

# Wide Flange Beams in accordance with ASTM



Standard dimension				Reference							
Serial size (mm)	Designation	Section area	Unit weight	Moment of inertia (cm <sup>4</sup> )		Radius of gyration (cm)		Section modulus (cm <sup>3</sup> )		Plastic section modulus (cm <sup>3</sup> )	
		(cm <sup>2</sup> )	(kg/m)	I <sub>x</sub>	I <sub>y</sub>	r <sub>x</sub>	r <sub>y</sub>	S <sub>x</sub>	S <sub>y</sub>	Z <sub>x</sub>	Z <sub>y</sub>
W40x12	W40x12x327lbs/ft	620	486.6	1021400	26720	40.6	6.57	19720	1732	23200	2799.0
	W40x12x294lbs/ft	557	436.9	909900	23450	40.4	6.49	17740	1535	20760	2467.0
	W40x12x264lbs/ft	500	392.7	807700	20500	40.2	6.40	15900	1353	18540	2167.0
	W40x12x235lbs/ft	445	349.4	723100	18460	40.3	6.44	14350	1223	16590	1940.0
	W40x12x211lbs/ft	400	314.3	644200	16230	40.1	6.37	12880	1082	14850	1712.0
	W40x12x183lbs/ft	347	272.3	554000	14000	40.0	6.35	11190	934	12830	1469.0
	W40x12x167lbs/ft	317	248.7	481300	11750	39.0	6.09	9821	784	11350	1244.0
	W40x12x149lbs/ft	283	222.0	408000	9546	38.0	5.81	8409	636	9808	1019.0
W36x16.5	W36x16.5x359lbs/ft	680	533.8	1031100	65510	38.9	9.82	21710	3084	24830	4793.0
	W36x16.5x328lbs/ft	622	488.0	936400	59180	38.8	9.76	19880	2802	22640	4344.0
	W36x16.5x300lbs/ft	570	447.1	846300	53980	38.5	9.73	18150	2552	20590	3950.0
	W36x16.5x280lbs/ft	533	418.1	787600	50070	38.5	9.70	16970	2373	19210	3668.0
	W36x16.5x260lbs/ft	494	388.0	719600	45440	38.2	9.59	15630	2161	17670	3340.0
	W36x16.5x245lbs/ft	465	364.8	671100	42240	38.0	9.53	14650	2015	16540	3111.0
	W36x16.5x230lbs/ft	437	343.3	625800	39160	37.8	9.46	13730	1871	15480	2889.0
	W36x12	W36x12x386lbs/ft	733.0	575.4	1101000	36460	38.8	7.05	22180	2266.0	26260
W36x12x349lbs/ft		663.0	520.8	981300	32080	38.5	6.95	20010	2012.0	23590	3234.0
W36x12x318lbs/ft		603.0	473.7	884600	28580	38.3	6.88	18220	1810.0	21370	2896.0
W36x12x285lbs/ft		542.0	425.3	787600	25140	38.1	6.81	16390	1608.0	19120	2559.0
W36x12x256lbs/ft		486.0	381.6	696900	21970	37.9	6.72	14660	1416.0	17030	2247.0
W36x12x232lbs/ft		440.0	345.1	625300	19500	37.7	6.66	13260	1266.0	15340	2001.0
W36x12x210lbs/ft		399.0	313.0	548900	17110	37.1	6.55	11780	1106.0	13640	1752.0
W36x12x194lbs/ft		368.0	289.1	504200	15600	37.0	6.51	10880	1014.0	12570	1601.0
W36x12x182lbs/ft		346.0	271.7	471600	14520	36.9	6.48	10220	946.0	11780	1491.0
W36x12x170lbs/ft		323.0	253.4	436300	13300	36.8	6.42	9501	871.0	10940	1370.0
W36x12x160lbs/ft		303.0	238.1	405800	12260	36.6	6.36	8874	805.0	10220	1265.0
W36x12x150lbs/ft		286	224.2	376400	11240	36.3	6.27	8269	739	9535	1163.0
W36x12x135lbs/ft		256	200.9	325300	9423	35.7	6.07	7204	621	8352	982.0
W33x15.75	W33x15.75x387lbs/ft	734	576.0	1010700	67230	37.1	9.57	22140	3271	25540	5100.0
	W33x15.75x354lbs/ft	672	527.6	914000	60730	36.9	9.51	20240	2970	23250	4620.0
	W33x15.75x318lbs/ft	603	473.3	812300	53670	36.7	9.43	18190	2644	20770	4099.0
	W33x15.75x291lbs/ft	552	433.3	735200	48350	36.5	9.36	16610	2394	18900	3705.0

	W33x15.75x263lbs/ft	499	391.9	659300	43090	36.3	9.29	15030	2147	17030	3316.0
	W33x15.75x241lbs/ft	458	359.4	590500	38900	35.9	9.22	13610	1931	15400	2983.0
	W33x15.75x221lbs/ft	420	329.4	534700	34880	35.7	9.12	12410	1739	14020	2686.0
	W33x15.75x201lbs/ft	381	299.3	479700	31170	35.5	9.04	11220	1559	12650	2404.0
W33x11.5	W33x11.5x219lbs/ft	416	326.6	513500	17540	35.1	6.49	11710	1180	13550	1863.0
	W33x11.5x204lbs/ft	386	303.3	473000	16050	35.0	6.45	10860	1086	12530	1710.0
	W33x11.5x187lbs/ft	355	278.6	430400	14470	34.8	6.38	9950	984	11450	1547.0
	W33x11.5x169lbs/ft	319	250.7	386500	12910	34.8	6.36	8999	884	10300	1383.0
	W33x11.5x152lbs/ft	289	226.5	339700	11360	34.3	6.27	7985	773	9155	1211.0
	W33x11.5x141lbs/ft	268	210.8	310700	10260	34.0	6.18	7344	700	8429	1098.0
	W33x11.5x130lbs/ft	247	193.8	279200	9066	33.6	6.06	6641	620	7640	974.0
	W33x11.5x118lbs/ft	224	175.9	246000	7799	33.1	5.90	5893	535	6808	842.0
W30x15	W30x15x326lbs/ft	618	484.8	698000	51820	33.6	9.16	16960	2655	19510	4126.0
	W30x15x292lbs/ft	553	433.9	618200	45650	33.4	9.09	15210	2357	17380	3651.0
	W30x15x261lbs/ft	495	388.3	543500	39910	33.2	8.98	13540	2074	15410	3207.0
	W30x15x235lbs/ft	445	349.4	485500	35460	33.0	8.93	12210	1856	13820	2863.0
	W30x15x211lbs/ft	400	314.2	427100	31500	32.7	8.87	10870	1642	12270	2531.0
	W30x15x191lbs/ft	362	283.9	381300	28000	32.5	8.80	9789	1466	11020	2257.0
	W30x15x173lbs/ft	328	257.6	341700	25010	32.3	8.73	8841	1313	9929	2019.0
W30x10.5	W30x10.5x148lbs/ft	281	220.3	278200	9462	31.5	5.81	7142	711	8197	1114.0
	W30x10.5x132lbs/ft	251	196.8	240000	8175	30.9	5.71	6234	610	7167	958.0
	W30x10.5x124lbs/ft	235	184.8	222800	7510	30.8	5.65	5817	563	6686	884.0
	W30x10.5x116lbs/ft	220	173.0	205300	6850	30.5	5.58	5387	514	6198	807.0
	W30x10.5x108lbs/ft	204	160.4	185900	6073	30.2	5.45	4904	457	5661	719.0
	W30x10.5x99lbs/ft	187	146.9	168500	5455	30.0	5.40	4470	411	5156	647.0
	W30x10.5x90lbs/ft	171	133.9	150700	4788	29.7	5.30	4018	362	4644	570.0
W27x14	W27x14x307lbs/ft	582	457.0	545000	43860	30.6	8.68	14490	2391	16760	3718.0
	W27x14x381lbs/ft	533	418.3	494400	39360	30.5	8.62	13290	2175	15280	3373.0
	W27x14x258lbs/ft	489	383.9	448000	35780	30.3	8.55	12170	1975	13930	3058.0
	W27x14x235lbs/ft	446	350.2	402300	31980	30.0	8.47	11050	1775	12600	2745.0
	W27x14x217lbs/ft	411	323.0	369300	29310	30.0	8.44	10230	1635	11610	2523.0
	W27x14x194lbs/ft	367	288.2	325100	25690	29.8	8.37	9107	1442	10290	2220.0
	W27x14x178lbs/ft	337	264.5	290600	23090	29.4	8.28	8227	1291	9290	1990.0
	W27x14x161lbs/ft	306	239.9	261100	20650	29.2	8.22	7452	1160	8387	1785.0
	W27x14x146lbs/ft	277	217.8	234300	18510	29.1	8.17	6744	1043	7568	1603.0
W27x10	W27x10x221lbs/ft	418	328.3	359400	14640	29.3	5.92	9715	1106	11390	1759.0
	W27x10x201lbs/ft	382	299.8	323800	13060	29.1	5.85	8847	994	10330	1577.0
	W27x10x182lbs/ft	345	270.8	289300	11540	29.0	5.78	7993	887	9282	1402.0
	W27x10x159lbs/ft	301	236.0	247800	9750	28.7	5.69	6940	756	8017	1191.0
	W27x10x129lbs/ft	244	191.4	198000	7643	28.5	5.60	5641	602	6459	941.0
	W27x10x114lbs/ft	217	170.2	170300	6630	28.0	5.53	4916	518	5631	811.0
	W27x10x102lbs/ft	194	152.4	150400	5784	27.8	5.46	4374	455	5001	710.0
	W27x10x94lbs/ft	178	140.1	136300	5183	27.6	5.39	3987	409	4558	638.0

	W27x10x84lbs/ft	159	125.2	118000	4383	27.2	5.24	3481	346	3994	542.0
W24x12.75	W24x12.75x306lbs/ft	580	455.0	445800	38090	27.7	8.11	12930	2241	15130	3498.0
	W24x12.75x279lbs/ft	530	416.3	400500	34300	27.5	8.04	11800	2030	13720	3162.0
	W24x12.75x250lbs/ft	475	373.0	353800	30140	27.3	7.97	10580	1800	12220	2795.0
	W24x12.75x229lbs/ft	435	341.1	318900	27090	27.1	7.90	9650	1627	11090	2523.0
	W24x12.75x207lbs/ft	393	308.2	284700	24040	26.9	7.82	8719	1455	9964	2251.0
	W24x12.75x192lbs/ft	364	286.1	361400	22070	26.8	7.78	8081	1341	9200	2072.0
	W24x12.75x176lbs/ft	334	261.9	236700	19850	26.6	7.71	7385	1214	8374	1872.0
	W24x12.75x162lbs/ft	304	238.9	214900	18430	26.6	7.78	6768	1120	7630	1722.0
	W24x12.75x146lbs/ft	279	218.6	191500	16320	26.2	7.65	6099	995	6873	1532.0
	W24x12.75x131lbs/ft	250	196.4	168600	14240	26.0	7.54	5421	871	6099	1341.0
	W24x12.75x117lbs/ft	223	175.0	147900	12370	25.8	7.45	4801	761	5387	1171.0
W24x12.75x104lbs/ft	198	155.6	129700	10780	25.6	7.38	4245	666	4753	1023.0	
W24x9	W24x9x198lbs/ft	376	295.1	259400	10980	26.3	5.41	7778	913	9173	1457.0
	W24x9x163lbs/ft	310	243.1	207900	8616	25.9	5.27	6388	730	7457	1157.0
	W24x9x146lbs/ft	278	218.2	183900	7543	25.7	5.21	5718	644	6643	1018.0
	W24x9x128lbs/ft	242	190.2	158800	6435	25.6	5.15	5001	556	5769	874.0
	W24x9x114lbs/ft	219	171.6	141400	5677	25.4	5.10	4497	494	5169	774.0
	W24x9x103lbs/ft	195	153.5	125000	4972	25.3	5.04	4012	435	4595	680.0
	W24x9x94lbs/ft	179	139.9	111800	4505	25.0	5.03	3622	391	4142	611.0
	W24x9x84lbs/ft	159	125.1	98610	3932	24.9	4.97	3221	343	3676	535.0
	W24x9x76lbs/ft	145	113.0	87450	3434	24.6	4.88	2877	301	3284	469.0
	W24x9x68lbs/ft	130	101.2	75780	2915	24.2	4.75	2515	256	2881	400.0
W24x7	W24x7x62lbs/ft	117	92.0	64630	1441	23.4	3.50	2144	161	2513	258.0
	W24x7x55lbs/ft	105	82.0	55980	1209	23.2	3.40	1869	136	2197	218.0
W21x12.25	W21x12.25x275lbs/ft	521	409.0	317100	32650	24.7	7.92	10350	1994	12130	3103.0
	W21x12.25x248lbs/ft	471	369.4	281300	28830	24.4	7.83	9331	1777	10860	2759.0
	W21x12.25x223lbs/ft	422	331.2	247700	25390	24.2	7.76	8355	1577	9656	2442.0
	W21x12.25x201lbs/ft	382	299.5	220700	22450	24.1	7.67	7547	1408	8670	2175.0
	W21x12.25x182lbs/ft	346	271.3	196700	20000	23.9	7.61	6820	1262	7792	1947.0
	W21x12.25x166lbs/ft	314	246.6	177500	18000	23.8	7.57	6217	1143	7062	1759.0
	W21x12.25x147lbs/ft	279	218.9	151000	15680	23.3	7.50	5394	986	6114	1520.0
	W21x12.25x132lbs/ft	250	196.5	134000	13850	23.1	7.44	4837	877	5457	1349.0
	W21x12.25x122lbs/ft	231	181.7	123500	12730	23.1	7.42	4484	808	5040	1241.0
	W21x12.25x101lbs/ft	211	165.3	111000	11360	23.0	7.34	4064	726	4555	1113.0
	W21x12.25x111lbs/ft	192	150.6	100800	10290	22.9	7.32	3714	659	4146	1009.0
W21x8.25	W21x8.25x93lbs/ft	176	138.3	86080	3870	22.1	4.69	3136	362	3613	569.0
	W21x8.25x83lbs/ft	155	122.0	76070	3392	22.1	4.67	2794	320	3197	500.0
	W21x8.25x73lbs/ft	139	109.0	66820	2943	21.9	4.60	2477	279	2829	436.0
	W21x8.25x68lbs/ft	129	101.0	61520	2692	21.9	4.57	2292	256	2612	399.0
	W21x8.25x62lbs/ft	117	92.1	55230	2389	21.7	4.51	2072	228	2360	355.0
W21x6.5	W21x6.5x57lbs/ft	108	84.7	48540	1263	21.2	3.42	1815	152	2104	242.0
	W21x6.5x50lbs/ft	95.2	74.7	41060	1042	20.8	3.31	1552	125	1809	200.0

	W21x6.5x44lbs/ft	83.7	65.7	35060	857	20.5	3.20	1336	104	1562	166.0
W18x11	W18x11x119lbs/ft	226	177.0	91200	10500	20.1	6.82	3784	736	4277	1132.0
	W18x11x106lbs/ft	201	158.0	79500	9160	19.9	6.76	3342	644	3769	991.0
	W18x11x97lbs/ft	184	144.0	72800	8370	19.9	6.75	3085	591	3458	906.0
	W18x11x86lbs/ft	163	128.0	63700	7280	19.8	6.68	2727	517	3048	793.0
	W18x11x76lbs/ft	144	113.0	55400	6330	19.6	6.63	2394	451	2671	692.0
W18x7.5	W18x7.5x71lbs/ft	134	106.0	49040	2515	19.0	4.31	2091	259	2398	406.0
	W18x7.5x65lbs/ft	123	98.3	45730	2347	19.1	4.33	1957	243	2232	379.0
	W18x7.5x60lbs/ft	114	89.0	41020	2086	19.0	4.29	1770	218	2014	338.0
	W18x7.5x55lbs/ft	105	82.0	37050	1871	18.8	4.23	1611	196	1831	304.0
	W18x7.5x50lbs/ft	94.8	74.3	33320	1671	18.8	4.20	1458	176	1653	272.0
W18x6	W18x6x46lbs/ft	86	67.2	28930	913	18.4	3.27	1263	119	1453	187.0
	W18x6x40lbs/ft	76.2	59.8	25500	795	18.3	3.23	1122	104	1287	163.0
	W18x6x35lbs/ft	66.6	52.3	21370	645	17.9	3.11	950	85	1096	133.0
W16x7	W16x7x57lbs/ft	108	85.0	31540	1803	17.1	4.08	1513	199	1725	310.0
	W16x7x50lbs/ft	94.8	75.0	27310	1545	17.0	4.04	1323	172	1501	267.0
	W16x7x45lbs/ft	85.8	67.0	24330	1365	16.9	3.99	1189	153	1346	237.0
	W16x7x40lbs/ft	76.1	60.0	21600	1203	16.8	3.97	1063	135	1200	209.0
	W16x7x36lbs/ft	68.4	53.0	18720	1021	16.5	3.85	930	115	1055	178.0
W16x5.5	W16x5.5x31lbs/ft	58.8	46.1	15690	538	16.4	3.03	778	75.7	888	118.0
	W16x5.5x26lbs/ft	49.5	38.8	12510	410	15.9	2.87	629	57.8	724	90.8
W14x16	W14x16x730lbs/ft	1386.0	1087.9	595700	196200	20.7	11.90	20940	8645.0	27210	13380.0
	W14x16x665lbs/ft	1262.0	991.0	518900	173400	20.3	11.70	18870	7739.0	24280	11960.0
	W14x16x605lbs/ft	1149.0	902.2	450200	153300	19.8	11.60	169960	6938.0	21620	10710.0
	W14x16x550lbs/ft	1043.0	819.0	392200	135500	19.4	11.40	15260	6203.0	19260	9561.0
	W14x16x500lbs/ft	948.0	744.3	342100	119900	19.0	11.20	13740	5552.0	17170	8549.0
	W14x16x455lbs/ft	863.0	677.8	299500	106900	18.6	11.10	12400	4994.0	15350	7680.0
	W14x16x426lbs/ft	808.0	633.9	274800	98130	18.4	11.00	11580	4629.0	14240	7108.0
	W14x16x398lbs/ft	755.0	592.6	250200	90170	18.2	10.90	10760	4284.0	13140	6574.0
	W14x16x370lbs/ft	702.0	551.0	226900	82670	18.0	10.90	9962	3951.0	12080	6058.0
	W14x16x342lbs/ft	649.0	509.5	204500	75400	17.8	10.80	9172	3625.0	11030	5552.0
	W14x16x311lbs/ft	590.0	462.8	180200	67040	17.5	10.70	8284	3254.0	9879	4978.0
	W14x16x283lbs/ft	537	421.7	159600	60080	17.2	10.60	7510	2938	8881	4489.0
	W14x16x257lbs/ft	487	382.4	141300	53620	17.0	10.5	6795	2641	7966	4031.0
	W14x16x233lbs/ft	442	347.0	125000	48090	16.8	10.4	6140	2380	7140	3629.0
	W14x16x211lbs/ft	399	313.4	110200	42600	16.6	10.3	5526	2125	6375	3236.0
	W14x16x193lbs/ft	366	287.1	99880	38680	16.5	10.30	5075	1939	5813	2949.0
	W14x16x176lbs/ft	335	262.7	89420	35020	16.3	10.2	4621	1760	5260	2676.0
	W14x16x159lbs/ft	299	235.1	79080	30990	16.3	10.2	4151	1570	4687	2383.0
	W14x16x145lbs/ft	276	216.3	71150	28250	16.1	10.1	3795	1434	4263	2176.0
	W14x14.5	W14x14.5x132lbs/ft	250	196.0	63640	22860	15.9	9.55	3422	1222	3838
W14x14.5x120lbs/ft		228	179.0	57450	20680	15.9	9.52	3122	1109	3483	1683.0
W14x14.5x109lbs/ft		206	162.0	51550	18560	15.8	9.48	2833	1001	3140	1516.0

	W14x14.5x99lbs/ft	188	147.0	46300	16720	15.7	9.43	2572	904	2839	1369.0
	W14x14.5x90lbs/ft	171	134.0	41520	15080	15.6	9.40	2333	817	2563	1237.0
W14x6.75	W14x6.75x38lbs/ft	72.3	58.0	16040	1108	14.9	3.91	896	129	1010	199.0
	W14x6.75x34lbs/ft	64.5	51.0	14140	968	14.8	3.86	796	113	896	174.0
	W14x6.75x30lbs/ft	57.1	44.6	12070	811	14.5	3.76	687	94.8	775	147.0
W14x5	W14x5x26lbs/ft	49.8	39.1	10170	358	14.3	2.68	576	57	659	89.0
	W14x5x22lbs/ft	42.1	33.1	8249	280	14.0	2.58	473	44.7	543	70.2

(The information given on these tables is for initial information only. Any use of these figures is at users own risk.)