

## Wide Flange Beam Conversion Factors



Member Size	W/D Value	Metric Designation	M/D Value	Hp/A Value	Square Ft. / Lin. Foot	Square M. / Lin. Meter
W44 x 335	2.52	W1120 x 498	148.7	52.4	11.1	3.38
290	2.2	432	129.8	60.0	11.0	3.35
262	2	390	118.0	66.0	10.9	3.32
230	1.77	342	104.4	74.6	10.8	3.29
W40 x 593	4.56	W1000 x 883	269.0	28.9	10.8	3.29
503	3.93	748	231.9	33.6	10.7	3.26
431	3.42	641	201.8	38.6	10.5	3.20
397	3.15	591	185.9	41.9	10.5	3.20
392	3.38	583	199.4	39.1	9.67	2.95
372	2.98	554	175.8	44.3	10.4	3.17
362	2.9	539	171.1	45.5	10.4	3.17
331	2.9	493	171.1	45.5	9.5	2.90
327	2.89	487	170.5	45.7	9.42	2.87
324	2.61	482	154.0	50.6	10.3	3.14
297	2.41	442	142.2	54.8	10.3	3.14
278	2.48	414	146.3	53.2	9.33	2.84
277	2.25	412	132.8	58.7	10.3	3.14
264	2.36	393	139.2	55.9	9.33	2.84
249	2.02	371	119.2	65.3	10.3	3.14
235	2.1	350	123.9	62.9	9.33	2.84
215	1.76	321	103.8	75.0	10.2	3.11
211	1.9	314	112.1	69.5	9.25	2.82
199	1.64	296	96.8	80.5	10.1	3.08
183	1.66	272	97.9	79.5	9.17	2.80
167	1.53	249	90.3	86.3	9.08	2.77
149	1.37	222	80.8	96.4	9.08	2.77
W36 x 798	6.09	W920 x 1188	359.3	21.7	10.9	3.32
650	5.08	967	299.7	26.0	10.7	3.26
527	4.22	784	249.0	31.3	10.4	3.17
439	3.57	653	210.6	37.0	10.3	3.14
393	3.25	585	191.8	40.6	10.1	3.08
359	2.97	534	175.2	44.4	10.1	3.08
328	2.73	488	161.1	48.4	10.0	3.05
300	2.5	446	147.5	52.8	10.0	3.05
280	2.35	417	138.7	56.2	9.92	3.02
260	2.18	387	128.6	60.6	9.92	3.02
256	2.37	381	139.8	55.7	9	2.74
245	2.08	365	122.7	63.5	9.83	3.00
232	2.15	345	126.9	61.4	9	2.74
230	1.95	342	115.1	67.7	9.83	3.00

The W/D ratios and Square foot factors herein were obtained from the AISC Manual of Steel Construction – Load and Resistance Factor Design – Third Edition.

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W36 x 210	1.96	W920 x 313	115.6	67.3	8.92	2.72
194	1.81	289	106.8	72.9	8.92	2.72
182	1.72	271	101.5	76.7	8.83	2.69
170	1.6	253	94.4	82.5	8.83	2.69
160	1.51	238	89.1	87.4	8.83	2.69
150	1.43	223	84.4	92.3	8.75	2.67
135	1.29	201	76.1	102.3	8.75	2.67
W33 x 387	3.31	W840 x 576	195.3	39.9	9.75	2.97
354	3.05	527	180.0	43.3	9.67	2.95
318	2.77	473	163.4	47.7	9.58	2.92
291	2.55	433	150.5	51.8	9.50	2.90
263	2.33	392	137.5	56.7	9.42	2.87
241	2.13	359	125.7	62.0	9.42	2.87
221	1.97	329	116.2	67.0	9.33	2.84
201	1.79	299	105.6	73.7	9.33	2.84
169	1.7	251	100.3	77.6	8.30	2.53
152	1.53	226	90.3	86.3	8.28	2.52
141	1.43	210	84.4	92.3	8.20	2.50
130	1.32	193	77.9	100.0	8.19	2.50
118	1.21	176	71.4	109.1	8.15	2.48
W30 x 391	3.59	W760 x 582	211.8	36.8	9.08	2.77
357	3.31	531	195.3	39.9	9.00	2.74
326	3.05	484	180.0	43.3	8.92	2.72
292	2.73	434	161.1	48.4	8.92	2.72
261	2.46	389	145.1	53.7	8.83	2.69
235	2.24	350	132.2	58.9	8.75	2.67
211	2.01	314	118.6	65.7	8.75	2.67
191	1.85	284	109.2	71.4	8.58	2.62
173	1.66	257	97.9	79.5	8.67	2.64
148	1.64	220	96.8	80.5	7.53	2.30
132	1.47	196	86.7	89.8	7.46	2.27
124	1.39	185	82.0	95.0	7.44	2.27
116	1.3	173	76.7	101.5	7.43	2.26
108	1.21	161	71.4	109.1	7.41	2.26
99	1.12	147	66.1	117.9	7.38	2.25
90	1.02	134	60.2	129.4	7.33	2.23
W27 x 539	5.08	W690 x 802	299.7	26.0	8.83	2.69
368	3.64	548	214.8	36.3	8.42	2.57

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W27 x 336	3.36	W690 x 500	198.2	39.3	8.33	2.54
307	3.11	457	183.5	42.4	8.23	2.51
281	2.86	418	168.7	46.2	8.18	2.49
258	2.64	384	155.8	50.0	8.14	2.48
235	2.43	350	143.4	54.3	8.05	2.45
217	2.26	323	133.3	58.4	8.00	2.44
194	2.03	289	119.8	65.0	7.97	2.43
178	1.87	265	110.3	70.6	7.92	2.41
161	1.7	240	100.3	77.6	7.88	2.40
146	1.55	217	91.5	85.2	7.86	2.40
129	1.56	192	92.0	84.6	6.90	2.10
114	1.39	170	82.0	95.0	6.86	2.09
102	1.24	152	73.2	106.5	6.84	2.08
94	1.15	140	67.9	114.8	6.79	2.07
84	1.03	125	60.8	128.2	6.77	2.06
W24 x 370	3.98	W610 x 551	234.8	33.2	7.74	2.36
335	3.66	498	215.9	36.1	7.63	2.33
306	3.37	455	198.8	39.2	7.57	2.31
279	3.11	415	183.5	42.4	7.48	2.28
250	2.81	372	165.8	47.0	7.42	2.26
229	2.6	341	153.4	50.8	7.34	2.24
207	2.36	307	139.2	55.9	7.30	2.23
192	2.2	285	129.8	60.0	7.26	2.21
176	2.03	262	119.8	65.0	7.21	2.20
162	1.88	241	110.9	70.2	7.19	2.19
146	1.7	217	100.3	77.6	7.15	2.18
131	1.54	195	90.9	85.7	7.11	2.17
117	1.38	174	81.4	95.7	7.04	2.15
104	1.24	155	73.2	106.5	7.01	2.14
103	1.4	153	82.6	94.3	6.13	1.87
94	1.28	140	75.5	103.1	6.13	1.87
84	1.15	125	67.9	114.8	6.10	1.86
76	1.05	113	62.0	125.7	6.04	1.84
68	0.94	101	55.5	140.4	6.02	1.83
62	0.93	92	54.9	141.9	5.53	1.69
55	0.82	82	48.4	161.0	5.53	1.69
W21 x 201	2.5	W530 x 300	147.5	52.8	6.71	2.05
182	2.28	272	134.5	57.9	6.67	2.03

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W21 x 166	2.09	W530 x 248	123.3	63.2	6.63	2.02
147	1.87	219	110.3	70.6	6.56	2.00
132	1.68	196	99.1	78.6	6.54	1.99
122	1.57	182	92.6	84.1	6.49	1.98
111	1.43	165	84.4	92.3	6.45	1.97
101	1.3	150	76.7	101.5	6.45	1.97
93	1.4	138	82.6	94.3	5.53	1.69
83	1.26	123	74.3	104.8	5.48	1.67
73	1.11	109	65.5	118.9	5.46	1.66
68	1.04	101	61.4	126.9	5.43	1.66
62	0.95	92	56.1	138.9	5.43	1.66
57	0.95	85	56.1	138.9	4.99	1.52
55	0.85	82	50.2	155.3	5.37	1.64
50	0.83	74	49.0	159.0	4.98	1.52
48	0.75	72	44.3	176.0	5.33	1.62
44	0.74	66	43.7	178.4	4.92	1.50
W18 x 175	2.46	W460 x 260	145.1	53.7	5.93	1.81
158	2.24	235	132.2	58.9	5.88	1.79
143	2.05	213	121.0	64.4	5.82	1.77
130	1.88	193	110.9	70.2	5.78	1.76
119	1.72	177	101.5	76.7	5.77	1.76
106	1.55	158	91.5	85.2	5.72	1.74
97	1.42	144	83.8	93.0	5.68	1.73
86	1.27	128	74.9	103.9	5.65	1.72
76	1.13	113	66.7	116.8	5.61	1.71
71	1.22	106	72.0	108.2	4.83	1.47
65	1.13	97	66.7	116.8	4.80	1.46
60	1.04	89	61.4	126.9	4.79	1.46
55	0.96	82	56.6	137.5	4.76	1.45
50	0.88	74	51.9	150.0	4.73	1.44
46	0.87	68	51.3	151.7	4.37	1.33
40	0.76	60	44.8	173.7	4.34	1.32
35	0.67	52	39.5	197.0	4.34	1.32
W16 x 100	1.59	W410 x 149	93.8	83.0	5.23	1.59
89	1.43	132	84.4	92.3	5.20	1.58
77	1.25	114	73.8	105.6	5.13	1.56
67	1.09	100	64.3	121.1	5.12	1.56
57	1.09	85	64.3	121.1	4.34	1.32
50	0.96	74	56.6	137.5	4.33	1.32
45	0.87	67	51.3	151.7	4.31	1.31

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W16 x 40	0.78	W410 x 60	46.0	169.2	4.28	1.30
36	0.7	53	41.3	188.6	4.28	1.30
31	0.66	46	38.9	200.0	3.91	1.19
26	0.55	39	32.5	240.0	3.88	1.18
W14 x 808	8.75	W360 x 1202	516.3	15.1	7.69	2.34
730	8.08	1086	476.7	16.3	7.53	2.30
665	7.49	990	441.9	17.6	7.40	2.26
605	6.96	900	410.6	19.0	7.24	2.21
550	6.43	818	379.4	20.5	7.13	2.17
500	5.95	744	351.1	22.2	7.00	2.13
455	5.53	677	326.3	23.9	6.86	2.09
426	5.21	634	307.4	25.3	6.82	2.08
398	4.93	592	290.9	26.8	6.73	2.05
370	4.63	551	273.2	28.5	6.66	2.03
342	4.32	509	254.9	30.6	6.59	2.01
311	3.98	463	234.8	33.2	6.51	1.98
283	3.66	421	215.9	36.1	6.44	1.96
257	3.36	382	198.2	39.3	6.38	1.94
233	3.08	347	181.7	42.9	6.30	1.92
211	2.81	314	165.8	47.0	6.27	1.91
193	2.6	287	153.4	50.8	6.19	1.89
176	2.38	262	140.4	55.5	6.18	1.88
159	2.16	237	127.4	61.1	6.13	1.87
145	1.99	216	117.4	66.3	6.06	1.85
132	1.89	196	111.5	69.8	5.83	1.78
120	1.71	179	100.9	77.2	5.84	1.78
109	1.57	162	92.6	84.1	5.80	1.77
99	1.43	147	84.4	92.3	5.77	1.76
90	1.31	134	77.3	100.8	5.73	1.75
82	1.45	122	85.6	91.0	4.71	1.44
74	1.32	110	77.9	100.0	4.68	1.43
68	1.22	101	72.0	108.2	4.64	1.41
61	1.1	91	64.9	120.0	4.64	1.41
53	1.06	79	62.5	124.5	4.15	1.26
48	0.97	72	57.2	136.1	4.13	1.26
43	0.87	64	51.3	151.7	4.10	1.25
38	0.8	57	47.2	165.0	3.92	1.19
34	0.72	51	42.5	183.3	3.91	1.19
30	0.64	45	37.8	206.3	3.88	1.18
26	0.62	39	36.6	212.9	3.45	1.05
22	0.53	33	31.3	249.1	3.43	1.05

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W12 x 336	4.85	W310 x 500	286.2	27.2	5.78	1.76
305	4.49	454	264.9	29.4	5.66	1.73
279	4.19	415	247.2	31.5	5.55	1.69
252	3.84	375	226.6	34.4	5.48	1.67
230	3.55	342	209.5	37.2	5.39	1.64
210	3.27	313	192.9	40.4	5.35	1.63
190	3	283	177.0	44.0	5.28	1.61
170	2.72	253	160.5	48.5	5.22	1.59
152	2.45	225	144.6	53.9	5.18	1.58
136	2.23	202	131.6	59.2	5.08	1.55
120	1.99	179	117.4	66.3	5.03	1.53
106	1.77	158	104.4	74.6	4.99	1.52
96	1.61	143	95.0	82.0	4.98	1.52
87	1.47	129	86.7	89.8	4.93	1.50
79	1.34	117	79.1	98.5	4.90	1.49
72	1.23	107	72.6	107.3	4.86	1.48
65	1.11	97	65.5	118.9	4.86	1.48
58	1.1	86	64.9	120.0	4.39	1.34
53	1.02	79	60.2	129.4	4.33	1.32
50	1.06	74	62.5	124.5	3.92	1.19
45	0.97	67	57.2	136.1	3.85	1.17
40	0.86	60	50.7	153.5	3.88	1.18
35	0.81	52	47.8	163.0	3.60	1.10
30	0.69	45	40.7	191.3	3.58	1.09
26	0.61	39	36.0	216.4	3.54	1.08
22	0.62	33	36.6	212.9	2.94	0.90
19	0.54	28	31.9	244.4	2.93	0.89
16	0.45	24	26.6	293.3	2.92	0.89
14	0.4	21	23.6	330.0	2.88	0.88
W10 x 112	2.17	W250 x 167	128.0	60.8	4.29	1.31
100	1.97	149	116.2	67.0	4.23	1.29
88	1.74	131	102.7	75.9	4.21	1.28
77	1.54	115	90.9	85.7	4.16	1.27
68	1.38	101	81.4	95.7	4.09	1.25
60	1.22	89	72.0	108.2	4.09	1.25
54	1.11	80	65.5	118.9	4.05	1.23
49	1.01	73	59.6	130.7	4.03	1.23
45	1.06	67	62.5	124.5	3.55	1.08
39	0.92	58	54.3	143.5	3.50	1.07
33	0.78	49	46.0	169.2	3.50	1.07
30	0.8	45	47.2	165.0	3.09	0.94

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Member Size	W/D Value	Metric Designation	M/D Value	Hp/A Value	Square Ft. / Lin. Foot	Square M. / Lin. Meter
W10 x 26	0.7	W10 x 39	41.3	188.6	3.06	0.93
22	0.6	33	35.4	220.0	3.03	0.92
19	0.6	28	35.4	220.0	2.61	0.80
17	0.54	25	31.9	244.4	2.61	0.80
15	0.48	22	28.3	275.0	2.58	0.79
12	0.39	18	23.0	338.5	2.55	0.78
W8 x 67	1.65	W200 x 100	97.4	80.0	3.39	1.03
58	1.44	86	85.0	91.7	3.35	1.02
48	1.21	71	71.4	109.1	3.31	1.01
40	1.03	59	60.8	128.2	3.25	0.99
35	0.9	52	53.1	146.7	3.22	0.98
31	0.8	46	47.2	165.0	3.22	0.98
28	0.81	42	47.8	163.0	2.85	0.87
24	0.7	36	41.3	188.6	2.84	0.87
21	0.67	31	39.5	197.0	2.59	0.79
18	0.58	27	34.2	227.6	2.58	0.79
15	0.55	22	32.5	240.0	2.27	0.69
13	0.48	19	28.3	275.0	2.24	0.68
10	0.37	15	21.8	356.8	2.23	0.68
W6 x 25	0.83	W150 x 37	49.0	159.0	2.48	0.76
20	0.67	30	39.5	197.0	2.46	0.75
16	0.68	24	40.1	194.1	1.95	0.59
15	0.52	22	30.7	253.8	2.40	0.73
12	0.52	18	30.7	253.8	1.90	0.58
9	0.39	14	23.0	338.5	1.88	0.57
8.5	0.37	13	21.8	356.8	1.89	0.58
W5 x 19	0.77	W130 x 28	45.4	171.4	2.04	0.62
16	0.66	24	38.9	200.0	2.01	0.61
W4 x 13	0.67	W100 x 19	39.5	197.0	1.62	0.49

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