



SECTION 3

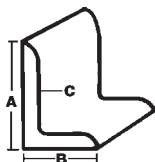
Structurals & Bar Shapes

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STRUCTURAL & BAR SHAPES

When the greatest dimension of a steel shape is less than 3", it is classified a "Bar Shape". When at least one dimension is 3" or greater, it is classified a "Structural Shape".

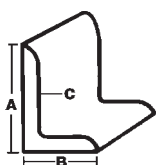


Bar Angles

ASTM A36
Stock Lengths
20 Ft. and 40 Ft.

Size in Inches			Lbs. Per Ft.	Lbs. Per 20'
A	B	C		
1/2	x 1/2	x 1/8	.38	7.60
3/4	x 3/4	x 1/8	.59	11.80
1	x 1	x 1/8	.80	16.00
1 1/4	x 1 1/4	x 3/16	1.16	23.20
		x 1/4	1.49	29.80
		x 1/8	1.01	20.20
1 1/2	x 1 1/2	x 3/16	1.48	29.60
		x 1/4	1.92	38.40
		x 1/8	1.23	24.60
1 3/4	x 1 3/4	x 3/16	1.80	36.00
		x 1/4	2.34	46.80
		x 3/16	2.12	42.40
2	x 1 1/2	x 1/4	2.77	55.40
		x 1/8	1.44	28.80
		x 3/16	2.12	42.40
2	x 2	x 1/4	2.77	55.40
		x 1/8	1.65	33.00
		x 3/16	2.44	48.80
		x 1/4	3.19	63.80
		x 5/16	3.92	78.40
		x 3/8	4.70	94.00
2 1/2	x 2	x 3/16	2.75	55.00
2 1/2	x 2 1/2	x 1/4	3.62	72.40
		x 3/16	3.07	61.40
		x 1/4	4.10	82.00
		x 5/16	5.00	100.00
		x 3/8	5.90	118.00
		x 1/2	7.70	154.00

STRUCTURAL & BAR SHAPES



Structural Angles

ASTM A36
Stock Lengths
20 Ft. and 40 Ft.

Size in Inches			Lbs. Per Ft.	Lbs. Per 40'
A	B	C		
3	x 2	x 3/16	3.1	124.0
		x 1/4	4.1	164.0
		x 5/16	5.0	200.0
3	x 2 1/2	x 3/8	5.9	236.0
		x 1/2	7.7	308.0
		x 1/4	4.5	180.0
3	x 3	x 5/16	5.6	224.0
		x 3/8	6.6	264.0
		x 3/16	3.71	148.4
3 1/2	x 2 1/2	x 1/4	4.9	196.0
		x 5/16	6.1	244.0
		x 3/8	7.2	288.0
3 1/2	x 3	x 1/2	9.4	376.0
		x 1/4	4.9	196.0
		x 5/16	6.1	244.0
3 1/2	x 3 1/2	x 3/8	7.2	288.0
		x 1/2	9.4	376.0
		x 1/4	5.4	216.0
4	x 3	x 5/16	6.6	264.0
		x 3/8	7.9	316.0
		x 1/2	10.2	408.0
4	x 3 1/2	x 1/4	5.8	232.0
		x 5/16	7.2	288.0
		x 3/8	8.5	340.0
4	x 4	x 1/2	11.1	444.0
		x 1/4	5.8	232.0
		x 5/16	7.2	288.0
4	x 3	x 3/8	8.5	340.0
		x 1/2	11.1	444.0
		x 1/4	6.2	248.0
5	x 3	x 5/16	7.7	308.0
		x 3/8	9.1	364.0
		x 1/2	11.9	476.0
5	x 4	x 1/4	6.6	264.0
		x 5/16	8.2	328.0
		x 3/8	9.8	392.0
5	x 3	x 1/2	12.8	512.0
		x 5/8	15.7	628.0
		x 3/4	18.5	740.0
5	x 3	x 1/4	6.6	264.0
		x 5/16	8.2	328.0
		x 3/8	9.8	392.0
5	x 4	x 1/2	12.8	512.0
		x 5/8	15.7	628.0
		x 3/4	18.5	740.0

STRUCTURAL & BAR SHAPES

Structural Angles (con't)

Size in Inches			Lbs.	Lbs.
A	B	C	Per Ft.	Per 40'
5	x 3 1/2	x 1/4	7.0	280.0
		x 5/16	8.7	348.0
		x 3/8	10.4	416.0
		x 1/2	13.6	544.0
		x 5/8	16.8	672.0
		x 3/4	19.8	792.0
5	x 5	x 5/16	10.3	412.0
		x 3/8	12.3	492.0
		x 1/2	16.2	648.0
		x 5/8	20.0	800.0
		x 3/4	23.6	944.0
		x 5/16	9.8	392.0
6	x 3 1/2	x 3/8	11.7	468.0
		x 1/2	15.3	612.0
		x 5/16	10.3	412.0
		x 3/8	12.3	492.0
		x 1/2	16.2	648.0
		x 5/8	20.0	800.0
6	x 4	x 3/4	23.6	944.0
		x 3/8	14.9	596.0
		x 1/2	19.6	784.0
		x 5/8	24.2	968.0
		x 3/4	28.7	1,148.0
		x 7/8	33.1	1,324.0
6	x 6	x 1	37.4	1,496.0
		x 3/8	13.6	544.0
		x 1/2	17.9	716.0
		x 5/8	22.1	884.0
		x 3/4	26.2	1,048.0
		x 1/2	19.6	784.0
7	x 4	x 3/4	28.7	1,148.0
		x 1/2	23.0	920.0
		x 3/4	33.8	1,352.0
		x 1	44.2	1,768.0
		x 1/2	26.4	1,056.0
		x 5/8	32.7	1,308.0
8	x 4	x 3/4	38.9	1,556.0
		x 7/8	45.0	1,800.0
		x 1	51.0	2,040.0
		x 3/4	38.9	1,556.0
		x 7/8	45.0	1,800.0
		x 1	51.0	2,040.0

STRUCTURAL & BAR SHAPES



American Standard Beams

ASTM A36

Stock Lengths 20 Ft. and 40 Ft.

Size A		Lbs. Per Ft.	Depth B	Web Thickness D
3	x	5.7	2.330	.170
	x	7.5	2.509	.349
4	x	7.7	2.663	.193
	x	9.5	2.796	.326
5	x	10.0	3.004	.214
6	x	12.5	3.332	.232
	x	17.25	3.565	.465
7	x	15.3	3.662	.252
8	x	18.4	4.001	.271
	x	23.0	4.171	.441
10	x	25.4	4.661	.311
10	x	35.0	4.944	.594
12	x	31.8	5.000	.350
	x	40.8	5.252	.462



Wide Flange Beams

ASTM A992, A572 GR 50, A36

Stock Lengths 20 Ft.,

40 Ft., 45 Ft., 50 Ft. and 60 Ft.

Thickness		Lbs.	Depth	Flange Width	Flange Thickness	Web
Size		Per Ft.	A	B	C	D
4	x	13	4.16	4.060	.345	.280
5	x	16	5.01	5.000	.360	.240
	x	19	5.15	5.030	.430	.270
6	x	9	5.90	3.940	.215	.170
	x	12	6.03	4.000	.280	.230
	x	15	5.99	5.990	.260	.230
	x	16	6.28	4.030	.405	.260
	x	20	6.20	6.020	.365	.260
	x	25	6.38	6.080	.455	.320
8	x	10	7.89	3.940	.205	.170
	x	13	7.99	4.000	.255	.230
	x	15	8.11	4.015	.315	.245
	x	18	8.14	5.250	.330	.230
	x	21	8.28	5.270	.400	.250
	x	24	7.93	6.495	.400	.245
	x	28	8.06	6.535	.465	.285
	x	31	8.00	7.995	.435	.285
	x	35	8.12	8.020	.495	.310

STRUCTURAL & BAR SHAPES

Wide Flange Beams (con't)

Size		Lbs. Per Ft.	Depth A	Flange Width B	Flange Thickness C	Web Thickness D
8	x	40	8.25	8.070	.560	.360
	x	48	8.50	8.110	.685	.400
10	x	12	9.87	3.960	.210	.190
	x	15	9.99	4.000	.270	.230
	x	17	10.11	4.010	.330	.240
	x	19	10.24	4.020	.395	.250
	x	22	10.17	5.750	.360	.240
	x	26	10.33	5.770	.440	.260
	x	30	10.47	5.810	.510	.300
	x	33	9.73	7.960	.435	.290
	x	39	9.92	7.985	.530	.315
	x	45	10.10	8.020	.620	.350
	x	49	9.98	10.000	.560	.340
	x	54	10.09	10.030	.615	.370
12	x	14	11.91	3.970	.225	.200
	x	16	11.99	3.990	.265	.220
	x	19	12.16	4.005	.350	.235
	x	22	12.31	4.030	.425	.260
	x	26	12.22	6.490	.380	.230
	x	30	12.34	6.520	.440	.260
	x	35	12.50	6.560	.520	.300
	x	40	11.94	8.005	.515	.295
	x	45	12.06	8.045	.575	.335
	x	50	12.19	8.080	.640	.370
	x	53	12.06	9.995	.575	.345
	x	58	12.19	10.010	.640	.360
	x	65	12.12	12.000	.605	.390
14	x	22	13.74	5.000	.335	.230
	x	26	13.91	5.025	.420	.255
	x	30	13.84	6.730	.385	.270
	x	34	13.98	6.745	.455	.285
	x	38	14.10	6.770	.515	.310
	x	43	13.66	7.995	.530	.305
	x	48	13.79	8.030	.595	.340
	x	53	13.92	8.060	.660	.370
16	x	26	15.69	5.500	.345	.250
	x	31	15.88	5.525	.440	.275
	x	36	15.86	6.985	.430	.295
	x	40	16.01	6.995	.505	.305
	x	45	16.13	7.035	.565	.345
	x	50	16.26	7.070	.630	.380
	x	57	16.43	7.120	.715	.430
18	x	35	17.70	6.000	.425	.300
	x	40	17.90	6.015	.525	.315
	x	46	18.06	6.060	.605	.360
	x	50	17.99	7.495	.570	.355

STRUCTURAL & BAR SHAPES

Wide Flange Beams (con't)

Thickness Size		Lbs. Per Ft.	Depth A	Flange Width B	Flange Thickness C	Web D
18	x	60	18.24	7.555	.695	.415
21	x	44	20.66	6.500	.450	.350
	x	50	20.83	6.530	.535	.380
	x	62	20.99	8.240	.615	.400
24	x	55	23.57	7.005	.505	.395
	x	60	23.73	8.965	.585	.415
	x	84	24.10	9.020	.770	.470



Bar Channels

ASTM A36
Stock Lengths 20 Ft.

Size in Inches			Lbs. Per Ft.	Lbs. Per 20'
A	B	C		
1	x 1/2	x 1/8	.84	16.80
1 1/4	x 1/2	x 1/8	1.01	20.20
1 1/2	x 1/2	x 1/8	1.12	22.40
2	x 1/2	x 1/8	1.43	28.60
2	x 5/8	x 1/4	2.28	45.60
	x 1	x 1/8	1.59	31.80
	x 1	x 3/16	2.32	46.40



Miscellaneous Channels

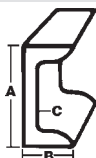
ASTM A36
Stock Lengths 20 Ft.

Size A	Lbs. Per Ft.	Web Thickness C	Flange Width B
3	x 7.1	.312	1.938
4	x 13.8	.500	2.500
6	x 12	.310	2.497
	x 15.3	.340	3.500
	x 16.3	.375	3.000
	x 18	.379	3.504
8	x 8.5	.179	1.874
	x 18.7	.353	2.978
	x 20	.400	3.025
	x 21.4	.375	3.450
	x 22.8	.427	3.502
9	x 25.4	.450	3.500
10	x 6.5	.152	1.127
	x 8.4	.170	1.500

STRUCTURAL & BAR SHAPES

Miscellaneous Channels (con't)

Size A	Lbs. Per Ft.	Web Thickness C	Flange Width B
10	x 22	.290	3.315
	x 25	.380	3.405
	x 28.5	.425	3.950
12	x 10.6	.190	1.500
	x 30.9	.450	3.450
	x 35	.467	3.767
	x 40	.590	3.890
	x 45	.712	4.012
	x 50	.835	4.135
18	x 42.7	.450	3.950
	x 45.8	.500	4.000



Structural Channels

ASTM A36

Stock Lengths 20 Ft.
and 40 Ft.

Size A	Lbs. Per Ft.	Web Thickness C	Flange Width B
3	x 3.5	.140	1.360
	x 4.1	.170	1.410
	x 5	.258	1.498
	x 6	.356	1.596
4	x 5.4	.184	1.584
	x 6.25	.247	1.647
	x 7.25	.321	1.721
5	x 6.7	.190	1.750
	x 9	.325	1.885
6	x 8.2	.200	1.920
	x 10.5	.314	2.034
	x 13	.437	2.157
7	x 9.8	.210	2.090
	x 12.25	.314	2.194
	x 14.75	.419	2.299
8	x 11.5	.220	2.260
	x 13.75	.303	2.343
	x 18.75	.487	2.527
9	x 13.4	.233	2.433
	x 15	.285	2.485
10	x 15.3	.240	2.600
	x 20	.379	2.739
	x 25	.526	2.886
	x 30	.673	3.033
12	x 20.7	.282	2.942
	x 25	.387	3.047
	x 30	.510	3.170
15	x 33.9	.400	3.400
	x 40	.520	3.520
	x 50	.716	3.716

STRUCTURAL & BAR SHAPES



Hot Rolled Bar Size Tees

ASTM A36

Stock Lengths 20 Ft.

Size in B	D	T	Lbs. Per Ft.	Lbs. Per 20'
1 1/4	x1 1/4	x3/16	1.55	31.00
1 1/2	x1 1/2	x3/16	1.90	38.00
2	x 2	x 1/4	3.62	72.40