



# A500 STRUCTURAL TUBING

## THEORETICAL WEIGHT PER FOOT FACTORS

Outside Dimension		Nominal Wall Thickness																
Square	Rectangle	0.065	0.072	0.083	0.095	0.109	0.125	0.134	0.148	0.165	0.188	0.203	0.220	0.250	0.313	0.375	0.500	
		16 Ga	15 Ga	14 Ga	13 Ga	12 Ga	1/8	10 Ga	9 Ga	8 Ga	3/16	6 Ga	5 Ga	1/4	5/16	3/8	1/2	
1 x 1		Mechanical					1.35											
1-1/2 x 1-1/2		Mechanical					2.20	2.33	2.53	2.76	3.04							
2 x 2	3 x 1      2-1/2 x 1-1/2			2.16	2.46	2.80	3.05	3.25	3.54	3.88	4.32	4.60	4.91	5.41				
2-1/8 x 2-1/8		1.79	1.97	2.25	2.55	2.89	3.27	3.47	3.79	4.16	4.64	4.95	5.28	5.83				
2.17 x 2.17		1.83	2.01	2.30	2.60	2.95	3.34	3.56	3.88	4.26	4.75	5.07	5.42	5.99				
2-1/4 x 2-1/4	3 x 1-1/2	1.90	2.09	2.39	2.71	3.07	3.48	3.70	4.04	4.44	4.96	5.29	5.65	6.26				
2-1/2 x 2-1/2	3-1/2 x 1-1/2      3 x 2	2.12	2.33	2.67	3.03	3.44	3.90	4.16	4.55	5.01	5.59	5.99	6.40	7.11				
3 x 3	4 x 2      3-1/2 x 2-1/2			3.24	3.68	4.19	4.75	5.07	5.55	6.13	6.87	7.37	7.90	8.81	10.58			
3-1/2 x 3-1/2	5 x 2      4 x 3			3.80	4.32	4.93	5.61	5.98	6.56	7.25	8.15	8.75	9.40	10.51	12.70			
4 x 4	6 x 2      5 x 3			4.36	4.97	5.67	6.46	6.89	7.57	8.37	9.42	10.13	10.89	12.21	14.83	17.27	21.63	
	6 x 3      5 x 4						7.31	7.81	8.57	9.50	10.70	11.51	12.39	13.91	16.96	19.82	25.03	
5 x 5	8 x 2      6 x 4						8.16	8.72	9.58	10.62	11.97	12.89	13.89	15.62	19.08	22.37	28.43	
	8 x 3      7 x 4						9.01	9.63	10.59	11.74	13.25	14.27	15.39	17.32	21.21	24.93	31.84	
6 x 6	10 x 2      8 x 4      7 x 5						9.86	10.54	11.60	12.87	14.53	15.66	16.88	19.02	23.34	27.48	35.24	
7 x 7	12 x 2      10 x 4      8 x 6										17.08	18.42	19.88	22.42	27.59	32.58	42.05	
8 x 8	12 x 4      10 x 6										19.63	21.18	22.87	25.82	31.84	37.69	48.85	
	12 x 6      10 x 8										22.18	23.95	25.87	29.23	36.10	42.79	55.66	
10 x 10	12 x 8										24.73	26.71	28.86	32.63	40.35	47.90	62.46	

This table is based on commonly used sizes. Other sizes are within Maruichi Leavitt production capabilities. We invite your inquiry.

TENSILE REQUIREMENTS		
ASTM A-500	Grade B	Grade C
Yield Strength, min. psi.	46,000	50,000
Tensile Strength, min. psi.	58,000	62,000
Elongation in 2 in. min. %	23%*	21%**
*For 0.180" Wall and over    **For 0.120" Wall and Over		

<b>Straightness Tolerance</b>	0.025" Per Foot Max.
<b>Corner Radius Max.</b>	3 x nominal wall thickness
<b>Squareness of Sides</b>	90 Degrees +2 Degrees

OUTSIDE DIMENSION TOLERANCE***	
Largest Outside	Tolerance, Inches
2-1/2" and Under	±0.020
Over 2-1/2" to 3-1/2" Incl.	±0.025
Over 3-1/2" to 5-1/2" Incl.	±0.030
Over 5-1/2"	±1%
***Measured at Least 2" From the end of the tube	

Wall Thickness Tolerance
± 10% of spec. Nominal Wall Thickness

TWIST TOLERANCE	
Specified Dimension of longest side, Inches	Maximum Twist in 3 Feet
1-1/2" and Under	0.050"
Over 1-1/2" to 2-1/2" Incl.	0.062"
Over 2-1/2" to 4" Incl.	0.075"
Over 4" to 6" Incl.	0.087"
Over 6" to 8" Incl.	0.100"
Over 8"	0.112"

Note: Reference: ASTM A-500 Latest.

Maruichi Leavitt structural tubing is produced in accordance with the mechanical and chemical property requirements of ASTM A500, Grades B & C.