1.77		24	12	9.4	1.51
	26	20	17	1.77			15	12	9.4	1.61			11	8.6	1.37
		18	16	1.61		28	15	12	9.6	2.05		26	11	8.7	1.77
	28	19	16	2.05			14	11	8.7	1.87			10	7.9	1.61
		17	15	1.87								28	10	8.1	2.05
													9.5	7.4	1.87
Web Shear and Property Values															
V, kips		154	129		V, kips		129	103	77		V, kips		103	77	
S_x, In.^{3}		26.0	22.4		S_x, In.^{3}		20.7	17.2	13.3		S_x, In.^{3}		14.5	11.2	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		10 x 8							
Wall Thickness		1/2	3/8	5/16	Δ Inches	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		55.66	42.79	36.10		29.23		22.18	
Design Wall Thickness		0.465	0.349	0.291		0.233		0.174 *	
Span in Feet	2	342	257	214	0.01	171	0.01	128	0.01
	3	288	229	196	0.03	146	0.03	104	0.02
	4	216	172	147	0.05	109	0.05	78	0.04
	5	173	137	117	0.08	88	0.07	63	0.07
	6	144	114	98	0.11	73	0.10	52	0.10
	7	123	98	84	0.15	63	0.14	45	0.13
	8	108	86	73	0.20	55	0.18	39	0.17
	9	96	76	65	0.25	49	0.23	35	0.22
	10	86	69	59	0.31	44	0.29	31	0.27
	11	79	62	53	0.38	40	0.35	28	0.32
	12	72	57	49	0.45	36	0.41	26	0.38
	13	66	53	45	0.53	34	0.48	24	0.45
	14	62	49	42	0.62	31	0.56	22	0.52
	15	58	46	39	0.71	29	0.64	21	0.60
	16	54	43	37	0.80	27	0.73	20	0.68
	17	51	40	35	0.91	26	0.83	18	0.77
	18	48	38	33	1.02	—	—	—	—
		44	35	30	0.93	24	0.93	17	0.86
	19	45	36	31	1.13	—	—	—	—
		41	33	28	1.03	23	1.03	16	0.96
	20	43	34	29	1.26	—	—	—	—
		39	31	27	1.14	22	1.14	16	1.06
	21	41	33	28	1.39	—	—	—	—
		37	30	25	1.26	21	1.26	15	1.17
	22	39	31	27	1.52	—	—	—	—
		36	28	24	1.38	20	1.38	14	1.29
	23	38	30	26	1.66	—	—	—	—
		34	27	23	1.51	19	1.51	14	1.40

Nominal Size		10 x 6							
Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		59.32	48.85	37.69	31.84	25.82		19.63	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233		0.174	
Span in Feet	2	407	342	257	214	171	0.01	128	0.01
	3	271	231	184	159	131	0.03	91	0.03
	4	203	174	138	119	98	0.05	69	0.05
	5	163	139	111	95	79	0.08	55	0.07
	6	136	116	92	79	65	0.11	46	0.10
	7	116	99	79	68	56	0.15	39	0.14
	8	102	87	69	59	49	0.20	34	0.18
	9	90	77	61	53	44	0.25	30	0.23
	10	81	69	55	48	39	0.31	27	0.29
	11	74	63	50	43	36	0.38	25	0.35
	12	68	58	46	40	33	0.45	23	0.41
	13	63	53	43	37	30	0.53	21	0.48
	14	58	50	39	34	28	0.62	—	—
		53	45	36	31	25	0.56	20	0.56
	15	54	46	37	32	26	0.71	—	—
		49	42	33	29	24	0.64	18	0.64
	16	51	43	35	30	25	0.80	—	—
		46	39	31	27	22	0.73	17	0.73
	17	48	41	33	28	23	0.91	—	—
		44	37	30	25	21	0.83	16	0.83
	18	45	39	31	26	22	1.02	—	—
		41	35	28	24	20	0.93	15	0.93
	19	43	37	29	25	21	1.13	—	—
		39	33	26	23	19	1.03	14	1.03
	20	41	35	28	24	20	1.26	—	—
		37	32	25	22	18	1.14	14	1.14
	21	39	33	26	23	19	1.39	—	—
		35	30	24	21	17	1.26	13	1.26
	22	37	32	25	22	18	1.52	—	—
		34	29	23	20	16	1.38	12	1.38
	23	35	30	24	21	17	1.66	—	—
		32	27	22	19	16	1.51	12	1.51

Web Shear and Property Values

V, kips	171	128	107		86		64		
S_x, In.^{3}	42.7	33.9	29.0		23.8		17.0**		

V, kips	214	171	128	107	86		64	
S_x, In.^{3}	40.2	34.3	27.3	23.5	19.4		14.9	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

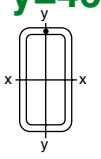
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		10 x 5					Nominal Size		10 x 4						
Wall Thickness		3/8	5/16	1/4	3/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		35.13	29.72	24.12	18.35		Weight Per Foot		50.81	42.05	32.58	27.59	22.42	17.08	
Design Wall Thickness		0.349	0.291	0.233	0.174		Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	0.174	
Span in Feet	2	244	210	171	128	0.01	Span in Feet	2	303	261	210	182	151	117	0.01
	3	163	140	116	89	0.03		3	202	174	140	121	101	78	0.03
	4	122	105	87	67	0.05		4	151	131	105	91	75	59	0.05
	5	98	84	70	53	0.08		5	121	104	84	73	60	47	0.08
	6	81	70	58	45	0.11		6	101	87	70	61	50	39	0.11
	7	70	60	50	38	0.15		7	86	75	60	52	43	34	0.15
	8	61	53	44	33	0.20		8	76	65	53	46	38	29	0.20
	9	54	47	39	30	0.25		9	67	58	47	40	34	26	0.25
	10	49	42	35	27	0.31			61	53	43	37	30	24	0.23
	11	44	38	32	24	0.38		10	61	52	42	36	30	23	0.31
		40	35	29	22	0.35			55	47	38	33	27	21	0.29
	12	41	35	29	22	0.45		11	55	47	38	33	27	21	0.38
		37	32	26	20	0.41			50	43	35	30	25	19	0.35
	13	38	32	27	21	0.53		12	50	44	35	30	25	20	0.45
		34	29	24	19	0.48			46	40	32	28	23	18	0.41
	14	35	30	25	19	0.62		13	47	40	32	28	23	18	0.53
		32	27	23	17	0.56			42	37	29	25	21	16	0.48
	15	33	28	23	18	0.71		14	43	37	30	26	22	17	0.62
		30	26	21	16	0.64			39	34	27	24	20	15	0.56
	16	30	26	22	17	0.80		15	40	35	28	24	20	16	0.71
		28	24	20	15	0.73			37	32	26	22	18	14	0.64
	17	29	25	20	16	0.91		16	38	33	26	23	19	15	0.80
		26	23	19	14	0.83			34	30	24	21	17	13	0.73
	18	27	23	19	15	1.02		17	36	31	25	21	18	14	0.91
		25	21	18	13	0.93			32	28	23	19	16	13	0.83
	19	26	22	18	14	1.13		18	34	29	23	20	17	13	1.02
		23	20	17	13	1.03			31	26	21	18	15	12	0.93
	20	24	21	17	13	1.26		19	32	27	22	19	16	12	1.13
		22	19	16	12	1.14			29	25	20	17	14	11	1.03
	21	23	20	17	13	1.39		20	30	26	21	18	15	12	1.26
		21	18	15	12	1.26			28	24	19	17	14	11	1.14
	22	22	19	16	12	1.52		21	29	25	20	17	14	11	1.39
		20	17	14	11	1.38			26	23	18	16	13	10	1.26
	23	21	18	15	12	1.66		22	28	24	19	17	14	11	1.52
		19	17	14	11	1.51			25	22	17	15	12	9.7	1.38
								23	26	23	18	16	13	10	1.66
									24	21	17	14	12	9.3	1.51

Web Shear and Property Values

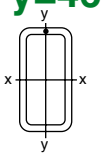
V, kips	128	107	86	64		V, kips	214	171	128	107	86	64	
S_x, In.^{3}	24.1	20.8	17.2	13.2		S_x, In.^{3}	29.9	25.8	20.8	18.0	14.9	11.6	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

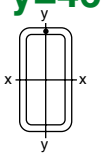
Nominal Size		10 x 3 1/2		Nominal Size		10 x 3						Nominal Size		10 x 2				
Wall Thickness		3/16	Δ Inches	Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		16.44		Weight Per Foot		30.03	25.46	20.72	15.80	10.71		Weight Per Foot		27.48	23.34	19.02	14.53	
Design Wall Thickness		0.174		Design Wall Thickness		0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.349	0.291	0.233	0.174	
Span in Feet	2	108	0.01	Span in Feet	2	178	155	129	100	69	0.01	Span in Feet	2	145	127	106	83	0.01
	3	72	0.03		3	119	103	86	67	46	0.03		3	96	84	71	55	0.03
	4	54	0.05		4	89	77	64	50	35	0.05		4	72	63	53	41	0.05
	5	43	0.08		5	71	62	51	40	28	0.08		5	58	51	43	33	0.08
	6	36	0.11		6	59	52	43	33	23	0.11			53	46	39	30	0.07
	7	31	0.15		7	51	44	37	29	20	0.15		6	48	42	35	28	0.11
	8	27	0.20			46	40	33	26	18	0.14			44	38	32	25	0.10
		25	0.18		8	45	39	32	25	17	0.20		7	41	36	30	24	0.15
	9	24	0.25			40	35	29	23	16	0.18			38	33	28	22	0.14
		22	0.23		9	40	34	29	22	15	0.25		8	36	32	27	21	0.20
	10	22	0.31			36	31	26	20	14	0.23			33	29	24	19	0.18
		20	0.29		10	36	31	26	20	14	0.31		9	32	28	24	18	0.25
	11	20	0.38			32	28	23	18	13	0.29			29	26	21	17	0.23
		18	0.35		11	32	28	23	18	13	0.38		10	29	25	21	17	0.31
	12	18	0.45			29	26	21	17	11	0.35			26	23	19	15	0.29
		16	0.41		12	30	26	21	17	12	0.45		11	26	23	19	15	0.38
	13	17	0.53			27	23	19	15	10	0.41			24	21	18	14	0.35
		15	0.48		13	27	24	20	15	11	0.53		12	24	21	18	14	0.45
	14	15	0.62			25	22	18	14	9.7	0.48			22	19	16	13	0.41
		14	0.56		14	25	22	18	14	9.9	0.62		13	22	19	16	13	0.53
	15	14	0.71			23	20	17	13	9.0	0.56			20	18	15	12	0.48
		13	0.64		15	24	21	17	13	9.2	0.71		14	21	18	15	12	0.62
	16	14	0.80			22	19	16	12	8.4	0.64			19	16	14	11	0.56
		12	0.73		16	22	19	16	12	8.6	0.80		15	19	17	14	11	0.71
	17	13	0.91			20	18	15	11	7.9	0.73			18	15	13	10	0.64
		12	0.83		17	21	18	15	12	8.1	0.91		16	18	16	13	10	0.80
	18	12	1.02			19	17	14	11	7.4	0.83			16	14	12	9.4	0.73
		11	0.93		18	20	17	14	11	7.7	1.02		17	17	15	13	9.8	0.91
	19	11	1.13			18	16	13	10	7.0	0.93			15	14	11	8.9	0.83
		10	1.03		19	19	16	14	11	7.3	1.13		18	16	14	12	9.2	1.02
	20	11	1.26			17	15	12	9.6	6.6	1.03			15	13	11	8.4	0.93
		9.8	1.14		20	18	15	13	10	6.9	1.26		19	15	13	11	8.7	1.13
	21	10	1.39			16	14	12	9.1	6.3	1.14			14	12	10	7.9	1.03
		9.4	1.26		21	17	15	12	9.5	6.6	1.39		20	14	13	11	8.3	1.26
	22	9.8	1.52			15	13	11	8.6	6.0	1.26			13	12	9.7	7.5	1.14
		8.9	1.38		22	16	14	12	9.1	6.3	1.52		21	14	12	10	7.9	1.39
	23	9.4	1.66			15	13	11	8.3	5.7	1.38			13	11	9.2	7.2	1.26
		8.6	1.51		23	15	13	11	8.7	6.0	1.66		22	13	12	9.7	7.5	1.52
						14	12	10	7.9	5.5	1.51			12	10	8.8	6.8	1.38
													23	13	11	9.2	7.2	1.66
														11	10	8.4	6.6	1.51
Web Shear and Property Values																		
V, kips		64		V, kips		128	107	86	64	43		V, kips		128	107	86	64	
S_x, In.^{3}		10.7		S_x, In.^{3}		17.6	15.3	12.7	9.87	6.83		S_x, In.^{3}		14.3	12.5	10.5	8.19	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

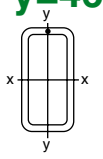
Nominal Size		9 x 7							
Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		59.32	48.85	37.69	31.84	25.82		19.63	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233		0.174 *	
Span in Feet	2	385	308	231	193	154	0.01	115	0.01
	3	261	223	178	152	126	0.03	86	0.03
	4	196	167	134	114	95	0.06	65	0.05
	5	157	134	107	91	76	0.09	52	0.08
	6	131	111	89	76	63	0.13	43	0.11
	7	112	95	76	65	54	0.17	37	0.15
	8	98	83	67	57	47	0.22	32	0.20
	9	87	74	59	51	42	0.28	29	0.25
	10	78	67	53	46	38	0.35	26	0.31
	11	71	61	49	42	34	0.42	24	0.38
	12	65	56	45	38	32	0.50	22	0.45
	13	60	51	41	35	29	0.59	20	0.53
	14	56	48	38	33	27	0.68	19	0.61
	15	52	45	36	30	25	0.79	17	0.70
	16	49	42	33	29	24	0.89	–	–
		45	38	30	26	22	0.81	16	0.80
	17	46	39	31	27	22	1.01	–	–
		42	36	29	24	20	0.92	15	0.90
	18	44	37	30	25	21	1.13	–	–
		40	34	27	23	19	1.03	14	1.01
	19	41	35	28	24	20	1.26	–	–
		37	32	26	22	18	1.15	14	1.12
	20	39	33	27	23	19	1.40	–	–
		36	30	24	21	17	1.27	13	1.24
	21	37	32	25	22	18	1.54	–	–
		34	29	23	20	16	1.40	12	1.37
Web Shear and Property Values									
V, kips		192	154	116	96	77		58	
S_x, In.^{3}		38.7	33.0	26.4	22.6	18.7		14.1 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.
** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

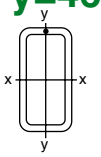
Nominal Size		9 x 5						
Wall Thickness		5/8	1/2	3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		50.81	42.05	32.58	27.59	22.42	17.08	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	0.174	
Span in Feet	2	300	258	207	179	149	115	0.01
	3	200	172	138	119	99	77	0.03
	4	150	129	104	90	74	58	0.06
	5	120	103	83	72	60	46	0.09
	6	100	86	69	60	50	38	0.13
	7	86	74	59	51	43	33	0.17
	8	75	65	52	45	37	29	0.22
	9	67	57	46	40	33	26	0.28
	10	60	52	41	36	30	23	0.35
	11	54	47	38	33	27	21	0.42
		50	43	34	30	25	19	0.38
	12	50	43	35	30	25	19	0.50
		45	39	31	27	23	17	0.46
	13	46	40	32	28	23	18	0.59
		42	36	29	25	21	16	0.54
	14	43	37	30	26	21	16	0.68
		39	34	27	23	19	15	0.62
	15	40	34	28	24	20	15	0.79
		36	31	25	22	18	14	0.71
	16	37	32	26	22	19	14	0.89
		34	29	24	20	17	13	0.81
	17	35	30	24	21	18	14	1.01
		32	28	22	19	16	12	0.92
	18	33	29	23	20	17	13	1.13
		30	26	21	18	15	12	1.03
	19	32	27	22	19	16	12	1.26
		29	25	20	17	14	11	1.15
	20	30	26	21	18	15	12	1.40
		27	23	19	16	14	10	1.27
	21	29	25	20	17	14	11	1.54
		26	22	18	16	13	10	1.40
Web Shear and Property Values								
V, kips		192	154	116	96	77	58	
S_x, In.^{3}		29.6	25.5	20.5	17.7	14.7	11.4	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

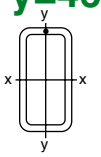
Nominal Size		9 x 3					
Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		35.24	27.48	23.34	19.02	14.53	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174	
Span in Feet	2	181	149	130	108	85	0.01
	3	121	99	86	72	56	0.03
	4	91	74	65	54	42	0.06
	5	72	60	52	43	34	0.09
	6	60	50	43	36	28	0.13
	7	52	43	37	31	24	0.17
		47	39	34	28	22	0.16
	8	45	37	32	27	21	0.22
		41	34	29	25	19	0.20
	9	40	33	29	24	19	0.28
		37	30	26	22	17	0.26
	10	36	30	26	22	17	0.35
		33	27	24	20	15	0.32
	11	33	27	24	20	15	0.42
		30	25	21	18	14	0.38
	12	30	25	22	18	14	0.50
		27	23	20	16	13	0.46
	13	28	23	20	17	13	0.59
		25	21	18	15	12	0.54
	14	26	21	19	15	12	0.68
		24	19	17	14	11	0.62
	15	24	20	17	14	11	0.79
		22	18	16	13	10	0.71
	16	23	19	16	14	11	0.89
		21	17	15	12	9.6	0.81
	17	21	18	15	13	9.9	1.01
		19	16	14	12	9.0	0.92
	18	20	17	14	12	9.4	1.13
		18	15	13	11	8.5	1.03
	19	19	16	14	11	8.9	1.26
		17	14	12	10	8.1	1.15
	20	18	15	13	11	8.5	1.40
		16	14	12	9.8	7.7	1.27
	21	17	14	12	10	8.0	1.54
		16	13	11	9.4	7.3	1.40
Web Shear and Property Values							
V, kips		154	116	96	77	58	
S_x, In.^{3}		17.9	14.7	12.8	10.7	8.35	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

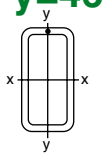
Nominal Size		8 x 6							
Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		50.81	42.05	32.58	27.59	22.42		17.08	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233		0.174	
Span in Feet	2	288	248	200	171	137	0.02	100	0.01
	3	192	165	134	115	95	0.04	67	0.03
	4	144	124	100	87	71	0.06	50	0.06
	5	115	99	80	69	57	0.10	40	0.09
	6	96	83	67	58	48	0.14	33	0.13
	7	82	71	57	49	41	0.19	29	0.17
	8	72	62	50	43	36	0.25	25	0.23
	9	64	55	45	38	32	0.32	22	0.29
	10	58	50	40	35	29	0.39	20	0.36
	11	52	45	36	31	26	0.48	18	0.43
	12	48	41	33	29	24	0.57	17	0.51
	13	44	38	31	27	22	0.66	15	0.60
	14	41	35	29	25	20	0.77	—	—
		37	32	26	22	19	0.70	14	0.70
	15	38	33	27	23	19	0.88	—	—
		35	30	24	21	17	0.80	13	0.80
	16	36	31	25	22	18	1.01	—	—
		33	28	23	20	16	0.91	13	0.91
	17	34	29	24	20	17	1.13	—	—
		31	27	21	19	15	1.03	12	1.03
	18	32	28	22	19	16	1.27	—	—
		29	25	20	17	14	1.16	11	1.16
Web Shear and Property Values									
V, kips		171	137	103	86	69		51	
S_x, In.^{3}		28.5	24.5	19.8	17.1	14.1		10.9	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

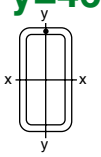
Nominal Size		8 x 4								
Wall Thickness		5/8	1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		42.30	35.24	27.48	23.34	19.02	14.53		9.86	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	0.174		0.116	
Span in Feet	2	207	181	149	130	107	84	0.02	53	0.01
	3	138	121	99	86	72	56	0.04	35	0.03
	4	104	91	74	65	54	42	0.06	26	0.06
	5	83	72	60	52	43	33	0.10	21	0.09
	6	69	60	50	43	36	28	0.14	18	0.13
	7	59	52	43	37	31	24	0.19	15	0.17
	8	52	45	37	32	27	21	0.25	13	0.23
	9	46	40	33	29	24	19	0.32	–	–
		42	37	30	26	22	17	0.29	12	0.29
	10	41	36	30	26	21	17	0.39	–	–
		38	33	27	24	20	15	0.36	11	0.36
	11	38	33	27	24	20	15	0.48	–	–
		34	30	25	21	18	14	0.43	9.6	0.43
	12	35	30	25	22	18	14	0.57	–	–
		31	27	23	20	16	13	0.51	8.8	0.51
	13	32	28	23	20	17	13	0.66	–	–
		29	25	21	18	15	12	0.60	8.1	0.60
	14	30	26	21	19	15	12	0.77	–	–
		27	24	19	17	14	11	0.70	7.5	0.70
	15	28	24	20	17	14	11	0.88	–	–
		25	22	18	16	13	10	0.80	7.0	0.80
	16	26	23	19	16	13	10	1.01	–	–
		24	21	17	15	12	9.5	0.91	6.6	0.91
	17	24	21	18	15	13	9.8	1.13	–	–
		22	19	16	14	11	9.0	1.03	6.2	1.03
	18	23	20	17	14	12	9.3	1.27	–	–
		21	18	15	13	11	8.5	1.16	5.9	1.16
Web Shear and Property Values										
V, kips		171	137	103	86	69	51		34	
S_x, In.^{3}		20.5	17.9	14.7	12.8	10.6	8.27		5.73	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		8 x 3						
Wall Thickness		1/2	3/8	5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		31.84	24.93	21.21	17.32	13.25	9.01	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174	0.116	
Span in Feet	2	148	122	107	90	70	49	0.02
	3	99	82	72	60	47	33	0.04
	4	74	61	54	45	35	24	0.06
	5	59	49	43	36	28	20	0.10
	6	49	41	36	30	23	16	0.14
	7	42	35	31	26	20	14	0.19
		38	32	28	23	18	13	0.17
	8	37	31	27	22	18	12	0.25
		34	28	24	20	16	11	0.23
	9	33	27	24	20	16	11	0.32
		30	25	22	18	14	9.9	0.29
	10	30	24	21	18	14	9.8	0.39
		27	22	20	16	13	8.9	0.36
	11	27	22	20	16	13	8.9	0.48
		24	20	18	15	12	8.1	0.43
	12	25	20	18	15	12	8.1	0.57
		22	19	16	14	11	7.4	0.51
	13	23	19	17	14	11	7.5	0.66
		21	17	15	13	9.8	6.8	0.60
	14	21	17	15	13	10	7.0	0.77
		19	16	14	12	9.1	6.3	0.70
	15	20	16	14	12	9.0	6.5	0.88
		18	15	13	11	8.5	5.9	0.80
	16	18	15	13	11	8.8	6.1	1.01
		17	14	12	10	8.0	5.6	0.91
	17	17	14	13	11	8.3	5.8	1.13
		16	13	11	9.6	7.5	5.2	1.03
	18	16	14	12	10	7.8	5.4	1.27
		15	12	11	9.1	7.1	4.9	1.16

Nominal Size		8 x 2					
Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		22.37	19.08	15.62	11.97	8.16	
Design Wall Thickness		0.349	0.291	0.233	0.174	0.116	
Span in Feet	2	97	85	72	57	40	0.02
	3	64	57	48	38	27	0.04
	4	48	43	36	28	20	0.06
	5	39	34	29	23	16	0.10
		35	31	26	21	14	0.09
	6	32	28	24	19	13	0.14
		29	26	22	17	12	0.13
	7	28	24	21	16	11	0.19
		25	22	19	15	10	0.17
	8	24	21	18	14	9.9	0.25
		22	19	16	13	9.0	0.23
	9	21	19	16	13	8.8	0.32
		20	17	15	11	8.0	0.29
	10	19	17	14	11	8.0	0.39
		18	16	13	10	7.2	0.36
	11	18	16	13	10	7.2	0.48
		16	14	12	9.4	6.6	0.43
	12	16	14	12	9.5	6.6	0.57
		15	13	11	8.6	6.0	0.51
	13	15	13	11	8.7	6.1	0.66
		14	12	10	7.9	5.6	0.60
	14	14	12	10	8.1	5.7	0.77
		13	11	9.4	7.4	5.2	0.70
	15	13	11	10	7.6	5.3	0.88
		12	10	8.7	6.9	4.8	0.80
	16	12	11	9.0	7.1	5.0	1.01
		11	9.7	8.2	6.5	4.5	0.91
	17	11	10	8.5	6.7	4.7	1.13
		10	9.1	7.7	6.1	4.3	1.03
	18	11	9.5	8.0	6.3	4.4	1.27
		9.8	8.6	7.3	5.7	4.0	1.16

Web Shear and Property Values

V, kips	137	103	86	69	51	34	
S_x, In.^{3}	14.6	12.1	10.6	8.88	6.94	4.83	

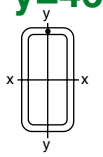
V, kips	103	86	69	51	34	
S_x, In.^{3}	9.56	8.43	7.12	5.61	3.93	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		7 x 5								
Wall Thickness		5/8	1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		42.30	35.24	27.48	23.34	19.02	14.53		9.86	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	0.174		0.116 *	
Span in Feet	2	200	175	143	124	103	81	0.02	48	0.02
	3	134	117	95	83	69	54	0.04	32	0.04
	4	100	88	71	62	52	40	0.07	24	0.06
	5	80	70	57	50	41	32	0.11	19	0.10
	6	67	58	48	41	34	27	0.16	16	0.14
	7	57	50	41	36	29	23	0.22	14	0.19
	8	50	44	36	31	26	20	0.29	12	0.25
	9	45	39	32	28	23	18	0.36	11	0.32
	10	40	35	29	25	21	16	0.45	9.7	0.39
	11	36	32	26	23	19	15	0.54	–	–
		33	29	24	21	17	13	0.49	8.8	0.47
	12	33	29	24	21	17	13	0.65	–	–
		30	27	22	19	16	12	0.59	8.1	0.56
	13	31	27	22	19	16	12	0.76	–	–
		28	24	20	17	14	11	0.69	7.5	0.66
	14	29	25	20	18	15	12	0.88	–	–
		26	23	19	16	13	10	0.80	6.9	0.76
	15	27	23	19	17	14	11	1.01	–	–
		24	21	17	15	13	9.8	0.92	6.5	0.88
	16	25	22	18	16	13	10	1.15	–	–
		23	20	16	14	12	9.2	1.04	6.1	1.00
Web Shear and Property Values										
V, kips		150	120	90	75	60	45		30	
S_x, In.^{3}		19.8	17.3	14.1	12.3	10.2	7.96		5.27 **	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

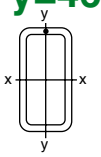
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

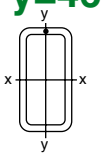
Nominal Size		7 x 4							
Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		31.84	24.93	21.21	17.32	13.25		9.01	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174		0.116	
Span in Feet	2	147	120	105	88	69	0.02	44	0.02
	3	98	80	70	59	46	0.04	29	0.04
	4	73	60	53	44	34	0.07	22	0.07
	5	59	48	42	35	28	0.11	17	0.10
	6	49	40	35	29	23	0.16	15	0.15
	7	42	34	30	25	20	0.22	12	0.20
	8	37	30	26	22	17	0.29	11	0.26
	9	33	27	23	20	15	0.36	–	–
		30	24	21	18	14	0.33	9.7	0.33
	10	29	24	21	18	14	0.45	–	–
		27	22	19	16	13	0.41	8.7	0.41
	11	27	22	19	16	13	0.54	–	–
		24	20	17	15	11	0.49	7.9	0.49
	12	24	20	18	15	11	0.65	–	–
		22	18	16	13	10	0.59	7.3	0.59
	13	23	19	16	14	11	0.76	–	–
		21	17	15	12	9.6	0.69	6.7	0.69
	14	21	17	15	13	9.8	0.88	–	–
		19	16	14	11	8.9	0.80	6.2	0.80
	15	20	16	14	12	9.2	1.01	–	–
		18	15	13	11	8.3	0.92	5.8	0.92
	16	18	15	13	11	8.6	1.15	–	–
		17	14	12	10	7.8	1.04	5.4	1.04
Web Shear and Property Values									
V, kips		120	90	75	60	45		30	
S_x, In.^{3}		14.5	11.9	10.4	8.72	6.80		4.73	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

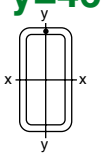
Nominal Size		7 x 3							Nominal Size		6 x 5				
Wall Thickness		1/2	3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		28.43	22.37	19.08	15.62	11.97	8.16		Weight Per Foot		24.93	21.21	17.32	13.25	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.349	0.291	0.233	0.174	
Span in Feet	2	117	98	86	73	57	40	0.02	Span in Feet	2	114	100	83	65	0.02
	3	78	66	58	49	38	27	0.04		3	76	66	56	43	0.05
	4	59	49	43	36	29	20	0.07		4	57	50	42	33	0.08
	5	47	39	35	29	23	16	0.11		5	46	40	33	26	0.13
	6	39	33	29	24	19	13	0.16		6	38	33	28	22	0.19
	7	34	28	25	21	16	11	0.22		7	33	28	24	19	0.26
		30	26	22	19	15	10	0.20		8	29	25	21	16	0.34
	8	29	25	22	18	14	10	0.29		9	25	22	19	14	0.42
		27	22	20	17	13	9.1	0.26		10	23	20	17	13	0.52
	9	26	22	19	16	13	8.9	0.36		11	21	18	15	12	0.63
		24	20	17	15	12	8.1	0.33			19	16	14	11	0.58
	10	23	20	17	15	11	8.0	0.45		12	19	17	14	11	0.75
		21	18	16	13	10	7.3	0.41			17	15	13	9.9	0.69
	11	21	18	16	13	10	7.3	0.54		13	18	15	13	10	0.88
		19	16	14	12	9.0	6.6	0.49			16	14	12	9.1	0.80
	12	20	16	14	12	10	6.7	0.65		14	16	14	12	9.3	1.03
		18	15	13	11	8.7	6.1	0.59			15	13	11	8.5	0.93
	13	18	15	13	11	8.8	6.1	0.76							
		16	14	12	10	8.0	5.6	0.69							
	14	17	14	12	10	8.2	5.7	0.88							
		15	13	11	9.0	7.4	5.2	0.80							
	15	16	13	12	9.7	7.6	5.3	1.01							
		14	12	10	8.8	6.9	4.8	0.92							
	16	15	12	11	9.1	7.1	5.0	1.15							
		13	11	9.8	8.3	6.5	4.5	1.04							
Web Shear and Property Values															
V, kips		120	90	75	60	45	30		V, kips		77	64	51	38	
S_x, In.^{3}		11.6	9.73	8.54	7.19	5.65	3.95		S_x, In.^{3}		11.3	9.85	8.25	6.44	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

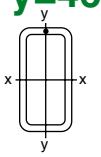
Nominal Size		6 x 4								Nominal Size		6 x 3						
Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches	Wall Thickness		1/2	3/8	5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		28.43	22.37	19.08	15.62	11.97		8.16		Weight Per Foot		25.03	19.82	16.96	13.91	10.70	7.31	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174		0.116		Design Wall Thickness		0.465	0.349	0.291	0.233	0.174	0.116	
Span in Feet	2	114	95	84	70	55	0.02	35	0.02	Span in Feet	2	90	77	68	57	45	32	0.02
	3	76	64	56	47	37	0.05	23	0.04		3	60	51	45	38	30	21	0.05
	4	57	48	42	35	28	0.08	18	0.08		4	45	38	34	29	23	16	0.08
	5	46	38	33	28	22	0.13	14	0.12		5	36	31	27	23	18	13	0.13
	6	38	32	28	23	18	0.19	12	0.17		6	30	26	23	19	15	11	0.19
	7	33	27	24	20	16	0.26	10	0.23		7	26	22	19	16	13	9.1	0.26
	8	29	24	21	18	14	0.34	8.8	0.30			23	20	18	15	12	8.3	0.23
	9	25	21	19	16	12	0.42	—	—		8	23	19	17	14	11	7.9	0.34
		23	19	17	14	11	0.39	7.8	0.39			21	17	15	13	10	7.2	0.30
	10	23	19	17	14	11	0.52	—	—		9	20	17	15	13	10	7.1	0.42
		21	17	15	13	10	0.48	7.0	0.48			18	15	14	12	9.1	6.4	0.39
	11	21	17	15	13	10	0.63	—	—		10	18	15	14	11	9.0	6.4	0.52
		19	16	14	12	9.1	0.58	6.4	0.58			16	14	12	10	8.2	5.8	0.48
	12	19	16	14	12	9.2	0.75	—	—		11	16	14	12	10	8.2	5.8	0.63
		17	14	13	11	8.4	0.69	5.8	0.69			15	13	11	9.5	7.5	5.3	0.58
	13	18	15	13	11	8.5	0.88	—	—		12	15	13	11	9.5	7.5	5.3	0.75
		16	13	12	9.9	7.7	0.80	5.4	0.80			14	12	10	8.7	6.9	4.8	0.69
	14	16	14	12	10	7.9	1.03	—	—		13	14	12	10	8.8	7.0	4.9	0.88
		15	12	11	9.1	7.2	0.93	5.0	0.93			13	11	9.5	8.0	6.3	4.4	0.80
											14	13	11	9.7	8.2	6.5	4.5	1.03
												12	9.9	8.8	7.4	5.9	4.1	0.93
Web Shear and Property Values																		
V, kips		103	77	64	51	38		26		V, kips		103	77	64	51	38	26	
S_x, In.^{3}		11.3	9.43	8.27	6.96	5.46		3.81		S_x, In.^{3}		8.94	7.57	6.69	5.66	4.47	3.14	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

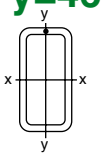
Nominal Size		6 x 2						Nominal Size		5 x 4					
Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		17.27	14.83	12.21	9.42	6.46		Weight Per Foot		25.03	19.82	16.96	13.91	10.70	
Design Wall Thickness		0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.465	0.349	0.291	0.233	0.174	
Span in Feet	2	58	52	44	35	25	0.02	Span in Feet	2	86	72	64	54	43	0.03
	3	39	34	29	24	17	0.05		3	57	48	43	36	28	0.06
	4	29	26	22	18	12	0.08		4	43	36	32	27	21	0.10
	5	23	21	18	14	10	0.13		5	34	29	26	22	17	0.16
		21	19	16	13	9.1	0.12		6	29	24	21	18	14	0.23
	6	19	17	15	12	8.3	0.19		7	25	21	18	15	12	0.31
		18	16	13	11	7.6	0.17		8	21	18	16	14	11	0.40
	7	17	15	13	10	7.1	0.26		9	19	16	14	12	9.5	0.51
		15	13	11	9.2	6.5	0.23			17	15	13	11	8.6	0.46
	8	14	13	11	8.8	6.2	0.34		10	17	14	13	11	8.5	0.63
		13	12	10	8.0	5.7	0.30			16	13	12	10	7.8	0.57
	9	13	11	9.8	7.8	5.6	0.42		11	16	13	12	9.8	7.8	0.76
		12	10	8.9	7.1	5.0	0.39			14	12	11	8.9	7.1	0.69
	10	12	10	8.8	7.1	5.0	0.52								
		11	9.4	8.0	6.4	4.5	0.48								
	11	11	9.4	8.0	6.4	4.5	0.63								
		9.6	8.5	7.3	5.8	4.1	0.58								
	12	9.6	8.6	7.4	5.9	4.2	0.75								
		8.8	7.8	6.7	5.4	3.8	0.69								
	13	8.9	8.0	6.8	5.4	3.8	0.88								
		8.1	7.2	6.2	4.9	3.5	0.80								
	14	8.3	7.4	6.3	5.0	3.6	1.03								
		7.5	6.7	5.7	4.6	3.2	0.93								
Web Shear and Property Values															
V, kips		77	64	51	38	26		V, kips		86	64	54	43	32	
S_x, In.^{3}		5.71	5.11	4.37	3.49	2.47		S_x, In.^{3}		8.48	7.16	6.32	5.35	4.22	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

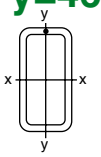
Nominal Size		5 x 3							Nominal Size		5 x 21/2			
Wall Thickness		1/2	3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		1/4	3/16	1/8	Δ Inches
Weight Per Foot		21.63	17.27	14.83	12.21	9.42	6.46		Weight Per Foot		11.36	8.78	6.03	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.233	0.174	0.116	
Span in Feet	2	66	57	51	43	35	24	0.03	Span in Feet	2	38	30	22	0.03
	3	44	38	34	29	23	16	0.06		3	25	20	14	0.06
	4	33	29	25	22	17	12	0.10		4	19	15	11	0.10
	5	27	23	20	17	14	9.8	0.16		5	15	12	8.7	0.16
	6	22	19	17	14	12	8.1	0.23		6	13	10	7.2	0.23
	7	19	16	15	12	9.9	7.0	0.31			12	9.2	6.6	0.21
		17	15	13	11	9.0	6.3	0.28		7	11	8.7	6.2	0.31
	8	17	14	13	11	8.6	6.1	0.40			9.9	7.9	5.6	0.28
		15	13	12	9.9	7.8	5.5	0.37		8	9.5	7.6	5.4	0.40
	9	15	13	11	9.6	7.7	5.4	0.51			8.6	6.9	4.9	0.37
		13	12	10	8.8	7.0	4.9	0.46		9	8.5	6.8	4.8	0.51
	10	13	11	10	8.7	6.9	4.9	0.63			7.7	6.2	4.4	0.46
		12	10	9.3	7.9	6.3	4.4	0.57		10	7.6	6.1	4.3	0.63
	11	12	10	9.3	7.9	6.3	4.4	0.76			6.9	5.5	3.9	0.57
		11	9.5	8.4	7.2	5.7	4.0	0.69		11	6.9	5.5	3.9	0.76
											6.3	5.0	3.6	0.69
Web Shear and Property Values														
V, kips		86	64	54	43	32	21		V, kips		43	32	21	
S_x, In.^{3}		6.56	5.65	5.03	4.29	3.41	2.41		S_x, In.^{3}		3.76	3.01	2.14	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

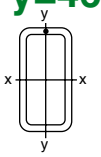
Nominal Size		5 x 2						Nominal Size		4 x 3					
Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		14.72	12.70	10.51	8.15	5.61		Weight Per Foot		14.72	12.70	10.51	8.15	5.61	
Design Wall Thickness		0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.349	0.291	0.233	0.174	0.116	
Span in Feet	2	42	38	33	26	19	0.03	Span in Feet	2	40	36	31	25	18	0.03
	3	28	25	22	18	13	0.06		3	27	24	21	17	12	0.07
	4	21	19	16	13	9.4	0.10		4	20	18	16	12	8.9	0.13
	5	17	15	13	11	7.5	0.16		5	16	14	12	10	7.1	0.20
		15	14	12	9.6	6.8	0.14		6	13	12	10	8.3	5.9	0.28
	6	14	13	11	8.8	6.3	0.23		7	11	10	8.9	7.1	5.1	0.38
		13	11	9.9	8.0	5.7	0.21			10	9.4	8.1	6.5	4.6	0.35
	7	12	11	9.3	7.5	5.4	0.31		8	10	9.0	7.8	6.2	4.5	0.50
		11	9.8	8.5	6.8	4.9	0.28			9.1	8.2	7.1	5.7	4.0	0.46
	8	10	9.5	8.2	6.6	4.7	0.40		9	8.9	8.0	6.9	5.6	4.0	0.64
		9.5	8.6	7.4	6.0	4.3	0.37			8.1	7.3	6.3	5.0	3.6	0.58
	9	9.3	8.4	7.3	5.8	4.2	0.51								
		8.5	7.6	6.6	5.3	3.8	0.46								
	10	8.4	7.6	6.5	5.3	3.8	0.63								
		7.6	6.9	5.9	4.8	3.4	0.57								
	11	7.6	6.9	5.9	4.8	3.4	0.76								
		6.9	6.3	5.4	4.3	3.1	0.69								
Web Shear and Property Values															
V, kips		64	54	43	32	21		V, kips		51	43	34	26	17	
S_x, In.^{3}		4.14	3.74	3.23	2.60	1.86		S_x, In.^{3}		3.96	3.57	3.07	2.47	1.76	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

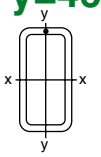
Nominal Size		4 x 2 1/2				Nominal Size		4 x 2					
Wall Thickness		5/16	1/4	3/16	Δ Inches	Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		11.64	9.66	7.51		Weight Per Foot		12.17	10.58	8.81	6.87	4.75	
Design Wall Thickness		0.291	0.233	0.174		Design Wall Thickness		0.349	0.291	0.233	0.174	0.116	
Span in Feet	2	31	27	22	0.03	Span in Feet	2	28	26	23	19	13	0.03
	3	21	18	15	0.07		3	19	17	15	12	8.9	0.07
	4	15	13	11	0.13		4	14	13	11	9.3	6.7	0.13
	5	12	11	8.7	0.20		5	11	10	9.1	7.4	5.3	0.20
	6	10	9.0	7.3	0.28			10	9.4	8.3	6.7	4.9	0.18
		9.4	8.2	6.6	0.26		6	9.4	8.6	7.6	6.2	4.5	0.28
	7	8.8	7.7	6.2	0.38			8.6	7.9	6.9	5.6	4.0	0.26
		8.0	7.0	5.7	0.35		7	8.1	7.4	6.5	5.3	3.8	0.38
	8	7.7	6.7	5.4	0.50			7.4	6.7	5.9	4.8	3.5	0.35
		7.0	6.1	4.9	0.46		8	7.1	6.5	5.7	4.6	3.3	0.50
	9	6.9	6.0	4.8	0.64			6.4	5.9	5.2	4.2	3.0	0.46
		6.3	5.4	4.4	0.58		9	6.3	5.8	5.1	4.1	3.0	0.64
								5.7	5.2	4.6	3.7	2.7	0.58
Web Shear and Property Values													
V, kips		43	34	26		V, kips		51	43	34	26	17	
S_x, In.^{3}		3.06	2.66	2.15		S_x, In.^{3}		2.80	2.56	2.25	1.83	1.32	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

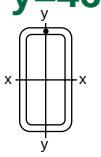
Nominal Size		3 1/2 x 2 1/2						Nominal Size		3 x 2 1/2				
Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		12.17	10.58	8.81	6.87	4.75		Weight Per Foot		9.51	7.96	6.23	4.33	
Design Wall Thickness		0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.291	0.233	0.174	0.116	
Span in Feet	1	55	50	44	36	26	0.01	Span in Feet	1	39	35	29	21	0.01
	2	27	25	22	18	13	0.04		2	20	17	14	10	0.04
	3	18	17	15	12	8.6	0.08		3	13	12	9.5	6.9	0.09
	4	14	13	11	8.9	6.5	0.14		4	9.8	8.7	7.1	5.2	0.17
	5	11	10	8.8	7.1	5.2	0.22		5	7.9	6.9	5.7	4.2	0.26
	6	9.1	8.4	7.3	5.9	4.3	0.32		6	6.5	5.8	4.8	3.5	0.38
		8.3	7.6	6.7	5.4	3.9	0.29			5.9	5.2	4.3	3.2	0.34
	7	7.8	7.2	6.3	5.1	3.7	0.44		7	5.6	4.9	4.1	3.0	0.51
		7.1	6.5	5.7	4.6	3.4	0.40			5.1	4.5	3.7	2.7	0.47
	8	6.9	6.3	5.5	4.5	3.2	0.57							
		6.2	5.7	5.0	4.0	2.9	0.52							
Web Shear and Property Values														
V, kips		45	37	30	22	15		V, kips		32	26	19	13	
S_x, In.^{3}		2.71	2.48	2.17	1.76	1.28		S_x, In.^{3}		1.94	1.71	1.41	1.03	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		3 x 2					Nominal Size		3 x 1 1/2				Nominal Size		3 x 1		
Wall Thickness		5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		1/4	3/16	1/8	Δ Inches	Wall Thickness		3/16	1/8	Δ Inches
Weight Per Foot		8.45	7.11	5.59	3.90		Weight Per Foot		6.26	4.96	3.48		Weight Per Foot		4.32	3.05	
Design Wall Thickness		0.291	0.233	0.174	0.116		Design Wall Thickness		0.233	0.174	0.116		Design Wall Thickness		0.174	0.116	
Span in Feet	1	32	29	24	18	0.01	Span in Feet	1	23	19	14	0.01	Span in Feet	1	14	11	0.01
	2	16	14	12	8.8	0.04		2	11	9.6	7.1	0.04		2	7.2	5.5	0.04
	3	11	9.6	8.0	5.8	0.09		3	7.6	6.4	4.8	0.09		3	4.8	3.7	0.09
	4	8.0	7.2	6.0	4.4	0.17		4	5.7	4.8	3.6	0.17			4.4	3.3	0.09
	5	6.4	5.7	4.8	3.5	0.26			5.2	4.3	3.2	0.15		4	3.6	2.8	0.17
		5.8	5.2	4.3	3.2	0.24		5	4.5	3.8	2.9	0.26			3.3	2.5	0.15
	6	5.3	4.8	4.0	2.9	0.38			4.1	3.5	2.6	0.24		5	2.9	2.2	0.26
		4.8	4.4	3.6	2.7	0.34		6	3.8	3.2	2.4	0.38			2.6	2.0	0.24
	7	4.6	4.1	3.4	2.5	0.51			3.4	2.9	2.2	0.34		6	2.4	1.8	0.38
		4.2	3.7	3.1	2.3	0.47		7	3.2	2.7	2.0	0.51			2.2	1.7	0.34
									2.9	2.5	1.9	0.47		7	2.1	1.6	0.51
															1.9	1.4	0.47

Web Shear and Property Values

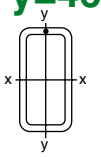
V, kips	32	26	19	13		V, kips	26	19	13		V, kips	19	13	
S_x, In.^{3}	1.58	1.42	1.18	0.866		S_x, In.^{3}	1.12	0.945	0.706		S_x, In.^{3}	0.713	0.545	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		2 1/2 x 1 1/2				Nominal Size		2 x 1 1/2			Nominal Size		2 x 1		
Wall Thickness		1/4	3/16	1/8	Δ Inches	Wall Thickness		3/16	1/8	Δ Inches	Wall Thickness		3/16	1/8	Δ Inches
Weight Per Foot		5.41	4.32	3.05		Weight Per Foot		3.68	2.63		Weight Per Foot		3.04	2.20	
Design Wall Thickness		0.233	0.174	0.116		Design Wall Thickness		0.174	0.116		Design Wall Thickness		0.174	0.116	
Span in Feet	1	17	14	11	0.01	Span in Feet	1	10	7.8	0.02	Span in Feet	1	7.1	5.7	0.02
	2	8.3	7.1	5.4	0.05		2	5.0	3.9	0.06		2	3.5	2.8	0.06
	3	5.5	4.8	3.6	0.11		3	3.3	2.6	0.14		3	2.4	1.9	0.14
	4	4.1	3.6	2.7	0.20		4	2.5	1.9	0.25			2.1	1.7	0.13
		3.8	3.2	2.5	0.18			2.3	1.8	0.23		4	1.8	1.4	0.25
	5	3.3	2.9	2.2	0.31								1.6	1.3	0.23
		3.0	2.6	2.0	0.29										
Web Shear and Property Values															
V, kips		21	16	11		V, kips		13	8.5		V, kips		13	8.5	
S_x, In.^{3}		0.820	0.705	0.535		S_x, In.^{3}		0.494	0.383		S_x, In.^{3}		0.349	0.280	

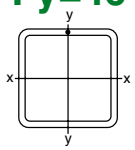
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

Notes

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		16 x 16								Nominal Size		14 x 14						
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	5/16	Δ Inches	Wall Thickness		5/8	1/2	Δ Inches	3/8	Δ Inches	5/16	Δ Inches
Weight Per Foot		127.37		103.30		78.52		65.87		Weight Per Foot		110.36	89.68		68.31		57.36	
Design Wall Thickness		0.581		0.465		0.349 *		0.291*		Design Wall Thickness		0.581	0.465		0.349 *		0.291*	
Span in Feet	4			548	0.03	411	0.03	343	0.02	Span in Feet	4	599	479	0.04	360	0.03	291	0.03
	5	684	0.05	519	0.04	372	0.04	289	0.04		5	518	429	0.06	297	0.05	233	0.05
	6	577	0.07	432	0.06	310	0.06	241	0.05		6	432	358	0.08	247	0.07	194	0.07
	7	494	0.10	371	0.09	265	0.08	207	0.07		7	370	306	0.11	212	0.10	166	0.09
	8	433	0.13	324	0.11	232	0.11	181	0.10		8	324	268	0.14	185	0.13	145	0.12
	9	385	0.16	288	0.14	206	0.13	161	0.12		9	288	238	0.18	165	0.16	129	0.15
	10	346	0.20	259	0.18	186	0.17	145	0.15		10	259	215	0.22	148	0.20	116	0.18
	11	315	0.24	236	0.22	169	0.20	131	0.18		11	236	195	0.27	135	0.24	106	0.22
	12	288	0.28	216	0.26	155	0.24	121	0.22		12	216	179	0.32	124	0.29	97	0.27
	13	266	0.33	200	0.30	143	0.28	111	0.26		13	199	165	0.38	114	0.34	89	0.31
	14	247	0.38	185	0.35	133	0.32	103	0.30		14	185	153	0.44	106	0.39	83	0.36
	15	231	0.44	173	0.40	124	0.37	96	0.34		15	173	143	0.50	99	0.45	78	0.41
	16	216	0.50	162	0.46	116	0.42	90	0.39		16	162	134	0.57	93	0.51	73	0.47
	17	204	0.57	153	0.52	109	0.48	85	0.44		17	152	126	0.65	87	0.58	68	0.53
	18	192	0.64	144	0.58	103	0.54	80	0.49		18	144	119	0.73	82	0.65	65	0.60
	19	182	0.71	137	0.64	98	0.60	76	0.55		19	136	113	0.81	78	0.72	61	0.66
	20	173	0.79	130	0.71	93	0.66	72	0.61		20	130	107	0.90	74	0.80	58	0.74
	21	165	0.87	124	0.79	88	0.73	69	0.67		21	123	102	0.99	71	0.88	55	0.81
	22	157	0.95	118	0.86	84	0.80	66	0.73		22	118	98	1.09	67	0.97	53	0.89
	23	150	1.04	113	0.94	81	0.87	63	0.80		23	113	93	1.19	64	1.05	51	0.97
	24	144	1.13	108	1.03	77	0.95	60	0.87		24	108	89	1.29	62	1.15	48	1.06
	25	138	1.23	104	1.12	74	1.03	58	0.95		25	104	86	1.40	59	1.25	47	1.15
	26	133	1.33	100	1.21	71	1.12	56	1.03		26	100	83	1.52	57	1.35	45	1.24
	27	128	1.43	96	1.30	69	1.20	54	1.11		27	96	79	1.64	55	1.45	43	1.34
	28	124	1.54	93	1.40	66	1.29	52	1.19		28	93	77	1.76	53	1.56	42	1.44
	29	119	1.65	89	1.50	64	1.39	50	1.28		29	89	74	1.89	51	1.68	40	1.55
	30	115	1.77	86	1.61	62	1.49	48	1.37		30	86	72	2.02	49	1.79	39	1.66
	31	112	1.89	84	1.71	60	1.59	47	1.46		31	84	69	2.16	–	–	–	–
	32	108	2.01	81	1.83	58	1.69	45	1.55			76	63	1.96	48	1.92	38	1.77
	33	105	2.14	79	1.94	56	1.80	44	1.65		32	81	67	2.30	–	–	–	–
	34	102	2.27	76	2.06	55	1.91	43	1.76			74	61	2.09	46	2.04	36	1.89
	35	99	2.40	–	–	–	–	–	–									
		90	2.19	74	2.19	53	2.02	41	1.86									
	36	96	2.54	–	–	–	–	–	–									
		87	2.31	72	2.31	52	2.14	40	1.97									
	37	94	2.69	–	–	–	–	–	–									
		85	2.44	70	2.44	50	2.26	39	2.08									
Web Shear and Property Values																		
V, kips		342		274		205		171		V, kips		299	240		180		150	
S_x, In.^{3}		171		141		101 **		78.6 **		S_x, In.^{3}		128	106		80.6 **		63.2 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

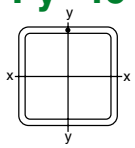
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of 238/ $\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		12 x 12								
Wall Thickness		5/8	1/2	Δ Inches	3/8	Δ Inches	5/16	Δ Inches	1/4	Δ Inches
Weight Per Foot		93.34	76.07		58.10		48.86		39.43	
Design Wall Thickness		0.581	0.465		0.349		0.291 *		0.233 *	
Span in Feet	4	462	386	0.04	274	0.04	225	0.04	167	0.03
	5	370	308	0.07	219	0.06	180	0.06	134	0.05
	6	308	257	0.09	182	0.09	150	0.08	111	0.08
	7	264	220	0.13	156	0.12	129	0.11	95	0.10
	8	231	193	0.17	137	0.15	113	0.15	83	0.13
	9	205	171	0.21	122	0.19	100	0.19	74	0.17
	10	185	154	0.26	109	0.24	90	0.23	67	0.21
	11	168	140	0.32	100	0.29	82	0.28	61	0.25
	12	154	129	0.38	91	0.34	75	0.33	56	0.30
	13	142	119	0.44	84	0.40	69	0.39	51	0.35
	14	132	110	0.51	78	0.47	64	0.45	48	0.41
	15	123	103	0.59	73	0.54	60	0.52	45	0.47
	16	115	96	0.67	68	0.61	56	0.59	42	0.53
	17	109	91	0.76	64	0.69	53	0.67	39	0.60
	18	103	86	0.85	61	0.77	50	0.75	37	0.68
	19	97	81	0.94	58	0.86	47	0.83	35	0.75
	20	92	77	1.05	55	0.95	45	0.92	33	0.84
	21	88	73	1.15	52	1.05	43	1.01	32	0.92
	22	84	70	1.27	50	1.15	41	1.11	30	1.01
	23	80	67	1.38	48	1.26	39	1.22	29	1.11
	24	77	64	1.51	46	1.37	38	1.33	28	1.20
	25	74	62	1.64	44	1.49	36	1.44	27	1.31
	26	71	59	1.77	42	1.61	35	1.56	26	1.41
	27	68	57	1.91	–	–	–	–	–	–
		62	52	1.73	41	1.73	33	1.68	25	1.52
	28	66	55	2.05	–	–	–	–	–	–
		60	50	1.87	41	1.87	32	1.80	24	1.64
Web Shear and Property Values										
V, kips		257	205		154		129		103	
S_x, In.^{3}		91.3	76.2		59.5		49.0 **		36.3 **	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

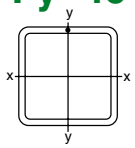
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		10 x 10									
Wall Thickness		5/8	1/2	3/8	Δ Inches	5/16	Δ Inches	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		76.33	62.46	47.90		40.35		32.63		24.73	
Design Wall Thickness		0.581	0.465	0.349		0.291		0.233 *		0.174 *	
Span in Feet	2	428			0.01	214	0.01	171	0.01	128	0.01
	3	410	342	257	0.03	212	0.03	165	0.02	111	0.02
	4	308	259	204	0.05	159	0.05	124	0.04	83	0.04
	5	246	207	164	0.08	127	0.07	99	0.07	67	0.06
	6	205	173	136	0.11	106	0.10	82	0.10	56	0.09
	7	176	148	117	0.15	91	0.14	71	0.13	48	0.12
	8	154	130	102	0.20	79	0.18	62	0.17	42	0.15
	9	137	115	91	0.25	71	0.23	55	0.22	37	0.19
	10	123	104	82	0.31	63	0.29	49	0.27	33	0.24
	11	112	94	74	0.38	58	0.35	45	0.33	30	0.29
	12	103	86	68	0.45	53	0.41	41	0.39	28	0.34
	13	95	80	63	0.53	49	0.48	38	0.46	26	0.40
	14	88	74	58	0.62	45	0.56	35	0.53	24	0.47
	15	82	69	55	0.71	42	0.64	33	0.61	22	0.54
	16	77	65	51	0.80	40	0.73	31	0.70	21	0.61
	17	72	61	48	0.91	37	0.83	29	0.79	20	0.69
	18	68	58	45	1.02	35	0.93	27	0.88	19	0.78
	19	65	55	43	1.13	33	1.03	26	0.98	18	0.86
	20	62	52	41	1.26	32	1.14	25	1.09	17	0.96
	21	59	49	39	1.39	30	1.26	24	1.20	16	1.06
	22	56	47	37	1.52	–	–	–	–	–	–
		51	43	34	1.38	29	1.38	22	1.32	15	1.16
	23	54	45	36	1.66	–	–	–	–	–	–
		49	41	32	1.51	28	1.51	22	1.44	14	1.27
Web Shear and Property Values											
V, kips		214	171	128		107		86		64	
S_x, In.^{3}		60.8	51.2	40.4		34.5		26.9 **		18.1 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

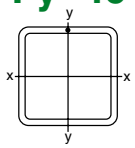
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		9 x 9							
Wall Thickness		1/2	3/8	5/16	Δ Inches	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		55.66	42.79	36.10		29.23		22.18	
Design Wall Thickness		0.465	0.349	0.291		0.233*		0.174*	
Span in Feet	2	308	231	193	0.01	154	0.01	115	0.01
	3	274	217	186	0.03	138	0.03	93	0.02
	4	205	163	140	0.06	104	0.05	70	0.04
	5	164	130	112	0.09	83	0.08	56	0.07
	6	137	109	93	0.13	69	0.11	47	0.10
	7	117	93	80	0.17	59	0.15	40	0.14
	8	103	81	70	0.22	52	0.20	35	0.18
	9	91	72	62	0.28	46	0.26	31	0.22
	10	82	65	56	0.35	41	0.31	28	0.28
	11	75	59	51	0.42	38	0.38	25	0.34
	12	68	54	47	0.50	35	0.45	23	0.40
	13	63	50	43	0.59	32	0.53	22	0.47
	14	59	47	40	0.68	30	0.62	20	0.54
	15	55	43	37	0.79	28	0.71	19	0.62
	16	51	41	35	0.89	26	0.81	17	0.71
	17	48	38	33	1.01	24	0.91	16	0.80
	18	46	36	31	1.13	23	1.02	16	0.90
	19	43	34	29	1.26	22	1.14	15	1.00
	20	41	33	28	1.40	–	–	–	–
		37	30	25	1.27	21	1.26	14	1.11
	21	39	31	27	1.54	–	–	–	–
		36	28	24	1.40	20	1.39	13	1.22
Web Shear and Property Values									
V, kips		154	116	96		77		58	
S_x, In.^{3}		40.6	32.2	27.6		22.5**		15.2**	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

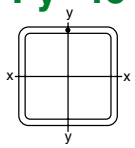
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of 238/$\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

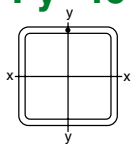
Nominal Size		8 x 8								
Wall Thickness		5/8	1/2	3/8	5/16	Δ Inches	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		59.32	48.85	37.69	31.84		25.82		19.63	
Design Wall Thickness		0.581	0.465	0.349	0.291		0.233		0.174 *	
Span in Feet	2	342	274	205	171	0.02	137	0.01	102	0.01
	3	246	210	168	144	0.04	109	0.03	77	0.03
	4	185	158	126	108	0.06	81	0.06	58	0.05
	5	148	126	101	87	0.10	65	0.09	46	0.08
	6	123	105	84	72	0.14	54	0.13	38	0.12
	7	106	90	72	62	0.19	47	0.17	33	0.16
	8	92	79	63	54	0.25	41	0.23	21	0.21
	9	82	70	56	48	0.32	36	0.29	26	0.27
	10	74	63	50	43	0.39	33	0.36	23	0.33
	11	67	57	46	39	0.48	30	0.43	21	0.40
	12	62	53	42	36	0.57	27	0.51	19	0.47
	13	57	49	39	33	0.66	25	0.60	18	0.55
	14	53	45	36	31	0.77	23	0.70	16	0.64
	15	49	42	34	29	0.88	22	0.80	15	0.74
	16	46	39	31	27	1.01	20	0.91	14	0.84
	17	43	37	30	25	1.13	19	1.03	14	0.95
	18	41	35	28	24	1.27	—	—	—	—
		37	32	25	22	1.16	18	1.16	13	1.06
Web Shear and Property Values										
V, kips		171	137	103	86		69		51	
S_x, In.^{3}		36.5	31.2	24.9	21.4		17.7		12.5 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.
** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		7 x 7							
Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		50.81	42.05	32.58	27.59	22.42		17.08	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233		0.174 *	
Span in Feet	2	270	233	180	150	120	0.02	90	0.02
	3	180	155	125	108	90	0.04	61	0.04
	4	135	116	94	81	67	0.07	46	0.06
	5	108	93	75	65	54	0.11	37	0.10
	6	90	78	63	54	45	0.16	31	0.14
	7	77	67	54	46	38	0.22	26	0.19
	8	68	58	47	40	34	0.29	23	0.25
	9	60	52	42	36	30	0.36	20	0.32
	10	54	47	38	32	27	0.45	18	0.40
	11	49	42	34	29	24	0.54	17	0.48
	12	45	39	31	27	22	0.65	15	0.57
	13	42	36	29	25	21	0.76	14	0.67
	14	39	33	27	23	19	0.88	13	0.78
	15	36	31	25	22	18	1.01	12	0.89
	16	34	29	24	20	17	1.15	—	—
		31	26	21	18	15	1.04	12	1.02
Web Shear and Property Values									
V, kips		150	120	90	75	60		45	
S_x, In.^{3}		26.7	23.0	18.6	16.0	13.3		10.0 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

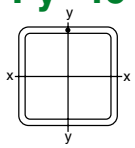
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		6 x 6									
Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		42.30	35.24	27.48	23.34	19.02		14.53		9.86	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233		0.174		0.116 *	
Span in Feet	2	186	163	133	115	97	0.02	68	0.02	41	0.02
	3	124	109	88	77	64	0.05	46	0.04	28	0.04
	4	93	81	66	58	48	0.08	34	0.08	21	0.07
	5	74	65	53	46	39	0.13	27	0.12	17	0.10
	6	62	54	44	38	32	0.19	23	0.17	14	0.15
	7	53	47	38	33	28	0.26	20	0.23	12	0.20
	8	47	41	33	29	24	0.34	17	0.30	10	0.27
	9	41	36	29	26	21	0.42	15	0.39	9.2	0.34
	10	37	33	27	23	19	0.52	14	0.48	8.3	0.42
	11	34	30	24	21	18	0.63	12	0.58	7.5	0.50
	12	31	27	22	19	16	0.75	11	0.69	6.9	0.60
	13	29	25	20	18	15	0.88	11	0.80	6.4	0.70
	14	27	23	19	16	14	1.03	–	–	–	–
		24	21	17	15	13	0.93	9.8	0.93	5.9	0.81
Web Shear and Property Values											
V, kips		128	103	77	64	51		38		26	
S_x, In.^{3}		18.4	16.1	13.1	11.4	9.54		7.42		4.51 **	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

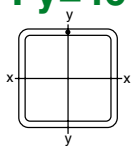
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		5 1/2 x 5 1/2							
Wall Thickness		3/8	5/16	1/4	Δ Inches	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		24.93	21.21	17.32		13.25		9.01	
Design Wall Thickness		0.349	0.291	0.233		0.174		0.116 *	
Span in Feet	2	109	95	80	0.02	57	0.02	36	0.02
	3	73	64	53	0.05	38	0.05	24	0.04
	4	55	48	40	0.09	28	0.08	18	0.08
	5	44	38	32	0.14	23	0.13	14	0.12
	6	36	32	27	0.21	19	0.19	12	0.17
	7	31	27	23	0.28	16	0.25	10	0.23
	8	27	24	20	0.37	14	0.33	9.0	0.30
	9	24	21	18	0.46	13	0.42	8.0	0.38
	10	22	19	16	0.57	11	0.52	7.2	0.47
	11	20	17	15	0.69	10	0.63	6.5	0.57
	12	18	16	13	0.82	—	—	—	—
		17	14	12	0.75	9.5	0.75	6.0	0.68
Web Shear and Property Values									
V, kips		71	59	47		35		23	
S_x, In.^{3}		10.8	9.43	7.90		6.17		3.91 **	

Nominal Size		5 x 5							
Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		28.43	22.37	19.08	15.62	11.97		8.16	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174		0.116 *	
Span in Feet	2	105	88	77	65	51	0.03	31	0.02
	3	70	58	51	43	34	0.06	20	0.05
	4	53	44	39	32	25	0.10	15	0.09
	5	42	35	31	26	20	0.16	12	0.14
	6	35	29	26	22	17	0.23	10	0.20
	7	30	25	22	19	15	0.31	8.8	0.27
	8	26	22	19	16	13	0.40	7.7	0.35
	9	23	19	17	14	11	0.51	6.8	0.44
	10	21	18	15	13	10	0.63	6.1	0.54
	11	19	16	14	12	9.3	0.76	—	—
		17	15	13	11	8.4	0.69	5.6	0.66
V, kips		86	64	54	43	32		21	
S_x, In.^{3}		10.4	8.67	7.61	6.41	5.03		3.34 **	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

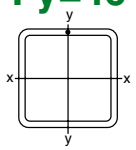
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

Nominal Size		4 1/2 x 4 1/2								Nominal Size		4 x 4							
Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches	Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		25.03	19.82	16.96	13.91	10.70		7.31		Weight Per Foot		21.63	17.27	14.83	12.21	9.42		6.46	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174		0.116 *		Design Wall Thickness		0.465	0.349	0.291	0.233	0.174		0.116	
Span in Feet	2	81	69	61	51	41	0.03	26	0.03	Span in Feet	2	60	52	46	39	31	0.03	20	0.03
	3	54	46	40	34	27	0.06	17	0.06		3	40	35	31	26	21	0.07	13	0.06
	4	41	34	30	26	20	0.11	13	0.10		4	30	26	23	20	16	0.13	10	0.11
	5	32	27	24	21	16	0.17	10	0.16		5	24	21	18	16	13	0.20	8.1	0.18
	6	27	23	20	17	14	0.25	8.6	0.23		6	20	17	15	13	10	0.28	6.7	0.26
	7	23	20	17	15	12	0.34	7.4	0.31		7	17	15	13	11	9.0	0.38	5.8	0.35
	8	20	17	15	13	10	0.45	6.4	0.40		8	15	13	12	9.9	7.8	0.50	5.1	0.46
	9	18	15	13	11	9.0	0.57	5.7	0.51		9	13	12	10	8.8	7.0	0.64	–	–
	10	16	14	12	10	8.1	0.70	–	–			12	10	9.3	8.0	6.3	0.58	4.5	0.58
		15	12	11	9.3	7.4	0.63	5.2	0.63										
Web Shear and Property Values																			
V, kips		77	58	48	39	29		19		V, kips		68	51	43	34	26		17	
S_x, In.^{3}		8.02	6.78	5.99	5.08	4.01		2.80 **		S_x, In.^{3}		5.95	5.13	4.57	3.90	3.10		2.20	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

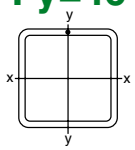
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

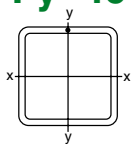
Nominal Size		3 1/2 x 3 1/2						Nominal Size		3 x 3					
Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		14.72	12.70	10.51	8.15	5.61		Weight Per Foot		12.17	10.58	8.81	6.87	4.75	
Design Wall Thickness		0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.349	0.291	0.233	0.174	0.116	
Span in Feet	1	75	68	58	45	30	0.01	Span in Feet	1	51	47	41	33	24	0.01
	2	37	34	29	23	17	0.04		2	25	23	20	17	12	0.04
	3	25	23	19	16	11	0.08		3	17	16	14	11	8.0	0.09
	4	19	17	15	12	8.4	0.14		4	13	12	10	8.3	6.0	0.17
	5	15	14	12	9.4	6.7	0.22		5	10	9.3	8.1	6.6	4.8	0.26
	6	12	11	9.7	7.8	5.6	0.32		6	8.5	7.8	6.8	5.5	4.0	0.38
	7	11	9.7	8.3	6.7	4.8	0.44		7	7.3	6.7	5.8	4.7	3.4	0.51
	8	9.4	8.5	7.3	5.8	4.2	0.57			6.6	6.0	5.3	4.3	3.1	0.47
		8.5	7.7	6.6	5.3	3.8	0.52								
Web Shear and Property Values															
V, kips		45	37	30	22	15		V, kips		39	32	26	19	13	
S_x, In.^{3}		3.70	3.34	2.88	2.31	1.66		S_x, In.^{3}		2.51	2.30	2.01	1.64	1.19	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

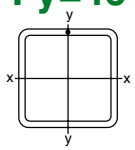
Nominal Size		2 1/2 x 2 1/2					Nominal Size		2 1/4 x 2 1/4				Nominal Size		2 x 2			
Wall Thickness		5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		1/4	3/16	1/8	Δ Inches	Wall Thickness		1/4	3/16	1/8	Δ Inches
Weight Per Foot		8.45	7.11	5.59	3.90		Weight Per Foot		6.26	4.96	3.48		Weight Per Foot		5.41	4.32	3.05	
Design Wall Thickness		0.291	0.233	0.174	0.116		Design Wall Thickness		0.233	0.174	0.116		Design Wall Thickness		0.233	0.174	0.116	
Span in Feet	1	29	26	22	16	0.01	Span in Feet	1	20	17	13	0.01	Span in Feet	1	15	13	9.8	0.02
	2	15	13	11	8.1	0.05		2	10	8.6	6.4	0.06		2	7.5	6.5	4.9	0.06
	3	9.8	8.8	7.3	5.4	0.11		3	6.7	5.7	4.3	0.13		3	5.0	4.3	3.3	0.14
	4	7.3	6.6	5.5	4.0	0.20		4	5.1	4.3	3.2	0.22		4	3.8	3.2	2.5	0.25
	5	5.9	5.3	4.4	3.2	0.31		5	4.0	3.4	2.6	0.35						
									3.7	3.1	2.3	0.32						
Web Shear and Property Values																		
V, kips		27	21	16	11		V, kips		19	14	9.6		V, kips		17	13	8.5	
S_x, In.^{3}		1.45	1.30	1.08	0.798		S_x, In.^{3}		1.00	0.847	0.633		S_x, In.^{3}		0.745	0.640	0.486	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



ERW

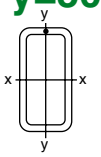
Nominal Size		1 3/4 x 1 3/4		Nominal Size		1 5/8 x 1 5/8			Nominal Size		1 1/2 x 1 1/2			Nominal Size		1 1/4 x 1 1/4		
Wall Thickness		3/16	Δ Inches	Wall Thickness		3/16	1/8	Δ Inches	Wall Thickness		3/16	1/8	Δ Inches	Wall Thickness		3/16	1/8	Δ Inches
Weight Per Foot		3.68		Weight Per Foot		3.36	2.42		Weight Per Foot		3.04	2.20		Weight Per Foot		2.40	1.78	
Design Wall Thickness		0.174		Design Wall Thickness		0.174	0.116		Design Wall Thickness		0.174	0.116		Design Wall Thickness		0.174	0.116	
Span in Feet	1	9.4	0.02	Span in Feet	1	7.8	6.1	0.02	Span in Feet	1	6.4	5.1	0.02	Span in Feet	1	3.9	3.3	0.03
	2	4.7	0.07		2	3.9	3.1	0.08		2	3.2	2.5	0.08		2	2.0	1.6	0.10
	3	3.1	0.16		3	2.6	2.0	0.17		3	2.1	1.7	0.19					
	4	2.3	0.29															
		2.1	0.26															
Web Shear and Property Values																		
V, kips		11		V, kips		10	6.9		V, kips		9.6	6.4		V, kips		8.0	5.3	
S_x, In.^{3}		0.462		S_x, In.^{3}		0.384	0.302		S_x, In.^{3}		0.314	0.251		S_x, In.^{3}		0.194	0.162	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		20 x 12						Nominal Size		20 x 8				
Wall Thickness		1/2	Δ Inches	3/8	Δ Inches	5/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	5/16	Δ Inches
Weight Per Foot		103.30		78.52		65.87		Weight Per Foot		110.36	89.68	68.31	57.36	
Design Wall Thickness		0.465		0.349		0.291 *		Design Wall Thickness		0.581	0.465	0.349	0.291	
Span in Feet	4	744	0.03	558	0.02	466	0.02	Span in Feet	4	792	655	509	432	0.03
	5	682	0.04	480	0.04	388	0.04		5	634	524	407	346	0.04
	6	568	0.06	400	0.06	324	0.05		6	528	436	340	288	0.06
	7	487	0.08	343	0.08	277	0.07		7	453	374	291	247	0.08
	8	426	0.11	300	0.10	243	0.10		8	396	327	255	216	0.11
	9	379	0.14	267	0.13	216	0.12		9	352	291	226	192	0.14
	10	341	0.17	240	0.16	194	0.15		10	317	262	204	173	0.17
	11	310	0.21	218	0.19	177	0.18		11	288	238	185	157	0.21
	12	284	0.25	200	0.22	162	0.21		12	264	218	170	144	0.25
	13	262	0.29	185	0.26	149	0.25		13	244	201	157	133	0.29
	14	244	0.33	171	0.30	139	0.29		14	226	187	146	124	0.33
	15	227	0.38	160	0.35	129	0.34		15	211	175	136	115	0.38
	16	213	0.44	150	0.40	121	0.38		16	198	164	127	108	0.44
	17	201	0.49	141	0.45	114	0.43		17	186	154	120	102	0.49
	18	189	0.55	133	0.50	108	0.48			169	140	109	92	0.45
	19	179	0.62	126	0.56	102	0.54		18	176	145	113	96	0.55
	20	171	0.68	120	0.62	97	0.60			160	132	103	87	0.50
	21	162	0.75	114	0.68	92	0.66		20	158	131	102	86	0.68
	22	155	0.83	109	0.75	88	0.72			144	119	93	79	0.62
	23	148	0.90	104	0.82	84	0.79		22	144	119	93	79	0.83
	24	142	0.98	100	0.89	81	0.86			131	108	84	71	0.75
	26	131	1.15	—	—	—	—		24	132	109	85	72	0.98
		119	1.05	92	1.05	75	1.01			120	99	77	66	0.89
	28	122	1.34	—	—	—	—		26	122	101	78	67	1.15
		111	1.22	86	1.22	69	1.17			111	92	71	60	1.05
	30	114	1.54	—	—	—	—		28	113	94	73	62	1.34
		103	1.40	80	1.40	65	1.34			103	85	66	56	1.22
	32	107	1.75	—	—	—	—		30	106	87	68	58	1.54
		97	1.59	75	1.59	61	1.53			96	79	62	52	1.40
	34	100	1.97	—	—	—	—		32	99	82	64	54	1.75
		91	1.79	71	1.79	57	1.72			90	74	58	49	1.59
	36	95	2.21	—	—	—	—		34	93	77	60	51	1.97
		86	2.01	67	2.01	54	1.93			85	70	54	46	1.79
	38	90	2.46	—	—	—	—		36	88	73	57	48	2.21
		82	2.24	63	2.24	51	2.15			80	66	51	44	2.01
	40	85	2.73	—	—	—	—		38	83	69	54	46	2.46
		78	2.48	60	2.48	49	2.39			76	63	49	41	2.24
	42	81	3.01	—	—	—	—		40	79	65	51	43	2.73
		74	2.74	57	2.74	46	2.63			72	60	46	39	2.48
									42	75	62	49	41	3.01
										69	57	44	37	2.74
Web Shear and Property Values														
V, kips		372		279		233		V, kips		465	372	279	233	
S_x, In.^{3}		155		120		97.1 **		S_x, In.^{3}		144	119	92.6	78.6	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

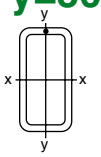
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

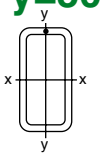
Nominal Size		20 x 4				Nominal Size		18 x 6					
Wall Thickness		1/2	3/8	5/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches
Weight Per Foot		76.07	58.10	48.86		Weight Per Foot		93.34	76.07	58.10	48.86	39.43	
Design Wall Thickness		0.465	0.349	0.291		Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	
Span in Feet	4	461	361	308	0.03	Span in Feet	4	567	471	368	314	256	0.03
	5	369	289	246	0.04		5	453	377	294	251	205	0.05
	6	307	241	205	0.06		6	378	314	245	209	171	0.07
	7	263	206	176	0.08		7	324	269	210	179	146	0.09
	8	230	181	154	0.11		8	283	235	184	157	128	0.12
	9	205	161	137	0.14		9	252	209	164	139	114	0.15
		186	146	124	0.13		10	227	188	147	125	102	0.19
	10	184	145	123	0.17		11	206	171	134	114	93	0.23
		168	131	112	0.16		12	189	157	123	105	85	0.27
	11	168	131	112	0.21		13	174	145	113	96	79	0.32
		152	119	102	0.19			158	132	103	88	72	0.29
	12	154	120	103	0.25		14	162	135	105	90	73	0.37
		140	110	93	0.22			147	122	96	81	66	0.34
	13	142	111	95	0.29		15	151	126	98	84	68	0.43
		129	101	86	0.26			137	114	89	76	62	0.39
	14	132	103	88	0.33		16	142	118	92	78	64	0.49
		120	94	80	0.30			129	107	84	71	58	0.44
	15	123	96	82	0.38		17	133	111	87	74	60	0.55
		112	88	75	0.35			121	101	79	67	55	0.50
	16	115	90	77	0.44		18	126	105	82	70	57	0.61
		105	82	70	0.40			114	95	74	63	52	0.56
	18	102	80	68	0.55		20	113	94	74	63	51	0.76
		93	73	62	0.50			103	86	67	57	47	0.69
	20	92	72	62	0.68		22	103	86	67	57	47	0.92
		84	66	56	0.62			94	78	61	52	42	0.83
	22	84	66	56	0.83		24	94	78	61	52	43	1.09
		76	60	51	0.75			86	71	56	48	39	0.99
	24	77	60	51	0.98		26	87	72	57	48	39	1.28
		70	55	47	0.89			79	66	51	44	36	1.17
	26	71	56	47	1.15		28	81	67	53	45	37	1.49
		64	51	43	1.05			74	61	48	41	33	1.35
	28	66	52	44	1.34		30	76	63	49	42	34	1.71
		60	47	40	1.22			69	57	45	38	31	1.55
	30	61	48	41	1.54		32	71	59	46	39	32	1.94
		56	44	37	1.40			64	54	42	36	29	1.77
	34	54	43	36	1.97		34	67	55	43	37	30	2.19
		49	39	33	1.79			61	50	39	34	27	1.99
	38	49	38	32	2.46		36	63	52	41	35	28	2.46
		44	35	29	2.24			57	48	37	32	26	2.23
	42	44	34	29	3.01		38	60	50	39	33	27	2.74
		40	31	27	2.74			54	45	35	30	24	2.49
Web Shear and Property Values													
V, kips		372	279	233		V, kips		418	335	251	210	168	
S_x, In.^{3}		83.8	65.7	56.0		S_x, In.^{3}		103	85.6	66.9	57.0	46.5	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		16 x 12						Nominal Size		16 x 8				
Wall Thickness		1/2	Δ Inches	3/8	Δ Inches	5/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	5/16	Δ Inches
Weight Per Foot		89.68		68.31		57.36		Weight Per Foot		93.34	76.07	58.10	48.86	
Design Wall Thickness		0.465		0.349		0.291*		Design Wall Thickness		0.581	0.465	0.349	0.291	
Span in Feet	4	595	0.03	439	0.03	356	0.03	Span in Feet	4	561	467	365	310	0.03
	5	497	0.05	351	0.05	284	0.05		5	449	374	292	248	0.05
	6	414	0.08	292	0.07	237	0.07		6	374	311	243	207	0.08
	7	355	0.10	251	0.10	203	0.09		7	321	267	208	177	0.10
	8	311	0.14	219	0.12	178	0.12		8	281	233	182	155	0.14
	9	276	0.17	195	0.16	158	0.15		9	249	208	162	138	0.17
	10	249	0.21	175	0.19	142	0.19		10	224	187	146	124	0.21
	11	226	0.26	159	0.23	129	0.22		11	204	170	133	113	0.26
	12	207	0.31	146	0.28	119	0.27		12	187	156	122	103	0.31
	13	191	0.36	135	0.33	109	0.31		13	173	144	112	95	0.36
	14	178	0.42	125	0.38	102	0.36		14	160	133	104	89	0.42
	15	166	0.48	117	0.44	95	0.42		15	150	125	97	83	0.48
	16	155	0.55	110	0.50	89	0.47		16	140	117	91	78	0.55
	17	146	0.62	103	0.56	84	0.54		17	132	110	86	73	0.62
	18	138	0.69	97	0.63	79	0.60			120	100	78	66	0.56
	19	131	0.77	92	0.70	75	0.67		18	125	104	81	69	0.69
	20	124	0.85	88	0.78	71	0.74			113	94	74	63	0.63
	21	118	0.94	84	0.86	68	0.82		19	118	98	77	65	0.77
	22	113	1.03	80	0.94	65	0.90			107	89	70	59	0.70
	23	108	1.13	76	1.03	62	0.98		20	112	93	73	62	0.85
	24	104	1.23	73	1.12	59	1.07			102	85	66	56	0.78
	25	99	1.33	—	—	—	—		21	107	89	69	59	0.94
		90	1.21	70	1.21	57	1.16			97	81	63	54	0.86
	26	96	1.44	—	—	—	—		22	102	85	66	56	1.03
		87	1.31	67	1.31	55	1.25			93	77	60	51	0.94
	27	92	1.56	—	—	—	—		23	98	81	63	54	1.13
		84	1.41	65	1.41	53	1.35			89	74	58	49	1.03
	28	89	1.67	—	—	—	—		24	94	78	61	52	1.23
		81	1.52	63	1.52	51	1.45			85	71	55	47	1.12
	30	83	1.92	—	—	—	—		26	86	72	56	48	1.44
		75	1.75	58	1.75	47	1.67			78	65	51	43	1.31
	32	78	2.18	—	—	—	—		28	80	67	52	44	1.67
		71	1.99	55	1.99	44	1.90			73	61	47	40	1.52
	34	73	2.47	—	—	—	—		30	75	62	49	41	1.92
		66	2.24	52	2.24	42	2.14			68	57	44	38	1.75
									32	70	58	46	39	2.18
										64	53	41	35	1.99
									34	66	55	43	36	2.47
										60	50	39	33	2.24

Web Shear and Property Values

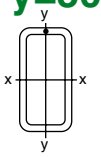
V, kips	298		223		186		V, kips	372	298	223	186	
S_x, In.^{3}	113		87.7		71.1**		S_x, In.^{3}	102	84.9	66.3	56.4	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of 238/ $\sqrt{Fy}$.
** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		16 x 4				Nominal Size		14 x 10							
Wall Thickness		1/2	3/8	5/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	Δ Inches	5/16	Δ Inches	1/4	Δ Inches
Weight Per Foot		62.46	47.90	40.35		Weight Per Foot		93.34	76.07	58.10		48.86		39.43	
Design Wall Thickness		0.465	0.349	0.291		Design Wall Thickness		0.581	0.465	0.349		0.291		0.233 *	
Span in Feet	4	313	248	212	0.03	Span in Feet	4	540	450	351	0.04	272	0.04	209	0.03
	5	250	198	169	0.05		5	432	360	281	0.06	217	0.06	167	0.05
	6	209	165	141	0.08		6	360	300	234	0.09	181	0.08	139	0.08
	7	179	141	121	0.10		7	309	257	201	0.12	155	0.11	119	0.10
	8	156	124	106	0.14		8	270	225	176	0.16	136	0.14	105	0.13
	9	139	110	94	0.17		9	240	200	156	0.20	121	0.18	93	0.17
		126	100	86	0.16		10	216	180	141	0.24	109	0.22	84	0.21
	10	125	99	85	0.21		11	196	164	128	0.30	99	0.27	76	0.25
		114	90	77	0.19		12	180	150	117	0.35	91	0.32	70	0.30
	11	114	90	77	0.26		13	166	138	108	0.41	84	0.37	64	0.35
		103	82	70	0.23		14	154	129	100	0.48	78	0.43	60	0.41
	12	104	83	71	0.31		15	144	120	94	0.55	72	0.50	56	0.47
		95	75	64	0.28		16	135	112	88	0.62	68	0.57	52	0.54
	13	96	76	65	0.36		17	127	106	83	0.70	64	0.64	49	0.60
		88	69	59	0.33		18	120	100	78	0.79	60	0.72	46	0.68
	14	89	71	61	0.42		19	114	95	74	0.88	57	0.80	44	0.76
		81	64	55	0.38		20	108	90	70	0.98	54	0.89	42	0.84
	15	83	66	56	0.48		21	103	86	67	1.08	–	–	–	–
		76	60	51	0.44			94	78	61	0.98	52	0.98	40	0.92
	16	78	62	53	0.55		22	98	82	64	1.18	–	–	–	–
		71	56	48	0.50			89	74	58	1.07	49	1.07	38	1.01
	17	74	58	50	0.62		23	94	78	61	1.29	–	–	–	–
		67	53	45	0.56			85	71	56	1.17	47	1.17	36	1.11
	18	70	55	47	0.69		24	90	75	59	1.40	–	–	–	–
		63	50	43	0.63			82	68	53	1.28	45	1.28	35	1.21
	19	66	52	45	0.77		25	86	72	56	1.52	–	–	–	–
		60	47	41	0.70			79	65	51	1.39	43	1.39	33	1.31
	20	63	50	42	0.85		26	83	69	54	1.65	–	–	–	–
		57	45	39	0.78			76	63	49	1.50	42	1.50	32	1.41
	22	57	45	39	1.03		27	80	67	52	1.78	–	–	–	–
		52	41	35	0.94			73	61	47	1.62	40	1.62	31	1.53
	24	52	41	35	1.23		28	77	64	50	1.91	–	–	–	–
		47	38	32	1.12			70	58	46	1.74	39	1.74	30	1.64
	26	48	38	33	1.44		29	74	62	48	2.05	–	–	–	–
		44	35	30	1.31			68	56	44	1.86	37	1.86	29	1.76
	30	42	33	28	1.92		30	72	60	47	2.19	–	–	–	–
		38	30	26	1.75			65	55	43	2.00	36	2.00	28	1.88
	34	37	29	25	2.47										
		33	26	23	2.24										
Web Shear and Property Values															
V, kips		298	223	186		V, kips		325	260	195		163		130	
S_x, In.^{3}		56.9	45.0	38.5		S_x, In.^{3}		98.2	81.8	63.9		54.3		41.8 **	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

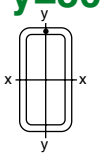
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

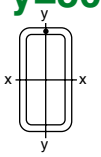
Nominal Size		14 x 6								Nominal Size		14 x 4						
Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches	3/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		76.33	62.46	47.90	40.35	32.63		24.73		Weight Per Foot		67.82	55.66	42.79	36.10	29.23	22.18	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233		0.174		Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	0.174	
Span in Feet	4	375	316	249	213	174	0.04	122	0.04	Span in Feet	4	293	249	198	170	140	107	0.04
	5	300	253	199	170	139	0.06	97	0.06		5	235	199	158	136	112	86	0.06
	6	250	210	166	142	116	0.09	81	0.08		6	195	166	132	113	93	72	0.09
	7	214	180	142	122	100	0.12	69	0.11		7	168	142	113	97	80	61	0.12
	8	188	158	125	106	87	0.16	61	0.14		8	147	125	99	85	70	54	0.16
	9	167	140	111	95	77	0.20	54	0.18		9	130	111	88	76	62	48	0.20
	10	150	126	100	85	70	0.24	49	0.22			118	101	80	69	56	43	0.18
	11	136	115	91	77	63	0.30	44	0.27		10	117	100	79	68	56	43	0.24
	12	125	105	83	71	58	0.35	41	0.32			107	91	72	62	51	39	0.22
	13	115	97	77	65	54	0.41	—	—		11	107	91	72	62	51	39	0.30
		105	88	70	60	49	0.37	37	0.37			97	82	65	56	46	35	0.27
	14	107	90	71	61	50	0.48	—	—		12	98	83	66	57	47	36	0.35
		97	82	65	55	45	0.43	35	0.43			89	76	60	52	42	33	0.32
	15	100	84	66	57	46	0.55	—	—		13	90	77	61	52	43	33	0.41
		91	77	60	52	42	0.50	32	0.50			82	70	55	48	39	30	0.37
	16	94	79	62	53	44	0.62	—	—		14	84	71	57	49	40	31	0.48
		85	72	57	48	40	0.57	30	0.57			76	65	51	44	36	28	0.43
	17	88	74	59	50	41	0.70	—	—		15	78	66	53	45	37	29	0.55
		80	68	53	46	37	0.64	29	0.64			71	60	48	41	34	26	0.50
	18	83	70	55	47	39	0.79	—	—		16	73	62	50	42	35	27	0.62
		76	64	50	43	35	0.72	27	0.72			67	57	45	39	32	24	0.57
	19	79	66	52	45	37	0.88	—	—		17	69	59	47	40	33	25	0.70
		72	60	48	41	33	0.80	26	0.80			63	53	42	36	30	23	0.64
	20	75	63	50	43	35	0.98	—	—		18	65	55	44	38	31	24	0.79
		68	57	45	39	32	0.89	24	0.89			59	50	40	34	28	22	0.72
	22	68	57	45	39	32	1.18	—	—		19	62	52	42	36	29	23	0.88
		62	52	41	35	29	1.07	22	1.07			56	48	38	33	27	21	0.80
	24	63	53	42	35	29	1.40	—	—		20	59	50	40	34	28	21	0.98
		57	48	38	32	26	1.28	20	1.28			53	45	36	31	25	20	0.89
	26	58	49	38	33	27	1.65	—	—		22	53	45	36	31	25	20	1.18
		52	44	35	30	24	1.50	19	1.50			48	41	33	28	23	18	1.07
	28	54	45	36	30	25	1.91	—	—		24	49	42	33	28	23	18	1.40
		49	41	32	28	23	1.74	17	1.74			44	38	30	26	21	16	1.28
	30	50	42	33	28	23	2.19	—	—		26	45	38	30	26	21	17	1.65
		45	38	30	26	21	2.00	16	2.00			41	35	28	24	20	15	1.50
											28	42	36	28	24	20	15	1.91
												38	32	26	22	18	14	1.74
											30	39	33	26	23	19	14	2.19
												36	30	24	21	17	13	2.00
Web Shear and Property Values																		
V, kips		325	260	195	163	130		97		V, kips		325	260	195	163	130	97	
S_x, In.^{3}		68.2	57.4	45.3	38.7	31.7		24.3		S_x, In.^{3}		53.3	45.3	36.0	30.9	25.4	19.5	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		12 X 10						
Wall Thickness		1/2	3/8	Δ Inches	5/16	Δ Inches	1/4	Δ Inches
Weight Per Foot		69.27	53.00		44.60		36.03	
Design Wall Thickness		0.465	0.349		0.291		0.233*	
Span in Feet	4	362	284	0.05	220	0.04	169	0.04
	5	290	227	0.07	176	0.06	135	0.06
	6	242	189	0.10	147	0.09	113	0.09
	7	207	162	0.14	126	0.13	97	0.12
	8	181	142	0.18	110	0.17	85	0.16
	9	161	126	0.23	98	0.21	75	0.20
	10	145	114	0.28	88	0.26	68	0.24
	11	132	103	0.34	80	0.31	61	0.29
	12	121	95	0.41	73	0.37	56	0.35
	13	112	87	0.48	68	0.44	52	0.41
	14	104	81	0.56	63	0.51	48	0.48
	15	97	76	0.64	59	0.58	45	0.55
	16	91	71	0.73	55	0.66	42	0.62
	17	85	67	0.82	52	0.75	40	0.70
	18	81	63	0.92	49	0.84	38	0.79
	19	76	60	1.03	46	0.93	36	0.88
	20	72	57	1.14	44	1.03	34	0.97
	21	69	54	1.25	–	–	–	–
		63	49	1.14	42	1.14	32	1.07
	22	66	52	1.38	–	–	–	–
		60	47	1.25	40	1.25	31	1.18
	23	63	49	1.50	–	–	–	–
		57	45	1.37	38	1.37	29	1.28
	24	60	47	1.64	–	–	–	–
		55	43	1.49	37	1.49	28	1.40
	25	58	45	1.78	–	–	–	–
		53	41	1.62	35	1.62	27	1.52
Web Shear and Property Values								
V, kips		223	168		140		112	
S_x, In.^{3}		65.9	51.6		44.0		33.8**	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

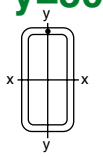
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		12 x 8								
Wall Thickness		5/8	1/2	3/8	5/16	Δ Inches	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		76.33	62.46	47.90	40.35		32.63		24.73	
Design Wall Thickness		0.581	0.465	0.349	0.291		0.233		0.174*	
Span in Feet	4	364	305	240	206	0.05	153	0.04	108	0.04
	5	291	244	192	165	0.07	122	0.06	86	0.06
	6	242	204	160	137	0.10	102	0.09	72	0.09
	7	208	174	137	118	0.14	87	0.13	61	0.12
	8	182	153	120	103	0.18	77	0.17	54	0.15
	9	162	136	107	91	0.23	68	0.21	48	0.19
	10	145	122	96	82	0.28	61	0.26	43	0.24
	11	132	111	87	75	0.34	56	0.31	39	0.29
	12	121	102	80	69	0.41	51	0.37	36	0.34
	13	112	94	74	63	0.48	47	0.44	33	0.40
	14	104	87	69	59	0.56	44	0.51	31	0.47
	15	97	81	64	55	0.64	41	0.58	29	0.54
	16	91	76	60	51	0.73	38	0.66	27	0.61
	17	86	72	57	48	0.82	—	—	—	—
		78	65	51	44	0.75	36	0.75	25	0.69
	18	81	68	53	46	0.92	—	—	—	—
		73	62	49	42	0.84	34	0.84	24	0.77
	19	77	64	51	43	1.03	—	—	—	—
		70	58	46	39	0.93	32	0.93	23	0.86
	20	73	61	48	41	1.14	—	—	—	—
		66	56	44	37	1.03	31	1.03	22	0.95
	21	69	58	46	39	1.25	—	—	—	—
		63	53	42	36	1.14	29	1.14	20	1.05
	22	66	56	44	37	1.38	—	—	—	—
		60	50	40	34	1.25	28	1.25	20	1.15
	23	63	53	42	36	1.50	—	—	—	—
		57	48	38	33	1.37	27	1.37	19	1.26
	24	61	51	40	34	1.64	—	—	—	—
		55	46	36	31	1.49	26	1.49	18	1.37
	25	58	49	38	33	1.78	—	—	—	—
		53	44	35	30	1.62	24	1.62	17	1.49
Web Shear and Property Values										
V, kips		279	223	168	140		112		84	
S_x, In.^{3}		66.1	55.5	43.7	37.4		30.6		21.5**	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

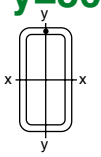
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

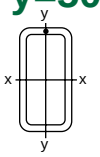
Nominal Size		12 x 6								Nominal Size		12 x 4						
Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches	3/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		67.82	55.66	42.79	36.10	29.23		22.18		Weight Per Foot		59.32	48.85	37.69	31.84	25.82	19.63	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233		0.174		Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	0.174	
Span in Feet	4	294	249	197	169	139	0.05	97	0.04	Span in Feet	4	224	192	154	132	109	84	0.05
	5	235	199	158	135	111	0.07	78	0.06		5	180	154	123	106	88	67	0.07
	6	196	166	131	113	92	0.10	65	0.09		6	150	128	103	88	73	56	0.10
	7	168	142	113	96	79	0.14	55	0.13		7	128	110	88	75	63	48	0.14
	8	147	124	98	84	69	0.18	49	0.17		8	112	96	77	66	55	42	0.18
	9	131	110	88	75	62	0.23	43	0.21		9	100	85	68	59	49	37	0.23
	10	117	99	79	68	55	0.28	39	0.26			91	78	62	53	44	34	0.21
	11	107	90	72	61	50	0.34	35	0.31		10	90	77	62	53	44	34	0.28
	12	98	83	66	56	46	0.41	32	0.37			82	70	56	48	40	31	0.26
	13	90	76	61	52	43	0.48	–	–		11	82	70	56	48	40	31	0.34
		82	70	55	47	39	0.44	30	0.44			74	63	51	44	36	28	0.31
	14	84	71	56	48	40	0.56	–	–		12	75	64	51	44	36	28	0.41
		76	65	51	44	36	0.51	28	0.51			68	58	47	40	33	26	0.37
	15	78	66	53	45	37	0.64	–	–		13	69	59	47	41	34	26	0.48
		71	60	48	41	34	0.58	26	0.58			63	54	43	37	31	24	0.44
	16	73	62	49	42	35	0.73	–	–		14	64	55	44	38	31	24	0.56
		67	57	45	38	32	0.66	24	0.66			58	50	40	34	28	22	0.51
	17	69	58	46	40	33	0.82	–	–		15	60	51	41	35	29	22	0.64
		63	53	42	36	30	0.75	23	0.75			54	47	37	32	27	20	0.58
	18	65	55	44	38	31	0.92	–	–		16	56	48	39	33	27	21	0.73
		59	50	40	34	28	0.84	22	0.84			51	44	35	30	25	19	0.66
	19	62	52	41	36	29	1.03	–	–		17	53	45	36	31	26	20	0.82
		56	48	38	32	27	0.93	20	0.93			48	41	33	28	23	18	0.75
	20	59	50	39	34	28	1.14	–	–		18	50	43	34	29	24	19	0.92
		53	45	36	31	25	1.03	19	1.03			45	39	31	27	22	17	0.84
	21	56	47	38	32	26	1.25	–	–		19	47	40	32	28	23	18	1.03
		51	43	34	29	24	1.14	18	1.14			43	37	29	25	21	16	0.93
	22	53	45	36	31	25	1.38	–	–		20	45	38	31	26	22	17	1.14
		49	41	33	28	23	1.25	18	1.25			41	35	28	24	20	15	1.03
	23	51	43	34	29	24	1.50	–	–		21	43	37	29	25	21	16	1.25
		46	39	31	27	22	1.37	17	1.37			39	33	27	23	19	15	1.14
	24	49	41	33	28	23	1.64	–	–		22	41	35	28	24	20	15	1.38
		45	38	30	26	21	1.49	16	1.49			37	32	25	22	18	14	1.25
	25	47	40	32	27	22	1.78	–	–		23	39	33	27	23	19	15	1.50
		43	36	29	25	20	1.62	16	1.62			35	30	24	21	17	13	1.37
											24	37	32	26	22	18	14	1.64
												34	29	23	20	17	13	1.49
											25	36	31	25	21	18	13	1.78
												33	28	22	19	16	12	1.62
Web Shear and Property Values																		
V, kips		279	223	168	140	112		84		V, kips		279	223	168	140	112	84	
S_x, In.^{3}		53.4	45.2	35.8	30.7	25.2		19.4		S_x, In.^{3}		40.8	34.9	28.0	24.0	19.9	15.3	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

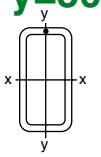
Nominal Size		12 x 3 1/2			Nominal Size		12 x 3				Nominal Size		12 x 2		
Wall Thickness		3/8	5/16	Δ Inches	Wall Thickness		5/16	1/4	3/16	Δ Inches	Wall Thickness		1/4	3/16	Δ Inches
Weight Per Foot		36.41	30.78		Weight Per Foot		29.72	24.12	18.35		Weight Per Foot		22.42	17.08	
Design Wall Thickness		0.349	0.291		Design Wall Thickness		0.291	0.233	0.174		Design Wall Thickness		0.233	0.174	
Span in Feet	4	143	123	0.05	Span in Feet	4	114	95	73	0.05	Span in Feet	4	80	62	0.05
	5	114	99	0.07		5	91	76	59	0.07		5	64	49	0.07
	6	95	82	0.10		6	76	63	49	0.10			58	45	0.06
	7	82	70	0.14		7	65	54	42	0.14		6	53	41	0.10
	8	72	62	0.18			59	49	38	0.13			48	37	0.09
		65	56	0.17		8	57	47	37	0.18		7	46	35	0.14
	9	64	55	0.23			52	43	33	0.17			41	32	0.13
		58	50	0.21		9	51	42	33	0.23		8	40	31	0.18
	10	57	49	0.28			46	38	30	0.21			36	28	0.17
		52	45	0.26		10	46	38	29	0.28		9	35	27	0.23
	11	52	45	0.34			41	34	27	0.26			32	25	0.21
		47	41	0.31		11	41	34	27	0.34		10	32	25	0.28
	12	48	41	0.41			38	31	24	0.31			29	22	0.26
		43	37	0.37		12	38	32	24	0.41		11	29	22	0.34
	13	44	38	0.48			35	29	22	0.37			26	20	0.31
		40	34	0.44		13	35	29	23	0.48		12	27	21	0.41
	14	41	35	0.56			32	26	20	0.44			24	19	0.37
		37	32	0.51		14	33	27	21	0.56		13	25	19	0.48
	15	38	33	0.64			30	25	19	0.51			22	17	0.44
		35	30	0.58		15	30	25	20	0.64		14	23	18	0.56
	16	36	31	0.73			28	23	18	0.58			21	16	0.51
		33	28	0.66		16	28	24	18	0.73		15	21	16	0.64
	17	34	29	0.82			26	22	17	0.66			19	15	0.58
		31	26	0.75		17	27	22	17	0.82		16	20	15	0.73
	18	32	27	0.92			24	20	16	0.75			18	14	0.66
		29	25	0.84		18	25	21	16	0.92		17	19	14	0.82
	19	30	26	1.03			23	19	15	0.84			17	13	0.75
		27	24	0.93		19	24	20	15	1.03		18	18	14	0.92
	20	29	25	1.14			22	18	14	0.93			16	12	0.84
		26	22	1.03		20	23	19	15	1.14		19	17	13	1.03
	21	27	23	1.25			21	17	13	1.03			15	12	0.93
		25	21	1.14		21	22	18	14	1.25		20	16	12	1.14
	22	26	22	1.38			20	16	13	1.14			15	11	1.03
		24	20	1.25		22	21	17	13	1.38		21	15	12	1.25
	23	25	21	1.50			19	16	12	1.25			14	11	1.14
		23	19	1.37		23	20	16	13	1.50		22	15	11	1.38
	24	24	21	1.64			18	15	12	1.37			13	10	1.25
		22	19	1.49		24	19	16	12	1.64		23	14	11	1.50
	25	23	20	1.78			17	14	11	1.49			13	9.7	1.37
		21	18	1.62		25	18	15	12	1.78		25	13	9.9	1.78
							17	14	11	1.62			12	9.0	1.62
Web Shear and Property Values															
V, kips		168	140		V, kips		140	112	84		V, kips		112	84	
S_x, In.^{3}		26.0	22.4		S_x, In.^{3}		20.7	17.2	13.3		S_x, In.^{3}		14.5	11.2	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		10 x 8							
Wall Thickness		1/2	3/8	5/16	Δ Inches	1/4	Δ Inches	3/6	Δ Inches
Weight Per Foot		55.66	42.79	36.10		29.23		22.18	
Design Wall Thickness		0.465	0.349	0.291		0.233		0.174 *	
Span in Feet	2	372	279	233	0.01	186	0.01	139	0.01
	3	313	249	213	0.03	159	0.03	111	0.03
	4	235	186	160	0.05	119	0.05	84	0.05
	5	188	149	128	0.09	95	0.08	67	0.07
	6	157	124	106	0.12	79	0.11	56	0.10
	7	134	107	91	0.17	68	0.15	48	0.14
	8	117	93	80	0.22	60	0.20	42	0.18
	9	104	83	71	0.28	53	0.25	37	0.23
	10	94	75	64	0.34	48	0.31	33	0.28
	11	85	68	58	0.41	43	0.38	30	0.34
	12	78	62	53	0.49	40	0.45	28	0.41
	13	72	57	49	0.58	37	0.52	26	0.48
	14	67	53	46	0.67	34	0.61	24	0.56
	15	63	50	43	0.77	32	0.70	22	0.64
	16	59	47	40	0.87	30	0.79	21	0.73
	17	55	44	38	0.99	—	—	—	—
		50	40	34	0.90	28	0.90	20	0.82
	18	52	41	35	1.11	—	—	—	—
		47	38	32	1.01	26	1.01	19	0.92
	19	49	39	34	1.23	—	—	—	—
		45	36	31	1.12	25	1.12	18	1.02
	20	47	37	32	1.37	—	—	—	—
		43	34	29	1.24	24	1.24	17	1.13
	21	45	36	30	1.51	—	—	—	—
		41	32	28	1.37	23	1.37	16	1.25

Nominal Size		10 x 6							
Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		59.32	48.85	37.69	31.84	25.82		19.63	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233		0.174	
Span in Feet	2	442	372	279	233	186	0.01	139	0.01
	3	295	252	200	172	142	0.03	99	0.03
	4	221	189	150	129	107	0.05	75	0.05
	5	177	151	120	103	85	0.09	60	0.08
	6	147	126	100	86	71	0.12	50	0.11
	7	126	108	86	74	61	0.17	43	0.15
	8	111	94	75	65	53	0.22	37	0.20
	9	98	84	67	57	47	0.28	33	0.25
	10	88	75	60	52	43	0.34	30	0.31
	11	80	69	55	47	39	0.41	27	0.38
	12	74	63	50	43	36	0.49	25	0.45
	13	68	58	46	40	33	0.58	—	—
		62	53	42	36	30	0.52	23	0.52
	14	63	54	43	37	30	0.67	—	—
		57	49	39	34	28	0.61	21	0.61
	15	59	50	40	34	28	0.77	—	—
		54	46	36	31	26	0.70	20	0.70
	16	55	47	38	32	27	0.87	—	—
		50	43	34	29	24	0.79	19	0.79
	17	52	44	35	30	25	0.99	—	—
		47	40	32	28	23	0.90	18	0.90
	18	49	42	33	29	24	1.11	—	—
		45	38	30	26	22	1.01	17	1.01
	19	47	40	32	27	22	1.23	—	—
		42	36	29	25	20	1.12	16	1.12
	20	44	38	30	26	21	1.37	—	—
		40	34	27	24	19	1.24	15	1.24
	21	42	36	29	25	20	1.51	—	—
		38	33	26	22	18	1.37	14	1.37

Web Shear and Property Values

V, kips	186	140	116		93		70		
S_x, In.^{3}	42.7	33.9	29.0		23.8		16.7 **		

V, kips	232	186	140	116	93		70	
S_x, In.^{3}	40.2	34.3	27.3	23.5	19.4		14.9	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

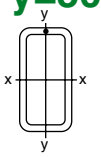
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

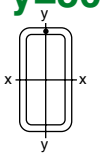
Nominal Size		10 x 5					Nominal Size		10 x 4						
Wall Thickness		3/8	5/16	1/4	3/16	Δ Inches	Wall Thickness		5/8	1/2	3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		35.13	29.72	24.12	18.35		Weight Per Foot		50.81	42.05	32.58	27.59	22.42	17.08	
Design Wall Thickness		0.349	0.291	0.233	0.174		Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	0.174	
Span in Feet	2	265	229	186	139	0.01	Span in Feet	2	329	284	229	198	164	128	0.01
	3	177	153	126	97	0.03		3	219	189	153	132	109	85	0.03
	4	133	114	95	73	0.05		4	164	142	114	99	82	64	0.05
	5	106	92	76	58	0.09		5	132	114	92	79	66	51	0.09
	6	88	76	63	48	0.12		6	110	95	76	66	55	43	0.12
	7	76	65	54	41	0.17		7	94	81	65	57	47	36	0.17
	8	66	57	47	36	0.22		8	82	71	57	50	41	32	0.22
	9	59	51	42	32	0.28		9	73	63	51	44	36	28	0.28
	10	53	46	38	29	0.34			66	57	46	40	33	26	0.25
	11	48	42	34	26	0.41		10	66	57	46	40	33	26	0.34
		44	38	31	24	0.38			60	52	42	36	30	23	0.31
	12	44	38	32	24	0.49		11	60	52	42	36	30	23	0.41
		40	35	29	22	0.45			54	47	38	33	27	21	0.38
	13	41	35	29	22	0.58		12	55	47	38	33	27	21	0.49
		37	32	26	20	0.52			50	43	35	30	25	19	0.45
	14	38	33	27	21	0.67		13	51	44	35	30	25	20	0.58
		34	30	25	19	0.61			46	40	32	28	23	18	0.52
	15	35	31	25	19	0.77		14	47	41	33	28	23	18	0.67
		32	28	23	18	0.70			43	37	30	26	21	17	0.61
	16	33	29	24	18	0.87		15	44	38	31	26	22	17	0.77
		30	26	22	17	0.79			40	34	28	24	20	15	0.70
	17	31	27	22	17	0.99		16	41	35	29	25	20	16	0.87
		28	24	20	16	0.90			37	32	26	23	19	15	0.79
	18	29	25	21	16	1.11		17	39	33	27	23	19	15	0.99
		27	23	19	15	1.01			35	30	24	21	18	14	0.90
	19	28	24	20	15	1.23		18	37	32	25	22	18	14	1.11
		25	22	18	14	1.12			33	29	23	20	17	13	1.01
	20	27	23	19	15	1.37		19	35	30	24	21	17	13	1.23
		24	21	17	13	1.24			31	27	22	19	16	12	1.12
	21	25	22	18	14	1.51		20	33	28	23	20	16	13	1.37
		23	20	16	13	1.37			30	26	21	18	15	12	1.24
								21	31	27	22	19	16	12	1.51
									28	25	20	17	14	11	1.37
Web Shear and Property Values															
V, kips		140	116	93	70		V, kips		232	186	140	116	93	70	
S_x, In.^{3}		24.1	20.8	17.2	13.2		S_x, In.^{3}		29.9	25.8	20.8	18.0	14.9	11.6	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		10 x 3 1/2		Nominal Size		10 x 3						Nominal Size		10 x 2				
Wall Thickness		3/16	Δ Inches	Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		16.44		Weight Per Foot		30.03	25.46	20.72	15.80	10.71		Weight Per Foot		27.48	23.34	19.02	14.53	
Design Wall Thickness		0.174		Design Wall Thickness		0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.349	0.291	0.233	0.174	
Span in Feet	2	118	0.01	Span in Feet	2	194	168	140	109	75	0.01	Span in Feet	2	157	138	116	90	0.01
	3	78	0.03		3	129	112	93	72	50	0.03		3	105	92	77	60	0.03
	4	59	0.05		4	97	84	70	54	38	0.05		4	79	69	58	45	0.05
	5	47	0.09		5	77	67	56	43	30	0.09		5	63	55	46	36	0.09
	6	39	0.12		6	65	56	47	36	25	0.12			57	50	42	33	0.08
	7	34	0.17		7	55	48	40	31	21	0.17		6	52	46	39	30	0.12
	8	29	0.22			50	44	36	28	20	0.15			48	42	35	27	0.11
		27	0.20		8	48	42	35	27	19	0.22		7	45	39	33	26	0.17
	9	26	0.28			44	38	32	25	17	0.20			41	36	30	23	0.15
		24	0.25		9	43	37	31	24	17	0.28		8	39	34	29	23	0.22
	10	24	0.34			39	34	28	22	15	0.25			36	31	26	20	0.20
		21	0.31		10	39	34	28	22	15	0.34		9	35	31	26	20	0.28
	11	21	0.41			35	31	25	20	14	0.31			32	28	23	18	0.25
		19	0.38		11	35	31	25	20	14	0.41		10	31	28	23	18	0.34
	12	20	0.49			32	28	23	18	12	0.38			29	25	21	16	0.31
		18	0.45		12	32	28	23	18	13	0.49		11	29	25	21	16	0.41
	13	18	0.58			29	26	21	16	11	0.45			26	23	19	15	0.38
		16	0.52		13	30	26	21	17	12	0.58		12	26	23	19	15	0.49
	14	17	0.67			27	24	20	15	11	0.52			24	21	18	14	0.45
		15	0.61		14	28	24	20	16	11	0.67		13	24	21	18	14	0.58
	15	16	0.77			25	22	18	14	9.8	0.61			22	19	16	13	0.52
		14	0.70		15	26	22	19	14	10	0.77		14	22	20	17	13	0.67
	16	15	0.87			23	20	17	13	9.1	0.70			20	18	15	12	0.61
		13	0.79		16	24	21	17	14	9.4	0.87		15	21	18	15	12	0.77
	17	14	0.99			22	19	16	12	8.5	0.79			19	17	14	11	0.70
		13	0.90		17	23	20	16	13	8.8	0.99		16	20	17	14	11	0.87
	18	13	1.11			21	18	15	12	8.0	0.90			18	16	13	10	0.79
		12	1.01		18	22	19	16	12	8.3	1.11		17	19	16	14	11	0.99
	19	12	1.23			20	17	14	11	7.6	1.01			17	15	12	9.6	0.90
		11	1.12		19	20	18	15	11	7.9	1.23		18	17	15	13	10	1.11
	20	12	1.37			19	16	13	10	7.2	1.12			16	14	12	9.1	1.01
		11	1.24		20	19	17	14	11	7.5	1.37		19	17	14	12	9.5	1.23
	21	11	1.51			18	15	13	9.9	6.8	1.24			15	13	11	8.6	1.12
		10	1.37		21	18	16	13	10	7.2	1.51		20	16	14	12	9.0	1.37
						17	15	12	9.4	6.5	1.37			14	13	11	8.2	1.24
													21	15	13	11	8.6	1.51
														14	12	10	7.8	1.37

Web Shear and Property Values

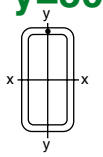
V, kips	70		V, kips	140	116	93	70	46		V, kips	140	116	93	70	
S_x, In.^{3}	10.7		S_x, In.^{3}	17.6	15.3	12.7	9.87	6.83		S_x, In.^{3}	14.3	12.5	10.5	8.19	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		9 x 7								
Wall Thickness		5/8	1/2	3/8	5/16	Δ Inches	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		59.32	48.85	37.69	31.84		25.82		19.63	
Design Wall Thickness		0.581	0.465	0.349	0.291		0.233		0.174 *	
Span in Feet	2	418	335	251	210	0.02	168	0.01	125	0.01
	3	284	242	194	166	0.03	125	0.03	93	0.03
	4	213	182	145	124	0.06	94	0.06	70	0.05
	5	170	145	116	99	0.09	75	0.09	56	0.08
	6	142	121	97	83	0.14	62	0.12	46	0.12
	7	122	104	83	71	0.19	53	0.17	40	0.16
	8	106	91	73	62	0.24	47	0.22	35	0.21
	9	95	81	65	55	0.31	42	0.28	31	0.27
	10	85	73	58	50	0.38	37	0.34	28	0.33
	11	77	66	53	45	0.46	34	0.42	25	0.40
	12	71	61	48	41	0.55	31	0.50	23	0.48
	13	65	56	45	38	0.64	29	0.58	21	0.56
	14	61	52	41	36	0.74	27	0.68	20	0.65
	15	57	48	39	33	0.85	—	—	—	—
		52	44	35	30	0.78	25	0.78	19	0.75
	16	53	45	36	31	0.97	—	—	—	—
		48	41	33	28	0.88	23	0.88	17	0.85
	17	50	43	34	29	1.10	—	—	—	—
		46	39	31	27	1.00	22	1.00	16	0.96
	18	47	40	32	28	1.23	—	—	—	—
		43	37	29	25	1.12	21	1.12	15	1.08
	19	45	38	31	26	1.37	—	—	—	—
		41	35	28	24	1.24	20	1.24	15	1.20
Web Shear and Property Values										
V, kips		209	167	126	105		84		63	
S_x, In.^{3}		38.7	33.0	26.4	22.6		18.7		13.9 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

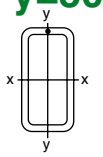
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

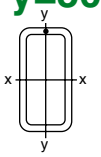
Nominal Size		9 x 5						
Wall Thickness		5/8	1/2	3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		50.81	42.05	32.58	27.59	22.42	17.08	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	0.174	
Span in Feet	2	326	281	226	195	162	125	0.02
	3	217	187	150	130	108	84	0.03
	4	163	140	113	97	81	63	0.06
	5	130	112	90	78	65	50	0.09
	6	109	94	75	65	54	42	0.14
	7	93	80	64	56	46	36	0.19
	8	81	70	56	49	40	31	0.24
	9	72	62	50	43	36	28	0.31
	10	65	56	45	39	32	25	0.38
	11	59	51	41	35	29	23	0.46
		54	46	37	32	27	21	0.42
	12	54	47	38	32	27	21	0.55
		49	43	34	30	25	19	0.50
	13	50	43	35	30	25	19	0.64
		46	39	32	27	23	18	0.58
	14	47	40	32	28	23	18	0.74
		42	36	29	25	21	16	0.68
	15	43	37	30	26	22	17	0.85
		39	34	27	24	20	15	0.78
	16	41	35	28	24	20	16	0.97
		37	32	26	22	18	14	0.88
	17	38	33	27	23	19	15	1.10
		35	30	24	21	17	13	1.00
	18	36	31	25	22	18	14	1.23
		33	28	23	20	16	13	1.12
	19	34	30	24	20	17	13	1.37
		31	27	22	19	15	12	1.24
Web Shear and Property Values								
V, kips		209	167	126	105	84	63	
S_x, In.^{3}		29.6	25.5	20.5	17.7	14.7	11.4	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

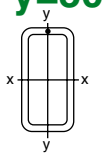
Nominal Size		9 x 3					
Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		35.24	27.48	23.34	19.02	14.53	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174	
Span in Feet	2	197	162	141	118	92	0.02
	3	131	108	94	78	61	0.03
	4	98	81	70	59	46	0.06
	5	79	65	56	47	37	0.09
	6	66	54	47	39	31	0.14
	7	56	46	40	34	26	0.19
		51	42	37	31	24	0.17
	8	49	40	35	29	23	0.24
		45	37	32	27	21	0.22
	9	44	36	31	26	20	0.31
		40	33	28	24	19	0.28
	10	39	32	28	24	18	0.38
		36	29	26	21	17	0.34
	11	36	29	26	21	17	0.46
		33	27	23	19	15	0.42
	12	33	27	23	20	15	0.55
		30	25	21	18	14	0.50
	13	30	25	22	18	14	0.64
		28	23	20	16	13	0.58
	14	28	23	20	17	13	0.74
		26	21	18	15	12	0.68
	15	26	22	19	16	12	0.85
		24	20	17	14	11	0.78
	16	25	20	18	15	11	0.97
		22	18	16	13	10	0.88
	17	23	19	17	14	11	1.10
		21	17	15	13	9.8	1.00
	18	22	18	16	13	10	1.23
		20	16	14	12	9.3	1.12
	19	21	17	15	12	9.7	1.37
		19	15	13	11	8.8	1.24
Web Shear and Property Values							
V, kips		167	126	105	84	63	
S_x, In.^{3}		17.9	14.7	12.8	10.7	8.35	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

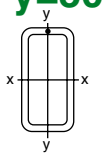
Nominal Size		8 x 6							
Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		50.81	42.05	32.58	27.59	22.42		17.08	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233		0.174	
Span in Feet	2	314	270	218	186	149	0.02	109	0.02
	3	209	180	145	125	103	0.04	73	0.03
	4	157	135	109	94	78	0.07	55	0.06
	5	125	108	87	75	62	0.11	44	0.10
	6	105	90	73	63	52	0.15	36	0.14
	7	90	77	62	54	44	0.21	31	0.19
	8	78	67	54	47	39	0.27	27	0.25
	9	70	60	48	42	34	0.35	24	0.31
	10	63	54	44	38	31	0.43	22	0.39
	11	57	49	40	34	28	0.52	20	0.47
	12	52	45	36	31	26	0.61	18	0.56
	13	48	41	34	29	24	0.72	—	—
		44	38	30	26	22	0.66	17	0.66
	14	45	39	31	27	22	0.84	—	—
		41	35	28	24	20	0.76	16	0.76
	15	42	36	29	25	21	0.96	—	—
		38	33	26	23	19	0.87	15	0.87
	16	39	34	27	24	19	1.09	—	—
		36	31	25	21	18	0.99	14	0.99
	17	37	32	26	22	18	1.23	—	—
		34	29	23	20	17	1.12	13	1.12
Web Shear and Property Values									
V, kips		186	149	112	93	75		56	
S_x, In.^{3}		28.5	24.5	19.8	17.1	14.1		10.9	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

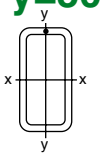
Nominal Size		8 x 4								
Wall Thickness		5/8	1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		42.30	35.24	27.48	23.34	19.02	14.53		9.86	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	0.174		0.116	
Span in Feet	2	226	197	162	141	117	91	0.02	57	0.02
	3	150	131	108	94	78	61	0.04	38	0.03
	4	113	98	81	70	58	45	0.07	29	0.06
	5	90	79	65	56	47	36	0.11	23	0.10
	6	75	66	54	47	39	30	0.15	19	0.14
	7	64	56	46	40	33	26	0.21	16	0.19
	8	56	49	40	35	29	23	0.27	14	0.25
	9	50	44	36	31	26	20	0.35	–	–
		46	40	33	28	24	18	0.31	13	0.31
	10	45	39	32	28	23	18	0.43	–	–
		41	36	29	26	21	17	0.39	11	0.39
	11	41	36	29	26	21	17	0.52	–	–
		37	33	27	23	19	15	0.47	10	0.47
	12	38	33	27	23	19	15	0.61	–	–
		34	30	25	21	18	14	0.56	9.6	0.56
	13	35	30	25	22	18	14	0.72	–	–
		32	28	23	20	16	13	0.66	8.8	0.66
	14	32	28	23	20	17	13	0.84	–	–
		29	26	21	18	15	12	0.76	8.2	0.76
	15	30	26	22	19	16	12	0.96	–	–
		27	24	20	17	14	11	0.87	7.6	0.87
	16	28	25	20	18	15	11	1.09	–	–
		26	22	18	16	13	10	0.99	7.2	0.99
	17	27	23	19	17	14	11	1.23	–	–
		24	21	17	15	12	9.7	1.12	6.7	1.12
Web Shear and Property Values										
V, kips		186	149	112	93	75	56		37	
S_x, In.^{3}		20.5	17.9	14.7	12.8	10.6	8.27		5.73	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		8 x 3						
Wall Thickness		1/2	3/8	5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		31.84	24.93	21.21	17.32	13.25	9.01	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174	0.116	
Span in Feet	2	161	133	117	98	76	53	0.02
	3	107	89	78	65	51	35	0.04
	4	80	67	58	49	38	27	0.07
	5	64	53	47	39	31	21	0.11
	6	54	44	39	33	25	18	0.15
	7	46	38	33	28	22	15	0.21
		42	35	30	25	20	14	0.19
	8	40	33	29	24	19	13	0.27
		37	30	27	22	17	12	0.25
	9	36	30	26	22	17	12	0.35
		32	27	24	20	15	11	0.31
	10	32	27	23	20	15	11	0.43
		29	24	21	18	14	9.7	0.39
	11	29	24	21	18	14	9.7	0.52
		27	22	19	16	13	8.8	0.47
	12	27	22	19	16	13	8.9	0.61
		24	20	18	15	12	8.1	0.56
	13	25	20	18	15	12	8.2	0.72
		22	19	16	14	11	7.4	0.66
	14	23	19	17	14	11	7.6	0.84
		21	17	15	13	9.9	6.9	0.76
	15	21	18	16	13	10	7.1	0.96
		19	16	14	12	9.3	6.4	0.87
	16	20	17	15	12	9.5	6.6	1.09
		18	15	13	11	8.7	6.0	0.99
	17	19	16	14	11	9.0	6.3	1.23
		17	14	12	10	8.2	5.7	1.12

Nominal Size		8 x 2					
Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		22.37	19.08	15.62	11.97	8.16	
Design Wall Thickness		0.349	0.291	0.233	0.174	0.116	
Span in Feet	2	105	93	78	62	43	0.02
	3	70	62	52	41	29	0.04
	4	53	46	39	31	22	0.07
	5	42	37	31	25	17	0.11
		38	34	28	22	16	0.10
	6	35	31	26	21	14	0.15
		32	28	24	19	13	0.14
	7	30	26	22	18	12	0.21
		27	24	20	16	11	0.19
	8	26	23	20	15	11	0.27
		24	21	18	14	9.8	0.25
	9	23	21	17	14	9.6	0.35
		21	19	16	12	8.7	0.31
	10	21	19	16	12	8.6	0.43
		19	17	14	11	7.9	0.39
	11	19	17	14	11	7.9	0.52
		17	15	13	10	7.1	0.47
	12	18	15	13	10	7.2	0.61
		16	14	12	9.4	6.6	0.56
	13	16	14	12	9.5	6.7	0.72
		15	13	11	8.6	6.0	0.66
	14	15	13	11	8.8	6.2	0.84
		14	12	10	8.0	5.6	0.76
	15	14	12	10	8.2	5.8	0.96
		13	11	9.5	7.5	5.2	0.87
	16	13	12	9.8	7.7	5.4	1.09
		12	11	8.9	7.0	4.9	0.99
	17	12	11	9.2	7.3	5.1	1.23
		11	9.9	8.4	6.6	4.6	1.12

Web Shear and Property Values

V, kips	149	112	93	75	56	37	
S_x, In.^{3}	14.6	12.1	10.6	8.88	6.94	4.83	

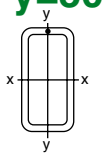
V, kips	112	93	75	56	37	
S_x, In.^{3}	9.56	8.43	7.12	5.61	3.93	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		7 x 5								
Wall Thickness		5/8	1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		42.30	35.24	27.48	23.34	19.02	14.53		9.86	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233	0.174		0.116*	
Span in Feet	2	218	190	155	135	112	88	0.02	52	0.02
	3	145	127	103	90	75	58	0.04	35	0.04
	4	109	95	78	68	56	44	0.08	26	0.07
	5	87	76	62	54	45	35	0.12	21	0.10
	6	73	63	52	45	37	29	0.18	17	0.15
	7	62	54	44	39	32	25	0.24	15	0.20
	8	54	48	39	34	28	22	0.31	13	0.27
	9	48	42	34	30	25	19	0.40	12	0.34
	10	44	38	31	27	22	18	0.49	10	0.42
	11	40	35	28	25	20	16	0.59	–	–
		36	31	26	22	19	14	0.54	9.4	0.50
	12	36	32	26	23	19	15	0.70	–	–
		33	29	24	21	17	13	0.64	8.7	0.60
	13	34	29	24	21	17	13	0.82	–	–
		30	27	22	19	16	12	0.75	8.0	0.71
	14	31	27	22	19	16	13	0.96	–	–
		28	25	20	18	15	11	0.87	7.4	0.82
	15	29	25	21	18	15	12	1.10	–	–
		26	23	19	16	14	11	1.00	6.9	0.94
Web Shear and Property Values										
V, kips		163	130	98	81	65	49		32	
S_x, In.^{3}		19.8	17.3	14.1	12.3	10.2	7.96		5.19**	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

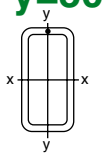
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

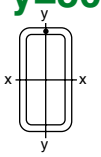
Nominal Size		7 x 4							
Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		31.84	24.93	21.21	17.32	13.25		9.01	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174		0.116	
Span in Feet	2	160	131	114	96	75	0.02	47	0.02
	3	106	87	76	64	50	0.04	32	0.04
	4	80	65	57	48	37	0.08	24	0.07
	5	64	52	46	38	30	0.12	19	0.11
	6	53	44	38	32	25	0.18	16	0.16
	7	46	37	33	27	21	0.24	14	0.22
	8	40	33	29	24	19	0.31	12	0.28
	9	35	29	25	21	17	0.40	–	–
		32	26	23	19	15	0.36	11	0.36
	10	32	26	23	19	15	0.49	–	–
		29	24	21	17	14	0.44	9.5	0.44
	11	29	24	21	17	14	0.59	–	–
		26	22	19	16	12	0.54	8.6	0.54
	12	27	22	19	16	12	0.70	–	–
		24	20	17	15	11	0.64	7.9	0.64
	13	25	20	18	15	12	0.82	–	–
		22	18	16	13	10	0.75	7.3	0.75
	14	23	19	16	14	11	0.96	–	–
		21	17	15	12	9.7	0.87	6.8	0.87
	15	21	17	15	13	10	1.10	–	–
		19	16	14	12	9.1	1.00	6.3	1.00
Web Shear and Property Values									
V, kips		130	98	81	65	49		32	
S_x, In.^{3}		14.5	11.9	10.4	8.72	6.80		4.73	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

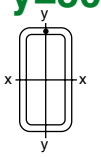
Nominal Size		7 x 3							Nominal Size		6 x 5					
Wall Thickness		1/2	3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		28.43	22.37	19.08	15.62	11.97	8.16		Weight Per Foot		24.93	21.21	17.32	13.25	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.349	0.291	0.233	0.174	
Span in Feet	2	128	107	94	79	62	43	0.02	Span in Feet	2	124	108	91	71	0.02
	3	85	71	63	53	41	29	0.04		3	83	72	61	47	0.05
	4	64	54	47	40	31	22	0.08		4	62	54	45	35	0.09
	5	51	43	38	32	25	17	0.12		5	50	43	36	28	0.14
	6	43	36	31	26	21	14	0.18		6	41	36	30	24	0.20
	7	36	31	27	23	18	12	0.24		7	36	31	26	20	0.28
		33	28	24	21	16	11	0.22		8	31	27	23	18	0.36
	8	32	27	23	20	16	11	0.31		9	28	24	20	16	0.46
		29	24	21	18	14	9.9	0.28		10	25	22	18	14	0.57
	9	28	24	21	18	14	9.7	0.40		11	23	20	17	13	0.69
		26	22	19	16	13	8.8	0.36			21	18	15	12	0.63
	10	26	21	19	16	12	8.7	0.49		12	21	18	15	12	0.82
		23	19	17	14	11	7.9	0.44			19	16	14	11	0.74
	11	23	19	17	14	11	7.9	0.59							
		21	18	16	13	10	7.2	0.54							
	12	21	18	16	13	10	7.2	0.70							
		19	16	14	12	9.4	6.6	0.64							
	13	20	16	14	12	9.6	6.7	0.82							
		18	15	13	11	8.7	6.1	0.75							
	14	18	15	13	11	8.9	6.2	0.96							
		17	14	12	10	8.1	5.6	0.87							
	15	17	14	13	11	8.3	5.8	1.10							
		15	13	11	9.6	7.5	5.3	1.00							
Web Shear and Property Values															
V, kips		130	98	81	65	49	32		V, kips		84	70	56	42	
S_x, In.^{3}		11.6	9.73	8.54	7.19	5.65	3.95		S_x, In.^{3}		11.3	9.85	8.25	6.44	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

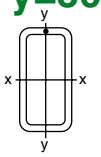
Nominal Size		6 x 4								Nominal Size		6 x 3						
Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches	Wall Thickness		1/2	3/8	5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		28.43	22.37	19.08	15.62	11.97		8.16		Weight Per Foot		25.03	19.82	16.96	13.91	10.70	7.31	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174		0.116		Design Wall Thickness		0.465	0.349	0.291	0.233	0.174	0.116	
Span in Feet	2	124	104	91	77	60	0.02	38	0.02	Span in Feet	2	98	83	74	62	49	35	0.02
	3	83	69	61	51	40	0.05	25	0.05		3	66	56	49	42	33	23	0.05
	4	62	52	45	38	30	0.09	19	0.08		4	49	42	37	31	25	17	0.09
	5	50	41	36	31	24	0.14	15	0.13		5	39	33	29	25	20	14	0.14
	6	41	35	30	26	20	0.20	13	0.19		6	33	28	25	21	16	12	0.20
	7	36	30	26	22	17	0.28	11	0.25		7	28	24	21	18	14	9.9	0.28
	8	31	26	23	19	15	0.36	9.5	0.33			26	22	19	16	13	9.0	0.25
	9	28	23	20	17	13	0.46	—	—		8	25	21	18	16	12	8.6	0.36
		25	21	18	15	12	0.42	8.5	0.42			22	19	17	14	11	7.9	0.33
	10	25	21	18	15	12	0.57	—	—		9	22	19	16	14	11	7.7	0.46
		23	19	17	14	11	0.52	7.6	0.52			20	17	15	13	9.9	7.0	0.42
	11	23	19	17	14	11	0.69	—	—		10	20	17	15	12	9.8	6.9	0.57
		21	17	15	13	9.9	0.63	6.9	0.63			18	15	13	11	8.9	6.3	0.52
	12	21	17	15	13	10	0.82	—	—		11	18	15	13	11	8.9	6.3	0.69
		19	16	14	12	9.1	0.74	6.4	0.74			16	14	12	10	8.1	5.7	0.63
											12	16	14	12	10	8.2	5.8	0.82
												15	13	11	9.4	7.4	5.2	0.74
Web Shear and Property Values																		
V, kips		112	84	70	56	42		28		V, kips		112	84	70	56	42	28	
S_x, In.^{3}		11.3	9.43	8.27	6.96	5.46		3.81		S_x, In.^{3}		8.94	7.57	6.69	5.66	4.47	3.14	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

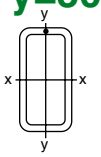
Nominal Size		6 x 2						Nominal Size		5 x 4					
Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches
Weight Per Foot		17.27	14.83	12.21	9.42	6.46		Weight Per Foot		25.03	19.82	16.96	13.91	10.70	
Design Wall Thickness		0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.465	0.349	0.291	0.233	0.174	
Span in Feet	2	63	56	48	38	27	0.02	Span in Feet	2	93	79	70	59	46	0.03
	3	42	37	32	26	18	0.05		3	62	53	46	39	31	0.06
	4	31	28	24	19	14	0.09		4	47	39	35	29	23	0.11
	5	25	22	19	15	11	0.14		5	37	32	28	24	19	0.17
		23	20	17	14	9.9	0.13		6	31	26	23	20	15	0.25
	6	21	19	16	13	9.1	0.20		7	27	23	20	17	13	0.33
		19	17	15	12	8.2	0.19		8	23	20	17	15	12	0.44
	7	18	16	14	11	7.8	0.28		9	21	18	15	13	10	0.55
		16	15	12	10	7.1	0.25			19	16	14	12	9.4	0.50
	8	16	14	12	9.6	6.8	0.36		10	19	16	14	12	9.3	0.68
		14	13	11	8.7	6.2	0.33			17	14	13	11	8.4	0.62
	9	14	12	11	8.5	6.0	0.46								
		13	11	9.7	7.8	5.5	0.42								
	10	13	11	9.6	7.7	5.4	0.57								
		11	10	8.7	7.0	4.9	0.52								
	11	11	10	8.7	7.0	4.9	0.69								
		10	9.3	7.9	6.3	4.5	0.63								
	12	10	9.4	8.0	6.4	4.5	0.82								
		9.5	8.5	7.3	5.8	4.1	0.74								
Web Shear and Property Values															
V, kips		84	70	56	42	28		V, kips		93	70	58	47	35	
S_x, In.^{3}		5.71	5.11	4.37	3.49	2.47		S_x, In.^{3}		8.48	7.16	6.32	5.35	4.22	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

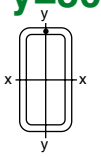
Nominal Size		5 x 3							Nominal Size		5 x 21/2			
Wall Thickness		1/2	3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		1/4	3/16	1/8	Δ Inches
Weight Per Foot		21.63	17.27	14.83	12.21	9.42	6.46		Weight Per Foot		11.36	8.78	6.03	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.233	0.174	0.116	
Span in Feet	2	72	62	55	47	38	27	0.03	Span in Feet	2	41	33	24	0.03
	3	48	41	37	31	25	18	0.06		3	28	22	16	0.06
	4	36	31	28	24	19	13	0.11		4	21	17	12	0.11
	5	29	25	22	19	15	11	0.17		5	17	13	9.4	0.17
	6	24	21	18	16	13	8.8	0.25		6	14	11	7.8	0.25
	7	21	18	16	13	11	7.6	0.33			13	10	7.1	0.22
		19	16	14	12	9.7	6.9	0.30		7	12	9.5	6.7	0.33
	8	18	16	14	12	9.4	6.6	0.44			11	8.6	6.1	0.30
		16	14	13	11	8.5	6.0	0.40		8	10	8.3	5.9	0.44
	9	16	14	12	10	8.3	5.9	0.55			9.4	7.5	5.4	0.40
		15	13	11	9.5	7.6	5.4	0.50		9	9.2	7.4	5.2	0.55
	10	14	12	11	9.4	7.5	5.3	0.68			8.4	6.7	4.8	0.50
		13	11	10	8.6	6.8	4.8	0.62		10	8.3	6.6	4.7	0.68
											7.5	6.0	4.3	0.62
Web Shear and Property Values														
V, kips		93	70	58	47	35	23		V, kips		47	35	23	
S_x, In.^{3}		6.56	5.65	5.03	4.29	3.41	2.41		S_x, In.^{3}		3.76	3.01	2.14	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

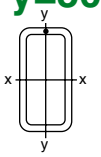
Nominal Size		5 x 2						Nominal Size		4 x 3					
Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		14.72	12.70	10.51	8.15	5.61		Weight Per Foot		14.72	12.70	10.51	8.15	5.61	
Design Wall Thickness		0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.349	0.291	0.233	0.174	0.116	
Span in Feet	2	46	41	36	29	20	0.03	Span in Feet	2	44	39	34	27	19	0.03
	3	30	27	24	19	14	0.06		3	29	26	23	18	13	0.08
	4	23	21	18	14	10	0.11		4	22	20	17	14	9.7	0.14
	5	18	16	14	11	8.2	0.17		5	17	16	14	11	7.7	0.21
		17	15	13	10	7.4	0.16		6	15	13	11	9.1	6.5	0.31
	6	15	14	12	9.5	6.8	0.25		7	12	11	9.6	7.8	5.5	0.42
		14	12	11	8.7	6.2	0.22			11	10	8.8	7.1	5.0	0.38
	7	13	12	10	8.2	5.8	0.33		8	11	9.8	8.4	6.8	4.8	0.55
		12	11	9.2	7.4	5.3	0.30			9.9	8.9	7.7	6.2	4.4	0.50
	8	11	10	8.9	7.2	5.1	0.44								
		10	9.4	8.1	6.5	4.7	0.40								
	9	10	9.1	7.9	6.4	4.5	0.55								
		9.2	8.3	7.2	5.8	4.1	0.50								
	10	9.1	8.2	7.1	5.7	4.1	0.68								
		8.3	7.5	6.5	5.2	3.7	0.62								
Web Shear and Property Values															
V, kips		70	58	47	35	23		V, kips		56	47	37	28	19	
S_x, In.^{3}		4.14	3.74	3.23	2.60	1.86		S_x, In.^{3}		3.96	3.57	3.07	2.47	1.76	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

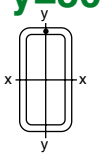
Nominal Size		4 x 2 1/2				Nominal Size		4 x 2					
Wall Thickness		5/16	1/4	3/16	Δ Inches	Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		11.64	9.66	7.51		Weight Per Foot		12.17	10.58	8.81	6.87	4.75	
Design Wall Thickness		0.291	0.233	0.174		Design Wall Thickness		0.349	0.291	0.233	0.174	0.116	
Span in Feet	2	34	29	24	0.03	Span in Feet	2	31	28	25	20	15	0.03
	3	22	20	16	0.08		3	21	19	17	13	9.7	0.08
	4	17	15	12	0.14		4	15	14	12	10	7.3	0.14
	5	13	12	9.5	0.21		5	12	11	9.9	8.1	5.8	0.21
	6	11	9.8	7.9	0.31			11	10	9.0	7.3	5.3	0.19
		10	8.9	7.2	0.28		6	10	9.4	8.3	6.7	4.8	0.31
	7	9.6	8.4	6.8	0.42			9.3	8.5	7.5	6.1	4.4	0.28
		8.7	7.6	6.1	0.38		7	8.8	8.0	7.1	5.8	4.1	0.42
	8	8.4	7.3	5.9	0.55			8.0	7.3	6.4	5.2	3.8	0.38
		7.7	6.7	5.4	0.50		8	7.7	7.0	6.2	5.0	3.6	0.55
								7.0	6.4	5.6	4.6	3.3	0.50
Web Shear and Property Values													
V, kips		47	37	28		V, kips		56	47	37	28	19	
S_x, In.^{3}		3.06	2.66	2.15		S_x, In.^{3}		2.80	2.56	2.25	1.83	1.32	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

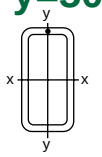
Nominal Size		3 1/2 x 2 1/2						Nominal Size		3 x 2 1/2				
Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		12.17	10.58	8.81	6.87	4.75		Weight Per Foot		9.51	7.96	6.23	4.33	
Design Wall Thickness		0.349	0.291	0.233	0.174	0.116		Design Wall Thickness		0.291	0.233	0.174	0.116	
Span in Feet	1	60	55	48	39	28	0.01	Span in Feet	1	43	38	31	23	0.01
	2	30	27	24	19	14	0.04		2	21	19	16	11	0.05
	3	20	18	16	13	9.4	0.09		3	14	13	10	7.6	0.10
	4	15	14	12	9.7	7.0	0.16		4	11	9.4	7.8	5.7	0.18
	5	12	11	9.5	7.7	5.6	0.24		5	8.5	7.5	6.2	4.5	0.28
	6	9.9	9.1	8.0	6.5	4.7	0.35		6	7.1	6.3	5.2	3.8	0.41
		9.0	8.3	7.2	5.9	4.3	0.32			6.5	5.7	4.7	3.4	0.37
	7	8.5	7.8	6.8	5.5	4.0	0.48							
		7.7	7.1	6.2	5.0	3.7	0.43							
Web Shear and Property Values														
V, kips		49	41	33	24	16		V, kips		35	28	21	14	
S_x, In.^{3}		2.71	2.48	2.17	1.76	1.28		S_x, In.^{3}		1.94	1.71	1.41	1.03	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

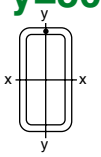
Nominal Size		3 x 2					Nominal Size		3 x 1 1/2				Nominal Size		3 x 1		
Wall Thickness		5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		1/4	3/16	1/8	Δ Inches	Wall Thickness		3/16	1/8	Δ Inches
Weight Per Foot		8.45	7.11	5.59	3.90		Weight Per Foot		6.26	4.96	3.48		Weight Per Foot		4.32	3.05	
Design Wall Thickness		0.291	0.233	0.174	0.116		Design Wall Thickness		0.233	0.174	0.116		Design Wall Thickness		0.174	0.116	
Span in Feet	1	35	31	26	19	0.01	Span in Feet	1	25	21	16	0.01	Span in Feet	1	16	12	0.01
	2	17	16	13	9.5	0.05		2	12	10	7.8	0.05		2	7.8	6.0	0.05
	3	12	10	8.7	6.4	0.10		3	8.2	6.9	5.2	0.10		3	5.2	4.0	0.10
	4	8.7	7.8	6.5	4.8	0.18		4	6.2	5.2	3.9	0.18			4.8	3.6	0.09
	5	7.0	6.2	5.2	3.8	0.28			5.6	4.7	3.5	0.17		4	3.9	3.0	0.18
		6.3	5.7	4.7	3.5	0.26		5	4.9	4.2	3.1	0.28			3.6	2.7	0.17
	6	5.8	5.2	4.3	3.2	0.41			4.5	3.8	2.8	0.26		5	3.1	2.4	0.28
		5.3	4.7	3.9	2.9	0.37		6	4.1	3.5	2.6	0.41			2.9	2.2	0.26
									3.7	3.2	2.4	0.37		6	2.6	2.0	0.41
															2.4	1.8	0.37
Web Shear and Property Values																	
V, kips		35	28	21	14		V, kips		28	21	14		V, kips		21	14	
S_x, In.^{3}		1.58	1.42	1.18	0.866		S_x, In.^{3}		1.12	0.945	0.706		S_x, In.^{3}		0.713	0.545	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		2 1/2 x 1 1/2				Nominal Size		2 x 1 1/2			Nominal Size		2 x 1		
Wall Thickness		1/4	3/16	1/8	Δ Inches	Wall Thickness		3/16	1/8	Δ Inches	Wall Thickness		3/16	1/8	Δ Inches
Weight Per Foot		5.41	4.32	3.05		Weight Per Foot		3.68	2.63		Weight Per Foot		3.04	2.20	
Design Wall Thickness		0.233	0.174	0.116		Design Wall Thickness		0.174	0.116		Design Wall Thickness		0.174	0.116	
Span in Feet	1	18	16	12	0.01	Span in Feet	1	11	8.4	0.02	Span in Feet	1	7.7	6.2	0.02
	2	9.0	7.8	5.9	0.05		2	5.4	4.2	0.07		2	3.8	3.1	0.07
	3	6.0	5.2	3.9	0.12		3	3.6	2.8	0.15		3	2.6	2.1	0.15
	4	4.5	3.9	2.9	0.22		4	2.7	2.1	0.27			2.3	1.9	0.14
		4.1	3.5	2.7	0.20			2.5	1.9	0.25		4	1.9	1.5	0.27
	5	3.6	3.1	2.4	0.34								1.7	1.4	0.25
		3.3	2.8	2.1	0.31										
Web Shear and Property Values															
V, kips		23	17	12		V, kips		14	9.3		V, kips		14	9.3	
S_x, In.^{3}		0.820	0.705	0.535		S_x, In.^{3}		0.494	0.383		S_x, In.^{3}		0.349	0.280	

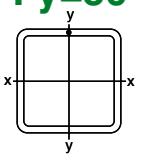
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

Notes

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		16 x 16								Nominal Size		14 x 14							
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	5/16	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	5/16	Δ Inches
Weight Per Foot		127.30		103.30		78.52		65.87		Weight Per Foot		110.36		89.68		68.31		57.36	
Design Wall Thickness		0.581		0.465		0.349*		0.291*		Design Wall Thickness		0.581		0.465		0.349*		0.291*	
Span in Feet	4			595	0.03	447	0.03	372	0.03	Span in Feet	4	651	0.04	521	0.04	391	0.03	311	0.03
	5	744	0.05	564	0.05	396	0.04	309	0.04		5	563	0.06	424	0.06	317	0.05	248	0.05
	6	627	0.08	470	0.07	330	0.06	258	0.06		6	469	0.09	353	0.08	264	0.08	207	0.07
	7	537	0.10	403	0.10	283	0.09	221	0.08		7	402	0.12	303	0.11	227	0.10	177	0.10
	8	470	0.14	353	0.12	248	0.11	193	0.10		8	352	0.16	265	0.14	198	0.14	155	0.13
	9	418	0.17	313	0.16	220	0.14	172	0.13		9	313	0.20	236	0.18	176	0.17	138	0.16
	10	376	0.21	282	0.19	198	0.18	155	0.16		10	282	0.24	212	0.22	159	0.21	124	0.20
	11	342	0.26	256	0.23	180	0.21	141	0.20		11	256	0.30	193	0.27	144	0.26	113	0.24
	12	314	0.31	235	0.28	165	0.25	129	0.23		12	235	0.35	177	0.32	132	0.31	104	0.28
	13	289	0.36	217	0.33	152	0.30	119	0.27		13	217	0.41	163	0.37	122	0.36	96	0.33
	14	269	0.42	201	0.38	141	0.34	110	0.32		14	201	0.48	151	0.43	113	0.42	89	0.39
	15	251	0.48	188	0.44	132	0.40	103	0.37		15	188	0.55	141	0.50	106	0.48	83	0.44
	16	235	0.55	176	0.50	124	0.45	97	0.42		16	176	0.62	133	0.57	99	0.55	78	0.50
	17	221	0.62	166	0.56	116	0.51	91	0.47		17	166	0.70	125	0.64	93	0.62	73	0.57
	18	209	0.69	157	0.63	110	0.57	86	0.53		18	156	0.79	118	0.72	88	0.69	69	0.64
	19	198	0.77	148	0.70	104	0.64	81	0.59		19	148	0.88	112	0.80	83	0.77	65	0.71
	20	188	0.85	141	0.78	99	0.70	77	0.65		20	141	0.98	106	0.89	79	0.85	62	0.79
	21	179	0.94	134	0.86	94	0.78	74	0.72		21	134	1.08	101	0.98	76	0.94	59	0.87
	22	171	1.03	128	0.94	90	0.85	70	0.79		22	128	1.18	96	1.07	72	1.03	56	0.95
	23	164	1.13	123	1.03	86	0.93	67	0.86		23	122	1.29	92	1.17	69	1.13	54	1.04
	24	157	1.23	118	1.12	83	1.01	64	0.93		24	117	1.40	88	1.28	66	1.23	52	1.13
	25	150	1.33	113	1.21	79	1.10	62	1.01		25	113	1.52	85	1.39	63	1.33	50	1.23
	26	145	1.44	108	1.31	76	1.19	59	1.10		26	108	1.65	82	1.50	61	1.44	48	1.33
	27	139	1.56	104	1.41	73	1.28	57	1.18		27	104	1.78	79	1.62	59	1.55	46	1.43
	28	134	1.67	101	1.52	71	1.38	55	1.27		28	101	1.91	76	1.74	57	1.67	44	1.54
	29	130	1.79	97	1.63	68	1.48	53	1.37		29	97	2.05	—	—	—	—	—	—
	30	125	1.92	94	1.75	66	1.58	52	1.46			88	1.86	73	1.86	55	1.79	43	1.65
	31	121	2.05	91	1.86	64	1.69	50	1.56		30	94	2.19	—	—	—	—	—	—
	32	118	2.18	88	1.99	62	1.80	48	1.66			85	2.00	71	2.00	53	1.92	41	1.77
	33	114	2.32	—	—	—	—	—	—										
		104	2.11	85	2.11	60	1.92	47	1.77										
	34	111	2.47	—	—	—	—	—	—										
		101	2.24	83	2.24	58	2.03	45	1.88										
Web Shear and Property Values																			
V, kips		372		298		223		186		V, kips		325		260		195		163	
S_x, In.^{3}		171		141		99.0 **		77.3 **		S_x, In.^{3}		128		106		79.3 **		62.1 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

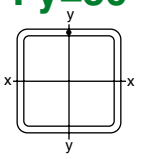
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		12 x 12								
Wall Thickness		5/8	1/2	Δ Inches	3/8	Δ Inches	5/16	Δ Inches	1/4	Δ Inches
Weight Per Foot		93.34	76.07		58.10		48.86		39.43	
Design Wall Thickness		0.581	0.465		0.349		0.291 *		0.233 *	
Span in Feet	4	502	419	0.05	298	0.04	241	0.04	179	0.04
	5	402	335	0.07	238	0.06	193	0.06	143	0.06
	6	335	279	0.10	198	0.09	161	0.09	119	0.08
	7	287	239	0.14	170	0.13	138	0.12	102	0.11
	8	251	210	0.18	149	0.17	121	0.16	89	0.14
	9	223	186	0.23	132	0.21	107	0.20	79	0.18
	10	201	168	0.28	119	0.26	96	0.25	71	0.22
	11	183	152	0.34	108	0.31	88	0.30	65	0.27
	12	167	140	0.41	99	0.37	80	0.35	60	0.32
	13	155	129	0.48	92	0.44	74	0.42	55	0.38
	14	143	120	0.56	85	0.51	69	0.48	51	0.44
	15	134	112	0.64	79	0.58	64	0.55	48	0.50
	16	126	105	0.73	74	0.66	60	0.63	45	0.57
	17	118	99	0.82	70	0.75	57	0.71	42	0.65
	18	112	93	0.92	66	0.84	54	0.80	40	0.72
	19	106	88	1.03	63	0.93	51	0.89	38	0.81
	20	100	84	1.14	60	1.03	48	0.98	36	0.89
	21	96	80	1.25	57	1.14	46	1.08	34	0.99
	22	91	76	1.38	54	1.25	44	1.19	32	1.08
	23	87	73	1.50	52	1.37	42	1.30	31	1.18
	24	84	70	1.64	50	1.49	40	1.42	30	1.29
	25	80	67	1.78	—	—	—	—	—	—
		73	61	1.62	48	1.62	39	1.54	29	1.40
Web Shear and Property Values										
V, kips		279	223		168		140		112	
S_x, In.^{3}		91.3	76.2		59.5		48.2 **		35.7 **	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

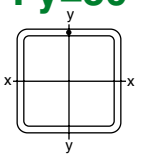
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		10 x 10									
Wall Thickness		5/8	1/2	3/8	Δ Inches	5/16	Δ Inches	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		76.33	62.46	47.90		40.35		32.63		24.73	
Design Wall Thickness		0.581	0.465	0.349		0.291		0.233 *		0.174 *	
Span in Feet	2	465			0.01	233	0.01	186	0.01	139	0.01
	3	446	372	279	0.03	230	0.03	176	0.03	118	0.02
	4	334	282	222	0.05	173	0.05	132	0.05	89	0.04
	5	268	225	178	0.09	138	0.08	106	0.07	71	0.06
	6	223	188	148	0.12	115	0.11	88	0.10	59	0.09
	7	191	161	127	0.17	99	0.15	75	0.14	51	0.12
	8	167	141	111	0.22	86	0.20	66	0.19	44	0.16
	9	149	125	99	0.28	77	0.25	59	0.24	39	0.21
	10	134	113	89	0.34	69	0.31	53	0.29	35	0.25
	11	122	102	81	0.41	63	0.38	48	0.35	32	0.31
	12	111	94	74	0.49	58	0.45	44	0.42	30	0.37
	13	103	87	68	0.58	53	0.52	41	0.49	27	0.43
	14	96	80	63	0.67	49	0.61	38	0.57	25	0.50
	15	89	75	59	0.77	46	0.70	35	0.65	24	0.57
	16	84	70	56	0.87	43	0.79	33	0.74	22	0.65
	17	79	66	52	0.99	41	0.90	31	0.84	21	0.73
	18	74	63	49	1.11	38	1.01	29	0.94	20	0.82
	19	70	59	47	1.23	36	1.12	28	1.05	19	0.92
	20	67	56	44	1.37	35	1.24	26	1.16	18	1.02
	21	64	54	42	1.51	—	—	—	—	—	—
		58	49	38	1.37	33	1.37	25	1.28	17	1.12
Web Shear and Property Values											
V, kips		232	186	140		116		93		70	
S_x, In.^{3}		60.8	51.2	40.4		34.5		26.4 **		17.7 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

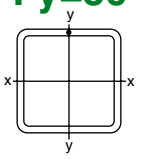
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

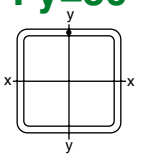
Nominal Size		9 x 9								
Wall Thickness		1/2	3/8	Δ Inches	5/16	Δ Inches	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		55.66	42.79		36.10		29.23		22.18	
Design Wall Thickness		0.465	0.349		0.291		0.233 *		0.174 *	
Span in Feet	2	335	251	0.02	210	0.01	168	0.01	125	0.01
	3	298	236	0.03	184	0.03	147	0.03	100	0.03
	4	223	177	0.06	138	0.06	111	0.05	75	0.05
	5	179	142	0.09	110	0.09	88	0.08	60	0.07
	6	149	118	0.14	92	0.12	74	0.12	50	0.11
	7	128	101	0.19	79	0.17	63	0.16	43	0.15
	8	112	89	0.24	69	0.22	55	0.22	38	0.19
	9	99	79	0.31	61	0.28	49	0.27	33	0.24
	10	89	71	0.38	55	0.34	44	0.34	30	0.30
	11	81	64	0.46	50	0.42	40	0.41	27	0.36
	12	74	59	0.55	46	0.50	37	0.48	25	0.43
	13	69	54	0.64	42	0.58	34	0.57	23	0.50
	14	64	51	0.74	39	0.68	32	0.66	21	0.58
	15	60	47	0.85	37	0.78	29	0.76	20	0.67
	16	56	44	0.97	35	0.88	28	0.86	19	0.76
	17	53	42	1.10	32	1.00	26	0.97	18	0.86
	18	50	39	1.23	31	1.12	25	1.09	17	0.96
	19	47	37	1.37	–	–	–	–	–	–
		43	34	1.24	29	1.24	23	1.21	16	1.07
Web Shear and Property Values										
V, kips		167	126		105		84		63	
S_x, In.^{3}		40.6	32.2		27.6		22.1 **		15.0 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.
** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

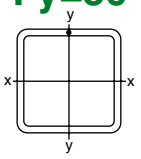
Nominal Size		8 x 8								
Wall Thickness		5/8	1/2	3/8	5/16	Δ Inches	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		59.32	48.85	37.69	31.84		25.82		19.63	
Design Wall Thickness		0.581	0.465	0.349	0.291		0.233		0.174 *	
Span in Feet	2	372	298	223	186	0.02	149	0.02	111	0.01
	3	268	229	183	157	0.04	118	0.03	82	0.03
	4	201	172	137	118	0.07	89	0.06	62	0.06
	5	161	137	110	94	0.11	71	0.10	49	0.09
	6	134	114	91	78	0.15	59	0.14	41	0.13
	7	115	98	78	67	0.21	51	0.19	35	0.17
	8	100	86	68	59	0.27	44	0.25	31	0.22
	9	89	76	61	52	0.35	39	0.31	27	0.28
	10	80	69	55	47	0.43	35	0.39	25	0.35
	11	73	62	50	43	0.52	32	0.47	22	0.42
	12	67	57	46	39	0.61	30	0.56	21	0.51
	13	62	53	42	36	0.72	27	0.66	19	0.59
	14	57	49	39	34	0.84	25	0.76	18	0.69
	15	54	46	37	31	0.96	24	0.87	16	0.79
	16	50	43	34	29	1.09	22	0.99	15	0.90
	17	47	40	32	28	1.23	–	–	–	–
		43	37	29	25	1.12	21	1.12	14	1.01
Web Shear and Property Values										
V, kips		186	149	112	93		75		56	
S_x, In.^{3}		36.5	31.2	24.9	21.4		17.7		12.3 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.
** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

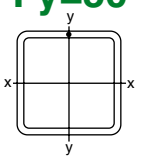
Nominal Size		7 x 7								
Wall Thickness		5/8	1/2	3/8	5/16	Δ Inches	1/4	Δ Inches	3/16	Δ Inches
Weight Per Foot		50.81	42.05	32.58	27.59		22.42		17.08	
Design Wall Thickness		0.581	0.465	0.349	0.291		0.233		0.174 *	
Span in Feet	2	294	253	195	163	0.02	130	0.02	97	0.02
	3	196	169	136	117	0.04	89	0.04	66	0.04
	4	147	127	102	88	0.08	67	0.07	49	0.07
	5	117	101	82	70	0.12	53	0.11	40	0.11
	6	98	84	68	59	0.18	44	0.16	33	0.15
	7	84	72	58	50	0.24	38	0.22	28	0.21
	8	73	63	51	44	0.31	33	0.28	25	0.27
	9	65	56	45	39	0.40	30	0.36	22	0.34
	10	59	51	41	35	0.49	27	0.44	20	0.43
	11	53	46	37	32	0.59	24	0.54	18	0.52
	12	49	42	34	29	0.70	22	0.64	16	0.61
	13	45	39	31	27	0.82	20	0.75	15	0.72
	14	42	36	29	25	0.96	19	0.87	14	0.83
	15	39	34	27	23	1.10	—	—	—	—
		36	31	25	21	1.00	18	1.00	13	0.96
Web Shear and Property Values										
V, kips		163	130	98	81		65		49	
S_x, In.^{3}		26.7	23.0	18.6	16.0		13.3		9.88 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.
** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		6 x 6									
Wall Thickness		5/8	1/2	3/8	5/16	1/4	Δ Inches	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		42.30	35.24	27.48	23.34	19.02		14.53		9.86	
Design Wall Thickness		0.581	0.465	0.349	0.291	0.233		0.174		0.116 *	
Span in Feet	2	202	177	144	125	105	0.02	74	0.02	44	0.02
	3	135	118	96	84	70	0.05	49	0.05	30	0.04
	4	101	89	72	63	52	0.09	37	0.08	22	0.07
	5	81	71	58	50	42	0.14	30	0.13	18	0.11
	6	67	59	48	42	35	0.20	25	0.19	15	0.16
	7	58	51	41	36	30	0.28	21	0.25	13	0.22
	8	51	44	36	31	26	0.36	19	0.33	11	0.28
	9	45	39	32	28	23	0.46	16	0.42	9.8	0.36
	10	40	35	29	25	21	0.57	15	0.52	8.9	0.44
	11	37	32	26	23	19	0.69	13	0.63	8.1	0.54
	12	34	30	24	21	17	0.82	12	0.74	7.4	0.64
Web Shear and Property Values											
V, kips		139	112	84	70	56		42		28	
S_x, In.^{3}		18.4	16.1	13.1	11.4	9.54		7.42		4.43 **	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

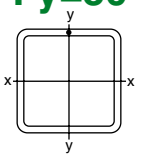
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		5 1/2 x 5 1/2							
Wall Thickness		3/8	5/16	1/4	Δ Inches	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		24.93	21.21	17.32		13.25		9.01	
Design Wall Thickness		0.349	0.291	0.233		0.174		0.116 *	
Span in Feet	2	119	104	87	0.02	62	0.02	38	0.02
	3	79	69	58	0.06	41	0.05	26	0.05
	4	59	52	43	0.10	31	0.09	19	0.08
	5	48	41	35	0.16	25	0.14	15	0.13
	6	40	35	29	0.22	21	0.20	13	0.18
	7	34	30	25	0.30	18	0.28	11	0.25
	8	30	26	22	0.40	15	0.36	9.6	0.32
	9	26	23	19	0.50	14	0.46	8.5	0.41
	10	24	21	17	0.62	12	0.56	7.7	0.50
	11	22	19	16	0.75	11	0.68	7.0	0.61
Web Shear and Property Values									
V, kips		77	64	51		38		26	
S_x, In.^{3}		10.8	9.43	7.90		6.17		3.84 **	

Nominal Size		5 x 5							
Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		28.43	22.37	19.08	15.62	11.97		8.16	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174		0.116 *	
Span in Feet	2	114	95	84	71	55	0.03	33	0.02
	3	76	64	56	47	37	0.06	22	0.05
	4	57	48	42	35	28	0.11	16	0.09
	5	46	38	33	28	22	0.17	13	0.14
	6	38	32	28	24	18	0.25	11	0.21
	7	33	27	24	20	16	0.33	9.4	0.28
	8	29	24	21	18	14	0.44	8.2	0.37
	9	25	21	19	16	12	0.55	7.3	0.47
	10	23	19	17	14	11	0.68	6.6	0.58
V, kips		93	70	58	47	35		23	
S_x, In.^{3}		10.4	8.67	7.61	6.41	5.03		3.28 **	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

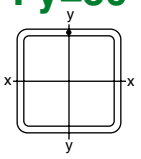
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

Nominal Size		4 1/2 x 4 1/2								4 x 4							
Wall Thickness		1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches	1/2	3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches
Weight Per Foot		25.03	19.82	16.96	13.91	10.70		7.31		21.63	17.27	14.83	12.21	9.42		6.46	
Design Wall Thickness		0.465	0.349	0.291	0.233	0.174		0.116 *		0.465	0.349	0.291	0.233	0.174		0.116	
Span in Feet	2	88	75	66	56	44	0.03	28	0.03	65	56	50	43	34	0.03	22	0.03
	3	59	50	44	37	29	0.07	18	0.06	44	38	34	29	23	0.08	15	0.07
	4	44	37	33	28	22	0.12	14	0.11	33	28	25	21	17	0.14	11	0.12
	5	35	30	26	22	18	0.19	11	0.17	26	23	20	17	14	0.21	8.8	0.19
	6	29	25	22	19	15	0.27	9.2	0.24	22	19	17	14	11	0.31	7.3	0.28
	7	25	21	19	16	13	0.37	7.9	0.33	19	16	14	12	9.7	0.42	6.3	0.38
	8	22	19	16	14	11	0.49	6.9	0.43	16	14	13	11	8.5	0.55	5.5	0.50
	9	20	17	15	12	9.8	0.61	6.1	0.54								
Web Shear and Property Values																	
V, kips		84	63	52	42	31		21		74	56	47	37	28		19	
S_x, In.^{3}		8.02	6.78	5.99	5.08	4.01		2.75 **		5.95	5.13	4.57	3.90	3.10		2.20	

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

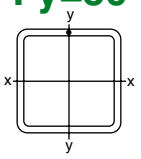
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



ERW

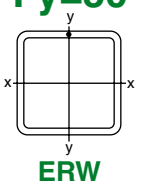
Nominal Size		3 1/2 x 3 1/2							Nominal Size		3 x 3					
Wall Thickness		3/8	5/16	1/4	3/16	Δ Inches	1/8	Δ Inches	Wall Thickness		3/8	5/16	1/4	3/16	1/8	Δ Inches
Weight Per Foot		14.72	12.70	10.51	8.15		5.61		Weight Per Foot		12.17	10.58	8.81	6.87	4.75	
Design Wall Thickness		0.349	0.291	0.233	0.174		0.116		Design Wall Thickness		0.349	0.291	0.233	0.174	0.116	
Span in Feet	1	81	73	63	49	0.01	32	0.01	Span in Feet	1	55	51	44	36	26	0.01
	2	41	37	32	25	0.04	17	0.04		2	28	25	22	18	13	0.05
	3	27	24	21	17	0.09	11	0.08		3	18	17	15	12	8.7	0.10
	4	20	18	16	13	0.16	8.3	0.14		4	14	13	11	9.0	6.5	0.18
	5	16	15	13	10	0.24	6.6	0.22		5	11	10	8.8	7.2	5.2	0.28
	6	14	12	11	8.5	0.35	5.5	0.32		6	9.2	8.4	7.4	6.0	4.4	0.41
	7	12	10	9.1	7.3	0.48	4.7	0.43								
Web Shear and Property Values																
V, kips		49	41	33	24		16		V, kips		42	35	28	21	14	
S_x, In.^{3}		3.70	3.34	2.88	2.31		1.66		S_x, In.^{3}		2.51	2.30	2.01	1.64	1.19	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



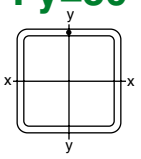
ERW

Nominal Size		2 1/2 x 2 1/2					Nominal Size		2 1/4 x 2 1/4				Nominal Size		2 x 2			
Wall Thickness		5/16	1/4	3/16	1/8	Δ Inches	Wall Thickness		1/4	3/16	1/8	Δ Inches	Wall Thickness		1/4	3/16	1/8	Δ Inches
Weight Per Foot		8.45	7.11	5.59	3.90		Weight Per Foot		6.26	4.96	3.48		Weight Per Foot		5.41	4.32	3.05	
Design Wall Thickness		0.291	0.233	0.174	0.116		Design Wall Thickness		0.233	0.174	0.116		Design Wall Thickness		0.233	0.174	0.116	
Span in Feet	1	32	29	24	18	0.01	Span in Feet	1	22	19	14	0.02	Span in Feet	1	16	14	11	0.02
	2	16	14	12	8.8	0.05		2	11	9.3	7.0	0.06		2	8.2	7.0	5.3	0.07
	3	11	9.5	7.9	5.9	0.12		3	7.3	6.2	4.6	0.14		3	5.5	4.7	3.6	0.15
	4	8.0	7.2	5.9	4.4	0.22		4	5.5	4.7	3.5	0.24		4	4.1	3.5	2.7	0.27
	5	6.4	5.7	4.8	3.5	0.34												
Web Shear and Property Values																		
V, kips		29	23	17	12		V, kips		21	16	10		V, kips		19	14	9.3	
S_x, In.^{3}		1.45	1.30	1.08	0.798		S_x, In.^{3}		1.00	0.847	0.633		S_x, In.^{3}		0.745	0.640	0.486	

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



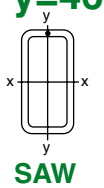
ERW

Nominal Size		1 3/4 x 1 3/4		Nominal Size		1 5/8 x 1 5/8			Nominal Size		1 1/2 x 1 1/2			Nominal Size		1 1/4 x 1 1/4		
Wall Thickness		3/16	Δ Inches	Wall Thickness		3/16	1/8	Δ Inches	Wall Thickness		3/16	1/8	Δ Inches	Wall Thickness		3/16	1/8	Δ Inches
Weight Per Foot		3.68		Weight Per Foot		3.36	2.42		Weight Per Foot		3.04	2.20		Weight Per Foot		2.40	1.78	
Design Wall Thickness		0.174		Design Wall Thickness		0.174	0.116		Design Wall Thickness		0.174	0.116		Design Wall Thickness		0.174	0.116	
Span in Feet	1	10	0.02	Span in Feet	1	8.4	6.6	0.02	Span in Feet	1	6.9	5.5	0.02	Span in Feet	1	4.3	3.6	0.03
	2	5.1	0.08		2	4.2	3.3	0.08		2	3.5	2.8	0.09		2	2.1	1.8	0.11
	3	3.4	0.18		3	2.8	2.2	0.19		3	2.3	1.8	0.20					
Web Shear and Property Values																		
V, kips		12		V, kips		11	7.5		V, kips		10	7.0		V, kips		8.7	5.8	
S_x, In.^{3}		0.462		S_x, In.^{3}		0.384	0.302		S_x, In.^{3}		0.314	0.251		S_x, In.^{3}		0.194	0.162	

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



SAW

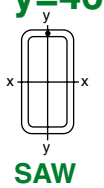
Nominal Size		32 x 24						Nominal Size		30 x 24					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		225.80		183.50		138.95		Weight Per Foot		217.30		176.70		133.84	
Design Wall Thickness		0.625*		0.500*		0.375*		Design Wall Thickness		0.625*		0.500*		0.375*	
Span in Feet	6					883	0.03	Span in Feet	6					828	0.03
	7	1470	0.04	1180	0.04	839	0.04		7	1380	0.05	1100	0.04	765	0.04
	8	1410	0.06	1070	0.05	734	0.05		8	1290	0.06	980	0.06	669	0.05
	9	1260	0.07	953	0.07	652	0.06		9	1150	0.08	871	0.07	595	0.06
	10	1130	0.09	857	0.08	587	0.07		10	1040	0.09	784	0.09	535	0.08
	11	1030	0.11	779	0.10	534	0.09		11	942	0.11	713	0.10	487	0.09
	12	943	0.13	715	0.12	489	0.10		12	863	0.14	653	0.12	446	0.11
	13	870	0.15	660	0.14	452	0.12		13	797	0.16	603	0.15	412	0.13
	14	808	0.17	612	0.16	419	0.14		14	740	0.19	560	0.17	382	0.15
	15	754	0.20	572	0.18	391	0.16		15	691	0.21	523	0.20	357	0.17
	16	707	0.23	536	0.21	367	0.19		16	647	0.24	490	0.22	335	0.20
	17	666	0.26	504	0.24	345	0.21		17	609	0.27	461	0.25	315	0.22
	18	629	0.29	476	0.26	326	0.24		18	576	0.31	435	0.28	297	0.25
	19	596	0.32	451	0.29	309	0.26		19	545	0.34	413	0.31	282	0.28
	20	566	0.36	429	0.33	293	0.29		20	518	0.38	392	0.35	268	0.31
	21	539	0.39	408	0.36	280	0.32		21	493	0.42	373	0.38	255	0.34
	22	514	0.43	390	0.39	267	0.35		22	471	0.46	356	0.42	243	0.37
	23	492	0.47	373	0.43	255	0.39		23	450	0.50	341	0.46	233	0.41
	24	472	0.51	357	0.47	245	0.42		24	432	0.55	327	0.50	223	0.44
	25	453	0.56	343	0.51	235	0.46		25	414	0.59	314	0.54	214	0.48
	26	435	0.60	330	0.55	226	0.49		26	398	0.64	301	0.59	206	0.52
	27	419	0.65	318	0.59	217	0.53		27	384	0.69	290	0.63	198	0.56
	28	404	0.70	306	0.64	210	0.57		28	370	0.74	280	0.68	191	0.61
	30	377	0.80	286	0.73	196	0.66		29	357	0.80	270	0.73	185	0.65
	32	354	0.91	268	0.83	183	0.75		30	345	0.85	261	0.78	178	0.69
	34	333	1.03	252	0.94	173	0.84		32	324	0.97	245	0.89	167	0.79
	36	314	1.15	238	1.06	163	0.94		34	305	1.10	231	1.00	157	0.89
	38	298	1.28	226	1.18	154	1.05		36	288	1.23	218	1.12	149	1.00
	40	283	1.42	214	1.30	147	1.17		38	273	1.37	206	1.25	141	1.12
	42	269	1.57	204	1.44	140	1.29		40	259	1.52	196	1.39	134	1.24
	44	257	1.72	195	1.58	133	1.41		42	247	1.67	187	1.53	127	1.36
	46	246	1.88	186	1.73	128	1.54		44	235	1.83	178	1.68	122	1.49
	48	236	2.05	179	1.88	122	1.68		46	225	2.01	170	1.84	116	1.63
	50	226	2.22	171	2.04	117	1.82		48	216	2.18	163	2.00	112	1.78
	54	210	2.59	159	2.38	109	2.12		50	207	2.37	157	2.17	107	1.93
	58	195	2.99	148	2.74	101	2.45		54	192	2.76	145	2.53	99	2.25
	62	183	3.42	138	3.13	95	2.80		58	179	3.19	135	2.92	92	2.60
	66	171	3.87	130	3.55	89	3.17		62	167	3.64	126	3.33	86	2.97
	70	162	4.35	122	3.99	84	3.57		66	157	4.13	119	3.78	81	3.36
	74	153	4.87	116	4.46	79	3.99		70	148	4.64	112	4.25	76	3.78
Web Shear and Property Values															
V, kips		736		589		442		V, kips		690		552		414	
S_x, In.^{3}		615**		466**		319**		S_x, In.^{3}		563**		426**		291**	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.
** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



SAW

Nominal Size		28 x 24						Nominal Size		26 x 24					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		208.79		169.89		128.74		Weight Per Foot		200.28		163.08		123.64	
Design Wall Thickness		0.625 *		0.500 *		0.375 *		Design Wall Thickness		0.625 *		0.500 *		0.375 *	
Span in Feet	6			1030	0.03	773	0.03	Span in Feet	6			957	0.04	718	0.03
	7	1290	0.05	1020	0.05	694	0.04		7	1200	0.05	920	0.05	623	0.04
	8	1180	0.07	892	0.06	607	0.05		8	1070	0.07	805	0.06	545	0.06
	9	1050	0.08	793	0.08	540	0.07		9	949	0.09	716	0.08	485	0.07
	10	944	0.10	714	0.09	486	0.08		10	854	0.11	644	0.10	436	0.09
	11	858	0.12	649	0.11	442	0.10		11	776	0.13	585	0.12	396	0.11
	12	787	0.15	595	0.13	405	0.12		12	711	0.16	537	0.14	363	0.13
	13	726	0.17	549	0.16	374	0.14		13	657	0.18	495	0.17	335	0.15
	14	674	0.20	510	0.18	347	0.16		14	610	0.21	460	0.20	311	0.17
	15	629	0.23	476	0.21	324	0.19		15	569	0.25	429	0.22	291	0.20
	16	590	0.26	446	0.24	304	0.21		16	534	0.28	403	0.25	273	0.22
	17	555	0.29	420	0.27	286	0.24		17	502	0.32	379	0.29	257	0.25
	18	524	0.33	397	0.30	270	0.27		18	474	0.35	358	0.32	242	0.28
	19	497	0.37	376	0.33	256	0.30		19	449	0.39	339	0.36	230	0.32
	20	472	0.41	357	0.37	243	0.33		20	427	0.44	322	0.40	218	0.35
	21	449	0.45	340	0.41	231	0.36		21	407	0.48	307	0.44	208	0.39
	22	429	0.49	325	0.45	221	0.40		22	388	0.53	293	0.48	198	0.42
	23	410	0.54	310	0.49	211	0.44		23	371	0.58	280	0.53	190	0.46
	24	393	0.59	297	0.53	202	0.47		24	356	0.63	268	0.57	182	0.50
	25	378	0.63	286	0.58	194	0.51		25	342	0.68	258	0.62	174	0.55
	26	363	0.69	275	0.63	187	0.56		26	328	0.74	248	0.67	168	0.59
	27	350	0.74	264	0.68	180	0.60		27	316	0.80	239	0.73	162	0.64
	28	337	0.80	255	0.73	173	0.65		28	305	0.86	230	0.78	156	0.69
	29	325	0.85	246	0.78	168	0.69		29	294	0.92	222	0.84	150	0.74
	30	315	0.91	238	0.84	162	0.74		30	285	0.98	215	0.90	145	0.79
	32	295	1.04	223	0.95	152	0.84		32	267	1.12	201	1.02	136	0.90
	34	278	1.17	210	1.07	143	0.95		34	251	1.26	189	1.15	128	1.01
	36	262	1.32	198	1.20	135	1.07		36	237	1.42	179	1.29	121	1.14
	38	248	1.47	188	1.34	128	1.19		38	225	1.58	169	1.44	115	1.27
	40	236	1.63	178	1.48	121	1.32		40	213	1.75	161	1.59	109	1.40
	42	225	1.79	170	1.64	116	1.45		42	203	1.93	153	1.76	104	1.55
	44	215	1.97	162	1.80	110	1.59		44	194	2.12	146	1.93	99	1.70
	46	205	2.15	155	1.96	106	1.74		46	186	2.31	140	2.11	95	1.85
	48	197	2.34	149	2.14	101	1.90		48	178	2.52	134	2.29	91	2.02
	50	189	2.54	143	2.32	97	2.06		50	171	2.73	129	2.49	87	2.19
	52	182	2.75	137	2.51	93	2.23		52	164	2.96	124	2.69	84	2.37
	56	169	3.19	127	2.91	87	2.58		54	158	3.19	119	2.90	81	2.56
	60	157	3.66	119	3.34	81	2.96		56	152	3.43	115	3.12	78	2.75
	64	147	4.16	112	3.80	76	3.37		58	147	3.68	111	3.35	75	2.95
	65	145	4.29	110	3.92	75	3.48		60	142	3.94	107	3.58	73	3.16
Web Shear and Property Values															
V, kips		644		515		386		V, kips		598		478		359	
S_x, In.^{3}		513 **		388 **		264 **		S_x, In.^{3}		464 **		350 **		237 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

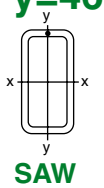
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



SAW

Nominal Size		24 x 22						Nominal Size		22 x 20					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		183.27		149.47		113.43		Weight Per Foot		166.25		135.86		103.22	
Design Wall Thickness		0.625		0.500 *		0.375 *		Design Wall Thickness		0.625		0.500 *		0.375 *	
Span in Feet	5					662	0.02	Span in Feet	5	1010	0.03	810	0.03	607	0.03
	6	1100	0.04	883	0.04	638	0.04		6	984	0.05	807	0.05	552	0.04
	7	1030	0.06	804	0.05	547	0.05		7	844	0.06	691	0.06	473	0.06
	8	897	0.08	704	0.07	478	0.06		8	738	0.08	605	0.08	414	0.07
	9	797	0.10	626	0.09	425	0.08		9	656	0.11	538	0.10	368	0.09
	10	718	0.12	563	0.11	383	0.10		10	591	0.13	484	0.13	331	0.11
	11	652	0.14	512	0.14	348	0.12		11	537	0.16	440	0.15	301	0.14
	12	598	0.17	469	0.16	319	0.14		12	492	0.19	403	0.18	276	0.16
	13	552	0.20	433	0.19	294	0.17		13	454	0.22	372	0.22	255	0.19
	14	513	0.23	402	0.22	273	0.19		14	422	0.25	346	0.25	237	0.22
	15	478	0.27	375	0.25	255	0.22		15	394	0.29	323	0.29	221	0.25
	16	449	0.30	352	0.29	239	0.25		16	369	0.33	302	0.33	207	0.29
	17	422	0.34	331	0.32	225	0.29		17	347	0.38	285	0.37	195	0.33
	18	399	0.39	313	0.36	213	0.32		18	328	0.42	269	0.41	184	0.37
	19	378	0.43	296	0.40	201	0.36		19	311	0.47	255	0.46	174	0.41
	20	359	0.48	282	0.45	191	0.40		20	295	0.52	242	0.51	166	0.45
	21	342	0.52	268	0.49	182	0.44		21	281	0.57	230	0.56	158	0.50
	22	326	0.58	256	0.54	174	0.48		22	268	0.63	220	0.62	151	0.55
	23	312	0.63	245	0.59	166	0.52		23	257	0.69	210	0.67	144	0.60
	24	299	0.69	235	0.65	159	0.57		24	246	0.75	202	0.73	138	0.65
	25	287	0.74	225	0.70	153	0.62		25	236	0.81	194	0.80	132	0.70
	26	276	0.80	217	0.76	147	0.67		26	227	0.88	186	0.86	127	0.76
	27	266	0.87	209	0.82	142	0.72		28	211	1.02	173	1.00	118	0.88
	28	256	0.93	201	0.88	137	0.78		30	197	1.17	161	1.15	110	1.01
	29	247	1.00	194	0.94	132	0.83		32	185	1.33	151	1.30	104	1.15
	30	239	1.07	188	1.01	128	0.89		34	174	1.50	142	1.47	97	1.30
	32	224	1.22	176	1.15	120	1.01		36	164	1.68	134	1.65	92	1.46
	34	211	1.38	166	1.29	113	1.14		38	155	1.87	127	1.84	87	1.63
	36	199	1.54	156	1.45	106	1.28		40	148	2.08	121	2.04	83	1.80
	38	189	1.72	148	1.62	101	1.43		42	141	2.29	115	2.25	79	1.99
	40	179	1.90	141	1.79	96	1.58		44	134	2.51	110	2.46	75	2.18
	42	171	2.10	134	1.98	91	1.75		46	128	2.75	105	2.69	72	2.38
	44	163	2.30	128	2.17	87	1.92		48	123	2.99	101	2.93	69	2.60
	46	156	2.52	122	2.37	83	2.09		50	118	3.24	97	3.18	66	2.82
	48	150	2.74	117	2.58	80	2.28		51	116	3.38	95	3.31	65	2.93
	50	144	2.97	113	2.80	77	2.47								
	52	138	3.22	108	3.03	74	2.68								
	54	133	3.47	104	3.27	71	2.89								
	56	128	3.73	101	3.51	68	3.10								
Web Shear and Property Values															
V, kips		552		442		331		V, kips		506		405		304	
S_x, In.^{3}		390		306 **		208 **		S_x, In.^{3}		321		263 **		180 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

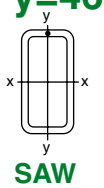
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



SAW

Nominal Size		20 x 18						Nominal Size		20 x 16					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		149.24		122.25		93.01		Weight Per Foot		140.73		115.45		87.91	
Design Wall Thickness		0.625		0.500		0.375 *		Design Wall Thickness		0.625		0.500		0.375 *	
Span in Feet	5	920	0.04	736	0.04	552	0.03	Span in Feet	4			736	0.02	552	0.02
	6	874	0.06	669	0.05	469	0.05		5	920	0.04	732	0.04	541	0.03
	7	749	0.08	573	0.07	402	0.06		6	796	0.06	610	0.05	451	0.05
	8	655	0.10	501	0.09	352	0.08		7	682	0.08	523	0.07	386	0.07
	9	582	0.13	446	0.12	313	0.10		8	597	0.10	458	0.09	338	0.09
	10	524	0.16	401	0.14	282	0.13		9	531	0.13	407	0.12	301	0.11
	11	477	0.19	365	0.17	256	0.16		10	478	0.16	366	0.14	270	0.14
	12	437	0.23	334	0.21	235	0.19		11	434	0.19	333	0.17	246	0.16
	13	403	0.27	309	0.24	217	0.22		12	398	0.23	305	0.21	225	0.20
	14	374	0.31	287	0.28	201	0.25		13	367	0.27	282	0.24	208	0.23
	15	349	0.35	267	0.32	188	0.29		14	341	0.31	262	0.28	193	0.27
	16	328	0.40	251	0.37	176	0.33		15	318	0.35	244	0.32	180	0.31
	17	308	0.45	236	0.41	166	0.37		16	299	0.40	229	0.37	169	0.35
	18	291	0.51	223	0.46	156	0.42		17	281	0.45	215	0.41	159	0.39
	19	276	0.57	211	0.52	148	0.47		18	265	0.51	203	0.46	150	0.44
	20	262	0.63	201	0.57	141	0.52		19	251	0.57	193	0.52	142	0.49
	21	250	0.69	191	0.63	134	0.57		20	239	0.63	183	0.57	135	0.55
	22	238	0.76	182	0.69	128	0.63		21	227	0.69	174	0.63	129	0.60
	23	228	0.83	174	0.76	122	0.68		22	217	0.76	166	0.69	123	0.66
	24	218	0.90	167	0.82	117	0.74		23	208	0.83	159	0.76	118	0.72
	25	210	0.98	160	0.89	113	0.81		24	199	0.90	153	0.82	113	0.78
	26	202	1.06	154	0.97	108	0.87		25	191	0.98	146	0.89	108	0.85
	27	194	1.14	149	1.04	104	0.94		26	184	1.06	141	0.97	104	0.92
	28	187	1.23	143	1.12	101	1.01		27	177	1.14	136	1.04	100	0.99
	29	181	1.32	138	1.20	97	1.09		28	171	1.23	131	1.12	97	1.07
	30	175	1.41	134	1.28	94	1.16		30	159	1.41	122	1.28	90	1.23
	31	169	1.51	129	1.37	91	1.24		32	149	1.61	114	1.46	85	1.40
	32	164	1.61	125	1.46	88	1.32		34	140	1.82	108	1.65	80	1.58
	33	159	1.71	122	1.55	85	1.41		36	133	2.04	–	–	–	–
	34	154	1.82	118	1.65	83	1.49			121	1.85	102	1.85	75	1.77
	36	146	2.04	111	1.85	78	1.67		38	126	2.27	–	–	–	–
	38	138	2.27	106	2.06	74	1.87			114	2.06	96	2.06	71	1.97
	40	131	2.51	–	–	–	–		40	119	2.51	–	–	–	–
		119	2.28	100	2.28	70	2.07			109	2.28	92	2.28	68	2.18
	42	125	2.77	–	–	–	–		42	114	2.77	–	–	–	–
		113	2.52	96	2.52	67	2.28			103	2.52	87	2.52	64	2.40
	44	119	3.04	–	–	–	–		44	109	3.04	–	–	–	–
		108	2.76	91	2.76	64	2.50			99	2.76	83	2.76	61	2.64
	46	114	3.32	–	–	–	–		46	104	3.32	–	–	–	–
		104	3.02	87	3.02	61	2.73			94	3.02	80	3.02	59	2.88
Web Shear and Property Values															
V, kips		460		368		276		V, kips		460		368		276	
S_x, In.^{3}		259		218		153 **		S_x, In.^{3}		236		199		147 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

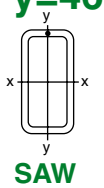
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



SAW

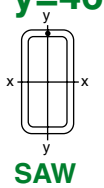
Nominal Size		20 x 12		Nominal Size		18 x 12				
Wall Thickness		5/8	Δ Inches	Wall Thickness		5/8	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		123.72		Weight Per Foot		115.21	95.03		72.59	
Design Wall Thickness		0.625		Design Wall Thickness		0.625	0.500		0.375	
Span in Feet	4	920	0.03	Span in Feet	3	828		0.02		
	5	765	0.04		4	815	662	0.03	497	0.03
	6	638	0.06		5	652	559	0.04	397	0.04
	7	546	0.08		6	543	466	0.06	331	0.06
	8	478	0.10		7	466	399	0.09	284	0.08
	9	425	0.13		8	407	349	0.11	248	0.10
	10	383	0.16		9	362	310	0.14	221	0.13
	11	348	0.19		10	326	279	0.17	199	0.16
	12	319	0.23		11	296	254	0.21	181	0.19
	13	294	0.27		12	272	233	0.25	166	0.23
	14	273	0.31		13	251	215	0.29	153	0.27
	15	255	0.35		14	233	200	0.34	142	0.31
	16	239	0.40		15	217	186	0.39	132	0.36
	17	225	0.45		16	204	175	0.45	124	0.41
	18	213	0.51		17	192	164	0.50	117	0.46
	19	201	0.57		18	181	155	0.57	110	0.51
	20	191	0.63		19	172	147	0.63	105	0.57
	21	182	0.69		20	163	140	0.70	99	0.63
	22	174	0.76		21	155	133	0.77	95	0.70
	23	166	0.83		22	148	127	0.84	90	0.77
	24	159	0.90		23	142	121	0.92	86	0.84
	25	153	0.98		24	136	116	1.01	83	0.91
	26	147	1.06		25	130	112	1.09	79	0.99
	27	142	1.14		26	125	107	1.18	76	1.07
		129	1.04		27	121	103	1.27	–	–
	28	137	1.23			110	94	1.16	74	1.16
		124	1.12		28	116	100	1.37	–	–
	30	128	1.41			106	91	1.24	71	1.24
		116	1.28		30	109	93	1.57	–	–
	32	120	1.61			99	85	1.43	66	1.43
		109	1.46		32	102	87	1.79	–	–
	34	113	1.82			93	79	1.62	62	1.62
		102	1.65		34	96	82	2.02	–	–
	38	101	2.27			87	75	1.83	58	1.83
		92	2.06		36	91	78	2.26	–	–
	42	91	2.77			82	71	2.06	55	2.06
		83	2.52		38	86	74	2.52	–	–
	46	83	3.32			78	67	2.29	52	2.29
		76	3.02		42	78	67	3.08	–	–
						71	60	2.80	47	2.80
Web Shear and Property Values										
V, kips		460		V, kips		414	331		248	
S_x, In.^{3}		189		S_x, In.^{3}		161	138		108	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



SAW

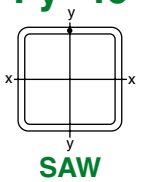
Nominal Size		16 x 12		Nominal Size		14 x 12			
Wall Thickness		5/8	Δ Inches	Wall Thickness		1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		106.71		Weight Per Foot		81.42		62.39	
Design Wall Thickness		0.625		Design Wall Thickness		0.500		0.375	
Span in Feet	3	736	0.02	Span in Feet	3	515	0.02	386	0.02
	4	688	0.03		4	490	0.04	351	0.03
	5	551	0.05		5	392	0.06	281	0.05
	6	459	0.07		6	327	0.08	234	0.07
	7	393	0.10		7	280	0.11	201	0.10
	8	344	0.13		8	245	0.14	175	0.13
	9	306	0.16		9	218	0.18	156	0.17
	10	275	0.20		10	196	0.22	140	0.20
	11	250	0.24		11	178	0.27	128	0.25
	12	229	0.28		12	163	0.32	117	0.29
	13	212	0.33		13	151	0.38	108	0.34
	14	197	0.38		14	140	0.44	100	0.40
	15	184	0.44		15	131	0.50	94	0.46
	16	172	0.50		16	123	0.57	88	0.52
	17	162	0.57		17	115	0.65	83	0.59
	18	153	0.64		18	109	0.73	78	0.66
	19	145	0.71		19	103	0.81	74	0.74
	20	138	0.79		20	98	0.90	70	0.82
	21	131	0.87		21	93	0.99	67	0.90
	22	125	0.95		22	89	1.09	64	0.99
	23	120	1.04		23	85	1.19	61	1.08
	24	115	1.13		24	82	1.29	58	1.17
	25	110	1.23		25	78	1.40	56	1.27
	26	106	1.33		26	75	1.52	54	1.38
	27	102	1.43		27	73	1.64	—	—
		93	1.30			66	1.49	52	1.49
	28	98	1.54		28	70	1.76	—	—
		89	1.40			64	1.60	50	1.60
	30	92	1.77		29	68	1.89	—	—
		83	1.61			61	1.72	48	1.72
	32	86	2.01		30	65	2.02	—	—
		78	1.83			59	1.84	47	1.84
	34	81	2.27		31	63	2.16	—	—
		74	2.06			58	1.96	45	1.96
	36	76	2.54		32	61	2.30	—	—
		70	2.31			56	2.09	44	2.09
	37	74	2.69						
		68	2.44						
Web Shear and Property Values									
V, kips		368		V, kips		258		193	
S_x, In.^{3}		136		S_x, In.^{3}		96.9		76.3	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



SAW

Nominal Size		32 x 32						Nominal Size		30 x 30					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		259.83		210.72		159.37		Weight Per Foot		242.82		197.11		149.16	
Design Wall Thickness		0.625 *		0.500 *		0.375 *		Design Wall Thickness		0.625 *		0.500 *		0.375 *	
Span in Feet	7			1180	0.03	883	0.03	Span in Feet	6					828	0.02
	8	1470	0.05	1160	0.05	782	0.04		7			1100	0.04	804	0.03
	9	1380	0.06	1030	0.06	695	0.05		8	1380	0.06	1040	0.05	704	0.04
	10	1240	0.08	927	0.07	626	0.06		9	1240	0.07	926	0.06	626	0.06
	11	1130	0.09	843	0.09	569	0.08		10	1120	0.09	834	0.08	563	0.07
	12	1040	0.11	773	0.10	521	0.09		11	1020	0.10	758	0.09	512	0.08
	13	957	0.13	713	0.12	481	0.11		12	932	0.12	695	0.11	469	0.10
	14	888	0.15	662	0.14	447	0.12		13	861	0.15	641	0.13	433	0.12
	15	829	0.18	618	0.16	417	0.14		14	799	0.17	595	0.15	402	0.13
	16	777	0.20	580	0.18	391	0.16		15	746	0.19	556	0.17	375	0.15
	17	732	0.23	546	0.21	368	0.18		16	699	0.22	521	0.20	352	0.18
	18	691	0.25	515	0.23	348	0.20		17	658	0.25	490	0.22	331	0.20
	19	655	0.28	488	0.26	329	0.23		18	622	0.28	463	0.25	313	0.22
	20	622	0.31	464	0.28	313	0.25		19	589	0.31	439	0.28	296	0.25
	21	592	0.35	442	0.31	298	0.28		20	559	0.34	417	0.31	282	0.27
	22	565	0.38	422	0.34	284	0.30		21	533	0.38	397	0.34	268	0.30
	23	541	0.42	403	0.38	272	0.33		22	509	0.42	379	0.38	256	0.33
	24	518	0.45	386	0.41	261	0.36		23	486	0.45	362	0.41	245	0.36
	25	498	0.49	371	0.45	250	0.39		24	466	0.50	347	0.45	235	0.40
	26	478	0.53	357	0.48	241	0.42		25	447	0.54	333	0.49	225	0.43
	27	461	0.57	343	0.52	232	0.46		26	430	0.58	321	0.53	217	0.46
	28	444	0.62	331	0.56	223	0.49		27	414	0.63	309	0.57	209	0.50
	29	429	0.66	320	0.60	216	0.53		28	400	0.67	298	0.61	201	0.54
	30	415	0.71	309	0.64	209	0.56		29	386	0.72	287	0.65	194	0.58
	32	389	0.80	290	0.73	196	0.64		30	373	0.77	278	0.70	188	0.62
	34	366	0.91	273	0.82	184	0.72		32	350	0.88	260	0.80	176	0.70
	36	346	1.02	258	0.92	174	0.81		34	329	0.99	245	0.90	166	0.79
	38	327	1.13	244	1.03	165	0.90		36	311	1.11	232	1.01	156	0.89
	40	311	1.26	232	1.14	156	1.00		38	294	1.24	219	1.12	148	0.99
	42	296	1.38	221	1.26	149	1.10		40	280	1.38	208	1.24	141	1.10
	44	283	1.52	211	1.38	142	1.21		42	266	1.52	198	1.37	134	1.21
	46	270	1.66	202	1.51	136	1.33		44	254	1.66	189	1.50	128	1.33
	48	259	1.81	193	1.64	130	1.44		46	243	1.82	181	1.64	122	1.45
	50	249	1.96	185	1.78	125	1.57		48	233	1.98	174	1.79	117	1.58
	54	230	2.29	172	2.08	116	1.83		50	224	2.15	167	1.94	113	1.71
	58	214	2.64	160	2.40	108	2.11		54	207	2.51	154	2.27	104	2.00
	62	201	3.02	150	2.74	101	2.41		58	193	2.89	144	2.61	97	2.31
	66	188	3.42	141	3.10	95	2.73		62	180	3.30	134	2.99	91	2.64
	70	178	3.84	132	3.49	89	3.07		66	170	3.74	126	3.39	85	2.99
	74	168	4.30	125	3.90	85	3.43		70	160	4.21	119	3.81	80	3.36
Web Shear and Property Values															
V, kips		736		589		442		V, kips		690		552		414	
S_x, In.^{3}		676 **		504 **		340 **		S_x, In.^{3}		608 **		453 **		306 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

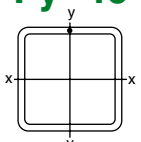
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



SAW

Nominal Size		28 x 28						Nominal Size		26 x 26					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		225.80		183.50		138.95		Weight Per Foot		208.79		169.89		128.74	
Design Wall Thickness		0.625*		0.500*		0.375*		Design Wall Thickness		0.625*		0.500*		0.375*	
Span in Feet	6					773	0.03	Span in Feet	6			957	0.03	718	0.03
	7	1290	0.05	1030	0.04	718	0.04		7	1200	0.05	944	0.05	636	0.04
	8	1250	0.06	932	0.05	628	0.05		8	1100	0.07	826	0.06	557	0.05
	9	1110	0.08	828	0.07	558	0.06		9	977	0.09	734	0.08	495	0.07
	10	997	0.10	745	0.09	502	0.08		10	880	0.11	661	0.10	445	0.08
	11	907	0.12	677	0.10	457	0.09		11	800	0.13	601	0.12	405	0.10
	12	831	0.14	621	0.12	419	0.11		12	733	0.15	550	0.14	371	0.12
	13	767	0.16	573	0.15	386	0.13		13	677	0.18	508	0.16	343	0.14
	14	712	0.19	532	0.17	359	0.15		14	628	0.21	472	0.19	318	0.16
	15	665	0.21	497	0.19	335	0.17		15	586	0.24	440	0.22	297	0.19
	16	623	0.24	466	0.22	314	0.19		16	550	0.27	413	0.25	278	0.22
	17	587	0.27	438	0.25	295	0.22		17	517	0.31	389	0.28	262	0.24
	18	554	0.31	414	0.28	279	0.25		18	489	0.34	367	0.31	247	0.27
	19	525	0.34	392	0.31	264	0.27		19	463	0.38	348	0.35	234	0.30
	20	499	0.38	373	0.34	251	0.30		20	440	0.42	330	0.38	223	0.34
	21	475	0.42	355	0.38	239	0.33		21	419	0.47	315	0.42	212	0.37
	22	453	0.46	339	0.42	228	0.37		22	400	0.51	300	0.46	202	0.41
	23	434	0.50	324	0.45	218	0.40		23	382	0.56	287	0.51	194	0.44
	24	416	0.55	311	0.49	209	0.44		24	366	0.61	275	0.55	186	0.48
	25	399	0.59	298	0.54	201	0.47		25	352	0.66	264	0.60	178	0.53
	26	384	0.64	287	0.58	193	0.51		26	338	0.71	254	0.65	171	0.57
	27	369	0.69	276	0.63	186	0.55		27	326	0.77	245	0.70	165	0.61
	28	356	0.75	266	0.67	179	0.59		28	314	0.83	236	0.75	159	0.66
	29	344	0.80	257	0.72	173	0.64		29	303	0.89	228	0.81	154	0.71
	30	332	0.86	248	0.77	167	0.68		30	293	0.95	220	0.86	148	0.76
	32	312	0.97	233	0.88	157	0.77		32	275	1.08	206	0.98	139	0.86
	34	293	1.10	219	0.99	148	0.87		34	259	1.22	194	1.11	131	0.97
	36	277	1.23	207	1.11	140	0.98		36	244	1.37	183	1.24	124	1.09
	38	262	1.37	196	1.24	132	1.09		38	231	1.53	174	1.38	117	1.21
	40	249	1.52	186	1.37	126	1.21		40	220	1.69	165	1.53	111	1.34
	42	237	1.68	177	1.52	120	1.33		42	209	1.86	157	1.69	106	1.48
	44	227	1.84	169	1.66	114	1.47		44	200	2.05	150	1.85	101	1.63
	46	217	2.01	162	1.82	109	1.60		46	191	2.24	144	2.03	97	1.78
	48	208	2.19	155	1.98	105	1.74		48	183	2.43	138	2.21	93	1.94
	50	199	2.38	149	2.15	100	1.89		50	176	2.64	132	2.39	89	2.10
	52	192	2.57	143	2.32	97	2.05		52	169	2.86	127	2.59	86	2.27
	56	178	2.98	133	2.69	90	2.37		54	163	3.08	122	2.79	82	2.45
	60	166	3.42	124	3.09	84	2.72		56	157	3.31	118	3.00	80	2.64
	64	156	3.89	116	3.52	78	3.10		58	152	3.55	114	3.22	77	2.83
	65	153	4.02	115	3.63	77	3.20		60	147	3.80	110	3.45	74	3.03
Web Shear and Property Values															
V, kips		644		515		386		V, kips		598		478		359	
S_x, In.^{3}		542**		405**		273**		S_x, In.^{3}		478**		359**		242**	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

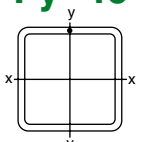
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



SAW

Nominal Size		24 x 24						Nominal Size		22 x 22					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		191.78		156.28		118.53		Weight Per Foot		174.76		142.67		108.32	
Design Wall Thickness		0.625*		0.500*		0.375*		Design Wall Thickness		0.625		0.500*		0.375*	
Span in Feet	5					662	0.02	Span in Feet	5					607	0.03
	6	1100	0.04	883	0.04	650	0.03		6	1010	0.05	810	0.04	564	0.04
	7	1100	0.06	825	0.05	557	0.05		7	912	0.06	715	0.06	484	0.05
	8	959	0.08	722	0.07	488	0.06		8	798	0.08	626	0.08	423	0.07
	9	853	0.10	642	0.09	433	0.08		9	709	0.11	556	0.10	376	0.09
	10	767	0.12	578	0.11	390	0.09		10	638	0.13	500	0.12	339	0.11
	11	698	0.14	525	0.13	355	0.11		11	580	0.16	455	0.15	308	0.13
	12	639	0.17	481	0.15	325	0.14		12	532	0.19	417	0.18	282	0.15
	13	590	0.20	444	0.18	300	0.16		13	491	0.22	385	0.21	260	0.18
	14	548	0.23	413	0.21	279	0.18		14	456	0.25	357	0.24	242	0.21
	15	512	0.27	385	0.24	260	0.21		15	426	0.29	334	0.27	226	0.24
	16	480	0.30	361	0.28	244	0.24		16	399	0.33	313	0.31	212	0.27
	17	451	0.34	340	0.31	229	0.27		17	376	0.38	294	0.35	199	0.31
	18	426	0.38	321	0.35	217	0.31		18	355	0.42	278	0.39	188	0.35
	19	404	0.43	304	0.39	205	0.34		19	336	0.47	263	0.44	178	0.39
	20	384	0.47	289	0.43	195	0.38		20	319	0.52	250	0.49	169	0.43
	21	365	0.52	275	0.47	186	0.42		21	304	0.57	238	0.54	161	0.47
	22	349	0.57	263	0.52	177	0.46		22	290	0.63	227	0.59	154	0.52
	23	334	0.63	251	0.57	170	0.50		23	278	0.69	218	0.64	147	0.56
	24	320	0.68	241	0.62	163	0.54		24	266	0.75	209	0.70	141	0.62
	25	307	0.74	231	0.67	156	0.59		25	255	0.81	200	0.76	135	0.67
	26	295	0.80	222	0.73	150	0.64		26	246	0.88	192	0.82	130	0.72
	27	284	0.86	214	0.78	144	0.69		27	236	0.95	185	0.89	125	0.78
	28	274	0.93	206	0.84	139	0.74		28	228	1.02	179	0.95	121	0.84
	29	265	1.00	199	0.90	135	0.79		29	220	1.09	173	1.02	117	0.90
	30	256	1.07	193	0.97	130	0.85		30	213	1.17	167	1.10	113	0.96
	32	240	1.21	181	1.10	122	0.97		32	200	1.33	156	1.25	106	1.09
	34	226	1.37	170	1.24	115	1.09		34	188	1.50	147	1.41	100	1.23
	36	213	1.53	160	1.39	108	1.22		36	177	1.68	139	1.58	94	1.38
	38	202	1.71	152	1.55	103	1.36		38	168	1.87	132	1.76	89	1.54
	40	192	1.89	144	1.72	98	1.51		40	160	2.08	125	1.95	85	1.71
	42	183	2.09	138	1.90	93	1.66		42	152	2.29	119	2.15	81	1.88
	44	174	2.29	131	2.08	89	1.83		44	145	2.51	114	2.36	77	2.07
	46	167	2.50	126	2.27	85	2.00		46	139	2.75	109	2.58	74	2.26
	48	160	2.73	120	2.48	81	2.17		48	133	2.99	104	2.80	71	2.46
	50	153	2.96	116	2.69	78	2.36		50	128	3.24	100	3.04	68	2.67
	52	148	3.20	111	2.91	75	2.55		51	125	3.38	98	3.17	66	2.78
	54	142	3.45	107	3.13	72	2.75								
	56	137	3.71	103	3.37	70	2.96								
Web Shear and Property Values															
V, kips		552		442		331		V, kips		506		405		304	
S_x, In.^{3}		417**		314**		212**		S_x, In.^{3}		347		272**		184**	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

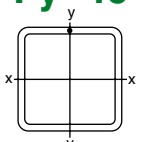
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=46



SAW

Nominal Size		20 x 20						Nominal Size		18 x 18					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		157.75		129.06		98.12		Weight Per Foot		140.73		115.45		87.91	
Design Wall Thickness		0.625		0.500 *		0.375 *		Design Wall Thickness		0.625		0.500		0.375 *	
Span in Feet	5	920	0.04	736	0.03	552	0.03	Span in Feet	4					497	0.02
	6	868	0.05	711	0.05	485	0.04		5	828	0.04	662	0.04	489	0.04
	7	744	0.07	610	0.07	415	0.06		6	756	0.06	580	0.06	408	0.05
	8	651	0.09	534	0.09	363	0.08		7	648	0.09	497	0.08	350	0.07
	9	579	0.12	474	0.11	323	0.10		8	567	0.11	435	0.10	306	0.09
	10	521	0.14	427	0.14	291	0.12		9	504	0.14	386	0.13	272	0.12
	11	473	0.17	388	0.17	264	0.15		10	453	0.17	348	0.16	245	0.14
	12	434	0.21	356	0.20	242	0.18		11	412	0.21	316	0.19	222	0.17
	13	401	0.24	328	0.24	224	0.21		12	378	0.25	290	0.23	204	0.21
	14	372	0.28	305	0.27	208	0.24		13	349	0.29	268	0.27	188	0.24
	15	347	0.32	285	0.31	194	0.28		14	324	0.34	248	0.31	175	0.28
	16	325	0.37	267	0.36	182	0.32		15	302	0.39	232	0.36	163	0.32
	17	306	0.41	251	0.40	171	0.36		16	283	0.45	217	0.41	153	0.37
	18	289	0.46	237	0.45	162	0.40		17	267	0.50	205	0.46	144	0.42
	19	274	0.52	225	0.50	153	0.44		18	252	0.57	193	0.51	136	0.47
	20	260	0.57	213	0.56	145	0.49		19	239	0.63	183	0.57	129	0.52
	21	248	0.63	203	0.62	138	0.54		20	227	0.70	174	0.63	122	0.58
	22	237	0.69	194	0.68	132	0.60		21	216	0.77	166	0.70	117	0.63
	23	226	0.76	186	0.74	126	0.65		22	206	0.84	158	0.77	111	0.70
	24	217	0.82	178	0.80	121	0.71		23	197	0.92	151	0.84	106	0.76
	25	208	0.89	171	0.87	116	0.77		24	189	1.01	145	0.91	102	0.83
	26	200	0.97	164	0.94	112	0.83		25	181	1.09	139	0.99	98	0.90
	27	193	1.04	158	1.02	108	0.90		26	174	1.18	134	1.07	94	0.97
	28	186	1.12	152	1.10	104	0.97		27	168	1.27	129	1.16	91	1.05
	29	180	1.20	147	1.18	100	1.04		28	162	1.37	124	1.24	87	1.13
	30	174	1.28	142	1.26	97	1.11		29	156	1.47	120	1.33	84	1.21
	31	168	1.37	138	1.34	94	1.18		30	151	1.57	116	1.43	82	1.29
	32	163	1.46	133	1.43	91	1.26		31	146	1.68	112	1.52	79	1.38
	33	158	1.55	129	1.52	88	1.34		32	142	1.79	109	1.62	76	1.47
	34	153	1.65	126	1.62	86	1.42		33	137	1.90	105	1.73	74	1.57
	35	149	1.75	122	1.71	83	1.51		34	133	2.02	102	1.83	72	1.66
	36	145	1.85	119	1.81	81	1.60		35	130	2.14	99	1.94	70	1.76
	37	141	1.95	115	1.91	79	1.69		36	126	2.26	97	2.06	68	1.86
	38	137	2.06	112	2.02	77	1.78		37	123	2.39	94	2.17	66	1.97
	39	134	2.17	109	2.13	75	1.87		38	119	2.52	92	2.29	64	2.08
	40	130	2.28	107	2.24	73	1.97		40	113	2.79	–	–	–	–
	42	124	2.52	102	2.47	69	2.17			103	2.54	87	2.54	61	2.30
	44	118	2.76	97	2.71	66	2.39		42	108	3.08	–	–	–	–
	46	113	3.02	93	2.96	63	2.61			98	2.80	83	2.80	58	2.54
Web Shear and Property Values															
V, kips		460		368		276		V, kips		414		331		248	
S_x, In.^{3}		283		232 **		158 **		S_x, In.^{3}		224		189		133 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

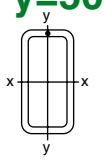
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



SAW

Nominal Size		32 x 24						Nominal Size		30 x 24					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		225.80		183.50		138.95		Weight Per Foot		217.30		176.70		133.84	
Design Wall Thickness		0.625*		0.500*		0.375*		Design Wall Thickness		0.625*		0.500*		0.375*	
Span in Feet	6					960	0.03	Span in Feet	6					900	0.03
	7	1600	0.05	1280	0.04	897	0.04		7	1500	0.05	1200	0.05	817	0.04
	8	1520	0.06	1150	0.06	785	0.05		8	1390	0.06	1050	0.06	715	0.05
	9	1350	0.08	1020	0.07	698	0.06		9	1230	0.08	931	0.08	636	0.07
	10	1210	0.10	918	0.09	628	0.08		10	1110	0.10	838	0.09	572	0.08
	11	1100	0.12	835	0.11	571	0.09		11	1010	0.12	762	0.11	520	0.10
	12	1010	0.14	765	0.13	523	0.11		12	925	0.15	698	0.13	477	0.12
	13	932	0.16	706	0.15	483	0.13		13	854	0.17	645	0.16	440	0.14
	14	866	0.19	656	0.17	449	0.15		14	793	0.20	599	0.18	409	0.16
	15	808	0.21	612	0.20	419	0.18		15	740	0.23	559	0.21	381	0.19
	16	758	0.24	574	0.22	393	0.20		16	694	0.26	524	0.24	358	0.21
	17	713	0.28	540	0.25	369	0.23		17	653	0.29	493	0.27	336	0.24
	18	673	0.31	510	0.28	349	0.25		18	617	0.33	466	0.30	318	0.27
	19	638	0.34	483	0.32	331	0.28		19	584	0.37	441	0.33	301	0.30
	20	606	0.38	459	0.35	314	0.31		20	555	0.41	419	0.37	286	0.33
	21	577	0.42	437	0.38	299	0.34		21	529	0.45	399	0.41	272	0.36
	22	551	0.46	417	0.42	285	0.38		22	505	0.49	381	0.45	260	0.40
	23	527	0.50	399	0.46	273	0.41		23	483	0.54	364	0.49	249	0.44
	24	505	0.55	383	0.50	262	0.45		24	463	0.58	349	0.53	238	0.48
	25	485	0.59	367	0.55	251	0.49		25	444	0.63	335	0.58	229	0.52
	26	466	0.64	353	0.59	242	0.53		26	427	0.69	322	0.63	220	0.56
	27	449	0.69	340	0.64	233	0.57		27	411	0.74	310	0.68	212	0.60
	28	433	0.75	328	0.68	224	0.61		28	396	0.80	299	0.73	204	0.65
	29	418	0.80	317	0.73	217	0.66		29	383	0.85	289	0.78	197	0.69
	30	404	0.86	306	0.79	209	0.70		30	370	0.91	279	0.83	191	0.74
	32	379	0.97	287	0.89	196	0.80		32	347	1.04	262	0.95	179	0.84
	34	356	1.10	270	1.01	185	0.90		34	326	1.17	246	1.07	168	0.95
	36	337	1.23	255	1.13	174	1.01		36	308	1.32	233	1.20	159	1.07
	38	319	1.37	242	1.26	165	1.13		38	292	1.47	221	1.34	151	1.19
	40	303	1.52	230	1.40	157	1.25		40	278	1.62	210	1.48	143	1.32
	42	289	1.68	219	1.54	150	1.38		42	264	1.79	200	1.64	136	1.46
	44	275	1.84	209	1.69	143	1.51		44	252	1.97	190	1.80	130	1.60
	46	263	2.01	200	1.85	137	1.65		46	241	2.15	182	1.96	124	1.75
	48	253	2.19	191	2.01	131	1.80		48	231	2.34	175	2.14	119	1.90
	50	242	2.38	184	2.18	126	1.95		50	222	2.54	168	2.32	114	2.06
	52	233	2.57	177	2.36	121	2.11		52	213	2.75	161	2.51	110	2.23
	56	216	2.98	164	2.74	112	2.44		54	206	2.96	155	2.70	106	2.41
	60	202	3.43	153	3.14	105	2.81		56	198	3.18	150	2.91	102	2.59
	64	189	3.90	143	3.58	98	3.19		58	191	3.42	144	3.12	99	2.77
	68	178	4.40	135	4.04	92	3.60		60	185	3.66	140	3.34	95	2.97
									64	173	4.16	131	3.80	89	3.38
Web Shear and Property Values															
V, kips		800		640		480		V, kips		750		600		450	
S_x, In.^{3}		606**		459**		314**		S_x, In.^{3}		555**		419**		286**	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

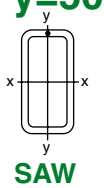
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



SAW

Nominal Size		28 x 24						Nominal Size		26 x 24					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		208.79		169.89		128.74		Weight Per Foot		200.28		163.08		123.64	
Design Wall Thickness		0.625 *		0.500 *		0.375 *		Design Wall Thickness		0.625 *		0.500 *		0.375 *	
Span in Feet	6			1120	0.04	840	0.03	Span in Feet	6			1040	0.04	780	0.03
	7	1400	0.05	1090	0.05	740	0.04		7	1300	0.06	983	0.05	669	0.05
	8	1260	0.07	953	0.06	648	0.06		8	1140	0.07	860	0.07	585	0.06
	9	1120	0.09	847	0.08	576	0.07		9	1020	0.09	764	0.09	520	0.08
	10	1010	0.11	762	0.10	518	0.09		10	914	0.12	688	0.11	468	0.09
	11	918	0.13	693	0.12	471	0.11		11	831	0.14	625	0.13	425	0.11
	12	842	0.16	635	0.14	432	0.13		12	762	0.17	573	0.15	390	0.14
	13	777	0.18	586	0.17	398	0.15		13	703	0.20	529	0.18	360	0.16
	14	721	0.21	544	0.19	370	0.17		14	653	0.23	491	0.21	334	0.18
	15	673	0.24	508	0.22	345	0.20		15	609	0.26	459	0.24	312	0.21
	16	631	0.28	476	0.25	324	0.22		16	571	0.30	430	0.27	293	0.24
	17	594	0.31	448	0.29	305	0.25		17	538	0.34	405	0.31	275	0.27
	18	561	0.35	423	0.32	288	0.28		18	508	0.38	382	0.34	260	0.30
	19	532	0.39	401	0.36	273	0.32		19	481	0.42	362	0.38	246	0.34
	20	505	0.43	381	0.40	259	0.35		20	457	0.47	344	0.43	234	0.38
	21	481	0.48	363	0.44	247	0.39		21	435	0.52	328	0.47	223	0.41
	22	459	0.53	346	0.48	235	0.42		22	415	0.57	313	0.51	213	0.46
	23	439	0.57	331	0.52	225	0.46		23	397	0.62	299	0.56	203	0.50
	24	421	0.63	318	0.57	216	0.51		24	381	0.67	287	0.61	195	0.54
	25	404	0.68	305	0.62	207	0.55		25	366	0.73	275	0.66	187	0.59
	26	388	0.73	293	0.67	199	0.59		26	352	0.79	265	0.72	180	0.64
	27	374	0.79	282	0.72	192	0.64		27	339	0.85	255	0.78	173	0.69
	28	361	0.85	272	0.78	185	0.69		28	326	0.92	246	0.83	167	0.74
	29	348	0.91	263	0.83	179	0.74		29	315	0.98	237	0.89	161	0.79
	30	337	0.98	254	0.89	173	0.79		30	305	1.05	229	0.96	156	0.85
	32	316	1.11	238	1.01	162	0.90		32	286	1.20	215	1.09	146	0.96
	34	297	1.26	224	1.14	152	1.01		34	269	1.35	202	1.23	138	1.09
	36	281	1.41	212	1.28	144	1.14		36	254	1.52	191	1.38	130	1.22
	38	266	1.57	201	1.43	136	1.27		38	241	1.69	181	1.54	123	1.36
	40	253	1.74	191	1.58	130	1.40		40	229	1.87	172	1.70	117	1.51
	42	240	1.92	181	1.75	123	1.55		42	218	2.06	164	1.88	111	1.66
	44	230	2.10	173	1.92	118	1.70		44	208	2.27	156	2.06	106	1.82
	46	220	2.30	166	2.10	113	1.86		46	199	2.48	150	2.25	102	1.99
	48	210	2.50	159	2.28	108	2.02		48	190	2.70	143	2.45	98	2.17
	50	202	2.72	152	2.48	104	2.19		50	183	2.93	138	2.66	94	2.35
	52	194	2.94	147	2.68	100	2.37		52	176	3.16	132	2.88	90	2.54
	54	187	3.17	141	2.89	96	2.56		54	169	3.41	127	3.10	87	2.74
	56	180	3.41	136	3.11	93	2.75		55	166	3.54	125	3.22	85	2.85
	58	174	3.66	131	3.33	89	2.95								
	60	168	3.91	127	3.57	86	3.16								
Web Shear and Property Values															
V, kips		700		560		420		V, kips		650		520		390	
S_x, In.^{3}		505 **		381 **		259 **		S_x, In.^{3}		457 **		344 **		234 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

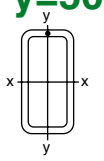
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



SAW

Nominal Size		24 x 22						Nominal Size		22 x 20					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		183.27		149.47		113.43		Weight Per Foot		166.25		135.86		103.22	
Design Wall Thickness		0.625		0.500 *		0.375 *		Design Wall Thickness		0.625		0.500 *		0.375 *	
Span in Feet	5					720	0.03	Span in Feet	5	1100	0.04	880	0.03	660	0.03
	6	1200	0.05	960	0.04	680	0.04		6	1070	0.05	863	0.05	590	0.04
	7	1110	0.06	860	0.06	583	0.05		7	917	0.07	740	0.07	506	0.06
	8	975	0.08	753	0.08	510	0.07		8	803	0.09	648	0.09	443	0.08
	9	867	0.10	669	0.10	453	0.09		9	713	0.11	576	0.11	393	0.10
	10	780	0.13	602	0.12	408	0.11		10	642	0.14	518	0.14	354	0.12
	11	709	0.16	547	0.14	371	0.13		11	584	0.17	471	0.16	322	0.15
	12	650	0.19	502	0.17	340	0.15		12	535	0.20	432	0.20	295	0.17
	13	600	0.22	463	0.20	314	0.18		13	494	0.24	398	0.23	272	0.20
	14	557	0.25	430	0.23	291	0.21		14	459	0.28	370	0.27	253	0.24
	15	520	0.29	401	0.27	272	0.24		15	428	0.32	345	0.31	236	0.27
	16	488	0.33	376	0.31	255	0.27		16	401	0.36	324	0.35	221	0.31
	17	459	0.37	354	0.35	240	0.30		17	378	0.41	305	0.39	208	0.35
	18	433	0.42	334	0.39	227	0.34		18	357	0.46	288	0.44	197	0.39
	19	411	0.47	317	0.43	215	0.38		19	338	0.51	273	0.49	186	0.43
	20	390	0.52	301	0.48	204	0.42		20	321	0.56	259	0.54	177	0.48
	21	371	0.57	287	0.53	194	0.47		21	306	0.62	247	0.60	169	0.53
	22	355	0.63	274	0.58	185	0.51		22	292	0.68	235	0.66	161	0.58
	23	339	0.68	262	0.63	177	0.56		23	279	0.75	225	0.72	154	0.64
	24	325	0.74	251	0.69	170	0.61		24	268	0.81	216	0.78	148	0.69
	25	312	0.81	241	0.75	163	0.66		25	257	0.88	207	0.85	142	0.75
	26	300	0.87	232	0.81	157	0.71		26	247	0.95	199	0.92	136	0.81
	27	289	0.94	223	0.87	151	0.77		27	238	1.03	192	0.99	131	0.88
	28	279	1.01	215	0.94	146	0.83		28	229	1.11	185	1.07	126	0.94
	29	269	1.09	208	1.01	141	0.89		29	221	1.19	179	1.15	122	1.01
	30	260	1.16	201	1.08	136	0.95		30	214	1.27	173	1.23	118	1.08
	32	244	1.32	188	1.23	128	1.08		32	201	1.44	162	1.40	111	1.23
	34	229	1.49	177	1.38	120	1.22		34	189	1.63	152	1.57	104	1.39
	36	217	1.68	167	1.55	113	1.37		36	178	1.83	144	1.77	98	1.56
	38	205	1.87	158	1.73	107	1.52		38	169	2.04	136	1.97	93	1.74
	40	195	2.07	151	1.92	102	1.69		40	161	2.26	130	2.18	89	1.93
	42	186	2.28	143	2.11	97	1.86		42	153	2.49	123	2.40	84	2.12
	44	177	2.50	137	2.32	93	2.04		44	146	2.73	118	2.64	80	2.33
	46	170	2.74	131	2.53	89	2.23		46	140	2.98	113	2.88	77	2.55
	48	163	2.98	125	2.76	85	2.43		47	137	3.12	110	3.01	75	2.66
	50	156	3.23	120	2.99	82	2.64								
	51	153	3.36	118	3.11	80	2.74								
Web Shear and Property Values															
V, kips		600		480		360		V, kips		550		440		330	
S_x, In.^{3}		390		301 **		204 **		S_x, In.^{3}		321		259 **		177 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

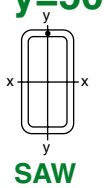
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



SAW

Nominal Size		20 x 18						Nominal Size		20 x 16					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		149.24		122.25		93.01		Weight Per Foot		140.73		115.45		87.91	
Design Wall Thickness		0.625		0.500		0.375 *		Design Wall Thickness		0.625		0.500		0.375 *	
Span in Feet	5	1000	0.04	800	0.04	600	0.03	Span in Feet	4			800	0.02	600	0.02
	6	950	0.06	727	0.06	500	0.05		5	1000	0.04	796	0.04	580	0.04
	7	814	0.08	623	0.08	429	0.07		6	865	0.06	663	0.06	483	0.05
	8	712	0.11	545	0.10	375	0.09		7	742	0.08	569	0.08	414	0.07
	9	633	0.14	484	0.13	333	0.11		8	649	0.11	498	0.10	363	0.09
	10	570	0.17	436	0.16	300	0.14		9	577	0.14	442	0.13	322	0.12
	11	518	0.21	396	0.19	273	0.17		10	519	0.17	398	0.16	290	0.15
	12	475	0.25	363	0.22	250	0.20		11	472	0.21	362	0.19	264	0.18
	13	438	0.29	335	0.26	231	0.23		12	433	0.25	332	0.22	242	0.21
	14	407	0.33	311	0.30	214	0.27		13	399	0.29	306	0.26	223	0.25
	15	380	0.38	291	0.35	200	0.31		14	371	0.33	284	0.30	207	0.29
	16	356	0.44	273	0.40	188	0.35		15	346	0.38	265	0.35	193	0.33
	17	335	0.49	256	0.45	176	0.40		16	325	0.44	249	0.40	181	0.37
	18	317	0.55	242	0.50	167	0.45		17	305	0.49	234	0.45	171	0.42
	19	300	0.62	229	0.56	158	0.50		18	288	0.55	221	0.50	161	0.47
	20	285	0.68	218	0.62	150	0.55		19	273	0.62	209	0.56	153	0.53
	21	271	0.75	208	0.68	143	0.61		20	260	0.68	199	0.62	145	0.58
	22	259	0.83	198	0.75	136	0.67		21	247	0.75	190	0.68	138	0.64
	23	248	0.90	190	0.82	130	0.73		22	236	0.83	181	0.75	132	0.71
	24	237	0.98	182	0.89	125	0.79		23	226	0.90	173	0.82	126	0.77
	25	228	1.07	174	0.97	120	0.86		24	216	0.98	166	0.89	121	0.84
	26	219	1.15	168	1.05	115	0.93		25	208	1.07	159	0.97	116	0.91
	27	211	1.24	161	1.13	111	1.00		26	200	1.15	153	1.05	112	0.99
	28	204	1.34	156	1.22	107	1.08		27	192	1.24	147	1.13	107	1.07
	29	196	1.44	150	1.31	103	1.16		28	185	1.34	142	1.22	104	1.15
	30	190	1.54	145	1.40	100	1.24		29	179	1.44	137	1.31	100	1.23
	31	184	1.64	141	1.49	97	1.32		30	173	1.54	133	1.40	97	1.31
	32	178	1.75	136	1.59	94	1.41		31	167	1.64	128	1.49	94	1.40
	33	173	1.86	132	1.69	91	1.50		32	162	1.75	124	1.59	91	1.50
	34	168	1.97	128	1.79	88	1.59		34	153	1.97	–	–	–	–
	36	158	2.21	121	2.01	83	1.78			139	1.79	117	1.79	85	1.69
	38	150	2.46	–	–	–	–		36	144	2.21	–	–	–	–
		136	2.24	115	2.24	79	1.99			131	2.01	111	2.01	81	1.89
	40	142	2.73	–	–	–	–		38	137	2.46	–	–	–	–
		130	2.48	109	2.48	75	2.20			124	2.24	105	2.24	76	2.11
	42	136	3.01	–	–	–	–		40	130	2.73	–	–	–	–
		123	2.74	104	2.74	71	2.43			118	2.48	100	2.48	73	2.34
									42	124	3.01	–	–	–	–
										112	2.74	95	2.74	69	2.58
Web Shear and Property Values															
V, kips		500		400		300		V, kips		500		400		300	
S_x, In.^{3}		259		218		150 **		S_x, In.^{3}		236		199		145 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

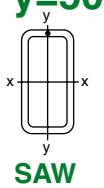
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



SAW

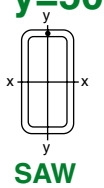
Nominal Size		20 x 12		Nominal Size		18 x 12				
Wall Thickness		5/8	Δ Inches	Wall Thickness		5/8	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		123.72		Weight Per Foot		115.21	95.03		72.59	
Design Wall Thickness		0.625		Design Wall Thickness		0.625	0.500		0.375	
Span in Feet	4	1000	0.03	Span in Feet	3	900		0.02		
	5	832	0.04		4	886	720	0.03	540	0.03
	6	693	0.06		5	708	607	0.05	432	0.04
	7	594	0.08		6	590	506	0.07	360	0.06
	8	520	0.11		7	506	434	0.09	309	0.08
	9	462	0.14		8	443	380	0.12	270	0.11
	10	416	0.17		9	394	337	0.15	240	0.14
	11	378	0.21		10	354	304	0.19	216	0.17
	12	347	0.25		11	322	276	0.23	196	0.21
	13	320	0.29		12	295	253	0.27	180	0.25
	14	297	0.33		13	272	234	0.32	166	0.29
	15	277	0.38		14	253	217	0.37	154	0.34
	16	260	0.44		15	236	202	0.43	144	0.39
	17	245	0.49		16	221	190	0.49	135	0.44
	18	231	0.55		17	208	179	0.55	127	0.50
	19	219	0.62		18	197	169	0.61	120	0.56
	20	208	0.68		19	186	160	0.68	114	0.62
	21	198	0.75		20	177	152	0.76	108	0.69
	22	189	0.83		21	169	145	0.84	103	0.76
	23	181	0.90		22	161	138	0.92	98	0.83
	24	173	0.98		23	154	132	1.00	94	0.91
	25	166	1.07		24	148	127	1.09	90	0.99
		151	0.97		25	142	121	1.19	–	–
	26	160	1.15			129	110	1.08	86	1.08
		145	1.05		26	136	117	1.28	–	–
	27	154	1.24			124	106	1.17	83	1.17
		140	1.13		27	131	112	1.38	–	–
	28	149	1.34			119	102	1.26	80	1.26
		135	1.22		28	127	108	1.49	–	–
	30	139	1.54			115	99	1.35	77	1.35
		126	1.40		30	118	101	1.71	–	–
	32	130	1.75			107	92	1.55	72	1.55
		118	1.59		32	111	95	1.94	–	–
	34	122	1.97			101	86	1.77	68	1.77
		111	1.79		34	104	89	2.19	–	–
	38	109	2.46			95	81	1.99	64	1.99
		99	2.24		36	98	84	2.46	–	–
	42	99	3.01			89	77	2.23	60	2.23
		90	2.74		38	93	80	2.74	–	–
						85	73	2.49	57	2.49
Web Shear and Property Values										
V, kips		500		V, kips		450	360		270	
S_x, In.^{3}		189		S_x, In.^{3}		161	138		108	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Rectangular Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



SAW

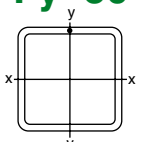
Nominal Size		16 x 12		Nominal Size		14 x 12			
Wall Thickness		5/8	Δ Inches	Wall Thickness		1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		106.71		Weight Per Foot		81.42		62.39	
Design Wall Thickness		0.625		Design Wall Thickness		0.500		0.375	
Span in Feet	3	800	0.02	Span in Feet	3	560	0.02	420	0.02
	4	748	0.03		4	533	0.04	382	0.04
	5	598	0.05		5	426	0.06	305	0.06
	6	499	0.08		6	355	0.09	254	0.08
	7	427	0.10		7	305	0.12	218	0.11
	8	374	0.14		8	266	0.16	191	0.14
	9	332	0.17		9	237	0.20	170	0.18
	10	299	0.21		10	213	0.24	153	0.22
	11	272	0.26		11	194	0.30	139	0.27
	12	249	0.31		12	178	0.35	127	0.32
	13	230	0.36		13	164	0.41	117	0.37
	14	214	0.42		14	152	0.48	109	0.43
	15	199	0.48		15	142	0.55	102	0.50
	16	187	0.55		16	133	0.62	95	0.57
	17	176	0.62		17	125	0.70	90	0.64
	18	166	0.69		18	118	0.79	85	0.72
	19	157	0.77		19	112	0.88	80	0.80
	20	150	0.85		20	107	0.98	76	0.89
	21	142	0.94		21	102	1.08	73	0.98
	22	136	1.03		22	97	1.18	69	1.07
	23	130	1.13		23	93	1.29	66	1.17
	24	125	1.23		24	89	1.40	64	1.28
	25	120	1.33		25	85	1.52	–	–
		109	1.21			78	1.39	61	1.39
	26	115	1.44		26	82	1.65	–	–
		105	1.31			75	1.50	59	1.50
	27	111	1.56		27	79	1.78	–	–
		101	1.41			72	1.62	57	1.62
	28	107	1.67		28	76	1.91	–	–
		97	1.52			69	1.74	55	1.74
	30	100	1.92		29	74	2.05	–	–
		91	1.75			67	1.86	53	1.86
	32	94	2.18		30	71	2.19	–	–
		85	1.99			65	2.00	51	2.00
	34	88	2.47						
		80	2.24						
Web Shear and Property Values									
V, kips		400		V, kips		280		210	
S_x, In.^{3}		136		S_x, In.^{3}		96.9		76.3	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.
Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



SAW

Nominal Size		32 x 32						Nominal Size		30 x 30					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		259.83		210.72		159.37		Weight Per Foot		242.82		197.11		149.16	
Design Wall Thickness		0.625*		0.500*		0.375*		Design Wall Thickness		0.625*		0.500*		0.375*	
Span in Feet	6					960	0.02	Span in Feet	6					900	0.03
	7			1280	0.04	954	0.03		7	1500	0.04	1200	0.04	860	0.04
	8	1600	0.05	1240	0.05	835	0.04		8	1490	0.06	1110	0.05	753	0.05
	9	1480	0.07	1100	0.06	742	0.05		9	1330	0.07	989	0.07	669	0.06
	10	1330	0.08	990	0.08	668	0.07		10	1190	0.09	890	0.08	602	0.07
	11	1210	0.10	900	0.09	607	0.08		11	1090	0.11	809	0.10	547	0.09
	12	1110	0.12	825	0.11	557	0.10		12	995	0.13	742	0.12	502	0.11
	13	1020	0.14	762	0.13	514	0.11		13	918	0.16	685	0.14	463	0.12
	14	949	0.16	707	0.15	477	0.13		14	853	0.18	636	0.16	430	0.14
	15	885	0.19	660	0.17	445	0.15		15	796	0.21	593	0.19	401	0.16
	16	830	0.21	619	0.19	418	0.17		16	746	0.23	556	0.21	376	0.19
	17	781	0.24	582	0.22	393	0.19		17	702	0.27	524	0.24	354	0.21
	18	738	0.27	550	0.25	371	0.22		18	663	0.30	494	0.27	334	0.24
	19	699	0.30	521	0.27	352	0.24		19	628	0.33	468	0.30	317	0.26
	20	664	0.34	495	0.30	334	0.27		20	597	0.37	445	0.33	301	0.29
	21	632	0.37	471	0.34	318	0.29		21	569	0.40	424	0.37	287	0.32
	22	604	0.41	450	0.37	304	0.32		22	543	0.44	405	0.40	274	0.35
	23	577	0.44	430	0.40	290	0.35		23	519	0.49	387	0.44	262	0.39
	24	553	0.48	413	0.44	278	0.39		24	498	0.53	371	0.48	251	0.42
	25	531	0.52	396	0.48	267	0.42		25	478	0.57	356	0.52	241	0.46
	26	511	0.57	381	0.51	257	0.45		26	459	0.62	342	0.56	232	0.50
	27	492	0.61	367	0.55	247	0.49		27	442	0.67	330	0.61	223	0.53
	28	474	0.66	354	0.60	239	0.52		28	426	0.72	318	0.65	215	0.57
	29	458	0.70	341	0.64	230	0.56		29	412	0.77	307	0.70	208	0.62
	30	443	0.75	330	0.68	223	0.60		30	398	0.83	297	0.75	201	0.66
	32	415	0.86	309	0.78	209	0.68		32	373	0.94	278	0.85	188	0.75
	34	391	0.97	291	0.88	196	0.77		34	351	1.06	262	0.96	177	0.85
	36	369	1.09	275	0.99	186	0.87		36	332	1.19	247	1.08	167	0.95
	38	349	1.21	261	1.10	176	0.97		38	314	1.32	234	1.20	158	1.06
	40	332	1.34	248	1.22	167	1.07		40	299	1.47	223	1.33	151	1.17
	42	316	1.48	236	1.34	159	1.18		42	284	1.62	212	1.46	143	1.29
	44	302	1.62	225	1.47	152	1.29		44	271	1.78	202	1.61	137	1.42
	46	289	1.77	215	1.61	145	1.42		46	260	1.94	193	1.76	131	1.55
	48	277	1.93	206	1.75	139	1.54		48	249	2.11	185	1.91	125	1.69
	50	266	2.09	198	1.90	134	1.67		50	239	2.29	178	2.07	120	1.83
	52	255	2.27	190	2.06	128	1.81		52	230	2.48	171	2.24	116	1.98
	56	237	2.63	177	2.38	119	2.10		56	213	2.88	159	2.60	108	2.30
	60	221	3.02	165	2.74	111	2.41		60	199	3.30	148	2.99	100	2.64
	64	208	3.43	155	3.12	104	2.74		64	187	3.76	139	3.40	94	3.00
	68	195	3.87	146	3.52	98	3.09								
Web Shear and Property Values															
V, kips		800		640		480		V, kips		750		600		450	
S_x, In.^{3}		664**		495**		334**		S_x, In.^{3}		597**		445**		301**	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

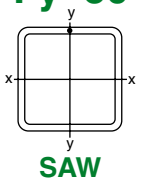
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



SAW

Nominal Size		28 x 28						Nominal Size		26 x 26					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		225.80		183.50		138.95		Weight Per Foot		208.79		169.89		128.74	
Design Wall Thickness		0.625*		0.500*		0.375*		Design Wall Thickness		0.625*		0.500*		0.375*	
Span in Feet	6					840	0.03	Span in Feet	6			1040	0.04	780	0.03
	7	1400	0.05	1120	0.04	769	0.04		7	1300	0.06	1010	0.05	680	0.04
	8	1330	0.06	995	0.06	673	0.05		8	1180	0.07	880	0.07	595	0.06
	9	1180	0.08	884	0.07	598	0.07		9	1040	0.09	782	0.08	529	0.07
	10	1060	0.10	796	0.09	538	0.08		10	940	0.11	704	0.10	476	0.09
	11	967	0.12	724	0.11	489	0.10		11	855	0.14	640	0.12	433	0.11
	12	887	0.15	663	0.13	448	0.12		12	783	0.16	587	0.15	397	0.13
	13	818	0.17	612	0.16	414	0.14		13	723	0.19	542	0.17	366	0.15
	14	760	0.20	569	0.18	384	0.16		14	671	0.22	503	0.20	340	0.18
	15	709	0.23	531	0.21	359	0.18		15	627	0.25	469	0.23	317	0.20
	16	665	0.26	498	0.23	336	0.21		16	588	0.29	440	0.26	298	0.23
	17	626	0.29	468	0.27	316	0.23		17	553	0.33	414	0.30	280	0.26
	18	591	0.33	442	0.30	299	0.26		18	522	0.37	391	0.33	264	0.29
	19	560	0.37	419	0.33	283	0.29		19	495	0.41	371	0.37	251	0.32
	20	532	0.41	398	0.37	269	0.32		20	470	0.45	352	0.41	238	0.36
	21	507	0.45	379	0.40	256	0.36		21	448	0.50	335	0.45	227	0.40
	22	484	0.49	362	0.44	245	0.39		22	427	0.55	320	0.49	216	0.43
	23	463	0.54	346	0.49	234	0.43		23	409	0.60	306	0.54	207	0.48
	24	443	0.58	332	0.53	224	0.47		24	392	0.65	293	0.59	198	0.52
	25	426	0.63	318	0.57	215	0.51		25	376	0.71	282	0.64	190	0.56
	26	409	0.69	306	0.62	207	0.55		26	362	0.76	271	0.69	183	0.61
	27	394	0.74	295	0.67	199	0.59		27	348	0.82	261	0.74	176	0.66
	28	380	0.80	284	0.72	192	0.64		28	336	0.89	251	0.80	170	0.70
	29	367	0.85	274	0.77	186	0.68		29	324	0.95	243	0.86	164	0.76
	30	355	0.91	265	0.83	179	0.73		30	313	1.02	235	0.92	159	0.81
	32	333	1.04	249	0.94	168	0.83		32	294	1.16	220	1.05	149	0.92
	34	313	1.17	234	1.06	158	0.94		34	276	1.31	207	1.18	140	1.04
	36	296	1.31	221	1.19	149	1.05		36	261	1.46	196	1.32	132	1.16
	38	280	1.46	209	1.33	142	1.17		38	247	1.63	185	1.47	125	1.30
	40	266	1.62	199	1.47	135	1.30		40	235	1.81	176	1.63	119	1.44
	42	253	1.79	190	1.62	128	1.43		42	224	1.99	168	1.80	113	1.59
	44	242	1.96	181	1.78	122	1.57		44	214	2.19	160	1.98	108	1.74
	46	231	2.15	173	1.94	117	1.72		46	204	2.39	153	2.16	103	1.90
	48	222	2.34	166	2.11	112	1.87		48	196	2.60	147	2.35	99	2.07
	50	213	2.54	159	2.29	108	2.03		50	188	2.82	141	2.55	95	2.25
	52	205	2.74	153	2.48	103	2.19		52	181	3.05	135	2.76	92	2.43
	54	197	2.96	147	2.68	100	2.36		54	174	3.29	130	2.98	88	2.62
	56	190	3.18	142	2.88	96	2.54		55	171	3.42	128	3.09	87	2.72
	58	183	3.41	137	3.09	93	2.73								
	60	177	3.65	133	3.30	90	2.92								
Web Shear and Property Values															
V, kips		700		560		420		V, kips		650		520		390	
S_x, In.^{3}		532**		398**		269**		S_x, In.^{3}		470**		352**		238**	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

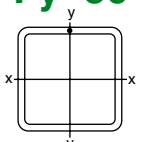
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



SAW

Nominal Size		24 x 24						Nominal Size		22 x 22					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		191.78		156.28		118.53		Weight Per Foot		174.76		142.67		108.32	
Design Wall Thickness		0.625 *		0.500 *		0.375 *		Design Wall Thickness		0.625		0.500 *		0.375 *	
Span in Feet	5					720	0.03	Span in Feet	5					660	0.03
	6	1200	0.05	960	0.04	697	0.04		6	1100	0.05	880	0.05	603	0.04
	7	1170	0.06	883	0.06	597	0.05		7	991	0.07	763	0.06	517	0.06
	8	1030	0.08	773	0.07	523	0.06		8	868	0.09	668	0.08	453	0.07
	9	911	0.10	687	0.09	464	0.08		9	771	0.11	593	0.11	402	0.09
	10	820	0.13	618	0.11	418	0.10		10	694	0.14	534	0.13	362	0.11
	11	745	0.15	562	0.14	380	0.12		11	631	0.17	485	0.16	329	0.14
	12	683	0.18	515	0.17	348	0.15		12	578	0.20	445	0.19	302	0.16
	13	631	0.21	475	0.19	322	0.17		13	534	0.24	411	0.22	278	0.19
	14	586	0.25	441	0.23	299	0.20		14	496	0.28	381	0.25	259	0.22
	15	547	0.28	412	0.26	279	0.23		15	463	0.32	356	0.29	241	0.26
	16	513	0.32	386	0.29	261	0.26		16	434	0.36	334	0.33	226	0.29
	17	482	0.37	364	0.33	246	0.29		17	408	0.41	314	0.38	213	0.33
	18	456	0.41	343	0.37	232	0.33		18	386	0.46	297	0.42	201	0.37
	19	432	0.46	325	0.42	220	0.36		19	365	0.51	281	0.47	191	0.41
	20	410	0.51	309	0.46	209	0.40		20	347	0.56	267	0.52	181	0.46
	21	390	0.56	294	0.51	199	0.45		21	330	0.62	254	0.57	172	0.50
	22	373	0.61	281	0.56	190	0.49		22	315	0.68	243	0.63	165	0.55
	23	357	0.67	269	0.61	182	0.53		23	302	0.75	232	0.69	157	0.60
	24	342	0.73	258	0.66	174	0.58		24	289	0.81	223	0.75	151	0.66
	25	328	0.79	247	0.72	167	0.63		25	278	0.88	214	0.81	145	0.71
	26	315	0.86	238	0.78	161	0.68		26	267	0.95	205	0.88	139	0.77
	27	304	0.92	229	0.84	155	0.74		27	257	1.03	198	0.95	134	0.83
	28	293	0.99	221	0.90	149	0.79		28	248	1.11	191	1.02	129	0.90
	29	283	1.06	213	0.97	144	0.85		29	239	1.19	184	1.09	125	0.96
	30	273	1.14	206	1.03	139	0.91		30	231	1.27	178	1.17	121	1.03
	32	256	1.30	193	1.18	131	1.03		32	217	1.44	167	1.33	113	1.17
	34	241	1.46	182	1.33	123	1.17		34	204	1.63	157	1.50	106	1.32
	36	228	1.64	172	1.49	116	1.31		36	193	1.83	148	1.68	101	1.48
	38	216	1.83	163	1.66	110	1.46		38	183	2.04	141	1.88	95	1.65
	40	205	2.02	155	1.84	105	1.62		40	174	2.26	134	2.08	91	1.83
	42	195	2.23	147	2.03	100	1.78		42	165	2.49	127	2.29	86	2.01
	44	186	2.45	140	2.23	95	1.96		44	158	2.73	121	2.51	82	2.21
	46	178	2.68	134	2.43	91	2.14		46	151	2.98	116	2.75	79	2.42
	48	171	2.91	129	2.65	87	2.33		47	148	3.12	114	2.87	77	2.52
	50	164	3.16	124	2.87	84	2.53								
	51	161	3.29	121	2.99	82	2.63								
Web Shear and Property Values															
V, kips		600		480		360		V, kips		550		440		330	
S_x, In.^{3}		410 **		309 **		209 **		S_x, In.^{3}		347		267 **		181 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

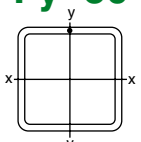
* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

HSS Beam Load Tables
Square Structural Steel Tubing

Total Allowable Uniform Load in Kips for Beams with Lateral Support

Fy=50



SAW

Nominal Size		20 x 20						Nominal Size		18 x 18					
Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches	Wall Thickness		5/8	Δ Inches	1/2	Δ Inches	3/8	Δ Inches
Weight Per Foot		157.75		129.06		98.12		Weight Per Foot		140.73		115.45		87.91	
Design Wall Thickness		0.625		0.500 *		0.375 *		Design Wall Thickness		0.625		0.500		0.375 *	
Span in Feet	5	1000	0.04	800	0.04	600	0.03	Span in Feet	4					540	0.02
	6	943	0.06	760	0.05	517	0.05		5	900	0.05	720	0.04	520	0.04
	7	809	0.08	651	0.07	443	0.06		6	821	0.07	630	0.06	433	0.06
	8	708	0.10	570	0.10	388	0.08		7	704	0.09	540	0.08	371	0.07
	9	629	0.13	507	0.12	344	0.11		8	616	0.12	473	0.11	325	0.10
	10	566	0.16	456	0.15	310	0.13		9	548	0.15	420	0.14	289	0.12
	11	515	0.19	415	0.18	282	0.16		10	493	0.19	378	0.17	260	0.15
	12	472	0.22	380	0.21	258	0.19		11	448	0.23	344	0.21	236	0.18
	13	435	0.26	351	0.25	238	0.22		12	411	0.27	315	0.25	217	0.22
	14	404	0.30	326	0.29	221	0.26		13	379	0.32	291	0.29	200	0.26
	15	377	0.35	304	0.34	207	0.30		14	352	0.37	270	0.34	186	0.30
	16	354	0.40	285	0.38	194	0.34		15	329	0.43	252	0.39	173	0.34
	17	333	0.45	268	0.43	182	0.38		16	308	0.49	236	0.44	163	0.39
	18	314	0.50	253	0.48	172	0.43		17	290	0.55	222	0.50	153	0.44
	19	298	0.56	240	0.54	163	0.47		18	274	0.61	210	0.56	144	0.50
	20	283	0.62	228	0.60	155	0.53		19	259	0.68	199	0.62	137	0.55
	21	270	0.68	217	0.66	148	0.58		20	246	0.76	189	0.69	130	0.61
	22	257	0.75	207	0.72	141	0.64		21	235	0.84	180	0.76	124	0.67
	23	246	0.82	198	0.79	135	0.70		22	224	0.92	172	0.83	118	0.74
	24	236	0.89	190	0.86	129	0.76		23	214	1.00	164	0.91	113	0.81
	25	226	0.97	182	0.93	124	0.82		24	205	1.09	158	0.99	108	0.88
	26	218	1.05	175	1.01	119	0.89		25	197	1.19	151	1.08	104	0.96
	27	210	1.13	169	1.09	115	0.96		26	190	1.28	145	1.17	100	1.03
	28	202	1.22	163	1.17	111	1.03		27	183	1.38	140	1.26	96	1.11
	29	195	1.31	157	1.26	107	1.11		28	176	1.49	135	1.35	93	1.20
	30	189	1.40	152	1.34	103	1.18		29	170	1.60	130	1.45	90	1.29
	31	183	1.49	147	1.43	100	1.26		30	164	1.71	126	1.55	87	1.38
	32	177	1.59	143	1.53	97	1.35		31	159	1.82	122	1.66	84	1.47
	33	172	1.69	138	1.63	94	1.43		32	154	1.94	118	1.77	81	1.56
	34	166	1.79	134	1.73	91	1.52		33	149	2.07	115	1.88	79	1.66
	35	162	1.90	130	1.83	89	1.61		34	145	2.19	111	1.99	76	1.77
	36	157	2.01	127	1.93	86	1.70		35	141	2.32	108	2.11	74	1.87
	37	153	2.12	123	2.04	84	1.80		36	137	2.46	105	2.23	72	1.98
	38	149	2.24	120	2.16	82	1.90		37	133	2.60	–	–	–	–
	39	145	2.36	117	2.27	79	2.00			121	2.36	102	2.36	70	2.09
	40	142	2.48	114	2.39	78	2.10		38	130	2.74	–	–	–	–
	41	138	2.61	111	2.51	76	2.21			118	2.49	99	2.49	68	2.21
	42	135	2.74	109	2.63	74	2.32								
Web Shear and Property Values															
V, kips		500		400		300		V, kips		450		360		270	
S_x, In.^{3}		283		228 **		155 **		S_x, In.^{3}		224		189		130 **	

Loads above heavy horizontal line based upon maximum shear stress, F_v, equal to 0.40 F_y.

Loads in shaded area based upon maximum allowable bending stress, F_b, equal to 0.60 F_y.

* Slender element section. Width-thickness ratio exceeds AISC "Specification" Section B5.1 limiting value of $238/\sqrt{Fy}$.

** Modified value of section modulus calculated in accordance with AISC "Specification" Appendix Section B5.2.b.

Notes

HSS Beam Load Tables / Structural Steel Tubing

Midspan Deflections

In Inches - Simple Span - Uniformly Distributed Load

Span in Feet	Depth - in inches																
	32	30	28	26	24	22	20	18	16	14	12	10	9	8	7	6	5 1/2
2	0.004	0.004	0.004	0.004	0.005	0.005	0.006	0.006	0.007	0.008	0.010	0.011	0.013	0.014	0.016	0.019	0.021
3	0.008	0.009	0.009	0.010	0.011	0.012	0.013	0.014	0.016	0.018	0.021	0.026	0.029	0.032	0.037	0.043	0.047
4	0.014	0.015	0.016	0.018	0.019	0.021	0.023	0.025	0.029	0.033	0.038	0.046	0.051	0.057	0.065	0.076	0.083
5	0.022	0.024	0.025	0.027	0.030	0.032	0.036	0.040	0.045	0.051	0.059	0.071	0.079	0.089	0.102	0.119	0.130
6	0.032	0.034	0.037	0.040	0.043	0.047	0.051	0.057	0.064	0.073	0.086	0.103	0.114	0.128	0.147	0.171	0.187
7	0.044	0.047	0.050	0.054	0.058	0.064	0.070	0.078	0.087	0.100	0.117	0.140	0.155	0.175	0.200	0.233	0.254
8	0.057	0.061	0.065	0.070	0.076	0.083	0.091	0.102	0.114	0.131	0.152	0.183	0.203	0.228	0.261	0.305	0.332
9	0.072	0.077	0.083	0.089	0.096	0.105	0.116	0.128	0.145	0.165	0.193	0.231	0.257	0.289	0.330	0.385	0.420
10	0.089	0.095	0.102	0.110	0.119	0.130	0.143	0.159	0.178	0.204	0.238	0.286	0.317	0.357	0.408	0.476	0.519
11	0.108	0.115	0.123	0.133	0.144	0.157	0.173	0.192	0.216	0.247	0.288	0.345	0.384	0.432	0.494	0.576	0.628
12	0.128	0.137	0.147	0.158	0.171	0.187	0.206	0.228	0.257	0.294	0.343	0.411	0.457	0.514	0.587	0.685	0.748
13	0.151	0.161	0.172	0.186	0.201	0.219	0.241	0.268	0.302	0.345	0.402	0.483	0.536	0.603	0.689	0.804	
14	0.175	0.187	0.200	0.215	0.233	0.254	0.280	0.311	0.350	0.400	0.466	0.560	0.622	0.700	0.799	0.933	
15	0.201	0.214	0.229	0.247	0.268	0.292	0.321	0.357	0.402	0.459	0.535	0.642	0.714	0.803	0.918		
16	0.228	0.244	0.261	0.281	0.305	0.332	0.365	0.406	0.457	0.522	0.609	0.731	0.812	0.914	1.044		
17	0.258	0.275	0.295	0.317	0.344	0.375	0.413	0.458	0.516	0.589	0.688	0.825	0.917	1.031			
18	0.289	0.308	0.330	0.356	0.385	0.420	0.463	0.514	0.578	0.661	0.771	0.925	1.028	1.156			
19	0.322	0.344	0.368	0.396	0.429	0.469	0.515	0.573	0.644	0.736	0.859	1.031	1.145				
20	0.357	0.381	0.408	0.439	0.476	0.519	0.571	0.634	0.714	0.816	0.952	1.142	1.269				
21	0.393	0.420	0.450	0.484	0.525	0.572	0.630	0.700	0.787	0.899	1.049	1.259	1.399				
22	0.432	0.461	0.494	0.532	0.576	0.628	0.691	0.768	0.864	0.987	1.152	1.382					
23	0.472	0.503	0.539	0.581	0.629	0.687	0.755	0.839	0.944	1.079	1.259	1.510					
24	0.514	0.548	0.587	0.633	0.685	0.748	0.822	0.914	1.028	1.175	1.370						
25	0.558	0.595	0.637	0.686	0.744	0.811	0.892	0.991	1.115	1.275	1.487						
26	0.603	0.643	0.689	0.742	0.804	0.877	0.965	1.072	1.206	1.379	1.608						
27	0.650	0.694	0.743	0.801	0.867	0.946	1.041	1.156	1.301	1.487	1.735						
28	0.700	0.746	0.799	0.861	0.933	1.017	1.119	1.244	1.399	1.599	1.865						
29	0.750	0.800	0.858	0.924	1.001	1.091	1.201	1.334	1.501	1.715							
30	0.803	0.857	0.918	0.988	1.071	1.168	1.285	1.428	1.606	1.835							
31	0.857	0.915	0.980	1.055	1.143	1.247	1.372	1.524	1.715	1.960							
32	0.914	0.975	1.044	1.124	1.218	1.329	1.462	1.624	1.827	2.088							
33	0.972	1.036	1.110	1.196	1.296	1.413	1.555	1.727	1.943								
34	1.031	1.100	1.179	1.269	1.375	1.500	1.650	1.834	2.063								
35	1.093	1.166	1.249	1.345	1.457	1.590	1.749	1.943	2.186								
36	1.156	1.233	1.322	1.423	1.542	1.682	1.850	2.056	2.313								
37	1.221	1.303	1.396	1.503	1.629	1.777	1.954	2.172	2.443								
38	1.288	1.374	1.472	1.586	1.718	1.874	2.061	2.290									
39	1.357	1.448	1.551	1.670	1.809	1.974	2.171	2.413									
40	1.428	1.523	1.632	1.757	1.903	2.076	2.284	2.538									
41	1.500	1.600	1.714	1.846	2.000	2.182	2.400	2.666									
42	1.574	1.679	1.799	1.937	2.099	2.289	2.518	2.798									
43	1.650	1.760	1.885	2.030	2.200	2.400	2.640										
44	1.727	1.843	1.974	2.126	2.303	2.513	2.764										
45	1.807	1.927	2.065	2.224	2.409	2.628	2.891										
46	1.888	2.014	2.158	2.324	2.517	2.746	3.021										
47	1.971	2.102	2.253	2.426	2.628	2.867											
48	2.056	2.193	2.349	2.530	2.741	2.990											
49	2.142	2.285	2.448	2.637	2.856	3.116											
50	2.231	2.379	2.549	2.745	2.974	3.245											
51	2.321	2.475	2.652	2.856	3.094	3.376											
52	2.413	2.573	2.757	2.969	3.217												
53	2.506	2.673	2.864	3.085	3.342												
54	2.602	2.775	2.973	3.202	3.469												
55	2.699	2.879	3.085	3.322	3.599												
56	2.798	2.985	3.198	3.444	3.731												
57	2.899	3.092	3.313	3.568													
58	3.002	3.202	3.430	3.694													
59	3.106	3.313	3.550	3.823													
60	3.212	3.426	3.671	3.953													
61	3.320	3.541	3.794														
62	3.430	3.658	3.920														
63	3.541	3.777	4.047														
64	3.655	3.898	4.177														
65	3.770	4.021	4.308														
66	3.887	4.146															
67	4.005	4.272															
68	4.126	4.401															
69	4.248	4.531															
70	4.372	4.663															
71	4.498																
72	4.625																
73	4.755																
74	4.886																

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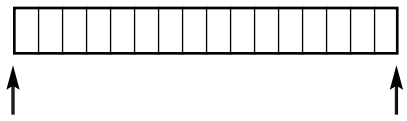


Span in Feet	Depth - in inches											
	5	4 1/2	4	3 1/2	3	2 1/2	2 1/4	2	1 3/4	1 5/8	1 1/2	1 1/4
2	0.023	0.025	0.029	0.033	0.038	0.046	0.051	0.057	0.065	0.070	0.076	0.091
3	0.051	0.057	0.064	0.073	0.086	0.103	0.114	0.128	0.147	0.158	0.171	
4	0.091	0.102	0.114	0.131	0.152	0.183	0.203	0.228	0.261			
5	0.143	0.159	0.178	0.204	0.238	0.286	0.317					
6	0.206	0.228	0.257	0.294	0.343							
7	0.280	0.311	0.350	0.400	0.466							
8	0.365	0.406	0.457	0.522								
9	0.463	0.514	0.578									
10	0.571	0.634										
11	0.691											

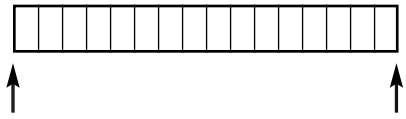
HSS Beam Load Tables / Structural Steel Tubing

Midspan Deflections

In Inches - Simple Span - Uniformly Distributed Load

Span in Feet	Depth - in inches																
	32	30	28	26	24	22	20	18	16	14	12	10	9	8	7	6	5 1/2
2	0.004	0.004	0.004	0.005	0.005	0.006	0.006	0.007	0.008	0.009	0.010	0.012	0.014	0.016	0.018	0.021	0.023
3	0.009	0.009	0.010	0.011	0.012	0.013	0.014	0.016	0.017	0.020	0.023	0.028	0.031	0.035	0.040	0.047	0.051
4	0.016	0.017	0.018	0.019	0.021	0.023	0.025	0.028	0.031	0.035	0.041	0.050	0.055	0.062	0.071	0.083	0.090
5	0.024	0.026	0.028	0.030	0.032	0.035	0.039	0.043	0.048	0.055	0.065	0.078	0.086	0.097	0.111	0.129	0.141
6	0.035	0.037	0.040	0.043	0.047	0.051	0.056	0.062	0.070	0.080	0.093	0.112	0.124	0.140	0.160	0.186	0.203
7	0.048	0.051	0.054	0.058	0.063	0.069	0.076	0.084	0.095	0.109	0.127	0.152	0.169	0.190	0.217	0.253	0.276
8	0.062	0.066	0.071	0.076	0.083	0.090	0.099	0.110	0.124	0.142	0.166	0.199	0.221	0.248	0.284	0.331	0.361
9	0.079	0.084	0.090	0.097	0.105	0.114	0.126	0.140	0.157	0.180	0.209	0.251	0.279	0.314	0.359	0.419	0.457
10	0.097	0.103	0.111	0.119	0.129	0.141	0.155	0.172	0.194	0.222	0.259	0.310	0.345	0.388	0.443	0.517	0.564
11	0.117	0.125	0.134	0.144	0.156	0.171	0.188	0.209	0.235	0.268	0.313	0.376	0.417	0.469	0.536	0.626	0.683
12	0.140	0.149	0.160	0.172	0.186	0.203	0.223	0.248	0.279	0.319	0.372	0.447	0.497	0.559	0.638	0.745	
13	0.164	0.175	0.187	0.202	0.219	0.238	0.262	0.291	0.328	0.375	0.437	0.524	0.583	0.656	0.749		
14	0.190	0.203	0.217	0.234	0.253	0.276	0.304	0.338	0.380	0.434	0.507	0.608	0.676	0.760	0.869		
15	0.218	0.233	0.249	0.269	0.291	0.317	0.349	0.388	0.436	0.499	0.582	0.698	0.776	0.873	0.998		
16	0.248	0.265	0.284	0.306	0.331	0.361	0.397	0.441	0.497	0.567	0.662	0.794	0.883	0.993			
17	0.280	0.299	0.320	0.345	0.374	0.408	0.448	0.498	0.561	0.641	0.747	0.897	0.997	1.121			
18	0.314	0.335	0.359	0.387	0.419	0.457	0.503	0.559	0.628	0.718	0.838	1.006	1.117				
19	0.350	0.373	0.400	0.431	0.467	0.509	0.560	0.622	0.700	0.800	0.934	1.120	1.245				
20	0.388	0.414	0.443	0.477	0.517	0.564	0.621	0.690	0.776	0.887	1.034	1.241					
21	0.428	0.456	0.489	0.526	0.570	0.622	0.684	0.760	0.855	0.978	1.141	1.369					
22	0.469	0.501	0.536	0.578	0.626	0.683	0.751	0.834	0.939	1.073	1.252						
23	0.513	0.547	0.586	0.631	0.684	0.746	0.821	0.912	1.026	1.173	1.368						
24	0.559	0.596	0.638	0.688	0.745	0.813	0.894	0.993	1.117	1.277	1.490						
25	0.606	0.647	0.693	0.746	0.808	0.882	0.970	1.078	1.212	1.385	1.616						
26	0.656	0.699	0.749	0.807	0.874	0.954	1.049	1.166	1.311	1.499							
27	0.707	0.754	0.808	0.870	0.943	1.028	1.131	1.257	1.414	1.616							
28	0.760	0.811	0.869	0.936	1.014	1.106	1.217	1.352	1.521	1.738							
29	0.816	0.870	0.932	1.004	1.088	1.186	1.305	1.450	1.631	1.864							
30	0.873	0.931	0.998	1.074	1.164	1.270	1.397	1.552	1.746	1.995							
31	0.932	0.994	1.065	1.147	1.243	1.356	1.491	1.657	1.864								
32	0.993	1.059	1.135	1.222	1.324	1.445	1.589	1.766	1.986								
33	1.056	1.127	1.207	1.300	1.408	1.536	1.690	1.878	2.112								
34	1.121	1.196	1.281	1.380	1.495	1.631	1.794	1.993	2.242								
35	1.188	1.267	1.358	1.462	1.584	1.728	1.901	2.112									
36	1.257	1.341	1.436	1.547	1.676	1.828	2.011	2.234									
37	1.328	1.416	1.517	1.634	1.770	1.931	2.124	2.360									
38	1.400	1.494	1.600	1.724	1.867	2.037	2.241	2.490									
39	1.475	1.573	1.686	1.816	1.967	2.146	2.360										
40	1.552	1.655	1.773	1.910	2.069	2.257	2.483										
41	1.630	1.739	1.863	2.006	2.174	2.371	2.608										
42	1.711	1.825	1.955	2.106	2.281	2.488	2.737										
43	1.793	1.913	2.049	2.207	2.391	2.608											
44	1.878	2.003	2.146	2.311	2.503	2.731											
45	1.964	2.095	2.244	2.417	2.619	2.857											
46	2.052	2.189	2.345	2.526	2.736	2.985											
47	2.142	2.285	2.448	2.637	2.856	3.116											
48	2.234	2.383	2.554	2.750	2.979												
49	2.329	2.484	2.661	2.866	3.105												
50	2.425	2.586	2.771	2.984	3.233												
51	2.523	2.691	2.883	3.105	3.363												
52	2.622	2.797	2.997	3.228													
53	2.724	2.906	3.113	3.353													
54	2.828	3.017	3.232	3.481													
55	2.934	3.129	3.353	3.611													
56	3.041	3.244	3.476														
57	3.151	3.361	3.601														
58	3.263	3.480	3.729														
59	3.376	3.601	3.858														
60	3.491	3.724	3.990														
61	3.609	3.849															
62	3.728	3.977															
63	3.849	4.106															
64	3.972	4.237															
65	4.098																
66	4.225																
67	4.354																
68	4.484																

$F_b = 30.0$ ksi



Span in Feet	Depth - in inches											
	5	4 1/2	4	3 1/2	3	2 1/2	2 1/4	2	1 3/4	1 5/8	1 1/2	1 1/4
2	0.025	0.028	0.031	0.035	0.041	0.050	0.055	0.062	0.071	0.076	0.083	0.099
3	0.056	0.062	0.070	0.080	0.093	0.112	0.124	0.140	0.160	0.172	0.186	
4	0.099	0.110	0.124	0.142	0.166	0.199	0.221	0.248				
5	0.155	0.172	0.194	0.222	0.259	0.310						
6	0.223	0.248	0.279	0.319	0.372							
7	0.304	0.338	0.380	0.434								
8	0.397	0.441	0.497									
9	0.503	0.559										
10	0.621											

HSS Beam Load Tables / Structural Steel Tubing

Midspan Deflections

In Inches - Simple Span - Uniformly Distributed Load

Span in Feet	Depth - in inches																
	32	30	28	26	24	22	20	18	16	14	12	10	9	8	7	6	5 1/2
2	0.004	0.005	0.005	0.005	0.006	0.006	0.007	0.008	0.009	0.010	0.011	0.014	0.015	0.017	0.020	0.023	0.025
3	0.010	0.010	0.011	0.012	0.013	0.014	0.015	0.017	0.019	0.022	0.026	0.031	0.034	0.038	0.044	0.051	0.056
4	0.017	0.018	0.020	0.021	0.023	0.025	0.027	0.030	0.034	0.039	0.046	0.055	0.061	0.068	0.078	0.091	0.099
5	0.027	0.028	0.030	0.033	0.036	0.039	0.043	0.047	0.053	0.061	0.071	0.085	0.095	0.107	0.122	0.142	0.155
6	0.038	0.041	0.044	0.047	0.051	0.056	0.061	0.068	0.077	0.088	0.102	0.123	0.137	0.154	0.176	0.205	0.223
7	0.052	0.056	0.060	0.064	0.070	0.076	0.084	0.093	0.105	0.119	0.139	0.167	0.186	0.209	0.239	0.279	0.304
8	0.068	0.073	0.078	0.084	0.091	0.099	0.109	0.121	0.137	0.156	0.182	0.218	0.243	0.273	0.312	0.364	0.397
9	0.086	0.092	0.099	0.106	0.115	0.126	0.138	0.154	0.173	0.198	0.230	0.277	0.307	0.346	0.395	0.461	0.503
10	0.107	0.114	0.122	0.131	0.142	0.155	0.171	0.190	0.213	0.244	0.284	0.341	0.379	0.427	0.488	0.569	0.621
11	0.129	0.138	0.148	0.159	0.172	0.188	0.207	0.229	0.258	0.295	0.344	0.413	0.459	0.516	0.590	0.688	
12	0.154	0.164	0.176	0.189	0.205	0.223	0.246	0.273	0.307	0.351	0.410	0.492	0.546	0.614	0.702		
13	0.180	0.192	0.206	0.222	0.240	0.262	0.288	0.321	0.361	0.412	0.481	0.577	0.641	0.721	0.824		
14	0.209	0.223	0.239	0.257	0.279	0.304	0.335	0.372	0.418	0.478	0.558	0.669	0.743	0.836			
15	0.240	0.256	0.274	0.295	0.320	0.349	0.384	0.427	0.480	0.549	0.640	0.768	0.853	0.960			
16	0.273	0.291	0.312	0.336	0.364	0.397	0.437	0.486	0.546	0.624	0.728	0.874	0.971				
17	0.308	0.329	0.352	0.379	0.411	0.448	0.493	0.548	0.617	0.705	0.822	0.987	1.096				
18	0.346	0.369	0.395	0.425	0.461	0.503	0.553	0.614	0.691	0.790	0.922	1.106					
19	0.385	0.411	0.440	0.474	0.513	0.560	0.616	0.685	0.770	0.880	1.027	1.232					
20	0.427	0.455	0.488	0.525	0.569	0.621	0.683	0.759	0.853	0.975	1.138						
21	0.470	0.502	0.538	0.579	0.627	0.684	0.753	0.836	0.941	1.075	1.255						
22	0.516	0.551	0.590	0.635	0.688	0.751	0.826	0.918	1.033	1.180	1.377						
23	0.564	0.602	0.645	0.695	0.752	0.821	0.903	1.003	1.129	1.290	1.505						
24	0.614	0.655	0.702	0.756	0.819	0.894	0.983	1.092	1.229	1.405							
25	0.667	0.711	0.762	0.821	0.889	0.970	1.067	1.185	1.334	1.524							
26	0.721	0.769	0.824	0.888	0.962	1.049	1.154	1.282	1.442	1.648							
27	0.778	0.830	0.889	0.957	1.037	1.131	1.244	1.383	1.555	1.778							
28	0.836	0.892	0.956	1.029	1.115	1.217	1.338	1.487	1.673								
29	0.897	0.957	1.025	1.104	1.196	1.305	1.436	1.595	1.794								
30	0.960	1.024	1.097	1.182	1.280	1.397	1.536	1.707	1.920								
31	1.025	1.094	1.172	1.262	1.367	1.491	1.640	1.823	2.050								
32	1.092	1.165	1.248	1.345	1.457	1.589	1.748	1.942									
33	1.162	1.239	1.328	1.430	1.549	1.690	1.859	2.065									
34	1.233	1.315	1.409	1.518	1.644	1.794	1.973	2.192									
35	1.307	1.394	1.494	1.608	1.742	1.901	2.091	2.323									
36	1.383	1.475	1.580	1.702	1.843	2.011	2.212										
37	1.460	1.558	1.669	1.797	1.947	2.124	2.337										
38	1.540	1.643	1.761	1.896	2.054	2.241	2.465										
39	1.623	1.731	1.854	1.997	2.163	2.360	2.596										
40	1.707	1.821	1.951	2.101	2.276	2.483											
41	1.793	1.913	2.049	2.207	2.391	2.608											
42	1.882	2.007	2.151	2.316	2.509	2.737											
43	1.973	2.104	2.254	2.428	2.630												
44	2.065	2.203	2.360	2.542	2.754												
45	2.160	2.304	2.469	2.659	2.880												
46	2.257	2.408	2.580	2.778	3.010												
47	2.357	2.514	2.693	2.900													
48	2.458	2.622	2.809	3.025													
49	2.561	2.732	2.927	3.153													
50	2.667	2.845	3.048	3.282													
51	2.775	2.960	3.171														
52	2.885	3.077	3.297														
53	2.997	3.196	3.425														
54	3.111	3.318	3.555														
55	3.227	3.442															
56	3.346	3.569															
57	3.466	3.697															
58	3.589	3.828															
59	3.714																
60	3.841																
61	3.970																
62	4.101																

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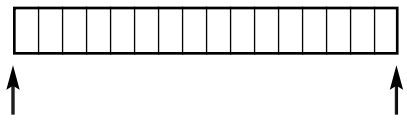
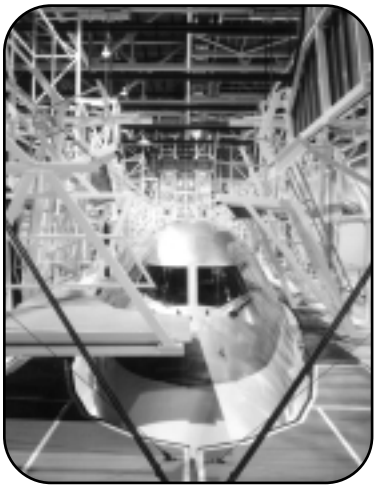


Span in Feet	Depth - in inches											
	5	4 1/2	4	3 1/2	3	2 1/2	2 1/4	2	1 3/4	1 5/8	1 1/2	1 1/4
2	0.027	0.030	0.034	0.039	0.046	0.055	0.061	0.068	0.078	0.084	0.091	0.109
3	0.061	0.068	0.077	0.088	0.102	0.123	0.137	0.154	0.176	0.189		
4	0.109	0.121	0.137	0.156	0.182	0.218	0.243					
5	0.171	0.190	0.213	0.244	0.284							
6	0.246	0.273	0.307	0.351								
7	0.335	0.372	0.418									
8	0.437	0.486										
9	0.553											

HSS APPLICATIONS



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