

# Structural Steel Reference Sheet

### ANGLES ASTM A36 & A529-50

A x B x C				Weight in Pounds		
Sizes (inches)		Per ft.	/20 ft.	/40 ft.		
1/2 x 1/2 x 1/8	0.38	7.6	15.2			
3/4 x 3/4 x 1/8	0.59	11.8	23.6			
3/4 x 3/4 x 3/16	0.84	16.8	33.6			
1 x 1 x 1/8	0.80	16.0	32.0			
1 x 1 x 3/16	1.16	23.2	46.4			
1 x 1 x 1/4	1.49	29.8	59.6			
1 1/4 x 1 1/4 x 1/8	1.01	20.2	40.4			
1 1/4 x 1 1/4 x 3/16	1.48	29.6	59.2			
1 1/4 x 1 1/4 x 1/4	1.92	38.4	76.8			
1 1/2 x 1 1/2 x 1/8	1.23	24.6	49.2			
1 1/2 x 1 1/2 x 3/16	1.80	36.0	72.0			
1 1/2 x 1 1/2 x 1/4	2.34	46.8	93.6			
1 3/4 x 1 3/4 x 1/8	1.44	28.8	57.6			
1 3/4 x 1 3/4 x 3/16	2.12	42.4	84.8			
1 3/4 x 1 3/4 x 1/4	2.77	55.4	110.8			
2 x 1 1/2 x 1/8	1.44	28.8	57.6			
2 x 1 1/2 x 3/16	2.12	42.4	84.8			
2 x 1 1/2 x 1/4	2.77	55.4	110.8			
2 x 2 x 1/8	1.65	33.0	66.0			
2 x 2 x 3/16	2.44	48.8	97.6			
2 x 2 x 1/4	3.19	63.8	127.6			
2 x 2 x 5/16	3.92	78.4	156.8			
2 x 2 x 3/8	4.70	94.0	188.0			
2 1/2 x 2 x 3/16	2.75	55.0	110.0			
2 1/2 x 2 x 1/4	3.62	72.4	144.8			
2 1/2 x 2 x 5/16	4.50	90.0	180.0			
2 1/2 x 2 x 3/8	5.30	106.0	212.0			

A x B x C				Weight in Pounds		
Sizes (inches)		Per ft.	/20 ft.	/40 ft.		
2 1/2 x 2 1/2 x 3/16	3.07	61.4	122.8			
2 1/2 x 2 1/2 x 1/4	4.10	82.0	164.0			
2 1/2 x 2 1/2 x 5/16	5.00	100.0	200.0			
2 1/2 x 2 1/2 x 3/8	5.90	118.0	236.0			
2 1/2 x 2 1/2 x 1/2	7.70	154.0	308.0			
3 x 2 x 3/16	3.07	61.4	122.8			
3 x 2 x 1/4	4.10	82.0	164.0			
3 x 2 x 5/16	5.00	100.0	200.0			
3 x 2 x 3/8	5.90	118.0	236.0			
3 x 2 x 1/2	7.70	154.0	308.0			
3 x 3 x 1/4	4.50	90.0	180.0			
3 x 3 x 5/16	5.60	112.0	224.0			
3 x 3 x 3/8	6.60	132.0	264.0			
3 x 3 x 1/2	8.80	176.0	352.0			
3 1/2 x 2 1/2 x 1/4	4.90	98.0	196.0			
3 1/2 x 2 1/2 x 5/16	6.10	122.0	244.0			
3 1/2 x 2 1/2 x 3/8	7.20	144.0	288.0			
3 1/2 x 2 1/2 x 1/2	9.70	194.0	388.0			
3 1/2 x 3 x 1/4	5.40	108.0	216.0			
3 1/2 x 3 x 5/16	6.60	132.0	264.0			
3 1/2 x 3 x 3/8	7.90	158.0	316.0			
3 1/2 x 3 1/2 x 1/4	5.80	116.0	232.0			
3 1/2 x 3 1/2 x 5/16	7.20	144.0	288.0			
3 1/2 x 3 1/2 x 3/8	8.50	170.0	340.0			
3 1/2 x 3 1/2 x 1/2	11.20	224.0	448.0			
4 x 3 x 1/4	5.80	116.0	232.0			

A x B x C				Weight in Pounds		
Sizes (inches)		Per ft.	/20 ft.	/40 ft.		
4 x 3 x 5/16	7.20	144.0	288.0			
4 x 3 x 3/8	8.50	170.0	340.0			
4 x 3 1/2 x 1/4	6.20	124.0	248.0			
4 x 3 1/2 x 5/16	7.70	154.0	308.0			
4 x 3 1/2 x 3/8	9.10	182.0	364.0			
4 x 4 x 1/4	6.60	132.0	264.0			
4 x 4 x 5/16	8.20	164.0	328.0			
4 x 4 x 3/8	9.80	196.0	392.0			
4 x 4 x 1/2	12.80	256.0	512.0			
4 x 4 x 3/4	16.40	328.0	656.0			
5 x 3 x 1/4	6.60	132.0	264.0			
5 x 3 x 5/16	8.20	164.0	328.0			
5 x 3 x 3/8	9.80	196.0	392.0			
5 x 3 x 1/2	12.80	256.0	512.0			
5 x 3 1/2 x 1/4	7.00	140.0	280.0			
5 x 3 1/2 x 5/16	8.70	174.0	348.0			
5 x 3 1/2 x 3/8	10.40	208.0	416.0			
5 x 3 1/2 x 1/2	13.60	272.0	544.0			
5 x 5 x 5/16	10.30	206.0	412.0			
5 x 5 x 3/8	12.30	246.0	492.0			
5 x 5 x 1/2	16.20	324.0	648.0			
5 x 5 x 5/8	20.00	400.0	800.0			
5 x 5 x 3/4	23.60	472.0	944.0			
5 x 5 x 7/8	27.20	544.0	1088.0			
6 x 3 1/2 x 5/16	9.80	196.0	392.0			
6 x 3 1/2 x 3/8	11.70	234.0	468.0			
6 x 3 1/2 x 1/2	15.30	306.0	612.0			
6 x 3 1/2 x 5/8	18.90	378.0	756.0			
6 x 4 x 5/16	10.30	206.0	412.0			

### PLATE ASTM A36 & A572-50 Other grades available.

Thickness (inches)	Weight in Pounds	
	Square in.	Square ft.
3/16	0.053	7.66
1/4	0.071	10.21
5/16	0.089	12.76
3/8	0.106	15.31
1/2	0.142	20.42
5/8	0.177	25.52
3/4	0.213	30.63
7/8	0.248	35.73
1	0.284	40.84
1-1/8	0.319	45.94
1-1/4	0.355	51.05
1-3/8	0.39	56.16
1-1/2	0.425	61.26

Thickness (inches)	Weight in Pounds	
	Square in.	Square ft.
1-3/4	0.496	71.47
2	0.567	81.68
2-1/8	0.603	86.78
2-1/4	0.638	91.89
2-1/2	0.709	102.1
2-3/4	0.780	112.313
3	0.851	122.52
3-1/4	0.922	132.72
3-1/2	0.993	142.93
3-3/4	1.064	153.144
4	1.134	163.35
4-1/4	1.205	173.56
4-1/2	1.276	183.775

Thickness (inches)	Weight in Pounds	
	Square in.	Square ft.
5	1.418	204.19
5-1/2	1.560	224.616
6	1.702	245.03
6-1/2	1.843	265.457
7	1.985	285.87
7-1/2	2.127	306.298
8	2.269	326.71
8-1/2	2.411	347.139
9	2.552	367.551
10	2.836	408.381
12	3.403	490.06

### REBAR No Grade, GR40 and GR60 available. Domestic bar available.

Size (inches)	Size Number	Weight in Pounds		
		Per ft.	/20 ft.	/40 ft.
3/8	#3	0.376	7.52	15.04
1/2	#4	0.688	13.36	26.72
5/8	#5	1.043	20.86	41.72
3/4	#6	1.502	30.04	60.08
7/8	#7	2.044	40.88	81.76
1	#8	2.670	53.40	106.80
1-1/8	#9	3.400	68.00	136.00
1-1/4	#10	4.303	86.06	172.12
1-3/8	#11	5.313	106.26	212.52
1-3/4	#14	7.650	153.00	306.00
2-1/4	#18	13.600	272.00	544.00

### PLATE Most Common Sizes (inches)

60 x 120	72 x 240
60 x 144	96 x 240
60 x 240	96 x 480
72 x 96	120 x 240
72 x 120	120 x 480
72 x 144	

### Universal Mill PLATE ASTM A36 & A529-50

Thickness x Width	Weight in Pounds	
	Per ft.	/20 ft.
1/4 x 9	7.65	153.0
x 10	8.50	170.0
x 11	9.35	187.0
x 12	10.20	204.0
3/8 x 9	11.48	229.6
x 10	12.75	255.0
x 11	14.03	280.6
x 12	15.30	306.0
1/2 x 9	15.30	306.0
x 10	17.00	340.0
x 11	18.70	374.0
x 12	20.40	408.0
5/8 x 9	19.13	382.6
x 10	21.25	425.0
x 11	23.40	468.0
x 12	25.50	510.0
3/4 x 9	22.95	459.0
x 10	25.50	510.0
x 12	30.60	612.0
1 x 9	30.60	612.0
x 10	34.00	680.0
x 12	40.80	816.0
1-1/4 x 9	38.25	765.0
x 10	42.50	850.0
x 12	51.00	1020.0
1-1/2 x 10	51.00	1020.0
x 12	61.20	1224.0

### SHEETS ASTM A1011 Other grades available.

Sheet Size (inches)	Weight in Pounds	
	(lbs.) Plain	Galvanized
<b>10 Gauge</b>		
Plain:	Thick: 0.1345"	Wt: 5.625 lbs/ft <sup>2</sup>
Galvanized:	Thick: 0.1382"	Wt: 5.781 lbs/ft <sup>2</sup>
48 x 96	180	184.99
48 x 120	225	231.24
48 x 144	270	277.48
48 x 240	450	462.48
60 x 96	225	231.24
60 x 120	281.25	289.05
60 x 144	337.5	346.86
60 x 240	562.5	578.1
72 x 96	270	—
72 x 120	337.5	—
72 x 144	405	—
72 x 240	675	—
<b>12 Gauge</b>		
Plain:	Thick: 0.1046"	Wt: 4.375 lbs/ft <sup>2</sup>
Galvanized:	Thick: 0.1084"	Wt: 4.531 lbs/ft <sup>2</sup>
48 x 96	140	144.99
48 x 120	175	181.24
48 x 144	210	217.49
60 x 96	175	181.24
60 x 120	218.75	226.55
60 x 144	262.5	271.86
60 x 240	437.5	453.1
72 x 96	210	—
72 x 120	262.5	—

Sheet Size (inches)	Weight in Pounds	
	(lbs.) Plain	Galvanized
<b>12 Gauge</b>		
72 x 144	315	—
72 x 240	525	—
<b>14 Gauge</b>		
Plain:	Thick: 0.0747"	Wt: 3.125 lbs/ft <sup>2</sup>
Galvanized:	Thick: 0.0785"	Wt: 3.281 lbs/ft <sup>2</sup>
48 x 96	100	104.99
48 x 120	125	131.24
48 x 144	150	157.49
48 x 144	150	157.49
60 x 96	125	131.24
60 x 120	156.25	164.05
60 x 144	187.5	196.86
72 x 96	150	—
72 x 120	187.5	—
72 x 144	225	—
<b>16 Gauge</b>		
Plain:	Thick: 0.0598"	Wt: 2.5 lbs/ft <sup>2</sup>
Galvanized:	Thick: 0.0635"	Wt: 2.656 lbs/ft <sup>2</sup>
48 x 96	80	84.99
48 x 120	100	106.24
48 x 144	120	127.49
60 x 96	100	106.24
60 x 120	125	132.8
60 x 144	150	159.36

### Standard EXPANDED METAL

Size - Style (inches)	Weight per 100 ft <sup>2</sup> (lbs.)	Center to Center of Bond (inches)			Size of Opening (inches)		Size of Strands (inches)		Overall Thickness (inches)
		Width	Length	Width	Length	Width	Thick.		
3/16 - No. 24	50	0.200	0.50	0.166	0.437	0.050	0.024	0.086	
3/16 - No. 22	62	0.200	0.50	0.166	0.437	0.050	0.030	0.088	
3/16 - No. 20	75	0.200	0.50	0.166	0.437	0.050	0.036	0.090	
1/4 - No. 20	86	0.255	1.00	0.172	0.719	0.073	0.036	0.125	
1/4 - No. 18	114	0.255	1.00	0.172	0.719	0.073	0.048	0.125	
1/2 - No. 20	43	0.500	1.20	0.438	0.938	0.072	0.036	0.124	
1/2 - No. 18	70	0.500	1.20	0.438	0.938	0.088	0.048	0.155	
1/2 - No. 16	86	0.500	1.20	0.375	0.938	0.086	0.060	0.157	
1/2 - No. 13	147	0.500	1.20	0.313	0.938	0.096	0.092	0.182	
3/4 - No. 16	54	0.923	2.00	0.813	1.750	0.099	0.060	0.186	
3/4 - No. 13	80	0.923	2.00	0.750	1.688	0.096	0.092	0.195	
3/4 - No. 10	120	0.923	2.00						

# Wide Flange BEAMS ASTM A992

Size (in.)		Weight per foot (lbs.)	Depth	Flange Width	Flange Thick.	Web Thick.
4	x	4	13	4.16	4.060	0.345 0.280
5	x	5	16	5.01	5.000	0.360 0.240
			19	5.15	5.030	0.430 0.270
6	x	4	8.5	5.83	3.940	0.195 0.170
			9	5.90	3.940	0.215 0.170
			12	6.03	4.000	0.280 0.230
			16	6.28	4.030	0.405 0.260
6	x	6	15	5.99	5.990	0.260 0.230
			20	6.20	6.020	0.365 0.260
			25	6.38	6.080	0.455 0.320
8	x	4	10	7.89	3.940	0.205 0.170
			13	7.99	4.000	0.255 0.230
			15	8.11	4.015	0.315 0.245
8	x	5 1/4	18	8.14	5.250	0.330 0.230
			21	8.28	5.270	0.400 0.250
8	x	6 1/2	24	7.93	6.500	0.400 0.245
			28	8.06	6.540	0.465 0.285
8	x	8	31	8.00	8.000	0.435 0.285
			35	8.12	8.020	0.495 0.310
			40	8.25	8.070	0.560 0.360
			48	8.50	8.110	0.685 0.400
			58	8.75	8.220	0.810 0.510
8	x	8 1/4	67	9.00	8.280	0.935 0.570
10	x	4	12	9.87	3.960	0.210 0.190
			15	9.99	4.000	0.270 0.230
			17	10.10	4.010	0.330 0.240
			19	10.20	4.020	0.395 0.250
10	x	5 3/4	22	10.20	5.750	0.360 0.240
			26	10.30	5.770	0.440 0.260
			30	10.50	5.810	0.510 0.300
10	x	8	33	9.73	7.960	0.435 0.290
			39	9.92	7.990	0.530 0.315
			45	10.10	8.020	0.620 0.350
10	x	10	49	10.00	10.000	0.560 0.340
			54	10.10	10.000	0.615 0.370
			60	10.20	10.100	0.680 0.420
			68	10.40	10.100	0.770 0.470
			77	10.60	10.200	0.870 0.530
10	x	10 1/4	88	10.80	10.300	0.990 0.605
			100	11.10	10.300	1.120 0.680
			112	11.40	10.400	1.250 0.755
12	x	4	14	11.90	3.970	0.225 0.200
			16	12.00	3.990	0.265 0.220
			19	12.20	4.010	0.350 0.235
			22	12.30	4.030	0.425 0.260
12	x	6 1/2	26	12.20	6.490	0.380 0.230
			30	12.30	6.520	0.440 0.260
			35	12.50	6.560	0.520 0.300
12	x	8	40	11.90	8.010	0.515 0.295
			45	12.10	8.050	0.575 0.335
			50	12.20	8.080	0.640 0.370
12	x	10	53	12.10	10.000	0.575 0.345
			58	12.20	10.000	0.640 0.360
12	x	12	65	12.10	12.000	0.605 0.350
			72	12.30	12.000	0.670 0.430
			79	12.40	12.100	0.735 0.470
			87	12.50	12.100	0.810 0.515
			96	12.70	12.200	0.900 0.550
			106	12.90	12.200	0.990 0.610
12	x	12 1/4	120	13.10	12.300	1.110 0.710
Size (in.)		Weight per foot (lbs.)	Depth	Flange Width	Flange Thick.	Web Thick.
12	x	12 1/2	152	13.70	12.500	1.400 0.870
			170	14.00	12.600	1.560 0.960
12	x	12 3/4	190	14.40	12.700	1.740 1.060
			210	14.70	12.800	1.900 1.180
			230	15.10	12.900	2.070 1.290
12	x	13	252	15.40	13.000	2.250 1.400
			279	15.90	13.100	2.470 1.530
			305	16.30	13.200	2.710 1.630
12	x	13 1/2	336	16.80	13.400	2.960 1.780
14	x	5	22	13.70	5.000	0.335 0.230
			26	13.90	5.030	0.420 0.255
14	x	6 3/4	30	13.80	6.730	0.385 0.270
			34	14.00	6.750	0.455 0.285
			38	14.10	6.770	0.515 0.310
14	x	8	43	13.70	8.000	0.530 0.305
			48	13.80	8.030	0.595 0.340
			53	13.90	8.060	0.660 0.370
14	x	10	61	13.90	10.000	0.645 0.375
			68	14.00	10.000	0.720 0.415
			74	14.20	10.100	0.785 0.450
			82	14.30	10.100	0.855 0.510
14	x	14 1/2	90	14.00	14.500	0.710 0.440
			99	14.20	14.600	0.780 0.485
			109	14.30	14.600	0.860 0.525
14	x	14 3/4	120	14.50	14.700	0.940 0.590
			132	14.70	14.700	1.030 0.645
14	x	15 1/2	145	14.80	15.500	1.090 0.680
			159	15.00	15.600	1.190 0.745
14	x	15 3/4	176	15.20	15.700	1.310 0.830
			193	15.50	15.700	1.440 0.890
			211	15.70	15.800	1.560 0.980
14	x	16	233	16.00	15.900	1.720 1.070
			257	16.40	16.000	1.890 1.180
			283	16.70	16.100	2.070 1.290
14	x	16 1/4	311	17.10	16.200	2.260 1.410
			342	17.50	16.400	2.470 1.540
14	x	16 1/2	370	17.90	16.500	2.660 1.660
			398	18.30	16.600	2.850 1.770
14	x	16 3/4	426	18.70	16.700	3.040 1.880
			455	19.00	16.800	3.210 2.020
14	x	17	500	19.60	17.000	3.500 2.190
			550	20.20	17.200	3.820 2.380
14	x	17 1/2	605	20.90	17.400	4.160 2.600
14	x	17 3/4	665	21.60	17.700	4.520 2.830
14	x	18	730	22.40	17.900	4.910 3.070
16	x	5 1/2	26	15.70	5.500	0.345 0.250
			31	15.90	5.530	0.440 0.275
16	x	7	36	15.90	6.990	0.430 0.295
			40	16.00	7.000	0.505 0.305
			45	16.10	7.040	0.565 0.345
			50	16.30	7.070	0.630 0.380
			57	16.40	7.120	0.715 0.430
16	x	10 1/4	67	16.30	10.200	0.665 0.395
			77	16.50	10.300	0.760 0.455
16	x	10 1/2	89	16.80	10.400	0.875 0.525
			100	17.00	10.400	0.985 0.585
18	x	6	35	17.70	6.000	0.425 0.300
			40	17.90	6.020	0.525 0.315
			46	18.10	6.060	0.605 0.360

# Flat BARS ASTM A36

Size (inches)		Weight in Pounds	
Per ft.	/20 ft.	Per ft.	/20 ft.
<b>1/4 Inch</b>			
1/2	0.43	8.50	
3/4	0.64	12.76	
1	0.85	17.00	
1-1/4	1.06	21.26	
1-1/2	1.28	25.50	
1-3/4	1.49	29.76	
2	1.70	34.00	
2-1/2	2.13	42.50	
2-3/4	2.34	46.76	
3	2.55	51.00	
3-1/2	2.98	59.50	
4	3.40	68.00	
4-1/2	3.83	76.50	
5	4.25	85.00	
5-1/2	4.68	93.50	
6	5.10	102.00	
7	5.95	119.00	
8	6.80	136.00	
<b>5/16 Inch</b>			
1/2	0.53	10.62	
3/4	0.80	15.94	
1	1.06	21.26	
1-1/4	1.33	26.56	
1-1/2	1.59	31.88	
1-3/4	1.86	37.18	
2	2.13	42.50	
2-1/2	2.66	53.12	
2-3/4	2.92	58.44	
3	3.19	63.76	
3-1/2	3.72	74.38	
4	4.25	85.00	
4-1/2	4.78	95.62	
5	5.31	106.30	
5-1/2	5.84	116.80	
6	6.38	127.50	
7	7.44	148.70	
8	8.50	170.00	
<b>3/8 Inch</b>			
1/2	0.64	12.76	
3/4	0.96	19.12	
1	1.28	25.50	
1-1/4	1.59	31.88	
1-1/2	1.91	38.26	
1-3/4	2.23	44.62	
2	2.55	51.00	
2-1/2	3.19	63.76	
3	3.83	76.50	
3-1/2	4.46	89.26	
4	5.10	102.00	
4-1/2	5.74	114.80	
5	6.38	127.50	
5-1/2	7.01	140.30	
6	7.65	153.00	
7	8.93	178.50	
8	10.20	204.00	
<b>1/2 Inch</b>			
3/4	1.28	25.50	
1	1.70	34.00	
1-1/4	2.13	42.50	
1-1/2	2.55	51.00	
2	3.40	68.00	
2-1/2	4.25	85.00	
3	5.10	102.00	
3-1/2	5.95	119.00	
4	6.80	136.00	
4-1/2	7.65	153.00	
5	8.50	170.00	
5-1/2	9.35	187.00	
6	10.20	204.00	
7	11.90	238.00	
8	13.60	272.00	
<b>5/8 Inch</b>			
1	2.13	42.50	
1-1/4	2.66	53.12	
1-3/8	2.92	58.44	
1-1/2	3.19	63.76	

# Steel PIPE ASTM A53 & A500

Nominal Pipe Sizes (in.)	Outside Diameter (in.)	Schedule	I.P.S.	Wall Thickness (in.)		Weight (lbs/ft)
				Thick.	Diam.	
1/2	0.840	SCH40	STD	0.109	0.622	0.85
1/2	0.840	SCH80	XS	0.147	0.546	1.09
3/4	1.050	SCH40	STD	0.113	0.824	1.13
3/4	1.050	SCH80	XS	0.154	0.742	1.48
1	1.320	SCH40	STD	0.133	1.050	1.68
1	1.320	SCH80	XS	0.179	0.957	2.17
1 1/4	1.660	SCH40	STD	0.140	1.380	2.27
1 1/4	1.660	SCH80	XS	0.191	1.280	3.00
1 1/2	1.900	SCH40	STD	0.145	1.610	2.72
1 1/2	1.900	SCH80	XS	0.200	1.500	3.63
2	2.380	SCH40	STD	0.154	2.070	3.66
2	2.380	SCH80	XS	0.218	1.940	5.03
2	2.380	XXS	XXS	0.436	1.500	9.04
2 1/2	2.880	SCH40	STD	0.203	2.470	5.80
2 1/2	2.880	SCH80	XS	0.276	2.320	7.67
2 1/2	2.880	XXS	XXS	0.552	1.770	13.70
3	3.500	SCH40	STD	0.216	3.070	7.58
3	3.500	SCH80	XS	0.300	2.900	10.30
3	3.500	XXS	XXS	0.600	2.300	18.60
3 1/2	4.000	SCH40	STD	0.226	3.550	9.12
3 1/2	4.000	SCH80	XS	0.318	3.360	12.50
4	4.500	SCH40	STD	0.237	4.030	