

The Premier Structural Steel Service Center in the United States

STEEL DATA REFERENCE GUIDE



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WHEN YOU NEED IT.**

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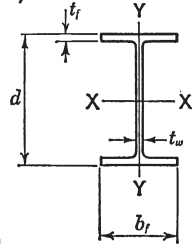
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**Our stock book is strictly a reference guide for items commonly used in the steel industry. Brown Strauss does not stock all items listed, it is listed for your convenience.*

WIDE FLANGE BEAMS

We Stock 35', 40', 45', 50', 55', 60', 65'

Designation and nominal size in inches



	Wt./Ft.	Depth of Section	FLANGE		Web	Wt./40'	Wt./60'	
			Width	Thickness	Thickness			
4" x 4	13	4.16	4.060	.345	.280	520	780	
5" x 5	16	5.01	5.000	.360	.240	640	960	
	19	5.15	5.030	.430	.270	760	1140	
	6" x 4	8.5	5.82	4.000	.194	.170	340	510
6" x 6	9	5.90	3.940	.215	.170	360	540	
	12	6.03	4.000	.280	.230	480	720	
	16	6.28	4.030	.405	.260	640	960	
	15	5.99	5.990	.260	.230	600	900	
6" x 6	20	6.20	6.020	.365	.260	800	1200	
	25	6.38	6.080	.455	.320	1000	1500	
	8" x 4	10	7.89	3.940	.205	.170	400	600
8" x 4	13	7.99	4.000	.255	.230	520	780	
	15	8.11	4.015	.315	.245	600	900	
	8" x 5 ¹ / ₄	18	8.14	5.250	.330	.230	720	1080
8" x 5 ¹ / ₄	21	8.28	5.270	.400	.250	840	1260	
	8" x 6 ¹ / ₂	24	7.93	6.495	.400	.245	960	1440
8" x 6 ¹ / ₂	28	8.06	6.535	.465	.285	1120	1680	
	8" x 8	31	8.00	7.995	.435	.285	1240	1860
	35	8.12	8.020	.495	.310	1400	2100	
	40	8.25	8.070	.560	.360	1600	2400	
	48	8.50	8.110	.685	.400	1920	2880	
	58	8.75	8.220	.810	.510	2320	3480	
67	9.00	8.280	.935	.570	2680	4020		
10" x 4	12	9.87	3.960	.210	.190	480	720	
	15	9.99	4.000	.270	.230	600	900	
	17	10.11	4.010	.330	.240	680	1020	
	19	10.24	4.020	.395	.250	760	1140	

WIDE FLANGE BEAMS (Con't)

Designation and nominal size in inches

	Wt./Ft.	Depth of Section	FLANGE		Web	Wt./40'	Wt./60'
			Width	Thickness	Thickness		
10" x 5 ³ / ₄	22	10.17	5.750	.360	.240	880	1320
	26	10.33	5.770	.440	.260	1040	1560
	30	10.47	5.810	.510	.300	1200	1800
10" x 8	33	9.73	7.960	.435	.290	1320	1980
	39	9.92	7.985	.530	.315	1560	2340
	45	10.10	8.020	.620	.350	1800	2700
10" x 10	49	9.98	10.000	.560	.340	1960	2940
	54	10.09	10.030	.615	.370	2160	3240
	60	10.22	10.080	.680	.420	2400	3600
	68	10.40	10.130	.770	.470	2720	4080
	77	10.60	10.190	.870	.530	3080	4620
	88	10.84	10.265	.990	.605	3520	5280
	100	11.10	10.340	1.120	.680	4000	6000
12" x 4	14	11.91	3.970	.225	.200	560	840
	16	11.99	3.990	.265	.220	640	960
	19	12.16	4.005	.350	.235	760	1140
	22	12.31	4.030	.425	.260	880	1320
	12" x 6 ¹ / ₂	26	12.22	6.490	.380	.230	1040	1560
30		12.34	6.520	.440	.260	1200	1800
35		12.50	6.560	.520	.300	1400	2100
12" x 8		40	11.94	8.005	.515	.295	1600	2400
	45	12.06	8.045	.575	.335	1800	2700
	50	12.19	8.080	.640	.370	2000	3000
12" x 10	53	12.06	9.995	.575	.345	2120	3180
	58	12.19	10.010	.640	.360	2320	3480
12" x 12	65	12.12	12.000	.605	.390	2600	3900
	72	12.25	12.040	.670	.430	2880	4320
	79	12.38	12.080	.735	.470	3160	4740
	87	12.53	12.125	.810	.515	3480	5220
	96	12.71	12.160	.900	.550	3840	5760
	106	12.89	12.220	.990	.610	4240	6360
	120	13.12	12.320	1.105	.710	4800	7200
	136	13.41	12.400	1.250	.790	5440	8160
	152	13.71	12.480	1.400	.870	6080	9120
170	14.03	12.570	1.560	.960	6800	10200	
190	14.38	12.670	1.735	1.060	7600	11400	

H. Pile upon request

WIDE FLANGE BEAMS (Con't)

	Wt./Ft.	Depth of Section	FLANGE		Web		Wt./40'	Wt./60'
			Width	Thickness	Thickness			
	210	14.71	12.790	1.900	1.180	8400	12600	
	230	15.05	12.895	2.070	1.285	9200	13800	
	252	15.41	13.005	2.250	1.395	10080	15120	
	279	15.85	13.140	2.470	1.530	11160	16740	
	305	16.32	13.235	2.705	1.625	12200	18300	
	336	16.82	13.385	2.955	1.775	13440	20160	
14" x 5	22	13.74	5.000	.335	.230	880	1100	
	26	13.91	5.025	.420	.225	1040	1300	
14" x 6 ³ / ₄	30	13.84	6.730	.385	.270	1200	1800	
	34	13.98	6.745	.455	.285	1360	2040	
	38	14.10	6.770	.515	.310	1520	2280	
14" x 8	43	13.66	7.995	.530	.305	1720	2580	
	48	13.79	8.030	.595	.340	1920	2880	
	53	13.92	8.060	.660	.370	2120	3180	
14" x 10	61	13.89	9.995	.645	.375	2440	3660	
	68	14.04	10.035	.720	.415	2720	4080	
	74	14.17	10.070	.785	.450	2960	4440	
	82	14.31	10.130	.855	.510	3280	4920	
14" x 14 ¹ / ₂	90	14.02	14.520	.710	.440	3600	5400	
	99	14.16	14.565	.780	.485	3960	5940	
	109	14.32	14.605	.860	.525	4360	6540	
	120	14.48	14.670	.940	.590	4800	7200	
	132	14.66	14.725	1.030	.645	5280	7920	
14" x 16	145	14.78	15.500	1.090	.680	5800	8700	
	159	14.98	15.565	1.190	.745	6360	9540	
	176	15.22	15.650	1.310	.830	7040	10560	
	193	15.48	15.710	1.440	.890	7720	11580	
	211	15.72	15.800	1.560	.980	8440	12660	
	233	16.04	15.890	1.720	1.070	9320	13980	
	257	16.38	15.995	1.890	1.175	10280	15420	
	283	16.74	16.110	2.070	1.290	11320	16980	
	311	17.12	16.230	2.260	1.410	12440	18660	
	342	17.54	16.360	2.470	1.540	13680	20520	
	370	17.92	16.475	2.660	1.655	14800	22200	
	398	18.29	16.590	2.845	1.770	15920	23880	
	426	18.67	16.695	3.035	1.875	17040	25560	

WIDE FLANGE BEAMS (Con't)

	Wt./Ft.	Depth of Section	FLANGE		Web		Wt./60'
			Width	Thickness	Thickness	Wt./40'	
	455	19.02	16.835	3.210	2.015	18200	27300
	500	19.60	17.101	3.500	2.190	20000	30000
	550	20.24	17.200	3.820	2.380	22000	33000
	605	20.92	17.415	4.160	2.595	24200	36300
	665	21.64	17.650	4.520	2.830	26600	39900
	730	22.42	17.890	4.910	3.070	29200	43800
16" x 5 ¹ / ₂	26	15.69	5.500	.345	.250	1040	1560
	31	15.88	5.525	.440	.275	1240	1860
16" x 7	36	15.86	6.985	.430	.295	1440	2160
	40	16.01	6.995	.505	.305	1600	2400
	45	16.13	7.035	.565	.345	1800	2700
	50	16.26	7.070	.630	.380	2000	3000
	57	16.43	7.120	.715	.430	2280	3420
16" x 10 ¹ / ₄	67	16.33	10.235	.665	.395	2680	4020
	77	16.52	10.295	.760	.455	3080	4620
	89	16.75	10.365	.875	.525	3560	5340
	100	16.97	10.425	.985	.585	4000	6000
18" x 6"	35	17.70	6.000	.425	.300	1400	2100
	40	17.90	6.015	.525	.315	1600	2400
	46	18.06	6.060	.605	.360	1840	2760
18" x 7 ¹ / ₂	50	17.99	7.495	.570	.355	2000	3000
	55	18.11	7.530	.630	.390	2200	3300
	60	18.24	7.555	.695	.415	2400	3600
	65	18.35	7.590	.750	.450	2600	3900
	71	18.47	7.635	.810	.495	2840	4260
18" x 11	76	18.21	11.035	.680	.425	3040	4560
	86	18.39	11.090	.770	.480	3440	5160
	97	18.59	11.145	.870	.535	3880	5820
	106	18.73	11.200	.940	.590	4240	6360
	119	18.87	11.265	1.060	.655	4760	7140
	130	19.25	11.160	1.200	.670	5200	7800
	143	19.49	11.220	1.320	.730	5720	8580
	158	19.72	11.300	1.440	.810	6320	9480
	175	20.04	11.375	1.590	.890	7000	10500
	192	20.35	11.455	1.750	.960	7680	11520
	211	20.67	11.555	1.910	1.060	8440	12660
	234	21.06	11.650	2.110	1.160	9360	14040

WIDE FLANGE BEAMS (Con't)

	Wt./Ft.	Depth of Section	FLANGE		Web		Wt./40'	Wt./60'
			Width	Thickness	Thickness	Thickness		
	258	21.46	11.770	2.300	1.280	10320	15480	
	283	21.85	11.890	2.500	1.400	11320	16980	
	311	22.32	12.005	2.740	1.520	12440	18660	
21" x 6 ¹ / ₂	44	20.66	6.500	.450	.350	1760	2640	
	50	20.83	6.530	.535	.380	2000	3000	
	57	21.06	6.555	.650	.405	2280	3420	
21" x 8 ¹ / ₄	48	20.62	8.14	.430	.350	1920	2880	
	55	20.80	8.22	.522	.375	2200	3300	
	62	20.99	8.420	.615	.400	2480	3720	
	68	21.13	8.270	.685	.430	2720	4080	
	73	21.24	8.295	.740	.455	2920	4380	
	83	21.43	8.355	.835	.515	3320	4920	
	93	21.62	8.420	.930	.580	3720	5580	
21" x 12 ¹ / ₄	101	21.36	12.290	.800	.500	4040	6060	
	111	21.51	12.340	.875	.550	4440	6660	
	122	21.68	12.390	.960	.600	4880	7320	
	132	21.83	12.440	1.035	.650	5280	7920	
	147	22.06	12.510	1.150	.720	5880	8820	
	166	22.48	12.420	1.360	.750	6640	9960	
	182	22.72	12.500	1.480	.830	7280	10920	
	201	23.03	12.575	1.630	.910	8040	12060	
	223	23.35	12.675	1.790	1.000	8920	13380	
	248	23.74	12.775	1.990	1.100	9920	14880	
	275	24.13	12.890	2.190	1.220	11000	16500	
24" x 7	55	23.57	7.005	.505	.395	2200	3300	
	62	23.74	7.040	.590	.430	2480	3720	
24" x 9	68	23.73	8.965	.585	.415	2702	4080	
	76	23.92	8.990	.680	.440	3040	4560	
	84	24.10	9.020	.770	.470	3360	5040	
	94	24.31	9.065	.875	.515	3760	5640	
	103	24.53	9.000	.980	.550	4120	6180	
24" x 12 ³ / ₄	104	24.06	12.750	.750	.500	4160	6240	
	117	24.26	12.800	.850	.550	4680	7020	
	131	24.48	12.855	.960	.695	5240	7860	
	146	24.74	12.900	1.090	.650	5840	8760	
	162	25.00	12.955	1.220	.705	6480	9720	
	176	25.24	12.890	1.340	.750	7040	10560	
	192	25.47	12.950	1.460	.810	7680	11520	
	207	25.71	13.010	1.570	.870	8280	12420	

WIDE FLANGE BEAMS (Con't)

	Wt./Ft.	Depth of Section	FLANGE		Web		Wt./40'	Wt./60'
			Width	Thickness	Thickness			
	229	26.02	13.110	1.730	.960	9160	13740	
	250	26.34	13.185	1.890	1.040	10000	15000	
	279	26.73	13.305	2.090	1.160	11160	16740	
	306	27.13	13.405	2.280	1.260	12240	18360	
	335	27.52	13.520	2.480	1.380	13400	20100	
	370	27.99	13.660	2.720	1.520	14800	22200	
27" x 10	84	26.71	9.960	.640	.460	3360	5040	
	94	26.92	9.990	.745	.490	3760	5640	
	102	27.09	10.015	.830	.505	4080	6120	
	114	27.29	10.070	.930	.570	4560	6840	
	129	27.63	10.010	1.100	.610	5160	7740	
27" x 14	146	27.38	13.965	.975	.605	5840	8760	
	161	27.59	14.020	1.080	.660	6440	9660	
	178	27.81	14.085	1.190	.725	7120	10680	
	194	28.11	14.035	1.340	.750	7760	11640	
	217	28.43	14.115	1.500	.830	8680	13020	
	235	28.66	14.190	1.610	.910	9400	14100	
	258	28.98	14.270	1.770	.980	10328	15480	
	281	27.29	14.350	1.930	1.060	11240	16860	
	307	29.61	14.445	2.090	1.160	12280	18420	
	336	30.00	14.550	2.280	1.260	13440	20160	
	368	30.39	14.665	2.480	1.380	14720	22080	
30" x 10 ^{1/2}	90	29.53	10.40	.610	.470	3600	5400	
	99	29.65	10.450	.670	.520	3960	5940	
	108	29.83	10.475	.760	.545	4320	6480	
	116	30.01	10.495	.850	.565	4640	6960	
	124	30.17	10.515	.930	.585	4960	7440	
	132	30.31	10.545	1.000	.615	5280	7920	
	148	30.67	10.480	1.180	.650	5920	8880	
30" x 15	173	30.44	14.985	1.065	.655	6920	10380	
	191	30.68	15.040	1.185	.710	7640	11460	
	211	30.94	15.105	1.135	.775	8440	12660	
	235	31.30	15.055	1.500	.830	9400	14100	
	261	31.61	15.155	1.650	.930	10440	15660	
	292	32.01	15.255	1.850	1.020	11680	17520	
	326	32.40	15.370	2.050	1.140	13040	19560	
	357	32.80	15.470	2.240	1.240	14280	21420	
	391	33.19	15.590	2.440	1.360	15640	23460	

WIDE FLANGE BEAMS (Con't)

	Wt./Ft.	Depth of	FLANGE		Web		Wt./40'	Wt./60'
		Section	Width	Thickness	Thickness	Thickness		
33" x 11 ¹ / ₂	118	32.86	11.480	.740	.550	4720	7080	
	130	33.09	11.510	.855	.580	5200	7800	
	141	33.30	11.535	.960	.605	5640	8460	
	152	33.49	11.565	1.055	.635	6080	9120	
	169	33.82	11.500	1.220	.670	6760	10140	
33" x 15 ³ / ₄	201	33.68	15.745	1.150	.715	8040	12060	
	221	33.93	15.805	1.275	.775	8840	13260	
	241	34.18	15.860	1.400	.830	9640	14460	
	263	34.53	15.805	1.570	.870	10520	15780	
	291	34.84	15.905	1.730	.960	11640	17460	
	318	35.16	15.985	1.890	1.040	12720	19080	
	354	35.55	16.100	2.090	1.160	14160	21240	
	387	35.95	16.200	2.280	1.260	15480	23220	
36" x 12	135	35.55	11.950	.790	.600	5400	8100	
	150	35.85	11.975	.940	.625	6000	9000	
	160	36.01	12.000	1.020	.650	6400	9600	
	170	36.17	12.030	1.100	.680	6800	10200	
	182	36.33	12.075	1.180	.725	7280	10920	
	194	36.49	12.115	1.260	.765	7760	11640	
	210	36.69	12.180	1.360	.830	8400	12600	
	232	37.12	12.120	1.570	.870	9280	13920	
	256	37.43	12.215	1.730	.960	10240	15360	
	36" x 16 ¹ / ₂	231	36.49	16.470	.760	1.260	9240	13860
247		36.67	16.510	1.350	.800	9880	14820	
262		36.85	16.550	.840	1.440	10480	15720	
282		37.11	16.595	.885	1.570	11280	16920	
302		37.33	16.655	.945	1.680	12080	18120	
330		37.67	16.630	1.850	1.020	13200	19800	
361		37.99	16.730	2.010	1.120	14440	21660	
395		38.37	16.830	2.200	1.220	15800	23700	
441		38.85	16.965	2.440	1.360	17640	26460	
527		39.21	17.220	2.910	1.610	21080	31620	
650		40.47	17.575	3.540	1.970	26000	39000	

WIDE FLANGE BEAMS (Con't)

	Wt./Ft.	Depth of	FLANGE		Web		Wt./40'	Wt./60'
		Section	Width	Thickness	Thickness	Thickness		
40" x 12	149	38.20	11.810	.830	.630	5960	8940	
	167	38.59	11.810	1.025	.650	6680	10020	
	183	38.98	11.810	1.220	.650	7320	10980	
	211	39.37	11.810	1.415	.750	8440	12660	
	235	39.69	11.890	1.575	.830	9400	14100	
	264	40.00	11.930	1.730	.960	10560	15840	
	278	40.16	11.969	1.811	1.024	11120	16680	
	294	40.39	12.010	1.930	1.060	11760	17640	
	327	40.79	12.130	2.130	1.180	13080	19620	
	331	40.79	12.165	2.126	1.220	13240	19860	
	392	41.57	12.362	2.520	1.417	15680	23520	
	40" x 16	199	38.67	15.750	1.065	.650	7960	11940
		215	38.98	15.750	1.220	.650	8600	12900
249		39.38	15.750	1.420	.750	9960	14940	
277		39.69	15.830	1.575	.830	11080	16620	
297		39.84	15.825	1.650	.930	11880	17820	
324		40.16	15.910	1.810	1.000	12960	19440	
362		40.55	16.020	2.010	1.120	14480	21720	
372		40.63	16.063	2.047	1.161	14880	22320	
397		40.95	16.120	2.200	1.220	15880	23820	
431		41.26	16.220	2.360	1.340	17240	25860	
44" x 16	230	42.91	15.748	1.220	.709	9200	13800	
	262	43.31	15.748	1.417	.878	10480	15720	
	290	43.62	15.827	1.575	.866	11600	17400	
	335	44.02	15.945	1.772	1.024	13400	20100	



SQUARE & RECTANGULAR TUBING

A500 Grade B

Not all sizes are available at all times.
Please call us with your inquiry.

SQUARE TUBING

Size	Ga.	Thickness	Lbs./Ft.	Size	Ga.	Thickness	Lbs./Ft.
1/2"	18	.0490	.301	3"	14	.0830	3.23
	16	.0630	.384		11	.1200	4.75
3/4"	16	.0630	.605	3/16	.1875	6.87	
	11	.1200	1.03	1/4	.2500	8.81	
1"	18	.0490	.634	5/16	.3125	10.58	
	16	.0630	.827	3/8	.375	12.16	
	15	.0720	.906	3 1/2"	11	.1200	5.60
	14	.0830	1.04	3/16	.1875	8.15	
	13	.0950	1.17	1/4	.2500	10.51	
	12	.1090	1.32	5/16	.3125	12.70	
1 1/4"	11	.1200	1.44	3/8	.375	14.72	
	16	.0630	1.05	4"	11	.1200	6.45
	14	.0830	1.32	3/16	.1875	9.42	
1 1/2"	11	.1200	1.84	1/4	.2500	12.21	
	16	.0630	1.27	5/16	.3125	14.83	
	14	.0830	1.60	3/8	.3750	17.27	
2"	11	.1200	2.25	1/2	.5000	21.63	
	3/16	.188	3.04	4 1/2"	3/16	.1875	10.70
	16	.0630	1.71	1/4	.2500	13.91	
	14	.0830	2.10	5"	3/16	.1875	11.97
2 1/2"	11	.1200	3.05	1/4	.2500	15.62	
	3/16	.1875	4.32	5/16	.3125	19.08	
	1/4	.2500	5.41	3/8	.3750	22.37	
	14	.0830	2.67	1/2	.5000	28.43	
3"	11	.1200	3.90	6"	3/16	.1875	14.53
	3/16	.1875	5.59	1/4	.2500	19.02	
	1/4	.2500	7.11	5/16	.3125	23.34	
				3/8	.3750	27.48	
			1/2	.5000	35.24		
			5/8	.625	42.27		

SQUARE TUBING

Size	Ga.	Thickness	Lbs./Ft.	Size	Ga.	Thickness	Lbs./Ft.
7"	3/16	.1875	17.08	10"	3/16	.1875	24.73
	1/4	.2500	22.42		1/4	.2500	32.63
	5/16	.3125	27.59		5/16	.3125	40.35
	3/8	.3750	32.58		3/8	.3750	47.90
	1/2	.5000	42.05		1/2	.5000	62.46
	5/8	.6250	50.77		5/8	.6250	76.33
8"	3/16	.1875	19.63	12"	1/4	.2500	39.43
	1/4	.2500	25.82		5/16	.3125	48.86
	5/16	.3125	31.84		3/8	.3750	58.10
	3/8	.3750	37.69		1/2	.5000	76.07
	1/2	.5000	48.85		5/8	.6250	93.25
	5/8	.6250	59.32		14"	5/16	.3125	57.36
9"	5/16	.3125	36.1	3/8		.3750	68.31
	3/8	.375	42.79	1/2		.5000	89.68
	1/2	.500	55.66	5/8		.625	110.36
	5/8	.625	67.82	16"		5/16	.3125	65.87
			3/8			.3750	78.52
			1/2		.5000	103.30	
			5/8		.625	127.37	

RECTANGULAR TUBING

Size	Ga.	Thickness	Lbs./Ft.	Size	Ga.	Thickness	Lbs./Ft.	
1½ x 1	14	.0830	1.32	5 x 2	11 ga	.1200	5.60	
	11	.1200	1.84		3/16	.1875	8.15	
2 x 1	16	.0630	1.27		1/4	.2500	10.51	
	14	.0830	1.60	5/16	.3125	12.70		
	11	.1200	2.25	5x2½	3/16	.1875	8.76	
2 x 1½	11	.1200	2.66		1/4	.250	11.35	
	3 x 1	16	.0630	1.71	5 x 3	11 ga	.1200	6.45
		14	.0830	2.10		3/16	.1875	9.42
11		.1200	3.05	1/4		.2500	12.21	
3 x 1½	16	.0630	1.90	5/16		.3125	14.83	
	14	.0830	2.38	3/8		.3750	17.27	
	11	.1200	3.48	1/2		.500	21.63	
3 x 2	14	.0830	2.67	5 x 4	3/16	.1875	10.71	
	11	.1200	3.90		1/4	.2500	13.91	
	3/16	.1875	5.59		5/16	.3125	16.96	
	1/4	.2500	7.11	3/8	.3750	19.82		
3½ x 2½	3/16	.1875	6.87	6 x 2	11 ga	.1200	6.45	
		1/4	.250		8.81	3/16	.1875	9.42
		4 x 2	14		.0830	3.23	1/4	.2500	12.21
11	.1200		4.75		5/16	.3125	14.83	
3/16	.1875		6.87	3/8	.3750	17.27		
4 x 2	1/4	.2500	8.80	6 x 3	3/16	.1875	10.70	
	5/16	.3125	10.58		1/4	.2500	13.91	
	3/8	.375	12.16		5/16	.3125	16.96	
	4 x 3	11	.1200	5.60	3/8	.3750	19.82	
		3/16	.1875	8.15	1/2	.5000	25.03	
		1/4	.2500	10.51	6 x 4	3/16	.1875	11.97
5/16		.3125	12.70	1/4		.2500	15.62	
	3/8	.3750	22.37	5/16		.3125	19.08	
	1/2	.5000	28.43	3/8	.3750	22.37		
				1/2	.5000	28.43		

RECTANGULAR TUBING

Size	Ga.	Thickness	Lbs./Ft.	Size	Ga.	Thickness	Lbs./Ft.
7 x 3	3/16	.1875	11.97	8 x 6	3/16	.1875	17.08
	1/4	.2500	15.62		1/4	.2500	22.42
	5/16	.3125	19.08		5/16	.3125	27.59
	3/8	.3750	22.37		3/8	.3750	32.58
					1/2	.5000	42.05
7 x 4	3/16	.1875	13.25	5/8	.625	50.77	
	1/4	.2500	17.32	10 x 2	3/16	.1875	14.53
	5/16	.3125	21.21		1/4	.2500	19.02
	3/8	.3750	24.93		5/16	.3125	23.34
	1/2	.5000	31.84	10 x 3	3/16	.1875	15.80
7 x 5	3/16	.1875	14.53		1/4	.2500	20.72
	1/4	.2500	19.02		10 x 4	3/16	.1875	17.08
	5/16	.3125	23.34	1/4		.2500	22.42
	3/8	.3750	27.48	5/16		.3125	27.59
	1/2	.5000	35.24	3/8	.3750	32.58	
8 x 2	3/16	.1875	11.97	1/2	.5000	42.05	
	1/4	.2500	15.62	10 x 5	1/4	.250	24.12
	5/16	.3125	19.08		5/16	.3125	29.72
	3/8	.375	22.37		3/8	.375	35.14
8 x 3	3/16	.1875	13.25	1/2	.500	45.12	
	1/4	.2500	17.32	10 x 6	3/16	.1875	19.63
	5/16	.3125	21.21		1/4	.2500	25.82
	3/8	.3750	24.93		5/16	.3125	31.84
	1/2	.5000	31.84	3/8	.3750	37.69	
8 x 4	3/16	.1875	14.53	1/2	.5000	48.85	
	1/4	.2500	19.02	5/8	.6250	59.32	
	5/16	.3125	23.34				
	3/8	.3750	27.48				
	1/2	.5000	35.24				
	5/8	.625	42.27				

Some of the above items are stocked by request only.

RECTANGULAR TUBING

Size	Ga.	Thickness	Lbs./Ft.	Size	Ga.	Thickness	Lbs./Ft.	
10 x 8	1/4	.2500	29.23	14 x 10	5/16	.3125	48.86	
	5/16	.3125	36.10		3/8	.3750	58.10	
	3/8	.3750	42.79		1/2	.5000	76.07	
	1/2	.5000	55.66		5/8	.6250	93.25	
12 x 2	3/16	.1875	17.08	16 x 4	5/16	.3125	40.35	
	1/4	.2500	22.42		3/8	.3750	47.90	
12 x 3	3/16	.1875	18.35	16 x 8	1/2	.5000	62.46	
	1/4	.2500	24.12		5/16	.3125	48.86	
12 x 4	3/16	.1875	19.63	16 x 12	3/8	.3750	58.10	
	1/4	.2500	25.82		1/2	.5000	76.07	
	5/16	.3125	31.84	18 x 6	5/16	.3125	57.36	
	3/8	.3750	37.69		3/8	.3750	68.31	
	1/2	.5000	48.85		1/2	.5000	89.68	
12 x 6	5/8	.6250	59.32	20 x 4	5/16	.3125	48.86	
	3/16	.1875	22.18		3/8	.3750	58.10	
	1/4	.2500	29.23		1/2	.5000	76.07	
	5/16	.3125	36.10	20 x 8	5/16	.3125	57.36	
	3/8	.3750	42.79		3/8	.3750	68.31	
12 x 8	1/2	.5000	55.66	20 x 12	1/2	.5000	89.68	
	5/8	.6250	67.82		5/16	.3125	65.87	
	3/8	.3750	47.90		3/8	.3750	78.52	
	14 x 4	1/4	.2500	32.63	20 x 12 5/8	1/2	.5000	103.30
		5/16	.3125	40.35		5/8	.6250	127.37
3/8		.3750	42.79					
1/2		.5000	55.66					
14 x 6	1/4	.2500	32.63					
	5/16	.3125	40.35					
	3/8	.3750	47.90					
	1/2	.5000	62.46					

Some of the above items are stocked by request only.

Square and Rectangular Structural Tubing - The specified dimensions, measured across the flats at positions at least 2 in. (50.8 mm) from either end of the tubing and including an allowance for convexity or concavity, shall not exceed the plus and minus tolerance shown in Table 2.

Wall Thickness - The minimum wall thickness at any point of measurement on the tubing shall be not more than 10% less than the nominal wall thickness specified. The maximum wall thickness, excluding the weld seam of welded tubing, shall be not more than 10% greater than the nominal wall thickness specified. The wall thickness on square and rectangular tubing is to be measured at the center of the flat.

Length - Structural tubing is normally produced in random mill lengths 5 ft. (1.5 m) and over, in multiple lengths, and in specified mill lengths. Refer to Section 3. When specified mill lengths are ordered, the length tolerance shall be in accordance with Table 3.

Straightness - The permissible variation for straightness of structural tubing shall be $1/8$ in. times the number of feet (10.4 mm times the number of meters) of total length divided by 5.

Squareness of Sides - For square or rectangular structural tubing, adjacent sides may deviate from 90° by a tolerance of $\pm 2^\circ$ max.

Radius of Corners - For square or rectangular structural tubing, the radius of any outside corner of the section shall not exceed three times the specified wall thickness.

Twist - The tolerances for twist or variation with respect to axial alignment of the section, for square and rectangular structural tubing, shall be as shown in Table 4. Twist is measured either by holding down one end of a square or rectangular tube on a flat surface plate with the bottom side of the tube parallel to the surface plate and noting the difference in height above the surface plate of the two corners at the opposite end of the bottom side of the tube or by measuring this difference on the heavier sections by a suitable measuring device. The difference in the height of the corners shall not exceed the values in Table 4. Twist measurements are not to be taken within 2 in. (50 mm) of either end of the product.

TUBE DATA BOOK

STRUCTURAL TUBING - CARBON STEEL

HOLLOW STRUCTURALS - All cold formed, conforming to ASTM A500, Grade B. This tubing can be subjected to most of the usual fabricating operations. Ductility is good. Bends well, flattens, cuts, punches, flares, flanges and welds easily.

TYPICAL MECHANICAL PROPERTIES

Condition	Tensile Strength in psi	Yield Strength in psi	Elong. in 2"	Brinell Hardness (B scale)
Cold Formed (ASTM A500) Grade B	58,000	46,000	23	121

LIGHT STRUCTURAL TUBING is electric resistance welded, and is made from low carbon 1020 strip. The homogeneous weld is as strong as the parent metal. Outside welding flash is removed on all sizes. Inside welding flash is controlled on all sizes under 2". It is excellent for applications where outside finish is important - for example when surface suitable for high gloss painting is needed.

TYPICAL MECHANICAL PROPERTIES

Tensile Strength in psi	Yield Strength in psi	Elong. in 2"	Brinell Hardness (B scale)
52,000	38,000	12	62

TABLE 1 Chemical Requirements

Element	Composition, %			
	Grades A and B		Grade C	
	Heat Analysis	Product Analysis	Heat Analysis	Product Analysis
Carbon, max	0.26	0.30	0.23	0.27
Manganese, max	...	...	1.35	1.40
Phosphorus, max	0.04	0.05	0.04	0.05
Sulfur, max	0.05	0.063	0.05	0.063
Copper, when copper steel is specified, min	0.20	0.18	0.20	0.18

TABLE 2 Outside Dimension Tolerance for Square and Rectangular Structural Tubing

Largest Outside Dimension, across flats, in. (mm)	Tolerance, ^A plus and minus, in. (mm)
2 ¹ / ₂ (63.5) and under	0.020 (0.51)
Over 2 ¹ / ₂ to 3 ¹ / ₂ (63.5 to 88.9), incl	0.025 (0.64)
Over 3 ¹ / ₂ to 5 ¹ / ₂ (88.9 to 139.7), incl	0.030 (0.76)
Over 5 ¹ / ₂ (139.7)	1%

^ATolerances include allowance for convexity or concavity. For rectangular sections, the tolerance calculated for the larger flat dimension shall also apply to the smaller flat dimension. This tolerance may be increased 50% when applied to the smaller dimension, if the ratio of the external sides is in the range from 1.5 to 3, inclusive, and 100% when the ratio exceeds 3.

TABLE 3 Specified Mill Length Tolerances for Structural Tubing

	22 ft. (6.7 m) and Under		Over 22 to 44 ft. (6.7 to 13.4 m), mci	
	Over	Under	Over	Under
	Length tolerance for specified mill length, in. (mm)	¹ / ₂ (12.7)	¹ / ₄ (6.4)	³ / ₄ (19.0)	^{3}/_{4} (6.4)

TABLE 4 Twist Tolerances for Square and Rectangular Structural Tubing

Specified Dimension of Longest Side, in. (mm)	Maximum Twist in the First 3 ft. (1 m) and in each additional 3 ft.	
	in.	mm
1 ¹ / ₂ (38.1) and under	0.050	1.39
Over 1 ¹ / ₂ to 2 ¹ / ₂ (38.1 to 63.5), incl	0.062	1.72
Over 2 ¹ / ₂ to 4 (63.5 to 101.6), incl	0.075	2.09
Over 4 to 6 (101.6 to 152.4), incl	0.087	2.42
Over 6 to 8 (152.4 to 203.2), incl	0.100	2.78
Over 8 (203)	0.112	3.11

PIPE DIMENSIONS & WEIGHTS

Nominal Pipe Size Inches	Outside Dia. Inches		Inside I.P.S. Schedule	Wall Inches	Dia. Inches	Wt/Ft Pounds
1/8	.405	40	40S Std.	.068	.269	.24
		80	80S Ex. Hvy.	.095	.215	.31
1/4	.540	40	40S Std.	.088	.364	.42
		80	80S Ex. Hvy.	.119	.302	.54
3/8	.675	40	40S Std.	.091	.493	.57
		80	80S Ex. Hvy.	.126	.423	.74
1/2	.840	40	40S Std.	.109	.622	.85
		80	80S Ex. Hvy.	.147	.546	1.09
		160		.187	.466	1.30
3/4	1.050		XX Hvy.	.294	.252	1.71
		40	40S Std.	.113	.824	1.13
		80	80S Ex. Hvy.	.154	.742	1.47
		160		.218	.614	1.94
1	1.315		XX Hvy.	.308	.434	2.44
		40	40S Std.	.133	1.048	1.68
		80	80S Ex. Hvy.	.179	.957	2.17
		160		.250	.815	2.84
1 1/4	1.660		XX Hvy.	.358	.599	3.66
		40	40S Std.	.140	1.380	2.27
		80	80S Ex. Hvy.	.191	1.278	3.00
		160		.250	1.160	3.77
1 1/2	1.900		XX Hvy.	.382	.896	5.21
		40	40S Std.	.145	1.610	2.72
		80	80S Ex. Hvy.	.200	1.500	3.63
		160		.281	1.338	4.86
			XX Hvy.	.400	1.100	6.41

PIPE DIMENSIONS & WEIGHTS

Nominal						
Pipe Size Inches	Outside Dia. Inches		Inside I.P.S. Schedule	Wall Inches	Dia. Inches	Wt/Ft Pounds
2	2.375	40	40S Std.	.154	2.067	3.65
		80	80S Ex. Hvy.	.218	1.939	5.02
		160		.343	1.689	7.46
			XX Hvy.	.436	1.503	9.03
2½	2.875	40	40S Std.	.203	2.469	5.79
		80	80S Ex. Hvy.	.276	2.323	7.66
		160		.375	2.125	10.01
			XX Hvy.	.552	1.771	13.66
3	3.500	40	40S Std.	.216	3.068	7.58
		80	80S Ex. Hvy.	.300	2.900	10.25
		160		.438	2.624	14.32
			XX Hvy.	.600	2.300	18.58
3½	4.000	40	40S Std.	.226	3.548	9.11
		80	80S Ex. Hvy.	.318	3.364	12.50
4	4.500	40	40S Std.	.237	4.026	10.79
		80	80S Ex. Hvy.	.337	3.826	14.98
		120		.438	3.624	19.00
		160		.531	3.438	22.51
			XX Hvy.	.674	3.152	27.54
5	5.563	40	40S Std.	.258	5.047	14.62
		80	80S Ex. Hvy.	.375	4.813	20.78
		120		.500	4.563	27.04
		160		.625	4.313	32.96
			XX Hvy.	.750	4.063	38.55
6	6.625	40	40S Std.	.280	6.056	18.97
		80	80S Ex. Hvy.	.432	5.761	28.57
		120		.562	5.491	36.39
		160		.718	5.189	45.30
			XX Hvy.	.864	4.897	53.16

PIPE DIMENSIONS & WEIGHTS

Nominal Pipe Size	Outside Dia.	Inside I.P.S.	Wall	Dia.	Wt/Ft		
Inches	Inches	Schedule	Inches	Inches	Pounds		
8	8.625	20	.250	8.125	22.36		
		30	.277	8.071	24.70		
		40	40S Std.	.322	7.981	28.55	
		60		.406	7.813	35.64	
		80		80S Ex. Hvy.	.500	7.625	43.39
		100	.594		7.439	50.95	
		120	.719		7.189	60.71	
		140	.812		7.001	67.76	
				XX Hvy.	.875	6.875	72.42
	160		.096	6.813	74.69		
10	10.750	20	.250	10.250	28.04		
		30	.307	10.136	34.24		
		40	40S Std.	.365	10.020	40.48	
		60		Ex. Hvy.	.500	9.750	54.74
		80	.594		9.564	64.43	
		100	.719		9.224	77.03	
			120		.844	9.064	89.29
			140	Dbl. Ex. Hvy.	1.000	8.750	104.13
			160		1.125	8.500	115.64
12	12.750	20	.250	12.250	33.38		
		30	.330	12.090	43.77		
		40	Std.	.375	12.000	49.56	
		60		Ex. Hvy.	.406	11.938	53.52
		80	.500		11.750	65.42	
		100	.562		11.626	73.15	
			120		.688	11.376	88.63
			140		.844	11.064	107.32
			160	XX Hvy.	1.000	10.750	125.49
			1.125	10.500	139.67		
			1.312	10.126	160.27		

PIPE DIMENSIONS & WEIGHTS

Nominal Pipe Size Inches	Outside Dia. Inches	Inside I.P.S. Schedule	Wall Inches	Dia. Inches	Wt/Ft Pounds	
14	14.000	10	.250	13.500	36.75	
		20	.312	13.376	45.65	
		30	Std.	.375	13.250	54.62
		40		.438	13.124	63.50
			Ex. Hvy.	.500	13.000	72.16
		60		.594	12.814	85.13
		80		.750	12.500	106.23
		100		.938	12.126	130.98
		120		1.094	11.814	150.93
		140		1.250	11.500	170.37
16	16.000	160	1.406	11.188	189.29	
		10	.250	15.500	42.09	
		20	.312	15.376	52.32	
		30	Std.	.375	15.250	62.64
		40	Ex. Hvy.	.500	15.000	82.87
		60		.656	14.688	107.60
		80		.844	14.314	136.74
		100		1.031	13.938	164.98
18	18.000	120	1.219	13.564	192.61	
		140	1.438	13.124	223.85	
		160	1.594	12.814	245.48	
		10	.250	17.500	47.44	
		20	.312	17.376	58.99	
			Std.	.375	17.250	70.65
		30		.438	17.124	82.23
			Ex. Hvy.	.500	17.000	93.54
	40	.562	16.876	104.76		
	60	.750	16.500	138.30		
	80	.938	16.126	171.08		
	100	1.156	15.688	208.15		
	120	1.375	15.250	244.37		
	140	1.562	14.876	274.48		
	160	1.781	14.438	308.79		

PIPE DIMENSIONS & WEIGHTS

Nominal Pipe Size Inches	Outside Dia. Inches		Inside I.P.S. Schedule	Wall Inches	Dia. Inches	Wt/Ft Pounds		
20	20.000	10		.250	19.500	52.78		
		20	Std.	.375	19.250	78.67		
		30	Ex. Hvy.	.500	19.000	104.23		
		40		.594	18.814	123.23		
		60		.812	18.376	166.56		
		80		1.031	17.938	209.06		
		100		1.281	17.438	256.34		
		120		1.500	17.000	296.65		
		140		1.750	16.500	341.41		
24	24.000	160		1.968	16.064	379.53		
		10		.250	23.500	63.47		
		20	Std.	.375	23.250	94.71		
			Ex. Hvy.	.500	23.000	125.61		
		30		.562	22.876	140.81		
		40		.688	22.626	171.45		
		60		.969	22.064	238.57		
		80		1.219	21.564	296.86		
		100		1.531	20.938	367.74		
30	30.000	120		1.812	20.376	429.79		
		140		2.062	19.876	483.57		
		160		2.343	19.314	542.64		
		10		.312	29.376	98.93		
			Std.	.375	29.250	118.65		
		20	Ex. Hvy.	.500	29.000	157.53		
		30		.625	28.750	196.08		
		36	36.000		Std.	.375	35.250	142.68
					Ex. Hvy.	.500	35.000	189.57
38	38.000			.312		125.58		
				.375		150.69		
				.500		200.25		

PIPE DIMENSIONS & WEIGHTS

Nominal Pipe Size Inches	Outside Dia. Inches	Inside I.P.S. Schedule	Wall Inches	Dia. Inches	Wt/Ft Pounds
40	40.000		.312		132.25
			.375		158.70
			.500		210.93
42	42.000		.312		138.91
			.375		166.71
			.500		221.61

WEIGHT PER FOOT FORMULA

$$W = 10.68 (D - T) T$$

D = OUTSIDE DIAMETER

T = WALL THICKNESS

PIPE SPECIFICATIONS

Specification and Size Range	Scope	Type	Grades
Where Indicated A-53 118" - 26"	Blk & Galv Welded & SMLS pipe suitable for welding and forming operations CW not	CW - Type F ERW - Type E	CW - Type F ERW & SMLS GRADE
	Intended for flanging. Grade B not intended for close coiling or severe cold forming. Pipe required for close coiling should be specified on order.	SMLS - Type S	

BAR SIZE CHANNELS

Size in Inches				Wt./Ft.	Wt./20'
1	x	1/2	x 1/8	82	16.4
1 1/4	x	1/2	x 1/8	1.01	20.2
1 1/2	x	1/2	x 1/8	1.12	22.4
2	x	1/2	x 1/8	1.43	28.6
2	x	1	x 1/8	1.78	35.6
			*3/16	2.32	46.4

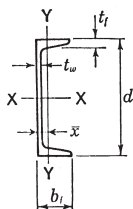
JR. CHANNELS

Size in inches and width of flange			Wt./Ft	Wt./40'
8"	x	1.875	8.5	340
10"	x	1.127	6.5	260
10"	x	1.500	8.4	336
12"	x	1.500	10.6	424

JR. BEAMS

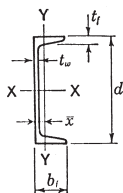
Size	Wt./Ft.	WT./40'
6"	4.4	176
8"	6.5	260
10"	9.0	360
12"	11.8	472

STRUCTURAL CHANNELS



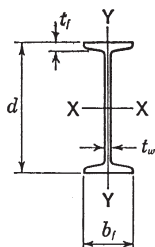
Designation and nominal Size in inches	Area A , in. ²	Depth d , in.	FLANGE		Web Thickness t_w , in. ^A
			Width b_f in.	Thickness t_f in. ^A	
3 x 3.50	1.03	3.00	1.372	.273	.132
x 4.10	1.21	3.00	1.410	.273	.170
x 5.00	1.47	3.00	1.498	.273	.258
x 6.00	1.76	3.00	1.596	.273	.356
4 x 4.50	1.32	4.00	1.584	.296	.125
x 5.40	1.59	4.00	1.584	.296	.184
x 7.25	2.13	4.00	1.721	.296	.321
5 x 6.70	1.97	5.00	1.750	.320	.190
x 9.00	2.64	5.00	1.885	.320	.325
6 x 8.20	2.40	6.00	1.920	.343	.200
x 10.50	3.09	6.00	2.034	.343	.314
x 13.00	3.83	6.00	2.157	.343	.437
7 x 9.80	2.87	7.00	2.090	.366	.210
x 12.25	3.60	7.00	2.194	.366	.314
x 14.75	4.33	7.00	2.299	.366	.419
8 x 11.50	3.38	8.00	2.260	.390	.220
x 13.75	4.04	8.00	2.343	.390	.303
x 18.75	5.51	8.00	2.527	.390	.487
9 x 13.40	3.94	9.00	2.433	.413	.233
x 15.00	4.41	9.00	2.485	.413	.285
x 20.00	5.88	9.00	2.648	.413	.448
10 x 15.30	4.49	10.00	2.600	.436	.240
x 20.00	5.88	10.00	2.739	.436	.379
x 25.00	7.35	10.00	2.886	.436	.526
x 30.00	8.82	10.00	3.033	.436	.673
12 x 20.70	6.09	12.00	2.942	.501	.282
x 25.00	7.35	12.00	3.047	.501	.387
x 30.00	8.82	12.00	3.170	.501	.510
15 x 33.90	9.96	15.00	3.400	.650	.400
x 40.00	11.8	15.00	3.520	.650	.520
x 50.00	14.7	15.00	3.716	.650	.716

M C CHANNELS



Designation and nominal Size in inches	Area A , in. ²	Depth d , in.	FLANGE		Web Thickness t_w , in. ^A
			Width b_f in.	Thickness t_f in. ^A	
6 x 12.00	3.53	6.00	2.497	.375	.310
x 15.10	4.44	6.00	2.941	.475	.316
x 16.30	4.79	6.00	3.000	.475	.375
x 15.30	4.50	6.00	3.500	.385	.340
x 18.00	5.29	6.00	3.504	.475	.379
7 x 19.10	5.61	7.00	3.452	.500	.352
x 22.70	6.67	7.00	3.603	.500	.503
8 x 18.70	5.50	8.00	2.978	.500	.353
x 20.00	5.88	8.00	3.025	.500	.400
x 21.40	6.28	8.00	3.450	.525	.375
x 22.80	6.70	8.00	3.502	.525	.427
9 x 23.90	7.02	9.00	3.450	.550	.400
x 25.40	7.47	9.00	3.500	.550	.450
10 x 22.00	6.45	10.00	3.315	.575	.290
x 25.00	7.35	10.00	3.405	.575	.380
x 28.50	8.37	10.00	3.950	.575	.425
x 33.60	9.87	10.00	4.100	.575	.575
x 41.10	12.1	10.00	4.321	.575	.796
12 x 31.00	9.12	12.00	3.670	.700	.370
x 35.00	10.3	12.00	3.765	.700	.465
x 40.00	11.8	12.00	3.890	.700	.590
x 45.00	13.2	12.00	4.010	.700	.710
x 50.00	14.7	12.00	4.135	.700	.835
13 x 31.80	9.35	13.00	4.000	.610	.375
x 35.00	10.3	13.00	4.072	.610	.447
x 40.00	11.8	13.00	4.185	.610	.560
x 50.00	14.7	13.00	4.412	.610	.787
18 x 42.70	12.6	18.00	3.950	.625	.450
x 45.80	13.5	18.00	4.000	.625	.500
x 51.90	15.3	18.00	4.100	.625	.600
x 58.00	17.1	18.00	4.200	.625	.700

I-BEAMS



Size in inches and width of flange		Wt./Ft.	Web Thickness	Wt./40'	
3"	x	2.330.....	5.70	.170	228
		2.509.....	7.50	.349	300
4"	x	2.663.....	7.70	.193	308
		2.796.....	9.50	.326	380
5"	x	3.004.....	10.00	.214	400
6"	x	3.332.....	12.50	.232	500
		3.565.....	17.25	.465	690
7"	x	3.362.....	15.30	.252	612
8"	x	4.001.....	18.40	.271	736
		4.101.....	23.00	.441	920
10"	x	4.661.....	25.40	.311	1016
		4.944.....	35.00	.594	1400
12"	x	5.000.....	31.80	.350	1272
		5.078.....	35.00	.428	1400
		5.252.....	40.80	.462	1632
		5.477.....	50.00	.687	2000
15"	x	5.501.....	42.90	.411	1716
		5.640.....	50.00	.550	2000
18"	x	6.001.....	54.70	.461	2188
		6.251.....	70.00	.711	2800
20"	x	6.255.....	66.00	.505	2640
		6.385.....	75.00	.635	3000
		7.060.....	86.00	.660	3440
		7.200.....	96.00	.800	3840
24"	x	7.000.....	80.00	.500	3200
		7.125.....	90.00	.625	3600
		7.245.....	100.00	.745	4000
		7.870.....	106.00	.620	4240
		8.050.....	121.00	.800	4840

STRUCTURAL ANGLES

Size in Inches	Wt./Ft.	Wt./20'	Wt./40'	
3 x 2	x 3/16.....	3.07	62.0	124.0
	1/4.....	4.1	82.0	164.0
	5/16.....	5.0	100.0	200.0
	3/8.....	5.9	118.0	236.0
	1/2.....	7.7	154.0	308.0
3 x 2 1/2	x 3/16.....	3.39	67.8	135.6
	1/4.....	4.5	90.0	180.0
	5/16.....	5.6	112.0	224.0
	3/8.....	6.6	132.0	264.0
	1/2.....	8.5	170.0	340.0
3 x 3	x 3/16.....	3.71	74.2	148.4
	1/4.....	4.9	98.0	196.0
	5/16.....	6.1	122.0	244.0
	3/8.....	7.2	144.0	288.0
	1/2.....	9.4	188.0	376.0
3 1/2 x 2 1/2	x 1/4.....	4.9	98.0	196.0
	5/16.....	6.1	122.0	244.0
	3/8.....	7.2	144.0	288.0
	1/2.....	9.4	188.0	376.0
	3 1/2 x 3	x 1/4.....	5.4	108.0	216.0
5/16.....		6.6	132.0	264.0
3/8.....		7.9	158.0	316.0
1/2.....		10.2	204.0	408.0
3 1/2 x 3 1/2		x 1/4.....	5.8	116.0	232.0
	5/16.....	7.2	144.0	288.0
	3/8.....	8.5	170.0	340.0
	1/2.....	11.1	222.0	444.0
	4 x 3	x 1/4.....	5.8	116.0	232.0
5/16.....		7.2	144.0	288.0
3/8.....		8.5	170.0	340.0
1/2.....		11.1	222.0	444.0
5/8.....		13.6	272.0	544.0

STRUCTURAL ANGLES (Con't)

Size in Inches			Wt./Ft.	Wt./20'	Wt./40'
4	x	3 ¹ / ₂ x	1/4.....6.2	124.0	248.0
			5/16.....7.7	154.0	308.0
			3/8.....9.1	182.0	364.0
			1/2.....11.9	238.0	476.0
4	x	4 x	1/4.....6.6	132.0	264.0
			5/16.....8.2	164.0	328.0
			3/8.....9.8	196.0	392.0
			1/2.....12.8	256.0	512.0
			5/8.....15.7	314.0	628.0
			3/4.....18.5	370.4	740.0
5	x	3 x	1/4.....6.6	132.0	264.0
			5/16.....8.2	164.0	328.0
			3/8.....9.8	196.0	392.0
			1/2.....12.8	256.0	512.0
5	x	3 ¹ / ₂ x	1/4.....7.0	140.0	280.0
			5/16.....8.7	174.0	348.0
			3/8.....10.4	208.0	416.0
			1/2.....13.6	272.0	544.0
5	x	5 x	5/16.....10.3	206.0	412.0
			3/8.....12.3	246.0	492.0
			1/2.....16.2	324.0	648.0
			5/8.....20.0	400.0	800.0
			3/4.....23.6	472.0	944.0
6	x	3 ¹ / ₂ x	5/16.....9.8	196.0	392.0
			3/8.....11.7	234.0	468.0
			1/2.....15.3	306.0	612.0

STRUCTURAL ANGLES (Con't)

Size in Inches				Wt./Ft.	Wt./40'	
6	x	4	x	$\frac{5}{16}$	10.3	412.0
				$\frac{3}{8}$	12.3	492.0
				$\frac{1}{2}$	16.2	648.0
				$\frac{5}{8}$	20.0	800.0
				$\frac{3}{4}$	23.6	944.0
6	x	6	x	$\frac{5}{16}$	12.4	496.0
				$\frac{3}{8}$	14.9	596.0
				$\frac{1}{2}$	19.6	784.0
				$\frac{5}{8}$	24.2	968.0
				$\frac{3}{4}$	28.7	1148.0
7	x	4	x	1.....	37.4	1496.0
				$\frac{3}{8}$	13.6	544.0
				$\frac{1}{2}$	17.9	716.0
				$\frac{3}{4}$	26.2	1048.0
8	x	4	X	$\frac{1}{2}$	19.6	784.0
				$\frac{5}{8}$	24.2	968.0
				$\frac{3}{4}$	28.7	1148.0
				1.....	37.4	1496.0
8	x	6	X	$\frac{1}{2}$	23.0	920.0
				$\frac{5}{8}$	28.5	1140.0
				$\frac{3}{4}$	33.8	1352.0
				1.....	44.2	1768.0
8	x	8	x	$\frac{1}{2}$	26.4	1056.0
				$\frac{9}{16}$	29.6	1184.0
				$\frac{5}{8}$	32.7	1308.0
				$\frac{3}{4}$	38.9	1556.0
				1.....	51.0	2040.0
*9	x	4	x	$\frac{1}{2}$	22.9	412.0
**9	x	4	x	$\frac{5}{8}$	25.95	1038.0

*Procedure for cutting MC 18x45.8# channel standard structural tolerances to apply.

**Procedure for cutting MC 18x51.9# channel standard structural tolerances to apply.

BAR SIZE ANGLES

Size in Inches	Wt./Ft.	Wt./20'	Wt./40'
1/2 x 1/2 x 1/8.....	.38	7.60	15.20
3/4 x 3/4 x 1/8.....	.59	11.80	23.60
1 x 1 x	1/8.....	.80	16.00
	3/16.....	1.16	23.20
	1/4.....	1.49	29.80
1 1/4 x 1 1/4 x	1/8.....	1.01	20.20
	3/16.....	1.48	29.60
	1/4.....	1.92	38.40
1 1/2 x 1 1/2 x	1/8.....	1.23	24.60
	3/16.....	1.80	36.00
	1/4.....	2.34	46.80
1 3/4 x 1 3/4 x	1/8.....	1.44	28.80
	3/16.....	2.12	42.40
	1/4.....	2.77	55.40
2 x 1 1/4 x	3/16.....	1.96	39.20
	1/4.....	2.55	51.00
2 x 1 1/2 x	1/8.....	1.44	28.80
	3/16.....	2.12	42.40
	1/4.....	2.77	55.40
2 x 2 x	1/8.....	1.65	33.00
	3/16.....	2.44	48.80
	1/4.....	3.19	63.80
	5/16.....	3.92	78.40
	3/8.....	4.70	94.00
2 1/2 x 1 1/2 x	3/16.....	2.44	48.80
	1/4.....	3.19	63.80
2 1/2 x 2 x	3/16.....	2.75	55.00
	1/4.....	3.62	72.40
	5/16.....	4.50	90.00
	3/8.....	5.30	106.00

BAR SIZE ANGLES (Con't)

Size in Inches	Wt./Ft.	Wt./20'	Wt./40'
$2\frac{1}{2}$ x $2\frac{1}{2}$ x $\frac{3}{16}$	3.07	61.4	122.8
$\frac{1}{4}$	4.10	82.0	164.0
$\frac{5}{16}$	5.00	100.0	200.0
$\frac{3}{8}$	5.90	118.0	236.0
$\frac{1}{2}$	7.70	154.0	308.0

FLATS

Size in Inches	Wt./Ft.	Wt./20'
$\frac{1}{4} \times \frac{1}{2}$	0.425	8.50
$\frac{3}{4}$	0.638	12.76
$\frac{7}{8}$	0.744	14.88
1	0.850	17.00
$1\frac{1}{8}$	0.956	19.12
$1\frac{1}{4}$	1.06	21.20
$1\frac{3}{8}$	1.17	23.40
$1\frac{1}{2}$	1.28	25.60
$1\frac{5}{8}$	1.38	27.60
$1\frac{3}{4}$	1.49	29.80
$1\frac{7}{8}$	1.59	31.80
2	1.70	34.00
$2\frac{1}{8}$	1.81	36.20
$2\frac{1}{4}$	1.91	38.20
$2\frac{3}{8}$	2.02	40.40
$2\frac{1}{2}$	2.13	42.60
$2\frac{5}{8}$	2.23	44.60
$2\frac{3}{4}$	2.34	46.80
$2\frac{7}{8}$	2.44	48.80

Size in Inches	Wt./Ft.	Wt./20'
$\frac{1}{4} \times 3$	2.55	51.00
$3\frac{1}{8}$	2.66	53.20
$3\frac{1}{4}$	2.76	55.20
$3\frac{3}{8}$	2.87	57.40
$3\frac{1}{2}$	2.98	59.60
$3\frac{5}{8}$	3.08	61.60
$3\frac{3}{4}$	3.19	63.80
$3\frac{7}{8}$	3.29	65.80
4	3.40	65.00
$4\frac{1}{4}$	3.61	72.20
$4\frac{1}{2}$	3.83	76.60
$4\frac{3}{4}$	4.04	80.80
5	4.25	85.00
$5\frac{1}{4}$	4.46	89.20
$5\frac{1}{2}$	4.68	93.60
$5\frac{3}{4}$	4.89	97.80
6	5.10	102.00
7	5.95	119.00
$7\frac{1}{2}$	6.38	127.60
8	6.80	136.00

FLATS (Con't)

Size in Inches	Wt./Ft.	Wt./20'
$\frac{5}{16} \times \frac{1}{2}$	0.531	10.62
$\frac{3}{4}$	0.797	15.94
$\frac{7}{8}$	0.930	18.60
1	1.06	21.20
$1\frac{1}{8}$	1.20	24.00
$1\frac{1}{4}$	1.33	26.60
$1\frac{3}{8}$	1.46	29.20
$1\frac{1}{2}$	1.59	31.80
$1\frac{5}{8}$	1.73	34.60
$1\frac{3}{4}$	1.86	37.20
$1\frac{7}{8}$	1.99	39.80
2	2.13	42.60
$2\frac{1}{8}$	2.26	45.20
$2\frac{1}{4}$	2.39	47.80
$2\frac{3}{8}$	2.52	50.40
$2\frac{1}{2}$	2.66	53.20
$2\frac{5}{8}$	2.79	55.80
$2\frac{3}{4}$	2.92	58.40
$2\frac{7}{8}$	3.06	61.20

Size in Inches	Wt./Ft.	Wt./20'
$\frac{5}{16} \times 3$	3.19	63.80
$3\frac{1}{8}$	3.32	66.40
$3\frac{1}{4}$	3.45	69.00
$3\frac{3}{8}$	3.59	71.80
$3\frac{1}{2}$	3.72	74.40
$3\frac{5}{8}$	3.85	77.00
$3\frac{3}{4}$	3.98	79.60
$3\frac{7}{8}$	4.12	82.40
4	4.25	85.00
$4\frac{1}{4}$	4.52	90.40
$4\frac{1}{2}$	4.78	95.60
$4\frac{3}{4}$	5.05	101.00
5	5.31	106.20
$5\frac{1}{4}$	5.58	111.60
$5\frac{1}{2}$	5.83	116.60
$5\frac{3}{4}$	6.11	122.20
6	6.38	127.60
7	7.44	148.80
8	8.50	170.00

FLATS (Con't)

Size in Inches			Size in Inches		
	Wt./Ft.	Wt./20'		Wt./Ft.	Wt./20'
$\frac{3}{8} \times \frac{1}{2}$.....	.638	12.76	$\frac{3}{8} \times 3$	3.83	76.60
$\frac{3}{4}$.....	.956	19.12	$3\frac{1}{8}$	3.98	79.60
$\frac{7}{8}$	1.12	22.40	$3\frac{1}{4}$	4.14	82.80
1.....	1.28	25.60	$3\frac{3}{8}$	4.30	86.00
$1\frac{1}{8}$	1.43	28.60	$3\frac{1}{2}$	4.46	89.20
$1\frac{1}{4}$	1.59	31.80	$3\frac{5}{8}$	4.62	92.40
$1\frac{3}{8}$	1.75	35.00	$3\frac{3}{4}$	4.78	95.60
$1\frac{1}{2}$	1.91	38.20	$3\frac{7}{8}$	4.94	98.80
$1\frac{5}{8}$	2.07	41.40	4.....	5.10	102.00
$1\frac{3}{4}$	2.23	44.60	$4\frac{1}{4}$	5.42	108.40
$1\frac{7}{8}$	2.39	47.80	$4\frac{1}{2}$	5.74	114.80
2.....	2.55	51.00	$4\frac{3}{4}$	6.06	121.20
$2\frac{1}{8}$	2.71	54.20	5.....	6.38	127.60
$2\frac{1}{4}$	2.87	57.40	$5\frac{1}{4}$	6.70	134.00
$2\frac{3}{8}$	3.03	60.60	$5\frac{1}{2}$	7.01	140.20
$2\frac{1}{2}$	3.19	63.80	$5\frac{3}{4}$	7.33	146.60
$2\frac{5}{8}$	3.35	67.00	6.....	7.65	153.00
$2\frac{3}{4}$	3.51	70.20	7.....	8.93	178.60
$2\frac{7}{8}$	3.67	73.40	8.....	10.20	204.00

FLATS (Con't)

Size in Inches	Wt./Ft.	Wt./20'
$\frac{1}{2} \times \frac{3}{4}$	1.28	25.60
1.....	1.70	34.00
$1\frac{1}{4}$	2.13	42.60
$1\frac{1}{2}$	2.55	51.00
$1\frac{3}{4}$	2.98	59.60
2.....	3.40	68.00
$2\frac{1}{4}$	3.83	76.60
$2\frac{1}{2}$	4.25	85.00
$2\frac{3}{4}$	4.68	93.60
3.....	5.10	102.00
$3\frac{1}{4}$	5.53	110.60
$3\frac{1}{2}$	5.95	119.00
$3\frac{3}{4}$	6.38	127.60
4.....	6.80	136.00
$4\frac{1}{4}$	7.23	144.60
$4\frac{1}{2}$	7.65	153.00
$4\frac{3}{4}$	8.08	161.60
5.....	8.50	170.00
$5\frac{1}{4}$	8.93	178.60
$5\frac{1}{2}$	9.35	187.00
$5\frac{3}{4}$	9.78	195.60
6.....	10.20	204.00
7.....	11.90	238.00
8.....	13.60	272.00

Size in Inches	Wt./Ft.	Wt./20'
$\frac{5}{8} \times 1$	2.13	42.60
$1\frac{1}{4}$	2.66	53.20
$1\frac{1}{2}$	3.19	63.80
$1\frac{3}{4}$	3.72	74.40
2.....	4.25	85.00
$2\frac{1}{4}$	4.78	95.60
$2\frac{1}{2}$	5.31	106.20
$2\frac{3}{4}$	5.84	116.80
3.....	6.38	127.60
$3\frac{1}{4}$	6.91	138.20
$3\frac{1}{2}$	7.44	148.80
$3\frac{3}{4}$	7.97	159.40
4.....	8.50	170.00
$4\frac{1}{4}$	9.03	180.60
$4\frac{1}{2}$	9.56	191.20
$4\frac{3}{4}$	10.09	201.80
5.....	10.63	212.60
$5\frac{1}{4}$	11.16	223.20
$5\frac{1}{2}$	11.69	233.80
$5\frac{3}{4}$	12.22	244.40
6.....	12.75	255.00
7.....	14.88	297.60
8.....	17.00	340.00

FLATS (Con't)

Size in Inches	Wt./Ft.	Wt./20'
$\frac{3}{4} \times 1$	2.55	51.00
$1\frac{1}{4}$	3.19	63.80
$1\frac{1}{2}$	3.83	76.60
$1\frac{3}{4}$	4.46	89.00
2	5.10	102.00
$2\frac{1}{4}$	5.74	114.80
$2\frac{1}{2}$	6.38	127.60
$2\frac{3}{4}$	7.01	140.20
3	7.65	153.00
$3\frac{1}{4}$	8.29	165.80
$3\frac{1}{2}$	8.93	178.60
$3\frac{3}{4}$	9.56	191.20
4	10.20	204.00
$4\frac{1}{4}$	10.84	216.80
$4\frac{1}{2}$	11.48	229.60
$4\frac{3}{4}$	12.11	242.20
5	12.75	255.00
$5\frac{1}{4}$	13.39	267.80
$5\frac{1}{2}$	14.03	280.60
$5\frac{3}{4}$	14.66	293.20
6	15.30	306.00
7	17.85	357.00
8	20.40	408.00

Size in Inches	Wt./Ft.	Wt./20'
$\frac{7}{8} \times 1$	2.98	59.60
$1\frac{1}{4}$	3.72	74.40
$1\frac{1}{2}$	4.46	89.20
$1\frac{3}{4}$	5.21	104.20
2	5.95	119.00
$2\frac{1}{4}$	6.69	133.80
$2\frac{1}{2}$	7.44	148.80
$2\frac{3}{4}$	8.18	163.60
3	8.93	178.60
$3\frac{1}{4}$	9.67	193.40
$3\frac{1}{2}$	10.41	208.26
$3\frac{3}{4}$	11.16	223.20
4	11.90	238.00
$4\frac{1}{4}$	12.64	252.88
$4\frac{1}{2}$	13.39	267.80
$4\frac{3}{4}$	14.13	282.62
5	14.88	297.60
$5\frac{1}{4}$	15.62	312.40
$5\frac{1}{2}$	16.36	327.20
$5\frac{3}{4}$	17.11	342.20
6	17.85	357.00
7	20.83	436.60
8	23.80	476.00

FLATS (Con't)

Size in Inches	Wt./Ft.	Wt./20'	
1 x	1 ¹ / ₄	4.25	85.00
	1 ¹ / ₂	5.10	102.00
	1 ³ / ₄	5.95	119.00
	2.....	6.80	136.00
	2 ¹ / ₄	7.65	153.00
	2 ¹ / ₂	8.50	170.00
	2 ³ / ₄	9.35	187.00
	3.....	10.20	204.00
	3 ¹ / ₄	11.05	221.00
	3 ¹ / ₂	11.90	238.00
1 x	3 ³ / ₄	12.75	255.00
	4.....	13.60	272.00
	4 ¹ / ₄	14.45	289.00
	4 ¹ / ₂	15.30	306.00
	4 ³ / ₄	16.15	323.00
	5.....	17.00	340.00
	5 ¹ / ₄	17.85	357.00
	5 ¹ / ₂	18.70	374.00
	5 ³ / ₄	19.55	391.00
	6.....	20.40	408.00
7.....	23.80	476.00	
8.....	27.20	544.00	

Size in Inches	Wt./Ft.	Wt./20'	
1 ¹ / ₈ x	2.....	7.65	153.00
	2 ¹ / ₂	9.56	191.20
	3.....	11.48	229.60
	4.....	15.30	306.00
	5.....	19.13	382.60
	5 ¹ / ₂	21.04	420.80
	6.....	22.95	459.00
1 ¹ / ₄ x	1 ¹ / ₂	6.38	127.60
	1 ³ / ₄	7.44	148.80
	2.....	8.50	170.00
	2 ¹ / ₄	9.56	191.20
	2 ¹ / ₂	10.63	212.60
	2 ³ / ₄	11.69	233.80
	3.....	12.75	255.00
	3 ¹ / ₄	13.81	276.20
	3 ¹ / ₂	14.88	297.60
	4.....	17.00	340.00
4 ¹ / ₂	19.13	382.60	
5.....	21.25	425.00	
5 ¹ / ₂	23.38	467.60	
6.....	25.50	510.00	
7.....	29.75	595.00	
8.....	34.00	680.00	

FLATS (Con't)

Size in Inches	Wt./Ft.	Wt./20'	Size in Inches	Wt./Ft.	Wt./20'		
1 ³ / ₈ x	1 ³ / ₄	8.93	178.60	2 x	2 ¹ / ₄	15.30	306.00
	2.....	10.20	204.00		2 ¹ / ₂	17.00	340.00
	2 ¹ / ₄	11.48	229.60	3	.....	20.40	408.00
	2 ¹ / ₂	12.75	255.00		3 ¹ / ₂	23.80	476.00
1 ¹ / ₂ x	2 ³ / ₄	14.03	280.60	4	.....	27.20	544.00
	3.....	15.30	306.00		4 ¹ / ₂	30.60	612.00
	3 ¹ / ₂	17.85	357.00	5	.....	34.00	680.00
	4.....	20.40	408.00		6.....	40.80	816.00
	4 ¹ / ₂	22.95	459.00	7	.....	47.60	952.00
	5.....	25.50	510.00		8.....	54.40	1088.00
	5 ¹ / ₂	28.05	561.00	2 ¹ / ₄ x	3.....	22.95	459.00
	6.....	30.60	612.00		4.....	30.60	612.00
7.....	35.70	714.00	2 ¹ / ₂ x	3.....	25.50	510.00	
8.....	40.80	816.00		3 ¹ / ₂	29.75	595.00	
1 ³ / ₄ x	2.....	11.90	238.00	4.....	34.00	680.00	
	2 ¹ / ₂	14.88	297.60	4 ¹ / ₂	38.25	765.00	
	2 ³ / ₄	16.36	327.20	5.....	42.50	850.00	
	3.....	17.85	357.00	6.....	51.00	1020.00	
	3 ¹ / ₂	20.83	416.60	3 x	4.....	40.80	816.00
	4.....	23.80	476.00		4 ¹ / ₂	45.90	918.00
	4 ¹ / ₂	26.78	535.60	5.....	51.00	1020.00	
	5.....	29.75	595.00	6.....	61.20	1224.00	
6.....	35.70	714.00					
8.....	47.60	952.00					

UNIVERSAL MILL PLATES

Size in inches **Wt. in Lbs. Per Foot**

$1/4 \times 9$	7.65
10	8.50
11	9.36
12	10.20
13	11.10
14	11.90
15	12.80
16	13.60
17	14.50
18	15.30

$5/16 \times 9$	9.57
10	10.64
11	11.70
12	12.76

$3/8 \times 9$	11.49
10	12.77
11	14.04
12	15.32

$1/2 \times 9$	15.32
10	17.02
11	18.72
12	20.42

$5/8 \times 9$	19.14
10	21.27
11	23.40
12	25.53

$3/4 \times 9$	22.95
10	25.50
11	28.05
12	30.60

Size in inches **Wt. in Lbs. Per Foot**

$7/8 \times 9$	26.80
10	29.80
11	32.80
12	35.74

1 x 9	30.60
10	34.00
11	37.40
12	40.80

$1 1/4 \times 8$	34.00
9	38.30
10	42.50
11	46.80
12	51.00

$1 1/2 \times 8$	40.80
9	45.90
10	51.00
11	56.10
12	61.20

$1 3/4 \times 9$	53.60
10	59.56
11	65.51
12	71.47

2 x 8	54.40
9	61.26
10	68.00
11	74.90
12	81.60

ROUND, SQUARE & HEXAGON BARS

Hot Rolled & Cold Rolled Pound Per Foot

Size, Inches	Rounds	Squares	Hexagons	Wt./20' Bar Rounds Only*
1/32	0.003	0.003	0.003	.06
1/16	0.010	0.013	0.012	.20
3/32	0.024	0.030	0.026	.48
1/8	0.042	0.053	0.046	.84
5/32	0.065	0.083	0.072	1.30
3/16	0.094	0.120	0.104	1.88
7/32	0.128	0.163	0.141	2.56
1/4	0.167	0.213	0.184	3.34
9/32	0.211	0.269	0.233	4.22
5/16	0.261	0.332	0.288	5.22
11/32	0.316	0.402	0.348	6.32
3/8	0.376	0.478	0.414	7.52
13/32	0.441	0.561	0.486	8.82
7/16	0.511	0.651	0.564	10.22
15/32	0.587	0.747	0.647	11.74
1/2	0.668	0.850	0.736	13.36
17/32	0.754	0.96	0.831	15.08
9/16	0.845	1.08	0.932	16.90
19/32	0.941	1.20	1.040	18.82
5/8	1.043	1.33	1.150	20.86
21/32	1.15	1.46	1.27	23.00
11/16	1.26	1.61	1.40	25.20
23/32	1.38	1.76	1.52	27.60
3/4	1.50	1.91	1.66	30.00
25/32	1.63	2.08	1.80	32.60
13/16	1.76	2.25	1.94	35.20
27/32	1.90	2.42	2.10	38.00
7/8	2.05	2.61	2.25	40.90

*FOR CHECKING PURPOSES ONLY

ROUND, SQUARE & HEXAGON BARS

Hot Rolled & Cold Rolled Pound Per Foot

Size, Inches	Rounds	Squares	Hexagons	Wt./20' Bar Rounds Only*
29/32	2.20	2.80	2.42	44.00
15/16	2.35	2.99	2.59	47.00
31/32	2.51	3.19	2.76	50.20
1	2.67	3.40	2.95	53.40
1-1/16	3.02	3.84	3.32	60.40
1-1/8	3.38	4.30	3.73	67.60
1-3/16	3.77	4.80	4.15	75.40
1-1/4	4.17	5.32	4.60	83.40
1-5/16	4.60	5.86	5.07	92.00
1-3/8	5.05	6.43	5.57	101.00
1-7/16	5.52	7.03	6.09	110.40
1-1/2	6.01	7.66	6.63	120.20
1-9/16	6.52	8.30	7.19	130.40
1-5/8	7.05	8.98	7.78	141.00
1-11/16	7.60	9.68	8.39	152.00
1-3/4	8.18	10.41	9.02	163.60
1-13/16	8.77	11.17	9.67	175.40
1-7/8	9.39	11.95	10.35	187.80
1-15/16	10.02	12.76	11.05	200.40
2	10.68	13.60	11.78	213.60
2-1/16	11.36	14.46	12.53	227.20
2-1/8	12.06	15.35	13.30	241.20
2-3/16	12.78	16.27	14.09	255.60
2-1/4	13.52	17.21	14.91	270.40
2-5/16	14.28	18.18	15.75	285.60
2-3/8	15.06	19.18	16.61	301.20
2-7/16	15.87	20.20	17.49	317.40
2-1/2	16.69	21.25	18.40	333.80

*FOR CHECKING PURPOSES ONLY

ROUND, SQUARE & HEXAGON BARS

Hot Rolled & Cold Rolled Pound Per Foot

Size, Inches	Rounds	Squares	Hexagons	Wt./20' Bar Rounds Only
2-5/8	18.40	23.43	20.29	368.0
2-3/4	20.19	25.71	22.27	403.9
2-7/8	22.07	28.10	24.34	441.4
3	24.03	30.60	26.50	480.6
3-1/8	26.08	33.20	28.76	521.6
3-1/4	28.21	35.91	31.10	564.2
3-3/8	30.42	38.73	33.54	608.4
3-1/2	32.71	41.65	36.07	654.2
3-5/8	35.09	44.68	38.69	701.8
3-3/4	37.55	47.81	41.41	751.0
3-7/8	40.10	51.05	44.21	802.0
4	42.73	54.40	47.11	854.6
4-1/8	45.44	57.85	50.10	908.8
4-1/4	48.23	61.41	53.18	964.6
4-3/8	51.11	65.08	56.36	1022.2
4-1/2	54.08	68.85	59.63	1081.6
4-5/8	57.12	72.73	62.98	1143.4
4-3/4	60.25	76.71	66.44	1205.0
4-7/8	63.46	80.80	69.98	1269.2
5	66.76	85.00	73.61	1335.2
5-1/8	70.14	89.30	77.34	1402.8
5-1/4	73.60	93.71	81.16	1472.0
5-3/8	77.15	98.23	85.07	1543.0
5-1/2	80.78	102.85	89.07	1615.6
5-5/8	84.49	107.58	93.16	1689.8
5-3/4	88.29	112.41	97.35	1765.8
5-7/8	92.17	117.35	101.63	1843.4
6	96.13	122.40	106.00	1922.6

***FOR CHECKING PURPOSES ONLY**

HOT ROLLED STRIP

Size in Inches	Wt./Ft.	Wt./20'
$\frac{1}{8} \times \frac{1}{2}$	0.213	4.26
$\frac{5}{8}$	0.266	5.32
$\frac{3}{4}$	0.319	6.38
$\frac{7}{8}$	0.372	7.44
1	0.425	8.50
$1\frac{1}{8}$	0.478	9.56
$1\frac{1}{4}$	0.531	10.62
$1\frac{1}{2}$	0.638	12.76
$1\frac{3}{4}$	0.744	14.88
2	0.850	17.00
$2\frac{1}{4}$	0.956	19.12
$2\frac{1}{2}$	1.06	21.20
$2\frac{3}{4}$	1.17	23.40
3	1.28	25.60
$3\frac{1}{2}$	1.49	29.80
4	1.70	34.00
$4\frac{1}{2}$	1.91	38.20
5	2.13	42.60
$5\frac{1}{2}$	2.34	46.80
6	2.55	51.00
7	2.98	59.50
8	3.40	68.00
9	3.83	76.60
10	4.25	85.00
12	5.10	102.00

Size in Inches	Wt./Ft.	Wt./20'
$\frac{3}{16} \times \frac{3}{8}$	0.239	4.78
$\frac{1}{2}$	0.319	6.38
$\frac{5}{8}$	0.398	7.96
$\frac{3}{4}$	0.478	9.56
$\frac{7}{8}$	0.558	11.16
1	0.638	12.76
$1\frac{1}{8}$	0.717	14.34
$1\frac{1}{4}$	0.797	15.94
$1\frac{1}{2}$	0.956	19.12
$1\frac{3}{4}$	1.12	22.40
2	1.28	25.60
$2\frac{1}{4}$	1.43	28.60
$2\frac{1}{2}$	1.59	31.80
$2\frac{3}{4}$	1.75	35.00
3	1.91	38.20
$3\frac{1}{2}$	2.23	44.60
4	2.55	51.00
$4\frac{1}{2}$	2.87	57.40
5	3.19	63.80
$5\frac{1}{2}$	3.51	70.20
6	3.83	76.60
7	4.46	89.20
8	5.10	102.00
9	5.74	114.80
10	6.38	127.60
11	7.02	140.40
12	7.65	153.00

PLATES

A-36, Abrasive Resistant, High Strength and Various Alloy Plates

Size in Inches	Dec. Equiv.	Wt. per sq. ft.
$\frac{3}{16}$	.188	7.67
$\frac{1}{4}$	.25	10.21
$\frac{5}{16}$	.313	12.78
$\frac{3}{8}$	.375	15.32
$\frac{7}{16}$	.438	17.89
$\frac{1}{2}$	.500	20.42
$\frac{9}{16}$	.563	22.99
$\frac{5}{8}$	.625	25.53
$\frac{11}{16}$	.688	28.10
$\frac{3}{4}$	.750	30.63
$\frac{13}{16}$	.813	33.20
$\frac{7}{8}$	.875	35.74
$\frac{15}{16}$	.938	38.31
1	1.000	40.84
1 $\frac{1}{16}$	1.063	43.41
1 $\frac{1}{8}$	1.125	45.95
1 $\frac{3}{16}$	1.188	48.52
1 $\frac{1}{4}$	1.250	51.05
1 $\frac{5}{16}$	1.313	53.63
1 $\frac{3}{8}$	1.375	56.16
1 $\frac{7}{16}$	1.438	58.73
1 $\frac{1}{2}$	1.500	61.26
1 $\frac{9}{16}$	1.563	63.83
1 $\frac{5}{8}$	1.625	63.37
1 $\frac{11}{16}$	1.688	68.94
1 $\frac{3}{4}$	1.750	71.47
1 $\frac{13}{16}$	1.813	74.04
1 $\frac{7}{8}$	1.875	76.58
1 $\frac{15}{16}$	1.938	79.15

PLATES (Con't)

Size in Inches	Dec. Equiv.	Wt. per sq. ft.
2	2.000	81.68
2 $\frac{1}{16}$	2.063	84.25
2 $\frac{1}{8}$	2.125	86.79
2 $\frac{3}{16}$	2.188	89.36
2 $\frac{1}{4}$	2.25	91.89
2 $\frac{5}{16}$	2.313	94.46
2 $\frac{3}{8}$	2.375	97.00
2 $\frac{7}{16}$	2.438	99.57
2 $\frac{1}{2}$	2.500	102.10
2 $\frac{9}{16}$	2.563	104.67
2 $\frac{5}{8}$	2.625	107.21
2 $\frac{11}{16}$	2.688	109.77
2 $\frac{3}{4}$	2.750	112.31
2 $\frac{13}{16}$	2.813	114.88
2 $\frac{7}{8}$	2.875	117.42
2 $\frac{15}{16}$	2.938	119.99
3	3.000	122.52
3 $\frac{1}{4}$	3.250	132.73
3 $\frac{1}{2}$	3.350	142.94
3 $\frac{3}{4}$	3.750	153.15
4	4.000	163.36
4 $\frac{1}{4}$	4.250	173.57
4 $\frac{1}{2}$	4.500	183.78
4 $\frac{3}{4}$	4.750	193.99
5	5.000	204.20
5 $\frac{1}{2}$	5.500	224.62
6	6.000	245.04
6 $\frac{1}{2}$	6.500	265.46

FLOOR PLATE

Size	Width (inches)	Wt. Per Sq. Ft.
16 ga. x	48.....	3.00
14 ga. x	48.....	3.75
	60.....	3.75
12 ga. x	48.....	5.25
	60.....	5.25
$\frac{1}{8}$ x	48.....	6.16
	60.....	6.16
	72.....	6.16
$\frac{3}{16}$ x	48.....	8.71
	60.....	8.71
	72.....	8.71
$\frac{1}{4}$ x	48.....	11.26
	60.....	11.26
	72.....	11.26
	96.....	11.26
$\frac{5}{16}$ x	48.....	13.81
	60.....	13.81
	72.....	13.81
	96.....	13.81
$\frac{3}{8}$ x	48.....	16.37
	60.....	16.37
	72.....	16.37
	96.....	16.37
$\frac{1}{2}$ x	48.....	21.47
	60.....	21.47
	72.....	21.47
	96.....	21.47

SHEETS

We stock sizes not listed and will stock your sizes on request.
Sheet sizes listed are for reference only.

Size	Decimal Average	Decimal Limits/Ga.	Black Wt./Sq. Ft.	Wt./Sheet	
7 GA.	.1793	(.1868-.1719)	7.50#		
				48x 96.....	240
				48x120.....	300
				48x240.....	600
				60x 96.....	300
				60x120.....	375
				60x240.....	750
				72x 96.....	360
				72x120.....	450
72x240.....	900				
10 GA.	.1345	(.1419-.1271)	5.625#		
				48x 96.....	180
				48x120.....	225
				48x144.....	270
				48x240.....	450
				60x 96.....	225
				60x120.....	281.3
				60x144.....	337.5
				60x240.....	562.5
				72x 96.....	270
				72x120.....	337.5
72x144.....	405				
72x240.....	675				
11 GA.	.1196	(.1270-.1121)	5.00#		
				48x 96.....	160
				48x120.....	200
				48x144.....	240
48x240.....	400				

SHEETS (Con't)

Size	Decimal Average	Decimal Limits/Ga.	Black Wt./Sq. Ft.	Wt./Sheet	
11 GA.	.1196	(.1270-.1121)	5.00#		
				60 x 96	200
				60 x 120	250
				60 x 144	300
				60 x 240	500
				72 x 96	240
				72 x 120	300
				72 x 144	360
				72 x 240	600
12 GA.	.1046	(.1120-.0972)	4.375#		
				48 x 96	140
				48 x 120	175
				48 x 144	210
				48 x 240	350
				60 x 96	175
				60 x 120	218.8
				60 x 144	262.5
				60 x 240	437.6
				72 x 96	210
72 x 120	262.5				
72 x 144	315				
72 x 240	525				
13 GA.	.0897	(.0971-.0822)	3.75#		
14 GA.	.0747	(.0821-.0710)	3.125#		
				48 x 96	100
				48 x 120	125
				48 x 144	150
				60 x 96	125
				60 x 120	156.3
60 x 144	187.5				

SHEETS (Con't)

Size	Decimal Average	Decimal Limits/Ga.	Black Wt./Sq. Ft.	Wt./Sheet
16 GA.	.0598	(.0635-.0568)	2.50#	
			36 x 96	60
			36 x 120	75
			36 x 144	90
			48 x 96	80
			48 x 120	100
			48 x 144	120
			60 x 96	100
			60 x 120	125
			60 x 144	150

EXPANDED METAL

Carbon Steel Expanded Metal - Regular

Style	Weight Per Sq. Ft.
$\frac{1}{4}$ " - #20 - R.....	.86
$\frac{1}{4}$ " - #18 - R.....	1.14
$\frac{1}{2}$ " - #20 - R.....	.43
$\frac{1}{2}$ " - #18 - R.....	.70
$\frac{1}{2}$ " - #16 - R.....	.86
$\frac{1}{2}$ " - #13 - R.....	1.47
$\frac{3}{4}$ " - #16 H - R.....	.54
$\frac{3}{4}$ " - #13 - R.....	.80
$\frac{3}{4}$ " - #10 - R.....	1.20
$\frac{3}{4}$ " - #9 - R.....	1.80
1" - #16 - R.....	.44
$1\frac{1}{2}$ " - #18 - R.....	.20
$1\frac{1}{2}$ " - #16 - R.....	.40
$1\frac{1}{2}$ " - #13 - R.....	.60
$1\frac{1}{2}$ " - #10 - R.....	.79
$1\frac{1}{2}$ " - #9 - R.....	1.20
$1\frac{1}{2}$ " - #6 - R.....	2.50
2" - #10 - R.....	.68
2" - #9 - R.....	.90

CARBON STEEL EXPANDED METAL

- FLATTENED

Style	Weight Per Sq. Ft.
$\frac{1}{4}$ " - #20 - F.....	83
$\frac{1}{4}$ " - #18 - F.....	1.11
$\frac{1}{2}$ " - #20 - F.....	40
$\frac{1}{2}$ " - #18 - F.....	66
$\frac{1}{2}$ " - #16 - F.....	82
$\frac{1}{2}$ " - #13 - F.....	1.40
$\frac{3}{4}$ " - #16 H - F.....	51
$\frac{3}{4}$ " - #14 - F.....	63
$\frac{3}{4}$ " - #13 - F.....	75
$\frac{3}{4}$ " - #9 - F.....	1.71
1" - #16 - F.....	41
$1\frac{1}{2}$ " - #16 - F.....	38
$1\frac{1}{2}$ " - #14 - F.....	46
$1\frac{1}{2}$ " - #13 - F.....	57
$1\frac{1}{2}$ " - #9 - F.....	1.14

GRATING

Style	Weight Per sq. Ft.
3.0 lb. - R.....	3.00
3.14 lb. - R.....	3.14
4.0 lb. - R.....	4.00
4.0 lb. - R.....	4.00
4.29 lb. - R.....	4.29
5.0 lb. - R.....	5.00
6.25 lb. - R.....	6.25
7.0 lb. - R.....	7.00

GRATING - FLATTENED

2.80 lb. - F.....	2.80
2.95 lb. - F.....	2.95
3.75 lb. - F.....	3.75
4.02 lb. - F.....	4.02

ASTM-A 36 Specifications

CHEMICAL REQUIREMENTS

Product	Shapes*	Plates					Bars			
		To $\frac{3}{8}$ in. incl.	Over $\frac{3}{8}$ to $1\frac{1}{2}$ in. incl.	Over $1\frac{1}{2}$ to $2\frac{1}{2}$ in. incl.	Over $2\frac{1}{2}$ to 4 in. incl.	Over 4 in.	To $\frac{3}{8}$ in. incl.	Over $\frac{3}{8}$ to $1\frac{1}{2}$ in. incl.	Over $1\frac{1}{2}$ to 4 in. incl.	Over 4 in.
Thickness	All									
Carbon, max. per cent.	0.26	0.25	0.25	0.26	0.27	0.29	0.26	0.27	0.28	0.2
Manganese, per cent			0.80 to 1.20	0.80 to 1.20	0.85 to 1.20	0.85 to 1.20		0.60 to 0.90	0.60 to 0.90	0.60 to 0.90
Phosphorus, max. per cent	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Sulphur, max. per cent	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Silicon, per cent				0.15 to 0.30	0.15 to 0.30	0.15 to 0.30				
Copper, min. per cent, when copper steel is specified	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20

^a Manganese content of 0.85 to 1.35 per cent and silicon content of 0.15 to 0.30 per cent is required for shapes over 426 lb.-ft.

TENSILE REQUIREMENTS

Plates, Shapes,^a and Bars:

Tensile strength, psi 58,000 to 80,000

Yield point, min. psi 36,000^b

Plates and Bars:

Elongation in 8 in. min. per cent 20^c

Elongation in 2 in. min. per cent 23

Shapes:

Elongation in 8 in. min. per cent 20^c

Elongation in 2 in. min. per cent 21^a

^a For wide flange shapes over 426 lb./ft. tensile strength minimum of 58,000 only and elongation in 2 in. of 19 per cent minimum applies.

^b Yield point 32,000 psi for plates over 8 in. in thickness.

^c See Section 7 (c) ASTM manual.

PLATE WEIGHT FORMULA

Length (Ft.) x Width (Ft.) x Wt. Sq.

Ft. = Wt./Plate or .2836 x Length

(Inches) x Width (Inches) x Thickness

= Wt. of One Plate.

ASTM-A992

TABLE 1 Chemical Requirements (Heat Analysis)

Element	Composition, %
Carbon, max	0.23
Manganese	0.50 to 1.50 ^A
Silicon, max	0.40
Vanadium, max	0.11 ^{B,C}
Columbium, max	0.05 ^B
Phosphorus, max	0.035
Sulfur, max	0.045
Copper, max	0.60
Nickel, max	0.45
Chromium, max	0.35
Molybdenum, max	0.15

^A Provided that the ratio of manganese to sulfur is not less than 20 to 1, the minimum limit for manganese for Group 1 shapes shall be 0.30%.

^B The sum of columbium and vanadium shall not exceed 0.15%.

^C When vanadium is added as the only nitrogen-binding element (see 4.3), nitrogen shall be reported and the ratio of vanadium to nitrogen shall be 4 to 1 or higher if the nitrogen is greater than 0.012%.

TABLE 2 Tensile Requirements

Tensile strength, min ksi (MPa)	65 (450)
Yield point, ksi (MPa)	50 to 65 (345 to 450)
Yield to tensile ratio, max	0.85
Elongation in 8 in. (200 mm), min % ^A	18
Elongation in 2 in. (50 mm), min % ^A	21

^ASee elongation requirements under the Tension Tests section of Specification A 6/A 6M.

Keywords

7.1 building framing; shapes; structural steel; welded construction.

METRIC CONVERSION FACTORS

English to Metric

Multiply	by	to obtain
Pounds (avoirdupois)	.45359	Kilograms
Net Tons (2000 Lbs.)	.90718	Metric Tons
Inches	25.4001	Millimeters
Feet	.304801	Meters
Pounds per Lineal Ft.	1.48816	Kilograms per Lineal Meter
Pounds per Sq. Ft.	4.88241	Kilograms per Sq. Meter

Metric to English

Kilograms	2.20462	Lbs. (avoirdupois)
* Metric Tons	1.10231	Net Tons 2000 pounds
Millimeters	.03937	Inches
Meters	3.280833	Feet

NOTE: Length, width and cube denote meters

Mass and weight denote Grams

Capacity denotes Liters

* One Metric Ton = 2204.62 Lbs.

Abbreviations

Kilometer - km	Kilogram - kg
Meter - m	Gram - g or gm
Centimeter - cm	Centigram - cg
Millimeter - mm	Milligram - mg

CONVERTING INCHES AND FRACTIONS OF AN INCH INTO DECIMALS OF A FOOT

	INCHES											
	1	2	3	4	5	6	7	8	9	10	11	
...	.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167	...
1/16	.0625	.1250	.1875	.2500	.3125	.3750	.4375	.5000	.5625	.6250	.6875	.7500
1/8	.1250	.2500	.3750	.5000	.6250	.7500	.8750	1.0000	1.1250	1.2500	1.3750	1.5000
3/16	.1875	.3750	.5625	.7500	.9375	1.1250	1.3125	1.5000	1.6875	1.8750	2.0625	2.2500
1/4	.2500	.5000	.7500	1.0000	1.2500	1.5000	1.7500	2.0000	2.2500	2.5000	2.7500	3.0000
5/16	.3125	.6250	.9375	1.2500	1.5625	1.8750	2.1875	2.5000	2.8125	3.1250	3.4375	3.7500
3/8	.3750	.7500	1.1250	1.5000	1.8750	2.2500	2.6250	3.0000	3.3750	3.7500	4.1250	4.5000
7/16	.4375	.8750	1.3125	1.7500	2.1875	2.6250	3.0625	3.5000	3.9375	4.3750	4.8125	5.2500
1/2	.5000	1.0000	1.5000	2.0000	2.5000	3.0000	3.5000	4.0000	4.5000	5.0000	5.5000	6.0000
9/16	.5625	1.1250	1.6875	2.2500	2.8125	3.3750	3.9375	4.5000	5.0625	5.6250	6.1875	6.7500
5/8	.6250	1.2500	1.8750	2.5000	3.1250	3.7500	4.3750	5.0000	5.6250	6.2500	6.8750	7.5000
11/16	.6875	1.3750	2.0625	2.7500	3.4375	4.1250	4.8125	5.5000	6.1875	6.8750	7.5625	8.2500
3/4	.7500	1.5000	2.2500	3.0000	3.7500	4.5000	5.2500	6.0000	6.7500	7.5000	8.2500	9.0000
13/16	.8125	1.6250	2.4375	3.2500	4.0625	4.8750	5.6875	6.5000	7.3125	8.1250	8.9375	9.7500
7/8	.8750	1.7500	2.6250	3.5000	4.3750	5.2500	6.1250	7.0000	7.8750	8.7500	9.6250	10.5000
15/16	.9375	1.8750	2.8125	3.7500	4.6875	5.6250	6.5625	7.5000	8.4375	9.3750	10.3125	11.2500



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