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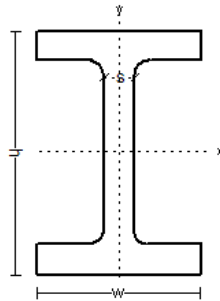
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American Wide Flange Beams - W Beam

American Wide Flange Beams ASTM A6 in English units

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Properties in imperial units of American Wide Flange Beams according ASTM A6 are indicated below.

- [American Wide Flange Beams according ASTM A6 in metric units](#)

Designation	Dimensions					Static Parameters			
						Moment of Inertia		Section Modulus	
Imperial (in x lb/ft)	Depth h (in)	Width w (in)	Web Thickness s (in)	Sectional Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	I _y (in ⁴)	W _x (in ³)	W _y (in ³)
W 27 x 178	27.8	14.09	0.725	52.3	178	6990	555	502	78.8
W 27 x 161	27.6	14.02	0.660	47.4	161	6280	497	455	70.9
W 27 x 146	27.4	14	0.605	42.9	146	5630	443	411	63.5
W 27 x 114	27.3	10.07	0.570	33.5	114	4090	159	299	31.5
W 27 x 102	27.1	10.02	0.515	30.0	102	3620	139	267	27.8
W 27 x 94	26.9	10	0.490	27.7	94	3270	124	243	24.8
W 27 x 84	26.7	9.96	0.460	24.8	84	2850	106	213	21.2
W 24 x 162	25	13	0.705	47.7	162	5170	443	414	68.4
W 24 x 146	24.7	12.9	0.650	43.0	146	4580	391	371	60.5
W 24 x 131	24.5	12.9	0.605	38.5	131	4020	340	329	53.0
W 24 x 117	24.3	12.8	0.55	34.4	117	3540	297	291	46.5
W 24 x 104	24.1	12.75	0.500	30.6	104	3100	259	258	40.7
W 24 x 94	24.1	9.07	0.515	27.7	94	2700	109	222	24.0
W 24 x 84	24.1	9.02	0.470	24.7	84	2370	94.4	196	20.9
W 24 x 76	23.9	9	0.440	22.4	76	2100	82.5	176	18.4
W 24 x 68	23.7	8.97	0.415	20.1	68	1830	70.4	154	15.7
W 24 x 62	23.7	7.04	0.430	18.2	62	1550	34.5	131	9.8
W 24 x 55	23.6	7.01	0.395	16.2	55	1350	29.1	114	8.3
W 21 x 147	22.1	12.51	0.720	43.2	147	3630	376	329	60.1
W 21 x 132	21.8	12.44	0.650	38.8	132	3220	333	295	53.5
W 21 x 122	21.7	12.39	0.600	35.9	122	2960	305	273	49.2
W 21 x 111	21.5	12.34	0.550	32.7	111	2670	274	249	44.5
W 21 x 101	21.4	12.29	0.500	29.8	101	2420	248	227	40.3
W 21 x 93	21.6	8.42	0.580	27.3	93	2070	92.9	192	22.1
W 21 x 83	21.4	8.36	0.515	24.3	83	1830	81.4	171	19.5
W 21 x 73	21.2	8.3	0.455	21.5	73	1600	70.6	151	17.0
W 21 x 68	21.1	8.27	0.430	20.0	68	1480	64.7	140	15.7
W 21 x 62	21	8.24	0.400	18.3	62	1330	57.5	127	13.9
W 21 x 57	21.1	6.56	0.405	16.7	57	1170	30.6	111	9.4

W 21 x 50	20.8	6.53	0.380	14.7	50	984	24.9	94.5	7.6
W 21 x 44	20.7	6.5	0.350	13.0	44	843	20.7	81.6	6.4
W 18 x 119	19	11.27	0.655	35.1	119	2190	253	231	44.9
W 18 x 106	18.7	11.2	0.590	31.1	106	1910	220	204	39.4
W 18 x 97	15.6	11.15	0.535	28.5	97	1750	201	188	36.1
W 18 x 86	18.4	11.09	0.480	25.3	86	1530	175	166	31.6
W 18 x 76	18.2	11.04	0.425	22.3	76	1330	152	146	27.6
W 18 x 71	18.5	7.64	0.495	20.8	71	1170	60.3	127	15.8
W 18 x 65	18.4	7.59	0.450	19.1	65	1070	54.8	117	14.4
W 18 x 60	18.2	7.56	0.415	17.6	60	984	50.1	108	13.3
W 18 x 55	18.1	7.53	0.390	16.2	55	890	44.9	98.3	11.9
W 18 x 50	18	7.5	0.355	14.7	50	800	40.1	88.9	10.7
W 18 x 46	18.1	6.06	0.360	13.5	46	712	22.5	78.8	7.4
W 18 x 40	17.9	6.02	0.315	11.8	40	612	19.1	68.4	6.4
W 18 x 35	17.7	6	0.300	10.3	35	510	15.3	57.6	5.1
W 16 x 100	16.97	10.425	0.585	29.4	100	1490	186	175	35.7
W 16 x 89	16.75	10.365	0.525	26.2	89	1300	163	155	31.4
W 16 x 77	16.52	10.295	0.455	22.6	77	1100	138	134	26.9
W 16 x 67	16.33	10.235	0.395	19.7	67	954	119	117	23.2
W 16 x 57	16.43	7.120	0.430	16.8	57	758	43.1	92.2	12.1
W 16 x 50	16.26	7.070	0.380	14.7	50	659	37.2	81	10.5
W 16 x 45	16.13	7.035	0.345	13.3	45	586	32.8	72.7	9.3
W 16 x 40	16.01	6.995	0.305	11.8	40	518	28.9	64.7	8.3
W 16 x 36	15.86	6.985	0.295	10.6	36	448	24.5	56.5	7
W 16 x 31	15.88	5.525	0.275	9.12	31	375	12.4	47.2	4.5
W 16 x 26	15.69	5.5	0.250	7.68	26	301	9.6	38.4	3.5
W 14 x 132	14.66	14.725	0.645	38.8	132	1530	548	209	74.5
W 14 x 120	14.48	14.670	0.590	35.3	120	1380	495	190	67.5
W 14 x 109	14.32	14.605	0.525	32	109	1240	447	173	61.2
W 14 x 99	14.16	14.565	0.485	29.1	99	1110	402	157	55.2
W 14 x 90	14.02	14.520	0.440	26.5	90	999	362	143	49.9
W 14 x 82	14.31	10.130	0.510	24.1	82	882	148	123	29.3
W 14 x 74	14.17	10.070	0.450	21.8	74	796	134	112	26.6
W 14 x 68	14.04	10.035	0.415	20.0	68	723	121	103	24.2
W 14 x 61	13.89	9.995	0.375	17.9	61	640	107	92.2	21.5
W 14 x 53	13.92	8.060	0.370	15.6	53	541	57.7	77.8	14.3
W 14 x 48	13.79	8.030	0.340	14.1	48	485	51.4	70.3	12.8
W 14 x 43	13.66	7.995	0.305	12.6	43	428	45.2	62.7	11.3
W 14 x 38	14.10	6.770	0.310	11.2	38	385	26.7	54.6	7.9
W 14 x 34	13.98	6.745	0.285	10.0	34	340	23.3	48.6	6.9
W 14 x 30	13.84	6.730	0.270	8.85	30	291	19.6	42.0	5.8
W 14 x 26	13.91	5.025	0.255	7.69	26	245	8.9	35.3	3.5
W 14 x 22	13.74	5	0.230	6.49	22	199	7	29.0	2.8
W 12 x 136	13.41	12.4	0.79	39.9	136	1240	398	186	64.2
W 12 x 120	13.12	12.32	0.71	35.3	120	1070	345	163	56.0
W 12 x 106	12.89	12.22	0.61	31.2	106	933	301	145	49.3
W 12 x 96	12.71	12.16	0.55	28.2	96	833	270	131	44.4
W 12 x 87	12.53	12.125	0.515	25.6	87	740	241	118	39.7
W 12 x 79	12.38	12.08	0.47	23.2	79	662	216	107	35.8
W 12 x 72	12.25	12.04	0.43	21.1	72	597	195	97.4	32.4
W 12 x 65	12.12	12	0.39	19.1	65	533	174	87.9	29.1
W 12 x 58	12.19	10.01	0.36	17.0	58	475	107	78	21.4
W 12 x 53	12.06	9.995	0.345	15.6	53	425	95.8	70.6	19.2
W 12 x 50	12.19	8.08	0.37	14.7	50	394	56.3	64.7	13.9
W 12 x 45	12.06	8.045	0.335	13.2	45	350	50.0	58.1	12.4
W 12 x 40	11.94	8.005	0.295	11.8	40	310	44.1	51.9	11.0
W 12 x 35	12.50	6.56	0.3	10.3	35	285	24.5	45.6	7.5
W 12 x 30	12.34	6.52	0.26	8.8	30	238	20.3	38.6	6.2
W 12 x 26	12.22	6.490	0.23	7.7	26	204	17.3	33.4	5.3
W 12 x 22	12.31	4.03	0.26	6.5	22	156	4.7	25.4	2.3
W 12 x 19	12.16	4.005	0.235	5.6	19	130	3.8	21.3	1.9
W 12 x 16	11.99	3.990	0.22	4.7	16	103	2.8	17.1	1.4
W 12 x 14	11.91	3.970	0.2	4.2	14	88.6	2.4	14.9	1.2

W 10 x 112	11.36	10.415	0.755	32.9	112	716	236	126	45.3
W 10 x 100	11.1	10.340	0.680	29.4	100	623	207	112	40.0
W 10 x 88	10.84	10.265	0.605	25.9	88	534	179	98.5	34.8
W 10 x 77	10.60	10.190	0.530	22.6	77	455	154	85.9	30.1
W 10 x 68	10.40	10.130	0.470	20.0	68	394	134	75.7	26.4
W 10 x 60	10.22	10.080	0.420	17.6	60	341	116	66.7	23.0
W 10 x 54	10.09	10.030	0.370	15.8	54	303	103	60.0	20.6
W 10 x 49	9.98	10	0.340	14.4	49	272	93.4	54.6	18.7
W 10 x 45	10.10	8.020	0.350	13.3	45	248	53.4	49.1	13.3
W 10 x 39	9.92	7.985	0.315	11.5	39	209	45.0	42.1	11.3
W 10 x 33	9.73	7.960	0.290	9.71	33	170	36.6	35.0	9.2
W 10 x 30	10.47	5.81	0.3	8.84	30	170	16.7	32.4	5.8
W 10 x 26	10.33	5.770	0.26	7.6	26	144	14.1	27.9	4.9
W 10 x 22	10.17	5.750	0.240	6.5	22	118	11.4	23.2	4
W 10 x 19	10.24	4.020	0.250	5.6	19	96.3	3	18.8	2.1
W 10 x 17	10.11	4.010	0.240	5	17	81.9	3.6	16.2	1.8
W 10 x 15	9.99	4	0.230	4.4	15	68.9	2.9	13.8	1.5
W 10 x 12	9.87	3.960	0.190	3.5	12	53.8	2.2	10.9	1.1
W 8 x 67	9.00	8.280	0.570	19.7	67	272	88.6	60.4	21.4
W 8 x 58	8.75	8.220	0.510	17.1	58	228	75.1	52.0	18.3
W 8 x 48	8.5	8.110	0.400	14.1	48	184	60.9	43.3	15.0
W 8 x 40	8.25	8.070	0.360	11.7	40	146	49.1	35.5	12.2
W 8 x 35	8.12	8.020	0.310	10.3	35	127	42.6	31.2	10.6
W 8 x 31	8.00	7.995	0.285	9.1	31	110	37.1	27.5	9.3
W 8 x 28	8.06	6.535	0.285	8.3	28	98.0	21.7	24.3	6.6
W 8 x 24	7.93	6.495	0.245	7.1	24	82.8	18.3	20.9	5.6
W 8 x 21	8.28	5.270	0.250	6.2	21	75.3	9.8	18.2	3.7
W 8 x 18	8.14	5.250	0.230	5.3	18	61.9	8	15.2	3
W 8 x 15	8.11	4.015	0.245	4.4	15	48.0	3.4	11.8	1.7
W 8 x 13	7.99	4	0.230	3.8	13	39.6	2.7	9.9	1.4
W 8 x 10	7.89	3.940	0.170	2.9	10	30.3	2.1	7.8	1.1
W 6 x 25	6.38	6.080	0.320	7.3	25	53.4	17.1	16.7	5.6
W 6 x 20	6.20	6.020	0.260	5.9	20	51.4	13.3	13.4	4.4
W 6 x 16	6.28	4.030	0.260	4.7	16	32.1	4.4	10.2	2.2
W 6 x 15	5.99	5.990	0.230	4.4	15	29.1	9.3	9.7	3.1
W 6 x 12	6.03	4	0.230	3.6	12	22.1	3	7.3	1.5
W 6 x 9	5.90	3.940	0.170	2.7	9	16.4	2.2	5.6	1.1
W 5 x 19	5.15	5.030	0.270	5.5	19	26.2	9.1	10.2	3.6
W 5 x 16	5.01	5	0.240	4.7	16	21.3	7.5	8.5	3
W 4 x 13	4.16	4.060	0.280	3.8	13	11.3	3.9	5.5	1.9

- $1 \text{ cm}^4 = 10^{-8} \text{ m} = 10^4 \text{ mm}$
- $1 \text{ in}^4 = 4.16 \times 10^5 \text{ mm}^4 = 41.6 \text{ cm}^4$
- $1 \text{ cm}^3 = 10^{-6} \text{ m} = 10^3 \text{ mm}$

The standard method for specifying the dimensions of a American Wide Flange Beam is for example W 6 x 25, which is 6 inches deep with a weight of 25 lb/ft.

I-shaped cross-section beams:

- Britain : Universal Beams (UB) and Universal Columns (UC)
- Europe : IPE. HE. HL. HD and other sections
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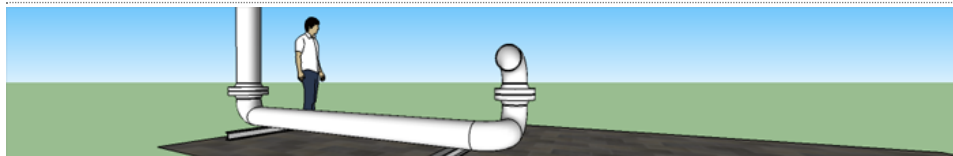
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