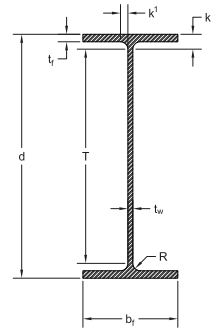


A photograph showing a row of vertical metal sheets, likely galvanized steel, standing upright on a dirt and gravel surface. The sheets are arranged in a line, receding into the distance. In the background, there is a chain-link fence and some trees. A dark blue horizontal band is overlaid across the middle of the image, containing the word "STRUCTURALS" in white, bold, sans-serif capital letters.

STRUCTURALS

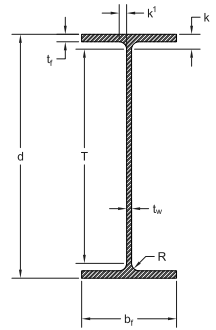
WIDE FLANGE BEAMS



W44 & W1100

Prime Section Group	Section Size	Area A	Depth d	Web Thickness	Flange		Distance			Fillet Radius	Elastic Properties						Plastic Modulus	
					Width	Thickness	T	k	k'		X - X			Y - Y				
					Inch x lbs/ft (mm x kg/m)	Inch² (mm²)	Inch (mm)	t _w Inch (mm)	b _f Inch (mm)		t _f Inch (mm)	Inch (mm)	Inch (mm)	Inch (mm)	I _x Inch⁴ (10⁶ mm⁴)	S _x Inch³ (10³ mm³)	r _x Inch (mm)	I _y Inch⁴ (10⁶ mm⁴)
44 x 16 1100 x 400	W44 x 335 W1100 x 499	98.7 63.677	44.02 1118	1.025 26.0	15.945 405	1.770 45.0	37.993 965	3.014 77	1.694 43	1.18 30	31100 12945	1410 23106	17.8 452	1200 499	150 2458	3.49 88.6	1620 26547	236 3.867
	W44 x 290 W1100 x 433	85.8 55355	43.62 1108	0.865 22.0	15.825 402	1.575 40.0	37.983 965	2.819 72	1.614 41	1.18 30	27000 11238	1240 20320	17.8 452	1040 433	132 2163	3.49 88.6	1410 23106	205 3.359
	W44 x 262 W1100 x 390	77.2 49806	43.31 1100	0.785 20.0	15.750 400	1.415 36.0	37.993 965	2.659 68	1.574 40	1.18 30	24100 10031	1110 18190	17.7 450	923 384	117 1917	3.47 88.1	1270 20811	182 2.982
	W44 x 230 W1100 x 343	67.9 43806	42.91 1090	0.710 18.0	15.750 400	1.220 31.0	37.983 965	2.464 63	1.536 39	1.18 30	20800 8658	971 15912	17.5 445	796 331.3	101 1655	3.43 87.1	1100 18026	157 2.573

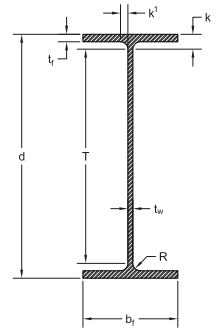
WIDE FLANGE BEAMS



W40 & W1100

Prime Section Group	Section Size	Area A	Depth d	Web Thickness	Flange		Distance			Fillet Radius	Elastic Properties						Plastic Modulus	
					Width	Thickness	T	k	k'		X - X			Y - Y				
											I _x Inch ⁴ (10 ⁶ mm ⁴)	S _x Inch ³ (10 ³ mm ³)	r _x Inch (mm)	I _y Inch ⁴ (10 ⁶ mm ⁴)	S _y Inch ³ (10 ³ mm ³)	r _y Inch (mm)	Z _x Inch ³ (10 ³ mm ³)	Z _y Inch ³ (10 ³ mm ³)
40 x 16 1000 x 400	W40 x 431 W1000 x 642	126.7 81742	41.26 1048	1.340 34.0	16.220 412	2.360 60.0	34.053 865	3.604 92	1.851 47	1.18 30	34800 14485	1690 27694	16.6 422	1690 703	208 3408	3.65 92.7	1960 32119	328 5.375
	W40 x 397 W1000 x 591	117.0 75484	40.95 1040	1.220 31.0	16.120 409	2.200 55.9	34.063 865	3.444 87	1.791 46	1.18 30	32000 13319	1560 25564	16.6 422	1540 641	191 3130	3.64 92.5	1800 29497	300 4.916
	W40 x 372 W1000 x 554	109.4 70581	40.63 1032	1.160 29.5	16.065 408	2.045 52.0	34.053 865	3.289 84	1.761 45	1.18 30	29600 12320	1460 23925	16.5 419	1420 591	177 2900	3.60 91.4	1680 27530	277 4.539
	W40 x 362 W1000 x 539	107.0 69032	40.55 1030	1.120 28.4	16.020 407	2.010 51.1	34.043 865	3.254 83	1.741 44	1.18 30	28900 12029	1420 23270	16.5 419	1380 574	173 2835	3.60 91.4	1640 26875	270 4.424
	W40 x 324 W1000 x 483	95.3 61484	40.16 1020	1.000 25.4	15.910 404	1.810 46.0	34.053 865	3.054 78	1.681 43	1.18 30	25600 10656	1280 20975	16.4 417	1220 508	153 2507	3.58 90.9	1460 23925	239 3.916
	W40 x 297 W1000 x 443	87.4 56387	39.84 1012	0.930 23.6	15.825 402	1.650 41.9	34.053 865	2.894 73	1.646 42	1.18 30	23200 9657	1170 19173	16.3 414	1090 454	138 2261	3.54 89.9	1330 21795	215 3.523
	W40 x 277 W1000 x 412	81.3 52452	39.69 1008	0.830 21.1	15.830 402	1.575 40.0	34.053 865	2.819 72	1.596 41	1.18 30	21900 9115	1100 18026	16.4 417	1040 433	132 2163	3.58 90.9	1250 20484	204 3.343
	W40 x 249 W1000 x 371	73.3 47290	39.38 1000	0.750 19.0	15.750 400	1.420 36.1	34.053 865	2.664 68	1.556 40	1.18 30	19600 8158	993 16272	16.3 414	926 385	118 1934	3.55 90.2	1120 18353	182 2.982
	W40 x 215 W1000 x 321	63.3 40839	38.98 990	0.650 16.5	15.750 400	1.220 31.0	34.053 865	2.464 63	1.506 38	1.18 30	16700 6951	859 14076	16.2 411	796 331	101 1655	3.54 89.9	964 15797	156 2.556
	W40 x 199 W1000 x 296	58.4 37678	38.67 982	0.650 16.5	15.750 400	1.065 27.1	34.053 865	2.309 59	1.506 38	1.18 30	14900 6202	770 12618	16.0 406	695 289	88.2 1445	3.45 87.6	869 14240	137 2.245
40 x 12 1000 x 300	W40 x 327 W1000 x 486	95.9 61871	40.79 1036	1.180 30.0	12.130 308	2.130 54.1	34.043 865	3.374 86	1.771 45	1.18 30	24500 10198	1200 19664	16.0 406	640 266	105 1721	2.58 65.5	1410 23106	170 2.786
	W40 x 294 W1000 x 438	86.2 55613	40.39 1026	1.060 26.9	12.010 305	1.930 49.0	34.043 865	3.174 81	1.711 43	1.18 30	21900 9115	1080 17698	15.9 404	562 234	93.5 1532	2.55 64.8	1270 20811	150 2.458
	W40 x 264 W1000 x 393	77.6 50064	40.00 1016	0.960 24.4	11.930 303	1.730 43.9	34.053 865	2.974 75	1.661 42	1.18 30	19400 8075	971 15912	15.8 401	493 205	82.6 1354	2.52 64.0	1130 18517	132 2.163
	W40 x 235 W1000 x 350	68.9 44452	39.69 1008	0.830 21.1	11.890 302	1.575 40.0	34.053 865	2.819 72	1.596 41	1.18 30	17400 7242	875 14339	15.9 404	444 185	74.6 1222	2.54 64.5	1010 16551	118 1.934
	W40 x 211 W1000 x 314	62.0 40000	39.37 1000	0.750 19.1	11.810 300	1.415 35.9	34.053 865	2.659 67	1.556 40	1.18 30	15500 6452	786 12880	15.8 401	390 162	66.1 1083	2.51 63.8	906 14847	105 1.721
	W40 x 183 W1000 x 272	53.7 34645	38.98 990	0.650 16.5	11.810 300	1.200 31.0	34.093 865	2.444 63	1.506 38	1.18 30	13200 5494	675 11061	15.7 399	331 138	56.0 918	2.49 63.2	774 12684	88.3 1.447
	W40 x 167 W1000 x 249	49.1 31677	38.59 980	0.650 16.5	11.810 300	1.025 26.0	34.053 865	2.269 58	1.506 38	1.18 30	11600 4828	600 9832	15.3 389	283 118	47.9 7856	2.40 61.0	693 11356	76.0 1.245
	W40 x 149 W1000 x 222	43.8 28258	38.20 970	0.630 16.0	11.810 300	0.830 21.1	34.053 865	2.074 53	1.496 38	1.18 30	9800 4079	513 8407	15.0 381	229 95.3	38.8 636	2.29 58.2	598 9799	62.2 1.019

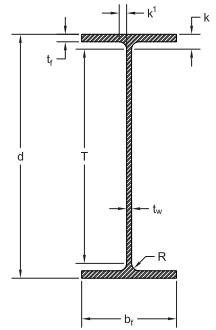
WIDE FLANGE BEAMS



W36 & W920

Prime Section Group	Section Size	Area A	Depth d	Web Thickness	Flange		Distance			Fillet Radius	Elastic Properties						Plastic Modulus	
					Width	Thickness	T	k	k'		X - X			Y - Y				
											b _f Inch (mm)	t _f Inch (mm)	T Inch (mm)	k Inch (mm)	k' Inch (mm)	I _x Inch ⁴ (10 ⁶ mm ⁴)	S _x Inch ³ (10 ³ mm ³)	r _x Inch (mm)
36 x 16.5 920 x 420	W36 x 441 W920 x 656	129.7 83677	38.85 987	1.360 34.5	16.965 431	2.440 62.0	31.483 800	3.684 94	1.861 47	1.18 30	32100 13361	1650 27039	15.7 399	1910 795	235 3851	3.92 99.6	1910 31299	368 6.030
	W36 x 395 W920 x 588	116.2 74968	38.37 975	1.220 31.0	16.830 427	2.200 55.9	31.483 800	3.444 87	1.791 46	1.18 30	28500 11863	1490 24417	15.7 399	1750 728	208 3408	3.88 98.6	1710 28022	325 5.326
	W36 x 361 W920 x 537	106.1 684515	37.99 965	1.120 28.4	16.730 425	2.010 51.1	31.483 800	3.254 83	1.741 44	1.18 30	25700 10697	1350 22122	15.6 396	1570 653	188 3081	3.85 97.8	1550 25400	293 4.801
	W36 x 330 W920 x 491	97.0 62581	37.67 957	1.020 25.9	16.630 422	1.850 47.0	31.483 800	3.094 79	1.691 43	1.18 30	23300 9698	1240 20320	15.5 394	1420 591	171 2802	3.83 97.3	1410 23106	265 4.343
	W36 x 302 W920 x 449	88.8 57290	37.33 948	0.945 24.0	16.655 423	1.680 42.7	31.483 800	2.924 74	1.654 42	1.18 30	21100 8782	1130 18517	15.4 391	1300 541	156 2556	3.82 97.0	1280 20975	241 3.949
	W36 x 282 W920 x 420	82.9 53484	37.11 943	0.885 22.5	16.595 422	1.570 39.9	31.483 800	2.814 71	1.624 41	1.18 30	19600 8158	1050 17206	15.4 391	1200 499	144 2360	3.80 96.5	1190 19501	223 3.654
	W36 x 262 W920 x 390	77.0 49677	36.85 936	0.840 21.3	16.550 420	1.440 36.6	31.483 800	2.684 68	1.601 41	1.18 30	17900 7451	972 15928	15.3 389	1090 454	132 2163	3.76 95.5	1100 18026	204 3.343
	W36 x 247 W920 x 368	72.5 46774	36.67 931	0.800 20.3	16.510 419	1.350 34.3	31.483 799	2.594 66	1.581 40	1.18 30	16700 6951	913 14961	15.2 386	1010 420	123 2016	3.74 95.0	1030 16879	190 3.114
	W36 x 231 W920 x 344	68.0 43871	36.49 927	0.760 19.3	16.470 418	1.260 32.0	31.483 800	2.504 64	1.561 40	1.18 30	15600 6493	854 13994	15.1 384	940 391	114 1868	3.71 94.2	963 15781	176 2.884
36 x 12 920 x 300	W36 x 256 W920 x 381	75.4 48645	37.43 951	0.960 24.4	12.215 310	1.730 43.9	31.483 800	2.974 75	1.661 42	1.18 30	16800 6993	895 14666	14.9 378	528 220	86.5 1417	2.65 67.3	1040 17042	137 2.245
	W36 x 232 W920 x 345	68.1 43935	37.12 943	0.870 22.1	12.120 308	1.570 39.9	31.493 800	2.814 71	1.616 41	1.18 30	15000 6243	809 13257	14.8 376	468 195	77.2 1265	2.62 66.5	936 15338	122 1.999
	W36 x 210 W920 x 313	61.8 39871	36.69 932	0.830 21.1	12.180 309	1.360 34.5	31.483 800	2.604 66	1.596 41	1.18 30	13200 5494	719 11782	14.6 371	411 171	67.5 1106	2.58 65.5	833 13650	107 1.753
	W36 x 194 W920 x 289	57.0 36774	36.49 927	0.765 19.4	12.115 308	1.260 32.0	31.483 800	2.504 64	1.564 40	1.18 30	12100 5036	664 10881	14.6 371	375 156	61.9 1014	2.56 65.0	767 12569	97.7 1.601
	W36 x 182 W920 x 271	53.6 34581	36.33 923	0.725 18.4	12.075 307	1.180 30.0	31.483 800	2.424 62	1.544 39	1.18 30	11300 4703	623 10209	14.5 368	347 144	57.6 944	2.55 64.8	718 11766	90.7 1.486
	W36 x 170 W920 x 253	50.0 32258	36.17 919	0.680 17.3	12.030 306	1.100 27.9	31.483 800	2.344 59	1.521 39	1.18 30	10500 4370	581 9521	14.5 368	320 133	53.2 872	2.53 64.3	668 10947	83.8 1.373
	W36 x 160 W920 x 238	47.0 30323	36.01 915	0.650 16.5	12.000 305	1.020 25.9	31.483 800	2.264 57	1.506 38	1.18 30	9760 4062	542 8882	14.4 366	295 123	49.1 805	2.50 63.5	624 10225	77.3 1.267
	W36 x 150 W920 x 223	44.2 28516	35.85 911	0.625 15.9	11.975 304	0.940 23.9	31.483 800	2.184 55	1.494 38	1.18 30	9040 3763	504 8259	14.3 363	270 112	45.1 739	2.47 62.7	581 9521	70.9 1.162
	W36 x 135 W920 x 201	39.7 25613	35.55 903	0.600 15.2	11.950 304	0.790 20.1	31.483 800	2.034 52	1.481 38	1.18 30	7800 3247	439 7194	14.0 356	225 93.7	37.7 618	2.38 60.5	509 8341	59.7 978

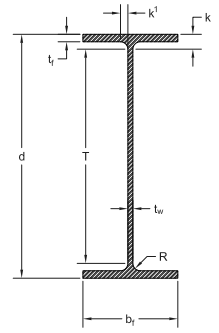
WIDE FLANGE BEAMS



W33 & W840

Prime Section Group	Section Size	Area A	Depth d	Web Thickness	Flange		Distance			Fillet Radius	Elastic Properties						Plastic Modulus	
					Width	Thickness	T	k	k'		X - X			Y - Y				
											b _f Inch (mm)	t _f Inch (mm)	T Inch (mm)	k Inch (mm)	k' Inch (mm)	I _x Inch ⁴ (10 ⁶ mm ⁴)	S _x Inch ³ (10 ³ mm ³)	r _x Inch (mm)
33 x 15.75 840 x 400	W33 x 387 W840 x 576	114.0 73548	35.95 913	1.260 32.0	16.200 411	2.280 57.9	28.903 734	3.524 89	1.811 46	1.18 30	24300 10114	1350 22122	14.6 371	1620 674	200 3277	3.77 95.8	1560 25564	312 5.113
	W33 x 354 W840 x 527	104.1 67161	35.55 903	1.160 29.5	16.100 409	2.090 53.1	28.883 734	3.334 85	1.761 45	1.18 30	22000 9157	1240 20320	14.5 368	1460 608	181 2966	3.74 95.0	1420 23270	282 4.621
	W33 x 318 W840 x 473	93.5 60322	35.16 893	1.040 26.4	15.985 406	1.890 48.0	28.893 734	3.134 80	1.701 43	1.18 30	19500 8117	1110 18190	14.5 368	1290 537	161 2638	3.71 94.2	1270 20811	250 4.097
	W33 x 291 W840 x 433	85.6 55226	34.84 885	0.960 24.4	15.905 404	1.730 43.9	28.893 734	2.974 75	1.661 42	1.18 30	17700 7367	1020 16715	14.4 366	1160 483	146 2393	3.68 93.5	1160 19009	226 3.703
	W33 x 263 W840 x 392	77.4 49935	34.53 877	0.870 22.1	15.805 401	1.570 39.9	28.903 734	2.814 71	1.616 41	1.18 30	15900 6618	919 15060	14.3 363	1040 433	131 2147	3.66 93.0	1040 17042	202 3.310
	W33 x 241 W840 x 359	70.9 45742	34.18 868	0.830 21.1	15.860 403	1.400 35.6	28.893 734	2.644 67	1.596 41	1.18 30	14200 5910	831 13618	14.1 358	933 388	118 1934	3.62 91.9	940 15404	182 2.982
	W33 x 221 W840 x 329	65.0 41935	33.93 862	0.775 19.7	15.805 401	1.275 32.4	28.893 734	2.519 64	1.569 40	1.18 30	12900 5369	759 12438	14.1 358	840 350	106 1737	3.59 91.2	857 14044	164 2.687
	W33 x 201 W840 x 299	59.1 38129	33.68 855	0.715 18.2	15.745 400	1.150 29.2	28.893 734	2.394 61	1.539 39	1.18 30	11600 4828	686 11241	14.0 356	749 312	95.2 1560	3.56 90.4	773 12667	147 2.409
33 x 11.5 840 x 290	W33 x 169 W840 x 251	49.5 31935	33.82 859	0.670 17.0	11.500 292	1.220 31.0	28.893 734	2.464 63	1.516 39	1.18 30	9290 3867	549 8996	13.7 348	310 129	53.9 883	2.50 63.5	629 10307	84.4 1.383
	W33 x 152 W840 x 226	44.7 28839	33.49 851	0.635 16.1	11.565 294	1.055 26.8	28.893 734	2.299 58	1.499 38	1.18 30	8160 3396	487 7980	13.5 343	273 114	47.2 773	2.47 62.7	559 9160	73.9 1.211
	W33 x 141 W840 x 210	41.6 26839	33.30 846	0.605 15.4	11.535 293	0.960 24.4	28.893 734	2.204 56	1.484 38	1.18 30	7450 3101	448 7341	13.4 340	246 102	42.7 700	2.43 61.7	514 8423	66.9 1.096
	W33 x 130 W840 x 193	38.3 24710	33.09 840	0.580 14.7	11.510 292	0.855 21.7	28.893 734	2.099 53	1.471 37	1.18 30	6710 2793	406 6653	13.2 335	218 90.7	37.9 621	2.39 60.7	467 7653	59.5 975
	W33 x 118 W840 x 176	34.7 22387	32.86 835	0.550 14.0	11.480 292	0.740 18.8	28.893 734	1.984 50	1.456 37	1.18 30	5900 2456	359 5883	13.0 330	187 77.8	32.6 534	2.32 58.9	415 6801	51.3 841

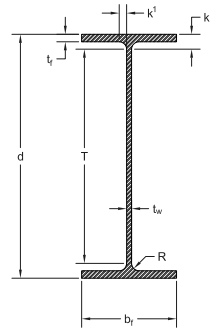
WIDE FLANGE BEAMS



W30 & W760

Prime Section Group	Section Size Inch x lbs/ft (mm x kg/m)	Area A Inch² (mm²)	Depth d Inch (mm)	Web Thickness t _w Inch (mm)	Flange		Distance			Fillet Radius R Inch (mm)	Elastic Properties						Plastic Modulus	
					Width b _f Inch (mm)	Thickness t _f Inch (mm)	T Inch (mm)	k Inch (mm)	k' Inch (mm)		X - X			Y - Y				
											I _x Inch⁴ (10⁶ mm⁴)	S _x Inch³ (10³ mm³)	r _x Inch (mm)	I _y Inch⁴ (10⁶ mm⁴)	S _y Inch³ (10³ mm³)	r _y Inch (mm)	Z _x Inch³ (10³ mm³)	Z _y Inch³ (10³ mm³)
30 x 15 760 x 380	W30 x 391 W760 x 582	115.0 74193	33.19 843	1.360 34.5	15.590 396	2.440 62.0	26.5 673	3.67 93.2	1.861 47	1.18 30	20700 8616	1250 20.484	13.4 340	1550 645	198 3.245	3.67 93.2	1450 23761	310 5.080
	W30 x 357 W760 x 531	104.8 67613	32.80 833	1.240 31.5	15.470 393	2.240 56.9	26.5 673	3.64 92.5	1.801 46	1.18 30	18700 7784	1140 18.681	13.3 338	1390 579	179 2.933	3.64 92.5	1320 21631	279 4.572
	W30 x 326 W760 x 484	95.7 61742	32.40 823	1.140 29.0	15.370 390	2.050 52.1	26.5 673	3.60 91.4	1.751 45	1.18 30	16800 6993	1040 17.042	13.2 335	1240 516	162 2.655	3.60 91.4	1190 19501	252 4.130
	W30 x 292 W760 x 434	85.7 55290	32.01 813	1.020 25.9	15.255 387	1.850 47.0	26.5 673	3.58 90.9	1.691 43	1.18 30	14900 6202	930 15.240	13.2 335	1100 458	144 2.360	3.58 90.9	1060 17370	223 3.654
	W30 x 261 W760 x 389	76.7 49484	31.61 803	0.930 23.6	15.155 385	1.650 41.9	26.5 673	3.53 89.7	1.646 42	1.18 30	13100 5453	829 13.585	13.1 333	959 399	127 2.081	3.53 89.7	943 15453	196 3.212
	W30 x 235 W760 x 350	69.0 44516	31.30 795	0.830 21.1	15.055 382	1.500 38.1	26.5 673	3.51 89.2	1.596 41	1.18 30	11700 4870	748 12.257	13.0 330	855 356	114 1.868	3.51 89.2	847 13880	175 2.868
	W30 x 211 W760 x 314	62.0 40000	30.94 786	0.775 19.7	15.105 384	1.315 33.4	26.5 673	3.49 88.6	1.569 40	1.18 30	10300 4287	665 10.897	12.9 328	757 315	100 1.639	3.49 88.6	751 12307	155 2.540
	W30 x 191 W760 x 284	56.1 36193	30.68 779	0.710 18.0	15.040 382	1.185 30.1	26.5 673	3.46 87.9	1.536 39	1.18 30	9200 3829	600 9.832	12.8 325	673 280	89.5 1.467	3.46 87.9	675 11061	138 2.261
	W30 x 173 W760 x 257	50.8 32774	30.44 773	0.655 16.6	14.985 381	1.065 27.1	26.5 673	3.42 86.9	1.509 38	1.18 30	8230 3426	541 8.865	12.7 323	598 249	79.8 1.308	3.42 86.9	607 9947	123 2.016
30 x 10.5 760 x 270	W30 x 148 W760 x 220	43.5 28064	30.67 779	0.650 16.5	10.480 266	1.180 30.0	26.5 673	2.28 57.9	1.506 38	1.18 30	6680 2780	436 7.145	12.4 315	227 94.5	43.3 710	2.28 57.9	500 8194	68.0 1.114
	W30 x 132 W760 x 196	38.9 25097	30.31 770	0.615 15.6	10.545 268	1.000 25.4	26.5 673	2.25 57.2	1.489 38	1.18 30	5770 2402	380 6.227	12.2 310	196 81.6	37.2 610	2.25 57.2	437 7161	58.4 957
	W30 x 124 W760 x 185	36.5 23548	30.17 766	0.585 14.9	10.515 267	0.930 23.6	26.5 673	2.23 56.6	1.474 37	1.18 30	5360 2231	355 5.817	12.1 307	181 75.3	34.4 564	2.23 56.6	408 6686	54.0 885
	W30 x 116 W760 x 173	34.2 22064	30.01 762	0.565 14.4	10.495 267	0.850 21.6	26.5 673	2.19 55.6	1.464 37	1.18 30	4930 2052	329 5.391	12.0 305	164 68.3	31.3 513	2.19 55.6	378 6194	49.2 806
	W30 x 108 W760 x 161	31.7 20452	29.83 758	0.545 13.8	10.475 266	0.760 19.3	26.5 673	2.15 54.6	1.454 37	1.18 30	4470 1861	299 4.900	11.9 302	146 60.8	27.9 457	2.15 54.6	346 5670	43.9 719
	W30 x 99 W760 x 147	29.1 18774	29.65 753	0.520 13.2	10.450 265	0.670 17.0	26.5 673	2.10 53.3	1.441 37	1.18 30	3990 1661	269 4.408	11.7 297	128 53.3	24.5 401	2.10 53.3	312 5113	38.6 633
	W30 x 90 W760 x 134	26.4 17032	29.53 750	0.470 11.9	10.400 264	0.610 15.5	26.5 673	2.21 362	1.416 36	1.18 30	3610 1503	245 4.015	11.7 297	115 47.9	22.1 362	2.09 53.1	283 4638	34.7 569

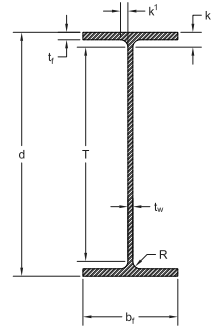
WIDE FLANGE BEAMS



W27 & W690

Prime Section Group	Section Size Inch x lbs/ft (mm x kg/m)	Area A Inch² (mm²)	Depth d Inch (mm)	Web Thickness t _w Inch (mm)	Flange		Distance			Fillet Radius R Inch (mm)	Elastic Properties						Plastic Modulus	
					Width b _f Inch (mm)	Thickness t _f Inch (mm)	T Inch (mm)	k Inch (mm)	k' Inch (mm)		X - X			Y - Y				
											I _x Inch⁴ (10⁶ mm⁴)	S _x Inch³ (10³ mm³)	r _x Inch (mm)	I _y Inch⁴ (10⁶ mm⁴)	S _y Inch³ (10³ mm³)	r _y Inch (mm)	Z _x Inch³ (10³ mm³)	Z _y Inch³ (10³ mm³)
27 x 14 690 x 360	W27 x 368 W690 x 548	108.1 69742	30.39 772	1.380 35.1	14.665 372	2.480 63.0	22.943 583	3.724 95	1.871 48	1.18 30	16200 6743	1060 17370	12.2 310	1310 545	179 2933	3.48 88.4	1240 20320	279 4.572
	W27 x 336 W690 x 500	98.7 63677	30.00 762	1.260 32.0	14.550 370	2.280 57.9	22.953 583	3.524 89	1.811 46	1.18 30	14600 6.077	972 15928	12.1 307	1180 491	162 2655	3.45 87.6	1130 18517	252 4.130
	W27 x 307 W690 x 457	90.2 58193	29.61 752	1.160 29.5	14.445 367	2.090 53.1	22.943 583	3.334 85	1.761 45	1.18 30	13100 5.453	887 14535	12.0 305	1050 437	146 2393	3.41 86.6	1030 16879	227 3.720
	W27 x 281 W690 x 419	82.6 53290	29.29 744	1.060 26.9	14.350 365	1.930 49.0	22.943 583	3.174 81	1.711 43	1.18 30	11900 4.953	814 13339	12.0 305	953 397	133 2179	3.39 86.1	936 15338	206 3.376
	W27 x 258 W690 x 384	75.7 48839	28.98 736	0.980 24.9	14.270 362	1.770 45.0	22.953 583	3.014 77	1.671 42	1.18 30	10800 4.495	745 12208	11.9 302	859 358	120 1966	3.36 85.3	852 13962	187 3.064
	W27 x 235 W690 x 350	69.1 44581	28.66 728	0.910 23.1	14.190 360	1.610 40.9	22.953 583	2.854 72	1.636 42	1.18 30	9700 4.037	677 11094	11.8 300	769 320	108 1770	3.33 84.6	772 12651	168 2.753
	W27 x 217 W690 x 323	63.8 41161	28.43 722	0.830 21.1	14.115 359	1.500 38.1	22.943 583	2.744 70	1.596 41	1.18 30	8910 3.709	627 10275	11.8 300	704 293	100.0 1639	3.32 84.3	711 11651	154 2.524
	W27 x 194 W690 x 289	57.0 36774	28.11 714	0.750 19.0	14.035 356	1.340 34.0	22.943 583	2.584 66	1.556 40	1.18 30	7860 3.272	559 9160	11.7 297	619 258	88.1 1444	3.29 83.6	631 10340	136 2.229
	W27 x 178 W690 x 265	52.3 33742	27.81 706	0.725 18.4	14.085 358	1.190 30.2	22.943 583	2.434 62	1.544 39	1.18 30	7020 2.922	505 8275	11.6 295	555 231	78.8 1291	3.25 82.6	570 9341	122 1.999
	W27 x 161 W690 x 240	47.4 30581	27.59 701	0.660 16.8	14.020 356	1.080 27.4	22.943 583	2.324 59	1.511 38	1.18 30	6310 2.626	458 7505	11.5 292	497 207	70.9 1162	3.23 82.0	515 8439	109 1.786
	W27 x 146 W690 x 217	42.9 27677	27.38 695	0.605 15.4	13.965 355	0.975 24.8	22.943 582	2.219 56	1.484 38	1.18 30	5660 2.356	414 6784	11.5 292	443 184	63.5 1041	3.20 81.3	464 7604	97.7 1.601
27 x 10 690 x 250	W27 x 129 W690 x 192	37.8 24387	27.63 702	0.610 15.5	10.010 254	1.100 27.9	22.943 583	2.344 59	1.486 38	1.18 30	4760 1.981	345 5654	11.2 284	184 76.6	36.8 603	2.21 56.1	395 6473	57.6 944
	W27 x 114 W690 x 170	33.5 21613	27.29 693	0.570 14.5	10.070 256	0.930 23.6	22.943 583	2.174 55	1.466 37	1.18 30	4080 1.698	299 4900	11.0 279	159 66.2	31.5 516	2.18 55.4	343 5621	49.3 808
	W27 x 102 W690 x 152	30.0 19355	27.09 688	0.515 13.1	10.015 254	0.830 21.1	22.943 583	2.074 53	1.439 37	1.18 30	3620 1.507	267 4375	11.0 279	139 57.9	27.8 456	2.15 54.6	305 4998	43.4 711
	W27 x 94 W690 x 140	27.7 17871	26.92 684	0.490 12.4	9.990 254	0.745 18.9	22.943 583	1.989 50	1.426 36	1.18 30	3270 1.361	243 3982	10.9 277	124 51.6	24.8 406	2.12 53.8	278 4556	38.8 636
	W27 x 84 W690 x 125	24.8 16.000	26.71 678	0.460 11.7	9.960 253	0.640 16.3	22.943 582	1.884 48	1.411 36	1.18 30	2850 1.186	213 3490	10.7 272	106 44.1	21.2 347	2.07 52.6	244 3998	33.2 544

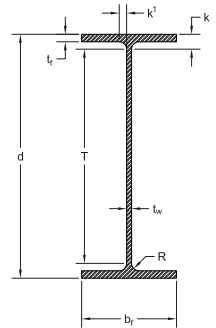
WIDE FLANGE BEAMS



W24 & W610

Prime Section Group	Section Size	Area A	Depth d	Web Thickness	Flange		Distance			Fillet Radius	Elastic Properties						Plastic Modulus	
					Width	Thickness	T	k	k¹		X - X			Y - Y				
											b _f Inch (mm)	t _f Inch (mm)	Inch (mm)	Inch (mm)	Inch (mm)	I _x Inch⁴ (10⁶ mm⁴)	S _x Inch³ (10³ mm³)	r _x Inch (mm)
24 x 12.75 610 x 320	W24 x 370 W610 x 551	108.0 69677	27.99 711	1.520 38.6	13.660 347	2.720 69.1	20.063 510	3.964 101	1.941 49	1.18 30	13400 5577	957 15682	11.1 282	1160 483	170 2786	3.27 83.1	1130 18517	267 4.375
	W24 x 335 W610 x 498	98.4 63484	27.52 699	1.380 35.1	13.520 343	2.480 63.0	20.073 510	3.724 94	1.871 48	1.18 30	11900 4953	864 14158	11.0 279	1030 429	152 2491	3.23 82.0	1020 16715	238 3.900
	W24 x 306 W610 x 455	89.8 57935	27.13 689	1.260 32.0	13.405 340	2.280 57.9	20.083 510	3.524 89	1.811 46	1.18 30	10700 4454	789 12929	10.9 277	919 383	137 2245	3.20 81.3	922 15109	214 3.507
	W24 x 279 W610 x 415	82.0 52903	26.73 679	1.160 29.5	13.305 338	2.090 53.1	20.063 510	3.334 85	1.761 45	1.18 30	9600 3996	718 11766	10.8 274	823 343	124 2032	3.17 80.5	835 13683	193 3.163
	W24 x 250 W610 x 372	73.5 47419	26.34 669	1.040 26.4	13.185 335	1.890 48.0	20.073 510	3.134 80	1.701 43	1.18 30	8490 3534	644 10553	10.7 272	724 301	110 1803	3.14 79.8	744 12192	171 2.802
	W24 x 229 W610 x 341	67.2 43355	26.02 661	0.960 24.4	13.110 333	1.730 43.9	20.073 510	2.974 75	1.661 42	1.18 30	7650 3184	588 9636	10.7 272	651 271	99.4 1629	3.11 79.0	675 11061	154 2.524
	W24 x 207 W610 x 307	60.7 39161	25.71 653	0.870 22.1	13.010 330	1.570 39.9	20.083 510	2.814 71	1.616 41	1.18 30	6820 2839	531 8701	10.6 269	578 241	88.8 1455	3.08 78.2	606 9931	137 2.245
	W24 x 192 W610 x 285	56.3 36323	25.47 647	0.810 20.6	12.950 329	1.460 37.1	20.063 510	2.704 69	1.586 40	1.18 30	6260 2606	491 8046	10.5 267	530 221	81.8 1340	3.07 78.0	559 9160	126 2.065
	W24 x 176 W610 x 262	51.7 33355	25.24 641	0.750 19.0	12.890 327	1.340 34.0	20.073 510	2.584 66	1.556 40	1.18 30	5680 2364	450 7374	10.5 267	479 199	74.3 1218	3.04 77.2	511 8374	115 1.885
	W24 x 162 W610 x 241	47.7 30774	25.00 635	0.705 17.9	12.955 329	1.220 31.0	20.073 510	2.464 63	1.534 39	1.18 30	5170 2152	414 6784	10.4 264	443 184	68.4 1121	3.05 77.5	468 7669	105 1.721
	W24 x 146 W610 x 217	43.0 27742	24.74 628	0.650 16.5	12.900 328	1.090 27.7	20.073 510	2.334 59	1.506 38	1.18 30	4580 1906	371 6080	10.3 262	391 163	60.5 991	3.01 76.5	418 6850	93.2 1.527
	W24 x 131 W610 x 195	38.5 24839	24.48 622	0.605 15.4	12.855 327	0.960 24.4	20.073 510	2.204 56	1.484 38	1.18 30	4020 1673	329 5391	10.2 259	340 142	53.0 869	2.97 75.4	370 6063	81.5 1.336
	W24 x 117 W610 x 174	34.4 22194	24.26 616	0.550 14.0	12.800 325	0.850 21.6	20.073 510	2.094 53	1.456 37	1.18 30	3540 1473	291 4769	10.1 257	297 124	46.5 762	2.94 74.7	327 5359	71.4 1.170
	W24 x 104 W610 x 155	30.6 19742	24.06 611	0.500 12.7	12.750 324	0.750 19.0	20.073 510	1.994 51	1.431 36	1.18 30	3100 1290	258 4228	10.1 257	259 108	40.7 667	2.91 73.9	289 4736	62.4 1.023
24 x 9 610 x 230	W24 x 103 W610 x 153	30.3 19548	24.53 623	0.550 14.0	9.000 229	0.980 24.9	20.083 510	2.224 56	1.456 37	1.18 30	3000 1249	245 4015	10.00 254	119 49.5	26.5 434	1.99 50.5	280 4588	41.5 680
	W24 x 94 W610 x 140	27.7 17871	24.31 617	0.515 13.1	9.065 230	0.875 22.2	20.073 510	2.119 54	1.439 37	1.18 30	2700 1124	222 3638	9.87 251	109 45.4	24.0 393	1.98 50.3	254 4162	37.5 615
	W24 x 84 W610 x 125	24.7 15935	24.10 612	0.470 11.9	9.020 229	0.770 19.6	20.073 510	2.014 51	1.416 36	1.18 30	2370 986	196 3212	9.79 249	94.4 39.3	20.9 342	1.95 49.5	224 3671	32.6 534
	W24 x 76 W610 x 113	22.4 14452	23.92 608	0.440 11.2	8.990 228	0.680 17.3	20.073 510	1.924 49	1.401 36	1.18 30	2100 874	176 2884	9.69 246	82.5 34.3	18.4 302	1.92 48.8	200 3277	28.6 469
	W24 x 68 W610 x 101	20.1 12968	23.73 603	0.415 10.5	8.965 228	0.585 14.9	20.073 510	1.829 46	1.389 35	1.18 30	1830 762	154 2524	9.55 243	70.4 29.3	15.7 257	1.87 47.5	177 2900	24.5 401
CSA	W24 x 61 W610 x 91	18.0 11613	23.56 598	0.380 9.7	8.930 227	0.500 12.7	20.073 510	1.744 44	1.371 35	1.18 30	1602 667	136 2230	9.45 240	59.6 24.8	13.4 219	1.82 46.3	156 2560	20.9 343
	W24 x 56 W610 x 84	16.6 10710	23.48 596	0.355 9.0	8.900 226	0.460 11.7	20.073 510	1.704 43	1.359 35	1.18 30	1473 613	126 2060	9.41 239	54.3 22.6	12.2 200	1.81 45.9	144 2360	19.1 313
24 x 7 610 x 180	W24 x 62 W610 x 92	18.2 11742	23.74 603	0.430 10.9	7.040 179	0.590 15.0	20.939 532	1.401 36	0.963 24	0.75 19	1550 645	131 2147	9.23 234	34.5 14.4	9.8 161	1.38 35.1	153 2507	15.7 257
	W24 x 55 W610 x 82	16.2 10452	23.57 599	0.395 10.0	7.005 178	0.505 12.8	20.939 532	1.316 33	0.946 24	0.75 19	1350 562	114 1868	9.11 231	29.1 12.1	8.30 136	1.34 34.0	134 2196	13.3 218

WIDE FLANGE BEAMS

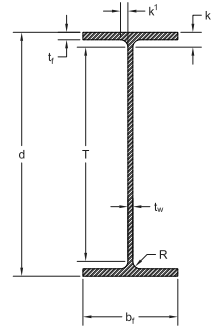


W21 & W530

Prime Section Group	Section Size	Area A	Depth d	Web Thickness	Flange		Distance			Fillet Radius	Elastic Properties						Plastic Modulus	
					Width	Thickness	T	k	k'		X - X			Y - Y				
											I_x Inch ⁴ (10 ⁶ mm ⁴)	S_x Inch ³ (10 ³ mm ³)	r_x Inch (mm)	I_y Inch ⁴ (10 ⁶ mm ⁴)	S_y Inch ³ (10 ³ mm ³)	r_y Inch (mm)	Z_x Inch ³ (10 ³ mm ³)	Z_y Inch ³ (10 ³ mm ³)
21 x 13 530 x 330	W21 x 275* W530 x 409*	81.8 52744	24.13 613	1.220 31.0	12.890 327	2.190 55.6	17.263 439	3.434 87	1.791 45	1.18 30	7710 3210	639 10500	9.71 247	786 327	122 2000	3.10 78.7	750 12300	190 3.120
	W21 x 248* W530 x 369*	73.8 47613	23.74 603	1.100 27.9	12.775 324	1.990 50.5	17.273 439	3.234 82	1.731 44	1.18 30	6850 2850	577 9450	9.63 245	695 289	109 1780	3.07 77.9	672 11000	169 2.770
	W21 x 223* W530 x 332*	66.3 42774	23.35 593	1.000 25.4	12.675 322	1.790 45.5	17.283 439	3.034 77	1.681 43	1.18 30	6040 2510	517 8480	9.54 242	610 254	96.2 1580	3.03 77.0	598 9800	150 2.450
21 x 12.25 530 x 310	W21 x 201 W530 x 300	59.2 38193	23.03 585	0.910 23.1	12.575 319	1.630 41.4	17.283 439	2.874 73	1.636 42	1.18 30	5310 2210	461 7554	9.47 241	542 226	86.1 1411	3.02 76.7	530 8685	133 2.179
	W21 x 182 W530 x 272	53.7 34645	22.72 577	0.830 21.1	12.500 317	1.480 37.6	17.273 439	2.724 69	1.596 41	1.18 30	4730 1969	417 6833	9.40 239	483 201	77.2 1265	3.00 76.2	476 7800	119 1.950
	W21 x 166 W530 x 248	48.9 31548	22.48 571	0.750 19.0	12.420 315	1.360 34.5	17.273 439	2.604 66	1.556 40	1.18 30	4280 1781	380 6227	9.36 238	435 181	70.0 1147	2.99 75.9	432 7079	108 1.770
	W21 x 147 W530 x 219	43.2 27871	22.06 560	0.720 18.3	12.510 318	1.150 29.2	17.273 439	2.394 61	1.541 39	1.18 30	3630 1511	329 5391	9.17 233	376 157	60.1 985	2.95 74.9	373 6112	92.6 1.517
	W21 x 132 W530 x 196	38.8 25032	21.83 554	0.650 16.5	12.440 316	1.035 26.3	17.273 438	2.279 58	1.506 38	1.18 30	3220 1340	295 4834	9.12 232	333 139	53.5 877	2.93 74.4	333 5457	82.3 1.349
	W21 x 122 W530 x 182	35.9 23161	21.68 551	0.600 15.2	12.390 315	0.960 24.4	17.273 439	2.204 56	1.481 38	1.18 30	2960 1232	273 4474	9.09 231	305 127	49.2 806	2.92 74.2	307 5031	75.6 1.239
	W21 x 111 W530 x 165	32.7 21097	21.51 546	0.550 14.0	12.340 313	0.875 22.2	17.273 439	2.119 54	1.456 37	1.18 30	2670 1111	249 4080	9.05 230	274 114	44.5 729	2.90 73.7	279 4572	68.2 1.118
	W21 x 101 W530 x 150	29.8 19226	21.36 543	0.500 12.7	12.290 312	0.800 20.3	17.273 439	2.044 52	1.431 36	1.18 30	2420 1007	227 3720	9.02 229	248 103	40.3 660	2.89 73.4	253 4146	61.7 1.011
	W21 x 93 W530 x 138	27.3 17613	21.62 549	0.580 14.7	8.420 214	0.930 23.6	18.139 461	1.741 44	1.038 26	0.75 19	2070 862	192 3146	8.70 221	92.9 39	22.1 362	1.84 46.7	221 3622	34.7 569
	W21 x 83 W530 x 123	24.3 15677	21.43 544	0.515 13.1	8.355 212	0.835 21.2	18.139 461	1.646 42	1.006 26	0.75 19	1830 762	171 2802	8.67 220	81.4 34	19.5 320	1.83 46.5	196 3212	30.5 500
	W21 x 73 W530 x 109	21.5 13871	21.24 539	0.455 11.6	8.295 211	0.740 18.8	18.139 460	1.551 39	0.976 25	0.75 19	1600 666	151 2474	8.64 219	70.6 29	17.0 279	1.81 46.0	172 2819	26.6 436
W21 x 68 W530 x 101	20.0 12903	21.13 537	0.430 10.9	8.270 210	0.685 17.4	18.139 461	1.496 38	0.963 24	0.75 19	1480 616	140 2294	8.60 218	64.7 27	15.7 257	1.80 45.7	160 2622	24.4 400	
21 x 8.25 530 x 210	W21 x 62 W530 x 92	18.3 11806	20.99 533	0.400 10.2	8.240 209	0.615 15.6	18.139 461	1.426 36	0.948 24	0.75 19	1330 554	127 2081	8.54 217	57.5 24	14.0 229	1.77 45.0	144 2360	21.7 356
	W21 x 55 W530 x 82	16.2 10452	20.80 528	0.375 9.5	8.220 209	0.522 13.3	18.135 460	1.333 34	0.936 24	0.75 19	1140 475	110 1803	8.40 213	48.4 20	11.8 193	1.73 43.9	126 2065	18.4 302
	W21 x 48 W530 x 72	14.1 9097	20.62 524	0.350 9.0	8.140 207	0.430 10.9	18.139 461	1.241 31	0.923 23	0.75 19	959 399	93 1524	8.24 209	38.7 16	9.52 156	1.66 42.2	107 1753	14.9 244
	W21 x 57 W530 x 85	16.7 10774	21.06 535	0.405 10.3	6.555 166	0.650 16.5	18.139 461	1.461 37	0.951 24	0.75 19	1170 487	111 1819	8.36 212	30.6 13	9.35 153	1.35 34.3	129 2114	14.8 243
21 x 6.5 530 x 170	W21 x 50 W530 x 74	14.7 9484	20.83 529	0.380 9.7	6.530 166	0.535 13.6	18.139 461	1.346 34	0.938 24	0.75 19	984 410	94.5 1549	8.18 208	24.9 10	7.64 125	1.30 33.0	110 1803	12.2 200
	W21 x 44 W530 x 66	13.0 8387	20.66 525	0.350 8.9	6.500 165	0.450 11.4	18.139 461	1.261 32	0.923 23	0.75 19	843 351	81.6 1337	8.06 205	20.7 9	6.37 104	1.26 32.0	95.4 1563	10.2 167

* Non ASTM A6 Sections

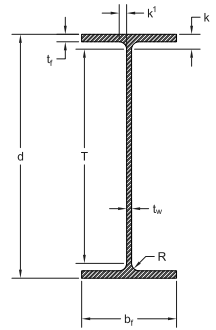
WIDE FLANGE BEAMS



W18 & W460

Prime Section Group	Section Size	Area A	Depth d	Web Thickness	Flange		Distance			Fillet Radius	Elastic Properties						Plastic Modulus	
					Width	Thickness	T	k	k'		X - X			Y - Y				
											b _f Inch (mm)	t _f Inch (mm)	T Inch (mm)	k Inch (mm)	k' Inch (mm)	I _x Inch ⁴ (10 ⁶ mm ⁴)	S _x Inch ³ (10 ³ mm ³)	r _x Inch (mm)
18 x 11 460 x 280	W18 x 234	68.8	21.06	1.16	11.65	2.11	15.502	2.779	1.249	0.669	4900	466	8.44	558	95.8	2.85	549	149
	W460x349	44387	534.9	29.5	295.9	53.6	393.8	70.6	31.7	17.0	203952	7636	214.4	23226	1570	72.39	8996	2442
	W18x211	62.3	20.7	1.06	11.6	1.91	15.5	2.31	1.375	0.669	4330	419	8.35	493	85.3	2.82	409	132
	W460x315	40193	525.8	26.9	294.6	48.5	393.7	58.7	34.9	17.0	180227	6866	212.09	20520	1398	71.628	6702	2163
	W18x192	56.2	20.4	0.96	11.5	1.75	15.5	2.15	1.125	0.669	3870	380	8.28	440	76.8	2.79	442	119
	W460x286	36258	518.2	24.4	292.1	44.5	393.7	54.6	28.6	17.0	161080	6227	210.312	18314	1259	70.866	7243	1950
	W18x175	51.4	20	0.89	11.4	1.59	15.125	1.99	1.25	0.669	3450	344	8.2	391	68.8	2.76	398	106
	W460x260	33161	508.0	22.6	289.6	40.4	384.2	50.5	31.8	17.0	143599	5637	208.28	16275	1127	70.104	6522	1737
	W18x158	46.3	19.7	0.81	11.3	1.44	15.125	1.84	1.25	0.669	3060	310	8.12	347	61.4	2.74	356	94.8
	W460x235	29871	500.4	20.6	287.0	36.6	384.2	46.7	31.8	17.0	127366	5080	206.248	14443	1006	69.596	5834	1553
	W18x143	42	19.5	0.73	11.2	1.32	15.125	1.72	1.1875	0.669	2750	282	8.09	311	55.5	2.72	322	85.4
	W460x213	27097	495.3	18.5	284.5	33.5	384.2	43.7	30.2	17.0	114463	4621	205.486	12945	909	69.088	5277	1399
	W18x130	38.3	19.3	0.67	11.2	1.2	15.125	1.6	1.1875	0.669	2460	256	8.03	278	49.9	2.70	290	76.7
	W460x193	24710	490.2	17.0	284.5	30.5	384.2	40.6	30.2	17.0	102392	4195	203.962	11571	818	68.58	4752	1257
	W18x119	35.1	19	0.655	11.3	1.06	15.125	1.46	1.1875	0.669	2190	231	7.9	253	44.9	2.69	262	69.1
	W460x177	22645	482.6	16.6	287.0	26.9	384.2	37.1	30.2	17.0	91154	3785	200.66	10531	736	68.326	4293	1132
18 x 75 460 x 190	W18x106	31.1	18.7	0.59	11.2	0.940	15.125	1.34	1.125	0.669	1910	204	7.84	220	39.4	2.66	230	60.5
	W460x158	20064	475.0	15.0	284.5	23.9	384.2	34.0	28.6	17.0	79410	3343	199.136	9157	646	67.564	3769	991
	W18x97	28.5	18.6	0.535	11.1	0.870	15.125	1.27	1.125	0.669	1750	188	7.82	201	36.1	2.65	211	55.3
	W460x144	18387	472.4	13.6	281.9	22.1	384.2	32.3	28.6	17.0	72840	3081	198.628	8366	592	67.31	3458	906
	W18x86	25.3	18.4	0.48	11.1	0.770	15.125	1.17	1.0625	0.669	1530	166	7.77	175	31.6	2.63	186	48.4
	W460x128	16323	467.4	12.2	281.9	19.6	384.2	29.7	27.0	17.0	63683	2720	197.358	7284	518	66.802	3048	793
	W18x76	22.3	18.2	0.425	11.0	0.680	15.125	1.1	1.1	0.669	1330.0	146.0	7.73	152.0	27.6	2.61	163.0	42.2
	W460x113	14387	462.3	10.8	279.4	17.3	384.2	27.4	27.0	17.0	55358	2393	196.342	6327	452	66.294	2671	692
	W18 x 71	20.9	18.47	0.495	7.635	0.81	15.125	1.21	0.875	0.669	1170	127	7.50	60.3	15.8	1.70	146	24.7
	W460x106	13484	469.1	12.6	193.9	20.6	384.2	30.7	22.2	17.0	48699	2081	190.5	2510	259	43.18	2393	405
	W18x65	19.1	18.35	0.450	7.59	0.75	15.125	1.15	0.875	0.669	1070	117	7.49	54.8	14.4	1.69	133	22.5
	W460x106	12323	466.1	11.4	192.8	19.1	384.2	29.2	22.2	17.0	44536	1917	190.246	2281	236	42.926	2179	369
	W18x60	17.6	18.24	0.415	7.555	0.695	15.125	1.1	0.8125	0.669	984	108	7.47	50.1	13.3	1.68	123	20.6
	W460x106	11355	463.3	10.5	191.9	17.7	384.2	27.9	20.6	17.0	40957	1770	189.738	2085	218	42.672	2016	338
	W18x55	16.2	18.11	0.390	7.53	0.63	15.125	1.03	0.8125	0.669	890	98.3	7.41	44.9	11.9	1.67	112	18.5
	W460x106	10452	460.0	9.9	191.3	16.0	384.2	26.2	20.6	17.0	37044	1611	188.214	1869	195	42.418	1835	303
W18x50	14.7	17.99	0.355	7.495	0.57	15.125	0.972	0.8125	0.669	800	88.9	7.38	40.1	10.7	1.65	101	16.6	
W460x106	9484	456.9	9.0	190.4	14.5	384.2	24.7	20.6	17.0	33299	1457	187.452	1670	175	41.91	1655	272	
18 x 6 460 x 150	W18x46	13.5	18.06	0.360	6.06	0.605	15.125	1.01	0.8125	0.669	712	78.8	7.25	22.5	7.43	1.29	90.7	11.7
	W460x106	8710	458.7	9.1	153.9	15.4	384.2	25.7	20.6	17.0	29635	1291	184.15	937	122	32.766	1486	192
	W18x40	11.8	17.9	0.315	6.015	0.525	15.125	0.927	0.8125	0.669	612	68.4	7.21	19.1	6.35	1.27	78.4	10
	W460x106	7613	454.7	8.0	152.8	13.3	384.2	23.5	20.6	17.0	254733	1121	183.134	795	104	32.258	1285	164
	W18x35	10.3	17.7	0.300	6	0.425	15.512	0.827	0.75	0.669	510	57.6	7.04	15.3	5.12	1.22	66.5	8.06
W460x106	6645	449.6	7.6	152.4	10.8	394.0	21.0	19.1	17.0	21228	944	178.816	637	84	30.988	1090	132	

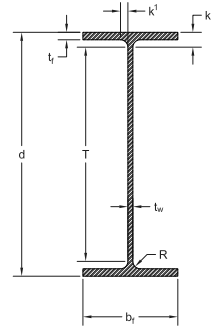
WIDE FLANGE BEAMS



W16 & W410

Prime Section Group	Section Size Inch x lbs/ft (mm x kg/m)	Area A Inch² (mm²)	Depth d Inch (mm)	Web Thickness t _w Inch (mm)	Flange		Distance			Fillet Radius R Inch (mm)	Elastic Properties						Plastic Modulus	
					Width b _f Inch (mm)	Thickness t _f Inch (mm)	T Inch (mm)	k Inch (mm)	k¹ Inch (mm)		X - X			Y - Y				
											I _x Inch⁴ (10⁶ mm⁴)	S _x Inch³ (10³ mm³)	r _x Inch (mm)	I _y Inch⁴ (10⁶ mm⁴)	S _y Inch³ (10³ mm³)	r _y Inch (mm)	Z _x Inch³ (10³ mm³)	Z _y Inch³ (10³ mm³)
16 x 10.25 410 x 260	W16 x 100	29.4	16.97	0.585	10.425	0.985	13.25	1.39	1.125	0.669	1490	175	7.1	186	35.7	2.51	198	54.9
	W410x149	18968	431	15	265	25	337	35	29	17	62018	2868	180	7742	585	64	3245	900
	W16x89	26.2	16.75	0.525	10.365	0.875	13.25	1.28	1.0625	0.669	1300	155	7.05	163	31.4	2.49	175	48.1
	W410x132	16903	425	13	263	22	337	33	27	17	54110	2540	179	6785	515	63	2868	788
	W16x77	22.6	16.52	0.455	10.295	0.76	13.25	1.16	1.0625	0.669	1110	134	7	138	26.9	2.47	150	41.1
	W410x114	14581	420	12	261	19	337	29	27	17	46201	2196	178	5744	441	63	2458	674
16 x 7 410 x 190	W16x67	19.7	16.33	0.395	10.235	0.665	13.25	1.07	1	0.669	954	117	6.96	119	23.2	2.46	130	35.5
	W410x100	12710	415	10	260	17	337	27	25	17	39708	1917	177	4953	380	62	2130	582
	W16 x 57	16.8	16.43	0.43	7.12	0.715	13.625	1.12	0.875	0.669	758	92.2	6.72	43.1	12.1	1.6	105	18.9
	W410x85	10839	417	11	181	18	346	28	22	17	31550	1511	171	1794	198	41	1721	310
	W16x50	14.7	16.26	0.38	7.07	0.63	13.625	1.03	0.8125	0.669	659	81	6.68	37.2	10.5	1.59	92	16.3
	W410x75	9484	413	10	180	16	346	26	21	17	27429	1327	170	1548	172	40	1508	267
	W16x45	13.3	16.13	0.345	7.035	0.565	13.625	0.967	0.8125	0.669	586	72.7	6.65	32.8	9.34	1.57	82.3	14.5
	W410x67	8581	410	9	179	14	346	25	21	17	24391	1191	169	1365	153	40	1349	238
	W16x40	11.8	16.01	0.305	6.995	0.505	13.625	0.907	0.8125	0.669	518	64.7	6.63	28.9	8.25	1.57	73	12.7
16 x 5.5 410 x 140	W410x60	7613	407	8	178	13	346	23	21	17	21561	1060	168	1203	135	40	1196	208
	W16x36	10.6	15.86	0.295	6.985	0.43	13.625	0.832	0.75	0.669	448	56.5	6.51	24.5	7	1.52	64	10.8
	W410x53	6839	403	7	177	11	346	21	19	17	18647	926	165	1020	115	39	1049	177
	W16x31	9.12	15.88	0.275	5.525	0.44	13.625	0.842	0.75	0.669	375	47.2	6.41	12.4	4.49	1.17	54	7.03
	W410x46.1	5884	403	7	140	11	346	21	19	17	15609	773	163	516	74	30	885	115
	W16x26	7.68	15.69	0.25	5.5	0.345	13.625	0.747	0.75	0.669	301	38.4	6.26	9.59	3.49	1.12	44.2	5.48
	W410x38.8	4955	399	6	140	9	346	19	19	17	12528	629	159	399	57	28	724	90

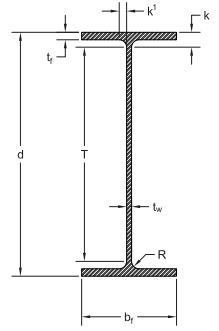
WIDE FLANGE BEAMS



W14 & W360

Prime Section Group	Section Size Inch x lbs/ft (mm x kg/m)	Area A Inch² (mm²)	Depth d Inch (mm)	Web Thickness t _w Inch (mm)	Flange		Distance			Fillet Radius R Inch (mm)	Elastic Properties						Plastic Modulus	
					Width b _f Inch (mm)	Thickness t _f Inch (mm)	T Inch (mm)	k Inch (mm)	k' Inch (mm)		X - X			Y - Y				
											I _x Inch⁴ (10⁶ mm⁴)	S _x Inch³ (10³ mm³)	r _x Inch (mm)	I _y Inch⁴ (10⁶ mm⁴)	S _y Inch³ (10³ mm³)	r _y Inch (mm)	Z _x Inch³ (10³ mm³)	Z _y Inch³ (10³ mm³)
14 x 16 360 x 406	W14x283	83.3	16.74	1.29	16.11	2.07	10	2.67	1.875	0.787	3840	459	6.79	1440	179	4.17	179	274
	W360x421	53739	425	33	409	53	254	68	48	20	159832	7522	172	59937	2933	106	2933	4490
	W14x257	75.6	16.38	1.175	15.995	1.89	10	2.49	1.8125	0.787	3400	415	6.71	1290	161	4.13	161	246
	W360x382	48772	416	30	406	48	254	63	46	20	141518	6801	170	53693	2638	105	2638	4031
	W14x233	68.5	16.04	1.070	15.89	1.72	10	2.32	1.75	0.787	3010	375	6.63	1150	145	4.1	145	221
	W360x247	44191	407	27	404	44	254	59	44	20	125285	6145	168	47866	2376	104	2376	3622
	W14x211	62	15.72	0.980	15.8	1.56	10	2.16	1.6875	0.787	2660	338	6.55	1030	130	4.07	130	198
	W360x314	39998	399	25	401	40	254	55	43	20	110717	5539	166	42871	2130	103	2130	3245
	W14x193	56.8	15.48	0.890	15.71	1.44	10	2.04	1.6875	0.787	2400	310	6.50	931	119	4.05	119	180
	W360x287	36643	393	23	399	37	254	52	43	20	99895	5080	165	38751	1950	103	1950	2950
14 x 14.5 360 x 370	W14x176	51.8	15.22	0.830	15.65	1.31	10	1.91	1.625	0.787	2140	281	6.43	838	107	4.02	107	163
	W360x262	33418	387	21	398	33	254	49	41	20	89073	4605	163	34880	1753	102	1753	2671
	W14x159	46.7	14.98	0.745	15.565	1.19	10	1.79	1.5625	0.787	1900	254	6.38	748	96.2	4	96.2	146
	W360x237	30128	380	19	395	30	254	45	40	20	79083	4162	162	31134	1576	102	1576	2393
	W14x145	42.7	14.78	0.68	15.5	1.09	10	1.69	1.5625	0.787	1710	232	6.33	677	87.3	3.98	87.3	133
	W360x216	27547	375	17	394	28	254	43	40	20	71175	3802	161	28179	1431	101	1431	2179
	W14x132	38.8	14.66	0.645	14.725	1.03	10	1.63	1.5625	0.787	1530	209	6.28	548	74.5	3.76	74.5	113
	W360x196	25031	372	16	374	26	254	41	40	20	63683	3425	160	22809	1221	96	234	1852
	W14x120	35.3	14.48	0.590	14.670	0.94	10	1.54	1.5	0.787	1380	190	6.24	495	67.5	3.74	212	102
	W360x179	22773	368	15	373	24	254	39	38	20	57439	3114	158	20603	1106	95	3474	1671
14 x 10 360 x 250	W14x109	32	14.32	0.525	14.605	0.86	10	1.46	1.5	0.787	1240	173	6.22	447	61.2	3.73	192	92.7
	W360x162	20644	364	13	371	22	254	37	38	20	51612	2835	158	18605	1003	95	3146	1519
	W14x99	29.1	14.16	0.485	14.565	0.78	10	1.38	1.4375	0.787	1110	157	6.17	402	55.2	3.71	173	83.6
	W360x147	18773	360	12	370	20	254	35	37	20	46201	2573	157	16732	905	94	2835	1370
	W14x90	26.5	14.02	0.440	14.520	0.71	10	1.31	1.4375	0.787	999	143	6.14	362	49.9	3.7	157	75.6
	W360x134	17096	356	11	369	18	254	33	37	20	41581	2343	156	15067	818	94	2573	1239
14 x 8 360 x 200	W14x82	24.1	14.31	0.510	10.130	0.855	10.875	1.45	1.0625	0.787	881	123	6.05	148	29.3	2.48	139	44.8
	W360x122	15548	363	13	257	22	276	37	27	20	36670	2016	154	6160	480	63	2278	734
	W14x74	21.8	14.17	0.450	10.070	0.785	10.875	1.38	1.0625	0.787	795	112	6.04	134	26.6	2.48	126	40.5
	W360x110	14064	360	11	256	20	276	35	27	20	33090	1835	153	5577	436	63	2065	664
	W14x68	20	14.04	0.415	10.035	0.72	10.875	1.31	1.0625	0.787	722	103	6.01	121	24.2	2.46	115	36.9
	W360x101	12903	357	11	255	18	276	33	27	20	30052	1688	153	5036	397	62	1885	605
14 x 6.75 360 x 170	W14x61	17.9	13.89	0.375	9.995	0.645	10.875	1.24	1.000	0.787	640	92.1	5.98	107	21.5	2.45	102	32.8
	W360x91	11548	353	10	254	16	276	31	25	20	26639	1509	152	4454	352	62	1671	537
	W14x53	15.6	13.92	0.370	8.060	0.66	10.875	1.25	1.000	0.787	541	77.8	5.89	57.7	14.3	1.92	87.1	22
	W360x79	10064	354	9	205	17	276	32	25	20	22518	1275	150	2402	234	49	1427	361
	W14x48	14.1	13.79	0.340	8.030	0.595	10.875	1.19	1.000	0.787	484	70.2	5.85	51.4	12.8	1.91	78.4	19.6
14 x 5 360 x 130	W360x72	9096	350	9	204	15	276	30	25	20	20145	1150	149	2139	210	49	1285	321
	W14x43	12.6	13.66	0.305	7.995	0.53	10.875	1.12	1.000	0.787	428	62.6	5.82	45.2	11.3	1.89	69.6	17.3
	W360x64	8129	347	8	203	13	276	28	25	20	17815	1026	148	1881	185	48	1141	283
	W14x38	11.2	14.1	0.310	6.770	0.515	11.625	0.915	0.8125	0.400	385	54.6	5.87	26.7	7.88	1.55	61.5	12.1
14 x 5 360 x 130	W360x58	7225	358	8	172	13	295	23	21	10	16025	895	149	1111	129	39	1008	198
	W14x34	10	13.98	0.285	6.745	0.455	11.625	0.855	0.750	0.400	340	48.6	5.83	23.3	6.91	1.53	54.6	10.6
	W360x51	6451	355	7	171	12	295	22	19	10	14152	796	148	970	113	39	895	174
	W14x30	8.85	13.84	0.270	6.730	0.385	11.625	0.785	0.750	0.400	291	42	5.73	19.6	5.82	1.49	47.3	8.99
14 x 5 360 x 130	W360x44.6	5709	352	7	171	10	295	20	19	10	12112	688	146	816	95	38	775	147
	W14x26	7.69	13.91	0.255	5.025	0.42	11.625	0.820	0.750	0.400	245	35.3	5.65	8.91	3.55	1.08	40.2	5.54
	W360x39	4961	353	6	128	11	295	21	19	10	10198	578	144	371	58	27	659	91
14 x 5 360 x 130	W14x22	6.49	13.74	0.230	5.000	0.335	11.625	0.735	0.750	0.400	199	29	5.54	7.00	2.8	1.05	33.2	4.39
	W360x32.9	4187	349	6	127	9	295	19	19	10	8283	475	141	291	46	27	544	72

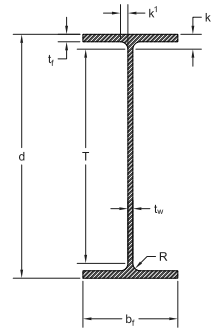
WIDE FLANGE BEAMS



W12 & W310

Prime Section Group	Section Size Inch x lbs/ft (mm x kg/m)	Area A Inch² (mm²)	Depth d Inch (mm)	Web Thickness t _w Inch (mm)	Flange		Distance			Fillet Radius R Inch (mm)	Elastic Properties						Plastic Modulus	
					Width b _f Inch (mm)	Thickness t _f Inch (mm)	T Inch (mm)	k Inch (mm)	k' Inch (mm)		X - X			Y - Y				
											I _x Inch⁴ (10⁶ mm⁴)	S _x Inch³ (10³ mm³)	r _x Inch (mm)	I _y Inch⁴ (10⁶ mm⁴)	S _y Inch³ (10³ mm³)	r _y Inch (mm)	Z _x Inch³ (10³ mm³)	Z _y Inch³ (10³ mm³)
12 x 12 310 x 310	W12x252	74.10	15.41	1.395	13.005	2.250	9.125	2.850	1.500	0.787	2720	353	6.06	6.06	127	3.34	428	196
	W310x375	47806	391	35	330	57	232	72	38	20	113214	5785	154	154	2081	85	7014	3212
	W12x230	67.70	15.05	1.285	12.895	2.070	9.125	2.670	1.500	0.787	2420	321	5.97	5.97	115	3.31	386	177
	W310x342	43677	382	33	328	53	232	68	38	20	100727	5260	152	152	1885	84	6325	2900
	W12x210	61.80	14.71	1.180	12.790	1.900	9.125	2.500	1.438	0.787	2140	292	5.89	5.89	104	3.28	348	159
	W310x313	39871	374	30	325	48	232	64	37	20	89073	4785	150	150	1704	83	5703	2606
	W12x190	56.00	14.38	1.060	12.670	1.735	9.125	2.330	1.375	0.787	1890	263	5.82	5.82	93	3.25	311	143
	W310x283	36129	365	27	322	44	232	59	35	20	78667	4310	148	148	1524	83	5096	2343
	W12x170	50.00	14.03	0.960	12.570	1.560	9.125	2.160	1.313	0.787	1650	235	5.74	5.74	82.3	3.22	275	126
	W310x253	32258	356	24	319	40	232	55	33	20	68678	3851	146	146	1349	82	4506	2065
	W12x152	44.70	13.71	0.870	12.480	1.400	9.125	2.000	1.250	0.787	1430	209	5.66	5.66	72.8	3.19	243	111
	W310x226	28839	348	22	317	36	232	51	32	20	59521	3425	144	144	1193	81	3982	1819
	W12x136	39.90	13.41	0.790	12.400	1.250	9.125	1.850	1.250	0.787	1240	186	5.58	5.58	64.2	3.16	214	98
	W310x202	25742	341	20	315	32	232	47	32	20	51612	3048	142	142	1052	80	3507	1606
	W12x120	35.20	13.12	0.710	12.320	1.105	9.125	1.700	1.188	0.787	1070	163	5.51	5.51	56	3.13	186	85.4
	W310x179	22710	333	18	313	28	232	43	30	20	44536	2671	140	140	918	80	3048	1399
	W12x106	31.20	12.89	0.610	12.220	0.990	9.125	1.590	1.125	0.787	933	145	5.47	5.47	49.3	3.11	164	75.1
	W310x158	20129	327	15	310	25	232	40	29	20	38834	2376	139	139	808	79	2687	1231
	W12x96	28.20	12.71	0.550	12.160	0.900	9.125	1.500	1.125	0.787	833	131	5.44	5.44	44.4	3.09	147	67.5
	W310x143	18194	323	14	309	23	232	38	29	20	34672	2147	138	138	728	78	2409	1106
	W12x87	25.60	12.53	0.515	12.125	0.810	9.125	1.410	1.063	0.787	740	118	5.38	5.38	39.7	3.07	132	60.4
	W310x129	16516	318	13	308	21	232	36	27	20	30801	1934	137	137	651	78	2163	990
W12x79	23.20	12.38	0.470	12.080	0.735	9.125	1.330	1.063	0.787	662	107	5.34	5.34	35.8	3.05	119	54.3	
W310x117	14968	314	12	307	19	232	34	27	20	27554	1753	136	136	587	77	1950	890	
W12x72	21.10	12.25	0.430	12.040	0.670	9.125	1.270	1.063	0.787	597	97.4	5.31	5.31	32.4	3.04	108	49.2	
W310x107	13613	311	11	306	17	232	32	27	20	24849	1596	135	135	531	77	1770	806	
W12x65	19.10	12.12	0.390	12.000	0.605	9.125	1.200	1.000	0.787	533	87.9	5.28	5.28	29.1	3.02	96.8	44.1	
W310x97	12323	308	10	305	15	232	30	25	20	22185	1440	134	134	477	77	1586	723	
12 x 10 310 x 250	W12x58	17.00	12.19	0.360	10.010	0.640	9.250	1.240	0.938	0.787	475	78	5.28	5.28	21.4	2.51	86.4	32.5
	W310x86	10968	310	9	254	16	235	31	24	20	19771	1278	134	134	351	64	1416	533
	W12x53	15.60	12.06	0.345	9.995	0.575	9.250	1.180	0.938	0.787	425	70.6	5.23	5.23	19.2	2.48	77.9	29.1
W310x79	10064	306	9	254	15	235	30	24	20	17690	1157	133	133	315	63	1277	477	
12 x 8 310 x 200	W12x50	14.60	12.19	0.370	8.808	0.640	9.250	1.140	0.938	0.787	391	64.2	5.18	5.18	13.9	1.96	71.9	21.3
	W310x74	9419	310	9	224	16	235	29	24	20	16275	1052	132	132	228	50	1178	349
	W12x45	13.10	12.06	0.335	8.045	0.575	9.250	1.080	0.938	0.787	348	57.7	5.15	5.15	12.4	1.95	64.2	19
	W310x67	8452	306	9	204	15	235	27	24	20	14485	946	131	131	203	50	1052	311
	W12x40	11.70	11.94	0.295	8.005	0.515	9.250	1.020	0.875	0.787	307	51.5	5.13	5.13	11	1.94	57	16.8
W310x60	7548	303	7	203	13	235	26	22	20	12778	844	130	130	180	49	934	275	
12 x 6.5 310 x 170	W12x35	10.30	12.5	0.300	6.560	0.520	10.125	0.820	0.750	0.400	285	45.6	5.25	5.25	7.47	1.54	51.2	11.5
	W310x52	6645	318	8	167	13	257	21	19	10	11862	747	133	133	122	39	839	188
	W12x30	8.79	12.34	0.260	6.520	0.440	10.125	0.740	0.750	0.400	238	38.6	5.21	5.21	6.24	1.52	43.1	9.56
	W310x44.5	5671	313	7	166	11	257	19	19	10	9906	633	132	132	102	39	706	157
	W12x26	7.65	12.22	0.230	6.490	0.380	10.125	0.680	0.750	0.400	204	33.4	5.17	5.17	5.34	1.51	37.2	8.17
W310x38.7	4935	310	6	165	10	257	17	19	10	8491	547	131	131	88	38	610	134	
12 x 4 310 x 130	W12x22	6.48	12.31	0.260	4.030	0.425	10.375	0.725	0.625	0.400	156	25.4	4.91	4.91	2.31	0.848	29.3	3.66
	W310x32.7	4181	313	7	102	11	264	18	16	10	6493	416	125	125	38	22	480	60
	W12x19	5.57	12.16	0.235	4.005	0.350	10.375	0.650	0.563	0.400	130	21.3	4.82	4.82	1.88	0.822	24.7	2.98
	W310x28.3	3594	309	6	102	9	264	17	14	10	5411	349	122	122	31	21	405	49
	W12x16	4.71	11.99	0.220	3.990	0.265	10.375	0.565	0.563	0.400	103	17.1	4.67	4.67	1.41	0.773	20.1	2.26
	W310x23.8	3039	305	6	101	7	264	14	14	10	4287	280	119	119	23	20	329	37
	W12x14	4.16	11.91	0.200	3.970	0.225	10.375	0.525	0.563	0.400	88.6	14.9	4.62	4.62	1.19	0.753	17.4	1.9
W310x21.0	2684	303	5	101	6	264	13	14	10	3688	244	117	117	20	19	285	31	

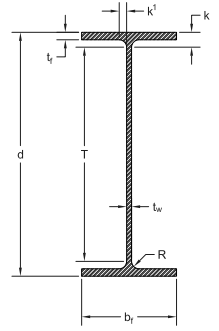
WIDE FLANGE BEAMS



W10 & W250

Prime Section Group	Section Size	Area A	Depth d	Web Thickness t _w Inch (mm)	Flange		Distance			Fillet Radius R Inch (mm)	Elastic Properties						Plastic Modulus	
					Width b _f Inch (mm)	Thickness t _f (mm)	T Inch (mm)	k Inch (mm)	k' Inch (mm)		X - X			Y - Y				
											I _x Inch ⁴ (10 ⁶ mm ⁴)	S _x Inch ³ (10 ³ mm ³)	r _x Inch (mm)	I _y Inch ⁴ (10 ⁶ mm ⁴)	S _y Inch ³ (10 ³ mm ³)	r _y Inch (mm)	Z _x Inch ³ (10 ³ mm ³)	Z _y Inch ³ (10 ³ mm ³)
10 x 10 250 x 250	W10x112	32.90	11.36	0.755	10.415	1.250	7.546	1.907	1.035	0.657	716	126	4.66	236	45.3	2.68	147	69.2
	W250x167	21226	289	19	265	32	192	48	26	17	29802	2065	118	9823	742	68	2409	1134
	W10x100	29.30	11.10	0.680	10.340	1.120	7.546	1.777	0.997	0.657	623	112	4.6	207	40	2.65	130	61
	W250x149	18903	282	17	263	28	192	45	25	17	25931	1835	117	8616	655	67	2130	1000
	W10x88	26.00	10.84	0.605	10.265	0.990	7.546	1.647	0.960	0.657	534	98.5	4.54	179	34.8	2.63	113	53.1
	W250x131	16774	275	15	261	25	192	42	24	17	22227	1614	115	7450	570	67	1852	870
	W10x77	22.70	10.60	0.530	10.190	0.870	7.546	1.527	0.922	0.657	455	85.9	4.49	154	30.1	2.6	97.6	45.9
	W250x115	14645	269	13	259	22	192	39	23	17	18938	1408	114	6410	493	66	1599	752
	W10x68	19.90	10.40	0.470	10.130	0.770	7.546	1.427	0.892	0.657	394	75.7	4.44	134	26.4	2.59	85.3	40.1
	W250x101	12839	264	12	257	20	192	36	23	17	16399	1240	113	5577	433	66	1398	657
10 x 8 250 x 200	W10x60	17.70	10.22	0.420	10.080	0.680	7.546	1.337	0.867	0.657	341	66.7	4.39	116	23	2.57	74.6	35
	W250x89	11419	260	11	256	17	192	34	22	17	14193	1093	112	4828	377	65	1222	574
	W10x54	15.80	10.09	0.370	10.030	0.615	7.546	1.272	0.842	0.657	303	60	4.37	103	20.6	2.56	66.6	31.3
	W250x80	10194	256	9	255	16	192	32	21	17	12612	983	111	4287	338	65	1091	513
	W10x49	14.40	9.98	0.340	10.000	0.560	7.546	1.217	0.827	0.657	272	54.6	4.35	93.4	18.7	2.54	60.4	28.3
	W250x73	9290	253	9	254	14	192	31	21	17	11321	895	110	3888	306	65	990	464
	W10x45	13.30	10.10	0.350	8.020	0.620	7.546	1.277	0.832	0.657	248	49.1	4.32	53.4	13.3	2.01	54.9	20.3
	W250x67	8581	257	9	204	16	192	32	21	17	10322	805	110	2223	218	51	900	333
	W10x39	11.50	9.92	0.315	7.985	0.530	7.546	1.187	0.815	0.657	209	42.1	4.27	45	11.3	1.98	46.8	17.2
	W250x58	7419	252	8	203	13	192	30	21	17	8699	690	108	1873	185	50	767	282
10 x 5.75 250 x 150	W10x33	9.71	9.73	0.290	7.960	0.435	7.546	1.092	0.802	0.657	171	35	4.19	36.6	9.2	1.94	38.8	14
	W250x49.1	6265	247	7	202	11	192	28	20	17	7117	574	106	1523	151	49	636	229
	W10x30	8.84	10.47	0.300	5.810	0.510	8.506	0.982	0.622	0.472	170	32.4	4.38	16.7	5.75	1.37	36.6	8.84
	W250x44.8	5703	266	8	148	13	216	25	16	12	7076	531	111	695	94	35	600	145
	W10x26	7.61	10.33	0.260	5.770	0.440	8.506	0.912	0.602	0.472	144	27.9	4.35	14.1	4.89	1.36	31.3	7.5
10 x 4 250 x 100	W250x38.5	4910	262	7	147	11	216	23	15	12	5994	457	110	587	80	35	513	123
	W10x22	6.49	10.17	0.240	5.750	0.360	8.506	0.832	0.592	0.472	118	23.2	4.27	11.4	3.97	1.33	26	6.1
	W250x32.7	4187	258	6	146	9	216	21	15	12	4911	380	108	474	65	34	426	100
	W10x19	5.62	10.24	0.250	4.020	0.395	8.506	0.867	0.597	0.472	96.3	18.8	4.14	4.29	2.14	0.874	21.6	3.35
	W250x28.4	3626	260	6	102	10	216	22	15	12	4008	308	105	179	35	22	354	55
10 x 4 250 x 100	W10x17	4.99	10.11	0.240	4.010	0.330	8.506	0.802	0.592	0.472	81.9	16.2	4.05	3.56	1.78	0.845	18.7	2.8
	W250x25.3	3219	257	6	102	8	216	20	15	12	3409	265	103	148	29	21	306	46
	W10x15	4.41	9.99	0.230	4.000	0.270	8.506	0.742	0.587	0.472	68.9	13.8	3.95	2.89	1.45	0.81	16	2.3
	W250x22.3	2845	254	6	102	7	216	19	15	12	2868	226	100	120	24	21	262	38
10 x 4 250 x 100	W10x12	3.54	9.87	0.190	3.960	0.210	8.506	0.682	0.567	0.472	53.8	10.9	3.9	2.18	1.1	0.785	12.6	1.74
	W250x17.9	2284	251	5	101	5	216	17	14	12	2239	179	99	91	18	20	206	29

WIDE FLANGE BEAMS



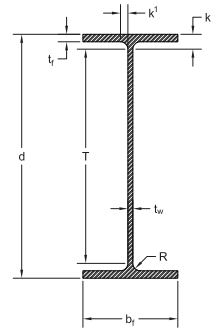
W8 & W200

Prime Section Group	Section Size Inch x lbs/ft (mm x kg/m)	Area A Inch² (mm²)	Depth d Inch (mm)	Web Thickness t _w Inch (mm)	Flange		Distance			Fillet Radius R Inch (mm)	Elastic Properties						Plastic Modulus	
					Width b _f Inch (mm)	Thickness t _f Inch (mm)	T Inch (mm)	k Inch (mm)	k¹ Inch (mm)		X - X			Y - Y				
											I _x Inch⁴ (10⁶ mm⁴)	S _x Inch³ (10³ mm³)	r _x Inch (mm)	I _y Inch⁴ (10⁶ mm⁴)	S _y Inch³ (10³ mm³)	r _y Inch (mm)	Z _x Inch³ (10³ mm³)	Z _y Inch³ (10³ mm³)
8 x 8 200 x 200	W8x67	19.7	9.00	0.570	8.280	0.935	5.75	1.33	0.9375	0.51	272	60.4	3.72	88.6	21.4	2.12	70.1	32.7
	W200x100	12709	229	14	210	24	146	34	24	13	11321	990	94	3688	351	54	1149	536
	W8x58	17.1	8.75	0.510	8.220	0.810	5.75	1.2	0.875	0.51	228	52	3.65	75.1	18.3	2.1	59.8	27.9
	W200x86	11032	222	13	209	21	146	30	22	13	9490	852	93	3126	300	53	980	457
	W8x48	14.1	8.50	0.400	8.110	0.685	5.75	1.08	0.875	0.51	184	43.2	3.61	60.9	15	2.08	49.0	22.9
	W200x71	9096	216	10	206	17	146	27	22	13	7659	708	92	2535	246	53	803	375
	W8x40	11.7	8.25	0.360	8.070	0.560	5.75	0.954	0.8125	0.51	146	35.5	3.53	49.1	12.2	2.04	39.8	18.5
	W200x59	7548	210	9	205	14	146	24	21	13	6077	582	90	2044	200	52	652	303
8 x 6.5 200 x 170	W8x35	10.3	8.12	0.310	8.020	0.495	5.75	0.889	0.8125	0.51	127	31.2	3.51	42.6	10.6	2.03	34.7	16.1
	W200x52	6645	206	8	204	13	146	23	21	13	5286	511	89	1773	174	52	569	264
	W8x31	9.13	8.00	0.285	7.995	0.435	5.75	0.829	0.75	0.51	110	27.5	3.47	37.1	9.27	2.02	30.4	14.1
	W200x46.1	5890	203	7	203	11	146	21	19	13	4579	451	88	1544	152	51	498	231
	W8x28	8.25	8.06	0.285	6.535	0.465	6.125	0.859	0.625	0.51	98	24.3	3.45	21.7	6.63	1.62	27.2	10.1
	W200x41.7	5322	205	7	166	12	156	22	16	13	4079	398	88	903	109	41	446	166
	W8x24	7.08	7.93	0.245	6.495	0.400	6.125	0.794	0.5625	0.51	82.7	20.9	3.42	18.3	5.63	1.61	23.1	8.57
	W200x35.9	4568	201	6	165	10	156	20	14	13	3442	342	87	762	92	41	379	140.4
8 x 5.25 200 x 130	W8x21	6.16	8.28	0.250	5.270	0.400	6.5	0.7	0.5625	0.39	75.3	18.2	3.49	9.77	3.71	1.26	20.4	5.69
	W200x31.3	3974	210	6	134	10	165	18	14	10	3134	298	89	407	61	32	334	93
	W8x18	5.26	8.14	0.23	5.250	0.330	6.5	0.63	0.5625	0.39	61.9	15.2	3.43	7.97	3.04	1.23	17.0	4.66
8 x 4 200 x 100	W200x26.6	3393	207	6	133	8	165	16	14	10	2576	249	87	332	50	31	279	76
	W8x15	4.44	8.11	0.245	4.015	0.315	6.5	0.615	0.5625	0.472	48	11.8	3.29	3.41	1.7	0.876	13.6	2.67
	W200x22.5	2864	206	6	102	8	165	16	14	12	1998	193	84	142	28	22	223	44
	W8x13	3.84	7.99	0.230	4.000	0.255	6.5	0.555	0.5625	0.472	39.6	9.91	3.21	2.73	1.37	0.843	11.4	2.15
	W200x19.3	2477	203	6	102	6	165	14	14	12	1648	162	82	114	22	21	187	35
	W8x10	2.96	7.89	0.170	3.940	0.205	6.5	0.505	0.5	0.472	30.8	7.81	3.22	2.09	1.06	0.841	8.87	1.66
	W200x15	1910	200	4	100	5	165	13	13	12	1282	128	82	87	17	21	145	27

W6 & W150

Prime Section Group	Section Size	Area A	Depth d	Web Thickness	Flange		Distance			Fillet Radius	Elastic Properties						Plastic Modulus	
					Width	Thickness	T	k	k'		X - X			Y - Y				
											b _f Inch (mm)	t _f Inch (mm)	T Inch (mm)	k Inch (mm)	k' Inch (mm)	I _x Inch ⁴ (10 ⁶ mm ⁴)	S _x Inch ³ (10 ³ mm ³)	r _x Inch (mm)
6 x 6 150 x 150	W6x25	7.34	6.38	0.32	6.08	0.455	4.526	0.828	0.47	0.472	53.6	16.8	2.7	17.1	5.61	1.52	19	8.57
	W150x37.1	4735	162	8	154	12	115	21	12	12	2231	275	69	712	92	39	311	140
	W6x20	5.87	6.2	0.26	6.02	0.365	4.526	0.738	0.44	0.472	41.5	13.4	2.66	13.3	4.41	1.5	15	6.72
	W150x29.8	3787	157	7	153	9	115	19	11	12	1727	220	68	554	72	38	246	110
	W6x15	4.43	5.99	0.23	5.99	0.26	4.53	0.63	0.43	0.472	29.30	9.77	2.56	9.32	3.11	1.45	10.80	4.75
	W150x22.5	2858	152	6	152	7	115	16	11	12	1220	160	65	388	51	37	177	78
6 x 4 150 x 100	W6x16	4.74	6.28	0.26	4.03	0.405	4.526	0.655	0.5625	0.472	32.1	10.2	2.6	4.43	2.2	0.96	11.7	3.39
	W150x24	3058	160	7	102	10	114960	17	14	12	1336	167	66	184	36	24	192	56
	W6x12	3.55	6.03	0.23	4	0.28	4.526	0.53	0.5625	0.472	22.1	7.31	2.49	2.99	1.5	0.918	8.3	2.32
	W150x18	2290	153	6	102	7	115	13	14	12	920	120	63	124	25	23	136	38
	W6x9	2.68	5.90	0.17	3.94	0.215	4.526	0.465	0.5	0.472	16.4	5.56	2.47	2.2	1.11	0.905	6.23	1.72
	W150x13.5	1729	150	4	100	5	115	12	13	12	683	91	63	92	18	23	102	28
	W6x8.5	2.52	5.83	0.17	3.94	0.19	4.50	0.45	0.50	0.472	14.90	5.10	2.43	1.99	1.01	0.89	5.73	1.56
	W150x13.5	1626	148	4	100	5	114	11	13	12	620	84	62	83	17	23	94	26

WIDE FLANGE BEAMS



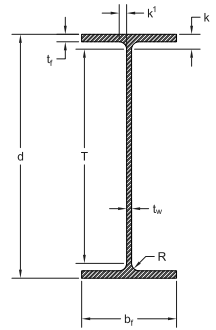
W5 & W130

Prime Section Group	Section Size Inch x lbs/ft (mm x kg/m)	Area A Inch² (mm²)	Depth d Inch (mm)	Web Thickness t _w Inch (mm)	Flange		Distance			Fillet Radius R Inch (mm)	Elastic Properties						Plastic Modulus	
					Width b _f Inch (mm)	Thickness t _f Inch (mm)	T Inch (mm)	k Inch (mm)	k' Inch (mm)		X - X			Y - Y				
											I _x Inch⁴ (10⁶ mm⁴)	S _x Inch³ (10³ mm³)	r _x Inch (mm)	I _y Inch⁴ (10⁶ mm⁴)	S _y Inch³ (10³ mm³)	r _y Inch (mm)	Z _x Inch³ (10³ mm³)	Z _y Inch³ (10³ mm³)
5 x 5 130 x 130	W5x19	5.56	5.15	0.27	5.03	0.43	3.5	0.835	0.540	0.405	26.3	10.2	2.17	9.13	3.63	1.28	11.6	5.53
	W130x28.1	3587	131	7	128	11	89	21	14	10	1095	167	55	380	59	33	190	91
	W5x16	4.71	5.05	0.24	5	0.36	3.5	0.765	0.525	0.405	21.4	8.55	2.13	7.51	3.00	1.26	9.63	4.58
	W130x23.8	3039	128	6	127	9	89	19	13	10	891	140	54	313	49	32	158	75

W4 & W100

Prime Section Group	Section Size	Area A	Depth d	Web Thickness	Flange		Distance			Fillet Radius	Elastic Properties						Plastic Modulus	
					Width	Thickness	T	k	k¹		X - X			Y - Y				
											b _f Inch (mm)	t _f Inch (mm)	T Inch (mm)	k Inch (mm)	k¹ Inch (mm)	I _x Inch⁴ (10⁶ mm⁴)	S _x Inch³ (10³ mm³)	r _x Inch (mm)
4 x4 100 x 100	W4 x 13 W100x19.3	3.83 2471	4.16 106	0.28 7	4.060 103	0.345 9	2.660 68	0.750 19	0.545 14	0.405 10	11.300 470	5.460 89	1.720 44	3.860 161	1.900 31	1.000 25	6.280 23	2.920 48

WIDE FLANGE ASTM TABLE



STRUCTURAL SECTIONS

BEAM Available Steel Grades								
American			Canadian			European *		
ASTM	Yield Strength		CSA G40.21	Yield Strength		EN 10025 & EN 10113	Yield Strength	
	ksi	MPa		ksi	MPa		ksi	MPa
A 36	36	250	Grade 350 W	50	350	S 235	34	235
A 572 Grade 50	50	345				S 275	40	275
A 588	50	345				S 355	51	355
A 709	50	345				S 460 HISTAR	67	460
A 913	50	345						
A 913	65	450						
A 992	50	345						

* HISTAR only available in some sizes

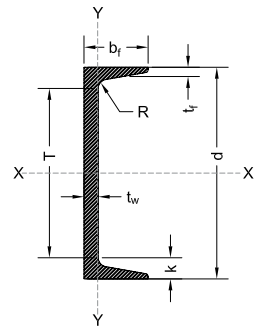
DELIVERY CONDITIONS & TOLERANCES

ASTM A 6

Mass	$\pm 2.5\%$		
Depth	± 0.125 inches		
Length	30 feet and Under	Over 30 Feet	
Beams W 24 and Under	± 0.375 inches	$+ (0.375 \text{ inches} + (\text{Length} - 30) / 80)$	-0.375 inches
Beams Over W 24	± 0.5 inches	$+ (0.5 \text{ inches} + (\text{Length} - 30) / 80)$	-0.375 inches
Flanges out of Square			
Beams W 12 and Under	≤ 0.25 inches		
Beams Over W 12	≤ 0.3125 inches		
Web off Center	≤ 0.1875 inches		
Greatest Depth over Theoretical	≤ 0.25 inches		
Camber and Sweep	$(0.125 \text{ in}) * (\text{Length} / 10)$		
Camber and Sweep for Columns			
45 Feet and Under	$(0.125 \text{ in}) * (\text{Length} / 10)$ but not over 0.375 inches		
Over 45 Feet	$(0.375 \text{ in}) + (0.125 \text{ in} * (\text{Length} - 45) / 10)$		

*W 8 x 31 and heavier, W 10 x 49 and heavier, W 12 x 65 and heavier, and W 14 x 90 and heavier order as columns. If other sections are ordered as columns, the tolerances are subject to negotiation with manufacturer.

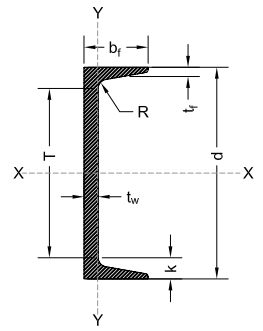
CHANNEL



MC

Prime Section Group	Section Size Inch x lbs/ft (mm x kg/m)	Area A Inch² (mm²)	Depth d Inch (mm)	Web Thickness t _w Inch (mm)	Flange		Distance		Fillet Radius R Inch (mm)	Elastic Properties						Plastic Modulus	
					Width b _f Inch (mm)	Thickness t _f Inch (mm)	T Inch (mm)	k Inch (mm)		X - X			Y - Y				
										I _x Inch⁴ (10⁶ mm⁴)	S _x Inch³ (10³ mm³)	r _x Inch (mm)	I _y Inch⁴ (10⁶ mm⁴)	S _y Inch³ (10³ mm³)	r _y Inch (mm)	Z _x Inch³ (10³ mm³)	Z _y Inch³ (10³ mm³)
18 x 4 460 x 100	MC18 x 58.0 MC460 x 86	17.1 11032	18.00 457	0.700 17.8	4.200 107	0.625 15.9	15.375 390	1.313 33	0.625 16	675 281	75.0 1229	6.29 159.8	17.6 7.3	5.28 87	1.020 25.9	95.4 1563	10.70 175
	MC18 x 51.9 MC460 x 77.2	15.3 9871	18.00 457	0.600 15.2	4.100 104	0.625 15.9	15.375 390	1.313 33	0.625 16	627 261	69.6 1141	6.41 162.8	16.3 6.8	5.02 82	1.030 26.2	87.3 1431	9.86 162
	MC18 x 45.8 MC460 x 68.2	13.5 8710	18.00 457	0.500 12.7	4.000 102	0.625 15.9	15.375 390	1.313 33	0.625 16	578 241	64.2 1052	6.55 166.4	14.9 6.2	4.77 78	1.050 26.7	79.2 1298	9.14 150
	MC18 x 42.7 MC460 x 63.5	12.60 8129	18.00 457	0.450 11.4	3.950 100	0.625 15.9	15.375 390	1.313 33	0.625 16	554 231	61.5 1008	6.64 168.7	14.3 6.0	4.64 76	1.070 27.2	75.1 1231	8.82 145
13 x 4 330 x 100	MC13 x 50.0 MC330 x 74	14.70 9484	13.00 330	0.787 20.0	4.412 112	0.610 15.5	10.655 270	1.173 30	0.500 13	314 131	48.3 791	4.62 117.3	16.4 6.8	4.77 78	1.060 26.9	60.8 996	10.20 167
	MC13 x 40.0 MC330 x 60	11.80 7613	13.00 330	0.560 14.2	4.185 106	0.610 15.5	10.655 270	1.173 30	0.500 13	273 114	41.9 687	4.82 122.4	13.7 5.7	4.24 69	1.080 27.4	51.2 839	8.66 142
	MC13 x 35.0 MC330 x 52	10.30 6645	13.00 330	0.447 11.4	4.072 103	0.610 15.5	10.655 270	1.173 30	0.500 13	252 105	38.8 636	4.95 125.7	12.3 5.1	3.97 65	1.090 27.7	46.5 762	8.04 132
	MC13 x 31.8 MC330 x 47.3	9.35 6032	13.00 330	0.375 9.5	4.000 102	0.610 15.5	10.655 270	1.173 30	0.500 13	239 99	36.7 601	5.05 128.3	11.4 4.7	3.79 62	1.100 27.9	43.4 711	7.69 126
12 x 4 310 x 100	MC12 x 50.0 MC310 x 74	14.70 9484	12.00 305	0.835 21.2	4.135 105	0.700 17.8	9.475 240	1.263 32	0.500 13	269 112	44.9 736	4.28 108.7	17.4 7.2	5.64 92	1.090 27.7	56.5 926	10.90 179
	MC12 x 45.0 MC310 x 67	13.20 85.16	12.00 305	0.710 18.0	4.010 102	0.700 17.8	9.475 240	1.263 32	0.500 13	251 104	41.9 687	4.36 110.7	15.8 6.6	5.30 87	1.090 27.7	52.0 852	10.10 166
	MC12 x 40.0 MC310 x 60	11.80 7613	12.00 305	0.590 15.0	3.890 98	0.700 17.8	9.475 240	1.263 32	0.500 13	234 97	39.0 639	4.46 113.3	14.2 5.9	4.98 82	1.100 27.9	47.7 782	9.31 153
	MC12 x 35.0 MC310 x 52	10.30 6645	12.00 305	0.465 11.8	3.765 96	0.700 17.8	9.475 240	1.263 32	0.500 13	216 90	36.0 590	4.59 116.6	12.6 5.2	4.64 76	1.110 28.2	43.2 708	8.62 141
	MC12 x 31.0 MC310 x 46	9.12 5884	12.00 305	0.370 9.4	3.670 93	0.700 17.8	9.475 240	1.263 32	0.500 13	202 84	33.7 552	4.71 119.6	11.3 4.7	4.37 72	1.110 28.2	39.7 651	8.15 134

CHANNEL



C

Prime Section Group	Section Size Inch x lbs/ft (mm x kg/m)	Area A Inch² (mm²)	Depth d Inch (mm)	Web Thickness t _w Inch (mm)	Flange		Distance		Fillet Radius R Inch (mm)	Elastic Properties						Plastic Modulus	
					Width b _f Inch (mm)	Thickness t _f Inch (mm)	T Inch (mm)	k Inch (mm)		X - X			Y - Y				
										I _x Inch⁴ (10⁶ mm⁴)	S _x Inch³ (10³ mm³)	r _x Inch (mm)	I _y Inch⁴ (10⁶ mm⁴)	S _y Inch³ (10³ mm³)	r _y Inch (mm)	Z _x Inch³ (10³ mm³)	Z _y Inch³ (10³ mm³)
15 x 3.375 380 x 85	C15 x 50.0 C380 x 74	14.7 9484	15.00 381	0.716 18.2	3.716 94	0.650 16.5	12.575 319	1.213 31	0.50 13	404 168	53.8 882	5.24 133.1	11.0 4.6	3.77 62	0.865 22.0	68.5 1123	8.14 133
	C15 x 40.0 C380 x 60	11.8 7613	15.00 381	0.520 13.2	3.520 89	0.650 16.5	12.575 319	1.213 31	0.50 13	348 144.8	46.5 762	5.45 138.4	9.2 3.8	3.34 55	0.883 22.4	57.5 942	6.84 112
	C15 x 33.9 C380 x 50	9.96 6426	15.00 381	0.400 10.2	3.400 86	0.650 16.5	12.575 319	1.213 31	0.50 13	315 131.1	42.0 688	5.62 142.7	8.1 3.4	3.09 51	0.901 22.9	50.8 832	6.19 101
12 x 3 310 x 75	C12 x 30.0 C310 x 45	8.82 5690	12.00 305	0.510 13.0	3.170 80	0.501 12.7	10.123 257	0.939 24	0.375 10	162 67.4	27.0 442	4.29 109.0	5.1 2.1	2.05 34	0.762 19.4	33.8 554	4.32 71
	C12 x 25.0 C310 x 37	7.35 4742	12.00 305	0.387 9.8	3.047 77	0.501 12.7	10.123 257	0.939 24	0.375 10	144 59.9	24.0 393	4.43 112.5	4.5 1.9	1.87 31	0.779 19.8	29.4 482	3.82 63
	C12 x 20.7 C310 x 31	6.09 3929	12.00 305	0.282 7.2	2.942 74	0.501 12.7	10.123 257	0.939 24	0.375 10	129 53.7	21.5 352	4.61 117.1	3.9 1.6	1.72 28	0.797 20.2	25.6 420	3.47 57
10 x 2.755 250 x 70	C10 x 30.0 C250 x 45	8.82 5690	10.00 254	0.673 17.1	3.033 77	0.436 11.1	7.965 202	1.018 26	0.472 12	103 42.8	20.7 339	3.43 87.1	3.93 1.6	1.65 27	0.668 17.0	26.7 438	3.78 62
	C10 x 25.0 C250 x 37	7.35 4742	10.00 254	0.526 13.4	2.886 73	0.436 11.1	7.965 202	1.018 26	0.472 12	91 37.8	18.2 298	3.52 89.4	3.34 1.4	1.47 24	0.675 17.1	23.1 379	3.18 52
	C10 x 20.0 C250 x 30	5.88 3794	10.00 254	0.379 9.6	2.739 70	0.436 11.1	7.965 202	1.018 26	0.472 12	79 32.8	15.8 259	3.67 93.2	2.80 1.2	1.31 21	0.690 17.5	19.4 318	2.70 44
	C10 x 15.3 C250 x 23	4.49 2897	10.00 254	0.240 6.1	2.600 66	0.436 11.1	7.965 202	1.018 26	0.472 12	67 27.8	13.5 221	3.88 98.5	2.27 0.9	1.15 19	0.711 18.0	15.9 261	2.34 38
8 x 2.5 200 x 60	C8 x 18.75 C200 x 28	5.51 3555	8.00 203	0.487 12.4	2.527 64	0.390 9.9	6.394 162	0.803 20	0.315 8	44 18.3	11.0 180	2.82 71.6	1.97 0.8	1.01 17	0.598 15.2	13.9 228	2.17 36
	C8 x 13.75 C200 x 21	4.04 2606	8.00 203	0.303 7.7	2.343 60	0.390 9.9	6.394 162	0.803 20	0.375 8	36 14.9	9.02 148	2.99 75.9	1.52 0.6	0.84 14	0.613 15.6	11.0 180	1.73 28
	C8 x 11.5 C200 x 17	6.09 3929	8.00 203	0.220 5.6	2.260 57	0.390 9.9	6.394 162	0.803 20	0.375 8	33 13.7	8.14 133	3.11 79.0	1.31 0.5	0.78 13	0.623 15.8	9.63 158	1.57 26



STRUCTURAL SECTIONS

BEAM Available Steel Grades								
American			Canadian			European *		
ASTM	Yield Strength		CSA G40.21	Yield Strength		EN 10248	Yield Strength	
	ksi	MPa		ksi	MPa		ksi	MPa
A 36	36	250	Grade 350 W	50	350	S 235 GP	34	235
A 572 Grade 50	50	345				S 355 GP	51	355
A 572 Grade 60	60	415						
A 588	50	345						
A 242	50	345						

DELIVERY CONDITIONS & TOLERANCES

	ASTM A 6					
Mass	± 2.5%					
Depth	3 to 7 in		7 to 14 in		Over 14 in	
	+1 in	– 0.0625 in	+ 0.125 in	– 1 in	+ 0.1875 in	– 0.125
Length	5 to 10 ft	10 to 20 ft	20 to 30 ft	30 to 40 ft	40 to 50 ft	50 to 65 ft
	+ 1.0 in	+1.5 in	+ 1.75 in	+ 2.25 in	+ 2.75 in	+ 2.75 in
Flange Width	3 to 7 in		7 to 14 in		Over 14 in	
	± 0.125 in		+ 0.125 in	– 1 in	+ 0.125 in	– 0.1875 in
Flanges out of Square	≤ 0.03125 in					
Camber	(0.125 in) * (Length / 5)					
Sweep	Subject to negotiation with manufacturer					

CONVERSION CHART

CONVERSION CHART

	IMPERIAL TO METRIC				METRIC TO IMPERIAL		
Dimensions, Area, Volume	1 in	=	2.5400 cm	Dimensions, Area, Volume	1 cm	=	0.3937 in
	1 ft	=	0.3048 m		1 m	=	3.2808 ft
	1 in ²	=	6.4516 cm ²		1 cm ²	=	0.1550 in ²
	1 ft ²	=	0.0929 m ²		1 m ²	=	10.7639 ft ²
	1 in ³	=	16.3870 cm ³		1 cm ³	=	0.0610 in ³
	1 ft ³	=	0.0283 m ³		1 m ³	=	35.3149 ft ³
	1 in ² /ft	=	21.166 cm ² /m		1 cm ² /m	=	0.0472 in ² /ft
Mass, Force, Pressure	1 lb	=	4.4497 N	Mass, Force, Pressure	1 N	=	0.2247 lb
	1 lb/in	=	0.1752 N/mm		1 N/mm	=	5.7082 lb/in
	1 lb/ft	=	14.5989 N/m		1 N/m	=	0.0685 lb/ft
	1 lb/in ²	=	0.6897 N/cm ²		1 N/cm ²	=	1.4499 lb/in ²
	1 lb/ft ²	=	47.8968 N/m ²		1 N/m ²	=	0.0209 lb/ft ²
	1 lb/in ³	=	0.2715 N/cm ³		1 N/cm ³	=	3.6827 lb/in ³
	1 lb/ft ³	=	157.1420 N/m ³		1 N/m ³	=	0.0064 lb/ft ³
	1 lb	=	0.4536 kg		1 kg	=	2.2046 lbs
	1 lb/ft	=	1.4882 kg/m		1 kg/m	=	0.6720 lb/ft
	1 lb/ft ²	=	4.8824 kg/m ²		1 kg/m ²	=	0.2048 lb/ft ²
	1 US Ton	=	0.9072 Metric Tons		1 Metric Ton	=	1.1023 US Tons
Moment of Inertia	1 in ⁴	=	41.6228 cm ⁴	Moment of Inertia	1 cm ⁴	=	0.0240 in ⁴
	1 in ⁴ /ft	=	136.5582 cm ⁴ /m		1 cm ⁴ /m	=	0.0073 in ⁴ /ft
Section Modulus	1 in ³	=	16.3870 cm ³	Section Modulus	1 cm ³	=	0.0610 in ³
	1 in ³ /ft	=	53.7631 cm ³ /m		1 cm ³ /m	=	0.0186 in ³ /ft
Bending Moment	1 lb.ft	=	1.3563 Nm	Bending Moment	1 Nm	=	0.7373 lb.ft
	1 lb.in/ft	=	0.3708 Nm/m		1 Nm/m	=	2.6968 lb.in/ft
	1 lb.ft/ft	=	4.4497 Nm/m		1 Nm/m	=	0.2247 lb.ft/ft