

Wide Flange Column 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	2.25	W1120 x 498	132.8	59.5	12.4	3.78
290	1.97	432	116.2	68.0	12.3	3.75
262	1.78	390	105.0	75.3	12.3	3.75
230	1.58	342	93.2	84.8	12.2	3.72
W40 x 593	4.03	W1000 x 883	237.8	33.2	12.3	3.75
503	3.49	748	205.9	38.4	12.0	3.66
431	3.04	641	179.4	44.1	11.9	3.63
397	2.80	591	165.2	47.9	11.8	3.60
392	3.06	583	180.5	43.8	10.7	3.26
372	2.64	554	155.8	50.8	11.8	3.60
362	2.57	539	151.6	52.1	11.8	3.60
331	2.63	493	155.2	50.9	10.5	3.20
327	2.62	487	154.6	51.1	10.4	3.17
324	2.31	482	136.3	58.0	11.7	3.57
297	2.14	442	126.3	62.6	11.6	3.54
278	2.24	414	132.2	59.8	10.3	3.14
277	1.99	412	117.4	67.3	1.99	0.61
264	2.13	393	125.7	62.9	10.3	3.14
249	1.79	371	105.6	74.9	11.6	3.54
235	1.90	350	112.1	70.5	10.3	3.14
215	1.56	320	92.0	85.9	11.5	3.51
211	1.72	314	101.5	77.9	10.3	3.14
199	1.45	296	85.6	92.4	11.4	3.47
183	1.50	272	88.5	89.3	10.2	3.11
167	1.38	249	81.4	97.1	10.1	3.08
149	1.23	222	72.6	108.9	10.1	3.08
W36 x 798	5.36	W920 x 1188	316.2	25.0	12.4	3.78
650	4.45	967	262.6	30.1	12.2	3.72
527	3.71	784	218.9	36.1	11.8	3.60
439	3.14	653	185.3	42.7	11.7	3.57
393	2.85	585	168.2	47.0	11.5	3.51
359	2.62	534	154.6	51.1	11.4	3.47
328	2.39	488	141.0	56.1	11.4	3.47
300	2.21	446	130.4	60.6	11.3	3.44
280	2.06	417	121.5	65.0	11.3	3.44
260	1.93	387	113.9	69.4	11.3	3.44
256	2.13	381	125.7	62.9	10.0	3.05
245	1.81	365	106.8	74.0	11.3	3.44
232	1.93	345	113.9	69.4	10.0	3.05
230	1.72	342	101.5	77.9	11.2	3.41
210	1.76	313	103.8	76.1	9.92	3.02
194	1.63	289	96.2	82.2	9.92	3.02
182	1.53	271	90.3	87.6	9.92	3.02
170	1.44	253	85.0	93.0	9.83	3.00
160	1.36	238	80.2	98.5	9.83	3.00
150	1.28	233	75.5	104.7	9.75	2.97

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 135	1.15	W920 x 201	67.9	116.5	9.75	2.97
W33 x 387	2.91	W840 x 576	171.7	46.0	11.1	3.38
354	2.68	527	158.1	50.0	11.0	3.35
318	2.43	473	143.4	55.1	10.9	3.32
291	2.24	433	132.2	59.8	10.8	3.29
263	2.04	392	120.4	65.7	10.8	3.29
241	1.87	359	110.3	71.6	10.8	3.29
221	1.73	329	102.1	77.4	10.7	3.26
201	1.58	299	93.2	84.8	10.6	3.23
169	1.52	251	89.7	88.1	9.25	2.82
152	1.37	226	80.8	97.8	9.25	2.82
141	1.28	210	75.5	104.7	9.17	2.80
130	1.18	193	69.6	113.5	9.17	2.80
118	1.08	176	63.7	124.1	9.08	2.77
W30 x 391	3.13	W760 x 582	184.7	42.8	10.4	3.17
357	2.88	531	169.9	46.5	10.3	3.14
326	2.65	484	156.4	50.6	10.3	3.14
292	2.39	434	141.0	56.1	10.2	3.11
261	2.16	389	127.4	62.0	10.1	3.08
235	1.96	350	115.6	68.4	10.0	3.05
211	1.76	314	103.8	76.1	10.0	3.05
191	1.62	284	95.6	82.7	9.83	3.00
173	1.45	257	85.6	92.4	9.92	3.02
148	1.47	220	86.7	91.1	8.42	2.57
132	1.32	196	77.9	101.5	8.33	2.54
124	1.24	185	73.2	108.1	8.32	2.54
116	1.16	173	68.4	115.5	8.30	2.53
108	1.09	161	64.3	122.9	8.28	2.52
99	1	147	59.0	134.0	8.25	2.51
90	0.91	134	53.7	147.2	8.20	2.50
W27x539	4.45	W690 x 802	262.6	30.1	10.1	3.08
368	3.17	548	187.0	42.3	9.67	2.95
336	2.92	500	172.3	45.9	9.58	2.92
307	2.72	457	160.5	49.3	9.42	2.87
281	2.49	418	146.9	53.8	9.42	2.87
258	2.3	384	135.7	58.3	9.33	2.84
235	2.12	350	125.1	63.2	9.25	2.82
217	1.97	323	116.2	68.0	9.17	2.80
194	1.76	289	103.8	76.1	9.17	2.80
178	1.63	265	96.2	82.2	9.08	2.77
161	1.48	240	87.3	90.5	9.08	2.77
146	1.35	217	79.7	99.2	9.00	2.74
129	1.39	192	82.0	96.4	7.73	2.36

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W27 x 114	1.23	W690 x 170	72.6	108.9	7.70	2.35
102	1.11	152	65.5	120.7	7.68	2.34
94	1.03	140	60.8	130.1	7.63	2.33
84	0.92	125	54.3	145.6	7.60	2.32
W24 x 370	3.46	W610 x 551	204.1	38.7	8.92	2.72
335	3.19	498	188.2	42.0	8.75	2.67
306	2.94	455	173.5	45.6	8.67	2.64
279	2.71	415	159.9	49.4	8.58	2.62
250	2.45	372	144.6	54.7	8.50	2.59
229	2.27	341	133.9	59.0	8.42	2.57
207	2.05	307	121.0	65.4	8.42	2.57
192	1.92	285	113.3	69.8	8.33	2.54
176	1.77	262	104.4	75.7	8.28	2.52
162	1.63	241	96.2	82.2	8.28	2.52
146	1.48	217	87.3	90.5	8.23	2.51
131	1.33	195	78.5	100.7	8.18	2.49
117	1.2	174	70.8	111.7	8.11	2.47
104	1.07	155	63.1	125.2	8.08	2.46
103	1.25	153	73.8	107.2	6.88	2.10
94	1.14	140	67.3	117.5	6.88	2.10
84	1.02	125	60.2	131.4	6.85	2.09
76	0.93	113	54.9	144.1	6.79	2.07
68	0.83	101	49.0	161.4	6.77	2.06
62	0.84	92	49.6	159.5	6.13	1.87
55	0.74	82	43.7	181.1	6.12	1.87
W21 x 201	2.16	W530 x 300	127.4	62.0	7.76	2.37
182	1.97	272	116.2	68.0	7.71	2.35
166	1.81	248	106.8	74.0	7.66	2.33
147	1.61	219	95.0	83.2	7.60	2.32
132	1.45	196	85.6	92.4	7.58	2.31
122	1.35	182	79.7	99.2	7.53	2.30
111	1.24	165	73.2	108.1	7.48	2.28
101	1.13	150	66.7	118.6	7.48	2.28
93	1.24	138	73.2	108.1	6.23	1.90
83	1.12	123	66.1	119.6	6.18	1.88
73	0.98	109	57.8	136.7	6.15	1.87
68	0.92	101	54.3	145.6	6.12	1.87
62	0.84	92	49.6	159.5	6.11	1.86
57	0.85	85	50.2	157.6	5.54	1.69
55	0.75	82	44.3	178.6	6.05	1.84
50	0.75	74	44.3	178.6	5.53	1.69
48	0.66	72	38.9	203.0	6.01	1.83
44	0.67	66	39.5	200.0	5.46	1.66
W18 x 175	2.12	W460 x 260	125.1	63.2	6.88	2.10
158	1.93	235	113.9	69.4	6.82	2.08

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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
W18 x 143	1.77	W460 x 213	104.4	75.7	6.75	2.06
130	1.61	193	95.0	83.2	6.71	2.05
119	1.48	177	87.3	90.5	6.71	2.05
106	1.33	158	78.5	100.7	6.65	2.03
97	1.22	144	72.0	109.8	6.60	2.01
86	1.09	128	64.3	122.9	6.58	2.01
76	0.97	113	57.2	138.1	6.53	1.99
71	1.08	106	63.7	124.1	5.47	1.67
65	0.99	97	58.4	135.3	5.43	1.66
60	0.92	89	54.3	145.6	5.42	1.65
55	0.85	82	50.2	157.6	5.39	1.64
50	0.77	74	45.4	174.0	5.36	1.63
46	0.78	68	46.0	171.8	4.88	1.49
40	0.68	60	40.1	197.0	4.84	1.48
35	0.6	52	35.4	223.3	4.84	1.48
W16 x 100	1.37	W410 x 149	80.8	97.8	6.09	1.86
89	1.22	132	72.0	109.8	6.07	1.85
77	1.07	114	63.1	125.2	5.99	1.83
67	0.93	100	54.9	144.1	5.97	1.82
57	0.96	85	56.6	139.6	4.93	1.50
50	0.84	74	49.6	159.5	4.93	1.50
45	0.76	67	44.8	176.3	4.89	1.49
40	0.68	60	40.1	197.0	4.86	1.48
36	0.61	53	36.0	219.6	4.86	1.48
31	0.59	46	34.8	227.1	4.37	1.33
26	0.49	39	28.9	273.4	4.34	1.32
W14 x 808	7.28	W360 x 1202	429.5	18.4	9.25	2.82
730	6.76	1086	398.8	19.8	9.00	2.74
665	6.21	990	366.4	21.6	8.92	2.72
605	5.82	900	343.4	23.0	8.67	2.64
550	5.34	818	315.1	25.1	8.58	2.62
500	4.95	744	292.1	27.1	8.42	2.57
455	4.59	677	270.8	29.2	8.26	2.52
426	4.32	634	254.9	31.0	8.21	2.50
398	4.09	592	241.3	32.8	8.11	2.47
370	3.84	551	226.6	34.9	8.03	2.45
342	3.58	509	211.2	37.4	7.96	2.43
311	3.3	463	194.7	40.6	7.86	2.40
283	3.03	421	178.8	44.2	7.78	2.37
257	2.78	382	164.0	48.2	7.71	2.35
233	2.55	347	150.5	52.5	7.63	2.33
211	2.32	314	136.9	57.8	7.58	2.31
193	2.14	287	126.3	62.6	7.50	2.29
176	1.96	262	115.6	68.4	7.48	2.28
159	1.78	237	105.0	75.3	7.43	2.26
145	1.64	216	96.8	81.7	7.35	2.24
132	1.56	196	92.0	85.9	7.06	2.15

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W14 x 120	1.42	W360 x 179	83.8	94.4	7.07	2.15
109	1.29	162	76.1	103.9	7.02	2.14
99	1.18	147	69.6	113.5	6.98	2.13
90	1.08	134	63.7	124.1	6.93	2.11
82	1.23	122	72.6	108.9	5.55	1.69
74	1.12	110	66.1	119.6	5.53	1.69
68	1.04	101	61.4	128.8	5.48	1.67
61	0.92	91	54.3	145.6	5.48	1.67
53	0.91	79	53.7	147.2	4.83	1.47
48	0.83	72	49.0	161.4	4.79	1.46
43	0.75	64	44.3	178.6	4.77	1.45
38	0.7	57	41.3	191.4	4.48	1.37
34	0.63	51	37.2	212.7	4.48	1.37
30	0.56	45	33.0	239.3	4.45	1.36
26	0.55	39	32.5	243.6	3.88	1.18
22	0.47	33	27.7	285.1	3.85	1.17
W12 x 336	4.06	W310 x 500	239.5	33.0	6.89	2.10
305	3.76	454	221.8	35.6	6.76	2.06
279	3.5	415	206.5	38.3	6.64	2.02
252	3.2	375	188.8	41.9	6.56	2.00
230	2.96	342	174.6	45.3	6.47	1.97
210	2.73	313	161.1	49.1	6.42	1.96
190	2.5	283	147.5	53.6	6.34	1.93
170	2.26	253	133.3	59.3	6.27	1.91
152	2.04	225	120.4	65.7	6.22	1.90
136	1.86	202	109.7	72.0	6.11	1.86
120	1.65	179	97.4	81.2	6.06	1.85
106	1.47	158	86.7	91.1	6.01	1.83
96	1.34	143	79.1	100.0	5.99	1.83
87	1.22	129	72.0	109.8	5.93	1.81
79	1.11	117	65.5	120.7	5.91	1.80
72	1.02	107	60.2	131.4	5.86	1.79
65	0.92	97	54.3	145.6	5.86	1.79
58	0.92	86	54.3	145.6	5.23	1.59
53	0.85	79	50.2	157.6	5.17	1.58
50	0.9	74	53.1	148.9	4.58	1.40
45	0.82	67	48.4	163.4	4.53	1.38
40	0.73	60	43.1	183.5	4.54	1.38
35	0.7	52	41.3	191.4	4.15	1.26
30	0.6	45	35.4	223.3	4.12	1.26
26	0.53	39	31.3	252.8	4.08	1.24
22	0.56	33	33.0	239.3	3.28	1.00
19	0.48	28	28.3	279.1	3.27	1.00
16	0.41	24	24.2	326.8	3.25	0.99
14	0.36	25	21.2	372.2	3.22	0.98
W10 x 112	1.81	W250 x 167	106.8	74.0	5.16	1.57
100	1.64	149	96.8	81.7	5.08	1.55

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W10 x 88	1.45	W250 x 131	85.6	92.4	5.07	1.55
77	1.28	115	75.5	104.7	5.01	1.53
68	1.15	101	67.9	116.5	4.93	1.50
60	1.01	89	59.6	132.7	4.93	1.50
54	0.92	80	54.3	145.6	4.88	1.49
49	0.84	73	49.6	159.5	4.86	1.48
45	0.88	67	51.9	152.3	4.23	1.29
39	0.78	58	46.0	171.8	4.17	1.27
33	0.66	49	38.9	203.0	4.16	1.27
30	0.69	45	40.7	194.2	3.58	1.09
26	0.61	39	36.0	219.6	3.54	1.08
22	0.52	33	30.7	257.7	3.51	1.07
19	0.53	28	31.3	252.8	2.94	0.90
17	0.48	25	28.3	279.1	2.94	0.90
15	0.42	22	24.8	319.0	2.92	0.89
12	0.34	18	20.1	394.1	2.88	0.88
W8 x 67	1.37	W200 x 100	80.8	97.8	4.08	1.24
58	1.2	86	70.8	111.7	4.04	1.23
48	1	71	59.0	134.0	3.98	1.21
40	0.84	59	49.6	159.5	3.93	1.20
35	0.74	52	43.7	181.1	3.89	1.19
31	0.66	46	38.9	203.0	3.88	1.18
28	0.68	42	40.1	197.0	3.39	1.03
24	0.59	36	34.8	227.1	3.38	1.03
21	0.57	31	33.6	235.1	3.03	0.92
18	0.49	27	28.9	273.4	3.01	0.92
15	0.48	22	28.3	279.1	2.60	0.79
13	0.42	19	24.8	319.0	2.58	0.79
10	0.33	15	19.5	406.0	2.55	0.78
W6 x 25	0.69	W150 x 37	40.7	194.2	2.99	0.91
20	0.56	30	33.0	239.3	2.96	0.90
16	0.58	24	34.2	231.0	2.28	0.69
15	0.43	22	25.4	311.6	2.90	0.88
12	0.44	18	26.0	304.5	2.23	0.68
9	0.33	14	19.5	406.0	2.22	0.68
W5 x 19	0.64	W130 x 28	37.8	209.3	2.46	0.75
16	0.55	24	32.5	243.6	2.43	0.74
W4 x 13	0.55	W100 x 19	32.5	243.6	1.95	0.59

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