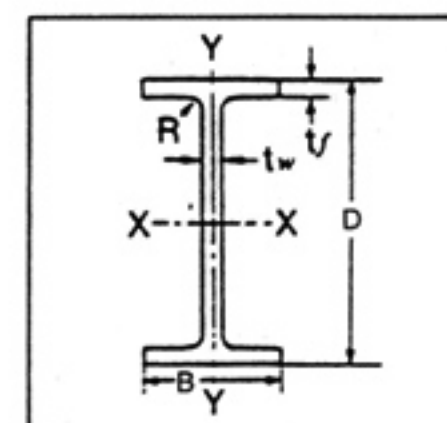




Universal Beam And Columns

Imperial Series

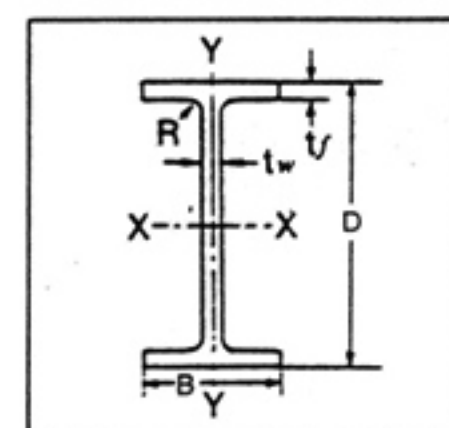
Section Number and Nominal Size	Unit weight M		Section area A		Section depth D		Flange				Web Thickness t		Corner radius r	
							Width B		Thickness T					
mm (in.)	lb/ft	kg/m	in. ²	cm ²	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
W4 102 x 102 (4 x 4)	13	19.35	3.83	24.71	4.16	105.7	4.060	103.1	0.345	8.76	0.280	7.11	0.25	6.35
W5 127 x 76 (5 x 3)	9	13.00	2.60	16.80	5.00	127.0	3.000	76.2	0.299	7.60	0.165	4.20	0.30	6.35
W5 127 x 127 (5 x 5)	19	28.28	5.56	35.87	5.15	130.8	5.030	127.8	0.430	10.90	0.270	6.86	0.30	7.62
	16	23.81	4.71	30.39	5.01	127.3	5.000	127.0	0.360	9.14	0.240	6.10	0.30	7.62
W6 152 x 89 (6 x 3½)	11	16.00	3.18	20.50	6.00	152.4	3.500	88.9	0.303	7.70	0.181	4.60	0.25	6.35
W6 152 x 102 (6 x 4)	16	23.81	4.74	30.58	6.28	159.5	4.030	102.4	0.405	10.20	0.260	6.60	0.25	6.35
	12	17.86	3.55	22.90	6.03	153.2	4.000	101.6	0.280	7.11	0.230	5.84	0.25	6.35
	9	13.39	2.68	17.29	5.90	149.9	3.940	100.1	0.215	5.46	0.170	4.32	0.25	6.35
W6 152 x 152 (6 x 6)	25	37.20	7.34	47.35	6.38	162.1	6.080	154.4	0.455	11.50	0.320	8.13	0.25	6.35
	20	30.00	5.87	37.87	6.20	157.5	6.020	152.9	0.365	9.27	0.260	6.60	0.25	6.35
	15.7	23.00	4.62	29.80	6.00	152.4	6.000	152.4	0.269	6.80	0.240	6.10	0.25	6.35
	15	22.50	4.43	28.58	5.99	152.1	5.990	152.1	0.260	6.60	0.230	5.84	0.25	6.35
W7 178 x 102 (7 x 4)	13	19.00	3.75	24.20	7.00	177.8	4.000	101.6	0.311	7.90	0.185	4.70	0.30	7.62
W8 203 x 102 (8 x 4)	15.5	23.00	4.50	29.00	8.00	203.2	4.000	101.6	0.368	9.30	0.205	5.20	0.30	7.62
	15	22.32	4.44	28.65	8.11	206.0	4.015	102.0	0.315	8.00	0.245	6.22	0.30	7.62
	13	19.35	3.84	24.77	7.99	202.9	4.000	101.6	0.255	6.48	0.230	5.84	0.30	7.62
	10	14.88	2.96	19.10	7.89	200.4	3.940	100.1	0.205	5.21	0.170	4.32	0.30	7.62
W8 203 x 133 (8 x 5¼)	21	31.30	6.16	39.74	8.28	210.3	5.270	133.9	0.400	10.10	0.250	6.35	0.30	7.62
	20	30.00	5.89	38.00	8.14	206.8	5.268	133.8	0.378	9.60	0.248	6.30	0.30	7.62
	18	26.79	5.26	33.94	8.14	206.8	5.250	133.3	0.330	8.38	0.230	5.84	0.30	7.62
	17	25.30	5.01	32.30	8.00	203.2	5.250	133.4	0.308	7.80	0.230	5.84	0.30	7.62
W8 203 x 165 (8 x 6½)	28	41.67	8.25	53.23	8.06	204.7	6.535	166.0	0.465	11.80	0.285	7.24	0.40	10.2
	24	35.72	7.08	45.68	7.93	201.4	6.495	165.0	0.400	10.10	0.245	6.22	0.40	10.2
W8 203 x 203 (8 x 8)	67	100.0	19.7	127.1	9.00	228.6	8.280	210.3	0.935	23.75	0.570	14.48	0.40	10.2
	58	86.31	17.1	110.3	8.75	222.2	8.220	208.8	0.810	20.57	0.510	12.95	0.40	10.2
	48	71.43	14.1	90.97	8.50	215.9	8.110	206.0	0.685	17.40	0.400	10.16	0.40	10.2
	40	60.00	11.7	75.48	8.25	209.5	8.070	205.0	0.560	14.20	0.360	9.14	0.40	10.2
	35	52.09	10.3	66.45	8.12	206.2	8.020	203.7	0.495	12.50	0.310	7.87	0.40	10.2
	31	46.13	9.12	58.84	8.00	203.2	7.995	203.1	0.435	11.00	0.285	7.24	0.40	10.2
W10 254 x 102 (10 x 4)	19	28.28	5.62	36.26	10.24	260.1	4.020	102.1	0.395	10.00	0.250	6.35	0.30	7.62
	17	25.30	4.99	32.19	10.11	256.8	4.010	101.9	0.330	8.38	0.240	6.10	0.30	7.62
	15	22.32	4.41	28.45	9.99	253.7	4.000	101.6	0.270	6.86	0.230	5.84	0.30	7.62
	12	17.86	3.54	22.84	9.87	250.7	3.960	100.6	0.210	5.33	0.190	4.83	0.30	7.62
W10 254 x 146 (10 x 5¾)	30	44.80	8.85	57.10	10.47	265.9	5.819	147.8	0.510	12.90	0.300	7.62	0.30	7.62
	29	43.00	8.54	55.10	10.22	259.6	5.799	147.3	0.500	12.70	0.289	7.30	0.30	7.62
	26	38.69	7.61	49.10	10.33	262.4	5.770	146.6	0.440	11.10	0.260	6.60	0.30	7.62
	25	37.20	7.36	47.50	10.08	256.0	5.762	146.4	0.430	10.90	0.252	6.40	0.30	7.62
	22	32.74	6.49	41.87	10.17	258.3	5.750	146.0	0.360	9.14	0.240	6.10	0.30	7.62
	21	31.25	6.20	40.00	9.90	251.5	5.750	146.1	0.340	8.60	0.240	6.10	0.30	7.62
W10 254 x 203 (10 x 8)	45	66.97	13.3	85.81	10.10	256.5	8.020	203.7	0.620	15.70	0.350	8.89	0.50	12.7
	39	58.04	11.5	74.19	9.92	252.0	7.985	202.8	0.530	13.40	0.315	8.00	0.50	12.7
	33	49.11	9.71	62.64	9.73	247.1	7.960	202.2	0.435	11.00	0.290	7.37	0.50	12.7
W10 254 x 254 (10 x 10)	112	167.0	32.9	212.3	11.36	288.5	10.415	264.5	1.250	31.75	0.755	19.18	0.50	12.7
	100	149.0	29.4	189.7	11.11	282.2	10.340	262.6	1.120	28.45	0.680	17.27	0.50	12.7
	89	132.0	26.2	168.9	10.88	276.4	10.275	261.0	0.998	25.30	0.615	15.60	0.50	12.7



Section Number and Nominal size	Moment of inertia				Radius of gyration				Modulus of section			
	I_x		I_y		i_x		i_y		Z_x		Z_y	
mm ⁴ /(in. ⁴)	in. ⁴	cm ⁴	in. ⁴	cm ⁴	in.	cm	in.	cm	in. ³	cm ³	in. ³	cm ³
W4 102 x 102 (4 x 4)	11.3	470	3.86	161	1.72	4.37	1.00	2.54	5.46	89.5	1.90	31.1
W5 127 x 76 (5 x 3)	11.5	477	1.30	56.0	2.10	5.33	0.72	1.83	4.60	75.0	0.90	15.0
W5 127 x 127 (5 x 5)	26.3 21.4	1,090 891	9.13 7.51	380 313	2.17 2.13	5.51 5.41	1.2 1.26	3.25 3.20	10.2 8.55	167 140	3.63 3.00	59.50 49.2
W6 152 x 89 (6 x 3 1/2)	20.1	838	2.20	90.0	2.52	6.40	0.83	2.10	6.70	110	1.20	20.0
W6 152 x 102 (6 x 4)	32.1 22.1 16.4	1,340 920 683	4.43 2.99 2.20	184 124 91.6	2.60 2.49 2.47	6.60 6.32 6.27	0.966 0.918 0.905	2.45 2.33 2.30	10.2 7.31 5.56	167 120 91.1	2.20 1.50 1.11	36.1 24.6 18.2
W6 152 x 152 (6 x 6)	53.4 41.4 30.3 29.1	2,220 1,720 1,263 1,210	17.1 13.3 9.70 9.32	712 554 403 388	2.70 2.66 2.56 2.56	6.86 6.76 6.51 6.50	1.52 1.50 1.45 1.45	3.86 3.81 3.68 3.68	16.7 13.4 10.1 9.72	274 220 165.7 159	5.61 4.41 3.20 3.11	91.9 72.3 52.95 51.0
W7 178 x 102 (7 x 4)	32.6	1,357	3.30	138	2.95	7.49	0.940	2.39	9.30	153	1.60	27.0
W8 203 x 102 (8 x 4)	50.2 48.0 39.6 30.8	2,091 2,000 1,650 1,280	3.90 3.41 2.73 2.09	163 142 114 87.0	3.34 3.29 3.21 3.22	8.49 8.36 8.15 8.18	0.930 0.876 0.843 0.841	2.37 2.22 2.14 2.14	12.6 11.8 9.91 7.81	206 193 162 128	2.00 1.70 1.37 1.06	32.0 27.9 22.4 17.4
W8 203 x 133 (8 x 5 1/4)	75.3 69.2 61.9 56.4	3,130 2,981 2,580 2,348	9.77 8.50 7.97 6.72	407 354 332 280	3.49 3.43 3.43 3.36	8.86 8.71 8.71 8.53	1.26 1.20 1.23 1.16	3.20 3.05 3.12 2.95	18.2 17.0 15.2 14.1	298 279 249 231	3.71 3.20 3.04 2.60	60.8 52.4 49.8 42.6
W8 203 x 165 (8 x 6 1/2)	98.0 82.8	4,080 3,450	21.7 18.3	903 762	3.45 3.42	8.76 8.69	1.62 1.61	4.11 4.09	24.3 20.9	398 342	6.63 5.63	109 92.3
W8 203 x 203 (8 x 8)	272 228 184 146 127 110	11,300 9,490 7,660 6,080 5,290 4,580	88.6 75.1 60.9 49.1 42.6 37.1	3,690 3,130 2,530 2,040 1,770 1,540	3.72 3.65 3.61 3.53 3.51 3.47	9.45 9.27 9.17 8.97 8.92 8.81	2.12 2.10 2.08 2.04 2.03 2.02	5.38 5.33 5.28 5.18 5.16 5.13	60.4 52.0 43.3 35.5 31.2 27.5	990 852 710 582 511 451	21.4 18.3 15.0 12.2 10.6 9.27	351 300 246 200 174 152
W10 254 x 102 (10 x 4)	96.3 81.9 68.9 53.8	4,010 3,410 2,870 2,240	4.29 3.56 2.89 2.18	179 148 120 90.7	4.14 4.05 3.95 3.90	10.5 10.3 10.0 9.91	0.874 0.845 0.810 0.785	2.22 2.15 2.06 1.99	18.8 16.2 13.8 10.9	308 265 226 179	2.14 1.78 1.45 1.10	35.1 29.2 23.8 18.0
W10 254 x 146 (10 x 5 3/4)	170 157 144 133 118 106	7,080 6,548 5,990 5,545 4,910 4,425	16.8 15.2 14.1 12.7 11.4 9.7	699 633 587 529 474 404	4.38 4.29 4.35 4.26 4.27 4.14	11.1 10.9 11.0 10.8 10.8 10.5	1.38 1.34 1.36 1.31 1.33 1.25	3.51 3.40 3.45 3.33 3.38 3.18	32.5 30.8 27.9 26.4 23.2 21.5	533 505 457 433 380 352	5.76 5.20 4.89 4.40 3.97 3.40	94.4 85.2 80.1 72.1 65.1 55.7
W10 254 x 203 (10 x 8)	248 209 170	10,300 8,700 7,080	53.4 45.0 36.6	2,220 1,870 1,520	4.32 4.27 4.19	11.0 10.8 10.6	2.01 1.98 1.94	5.11 5.03 4.93	49.1 42.1 35.0	805 690 574	13.3 11.3 9.20	218 185 151
W10 254 x 254 (10 x 10)	716 624 542	29,800 26,000 22,580	236 207 181	9,820 8,620 7,518	4.66 4.61 4.55	11.8 11.7 11.6	2.68 2.65 2.63	6.81 6.73 6.68	126 112 99.7	2,060 1,840 1,634	45.3 40.0 35.2	742 655 577



Section Number and Nominal Size	Unit weight M		Section area A		Section depth D		Flange				Web Thickness t		Corner radius r	
							Width B		Thickness T					
mm (in.)	lb/ft	kg/m	in. ²	cm ²	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
W10 254 x 254 (10 x 10)	88	131.0	25.9	167.1	10.84	275.3	10.265	260.7	0.990	25.15	0.605	15.37	0.50	12.7
	77	115.0	22.6	145.8	10.60	269.2	10.190	258.8	0.870	22.10	0.530	13.46	0.50	12.7
	72	107.0	21.2	136.6	10.50	266.7	10.170	258.3	0.808	20.50	0.510	13.00	0.50	12.7
	68	101.2	20.0	129.0	10.40	264.2	10.130	257.3	0.770	19.56	0.470	11.94	0.50	12.7
	60	89.29	17.6	113.5	10.22	259.6	10.080	256.0	0.680	17.27	0.420	10.67	0.50	12.7
	54	80.36	15.8	101.9	10.09	256.3	10.030	254.8	0.615	15.60	0.370	9.40	0.50	12.7
	49	73.00	14.4	92.90	9.98	253.5	10.000	254.0	0.560	14.20	0.340	8.64	0.50	12.7
W12 305 x 102 (12 x 4)	22	33.00	6.48	41.81	12.31	312.7	4.030	102.4	0.425	10.80	0.260	6.60	0.30	7.62
	19	28.28	5.57	35.94	12.16	308.9	4.005	101.7	0.350	8.89	0.235	5.97	0.30	7.62
	16.5	25.00	4.87	31.40	12.00	304.8	4.000	101.6	0.269	6.80	0.230	5.80	0.30	7.62
	16	23.81	4.71	30.39	11.99	304.5	3.990	101.3	0.265	6.73	0.220	5.59	0.30	7.62
	14	20.83	4.16	26.84	11.91	302.5	3.970	100.8	0.225	5.71	0.200	5.08	0.30	7.62
W12 305 x 127 (12 x 5)	32	48.00	9.42	60.8	12.22	310.4	4.930	125.2	0.551	14.00	0.350	8.90	0.30	7.62
	28	42.00	8.25	53.2	12.07	306.6	4.893	124.3	0.476	12.10	0.313	8.00	0.30	7.62
	25	37.00	7.36	47.5	11.96	303.8	4.864	123.5	0.421	10.70	0.284	7.20	0.30	7.62
W12 305 x 165 (12 x 6½)	36	54.00	10.6	68.40	12.24	310.9	6.565	166.8	0.540	13.70	0.305	7.70	0.30	7.62
	35	52.09	10.3	66.45	12.50	317.5	6.560	166.6	0.520	13.20	0.300	7.62	0.30	7.62
	31	46.00	9.13	58.90	12.09	307.1	6.525	165.7	0.465	11.80	0.265	6.70	0.30	7.62
	30	44.64	8.79	56.71	12.34	313.4	6.520	165.6	0.440	11.10	0.260	6.60	0.30	7.62
	27	40.00	7.98	51.50	11.96	303.8	6.500	165.1	0.400	10.20	0.240	6.10	0.30	7.62
	26	38.70	7.65	49.35	12.22	310.4	6.490	164.8	0.380	9.65	0.230	5.84	0.30	7.62
W12 305 x 203 (12 x 8)	50	74.41	14.7	94.84	12.19	309.6	8.080	205.2	0.640	16.20	0.370	9.40	0.60	15.2
	45	66.97	13.2	85.16	12.06	306.3	8.045	204.3	0.575	14.60	0.335	8.51	0.60	15.2
	40	59.53	11.8	76.13	11.94	303.3	8.005	203.3	0.515	13.00	0.295	7.49	0.60	15.2
W12 305 x 254 (12 x 10)	58	86.31	17.0	109.7	12.19	309.6	10.010	254.3	0.640	16.20	0.360	9.14	0.60	15.2
	53	78.87	15.6	100.6	12.06	306.3	9.995	253.9	0.575	14.60	0.345	8.76	0.60	15.2
W12 305 x 305 (12 x 12)	336	500.0	98.8	637.4	16.82	427.2	13.385	340.0	2.955	75.06	1.775	45.08	0.60	15.2
	305	453.9	89.6	578.1	16.32	414.5	13.235	336.2	2.705	68.71	1.625	41.27	0.60	15.2
	278	413.7	81.9	528.4	15.85	402.6	13.140	333.8	2.470	62.74	1.530	38.86	0.60	15.2
	252	375.0	74.0	477.4	15.41	391.4	13.005	330.3	2.250	57.15	1.395	35.43	0.60	15.2
	230	342.3	67.7	436.8	15.05	382.3	12.895	327.5	2.070	52.58	1.285	32.64	0.60	15.2
	210	312.5	61.8	398.7	14.71	373.6	12.790	324.9	1.900	48.26	1.180	29.97	0.60	15.2
	190	283.0	55.8	360.0	14.38	365.3	12.670	321.8	1.735	44.07	1.060	26.92	0.60	15.2
	170	253.0	50.0	322.6	14.03	356.4	12.570	319.3	1.560	39.62	0.960	24.38	0.60	15.2
	161	240.0	47.4	305.6	13.88	352.6	12.515	317.9	1.486	37.70	0.905	23.00	0.60	15.2
	152	226.2	44.7	288.4	13.71	348.2	12.480	317.0	1.400	35.56	0.870	22.10	0.60	15.2
	136	202.4	39.9	257.4	13.41	340.6	12.400	315.0	1.250	31.75	0.790	20.07	0.60	15.2
	133	198.0	39.1	252.3	13.38	339.9	12.365	314.1	1.236	31.40	0.755	19.20	0.60	15.2
	120	179.0	35.3	227.7	13.12	333.2	12.320	312.9	1.100	28.07	0.710	18.03	0.60	15.2
	106	158.0	31.2	201.3	12.89	327.4	12.220	310.4	0.990	25.15	0.610	15.49	0.60	15.2
	96	143.0	28.2	182.0	12.71	322.8	12.160	308.9	0.900	22.86	0.550	13.97	0.60	15.2
	92	137.0	27.1	174.6	12.62	320.4	12.155	308.7	0.856	21.70	0.545	13.80	0.60	15.2
	87	129.5	25.6	165.2	12.53	318.3	12.125	308.0	0.810	20.57	0.515	13.08	0.60	15.2
	79	118.0	23.2	149.7	12.38	314.5	12.080	306.8	0.735	18.67	0.470	11.94	0.60	15.2
	72	107.1	21.1	136.1	12.25	311.1	12.040	305.8	0.670	17.02	0.430	10.92	0.60	15.2
	65	97.0	19.1	123.2	12.12	307.8	12.000	304.8	0.605	15.30	0.390	9.91	0.60	15.2
W14 356 x 127 (14 x 5)	26	39.0	7.69	49.61	13.91	353.3	5.025	127.6	0.420	10.60	0.255	6.48	0.40	10.2
	22	33.0	6.49	41.87	13.74	349.0	5.000	127.0	0.335	8.51	0.230	5.84	0.40	10.2
W14 356 x 171 (14 x 6¾)	45	67.0	13.2	85.40	14.33	364.0	6.820	173.2	0.618	15.70	0.357	9.10	0.40	10.2
	38	57.0	11.2	72.26	14.10	358.1	6.770	172.0	0.515	13.00	0.310	7.87	0.40	10.2

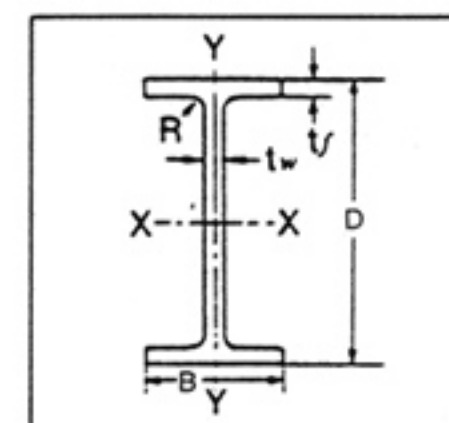


Section Number and Nominal size	Moment of inertia				Radius of gyration				Modulus of section			
	I_x		I_y		i_x		i_y		Z_x		Z_y	
mm./in.)	in. ⁴	cm ⁴	in. ⁴	cm ⁴	in.	cm	in.	cm	in. ³	cm ³	in. ³	cm ³
W10 254 x 254 (10 x 10)	534 455 421 394 341 303 272	22,200 18,900 17,510 16,400 14,200 12,600 11,300	179 154 142 134 116 103 93.4	7,450 6,410 5,903 5,580 4,830 4,290 3,890	4.54 4.49 4.46 4.44 4.39 4.37 4.35	11.5 11.4 11.3 11.3 11.2 11.1 11.0	2.63 2.60 2.59 2.58 2.57 2.56 2.54	6.68 6.60 6.58 6.55 6.53 6.50 6.45	98.5 85.9 80.1 75.7 66.7 60.0 54.6	1,610 1,410 1,312 1,240 1,090 983 895	34.8 30.1 27.9 26.4 23.0 20.6 18.7	570 493 457 433 377 338 306
W12 305 x 102 (12 x 4)	156 130 105.4 103 88.6	6,490 5,410 4,387 4,290 3,690	4.66 3.76 2.90 2.82 2.36	194 156 120 117 98.2	4.91 4.82 4.65 4.67 4.62	12.5 12.2 11.8 11.9 11.7	0.848 0.822 0.770 0.773 0.753	2.15 2.09 1.96 1.96 1.91	25.4 21.3 17.6 17.1 14.9	416 349 288 280 244	2.31 1.88 1.40 1.41 1.19	37.9 30.8 23.6 23.1 19.5
W12 305 x 127 (12 x 5)	228.3 195.6 172.0	9,504 8,143 7,162	11.1 9.3 8.1	460 388 337	4.92 4.87 4.83	12.5 12.4 12.3	1.08 1.06 1.05	2.75 2.70 2.67	37.4 32.4 28.8	612 531 472	4.50 3.80 3.30	73.5 62.5 54.6
W12 305 x 165 (12 x 6 1/2)	285 280.8 238.4 238 204.1 204	11,900 11,690 9,924 9,910 8,496 8,490	24.5 23.7 19.8 20.3 16.6 17.3	1,020 986.6 824 845 691 720	5.25 5.15 5.11 5.21 5.06 5.17	13.3 13.1 12.9 13.2 12.8 13.1	1.54 1.50 1.47 1.52 1.44 1.51	3.91 3.81 3.73 3.86 3.66 3.84	45.6 45.9 39.4 38.6 34.1 33.4	747 752 646 633 559 547	7.47 7.20 6.10 6.24 5.10 5.34	122 118 100 102 83.6 87.5
W12 305 x 203 (12 x 8)	394 350 310	16,400 14,600 12,900	56.3 50.0 44.1	2,340 2,080 1,840	5.18 5.15 5.13	13.2 13.1 13.0	1.96 1.94 1.94	4.98 4.93 4.93	64.7 58.1 51.9	1,060 952 850	13.9 12.4 11.0	228 203 180
W12 305 x 254 (12 x 10)	475 425	19,800 17,700	107 95.8	4,450 3,990	5.28 5.23	13.4 13.3	2.51 2.48	6.38 6.30	78.0 70.6	1,280 1,160	21.4 19.2	351 315
W12 305 x 305 (12 x 12)	4,060 3,550 3,110 2,720 2,420 2,140 1,890 1,650 1,542 1,430 1,240 1,221 1,070 933 833 789 740 662 597 533	169,000 148,000 129,000 113,000 101,000 89,100 78,700 68,700 64,180 59,500 51,600 50,840 44,500 38,800 34,700 32,840 30,800 27,600 24,800 22,200	1,190 1,050 937 828 742 664 589 517 486 454 398 390 345 301 270 256 241 216 195 174	49,500 43,700 39,000 34,500 30,900 27,600 24,500 21,500 20,240 18,900 16,600 16,230 14,400 12,500 11,200 10,670 10,000 8,990 8,120 7,240	6.41 6.29 6.16 6.06 5.97 5.89 5.82 5.74 5.70 5.66 5.58 5.59 5.51 5.47 5.44 5.40 5.38 5.34 5.31 5.28	16.3 16.0 15.6 15.4 15.2 15.0 14.8 14.6 14.5 14.4 14.2 14.2 14.0 13.9 13.8 13.7 13.7 13.6 13.5 13.4	3.47 3.42 3.38 3.34 3.31 3.28 3.25 3.22 3.20 3.19 3.16 3.16 3.13 3.11 3.09 3.08 3.07 3.05 3.04 3.02	8.81 8.69 8.59 8.48 8.41 8.33 8.25 8.18 8.13 8.10 8.03 8.03 7.95 7.90 7.85 7.82 7.80 7.75 7.72 7.67	483 435 393 353 321 292 263 235 222 209 186 183 163 145 131 125 118 107 97.4 87.9	7,910 7,130 6,440 5,780 5,260 4,780 4,310 3,850 3,641 3,420 3,050 2,991 2,670 2,380 2,150 2,048 1,930 1,750 1,600 1,440	177 159 143 127 115 104 93.0 82.3 77.1 72.8 64.2 63.1 56.0 49.3 44.4 42.2 39.7 35.8 32.4 29.1	2,900 2,610 2,340 2,080 1,880 1,700 1,520 1,350 1,273 1,190 1,050 1,034 918 808 728 691 651 587 531 477
W14 356 x 127 (14 x 5)	245 199	10,200 8,280	8.91 7.00	371 291	5.65 5.54	14.4 14.1	1.08 1.04	2.74 2.64	35.3 29.0	578 475	3.55 2.80	58.2 45.9
W14 356 x 171 (14 x 6 3/4)	469 385	19,522 16,000	32.7 26.7	1,362 1,110	5.95 5.88	15.1 14.9	1.57 1.55	3.99 3.94	65.5 54.6	1,073 895	9.60 7.88	157 129



Universal Beam And Columns

Section Number and Nominal Size	Unit weight M		Section area A		Section depth D		Flange				Web Thickness t		Corner radius r	
							Width B		Thickness T					
mm (in.)	lb/ft	kg/m	in. ²	cm ²	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
W14 356 x 171 (14 x 6 ³ / ₄)	34	51.0	10.0	64.52	13.98	355.1	6.745	171.3	0.455	11.50	0.285	7.24	0.40	10.2
	30	45.0	8.85	57.10	13.84	351.5	6.730	170.9	0.385	9.78	0.270	6.86	0.40	10.2
W14 356 x 203 (14 x 8)	53	78.87	15.6	100.6	13.92	353.6	8.060	204.7	0.660	16.70	0.370	9.40	0.60	15.2
	48	71.43	14.1	90.97	13.79	350.3	8.030	204.0	0.595	15.10	0.340	8.64	0.60	15.2
	43	63.99	12.6	81.29	13.66	347.0	7.995	203.1	0.530	13.40	0.305	7.75	0.60	15.2
W14 356 x 254 (14 x 10)	82	122.0	24.1	155.5	14.31	363.5	10.130	257.3	0.855	21.72	0.510	12.95	0.60	15.2
	74	110.1	21.8	140.6	14.17	359.9	10.070	255.8	0.785	19.94	0.450	11.43	0.60	15.2
	68	101.2	20.0	129.0	14.04	356.6	10.035	254.9	0.723	18.36	0.415	10.54	0.60	15.2
	61	90.78	17.9	115.5	13.89	352.8	9.995	253.9	0.645	16.30	0.375	9.52	0.60	15.2
W14 356 x 368 (14 x 14 ¹ / ₂)	136	202.0	40.0	257.9	14.75	374.7	14.740	374.4	1.063	27.00	0.660	16.80	0.60	15.2
	132	196.4	38.8	250.3	14.66	372.4	14.725	374.0	1.030	26.16	0.645	16.38	0.60	15.2
	120	179.0	35.3	227.7	14.48	367.8	14.670	372.6	0.940	23.88	0.590	14.99	0.60	15.2
	119	177.0	35.0	225.7	14.50	368.3	14.650	372.1	0.938	23.80	0.570	14.50	0.60	15.2
	109	162.2	32.0	206.5	14.32	363.7	14.605	371.0	0.860	21.84	0.525	13.33	0.60	15.2
	103	153.0	30.3	195.2	14.25	362.0	14.575	370.2	0.813	20.70	0.495	12.60	0.60	15.2
	99	147.3	29.1	187.7	14.16	359.7	14.565	370.0	0.780	19.81	0.485	12.32	0.60	15.2
	90	134.0	26.5	171.0	14.02	356.1	14.520	368.8	0.710	18.03	0.440	11.18	0.60	15.2
	87	129.0	25.6	164.9	14.00	355.6	14.500	368.3	0.688	17.50	0.420	10.70	0.60	15.2
W14 305 x 406 (14 x 16)	730	1,086.0	215	1,387	22.42	569.5	17.890	454.4	4.910	124.70	3.070	77.98	0.60	15.2
	665	989.6	196	1,265	21.64	549.7	17.650	448.3	4.520	114.80	2.830	71.88	0.60	15.2
	605	900.3	178	1,148	20.92	531.4	17.415	442.3	4.160	105.60	2.595	65.91	0.60	15.2
	550	818.5	162	1,045	20.24	514.1	17.200	436.9	3.820	97.03	2.380	60.45	0.60	15.2
	500	744.1	147	948.4	19.60	497.8	17.010	432.1	3.500	88.90	2.190	55.63	0.60	15.2
	455	677.1	134	864.5	19.02	483.1	16.835	427.6	3.210	81.53	2.015	51.18	0.60	15.2
	426	634.0	125	806.4	18.67	474.2	16.695	424.1	3.035	77.09	1.875	47.62	0.60	15.2
	398	592.3	117	754.8	18.29	464.6	16.590	421.4	2.845	72.26	1.770	44.96	0.60	15.2
	370	551.0	109	703.2	17.92	455.2	16.475	418.5	2.660	67.56	1.655	42.04	0.60	15.2
	342	509.0	101	651.6	17.54	445.5	16.360	415.5	2.470	62.74	1.540	39.12	0.60	15.2
	314	467.0	92.3	595.5	17.19	436.6	16.235	412.4	2.283	58.00	1.415	35.90	0.60	15.2
	311	463.0	91.4	589.7	17.12	434.8	16.230	412.2	2.260	57.40	1.410	35.81	0.60	15.2
	283	421.1	83.3	537.4	16.74	425.2	16.110	409.2	2.070	52.58	1.290	32.77	0.60	15.2
	264	393.0	77.6	500.9	16.50	419.1	16.025	407.0	1.938	49.20	1.205	30.60	0.60	15.2
	257	382.5	75.6	487.7	16.38	416.1	15.995	406.3	1.890	48.01	1.175	29.84	0.60	15.2
	233	347.0	68.5	441.9	16.04	407.4	15.890	403.6	1.720	43.69	1.070	27.18	0.60	15.2
	228	340.0	67.1	432.7	16.00	406.4	15.865	403.0	1.688	42.90	1.045	26.50	0.60	15.2
	211	314.0	62.0	400.0	15.72	399.3	15.800	401.3	1.560	39.62	0.980	24.89	0.60	15.2
	193	287.2	56.8	366.4	15.48	393.2	15.710	399.0	1.440	36.58	0.890	22.61	0.60	15.2
	176	262.0	51.8	334.2	15.22	386.6	15.650	397.5	1.310	33.27	0.830	21.08	0.60	15.2
	159	237.0	46.7	301.3	14.98	380.5	15.565	395.4	1.190	30.23	0.745	18.92	0.60	15.2
	158	235.0	46.5	299.8	15.00	381.0	15.550	395.0	1.188	30.20	0.730	18.50	0.60	15.2
	145	216.0	42.7	275.5	14.78	375.4	15.500	393.7	1.090	27.69	0.680	17.27	0.60	15.2
	W16 406 x 140 (16 x 5 ¹ / ₂)	31	46.13	9.12	58.84	15.88	403.4	5.525	140.3	0.440	11.10	0.275	6.98	0.40
26		39.00	7.68	49.55	15.69	398.5	5.500	139.7	0.345	8.76	0.250	6.35	0.40	10.2
W16 406 x 178 (16 x 7)	57	85.0	16.8	108.4	16.43	417.3	7.120	180.8	0.715	18.16	0.430	10.92	0.40	10.2
	50	74.41	14.7	94.84	16.26	413.0	7.070	179.6	0.630	16.00	0.380	9.65	0.40	10.2
	45	67.0	13.3	85.81	16.13	409.7	7.035	178.7	0.565	14.30	0.345	8.76	0.40	10.2
	40	60.0	11.8	76.13	16.01	406.7	6.995	177.7	0.505	12.80	0.305	7.75	0.40	10.2
	36	54.0	10.6	68.39	15.86	402.8	6.985	177.4	0.430	10.90	0.295	7.49	0.40	10.2
W16 406 x 260 (16x 10 ¹ / ₄)	100	148.8	29.4	189.7	16.97	431.0	10.425	264.8	0.985	25.02	0.585	14.86	0.40	10.2
	89	132.4	26.2	169.0	16.75	425.4	10.365	263.3	0.875	22.22	0.525	13.33	0.40	10.2
	77	114.6	22.6	145.8	16.52	419.6	10.295	261.5	0.760	19.30	0.455	11.56	0.40	10.2
	67	99.71	19.7	127.1	16.33	414.8	10.235	260.0	0.665	16.89	0.395	10.03	0.40	10.2

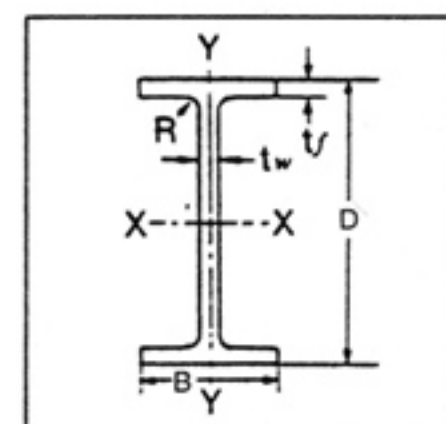


Section Number and Nominal size	Moment of inertia				Radius of gyration				Modulus of section			
	I_x		I_y		i_x		i_y		Z_x		Z_y	
mm./(in.)	in. ⁴	cm ⁴	in. ³	cm ³	in.	cm	in. ⁴	cm ⁴	in. ³	cm ³	in.	cm
W14 356 x 171 (14 x 6 ³ / ₄)	340 291	14,200 12,100	23.3 19.6	970 816	5.83 5.73	14.8 14.6	1.53 1.49	3.89 3.78	48.6 42.0	796 688	6.91 5.82	113 95.4
W14 356 x 203 (14 x 8)	542 485 428	22,600 20,200 17,800	57.7 51.4 45.2	2,400 2,140 1,880	5.89 5.85 5.82	15.0 14.9 14.8	1.92 1.91 1.89	4.88 4.85 4.80	77.8 70.3 62.7	1,270 1,150 1,030	14.3 12.8 11.3	234 210 185
W14 356 x 254 (14 x 10)	882 796 725 640	36,700 33,100 30,200 26,600	148 134 122 107	6,160 5,580 5,080 4,450	6.05 6.04 6.01 5.98	15.4 15.3 15.3 15.2	2.48 2.48 2.47 2.45	6.30 6.30 6.27 6.22	123 112 103 92.2	2,020 1,840 1,690 1,510	29.3 26.6 24.3 21.5	480 436 398 352
W14 356 x 368 (14 x 14 ¹ / ₂)	1,593 1,530 1,380 1,373 1,240 1,166 1,110 999 966	63,310 63,700 57,400 57,160 51,600 48,530 46,200 41,600 40,250	568 548 495 492 447 420 402 362 350	23,630 22,800 20,600 20,470 18,600 17,470 16,700 15,100 14,560	6.31 6.28 6.24 6.26 6.22 6.21 6.17 6.14 6.15	16.0 16.0 15.8 15.9 15.8 15.8 15.7 15.6 15.6	3.77 3.76 3.74 3.75 3.73 3.72 3.71 3.70 3.70	9.58 9.55 9.50 9.52 9.47 9.45 9.42 9.40 9.40	216 209 190 189 173 164 157 143 138	3,540 3,420 3,110 3,104 2,830 2,681 2,570 2,340 2,263	77 74.5 67.5 67.1 61.2 57.6 55.2 49.9 48.2	1,262 1,220 1,110 1,099 1,000 944 905 818 790
W14 356 x 406 14 x 16	14,300 12,400 10,800 9,430 8,210 7,190 6,600 6,000 5,440 4,900 4,399 4,330 3,840 3,526 3,400 3,010 2,942 2,660 2,400 2,140 1,900 1,900 1,710	595,000 516,000 450,000 392,000 342,000 299,000 275,000 250,000 226,000 204,000 183,100 180,000 160,000 146,800 142,000 125,000 122,500 111,000 99,900 89,100 79,100 79,100 71,200	4,720 4,170 3,680 3,250 2,880 2,560 2,360 2,170 1,990 1,810 1,631 1,610 1,440 1,331 1,290 1,150 1,124 1,030 931 838 748 745 677	196,000 174,000 153,000 135,000 120,000 107,000 98,200 90,300 82,800 75,300 67,910 67,000 59,900 55,420 53,700 47,900 46,820 42,900 38,800 34,900 31,100 31,010 28,200	8.17 7.98 7.80 7.63 7.48 7.33 7.26 7.16 7.07 6.98 6.90 6.88 6.79 6.74 6.71 6.63 6.62 6.55 6.50 6.43 6.38 6.40 6.33	20.8 20.3 19.8 19.4 19.0 18.6 18.4 18.2 18.0 17.7 17.5 17.5 17.2 17.1 17.0 16.8 16.8 16.6 16.5 16.3 16.2 16.2 16.1	4.69 4.62 4.55 4.49 4.43 4.38 4.34 4.31 4.27 4.24 4.20 4.20 4.17 4.14 4.13 4.10 4.10 4.07 4.05 4.02 4.00 4.00 3.98	11.9 11.7 11.6 11.4 11.3 11.1 11.0 10.9 10.8 10.8 10.7 10.7 10.6 10.5 10.5 10.4 10.4 10.3 10.3 10.2 10.2 10.2 10.1	1,280 1,150 1,040 931 838 756 706 656 607 559 512 506 459 427 415 375 368 338 310 281 254 253 232	21,000 18,800 17,000 15,300 13,700 12,400 11,600 10,700 9,950 9,160 8,390 8,290 7,520 7,005 6,800 6,150 6,028 5,540 5,080 4,600 4,160 4,153 3,800	527 472 423 378 339 304 283 262 241 221 201 199 179 166 161 145 141 130 119 107 96.2 95.8 87.3	8,640 7,730 6,930 6,190 5,560 4,980 4,640 4,290 3,950 3,620 3,294 3,260 2,930 2,772 2,640 2,380 2,324 2,130 1,950 1,750 1,580 1,570 1,430
W16 406 x 140 (16 x 5 ¹ / ₂)	375 301	15,600 12,500	12.4 9.59	516 399	6.41 6.26	16.3 15.9	1.17 1.12	2.97 2.84	47.2 38.4	773 629	4.49 3.49	73.6 57.2
W16 406 x 178 (16 x 7)	758 659 586 518 448	31,600 27,400 24,400 21,600 18,600	43.1 37.2 32.8 28.9 24.5	1,790 1,550 1,370 1,200 1,020	6.72 6.68 6.65 6.63 6.51	17.1 17.0 16.9 16.8 16.5	1.60 1.59 1.57 1.57 1.52	4.06 4.04 3.99 3.99 3.86	92.2 81.0 72.7 64.7 56.5	1,510 1,330 1,190 1,060 926	12.1 10.5 9.34 8.25 7.00	198 172 153 135 115
W16 406 x 260 (16 x 10 ¹ / ₄)	1,490 1,300 1,100 954	62,000 54,100 46,200 39,700	186 163 138 119	7,740 6,780 5,740 4,950	7.10 7.05 7.00 6.96	18.0 17.9 17.8 17.7	2.51 2.49 2.47 2.46	6.38 6.32 6.27 6.25	175 155 134 117	2,870 2,540 2,200 1,920	35.7 31.4 26.9 23.2	585 515 441 380



Universal Beam And Columns

Section Number and Nominal Size	Unit weight M		Section area A		Section depth D		Flange				Web Thickness t		Corner radius r	
							Width B		Thickness T					
mm (in.)	lb/ft	kg/m	in. ²	cm ²	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
W18 457 x 152 (18 x 6)	55	82.00	16.2	104.5	18.31	465.1	6.042	153.5	0.744	18.90	0.420	10.7	0.40	10.2
	50	74.00	14.7	95.00	18.16	461.3	6.011	152.7	0.669	17.00	0.389	9.90	0.40	10.2
	46	68.46	13.5	87.10	18.06	458.7	6.060	153.9	0.605	15.30	0.360	9.14	0.40	10.2
	45	67.00	13.2	85.40	18.00	457.2	5.982	151.9	0.589	15.00	0.360	9.10	0.40	10.2
	40	60.00	11.8	76.13	17.90	454.7	6.015	152.8	0.525	13.30	0.315	8.00	0.40	10.2
	35	52.09	10.3	66.45	17.70	449.6	6.000	152.4	0.425	10.80	0.300	7.62	0.40	10.2
W18 457 x 191 (18 x 7½)	71	106.0	20.8	134.2	18.47	469.1	7.635	193.9	0.810	20.57	0.495	12.57	0.40	10.2
	66	98.00	19.4	125.3	18.40	467.4	7.592	192.8	0.770	19.60	0.450	11.40	0.40	10.2
	65	97.00	19.1	123.2	18.35	466.1	7.590	192.8	0.750	19.05	0.450	11.43	0.40	10.2
	60	89.29	17.6	113.5	18.24	463.3	7.555	191.9	0.695	17.65	0.415	10.54	0.40	10.2
	55	82.00	16.2	104.5	18.11	460.0	7.530	191.3	0.630	16.00	0.390	9.91	0.40	10.2
	50	74.41	14.7	94.84	17.99	456.9	7.495	190.4	0.570	14.40	0.355	9.02	0.40	10.2
	45	67.00	13.2	85.40	17.86	453.6	7.476	189.9	0.500	12.70	0.334	8.50	0.40	10.2
W18 457 x 279 (18 x 11)	119	177.1	35.1	226.5	18.97	481.8	11.265	286.1	1.060	26.92	0.655	16.64	0.40	10.2
	106	157.7	31.1	200.6	18.73	475.7	11.200	284.5	0.940	23.88	0.590	14.99	0.40	10.2
	97	144.4	28.5	183.9	18.59	472.2	11.145	283.1	0.870	22.10	0.535	13.59	0.40	10.2
	86	128.0	25.3	163.2	18.39	467.1	11.090	281.7	0.770	19.56	0.480	12.19	0.40	10.2
	76	113.1	22.3	143.9	18.21	462.5	11.035	280.3	0.680	17.27	0.425	10.80	0.40	10.2
W21 533 x 165 (21 x 6½)	57	85.00	16.7	107.7	21.06	534.9	6.555	166.5	0.650	16.51	0.405	10.29	0.50	12.7
	50	74.41	14.7	94.84	20.83	529.1	6.530	165.9	0.535	13.50	0.380	9.65	0.50	12.7
	44	66.00	13.0	83.87	20.66	524.8	6.500	165.1	0.450	11.40	0.350	8.89	0.50	12.7
W21 533 x 210 (21 x 8¼)	93	138.4	27.3	176.1	21.62	549.1	8.420	213.9	0.930	23.62	0.580	14.73	0.50	12.7
	83	123.5	24.3	156.8	21.43	544.3	8.355	212.2	0.835	21.21	0.515	13.08	0.50	12.7
	82	122.0	24.1	155.8	21.44	544.6	8.342	211.9	0.840	21.30	0.502	12.80	0.50	12.7
	73	109.0	21.5	138.7	21.24	539.5	8.295	210.7	0.740	18.80	0.455	11.56	0.50	12.7
	68	101.2	20.0	129.0	21.13	536.7	8.270	210.1	0.685	17.40	0.430	10.92	0.50	12.7
	62	92.27	18.3	118.1	20.99	533.1	8.240	209.3	0.615	15.62	0.400	10.16	0.50	12.7
	55	82.00	16.2	104.4	20.80	528.3	8.216	208.7	0.520	13.20	0.376	9.60	0.50	12.7
W21 533 x 311 (21 x 12¼)	147	218.8	43.2	278.7	22.06	560.3	12.510	317.8	1.150	29.21	0.720	18.29	0.50	12.7
	132	196.4	38.8	250.3	21.83	554.5	12.440	316.0	1.030	26.29	0.650	16.51	0.50	12.7
	122	181.6	35.9	231.6	21.68	550.7	12.390	314.7	0.960	24.38	0.600	15.24	0.50	12.7
	111	165.2	32.7	211.0	21.51	546.4	12.340	313.4	0.875	22.22	0.550	13.97	0.50	12.7
	101	150.3	29.8	192.3	21.36	542.5	12.290	312.2	0.800	20.32	0.500	12.70	0.50	12.7
W24 610 x178 (24 x 7)	62	92.27	18.2	117.4	23.74	603.0	7.040	178.8	0.590	14.99	0.430	10.92	0.50	12.7
	61	91.00	17.9	116.5	23.72	602.5	7.023	178.4	0.591	15.00	0.419	10.60	0.50	12.7
	55	82.00	16.2	104.5	23.57	598.7	7.005	177.9	0.505	12.83	0.395	10.03	0.50	12.7
W24 610 x229 (24 x 9)	94	140.0	27.7	178.7	24.31	617.5	9.065	230.2	0.875	22.22	0.515	13.08	0.50	12.7
	84	125.0	24.7	159.4	24.10	612.1	9.020	229.1	0.770	19.56	0.470	11.94	0.50	12.7
	76	113.1	22.4	144.5	23.92	607.6	8.990	228.3	0.680	17.27	0.440	11.18	0.50	12.7
	68	101.2	20.1	129.7	23.73	602.7	8.965	227.7	0.585	14.86	0.415	10.54	0.50	12.7
W24 610 x 305 (24 x 12)	160	238	47.0	303.8	24.92	633.0	12.264	311.5	1.235	31.4	0.732	18.6	0.70	17.8
	120	179	35.3	227.9	24.31	617.5	12.088	307.0	0.930	23.6	0.556	14.1	0.70	17.8
	100	149	29.4	190.1	24.00	609.6	12.000	304.8	0.775	19.7	0.468	11.9	0.70	17.8
W24 610 x 324 (24 x 12¾)	162	241.1	47.7	307.7	25.00	635.0	12.955	329.1	1.220	30.99	0.705	17.91	0.50	12.7
	146	217.3	43.0	277.4	24.74	628.4	12.900	327.7	1.090	27.69	0.650	16.51	0.50	12.7
	131	194.9	38.5	248.4	24.48	621.8	12.855	326.5	0.960	24.38	0.605	15.37	0.50	12.7
	117	174.1	34.4	221.9	24.26	616.2	12.800	325.1	0.850	21.59	0.550	13.97	0.50	12.7
	104	154.8	30.6	197.4	24.06	611.1	12.750	323.8	0.750	19.05	0.500	12.70	0.50	12.7



Section Number and Nominal size	Moment of inertia				Radius of gyration				Modulus of section			
	I_x		I_y		i_x		i_y		Z_x		Z_y	
mm./(in.)	in. ⁴	cm ⁴	in. ⁴	cm ⁴	in.	cm	in.	cm	in. ³	cm ³	in. ³	cm ³
W18 457 x 152 (18 x 6)	870 779 712 686 612 510	36,215 32,435 29,600 28,577 25,500 21,200	27.5 24.3 22.5 21.1 19.1 15.3	1,143 1,012 937 878 795 637	7.33 7.28 7.25 7.20 7.21 7.04	18.6 18.5 18.4 18.3 18.3 17.9	1.30 1.28 1.29 1.26 1.27 1.22	3.31 3.26 3.28 3.21 3.23 3.10	95.0 85.8 78.8 76.3 68.4 57.6	1,557 1,406 1,290 1,250 1,120 944	9.10 8.10 7.43 7.00 6.35 5.12	149 133 122 116 104 83.9
W18 457 x 191 (18 x 7 1/4)	1,170 1,098 1,070 984 890 800 704	48,700 45,717 44,500 41,000 37,000 33,300 29,330	60.3 56.3 54.8 50.1 44.9 40.1 31.9	2,510 2,343 2,280 2,090 1,870 1,670 1,328	7.50 7.52 7.49 7.47 7.41 7.38 7.30	19.0 19.1 19.0 19.0 18.8 18.7 18.5	1.70 1.70 1.69 1.68 1.67 1.65 1.55	4.32 4.33 4.29 4.27 4.24 4.19 3.94	127 119 117 108 98.3 88.9 78.9	2,080 1,956 1,920 1,770 1,610 1,460 1,293	15.8 14.8 14.4 13.3 11.9 10.7 8.5	259 243 236 218 195 175 139
W18 457 x 279 (18 x 11)	2,190 1,910 1,750 1,530 1,330	91,200 79,500 72,800 63,700 55,400	253 220 201 175 152	10,500 9,170 8,370 7,280 6,330	7.90 7.84 7.82 7.77 7.73	20.1 19.9 19.9 19.7 19.6	2.69 2.66 2.65 2.63 2.61	6.83 6.76 6.73 6.68 6.63	231 204 188 166 146	3,790 3,340 3,080 2,720 2,390	44.9 39.4 36.1 31.6 27.6	736 646 592 518 452
W21 533 x 165 (21 x 6 1/2)	1,170 984 843	48,700 41,000 35,100	30.6 24.9 20.7	1,270 1,040 862	8.36 8.18 8.06	21.2 20.8 20.5	1.35 1.30 1.26	3.43 3.30 3.20	111 94.5 81.6	1,820 1,550 1,340	9.35 7.64 6.37	153 125 104
W21 533 x 210 (21 x 8 1/4)	2,070 1,830.7 1,830 1,600 1,480 1,330 1,140.7	86,200 76,207 76,200 66,600 61,600 55,400 47,490	92.9 81.5 81.4 70.6 64.7 57.5 44.0	3,870 3,393 3,390 2,940 2,690 2,390 1,832	8.70 8.71 8.67 8.64 8.60 8.54 8.40	22.1 22.1 22.0 21.9 21.8 21.7 21.3	1.84 1.84 1.83 1.81 1.80 1.77 1.65	4.67 4.67 4.65 4.60 4.57 4.50 4.19	192 171 170.8 151 140 127 109.7	3,150 2,800 2,799 2,470 2,290 2,080 1,798	22.1 19.5 19.5 17.0 15.7 14.0 10.7	362 320.2 320 279 257 229 175.4
W21 533 x 311 (21 x 12 1/4)	3,630 3,220 2,960 2,670 2,420	151,000 134,000 123,000 111,000 101,000	376 333 305 274 248	15,600 13,900 12,700 11,400 10,300	9.17 9.12 9.09 9.05 9.02	23.3 23.2 23.1 23.0 22.9	2.95 2.93 2.92 2.90 2.89	7.49 7.44 7.42 7.37 7.34	329 295 273 249 227	5,390 4,830 4,470 4,080 3,720	60.1 53.5 49.2 44.5 40.3	985 877 806 729 660
W24 610 x 178 (24 x 7)	1,550 1,540 1,350	64,500 64,085 56,200	34.5 34.3 29.1	1,440 1,432 1,210	9.23 9.25 9.11	23.4 23.5 23.1	1.38 1.38 1.34	3.51 3.51 3.40	131.0 130.0 114.0	2,150 2,124 1,870	9.80 9.76 8.30	161 159.5 136
W24 610 x 229 (24 x 9)	2,700 2,370 2,100 1,830	112,000 98,600 87,400 76,200	109 94.4 82.5 70.4	4,540 3,930 3,430 2,930	9.87 9.79 9.69 9.55	25.1 24.9 24.6 24.3	1.98 1.95 1.92 1.87	5.03 4.95 4.88 4.75	222 196 176 154	3,640 3,210 2,880 2,520	24.0 20.9 18.4 15.7	393 342 302 157
W24 610 x 305 (24 x 12)	4,986.3 3,635.3 2,987.3	207,571 151,300 124,400	380.5 254.0 203.5	15,838 10,570 8,471	10.28 10.15 10.08	26.10 25.78 25.60	2.84 2.68 2.63	7.22 6.81 6.68	400.2 299.1 248.9	6,559 4,902.2 4,079.5	62.0 42.0 33.9	1,017 688.4 555.6
W24 610 x 324 (24 x 12 3/4)	5,170 4,580 4,020 3,540 3,100	215,000 191,000 167,000 147,000 129,000	443 391 340 297 259	18,400 16,300 14,200 12,400 10,800	10.4 10.3 10.2 10.1 10.1	26.4 26.2 25.9 25.7 25.7	3.05 3.01 2.97 2.94 2.91	7.75 7.65 7.54 7.47 7.39	414 371 329 291 258	6,780 6,080 5,390 4,770 4,230	68.4 60.5 53.0 46.5 40.7	1,120 991 869 762 667



Universal Beam And Columns

Section Number and Nominal Size	Unit weight M		Section area A		Section depth D		Flange				Web Thickness t		Corner radius r	
							Width B		Thickness T					
mm (in.)	lb/ft	kg/m	in. ²	cm ²	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
W27 686 x 254 (27 x 10)	114	170.0	33.5	216.1	27.29	693.2	10.070	255.8	0.930	23.62	0.570	14.48	0.60	15.2
	102	152.0	30.0	193.5	27.09	688.1	10.015	254.4	0.830	21.08	0.515	13.08	0.60	15.2
	94	140.0	27.7	178.7	26.92	683.8	9.990	253.7	0.745	18.92	0.490	12.45	0.60	15.2
	84	125.0	24.8	160.0	26.71	678.4	9.960	253.0	0.640	16.26	0.460	11.68	0.60	15.2
W27 686 x 356 (27 x 14)	178	264.9	52.3	337.4	27.81	706.4	14.085	357.8	1.190	30.23	0.725	18.41	0.60	15.2
	161	239.6	47.4	305.8	27.59	700.8	14.020	356.1	1.080	27.43	0.660	16.76	0.60	15.2
	146	217.3	42.9	276.8	27.38	695.5	13.965	354.7	0.975	24.76	0.605	15.37	0.60	15.2
W30 762 x 267 (30 x 10½)	132	197.0	38.9	251.0	30.31	769.9	10.545	267.8	1.000	25.40	0.615	15.62	0.65	16.5
	124	185.0	36.5	235.5	30.17	766.3	10.515	267.1	0.930	23.62	0.585	14.86	0.65	16.5
	116	173.0	34.2	220.6	30.01	762.3	10.495	266.6	0.850	21.59	0.565	14.35	0.65	16.5
	108	161.0	31.7	204.5	29.83	757.7	10.475	266.1	0.760	19.30	0.545	13.84	0.65	16.5
	99	147.3	29.1	187.7	29.65	753.1	10.450	265.4	0.670	17.02	0.520	13.21	0.65	16.5
W30 762 x 381 (30 x 15)	211	314.0	62.0	400.0	30.94	785.9	15.105	383.7	1.310	33.40	0.775	19.68	0.65	16.5
	191	284.2	56.1	361.9	30.68	779.3	15.040	382.0	1.180	30.10	0.710	18.03	0.65	16.5
	173	257.5	50.8	327.7	30.44	773.2	14.985	380.6	1.060	27.05	0.655	16.64	0.65	16.5
W33 838 x 292 (33 x 11½)	152	226.2	44.7	288.4	33.49	850.6	11.565	293.8	1.050	26.80	0.635	16.13	0.70	17.8
	141	210.0	41.6	268.4	33.30	845.8	11.535	293.0	0.960	24.38	0.605	15.37	0.70	17.8
	130	194.0	38.3	247.1	33.09	840.5	11.510	292.4	0.855	21.72	0.580	14.73	0.70	17.8
	118	176.0	34.7	223.9	32.86	834.6	11.480	291.6	0.740	18.80	0.550	13.97	0.70	17.8
W33 838 x 400 (33 x 15¾)	241	358.6	70.9	457.4	34.18	868.2	15.860	402.8	1.400	35.56	0.830	21.08	0.70	17.8
	221	328.9	65.0	419.4	33.93	861.8	15.805	401.4	1.270	32.38	0.775	19.68	0.70	17.8
	201	299.1	59.1	381.3	33.68	855.5	15.745	399.9	1.150	29.21	0.715	18.16	0.70	17.8
W36 914 x 305 (36 x 12)	210	313.0	61.8	398.7	36.69	931.9	12.180	309.4	1.360	34.54	0.830	21.08	0.75	19.0
	194	289.0	57.0	367.7	36.49	926.8	12.115	307.7	1.260	32.00	0.765	19.43	0.75	19.0
	182	271.0	53.6	345.8	36.33	922.8	12.075	306.7	1.180	29.97	0.725	18.41	0.75	19.0
	170	253.0	50.0	322.6	36.17	918.7	12.030	305.6	1.100	27.94	0.680	17.27	0.75	19.0
	160	238.1	47.0	303.2	36.01	914.7	12.000	304.8	1.020	25.91	0.650	16.51	0.75	19.0
	150	224.0	44.2	285.2	35.85	910.6	11.975	304.2	0.940	23.88	0.625	15.87	0.75	19.0
	135	201.0	39.7	256.1	35.55	903.0	11.950	303.5	0.790	20.07	0.600	15.24	0.75	19.0
W36 914 x 419 (36 x 16½)	300	447.0	88.3	569.7	36.74	933.2	16.655	423.0	1.680	42.67	0.945	24.00	0.95	24.1
	280	417.0	82.4	531.6	36.52	927.6	16.595	421.5	1.570	39.88	0.885	22.48	0.95	24.1
	260	388.0	76.5	493.5	36.26	921.0	16.550	420.4	1.440	36.58	0.840	21.34	0.95	24.1
	245	365.0	72.1	465.2	36.08	916.4	16.510	419.4	1.350	34.29	0.800	20.32	0.95	24.1
	230	343.0	67.6	436.1	35.90	911.9	16.470	418.3	1.260	32.00	0.760	19.30	0.95	24.1