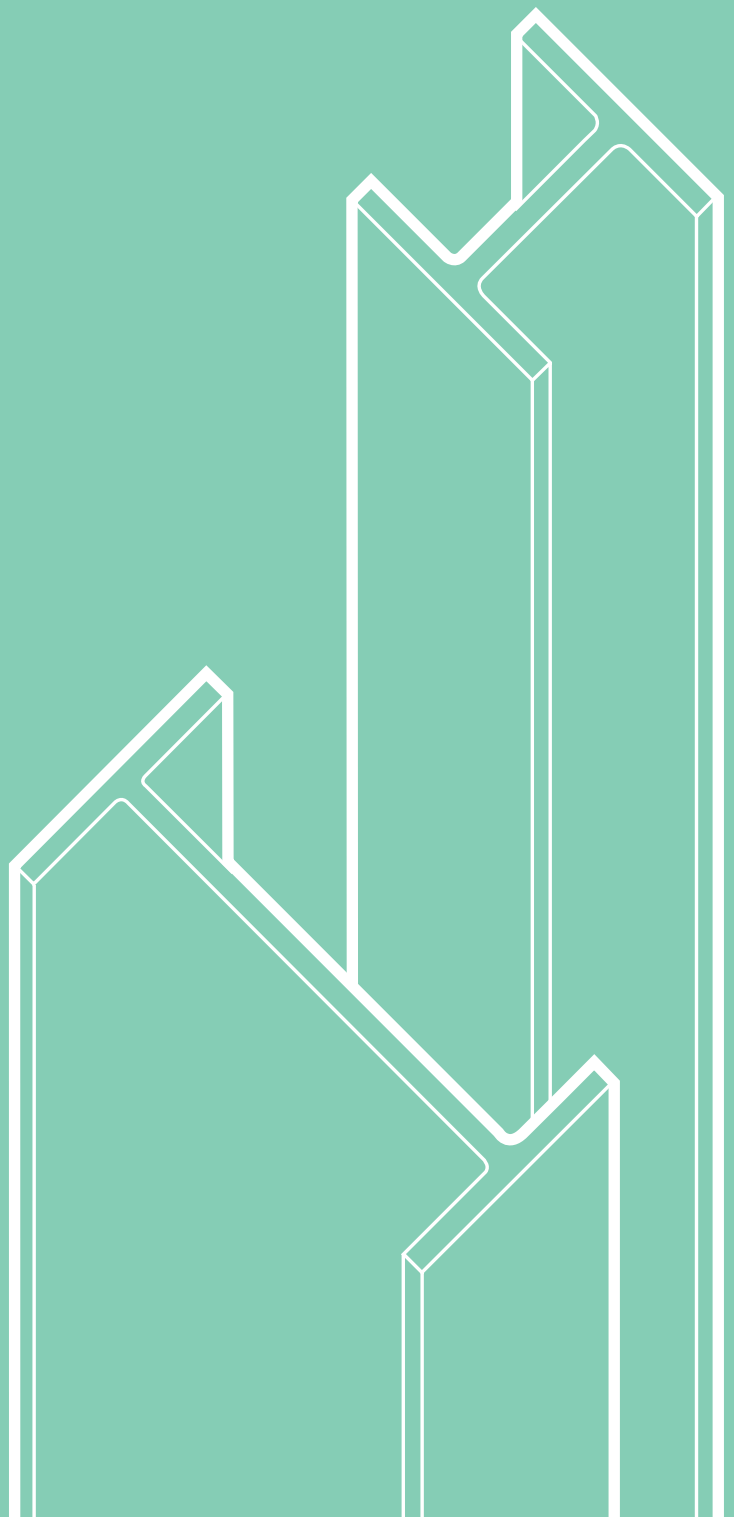


Structural sections – imperial

in accordance with ASTM specifications



Contents

Dimensions and properties		Page
	W40 x 12 – W36 x 12	2-3
	W33 x 15 ³ / ₄ – W27 x 14	4-5
	W27 x 10 – W24 x 7	6-7
	W21 x 12 ¹ / ₄ – W16 x 5 ¹ / ₂	8-9
	W14 x 16 – W14 x 6 ³ / ₄	10-11
	W14 x 5 – W12 x 4	12-13
	W10 x 10 – UB5x3	14-15
<hr/>		
Dimensions for detailing		
	W40 x 12 – W36 x 12	16
	W33 x 15 ³ / ₄ – W30 x 10 ¹ / ₂	17
	W27 x 14 – UB24 x 12	18
	W24 x 9 – UB18 x 7 ¹ / ₂	19
	W18 x 6 – UC14 x 14 ¹ / ₂	20
	UB14 x 6 ³ / ₄ – W12 x 4	21
	W10 x 10 – UB5 x 3	22
<hr/>		
W/D Ratio		
	W40 x 12 – W36 x 12	23
	W33 x 15 ³ / ₄ – W27 x 14	24
	W27 x 10 – W24 x 9	25
	W24 x 7 – W16 x 7	26
	W16 x 5 ¹ / ₂ – W14 x 6 ³ / ₄	27
	W14 x 5 – W12 x 4	28
	W10 x 10 – UB5 x 3	29
<hr/>		
Universal Bearing piling		30-31
<hr/>		
Notes		30
<hr/>		
Offices and agents for Corus exports		32-33
<hr/>		

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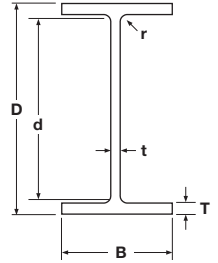
website: www.corusconstruction.com/structuralsteel

Please note that a Metric version is also available.

W SHAPES in accordance with ASTM A6/A6M

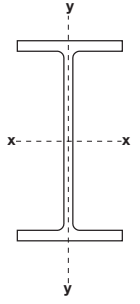
Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1



ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	Depth of Section D in	Width of Section B in	Thickness of Web t in	Thickness of Flange T in	Root Radius r in	Depth between fillets d in	Ratios for Local Buckling		Second Moment of Area	
									Flange B/2T	Web d/t	Axis xx in ⁴	Axis yy in ⁴
W40 x 12	327	† 1016x305x486	40.79	12.130	1.180	2.130	1.18	34.2	2.85	29.0	24510	640
W40 x 12	294	† 1016x305x438	40.39	12.010	1.060	1.930	1.18	34.2	3.11	32.2	21850	562
W40 x 12	264	† 1016x305x393	40.00	11.930	0.960	1.730	1.18	34.2	3.45	35.6	19420	493
W40 x 12	235	† 1016x305x350	39.69	11.890	0.830	1.575	1.18	34.2	3.77	41.2	17370	444
W40 x 12	211	† 1016x305x314	39.37	11.810	0.750	1.415	1.18	34.2	4.17	45.6	15480	390
W40 x 12	183	† 1016x305x272	38.98	11.810	0.650	1.200	1.18	34.2	4.92	52.6	13160	331
W40 x 12	167	† 1016x305x249	38.59	11.810	0.650	1.025	1.18	34.2	5.76	52.6	11570	283
W40 x 12	149	† 1016x305x222	38.20	11.810	0.630	0.830	1.18	34.2	7.11	54.3	9795	229
# W36 x 16 1/2	359	† 914x419x534	37.40	16.730	1.120	2.010	0.95	31.5	4.16	28.1	24760	1573
# W36 x 16 1/2	328	† 914x419x488	37.09	16.630	1.020	1.850	0.95	31.5	4.49	30.9	22490	1421
# W36 x 16 1/2	300	† 914x419x447	36.74	16.655	0.945	1.680	0.95	31.5	4.96	33.3	20350	1296
# W36 x 16 1/2	280	† 914x419x418	36.52	16.595	0.885	1.570	0.95	31.5	5.29	35.6	18880	1198
# W36 x 16 1/2	260	914x419x388	36.26	16.550	0.840	1.440	0.95	31.5	5.75	37.5	17270	1090
# W36 x 16 1/2	245	† 914x419x365	36.06	16.510	0.800	1.350	0.95	31.5	6.11	39.3	16120	1014
# W36 x 16 1/2	230	914x419x343	35.90	16.470	0.760	1.260	0.95	31.5	6.54	41.4	15020	940
W36 x 16 1/2	361		37.99	16.730	1.120	2.010	0.95	32.1	4.16	28.6	25670	1573
W36 x 16 1/2	330		37.67	16.630	1.020	1.850	0.95	32.1	4.49	31.4	23300	1421
W36 x 16 1/2	302		37.33	16.655	0.945	1.680	0.95	32.1	4.96	33.9	21100	1296
W36 x 16 1/2	282		37.11	16.595	0.885	1.570	0.95	32.1	5.29	36.2	19570	1198
W36 x 16 1/2	262		36.85	16.550	0.840	1.440	0.95	32.1	5.75	38.2	17910	1090
W36 x 16 1/2	247		36.67	16.510	0.800	1.350	0.95	32.1	6.11	40.1	16740	1014
W36 x 16 1/2	231		36.49	16.470	0.760	1.260	0.95	32.1	6.54	42.2	15580	940
# W36 x 12	387	† 914x305x576	39.09	12.670	1.420	2.560	0.75	32.5	2.47	22.9	26450	876
# W36 x 12	350	† 914x305x521	38.61	12.550	1.300	2.320	0.75	32.5	2.70	25.0	23580	771
# W36 x 12	318	† 914x305x474	38.22	12.430	1.180	2.130	0.75	32.5	2.92	27.5	21250	687
# W36 x 12	286	† 914x305x425	37.83	12.315	1.060	1.930	0.75	32.5	3.19	30.6	18930	604
W36 x 12	256	† 914x305x381	37.43	12.215	0.960	1.730	0.75	32.5	3.53	33.8	16750	528
W36 x 12	232	† 914x305x345	37.12	12.120	0.870	1.570	0.75	32.5	3.86	37.3	15010	468
W36 x 12	210	† 914x305x313	36.69	12.180	0.830	1.360	0.75	32.5	4.48	39.1	13190	411
W36 x 12	194	914x305x289	36.49	12.115	0.765	1.260	0.75	32.5	4.81	42.4	12110	375
W36 x 12	182	† 914x305x271	36.33	12.075	0.725	1.180	0.75	32.5	5.12	44.8	11310	347
W36 x 12	170	914x305x253	36.17	12.030	0.680	1.100	0.75	32.5	5.47	47.7	10500	320
W36 x 12	160	† 914x305x238	36.01	12.000	0.650	1.020	0.75	32.5	5.88	49.9	9755	295
W36 x 12	150	914x305x224	35.85	11.975	0.625	0.940	0.75	32.5	6.37	51.9	9040	270
W36 x 12	135	914x305x201	35.55	11.950	0.600	0.790	0.75	32.5	7.56	54.1	7802	225

For notes to tables, see page 30.



W SHAPES in accordance with ASTM A6/A6M

Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1

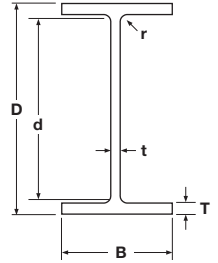
Radius of Gyration		Elastic Modulus		Plastic Modulus		Buckling Parameter u	Torsional Index x	Warping Constant H in ⁶	Torsional Constant J in ⁴	Area of Section in ²	ASTM Size in	Mass per foot lb
Axis xx in	Axis yy in	Axis xx in ³	Axis yy in ³	Axis xx in ³	Axis yy in ³							
16.0	2.58	1202	105	1414	170	0.867	21.1	239000	103	96.0	W40 x 12	327
15.9	2.55	1082	93.5	1267	150	0.868	23.1	207700	76.6	86.3	W40 x 12	294
15.8	2.52	971	82.6	1132	132	0.868	25.5	180500	56.1	77.6	W40 x 12	264
15.9	2.54	875	74.6	1012	118	0.872	27.9	161100	41.3	69.0	W40 x 12	235
15.8	2.51	786	66.1	906	105	0.872	30.7	140600	30.4	62.0	W40 x 12	211
15.7	2.49	675	56.0	775	88.2	0.871	35.5	118000	19.3	53.3	W40 x 12	183
15.3	2.40	600	47.9	693	76.0	0.861	39.8	99730	14.0	49.2	W40 x 12	167
15.0	2.29	513	38.8	598	62.1	0.850	45.8	79980	9.36	43.8	W40 x 12	149
15.3	3.86	1324	188	1515	292	0.887	19.8	492500	108	105	# W36 x 16 1/2	359
15.3	3.84	1213	171	1381	265	0.887	21.4	441300	84.1	96.4	# W36 x 16 1/2	328
15.2	3.83	1108	156	1257	241	0.887	23.3	398400	64.2	88.3	# W36 x 16 1/2	300
15.1	3.81	1034	144	1170	223	0.887	24.8	365900	52.6	82.4	# W36 x 16 1/2	280
15.0	3.78	953	132	1077	204	0.885	26.7	330400	41.5	76.5	# W36 x 16 1/2	260
15.0	3.75	894	123	1009	190	0.884	28.3	305500	34.6	72.0	# W36 x 16 1/2	245
14.9	3.73	837	114	943	176	0.883	30.2	281900	28.6	67.6	# W36 x 16 1/2	230
15.6	3.85	1351	188	1546	293	0.886	20.1	509100	109	106	W36 x 16 1/2	361
15.5	3.83	1237	171	1409	265	0.887	21.7	456000	84.3	97.0	W36 x 16 1/2	330
15.4	3.82	1130	156	1283	241	0.886	23.7	411900	64.3	88.8	W36 x 16 1/2	302
15.4	3.80	1055	144	1194	223	0.886	25.2	378400	52.7	82.9	W36 x 16 1/2	282
15.3	3.76	972	132	1099	204	0.884	27.3	341700	41.6	77.0	W36 x 16 1/2	262
15.2	3.74	913	123	1031	190	0.883	28.9	316300	34.7	72.5	W36 x 16 1/2	247
15.1	3.71	854	114	963	176	0.882	30.7	291600	28.7	68.1	W36 x 16 1/2	231
15.3	2.78	1353	138	1603	223	0.872	16.8	292300	171	114	# W36 x 12	387
15.1	2.74	1222	123	1440	197	0.871	18.4	253800	128	103	# W36 x 12	350
15.1	2.71	1112	110	1304	177	0.872	19.9	223600	98.5	93.5	# W36 x 12	318
15.0	2.68	1001	98.2	1167	156	0.873	21.8	194700	72.8	84.0	# W36 x 12	286
14.9	2.65	895	86.5	1040	137	0.872	24.1	168300	52.9	75.4	W36 x 12	256
14.8	2.62	809	77.2	936	122	0.872	26.4	147800	39.6	68.1	W36 x 12	232
14.6	2.58	719	67.5	833	107	0.866	29.7	128400	28.0	61.8	W36 x 12	210
14.6	2.56	664	61.9	767	97.7	0.867	32.0	116300	22.2	57.0	W36 x 12	194
14.5	2.55	623	57.6	718	90.7	0.866	33.9	107300	18.5	53.6	W36 x 12	182
14.5	2.53	581	53.2	668	83.8	0.866	36.2	98460	15.1	50.1	W36 x 12	170
14.4	2.50	542	49.1	624	77.2	0.864	38.6	90190	12.4	47.0	W36 x 12	160
14.3	2.47	504	45.1	581	70.9	0.861	41.3	82220	10.1	44.2	W36 x 12	150
14.0	2.38	439	37.7	509	59.7	0.852	46.9	68090	7.00	39.7	W36 x 12	135

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M

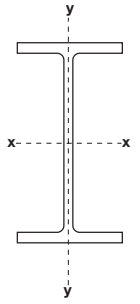
Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1



ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	Depth of Section D in	Width of Section B in	Thickness of Web t in	Thickness of Flange T in	Root Radius r in	Depth between fillets d in	Ratios for Local Buckling		Second Moment of Area	
									Flange B/2T	Web d/t	Axis xx in ⁴	Axis yy in ⁴
W33 x 15 ³ / ₄	387	† 838x400x576	35.95	16.200	1.260	2.280	0.70	30.0	3.55	23.8	24320	1621
W33 x 15 ³ / ₄	354	† 838x400x527	35.55	16.100	1.160	2.090	0.70	30.0	3.85	25.8	21950	1458
W33 x 15 ³ / ₄	318	† 838x400x473	35.16	15.985	1.040	1.890	0.70	30.0	4.23	28.8	19520	1290
W33 x 15 ³ / ₄	291	† 838x400x433	34.84	15.905	0.960	1.730	0.70	30.0	4.60	31.2	17670	1163
W33 x 15 ³ / ₄	263	† 838x400x392	34.53	15.805	0.870	1.570	0.70	30.0	5.03	34.5	15830	1035
W33 x 15 ³ / ₄	241	† 838x400x359	34.18	15.860	0.830	1.400	0.70	30.0	5.66	36.1	14180	933
W33 x 15 ³ / ₄	221	† 838x400x329	33.93	15.805	0.775	1.275	0.70	30.0	6.20	38.7	12850	840
W33 x 15 ³ / ₄	201	† 838x400x299	33.68	15.745	0.715	1.150	0.70	30.0	6.85	41.9	11530	749
# W33 x 11 ¹ / ₂	219	† 838x292x326	34.53	11.700	0.870	1.570	0.70	30.0	3.73	34.5	12330	421
# W33 x 11 ¹ / ₂	204	† 838x292x304	34.30	11.640	0.810	1.460	0.70	30.0	3.99	37.0	11360	385
# W33 x 11 ¹ / ₂	187	† 838x292x278	34.06	11.580	0.750	1.340	0.70	30.0	4.32	40.0	10340	348
W33 x 11 ¹ / ₂	169	† 838x292x251	33.82	11.500	0.670	1.220	0.70	30.0	4.71	44.7	9286	310
W33 x 11 ¹ / ₂	152	838x292x226	33.49	11.565	0.635	1.055	0.70	30.0	5.48	47.2	8157	273
W33 x 11 ¹ / ₂	141	† 838x292x210	33.30	11.535	0.605	0.960	0.70	30.0	6.01	49.6	7452	246
W33 x 11 ¹ / ₂	130	838x292x193	33.09	11.510	0.580	0.855	0.70	30.0	6.73	51.7	6709	218
W33 x 11 ¹ / ₂	118	838x292x176	32.86	11.480	0.550	0.740	0.70	30.0	7.76	54.5	5901	187
W30 x 15	326	† 762x381x484	32.40	15.370	1.140	2.050	0.65	27.0	3.75	23.7	16760	1244
W30 x 15	292	† 762x381x434	32.01	15.255	1.020	1.850	0.65	27.0	4.12	26.5	14850	1097
W30 x 15	261	† 762x381x389	31.61	15.155	0.930	1.650	0.65	27.0	4.59	29.0	13060	959
W30 x 15	235	† 762x381x350	31.30	15.055	0.830	1.500	0.65	27.0	5.02	32.5	11670	855
W30 x 15	211	† 762x381x314	30.94	15.105	0.775	1.315	0.65	27.0	5.74	34.9	10260	757
W30 x 15	191	† 762x381x284	30.68	15.040	0.710	1.185	0.65	27.0	6.35	38.0	9170	673
W30 x 15	173	† 762x381x257	30.44	14.985	0.655	1.065	0.65	27.0	7.04	41.2	8198	598
W30 x 10 ¹ / ₂	148	† 762x267x220	30.67	10.480	0.650	1.180	0.65	27.0	4.44	41.6	6680	227
W30 x 10 ¹ / ₂	132	762x267x196	30.31	10.545	0.615	1.000	0.65	27.0	5.27	43.9	5765	196
W30 x 10 ¹ / ₂	124	† 762x267x185	30.17	10.515	0.585	0.930	0.65	27.0	5.65	46.2	5359	181
W30 x 10 ¹ / ₂	116	762x267x173	30.01	10.495	0.565	0.850	0.65	27.0	6.17	47.8	4933	164
W30 x 10 ¹ / ₂	108	† 762x267x161	29.83	10.475	0.545	0.760	0.65	27.0	6.89	49.6	4466	146
W30 x 10 ¹ / ₂	99	762x267x147	29.65	10.450	0.520	0.670	0.65	27.0	7.80	51.9	3995	128
W30 x 10 ¹ / ₂	90	762x267x134	29.53	10.400	0.470	0.610	0.65	27.0	8.52	57.5	3613	115
W27 x 14	307	† 686x356x457	29.61	14.445	1.160	2.090	0.60	24.2	3.46	20.9	13090	1053
W27 x 14	281	† 686x356x419	29.29	14.350	1.060	1.930	0.60	24.2	3.72	22.9	11880	953
W27 x 14	258	† 686x356x384	28.98	14.270	0.980	1.770	0.60	24.2	4.03	24.7	10760	859
W27 x 14	235	† 686x356x350	28.66	14.190	0.910	1.610	0.60	24.2	4.41	26.6	9665	768
W27 x 14	217	† 686x356x323	28.43	14.115	0.830	1.500	0.60	24.2	4.71	29.2	8871	704
W27 x 14	194	† 686x356x289	28.11	14.035	0.750	1.340	0.60	24.2	5.24	32.3	7821	618
W27 x 14	178	† 686x356x265	27.81	14.085	0.725	1.190	0.60	24.2	5.92	33.4	6985	555
W27 x 14	161	† 686x356x240	27.59	14.020	0.660	1.080	0.60	24.2	6.49	36.7	6277	497
W27 x 14	146	† 686x356x217	27.38	13.965	0.605	0.975	0.60	24.2	7.16	40.1	5627	443

For notes to tables, see page 30.



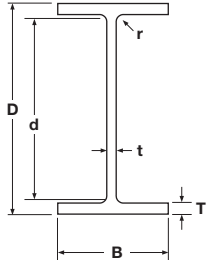
W SHAPES in accordance with ASTM A6/A6M

Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1

Radius of Gyration		Elastic Modulus		Plastic Modulus		Buckling Parameter u	Torsional Index x	Warping Constant H in ⁶	Torsional Constant J in ⁴	Area of Section in ²	ASTM Size in	Mass per foot lb
Axis xx in	Axis yy in	Axis xx in ³	Axis yy in ³	Axis xx in ³	Axis yy in ³							
14.6	3.77	1353	200	1561	312	0.887	16.7	459400	147	114	W33 x 15³/₄	387
14.5	3.74	1235	181	1418	282	0.887	18.1	408100	114	104	W33 x 15³/₄	354
14.4	3.71	1110	161	1268	250	0.888	19.9	356900	83.8	93.5	W33 x 15³/₄	318
14.4	3.69	1014	146	1154	226	0.887	21.6	318600	64.6	85.6	W33 x 15³/₄	291
14.3	3.66	917	131	1039	202	0.888	23.6	281100	48.2	77.4	W33 x 15³/₄	263
14.1	3.63	829	118	939	182	0.884	26.1	250500	35.8	70.9	W33 x 15³/₄	241
14.1	3.59	757	106	855	164	0.882	28.4	224000	27.5	65.0	W33 x 15³/₄	221
14.0	3.56	685	95.2	772	147	0.881	31.2	198200	20.5	59.1	W33 x 15³/₄	201
13.8	2.56	714	72.0	826	114	0.874	24.4	114300	37.7	64.5	# W33 x 11¹/₂	219
13.8	2.54	662	66.2	764	104	0.874	26.1	103900	30.3	59.8	# W33 x 11¹/₂	204
13.7	2.52	607	60.1	699	94.5	0.874	28.2	93150	23.6	55.0	# W33 x 11¹/₂	187
13.7	2.50	549	53.9	629	84.4	0.875	30.9	82400	17.7	49.5	W33 x 11¹/₂	169
13.5	2.47	487	47.2	559	73.9	0.870	34.9	71740	12.4	44.8	W33 x 11¹/₂	152
13.4	2.43	448	42.7	514	66.9	0.867	37.9	64390	9.70	41.6	W33 x 11¹/₂	141
13.2	2.39	406	37.9	467	59.4	0.862	41.6	56600	7.37	38.3	W33 x 11¹/₂	130
13.0	2.32	359	32.6	415	51.3	0.856	46.5	48260	5.30	34.7	W33 x 11¹/₂	118
13.2	3.61	1034	162	1190	252	0.888	16.7	286500	101	95.6	W30 x 15	326
13.2	3.58	928	144	1061	223	0.889	18.3	249500	74.2	85.7	W30 x 15	292
13.1	3.54	827	127	941	196	0.888	20.3	215300	53.3	76.7	W30 x 15	261
13.0	3.52	746	114	844	175	0.889	22.2	189700	39.7	69.0	W30 x 15	235
12.9	3.49	663	100	749	154	0.886	25.0	166000	27.9	62.0	W30 x 15	211
12.8	3.46	598	89.5	673	138	0.885	27.5	146300	20.6	56.1	W30 x 15	191
12.7	3.43	539	79.8	605	123	0.883	30.3	129000	15.3	50.8	W30 x 15	173
12.4	2.28	436	43.3	500	67.9	0.875	28.9	49380	14.5	43.5	W30 x 10¹/₂	148
12.2	2.25	380	37.2	437	58.4	0.869	33.2	42110	9.72	38.9	W30 x 10¹/₂	132
12.1	2.23	355	34.4	408	54.0	0.867	35.4	38630	7.99	36.5	W30 x 10¹/₂	124
12.0	2.19	329	31.3	378	49.2	0.864	38.1	34920	6.43	34.2	W30 x 10¹/₂	116
11.9	2.15	299	27.9	346	43.9	0.859	41.5	30850	4.99	31.7	W30 x 10¹/₂	108
11.7	2.10	269	24.5	312	38.6	0.854	45.6	26840	3.77	29.1	W30 x 10¹/₂	99
11.7	2.09	245	22.1	283	34.7	0.854	49.9	23980	2.84	26.4	W30 x 10¹/₂	90
12.0	3.42	884	146	1022	227	0.889	14.8	199400	99.8	90.2	W27 x 14	307
12.0	3.40	812	133	933	206	0.890	15.9	178400	78.1	82.7	W27 x 14	281
11.9	3.37	742	120	850	187	0.889	17.2	159100	60.5	75.8	W27 x 14	258
11.8	3.33	674	108	769	168	0.888	18.8	140600	46.0	69.1	W27 x 14	235
11.8	3.32	624	99.8	708	154	0.890	20.1	127700	36.8	63.8	W27 x 14	217
11.7	3.29	556	88.1	629	136	0.889	22.3	110800	26.4	57.0	W27 x 14	194
11.6	3.26	502	78.8	567	122	0.885	24.6	98340	19.5	52.3	W27 x 14	178
11.5	3.24	455	70.9	512	109	0.885	27.0	87270	14.6	47.4	W27 x 14	161
11.4	3.21	411	63.5	461	97.5	0.884	29.7	77230	10.9	42.9	W27 x 14	146

For notes to tables, see page 30.



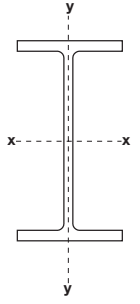
W SHAPES in accordance with ASTM A6/A6M

Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1

ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	Depth of Section D in	Width of Section B in	Thickness of Web t in	Thickness of Flange T in	Root Radius r in	Depth between fillets d in	Ratios for Local Buckling		Second Moment of Area	
									Flange B/2T	Web d/t	Axis xx in ⁴	Axis yy in ⁴
# W27 x 10	221	† 686x254x329	29.13	10.425	1.020	1.850	0.60	24.2	2.82	23.8	8634	352
# W27 x 10	201	† 686x254x299	28.82	10.345	0.940	1.670	0.60	24.2	3.10	25.8	7720	310
# W27 x 10	182	† 686x254x271	28.50	10.245	0.850	1.540	0.60	24.2	3.33	28.5	6952	277
# W27 x 10	159	† 686x254x237	28.11	10.150	0.750	1.340	0.60	24.2	3.79	32.3	5954	235
W27 x 10	129	† 686x254x192	27.63	10.010	0.610	1.100	0.60	24.2	4.55	39.7	4762	184
W27 x 10	114	686x254x170	27.29	10.070	0.570	0.930	0.60	24.2	5.41	42.5	4085	159
W27 x 10	102	686x254x152	27.09	10.015	0.515	0.830	0.60	24.2	6.03	47.1	3621	139
W27 x 10	94	686x254x140	26.92	9.990	0.490	0.745	0.60	24.2	6.70	49.5	3270	124
W27 x 10	84	686x254x125	26.71	9.960	0.460	0.640	0.60	24.2	7.78	52.7	2846	106
W24 x 12 ³ / ₄	306	† 610x324x455	27.13	13.405	1.260	2.280	0.65	21.3	2.94	16.9	10720	919
W24 x 12 ³ / ₄	279	† 610x324x415	26.73	13.305	1.160	2.090	0.65	21.3	3.18	18.3	9615	824
W24 x 12 ³ / ₄	250	† 610x324x372	26.34	13.185	1.040	1.890	0.65	21.3	3.49	20.4	8503	724
W24 x 12 ³ / ₄	229	† 610x324x341	26.02	13.110	0.960	1.730	0.65	21.3	3.79	22.1	7666	651
W24 x 12 ³ / ₄	207	† 610x324x307	25.71	13.010	0.870	1.570	0.65	21.3	4.14	24.4	6838	578
W24 x 12 ³ / ₄	192	† 610x324x285	25.47	12.950	0.810	1.460	0.65	21.3	4.43	26.2	6275	530
W24 x 12 ³ / ₄	176	† 610x324x262	25.24	12.890	0.750	1.340	0.65	21.3	4.81	28.3	5701	479
W24 x 12 ³ / ₄	162	† 610x324x241	25.00	12.955	0.705	1.220	0.65	21.3	5.31	30.2	5192	443
W24 x 12 ³ / ₄	146	† 610x324x217	24.74	12.900	0.650	1.090	0.65	21.3	5.92	32.7	4602	391
W24 x 12 ³ / ₄	131	† 610x324x195	24.48	12.855	0.605	0.960	0.65	21.3	6.70	35.1	4039	340
W24 x 12 ³ / ₄	117	† 610x324x174	24.26	12.800	0.550	0.850	0.65	21.3	7.53	38.7	3554	297
W24 x 12 ³ / ₄	104	† 610x324x155	24.06	12.750	0.500	0.750	0.65	21.3	8.50	42.5	3122	259
UB24 x 12	160	610x305x238	25.03	12.260	0.725	1.235	0.65	21.3	4.96	29.3	5029	380
UB24 x 12	120	610x305x179	24.42	12.090	0.555	0.930	0.65	21.3	6.50	38.3	3680	274
UB24 x 12	100	610x305x149	24.11	12.000	0.465	0.775	0.65	21.3	7.74	45.7	3023	223
# W24 x 9	198	† 610x229x295	26.26	9.470	1.020	1.850	0.50	21.6	2.56	21.1	6232	264
# W24 x 9	163	† 610x229x243	25.63	9.290	0.850	1.540	0.50	21.6	3.02	25.4	4996	207
# W24 x 9	146	† 610x229x217	25.32	9.215	0.770	1.380	0.50	21.6	3.34	28.0	4412	181
# W24 x 9	128	† 610x229x191	25.00	9.115	0.670	1.220	0.50	21.6	3.74	32.2	3815	155
# W24 x 9	115	† 610x229x171	24.76	9.055	0.610	1.100	0.50	21.6	4.12	35.3	3400	137
W24 x 9	103	† 610x229x153	24.53	9.000	0.550	0.980	0.50	21.6	4.59	39.2	3001	119
W24 x 9	94	610x229x140	24.31	9.065	0.515	0.875	0.50	21.6	5.18	41.9	2699	109
W24 x 9	84	610x229x125	24.10	9.020	0.470	0.770	0.50	21.6	5.86	45.9	2367	94.4
W24 x 9	76	610x229x113	23.92	8.990	0.440	0.680	0.50	21.6	6.61	49.0	2099	82.5
W24 x 9	68	610x229x101	23.73	8.965	0.415	0.585	0.50	21.6	7.66	52.0	1829	70.4
W24 x 7	62	† 610x178x92	23.74	7.040	0.430	0.591	0.50	21.6	5.96	50.1	1552	34.5
W24 x 7	55	† 610x178x82	23.57	7.005	0.395	0.504	0.50	21.6	6.95	54.6	1344	29.0

For notes to tables, see page 30.



W SHAPES in accordance with ASTM A6/A6M

Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1

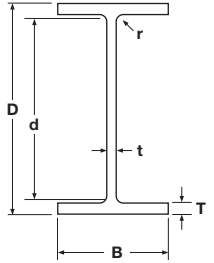
Radius of Gyration		Elastic Modulus		Plastic Modulus		Buckling Parameter u	Torsional Index x	Warping Constant H in ⁶	Torsional Constant J in ⁴	Area of Section in ²	ASTM Size in	Mass per foot lb
Axis xx in	Axis yy in	Axis xx in ³	Axis yy in ³	Axis xx in ³	Axis yy in ³							
11.5	2.33	593	67.5	695	107	0.877	17.2	65440	52.5	64.8	# W27 x 10	221
11.5	2.30	536	59.9	625	95.2	0.876	18.8	57130	39.2	58.8	# W27 x 10	201
11.4	2.28	488	54.2	567	85.6	0.878	20.3	50410	30.3	53.5	# W27 x 10	182
11.3	2.24	424	46.2	489	72.7	0.877	23.0	42010	20.2	46.6	# W27 x 10	159
11.2	2.21	345	36.8	395	57.6	0.878	27.7	32450	11.1	37.8	W27 x 10	129
11.0	2.18	299	31.5	343	49.3	0.872	31.9	27570	7.33	33.5	W27 x 10	114
11.0	2.15	267	27.8	305	43.4	0.872	35.4	24010	5.28	30.0	W27 x 10	102
10.9	2.12	243	24.8	278	38.8	0.868	38.8	21250	4.03	27.7	W27 x 10	94
10.7	2.07	213	21.2	244	33.2	0.862	43.8	17950	2.81	24.8	W27 x 10	84
10.9	3.20	790	137	924	214	0.889	12.2	141900	119	89.9	W24 x 12 ^{3/4}	306
10.8	3.17	719	124	837	193	0.889	13.2	125000	91.7	82.1	W24 x 12 ^{3/4}	279
10.7	3.14	646	110	746	171	0.890	14.5	108200	67.5	73.7	W24 x 12 ^{3/4}	250
10.7	3.11	589	99.4	677	154	0.890	15.6	96100	52.0	67.4	W24 x 12 ^{3/4}	229
10.6	3.08	532	88.8	608	137	0.890	17.1	84140	38.9	60.8	W24 x 12 ^{3/4}	207
10.5	3.06	493	81.8	561	126	0.890	18.3	76320	31.3	56.4	W24 x 12 ^{3/4}	192
10.5	3.04	452	74.4	512	115	0.890	19.7	68430	24.3	51.8	W24 x 12 ^{3/4}	176
10.4	3.04	415	68.4	470	105	0.888	21.4	62610	18.9	47.9	W24 x 12 ^{3/4}	162
10.3	3.01	372	60.6	419	93.2	0.887	23.7	54620	13.7	43.1	W24 x 12 ^{3/4}	146
10.2	2.97	330	53.0	371	81.5	0.884	26.5	47070	9.73	38.7	W24 x 12 ^{3/4}	131
10.1	2.94	293	46.5	329	71.5	0.882	29.6	40760	6.91	34.5	W24 x 12 ^{3/4}	117
10.1	2.90	260	40.7	291	62.5	0.881	33.1	35230	4.87	30.8	W24 x 12 ^{3/4}	104
10.3	2.84	402	62.0	457	96.0	0.886	21.3	53810	18.8	47.0	UB24 x 12	160
10.2	2.78	301	45.4	339	69.8	0.886	27.6	37840	8.19	35.4	UB24 x 12	120
10.1	2.75	251	37.2	280	57.1	0.886	32.7	30420	4.80	29.5	UB24 x 12	100
10.3	2.13	475	55.7	560	89.0	0.878	15.4	39320	46.9	58.3	# W24 x 9	198
10.2	2.08	390	44.6	455	70.6	0.878	18.2	30030	27.0	48.0	# W24 x 9	163
10.1	2.05	348	39.3	405	62.0	0.877	20.1	25920	19.6	43.0	# W24 x 9	146
10.1	2.03	305	33.9	352	53.3	0.879	22.5	21860	13.4	37.6	# W24 x 9	128
10.0	2.01	275	30.2	316	47.3	0.878	24.8	19110	9.90	33.9	# W24 x 9	115
9.96	1.99	245	26.5	280	41.5	0.878	27.6	16560	7.07	30.3	W24 x 9	103
9.87	1.98	222	24.0	254	37.5	0.875	30.4	14950	5.26	27.7	W24 x 9	94
9.79	1.95	196	20.9	224	32.6	0.873	34.1	12850	3.70	24.7	W24 x 9	84
9.69	1.92	176	18.4	200	28.6	0.869	38.0	11140	2.68	22.4	W24 x 9	76
9.55	1.87	154	15.7	177	24.5	0.864	42.9	9429	1.87	20.1	W24 x 9	68
9.23	1.38	131	9.81	153	15.7	0.848	42.8	4624	1.71	18.2	W24 x 7	62
9.11	1.34	114	8.28	134	13.3	0.843	48.4	3858	1.18	16.2	W24 x 7	55

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M

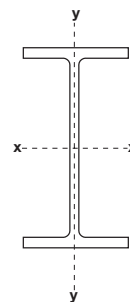
Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1



ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	Depth of Section D in	Width of Section B in	Thickness of Web t in	Thickness of Flange T in	Root Radius r in	Depth between fillets d in	Ratios for Local Buckling		Second Moment of Area	
									Flange B/2T	Web d/t	Axis xx in ⁴	Axis yy in ⁴
# W21 x 12 ¹ / ₄	275	† 533x312x409	24.13	12.890	1.220	2.190	0.50	18.8	2.94	15.4	7620	785
# W21 x 12 ¹ / ₄	248	† 533x312x370	23.74	12.770	1.110	1.990	0.50	18.8	3.21	16.9	6762	693
# W21 x 12 ¹ / ₄	222	† 533x312x331	23.35	12.675	1.000	1.790	0.50	18.8	3.54	18.8	5950	609
W21 x 12 ¹ / ₄	201	† 533x312x300	23.03	12.575	0.910	1.630	0.50	18.8	3.86	20.6	5309	542
W21 x 12 ¹ / ₄	182	† 533x312x272	22.72	12.500	0.830	1.480	0.50	18.8	4.22	22.6	4734	483
W21 x 12 ¹ / ₄	166	† 533x312x248	22.48	12.420	0.750	1.360	0.50	18.8	4.57	25.0	4275	435
W21 x 12 ¹ / ₄	147	† 533x312x219	22.06	12.510	0.720	1.150	0.50	18.8	5.44	26.1	3632	376
W21 x 12 ¹ / ₄	132	† 533x312x196	21.83	12.440	0.650	1.035	0.50	18.8	6.01	28.9	3225	333
W21 x 12 ¹ / ₄	122	† 533x312x182	21.68	12.390	0.600	0.960	0.50	18.8	6.45	31.3	2961	305
W21 x 12 ¹ / ₄	111	† 533x312x165	21.51	12.340	0.550	0.875	0.50	18.8	7.05	34.1	2674	274
W21 x 12 ¹ / ₄	101	† 533x312x150	21.36	12.290	0.500	0.800	0.50	18.8	7.68	37.5	2421	248
W21 x 8 ¹ / ₄	93	† 533x210x138	21.62	8.420	0.580	0.930	0.50	18.8	4.53	32.3	2071	92.9
W21 x 8 ¹ / ₄	83	533x210x123	21.43	8.355	0.515	0.835	0.50	18.8	5.00	36.4	1832	81.4
W21 x 8 ¹ / ₄	73	533x210x109	21.24	8.295	0.455	0.740	0.50	18.8	5.60	41.2	1603	70.6
W21 x 8 ¹ / ₄	68	533x210x101	21.13	8.270	0.430	0.685	0.50	18.8	6.04	43.6	1481	64.7
W21 x 8 ¹ / ₄	62	533x210x92	20.99	8.240	0.400	0.615	0.50	18.8	6.70	46.9	1330	57.5
W21 x 8 ¹ / ₄	55	533x210x82	20.80	8.220	0.375	0.522	0.50	18.8	7.87	50.0	1144	48.4
W21 x 6 ¹ / ₂	57	† 533x165x85	21.06	6.555	0.405	0.650	0.50	18.8	5.04	46.3	1169	30.6
W21 x 6 ¹ / ₂	50	† 533x165x74	20.83	6.530	0.380	0.535	0.50	18.8	6.10	49.4	984	24.9
W21 x 6 ¹ / ₂	44	† 533x165x66	20.66	6.500	0.350	0.450	0.50	18.8	7.22	53.6	843	20.7
W18 x 7 ¹ / ₂	71	† 457x191x106	18.47	7.635	0.495	0.810	0.40	16.0	4.71	32.4	1172	60.3
W18 x 7 ¹ / ₂	65	457x191x97	18.35	7.590	0.450	0.750	0.40	16.0	5.06	35.7	1071	54.8
W18 x 7 ¹ / ₂	60	457x191x89	18.24	7.555	0.415	0.695	0.40	16.0	5.44	38.7	984	50.1
W18 x 7 ¹ / ₂	55	457x191x82	18.11	7.530	0.390	0.630	0.40	16.0	5.98	41.1	890	44.9
W18 x 7 ¹ / ₂	50	457x191x74	17.99	7.495	0.355	0.570	0.40	16.0	6.57	45.2	800	40.1
UB18 x 7 ¹ / ₂	45	457x191x67	17.85	7.476	0.335	0.500	0.40	16.0	7.48	47.9	706	34.9
W18 x 6	46	457x152x68	18.06	6.060	0.360	0.605	0.40	16.0	5.01	44.6	712	22.5
W18 x 6	40	457x152x60	17.90	6.015	0.315	0.525	0.40	16.0	5.73	50.9	612	19.1
W18 x 6	35	457x152x52	17.70	6.000	0.300	0.425	0.40	16.0	7.06	53.5	510	15.3
W16 x 7	57	† 406x178x85	16.43	7.120	0.430	0.715	0.40	14.2	4.98	33.0	758	43.1
W16 x 7	50	406x178x75	16.26	7.070	0.380	0.630	0.40	14.2	5.61	37.4	659	37.2
W16 x 7	45	406x178x67	16.13	7.035	0.345	0.565	0.40	14.2	6.23	41.2	586	32.8
W16 x 7	40	406x178x60	16.01	6.995	0.305	0.505	0.40	14.2	6.93	46.5	518	28.9
W16 x 7	36	406x178x53	15.86	6.985	0.295	0.430	0.40	14.2	8.12	48.1	448	24.5
W16 x 5 ¹ / ₂	31	406x140x46	15.88	5.525	0.275	0.440	0.40	14.2	6.28	51.6	375	12.4
W16 x 5 ¹ / ₂	26	406x140x39	15.69	5.500	0.250	0.345	0.40	14.2	7.97	56.8	301	9.59

For notes to tables, see page 30.



W SHAPES in accordance with ASTM A6/A6M

Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1

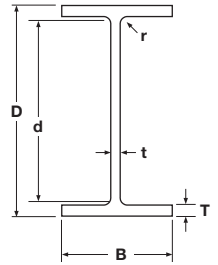
Radius of Gyration		Elastic Modulus		Plastic Modulus		Buckling Parameter u	Torsional Index x	Warping Constant H in ⁶	Torsional Constant J in ⁴	Area of Section in ²	ASTM Size in	Mass per foot lb
Axis xx in	Axis yy in	Axis xx in ³	Axis yy in ³	Axis xx in ³	Axis yy in ³							
9.71	3.12	632	122	740	189	0.890	11.2	94450	99.4	80.8	# W21 x 12 ¹ / ₄	275
9.63	3.08	570	109	663	168	0.890	12.2	81960	74.5	73.0	# W21 x 12 ¹ / ₄	248
9.54	3.05	510	96.1	589	149	0.890	13.4	70800	54.3	65.4	# W21 x 12 ¹ / ₄	222
9.47	3.02	461	86.1	530	133	0.890	14.6	62000	40.9	59.2	W21 x 12 ¹ / ₄	201
9.40	3.00	417	77.2	476	119	0.890	15.9	54450	30.7	53.6	W21 x 12 ¹ / ₄	182
9.36	2.99	380	70.0	432	108	0.891	17.2	48510	23.6	48.8	W21 x 12 ¹ / ₄	166
9.17	2.95	329	60.1	373	92.6	0.884	19.8	41090	15.4	43.2	W21 x 12 ¹ / ₄	147
9.12	2.93	295	53.5	333	82.3	0.884	21.8	35950	11.3	38.8	W21 x 12 ¹ / ₄	132
9.09	2.92	273	49.2	307	75.5	0.885	23.4	32710	8.98	35.9	W21 x 12 ¹ / ₄	122
9.05	2.90	249	44.5	279	68.2	0.885	25.6	29200	6.83	32.7	W21 x 12 ¹ / ₄	111
9.02	2.89	227	40.3	253	61.7	0.885	27.8	26180	5.21	29.8	W21 x 12 ¹ / ₄	101
8.70	1.84	192	22.1	221	34.7	0.873	24.9	9940	6.03	27.3	W21 x 8 ¹ / ₄	93
8.67	1.83	171	19.5	196	30.5	0.874	27.6	8634	4.34	24.3	W21 x 8 ¹ / ₄	83
8.64	1.81	151	17.0	172	26.5	0.875	30.9	7415	3.02	21.5	W21 x 8 ¹ / ₄	73
8.60	1.80	140	15.7	160	24.4	0.874	33.1	6764	2.45	20.0	W21 x 8 ¹ / ₄	68
8.54	1.77	127	14.0	144	21.7	0.872	36.4	5965	1.83	18.3	W21 x 8 ¹ / ₄	62
8.40	1.73	110	11.8	126	18.4	0.865	41.5	4978	1.24	16.2	W21 x 8 ¹ / ₄	55
8.36	1.35	111	9.35	129	14.8	0.862	35.5	3191	1.77	16.7	W21 x 6 ¹ / ₂	57
8.18	1.30	94.5	7.64	110	12.2	0.853	41.2	2568	1.14	14.7	W21 x 6 ¹ / ₂	50
8.06	1.26	81.6	6.37	95.4	10.2	0.847	47.0	2112	0.770	13.0	W21 x 6 ¹ / ₂	44
7.50	1.70	127	15.8	146	24.7	0.877	24.4	4699	3.49	20.8	W18 x 7 ¹ / ₂	71
7.49	1.69	117	14.4	133	22.5	0.879	26.3	4244	2.73	19.1	W18 x 7 ¹ / ₂	65
7.47	1.69	108	13.3	123	20.6	0.879	28.3	3853	2.17	17.6	W18 x 7 ¹ / ₂	60
7.41	1.67	98.3	11.9	112	18.5	0.877	30.9	3432	1.66	16.2	W18 x 7 ¹ / ₂	55
7.38	1.65	88.9	10.7	101	16.6	0.877	33.9	3040	1.24	14.7	W18 x 7 ¹ / ₂	50
7.30	1.62	79.1	9.33	89.8	14.5	0.872	37.8	2625	0.893	13.3	UB18 x 7 ¹ / ₂	45
7.25	1.29	78.8	7.43	90.7	11.7	0.869	32.9	1715	1.22	13.5	W18 x 6	46
7.21	1.27	68.4	6.35	78.4	9.95	0.869	37.5	1441	0.810	11.8	W18 x 6	40
7.04	1.22	57.6	5.12	66.5	8.06	0.858	44.1	1145	0.506	10.3	W18 x 6	35
6.72	1.60	92.2	12.1	105	18.9	0.881	24.5	2663	2.22	16.8	W16 x 7	57
6.68	1.59	81.0	10.5	92.0	16.3	0.881	27.5	2271	1.52	14.7	W16 x 7	50
6.65	1.57	72.7	9.34	82.3	14.5	0.880	30.4	1989	1.11	13.3	W16 x 7	45
6.63	1.57	64.7	8.25	73.0	12.7	0.881	33.8	1734	0.793	11.8	W16 x 7	40
6.51	1.52	56.5	7.00	64.0	10.8	0.873	38.5	1456	0.545	10.6	W16 x 7	36
6.41	1.17	47.2	4.49	54.0	7.03	0.868	38.9	739	0.460	9.13	W16 x 5 ¹ / ₂	31
6.26	1.12	38.4	3.49	44.2	5.48	0.859	47.1	565	0.262	7.68	W16 x 5 ¹ / ₂	26

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M

Dimensions and Properties

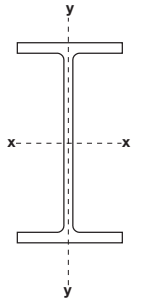
Supplemented by structural sections in accordance with BS4: Part 1



ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	Depth of Section D in	Width of Section B in	Thickness of Web t in	Thickness of Flange T in	Root Radius r in	Depth between fillets d in	Ratios for Local Buckling		Second Moment of Area	
									Flange B/2T	Web d/t	Axis xx in ⁴	Axis yy in ⁴
W14 x 16	730	† 356x406x1086	22.42	17.890	3.070	4.910	0.60	11.4	1.82	3.71	14340	4717
W14 x 16	665	† 356x406x990	21.64	17.650	2.830	4.520	0.60	11.4	1.95	4.03	12450	4167
W14 x 16	605	† 356x406x900	20.92	17.415	2.595	4.160	0.60	11.4	2.09	4.39	10830	3681
W14 x 16	550	† 356x406x818	20.24	17.200	2.380	3.820	0.60	11.4	2.25	4.79	9426	3254
W14 x 16	500	† 356x406x744	19.60	17.010	2.190	3.500	0.60	11.4	2.43	5.21	8214	2882
W14 x 16	455	† 356x406x677	19.02	16.835	2.015	3.210	0.60	11.4	2.62	5.66	7194	2562
W14 x 16	426	356x406x634	18.67	16.695	1.875	3.035	0.60	11.4	2.75	6.08	6595	2361
W14 x 16	398	† 356x406x592	18.29	16.590	1.770	2.845	0.60	11.4	2.92	6.44	6000	2171
W14 x 16	370	356x406x551	17.92	16.475	1.655	2.660	0.60	11.4	3.10	6.89	5442	1988
W14 x 16	342	† 356x406x509	17.54	16.360	1.540	2.470	0.60	11.4	3.31	7.40	4898	1807
W14 x 16	311	† 356x406x463	17.12	16.230	1.410	2.260	0.60	11.4	3.59	8.09	4328	1613
W14 x 16	283	† 356x406x421	16.74	16.110	1.290	2.070	0.60	11.4	3.89	8.84	3839	1445
UC14 x 16	264	356x406x393	16.50	16.025	1.205	1.935	0.60	11.4	4.14	9.49	3522	1329
W14 x 16	257	† 356x406x382	16.38	15.995	1.175	1.890	0.60	11.4	4.23	9.70	3399	1291
W14 x 16	233	† 356x406x347	16.04	15.890	1.070	1.720	0.60	11.4	4.62	10.7	3006	1152
UC14 x 16	228	356x406x340	16.00	15.865	1.045	1.690	0.60	11.4	4.69	10.9	2945	1126
W14 x 16	211	† 356x406x314	15.72	15.800	0.980	1.560	0.60	11.4	5.06	11.6	2656	1027
W14 x 16	193	356x406x287	15.48	15.710	0.890	1.440	0.60	11.4	5.45	12.8	2398	931
W14 x 16	176	† 356x406x262	15.22	15.650	0.830	1.310	0.60	11.4	5.97	13.7	2139	838
W14 x 16	159	356x406x237	14.98	15.565	0.745	1.190	0.60	11.4	6.54	15.3	1901	748
W14 x 16	145	† 356x406x216	14.78	15.500	0.680	1.090	0.60	11.4	7.11	16.8	1712	677
UC14 x 14 ^{1/2}	136	356x368x202	14.75	14.750	0.650	1.065	0.60	11.4	6.92	17.6	1595	570
W14 x 14 ^{1/2}	132	† 356x368x196	14.66	14.725	0.645	1.030	0.60	11.4	7.15	17.7	1531	548
W14 x 14 ^{1/2}	120	† 356x368x179	14.48	14.670	0.590	0.940	0.60	11.4	7.80	19.3	1376	495
W14 x 14 ^{1/2}	109	† 356x368x162	14.32	14.605	0.525	0.860	0.60	11.4	8.49	21.7	1239	447
UC14 x 14 ^{1/2}	103	356x368x153	14.25	14.585	0.485	0.815	0.60	11.4	8.95	23.6	1167	422
W14 x 14 ^{1/2}	99	† 356x368x147	14.16	14.565	0.485	0.780	0.60	11.4	9.34	23.5	1111	402
W14 x 14 ^{1/2}	90	† 356x368x134	14.02	14.520	0.440	0.710	0.60	11.4	10.2	25.9	999	362
UC14 x 14 ^{1/2}	87	356x368x129	14.00	14.510	0.410	0.690	0.60	11.4	10.5	27.9	968	351
UB14 x 6 ^{3/4}	45	356x171x67	14.31	6.820	0.360	0.620	0.40	12.3	5.50	34.1	469	32.8
W14 x 6 ^{3/4}	38	356x171x57	14.10	6.770	0.310	0.515	0.40	12.3	6.57	39.6	385	26.7
W14 x 6 ^{3/4}	34	356x171x51	13.98	6.745	0.285	0.455	0.40	12.3	7.41	43.0	340	23.3
W14 x 6 ^{3/4}	30	356x171x45	13.84	6.730	0.270	0.385	0.40	12.3	8.74	45.4	291	19.6

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M



Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1

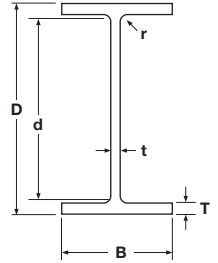
Radius of Gyration		Elastic Modulus		Plastic Modulus		Buckling Parameter u	Torsional Index x	Warping Constant H in ⁶	Torsional Constant J in ⁴	Area of Section in ²	ASTM Size in	Mass per foot lb
Axis xx in	Axis yy in	Axis xx in ³	Axis yy in ³	Axis xx in ³	Axis yy in ³							
8.17	4.69	1279	527	1662	816	0.851	3.82	361500	1447	215	W14 x 16	730
7.98	4.62	1150	472	1480	730	0.849	4.04	305300	1124	196	W14 x 16	665
7.80	4.55	1035	423	1319	652	0.848	4.29	258500	869	178	W14 x 16	605
7.63	4.49	931	378	1175	583	0.846	4.57	219400	670	162	W14 x 16	550
7.48	4.43	838	339	1047	522	0.845	4.87	186800	514	147	W14 x 16	500
7.33	4.38	756	304	936	468	0.843	5.21	160100	395	134	W14 x 16	455
7.26	4.34	707	283	869	434	0.843	5.45	144300	331	125	W14 x 16	426
7.16	4.31	656	262	801	402	0.842	5.73	129500	273	117	W14 x 16	398
7.07	4.27	607	241	736	370	0.841	6.04	115700	222	109	W14 x 16	370
6.98	4.24	559	221	672	338	0.840	6.41	102600	178	101	W14 x 16	342
6.88	4.20	506	199	603	304	0.838	6.90	89070	136	91.4	W14 x 16	311
6.79	4.17	459	179	542	274	0.837	7.42	77740	104	83.3	W14 x 16	283
6.74	4.14	427	166	502	253	0.837	7.88	70490	85.0	77.5	UC14 x 16	264
6.71	4.13	415	161	487	246	0.837	8.02	67760	79.1	75.6	W14 x 16	257
6.63	4.10	375	145	436	221	0.836	8.69	59040	59.5	68.5	W14 x 16	233
6.62	4.10	368	142	427	216	0.836	8.84	57650	56.3	67.1	UC14 x 16	228
6.55	4.07	338	130	390	198	0.834	9.45	51460	44.6	62.0	W14 x 16	211
6.50	4.05	310	119	355	180	0.834	10.1	45900	34.8	56.8	W14 x 16	193
6.43	4.02	281	107	320	163	0.833	11.0	40520	26.5	51.8	W14 x 16	176
6.38	4.00	254	96.2	287	146	0.833	12.0	35580	19.7	46.7	W14 x 16	159
6.33	3.98	232	87.3	260	133	0.832	13.0	31720	15.2	42.7	W14 x 16	145
6.32	3.78	216	77.3	243	117	0.844	13.3	26690	13.5	39.9	UC14 x 14½	136
6.28	3.76	209	74.5	234	113	0.843	13.7	25470	12.3	38.8	W14 x 14½	132
6.24	3.74	190	67.5	212	102	0.842	14.9	22680	9.37	35.3	W14 x 14½	120
6.22	3.73	173	61.2	192	92.7	0.843	16.2	20230	7.12	32.0	W14 x 14½	109
6.22	3.74	164	57.8	181	87.5	0.844	17.0	19020	6.02	30.2	UC14 x 14½	103
6.17	3.71	157	55.2	173	83.6	0.842	17.6	17980	5.37	29.1	W14 x 14½	99
6.14	3.70	143	49.9	157	75.6	0.842	19.2	16050	4.06	26.5	W14 x 14½	90
6.16	3.71	138	48.4	151	73.3	0.844	19.8	15560	3.68	25.5	UC14 x 14½	87
5.94	1.57	65.6	9.63	74.2	14.9	0.886	24.3	1539	1.35	13.3	UB14 x 6¾	45
5.88	1.55	54.7	7.88	61.5	12.1	0.885	28.7	1231	0.799	11.2	W14 x 6¾	38
5.83	1.53	48.6	6.91	54.6	10.6	0.882	32.1	1066	0.570	10.0	W14 x 6¾	34
5.73	1.49	42.0	5.82	47.3	8.99	0.876	36.7	887	0.381	8.85	W14 x 6¾	30

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M

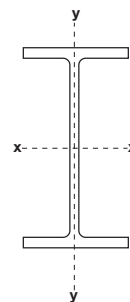
Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1



ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	Depth of Section D in	Width of Section B in	Thickness of Web t in	Thickness of Flange T in	Root Radius r in	Depth between fillets d in	Ratios for Local Buckling		Second Moment of Area	
									Flange B/2T	Web d/t	Axis xx in ⁴	Axis yy in ⁴
W14 x 5	26	356x127x39	13.91	5.025	0.255	0.420	0.40	12.3	5.98	48.1	245	8.91
W14 x 5	22	356x127x33	13.74	5.000	0.230	0.335	0.40	12.3	7.46	53.3	199	7.00
W12 x 12	336	† 305x305x500	16.82	13.385	1.775	2.955	0.60	9.7	2.26	5.47	4060	1186
W12 x 12	305	† 305x305x454	16.32	13.235	1.625	2.705	0.60	9.7	2.45	5.98	3546	1049
W12 x 12	279	† 305x305x415	15.85	13.140	1.530	2.470	0.60	9.7	2.66	6.35	3112	937
W12 x 12	252	† 305x305x375	15.41	13.005	1.395	2.250	0.60	9.7	2.89	6.96	2718	828
W12 x 12	230	† 305x305x342	15.05	12.895	1.285	2.070	0.60	9.7	3.11	7.56	2415	742
W12 x 12	210	† 305x305x313	14.71	12.790	1.180	1.900	0.60	9.7	3.37	8.23	2145	664
W12 x 12	190	305x305x283	14.38	12.670	1.060	1.735	0.60	9.7	3.65	9.16	1892	589
W12 x 12	170	† 305x305x253	14.03	12.570	0.960	1.560	0.60	9.7	4.03	10.1	1645	517
UC12 x 12	161	305x305x240	13.88	12.535	0.905	1.485	0.60	9.7	4.22	10.7	1543	488
W12 x 12	152	† 305x305x226	13.71	12.480	0.870	1.400	0.60	9.7	4.46	11.2	1432	454
W12 x 12	136	† 305x305x202	13.41	12.400	0.790	1.250	0.60	9.7	4.96	12.3	1244	398
UC12 x 12	133	305x305x198	13.38	12.380	0.750	1.235	0.60	9.7	5.01	13.0	1221	391
W12 x 12	120	† 305x305x179	13.12	12.320	0.710	1.105	0.60	9.7	5.57	13.7	1071	345
W12 x 12	106	305x305x158	12.89	12.220	0.610	0.990	0.60	9.7	6.17	15.9	933	301
W12 x 12	96	† 305x305x143	12.71	12.160	0.550	0.900	0.60	9.7	6.76	17.7	833	270
UC12 x 12	92	305x305x137	12.62	12.175	0.545	0.855	0.60	9.7	7.12	17.8	789	257
W12 x 12	87	† 305x305x129	12.53	12.125	0.515	0.810	0.60	9.7	7.48	18.9	740	241
W12 x 12	79	305x305x118	12.38	12.080	0.470	0.735	0.60	9.7	8.22	20.7	662	216
W12 x 12	72	† 305x305x107	12.25	12.040	0.430	0.670	0.60	9.7	8.99	22.6	597	195
W12 x 12	65	305x305x97	12.12	12.000	0.390	0.605	0.60	9.7	9.92	24.9	533	174
• UB12 x 6 1/2	36	305x165x54	12.22	6.565	0.310	0.540	0.35	10.4	6.08	33.7	281	25.5
• UB12 x 6 1/2	31	305x165x46	12.07	6.525	0.265	0.465	0.35	10.4	7.02	39.4	238	21.6
• UB12 x 6 1/2	27	305x165x40	11.94	6.500	0.235	0.400	0.35	10.4	8.13	44.4	203	18.3
UB12 x 5	32	305x127x48	12.24	4.935	0.355	0.550	0.35	10.4	4.49	29.4	230	11.1
UB12 x 5	28	305x127x42	12.09	4.895	0.315	0.475	0.35	10.4	5.15	33.1	196	9.32
UB12 x 5	25	305x127x37	11.98	4.860	0.280	0.420	0.35	10.4	5.79	37.3	172	8.06
W12 x 4	22	305x102x33	12.31	4.030	0.260	0.425	0.30	10.9	4.74	41.8	156	4.66
W12 x 4	19	305x102x28	12.16	4.005	0.235	0.350	0.30	10.9	5.72	46.2	130	3.76
W12 x 4	16	305x102x24	11.99	3.990	0.220	0.265	0.30	10.9	7.53	49.4	103	2.82

For notes to tables, see page 30.



W SHAPES in accordance with ASTM A6/A6M

Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1

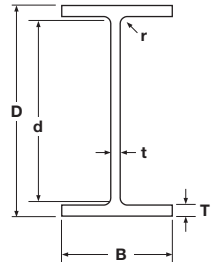
Radius of Gyration		Elastic Modulus		Plastic Modulus		Buckling Parameter u	Torsional Index x	Warping Constant H in ⁶	Torsional Constant J in ⁴	Area of Section in ²	ASTM Size in	Mass per foot lb
Axis xx in	Axis yy in	Axis xx in ³	Axis yy in ³	Axis xx in ³	Axis yy in ³							
5.65	1.08	35.3	3.55	40.3	5.54	0.873	35.4	405	0.359	7.69	W14 x 5	26
5.54	1.04	29.0	2.80	33.2	4.39	0.865	42.4	314	0.208	6.49	W14 x 5	22
6.41	3.47	483	177	603	274	0.861	5.01	57020	243	98.8	W12 x 12	336
6.29	3.42	435	159	537	244	0.860	5.36	48630	185	89.6	W12 x 12	305
6.16	3.38	393	143	481	220	0.857	5.73	41960	143	81.9	W12 x 12	279
6.06	3.34	353	127	428	196	0.856	6.17	35830	108	74.0	W12 x 12	252
5.97	3.31	321	115	386	177	0.855	6.60	31250	83.8	67.7	W12 x 12	230
5.89	3.28	292	104	348	159	0.855	7.09	27250	64.7	61.8	W12 x 12	210
5.82	3.25	263	93.0	311	143	0.855	7.66	23560	48.8	55.8	W12 x 12	190
5.74	3.22	235	82.3	275	126	0.854	8.37	20110	35.6	50.0	W12 x 12	170
5.71	3.21	222	77.9	259	119	0.854	8.74	18750	30.6	47.4	UC12 x 12	161
5.66	3.19	209	72.8	243	111	0.853	9.17	17210	25.8	44.7	W12 x 12	152
5.58	3.16	186	64.2	214	98.0	0.852	10.1	14700	18.5	39.9	W12 x 12	136
5.59	3.16	183	63.2	210	96.3	0.854	10.3	14420	17.6	39.1	UC12 x 12	133
5.51	3.13	163	56.0	186	85.4	0.851	11.2	12440	12.9	35.3	W12 x 12	120
5.47	3.11	145	49.3	164	75.1	0.853	12.4	10670	9.13	31.2	W12 x 12	106
5.44	3.09	131	44.4	147	67.5	0.853	13.6	9412	6.85	28.2	W12 x 12	96
5.40	3.08	125	42.3	140	64.3	0.851	14.1	8906	6.00	27.1	UC12 x 12	92
5.38	3.07	118	39.7	132	60.4	0.851	14.9	8270	5.10	25.6	W12 x 12	87
5.34	3.05	107	35.8	119	54.3	0.851	16.2	7326	3.84	23.2	W12 x 12	79
5.31	3.04	97.4	32.4	108	49.2	0.850	17.6	6538	2.93	21.1	W12 x 12	72
5.28	3.02	87.9	29.1	96.8	44.1	0.850	19.3	5779	2.18	19.1	W12 x 12	65
5.14	1.55	46.0	7.77	51.6	11.9	0.890	23.6	870	0.836	10.6	• UB12 x 6 1/2	36
5.11	1.54	39.5	6.61	44.0	10.1	0.890	27.1	726	0.536	9.13	• UB12 x 6 1/2	31
5.07	1.52	34.1	5.64	37.9	8.62	0.889	31.1	610	0.350	7.92	• UB12 x 6 1/2	27
4.92	1.08	37.5	4.48	43.3	7.07	0.873	23.4	378	0.761	9.49	UB12 x 5	32
4.87	1.06	32.5	3.81	37.4	5.99	0.872	26.6	314	0.505	8.26	UB12 x 5	28
4.85	1.05	28.7	3.32	32.9	5.20	0.872	29.8	269	0.353	7.31	UB12 x 5	25
4.91	0.848	25.4	2.31	29.3	3.66	0.866	31.6	164	0.293	6.48	W12 x 4	22
4.82	0.822	21.3	1.88	24.7	2.98	0.860	37.2	131	0.180	5.57	W12 x 4	19
4.67	0.773	17.1	1.41	20.1	2.26	0.846	45.0	96.9	0.103	4.71	W12 x 4	16

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M

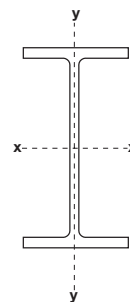
Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1



ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	Depth of Section D in	Width of Section B in	Thickness of Web t in	Thickness of Flange T in	Root Radius r in	Depth between fillets d in	Ratios for Local Buckling		Second Moment of Area	
									Flange B/2T	Web d/t	Axis xx in ⁴	Axis yy in ⁴
W10 x 10	112	254x254x167	11.36	10.415	0.755	1.250	0.50	7.9	4.17	10.4	716	236
W10 x 10	100	† 254x254x149	11.10	10.340	0.680	1.120	0.50	7.9	4.62	11.6	623	207
W10 x 10	88	254x254x132	10.84	10.265	0.605	0.990	0.50	7.9	5.18	13.0	534	179
W10 x 10	77	† 254x254x115	10.60	10.190	0.530	0.870	0.50	7.9	5.86	14.8	455	154
UC10 x 10	72	254x254x107	10.50	10.190	0.505	0.805	0.50	7.9	6.33	15.6	420	142
W10 x 10	68	† 254x254x101	10.40	10.130	0.470	0.770	0.50	7.9	6.58	16.7	394	134
W10 x 10	60	254x254x89	10.22	10.080	0.420	0.680	0.50	7.9	7.41	18.7	341	116
W10 x 10	54	† 254x254x80	10.09	10.030	0.370	0.615	0.50	7.9	8.15	21.2	303	103
W10 x 10	49	254x254x73	9.98	10.000	0.340	0.560	0.50	7.9	8.93	23.1	272	93.4
W10 x 5 ³ / ₄	30	† 254x146x45	10.47	5.810	0.300	0.510	0.30	8.9	5.70	29.5	170	16.7
UB10 x 5 ³ / ₄	29	254x146x43	10.22	5.800	0.285	0.500	0.30	8.6	5.80	30.3	157	16.3
W10 x 5 ³ / ₄	26	† 254x146x39	10.33	5.770	0.260	0.440	0.30	8.9	6.56	34.0	144	14.1
UB10 x 5 ³ / ₄	25	254x146x37	10.08	5.765	0.250	0.430	0.30	8.6	6.70	34.5	133	13.7
W10 x 5 ³ / ₄	22	† 254x146x33	10.17	5.750	0.240	0.360	0.30	8.9	7.99	36.9	118	11.4
UB10 x 5 ³ / ₄	21	254x146x31	9.90	5.750	0.235	0.340	0.30	8.6	8.46	36.7	106	10.8
W10 x 4	19	254x102x28	10.24	4.020	0.250	0.395	0.30	8.9	5.09	35.4	96.2	4.29
W10 x 4	17	254x102x25	10.11	4.010	0.240	0.330	0.30	8.9	6.08	36.9	81.9	3.56
W10 x 4	15	254x102x22	9.99	4.000	0.230	0.270	0.30	8.9	7.41	38.5	68.9	2.89
W8 x 8	67	† 203x203x100	9.00	8.280	0.570	0.935	0.40	6.3	4.43	11.1	272	88.6
W8 x 8	58	203x203x86	8.75	8.220	0.510	0.810	0.40	6.3	5.07	12.4	228	75.1
W8 x 8	48	203x203x71	8.50	8.110	0.400	0.685	0.40	6.3	5.92	15.8	184	60.9
W8 x 8	40	203x203x59	8.25	8.070	0.360	0.560	0.40	6.3	7.21	17.6	146	49.1
W8 x 8	35	203x203x52	8.12	8.020	0.310	0.495	0.40	6.3	8.10	20.4	127	42.6
W8 x 8	31	203x203x46	8.00	7.995	0.285	0.435	0.40	6.3	9.19	22.2	110	37.1
W8 x 5 ¹ / ₄	21	† 203x133x31	8.28	5.270	0.250	0.400	0.30	6.9	6.59	27.5	75.3	9.77
UB8 x 5 ¹ / ₄	20	203x133x30	8.14	5.270	0.250	0.380	0.30	6.8	6.93	27.1	69.7	9.28
W8 x 5 ¹ / ₄	18	† 203x133x27	8.14	5.250	0.230	0.330	0.30	6.9	7.95	29.9	61.9	7.97
UB8 x 5 ¹ / ₄	17	203x133x25	8.00	5.245	0.225	0.305	0.30	6.8	8.60	30.2	56.0	7.34
UB8 x 4	16	203x102x23	8.00	4.005	0.215	0.365	0.30	6.7	5.49	31.0	50.5	3.92
UB7 x 4	13	178x102x19	7.00	3.985	0.190	0.310	0.30	5.8	6.43	30.4	32.5	3.28
W6 x 6	25	152x152x37	6.38	6.080	0.320	0.455	0.30	4.9	6.68	15.2	53.6	17.1
W6 x 6	20	152x152x30	6.20	6.020	0.260	0.365	0.30	4.9	8.25	18.7	41.5	13.3
W6 x 6	15	152x152x23	5.99	5.990	0.230	0.260	0.30	4.9	11.5	21.2	29.3	9.32
UB6 x 3 ¹ / ₂	11	152x89x16	6.00	3.490	0.175	0.305	0.30	4.8	5.72	27.4	20.1	2.17
UB5 x 3	9	127x76x13	5.00	2.990	0.155	0.300	0.30	3.8	4.98	24.5	11.4	1.34

For notes to tables, see page 30.



W SHAPES in accordance with ASTM A6/A6M

Dimensions and Properties

Supplemented by structural sections in accordance with BS4: Part 1

Radius of Gyration		Elastic Modulus		Plastic Modulus		Buckling Parameter u	Torsional Index x	Warping Constant H in ⁶	Torsional Constant J in ⁴	Area of Section in ²	ASTM Size in	Mass per foot lb
Axis xx in	Axis yy in	Axis xx in ³	Axis yy in ³	Axis xx in ³	Axis yy in ³							
4.66	2.68	126	45.3	147	69.2	0.851	8.46	6024	15.1	32.9	W10 x 10	112
4.60	2.65	112	40.0	130	61.0	0.851	9.29	5145	10.9	29.4	W10 x 10	100
4.54	2.63	98.5	34.8	113	53.1	0.850	10.3	4334	7.53	25.9	W10 x 10	88
4.49	2.60	85.9	30.1	97.6	45.9	0.849	11.6	3635	5.11	22.6	W10 x 10	77
4.46	2.59	80.0	27.9	90.4	42.4	0.848	12.4	3339	4.12	21.1	UC10 x 10	72
4.44	2.59	75.7	26.4	85.3	40.1	0.849	12.9	3095	3.56	20.0	W10 x 10	68
4.39	2.57	66.7	23.0	74.6	35.0	0.848	14.4	2643	2.48	17.6	W10 x 10	60
4.37	2.56	60.0	20.6	66.6	31.3	0.849	15.8	2323	1.82	15.8	W10 x 10	54
4.35	2.54	54.6	18.7	60.4	28.3	0.849	17.2	2072	1.39	14.4	W10 x 10	49
4.38	1.37	32.4	5.75	36.6	8.84	0.888	21.3	414	0.622	8.84	W10 x 5³/₄	30
4.30	1.38	30.8	5.61	34.6	8.61	0.890	21.2	385	0.575	8.50	UB10 x 5³/₄	29
4.35	1.36	27.9	4.89	31.3	7.50	0.888	24.3	345	0.402	7.61	W10 x 5³/₄	26
4.26	1.37	26.5	4.77	29.6	7.30	0.889	24.3	320	0.372	7.34	UB10 x 5³/₄	25
4.27	1.33	23.2	3.97	26.0	6.10	0.882	28.9	275	0.239	6.48	W10 x 5³/₄	22
4.16	1.32	21.5	3.75	24.0	5.76	0.880	29.5	246	0.207	6.15	UB10 x 5³/₄	21
4.14	0.874	18.8	2.14	21.6	3.35	0.873	27.4	104	0.233	5.62	W10 x 4	19
4.05	0.845	16.2	1.78	18.7	2.80	0.865	31.3	85.1	0.156	4.99	W10 x 4	17
3.95	0.810	13.8	1.45	16.0	2.30	0.855	35.8	68.3	0.104	4.41	W10 x 4	15
3.72	2.12	60.4	21.4	70.2	32.7	0.852	9.00	1441	5.06	19.7	W8 x 8	67
3.65	2.10	52.0	18.3	59.8	27.9	0.850	10.2	1183	3.34	17.1	W8 x 8	58
3.61	2.08	43.3	15.0	49.0	22.8	0.853	11.9	931	1.96	14.1	W8 x 8	48
3.53	2.04	35.5	12.2	39.8	18.5	0.848	14.1	726	1.12	11.7	W8 x 8	40
3.51	2.03	31.2	10.6	34.7	16.1	0.849	15.8	619	0.771	10.3	W8 x 8	35
3.47	2.02	27.5	9.27	30.4	14.1	0.847	17.6	530	0.538	9.13	W8 x 8	31
3.49	1.26	18.2	3.71	20.4	5.69	0.885	20.8	152	0.282	6.16	W8 x 5³/₄	21
3.43	1.25	17.1	3.52	19.2	5.41	0.882	21.4	140	0.249	5.93	UB8 x 5³/₄	20
3.43	1.23	15.2	3.04	17.0	4.66	0.880	24.5	122	0.171	5.26	W8 x 5³/₄	18
3.37	1.22	14.0	2.80	15.7	4.30	0.876	25.7	109	0.141	4.94	UB8 x 5³/₄	17
3.33	0.926	12.6	1.96	14.3	3.02	0.887	22.5	57.1	0.168	4.56	UB8 x 4	16
2.94	0.933	9.29	1.64	10.4	2.53	0.887	22.6	36.6	0.105	3.76	UB7 x 4	13
2.70	1.52	16.8	5.61	19.0	8.57	0.848	13.3	150	0.470	7.36	W6 x 6	25
2.66	1.50	13.4	4.41	15.0	6.72	0.847	16.2	113	0.246	5.89	W6 x 6	20
2.56	1.45	9.77	3.11	10.9	4.75	0.838	21.1	76.5	0.105	4.45	W6 x 6	15
2.53	0.829	6.70	1.24	7.54	1.91	0.891	19.5	17.6	0.0862	3.15	UB6 x 3¹/₂	11
2.11	0.724	4.55	0.896	5.13	1.38	0.896	16.2	7.40	0.0685	2.55	UB5 x 3	9

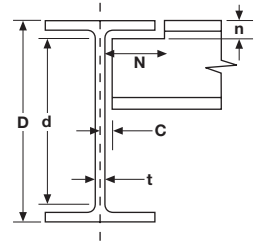
For notes to tables, see page 30.

W SHAPES

in accordance with ASTM A6/A6M

Dimensions for Detailing

Supplemented by structural sections in accordance with BS4: Part 1

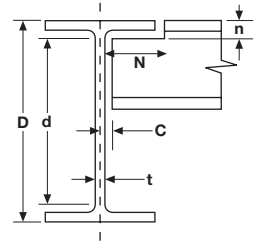


ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	End Clearance C in	Notch		Surface Area		
				N in	n in	per foot ft ²	per 'short' ton* ft ²	two end faces ft ²
W40 x 12	327	† 1016x305x486	0.67	5.91	3.39	10.5	64.3	1.333
W40 x 12	294	† 1016x305x438	0.61	5.91	3.15	10.4	70.8	1.199
W40 x 12	264	† 1016x305x393	0.56	5.91	2.91	10.3	78.1	1.078
W40 x 12	235	† 1016x305x350	0.49	5.98	2.83	10.3	87.8	0.958
W40 x 12	211	† 1016x305x314	0.45	5.98	2.60	10.2	96.7	0.861
W40 x 12	183	† 1016x305x272	0.41	5.98	2.44	10.2	111	0.740
W40 x 12	167	† 1016x305x249	0.41	5.98	2.28	10.1	121	0.683
W40 x 12	149	† 1016x305x222	0.39	5.98	2.05	10.0	134	0.608
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# W36 x 16 1/2	359	† 914x419x534	0.64	8.27	2.99	11.5	64.1	1.458
# W36 x 16 1/2	328	† 914x419x488	0.59	8.27	2.83	11.4	69.5	1.339
# W36 x 16 1/2	300	† 914x419x447	0.55	8.27	2.68	11.4	75.9	1.226
# W36 x 16 1/2	280	† 914x419x418	0.52	8.27	2.52	11.3	80.6	1.144
# W36 x 16 1/2	260	914x419x388	0.50	8.27	2.44	11.3	86.8	1.063
# W36 x 16 1/2	245	† 914x419x365	0.48	8.27	2.36	11.2	91.4	1.000
# W36 x 16 1/2	230	914x419x343	0.46	8.27	2.28	11.2	97.3	0.939
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W36 x 16 1/2	361		0.64	8.27	2.99	11.6	64.3	1.472
W36 x 16 1/2	330		0.59	8.27	2.83	11.5	69.7	1.347
W36 x 16 1/2	302		0.55	8.27	2.68	11.5	76.1	1.233
W36 x 16 1/2	282		0.52	8.27	2.52	11.4	80.8	1.151
W36 x 16 1/2	262		0.50	8.27	2.44	11.4	87.1	1.069
W36 x 16 1/2	247		0.48	8.27	2.36	11.3	91.6	1.007
W36 x 16 1/2	231		0.46	8.27	2.28	11.3	97.8	0.946
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# W36 x 12	387	† 914x305x576	0.79	6.06	3.39	10.4	53.8	1.583
# W36 x 12	350	† 914x305x521	0.73	6.06	3.15	10.3	58.8	1.431
# W36 x 12	318	† 914x305x474	0.67	6.06	2.91	10.2	64.1	1.299
# W36 x 12	286	† 914x305x425	0.61	6.06	2.76	10.1	70.6	1.167
W36 x 12	256	† 914x305x381	0.56	6.06	2.52	10.0	78.0	1.047
W36 x 12	232	† 914x305x345	0.51	6.06	2.36	9.97	86.0	0.946
W36 x 12	210	† 914x305x313	0.49	6.14	2.13	9.93	94.4	0.858
W36 x 12	194	914x305x289	0.46	6.14	2.05	9.88	102	0.792
W36 x 12	182	† 914x305x271	0.44	6.14	1.97	9.85	108	0.744
W36 x 12	170	914x305x253	0.42	6.14	1.89	9.82	115	0.696
W36 x 12	160	† 914x305x238	0.41	6.14	1.81	9.79	122	0.653
W36 x 12	150	914x305x224	0.39	6.14	1.73	9.75	130	0.614
W36 x 12	135	914x305x201	0.38	6.14	1.57	9.70	143	0.551

For notes to tables, see page 30.

W SHAPES

in accordance with ASTM A6/A6M



Dimensions for Detailing

Supplemented by structural sections in accordance with BS4: Part 1

ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	End Clearance C in	Notch		Surface Area		
				N in	n in	per foot ft ²	per 'short' ton* ft ²	two end faces ft ²
W33 x 15 ³ / ₄	387	† 838x400x576	0.71	7.87	2.99	11.1	57.3	1.583
W33 x 15 ³ / ₄	354	† 838x400x527	0.66	7.87	2.83	11.0	62.1	1.444
W33 x 15 ³ / ₄	318	† 838x400x473	0.60	7.87	2.60	10.9	68.5	1.299
W33 x 15 ³ / ₄	291	† 838x400x433	0.56	7.87	2.44	10.8	74.2	1.189
W33 x 15 ³ / ₄	263	† 838x400x392	0.51	7.87	2.28	10.8	82.1	1.075
W33 x 15 ³ / ₄	241	† 838x400x359	0.49	7.95	2.13	10.7	88.7	0.985
W33 x 15 ³ / ₄	221	† 838x400x329	0.46	7.95	2.05	10.7	96.7	0.903
W33 x 15 ³ / ₄	201	† 838x400x299	0.44	7.95	1.89	10.6	105	0.821
# W33 x 11 ¹ / ₂	219	† 838x292x326	0.51	5.83	2.28	9.41	85.8	0.896
# W33 x 11 ¹ / ₂	204	† 838x292x304	0.48	5.83	2.20	9.36	92.0	0.831
# W33 x 11 ¹ / ₂	187	† 838x292x278	0.45	5.83	2.05	9.31	99.5	0.764
W33 x 11 ¹ / ₂	169	† 838x292x251	0.41	5.83	1.97	9.26	110	0.688
W33 x 11 ¹ / ₂	152	838x292x226	0.40	5.91	1.81	9.23	121	0.622
W33 x 11 ¹ / ₂	141	† 838x292x210	0.38	5.91	1.73	9.19	130	0.578
W33 x 11 ¹ / ₂	130	838x292x193	0.37	5.91	1.57	9.15	140	0.532
W33 x 11 ¹ / ₂	118	838x292x176	0.35	5.91	1.50	9.11	154	0.482
W30 x 15	326	† 762x381x484	0.65	7.56	2.76	10.2	62.6	1.328
W30 x 15	292	† 762x381x434	0.59	7.56	2.52	10.2	70.0	1.190
W30 x 15	261	† 762x381x389	0.54	7.56	2.36	10.1	77.4	1.065
W30 x 15	235	† 762x381x350	0.49	7.56	2.20	10.0	85.2	0.958
W30 x 15	211	† 762x381x314	0.46	7.56	1.97	9.97	94.5	0.861
W30 x 15	191	† 762x381x284	0.43	7.56	1.89	9.92	104	0.779
W30 x 15	173	† 762x381x257	0.41	7.56	1.73	9.87	114	0.706
W30 x 10 ¹ / ₂	148	† 762x267x220	0.41	5.35	1.89	8.40	114	0.604
W30 x 10 ¹ / ₂	132	762x267x196	0.39	5.43	1.65	8.37	127	0.540
W30 x 10 ¹ / ₂	124	† 762x267x185	0.37	5.43	1.65	8.34	134	0.507
W30 x 10 ¹ / ₂	116	762x267x173	0.36	5.43	1.57	8.31	143	0.475
W30 x 10 ¹ / ₂	108	† 762x267x161	0.35	5.43	1.42	8.28	153	0.440
W30 x 10 ¹ / ₂	99	762x267x147	0.34	5.43	1.34	8.25	167	0.404
W30 x 10 ¹ / ₂	90	762x267x134	0.31	5.43	1.26	8.22	183	0.367

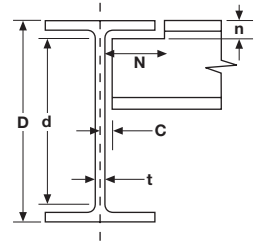
For notes to tables, see page 30.

W SHAPES

in accordance with ASTM A6/A6M

Dimensions for Detailing

Supplemented by structural sections in accordance with BS4: Part 1

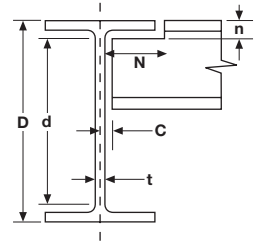


ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	End Clearance C in	Notch		Surface Area		
				N in	n in	per foot ft ²	per 'short' ton [†] ft ²	two end faces ft ²
W27 x 14	307	† 686x356x457	0.66	7.09	2.76	9.47	61.7	1.253
W27 x 14	281	† 686x356x419	0.61	7.09	2.60	9.40	66.8	1.149
W27 x 14	258	† 686x356x384	0.57	7.09	2.44	9.34	72.5	1.053
W27 x 14	235	† 686x356x350	0.54	7.09	2.28	9.27	78.8	0.960
W27 x 14	217	† 686x356x323	0.49	7.09	2.13	9.22	85.0	0.886
W27 x 14	194	† 686x356x289	0.45	7.09	1.97	9.15	94.4	0.792
W27 x 14	178	† 686x356x265	0.44	7.09	1.81	9.12	103	0.726
W27 x 14	161	† 686x356x240	0.41	7.09	1.73	9.08	113	0.658
W27 x 14	146	† 686x356x217	0.38	7.09	1.57	9.03	124	0.596
# W27 x 10	221	† 686x254x329	0.59	5.12	2.52	8.07	73.2	0.900
# W27 x 10	201	† 686x254x299	0.55	5.12	2.28	8.01	80.1	0.817
# W27 x 10	182	† 686x254x271	0.50	5.12	2.20	7.94	87.3	0.743
# W27 x 10	159	† 686x254x237	0.45	5.12	1.97	7.86	99.2	0.647
W27 x 10	129	† 686x254x192	0.38	5.12	1.73	7.75	120	0.525
W27 x 10	114	686x254x170	0.36	5.20	1.57	7.72	135	0.465
W27 x 10	102	686x254x152	0.34	5.20	1.50	7.68	150	0.417
W27 x 10	94	686x254x140	0.32	5.20	1.42	7.65	163	0.385
W27 x 10	84	686x254x125	0.31	5.20	1.26	7.61	181	0.344
W24 x 12 ^{3/4}	306	† 610x324x455	0.71	6.54	2.99	8.69	56.8	1.249
W24 x 12 ^{3/4}	279	† 610x324x415	0.66	6.54	2.76	8.60	61.5	1.140
W24 x 12 ^{3/4}	250	† 610x324x372	0.60	6.54	2.60	8.52	68.2	1.024
W24 x 12 ^{3/4}	229	† 610x324x341	0.56	6.54	2.44	8.45	73.7	0.936
W24 x 12 ^{3/4}	207	† 610x324x307	0.51	6.54	2.28	8.38	80.9	0.844
W24 x 12 ^{3/4}	192	† 610x324x285	0.48	6.54	2.13	8.33	86.7	0.783
W24 x 12 ^{3/4}	176	† 610x324x262	0.45	6.54	2.05	8.29	94.0	0.719
W24 x 12 ^{3/4}	162	† 610x324x241	0.43	6.54	1.89	8.27	102	0.665
W24 x 12 ^{3/4}	146	† 610x324x217	0.41	6.54	1.81	8.22	113	0.599
W24 x 12 ^{3/4}	131	† 610x324x195	0.38	6.54	1.65	8.17	125	0.538
W24 x 12 ^{3/4}	117	† 610x324x174	0.35	6.54	1.57	8.13	138	0.479
W24 x 12 ^{3/4}	104	† 610x324x155	0.33	6.54	1.42	8.08	155	0.428
UB24 x 12	160	610x305x238	0.44	6.22	1.89	8.04	101	0.653
UB24 x 12	120	610x305x179	0.36	6.22	1.65	7.91	131	0.492
UB24 x 12	100	610x305x149	0.31	6.22	1.50	7.85	157	0.410

For notes to tables, see page 30.

W SHAPES

in accordance with ASTM A6/A6M



Dimensions for Detailing

Supplemented by structural sections in accordance with BS4: Part 1

ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	End Clearance C in	Notch		Surface Area		
				N in	n in	per foot ft ²	per 'short' ton* ft ²	two end faces ft ²
# W24 x 9	198	† 610x229x295	0.59	4.65	2.36	7.29	73.5	0.810
# W24 x 9	163	† 610x229x243	0.50	4.65	2.05	7.16	87.7	0.667
# W24 x 9	146	† 610x229x217	0.46	4.65	1.89	7.09	96.9	0.597
# W24 x 9	128	† 610x229x191	0.41	4.65	1.73	7.02	110	0.522
# W24 x 9	115	† 610x229x171	0.38	4.65	1.65	6.97	121	0.471
W24 x 9	103	† 610x229x153	0.35	4.65	1.50	6.93	135	0.421
W24 x 9	94	610x229x140	0.34	4.72	1.42	6.92	147	0.385
W24 x 9	84	610x229x125	0.31	4.72	1.34	6.87	163	0.343
W24 x 9	76	610x229x113	0.30	4.72	1.18	6.84	180	0.311
W24 x 9	68	610x229x101	0.29	4.72	1.10	6.80	199	0.279
W24 x 7	62	† 610x178x92	0.29	3.70	1.10	6.16	199	0.253
W24 x 7	55	† 610x178x82	0.28	3.70	1.02	6.13	223	0.225
# W21 x 12 1/4	275	† 533x312x409	0.69	6.30	2.76	8.04	58.5	1.122
# W21 x 12 1/4	248	† 533x312x370	0.63	6.30	2.52	7.96	64.1	1.014
# W21 x 12 1/4	222	† 533x312x331	0.58	6.30	2.36	7.88	70.9	0.908
W21 x 12 1/4	201	† 533x312x300	0.54	6.30	2.20	7.81	77.5	0.822
W21 x 12 1/4	182	† 533x312x272	0.49	6.30	2.05	7.74	84.8	0.744
W21 x 12 1/4	166	† 533x312x248	0.45	6.30	1.89	7.69	92.6	0.678
W21 x 12 1/4	147	† 533x312x219	0.44	6.30	1.65	7.66	104	0.600
W21 x 12 1/4	132	† 533x312x196	0.41	6.30	1.57	7.61	115	0.539
W21 x 12 1/4	122	† 533x312x182	0.38	6.30	1.50	7.57	124	0.499
W21 x 12 1/4	111	† 533x312x165	0.35	6.30	1.42	7.54	136	0.454
W21 x 12 1/4	101	† 533x312x150	0.33	6.30	1.34	7.50	148	0.414
W21 x 8 1/4	93	† 533x210x138	0.37	4.33	1.50	6.24	134	0.379
W21 x 8 1/4	83	533x210x123	0.34	4.33	1.34	6.20	150	0.338
W21 x 8 1/4	73	533x210x109	0.31	4.33	1.26	6.16	169	0.299
W21 x 8 1/4	68	533x210x101	0.29	4.33	1.26	6.14	180	0.278
W21 x 8 1/4	62	533x210x92	0.28	4.33	1.18	6.11	197	0.254
W21 x 8 1/4	55	533x210x82	0.27	4.33	1.02	6.07	220	0.225
W21 x 6 1/2	57	† 533x165x85	0.28	3.54	1.18	5.56	195	0.232
W21 x 6 1/2	50	† 533x165x74	0.27	3.54	1.10	5.51	220	0.204
W21 x 6 1/2	44	† 533x165x66	0.25	3.54	1.02	5.48	248	0.181
W18 x 7 1/2	71	† 457x191x106	0.33	4.02	1.26	5.48	154	0.289
W18 x 7 1/2	65	457x191x97	0.30	4.02	1.18	5.46	168	0.265
W18 x 7 1/2	60	457x191x89	0.29	4.02	1.10	5.43	181	0.244
W18 x 7 1/2	55	457x191x82	0.27	4.02	1.10	5.41	196	0.225
W18 x 7 1/2	50	457x191x74	0.26	4.02	1.02	5.38	216	0.204
UB18 x 7 1/2	45	457x191x67	0.25	4.02	0.94	5.35	237	0.185

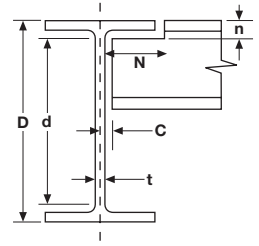
For notes to tables, see page 30.

W SHAPES

in accordance with ASTM A6/A6M

Dimensions for Detailing

Supplemented by structural sections in accordance with BS4: Part 1

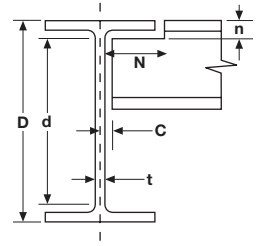


ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	End Clearance C in	Notch		Surface Area		
				N in	n in	per foot ft ²	per 'short' ton* ft ²	two end faces ft ²
W18 x 6	46	457x152x68	0.26	3.31	1.02	4.91	213	0.188
W18 x 6	40	457x152x60	0.24	3.31	0.94	4.88	244	0.164
W18 x 6	35	457x152x52	0.23	3.31	0.87	4.84	276	0.143
W16 x 7	57	† 406x178x85	0.29	3.78	1.18	4.98	175	0.233
W16 x 7	50	406x178x75	0.27	3.78	1.10	4.95	197	0.204
W16 x 7	45	406x178x67	0.25	3.78	1.02	4.92	218	0.185
W16 x 7	40	406x178x60	0.23	3.78	0.94	4.89	244	0.164
W16 x 7	36	406x178x53	0.23	3.78	0.87	4.87	271	0.147
W16 x 5½	31	406x140x46	0.22	3.07	0.87	4.39	283	0.127
W16 x 5½	26	406x140x39	0.20	3.07	0.79	4.35	333	0.107
W14 x 16	730	† 356x406x1086	1.61	7.87	5.51	9.10	24.9	2.986
W14 x 16	665	† 356x406x990	1.49	7.87	5.20	8.93	26.8	2.722
W14 x 16	605	† 356x406x900	1.38	7.87	4.80	8.77	29.0	2.472
W14 x 16	550	† 356x406x818	1.27	7.87	4.49	8.62	31.3	2.250
W14 x 16	500	† 356x406x744	1.17	7.87	4.17	8.49	34.0	2.042
W14 x 16	455	† 356x406x677	1.09	7.87	3.86	8.36	36.7	1.861
W14 x 16	426	356x406x634	1.02	7.87	3.70	8.28	38.8	1.736
W14 x 16	398	† 356x406x592	0.96	7.87	3.46	8.20	41.2	1.625
W14 x 16	370	356x406x551	0.91	7.87	3.31	8.12	43.9	1.514
W14 x 16	342	† 356x406x509	0.85	7.87	3.07	8.03	46.9	1.403
W14 x 16	311	† 356x406x463	0.78	7.87	2.91	7.94	51.0	1.269
W14 x 16	283	† 356x406x421	0.72	7.87	2.68	7.86	55.5	1.157
UC14 x 16	264	356x406x393	0.68	7.87	2.60	7.81	59.2	1.076
W14 x 16	257	† 356x406x382	0.67	7.87	2.52	7.78	60.5	1.050
W14 x 16	233	† 356x406x347	0.61	7.87	2.36	7.71	66.2	0.951
UC14 x 16	228	356x406x340	0.60	7.87	2.36	7.70	67.4	0.932
W14 x 16	211	† 356x406x314	0.57	7.87	2.20	7.64	72.5	0.861
W14 x 16	193	356x406x287	0.52	7.87	2.05	7.58	78.5	0.789
W14 x 16	176	† 356x406x262	0.49	7.87	1.97	7.53	85.5	0.719
W14 x 16	159	356x406x237	0.45	7.87	1.81	7.48	94.1	0.649
W14 x 16	145	† 356x406x216	0.42	7.87	1.73	7.43	102	0.593
UC14 x 14½	136	356x368x202	0.41	7.48	1.73	7.18	106	0.554
W14 x 14½	132	† 356x368x196	0.40	7.48	1.65	7.16	109	0.539
W14 x 14½	120	† 356x368x179	0.37	7.48	1.57	7.12	118	0.490
W14 x 14½	109	† 356x368x162	0.34	7.48	1.50	7.08	130	0.444
UC14 x 14½	103	356x368x153	0.32	7.48	1.42	7.07	138	0.419
W14 x 14½	99	† 356x368x147	0.32	7.48	1.42	7.05	142	0.404
W14 x 14½	90	† 356x368x134	0.30	7.48	1.34	7.02	156	0.368
UC14 x 14½	87	356x368x129	0.28	7.48	1.34	7.02	162	0.354

For notes to tables, see page 30.

W SHAPES

in accordance with ASTM A6/A6M



Dimensions for Detailing

Supplemented by structural sections in accordance with BS4: Part 1

ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	End Clearance C in	Notch		Surface Area		
				N in	n in	per foot ft ²	per 'short' ton* ft ²	two end faces ft ²
UB14 x 6³/₄	45	356x171x67	0.26	3.70	1.02	4.54	201	0.185
W14 x 6³/₄	38	356x171x57	0.23	3.70	0.94	4.50	237	0.156
W14 x 6³/₄	34	356x171x51	0.22	3.70	0.87	4.47	263	0.139
W14 x 6³/₄	30	356x171x45	0.21	3.70	0.79	4.45	296	0.123
W14 x 5	26	356x127x39	0.21	2.83	0.87	3.89	297	0.107
W14 x 5	22	356x127x33	0.19	2.83	0.79	3.86	349	0.090
W12 x 12	336	† 305x305x500	0.96	6.22	3.62	6.88	40.9	1.372
W12 x 12	305	† 305x305x454	0.89	6.22	3.31	6.78	44.5	1.244
W12 x 12	279	† 305x305x415	0.84	6.22	3.07	6.68	47.9	1.138
W12 x 12	252	† 305x305x375	0.78	6.22	2.91	6.59	52.3	1.028
W12 x 12	230	† 305x305x342	0.72	6.22	2.68	6.51	56.5	0.940
W12 x 12	210	† 305x305x313	0.67	6.22	2.52	6.43	61.2	0.858
W12 x 12	190	305x305x283	0.61	6.22	2.36	6.36	66.9	0.775
W12 x 12	170	† 305x305x253	0.56	6.22	2.20	6.28	73.8	0.694
UC12 x 12	161	305x305x240	0.53	6.22	2.13	6.26	77.6	0.658
W12 x 12	152	† 305x305x226	0.51	6.22	2.05	6.21	81.6	0.621
W12 x 12	136	† 305x305x202	0.47	6.22	1.89	6.15	90.5	0.554
UC12 x 12	133	305x305x198	0.45	6.22	1.89	6.15	92.5	0.543
W12 x 12	120	† 305x305x179	0.43	6.22	1.73	6.09	101	0.490
W12 x 12	106	305x305x158	0.38	6.22	1.65	6.03	114	0.433
W12 x 12	96	† 305x305x143	0.35	6.22	1.57	5.99	125	0.392
UC12 x 12	92	305x305x137	0.35	6.22	1.50	5.99	130	0.376
W12 x 12	87	† 305x305x129	0.34	6.22	1.42	5.96	137	0.356
W12 x 12	79	305x305x118	0.31	6.22	1.34	5.93	150	0.322
W12 x 12	72	† 305x305x107	0.29	6.22	1.34	5.90	164	0.293
W12 x 12	65	305x305x97	0.27	6.22	1.26	5.87	181	0.265
• UB12 x 6¹/₂	36	305x165x54	0.23	3.54	0.94	4.12	227	0.147
• UB12 x 6¹/₂	31	305x165x46	0.21	3.54	0.87	4.09	263	0.127
• UB12 x 6¹/₂	27	305x165x40	0.20	3.54	0.79	4.07	302	0.110
UB12 x 5	32	305x127x48	0.26	2.76	0.94	3.58	222	0.132
UB12 x 5	28	305x127x42	0.24	2.76	0.87	3.54	252	0.115
UB12 x 5	25	305x127x37	0.22	2.76	0.79	3.52	283	0.102
W12 x 4	22	305x102x33	0.21	2.28	0.79	3.31	300	0.090
W12 x 4	19	305x102x28	0.20	2.28	0.71	3.28	346	0.077
W12 x 4	16	305x102x24	0.19	2.28	0.63	3.25	405	0.065

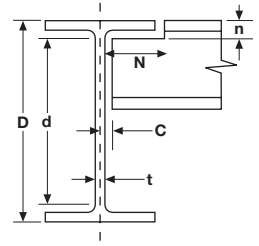
For notes to tables, see page 30.

W SHAPES

in accordance with ASTM A6/A6M

Dimensions for Detailing

Supplemented by structural sections in accordance with BS4: Part 1







ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	End Clearance C in	Notch		Surface Area		
				N in	n in	per foot ft ²	per 'short' ton* ft ²	two end faces ft ²
W10 x 10	112	254x254x167	0.46	5.28	1.81	5.17	92.2	0.457
W10 x 10	100	† 254x254x149	0.42	5.28	1.65	5.11	102	0.408
W10 x 10	88	254x254x132	0.38	5.28	1.50	5.06	115	0.360
W10 x 10	77	† 254x254x115	0.34	5.28	1.42	5.00	130	0.314
UC10 x 10	72	254x254x107	0.33	5.28	1.34	4.99	139	0.293
W10 x 10	68	† 254x254x101	0.31	5.28	1.34	4.96	146	0.278
W10 x 10	60	254x254x89	0.29	5.28	1.18	4.92	164	0.244
W10 x 10	54	† 254x254x80	0.26	5.28	1.18	4.89	182	0.219
W10 x 10	49	254x254x73	0.25	5.28	1.10	4.87	198	0.200
W10 x 5 ³ / ₄	30	† 254x146x45	0.23	3.15	0.87	3.59	239	0.123
UB10 x 5 ³ / ₄	29	254x146x43	0.22	3.23	0.87	3.55	245	0.118
W10 x 5 ³ / ₄	26	† 254x146x39	0.21	3.15	0.79	3.56	275	0.106
UB10 x 5 ³ / ₄	25	254x146x37	0.20	3.23	0.79	3.52	282	0.102
W10 x 5 ³ / ₄	22	† 254x146x33	0.20	3.15	0.71	3.53	320	0.090
UB10 x 5 ³ / ₄	21	254x146x31	0.20	3.23	0.71	3.48	332	0.085
W10 x 4	19	254x102x28	0.20	2.28	0.71	2.96	310	0.078
W10 x 4	17	254x102x25	0.20	2.28	0.63	2.94	346	0.069
W10 x 4	15	254x102x22	0.19	2.28	0.63	2.92	389	0.061
W8 x 8	67	† 203x203x100	0.36	4.25	1.34	4.11	123	0.274
W8 x 8	58	203x203x86	0.33	4.25	1.26	4.06	140	0.238
W8 x 8	48	203x203x71	0.28	4.25	1.10	4.00	167	0.196
W8 x 8	40	203x203x59	0.26	4.25	1.02	3.95	198	0.163
W8 x 8	35	203x203x52	0.23	4.25	0.94	3.92	224	0.143
W8 x 8	31	203x203x46	0.22	4.25	0.87	3.89	251	0.127
W8 x 5 ¹ / ₄	21	† 203x133x31	0.20	2.91	0.71	3.05	291	0.086
UB8 x 5 ¹ / ₄	20	203x133x30	0.20	2.91	0.71	3.03	300	0.082
W8 x 5 ¹ / ₄	18	† 203x133x27	0.19	2.91	0.63	3.03	338	0.073
UB8 x 5 ¹ / ₄	17	203x133x25	0.19	2.91	0.63	3.00	357	0.069
UB8 x 4	16	203x102x23	0.19	2.36	0.71	2.59	334	0.063
UB7 x 4	13	178x102x19	0.17	2.36	0.63	2.42	378	0.052
W6 x 6	25	152x152x37	0.24	3.31	0.79	2.99	239	0.102
W6 x 6	20	152x152x30	0.21	3.31	0.71	2.95	294	0.082
W6 x 6	15	152x152x23	0.19	3.31	0.63	2.91	384	0.062
UB6 x 3 ¹ / ₂	11	152x89x16	0.17	2.13	0.63	2.09	390	0.044
UB5 x 3	9	127x76x13	0.16	1.89	0.63	1.76	405	0.035

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M

W/D Ratio

Supplemented by structural sections in accordance with BS4: Part 1




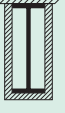
ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	W/D Ratio			
			 Profile 4 Sides	 Profile 3 Sides	 Box 4 Sides	 Box 3 Sides
W40 x 12	327	† 1016x305x486	2.59	2.87	3.08	3.48
W40 x 12	294	† 1016x305x438	2.35	2.60	2.80	3.16
W40 x 12	264	† 1016x305x393	2.13	2.36	2.54	2.87
W40 x 12	235	† 1016x305x350	1.90	2.10	2.27	2.57
W40 x 12	211	† 1016x305x314	1.72	1.91	2.06	2.33
W40 x 12	183	† 1016x305x272	1.49	1.65	1.78	2.02
W40 x 12	167	† 1016x305x249	1.38	1.53	1.66	1.88
W40 x 12	149	† 1016x305x222	1.24	1.37	1.49	1.69
# W36 x 16 ¹ / ₂	359	† 914x419x534	2.60	2.96	3.31	3.91
# W36 x 16 ¹ / ₂	328	† 914x419x488	2.39	2.72	3.05	3.61
# W36 x 16 ¹ / ₂	300	† 914x419x447	2.20	2.50	2.81	3.33
# W36 x 16 ¹ / ₂	280	† 914x419x418	2.06	2.35	2.64	3.12
# W36 x 16 ¹ / ₂	260	914x419x388	1.92	2.19	2.46	2.92
# W36 x 16 ¹ / ₂	245	† 914x419x365	1.81	2.07	2.33	2.76
# W36 x 16 ¹ / ₂	230	914x419x343	1.71	1.95	2.19	2.60
W36 x 16 ¹ / ₂	361		2.59	2.95	3.29	3.89
W36 x 16 ¹ / ₂	330		2.38	2.71	3.03	3.58
W36 x 16 ¹ / ₂	302		2.19	2.49	2.80	3.31
W36 x 16 ¹ / ₂	282		2.05	2.34	2.62	3.10
W36 x 16 ¹ / ₂	262		1.92	2.18	2.45	2.90
W36 x 16 ¹ / ₂	247		1.81	2.06	2.32	2.74
W36 x 16 ¹ / ₂	231		1.71	1.94	2.18	2.59
# W36 x 12	387	† 914x305x576	3.09	3.44	3.73	4.25
# W36 x 12	350	† 914x305x521	2.83	3.15	3.42	3.89
# W36 x 12	318	† 914x305x474	2.59	2.89	3.14	3.58
# W36 x 12	286	† 914x305x425	2.35	2.62	2.85	3.25
W36 x 12	256	† 914x305x381	2.13	2.36	2.58	2.94
W36 x 12	232	† 914x305x345	1.93	2.15	2.35	2.68
W36 x 12	210	† 914x305x313	1.76	1.96	2.15	2.46
W36 x 12	194	914x305x289	1.63	1.82	1.99	2.28
W36 x 12	182	† 914x305x271	1.54	1.72	1.88	2.15
W36 x 12	170	914x305x253	1.44	1.61	1.76	2.02
W36 x 12	160	† 914x305x238	1.36	1.52	1.67	1.90
W36 x 12	150	914x305x224	1.28	1.43	1.57	1.80
W36 x 12	135	914x305x201	1.16	1.29	1.42	1.63

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M

W/D Ratio

Supplemented by structural sections in accordance with BS4: Part 1




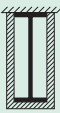
ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	W/D Ratio			
			 Profile 4 Sides	 Profile 3 Sides	 Box 4 Sides	 Box 3 Sides
W33 x 15 ³ / ₄	387	† 838x400x576	2.91	3.31	3.71	4.39
W33 x 15 ³ / ₄	354	† 838x400x527	2.68	3.05	3.42	4.06
W33 x 15 ³ / ₄	318	† 838x400x473	2.43	2.76	3.11	3.68
W33 x 15 ³ / ₄	291	† 838x400x433	2.23	2.54	2.87	3.40
W33 x 15 ³ / ₄	263	† 838x400x392	2.03	2.32	2.61	3.10
W33 x 15 ³ / ₄	241	† 838x400x359	1.87	2.13	2.41	2.86
W33 x 15 ³ / ₄	221	† 838x400x329	1.72	1.96	2.22	2.64
W33 x 15 ³ / ₄	201	† 838x400x299	1.57	1.79	2.03	2.42
# W33 x 11 ¹ / ₂	219	† 838x292x326	1.94	2.16	2.37	2.71
# W33 x 11 ¹ / ₂	204	† 838x292x304	1.81	2.02	2.21	2.53
# W33 x 11 ¹ / ₂	187	† 838x292x278	1.67	1.87	2.05	2.34
W33 x 11 ¹ / ₂	169	† 838x292x251	1.51	1.69	1.86	2.13
W33 x 11 ¹ / ₂	152	838x292x226	1.37	1.53	1.69	1.94
W33 x 11 ¹ / ₂	141	† 838x292x210	1.28	1.43	1.57	1.81
W33 x 11 ¹ / ₂	130	838x292x193	1.18	1.32	1.46	1.68
W33 x 11 ¹ / ₂	118	838x292x176	1.08	1.20	1.33	1.53
W30 x 15	326	† 762x381x484	2.64	3.02	3.40	4.05
W30 x 15	292	† 762x381x434	2.39	2.73	3.08	3.67
W30 x 15	261	† 762x381x389	2.16	2.47	2.79	3.33
W30 x 15	235	† 762x381x350	1.95	2.23	2.53	3.02
W30 x 15	211	† 762x381x314	1.76	2.02	2.29	2.74
W30 x 15	191	† 762x381x284	1.60	1.83	2.09	2.50
W30 x 15	173	† 762x381x257	1.46	1.67	1.90	2.28
W30 x 10 ¹ / ₂	148	† 762x267x220	1.47	1.64	1.80	2.06
W30 x 10 ¹ / ₂	132	762x267x196	1.31	1.47	1.62	1.86
W30 x 10 ¹ / ₂	124	† 762x267x185	1.24	1.38	1.52	1.75
W30 x 10 ¹ / ₂	116	762x267x173	1.17	1.30	1.43	1.65
W30 x 10 ¹ / ₂	108	† 762x267x161	1.08	1.21	1.34	1.54
W30 x 10 ¹ / ₂	99	762x267x147	0.999	1.12	1.23	1.42
W30 x 10 ¹ / ₂	90	762x267x134	0.908	1.02	1.12	1.29
W27 x 14	307	† 686x356x457	2.70	3.09	3.48	4.16
W27 x 14	281	† 686x356x419	2.49	2.85	3.22	3.85
W27 x 14	258	† 686x356x384	2.30	2.63	2.98	3.56
W27 x 14	235	† 686x356x350	2.11	2.42	2.74	3.29
W27 x 14	217	† 686x356x323	1.96	2.24	2.55	3.05
W27 x 14	194	† 686x356x289	1.76	2.02	2.30	2.76
W27 x 14	178	† 686x356x265	1.62	1.86	2.12	2.55
W27 x 14	161	† 686x356x240	1.48	1.70	1.93	2.33
W27 x 14	146	† 686x356x217	1.35	1.54	1.76	2.12

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M

W/D Ratio

Supplemented by structural sections in accordance with BS4: Part 1





ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	W/D Ratio			
			 Profile 4 Sides	 Profile 3 Sides	 Box 4 Sides	 Box 3 Sides
# W27 x 10	221	† 686x254x329	2.27	2.55	2.78	3.21
# W27 x 10	201	† 686x254x299	2.08	2.33	2.55	2.94
# W27 x 10	182	† 686x254x271	1.91	2.14	2.34	2.70
# W27 x 10	159	† 686x254x237	1.68	1.88	2.07	2.39
W27 x 10	129	† 686x254x192	1.38	1.55	1.71	1.97
W27 x 10	114	686x254x170	1.23	1.38	1.53	1.76
W27 x 10	102	686x254x152	1.11	1.24	1.38	1.59
W27 x 10	94	686x254x140	1.02	1.15	1.27	1.47
W27 x 10	84	686x254x125	0.921	1.03	1.15	1.33
W24 x 12 ^{3/4}	306	† 610x324x455	2.93	3.36	3.77	4.52
W24 x 12 ^{3/4}	279	† 610x324x415	2.70	3.10	3.49	4.18
W24 x 12 ^{3/4}	250	† 610x324x372	2.45	2.81	3.17	3.80
W24 x 12 ^{3/4}	229	† 610x324x341	2.26	2.59	2.93	3.51
W24 x 12 ^{3/4}	207	† 610x324x307	2.06	2.36	2.67	3.21
W24 x 12 ^{3/4}	192	† 610x324x285	1.92	2.20	2.50	3.00
W24 x 12 ^{3/4}	176	† 610x324x262	1.77	2.04	2.31	2.78
W24 x 12 ^{3/4}	162	† 610x324x241	1.64	1.88	2.14	2.58
W24 x 12 ^{3/4}	146	† 610x324x217	1.49	1.71	1.95	2.35
W24 x 12 ^{3/4}	131	† 610x324x195	1.34	1.54	1.76	2.13
W24 x 12 ^{3/4}	117	† 610x324x174	1.20	1.39	1.58	1.91
W24 x 12 ^{3/4}	104	† 610x324x155	1.08	1.24	1.42	1.72
UB24 x 12	160	610x305x238	1.65	1.90	2.14	2.56
UB24 x 12	120	610x305x179	1.27	1.45	1.65	1.97
UB24 x 12	100	610x305x149	1.06	1.22	1.39	1.66
# W24 x 9	198	† 610x229x295	2.26	2.54	2.77	3.19
# W24 x 9	163	† 610x229x243	1.90	2.13	2.34	2.69
# W24 x 9	146	† 610x229x217	1.72	1.93	2.12	2.44
# W24 x 9	128	† 610x229x191	1.52	1.70	1.87	2.16
# W24 x 9	115	† 610x229x171	1.38	1.54	1.70	1.97
W24 x 9	103	† 610x229x153	1.24	1.39	1.53	1.77
W24 x 9	94	610x229x140	1.13	1.27	1.41	1.63
W24 x 9	84	610x229x125	1.02	1.14	1.27	1.47
W24 x 9	76	610x229x113	0.926	1.04	1.15	1.34
W24 x 9	68	610x229x101	0.835	0.938	1.04	1.21

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M

W/D Ratio

Supplemented by structural sections in accordance with BS4: Part 1




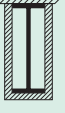
ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	W/D Ratio			
			 Profile 4 Sides	 Profile 3 Sides	 Box 4 Sides	 Box 3 Sides
W24 x 7	62	† 610x178x92	0.838	0.926	1.01	1.14
W24 x 7	55	† 610x178x82	0.748	0.827	0.900	1.02
# W21 x 12 ¹ / ₄	275	† 533x312x409	2.84	3.28	3.71	4.49
# W21 x 12 ¹ / ₄	248	† 533x312x370	2.60	3.00	3.40	4.12
# W21 x 12 ¹ / ₄	222	† 533x312x331	2.35	2.71	3.08	3.74
W21 x 12 ¹ / ₄	201	† 533x312x300	2.15	2.48	2.83	3.43
W21 x 12 ¹ / ₄	182	† 533x312x272	1.96	2.27	2.59	3.14
W21 x 12 ¹ / ₄	166	† 533x312x248	1.80	2.08	2.38	2.89
W21 x 12 ¹ / ₄	147	† 533x312x219	1.60	1.85	2.12	2.59
W21 x 12 ¹ / ₄	132	† 533x312x196	1.45	1.67	1.92	2.35
W21 x 12 ¹ / ₄	122	† 533x312x182	1.34	1.55	1.79	2.19
W21 x 12 ¹ / ₄	111	† 533x312x165	1.23	1.42	1.64	2.01
W21 x 12 ¹ / ₄	101	† 533x312x150	1.12	1.30	1.50	1.84
W21 x 8 ¹ / ₄	93	† 533x210x138	1.24	1.40	1.55	1.80
W21 x 8 ¹ / ₄	83	533x210x123	1.11	1.25	1.39	1.62
W21 x 8 ¹ / ₄	73	533x210x109	0.988	1.11	1.24	1.44
W21 x 8 ¹ / ₄	68	533x210x101	0.925	1.04	1.16	1.35
W21 x 8 ¹ / ₄	62	533x210x92	0.846	0.954	1.06	1.24
W21 x 8 ¹ / ₄	55	533x210x82	0.756	0.852	0.949	1.11
W21 x 6 ¹ / ₂	57	† 533x165x85	0.853	0.946	1.03	1.17
W21 x 6 ¹ / ₂	50	† 533x165x74	0.756	0.838	0.914	1.04
W21 x 6 ¹ / ₂	44	† 533x165x66	0.671	0.744	0.812	0.922
W18 x 7 ¹ / ₂	71	† 457x191x106	1.08	1.22	1.36	1.59
W18 x 7 ¹ / ₂	65	457x191x97	0.992	1.12	1.25	1.47
W18 x 7 ¹ / ₂	60	457x191x89	0.919	1.04	1.16	1.36
W18 x 7 ¹ / ₂	55	457x191x82	0.849	0.960	1.07	1.26
W18 x 7 ¹ / ₂	50	457x191x74	0.772	0.873	0.978	1.15
UB18 x 7 ¹ / ₂	45	457x191x67	0.701	0.794	0.890	1.04
W18 x 6	46	457x152x68	0.780	0.870	0.954	1.09
W18 x 6	40	457x152x60	0.683	0.761	0.836	0.956
W18 x 6	35	457x152x52	0.602	0.671	0.738	0.845
W16 x 7	57	† 406x178x85	0.953	1.08	1.21	1.43
W16 x 7	50	406x178x75	0.844	0.959	1.07	1.27
W16 x 7	45	406x178x67	0.764	0.867	0.973	1.15
W16 x 7	40	406x178x60	0.682	0.774	0.870	1.03
W16 x 7	36	406x178x53	0.615	0.699	0.786	0.928

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M

W/D Ratio

Supplemented by structural sections in accordance with BS4: Part 1



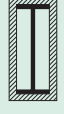
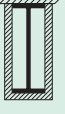
ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	W/D Ratio			
			 Profile 4 Sides	 Profile 3 Sides	 Box 4 Sides	 Box 3 Sides
W16 x 5½	31	406x140x46	0.589	0.658	0.724	0.832
W16 x 5½	26	406x140x39	0.500	0.559	0.616	0.708
W14 x 16	730	† 356x406x1086	6.68	7.99	9.05	11.6
W14 x 16	665	† 356x406x990	6.20	7.42	8.46	10.9
W14 x 16	605	† 356x406x900	5.74	6.88	7.89	10.2
W14 x 16	550	† 356x406x818	5.31	6.37	7.34	9.53
W14 x 16	500	† 356x406x744	4.90	5.89	6.82	8.89
W14 x 16	455	† 356x406x677	4.53	5.45	6.34	8.28
W14 x 16	426	356x406x634	4.29	5.15	6.02	7.88
W14 x 16	398	† 356x406x592	4.04	4.86	5.70	7.48
W14 x 16	370	356x406x551	3.80	4.57	5.38	7.07
W14 x 16	342	† 356x406x509	3.54	4.27	5.04	6.64
W14 x 16	311	† 356x406x463	3.26	3.93	4.66	6.16
W14 x 16	283	† 356x406x421	3.00	3.62	4.31	5.71
UC14 x 16	264	356x406x393	2.81	3.39	4.05	5.38
W14 x 16	257	† 356x406x382	2.75	3.32	3.97	5.27
W14 x 16	233	† 356x406x347	2.52	3.04	3.64	4.85
UC14 x 16	228	356x406x340	2.47	2.98	3.58	4.77
W14 x 16	211	† +356x406x314	2.30	2.78	3.34	4.46
W14 x 16	193	356x406x287	2.12	2.56	3.09	4.13
W14 x 16	176	† 356x406x262	1.95	2.36	2.85	3.82
W14 x 16	159	356x406x237	1.77	2.14	2.60	3.49
W14 x 16	145	† 356x406x216	1.63	1.97	2.39	3.22
UC14 x 14½	136	356x368x202	1.57	1.90	2.30	3.07
W14 x 14½	132	† 356x368x196	1.53	1.85	2.24	2.99
W14 x 14½	120	† 356x368x179	1.40	1.70	2.06	2.75
W14 x 14½	109	† 356x368x162	1.28	1.55	1.88	2.52
UC14 x 14½	103	356x368x153	1.21	1.46	1.78	2.38
W14 x 14½	99	† 356x368x147	1.17	1.41	1.72	2.31
W14 x 14½	90	† 356x368x134	1.07	1.29	1.58	2.11
UC14 x 14½	87	356x368x129	1.03	1.24	1.52	2.04
UB14 x 6¾	45	356x171x67	0.829	0.948	1.07	1.28
W14 x 6¾	38	356x171x57	0.703	0.804	0.909	1.08
W14 x 6¾	34	356x171x51	0.633	0.724	0.820	0.979
W14 x 6¾	30	356x171x45	0.563	0.645	0.731	0.874

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M

W/D Ratio

Supplemented by structural sections in accordance with BS4: Part 1




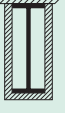
ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	W/D Ratio			
			 Profile 4 Sides	 Profile 3 Sides	 Box 4 Sides	 Box 3 Sides
W14 x 5	26	356x127x39	0.560	0.627	0.690	0.796
W14 x 5	22	356x127x33	0.476	0.534	0.589	0.680
W12 x 12	336	† 305x305x500	4.06	4.85	5.56	7.14
W12 x 12	305	† 305x305x454	3.75	4.48	5.15	6.64
W12 x 12	279	† 305x305x415	3.47	4.15	4.80	6.21
W12 x 12	252	† 305x305x375	3.18	3.81	4.43	5.74
W12 x 12	230	† 305x305x342	2.95	3.53	4.12	5.35
W12 x 12	210	† 305x305x313	2.72	3.26	3.82	4.97
W12 x 12	190	305x305x283	2.49	2.98	3.51	4.58
W12 x 12	170	† 305x305x253	2.25	2.70	3.19	4.18
UC12 x 12	161	305x305x240	2.15	2.58	3.05	4.00
W12 x 12	152	† 305x305x226	2.04	2.45	2.90	3.81
W12 x 12	136	† 305x305x202	1.84	2.21	2.63	3.46
UC12 x 12	133	305x305x198	1.80	2.16	2.58	3.39
W12 x 12	120	† 305x305x179	1.64	1.97	2.36	3.11
W12 x 12	106	305x305x158	1.46	1.76	2.11	2.79
W12 x 12	96	† 305x305x143	1.33	1.60	1.93	2.55
UC12 x 12	92	305x305x137	1.28	1.54	1.86	2.46
W12 x 12	87	† 305x305x129	1.22	1.46	1.76	2.34
W12 x 12	79	305x305x118	1.11	1.34	1.61	2.14
W12 x 12	72	† 305x305x107	1.01	1.22	1.48	1.97
W12 x 12	65	305x305x97	0.921	1.11	1.34	1.79
• UB12 x 6 1/2	36	305x165x54	0.731	0.843	0.963	1.17
• UB12 x 6 1/2	31	305x165x46	0.632	0.728	0.834	1.01
• UB12 x 6 1/2	27	305x165x40	0.552	0.636	0.730	0.886
UB12 x 5	32	305x127x48	0.751	0.849	0.939	1.10
UB12 x 5	28	305x127x42	0.660	0.746	0.827	0.966
UB12 x 5	25	305x127x37	0.588	0.664	0.737	0.862
W12 x 4	22	305x102x33	0.555	0.617	0.674	0.769
W12 x 4	19	305x102x28	0.481	0.536	0.586	0.669
W12 x 4	16	305x102x24	0.411	0.458	0.501	0.573

For notes to tables, see page 30.

W SHAPES in accordance with ASTM A6/A6M

W/D Ratio

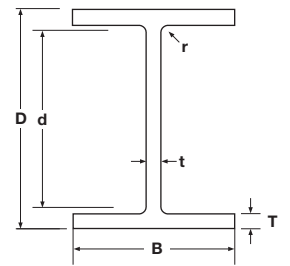
Supplemented by structural sections in accordance with BS4: Part 1

ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	W/D Ratio			
			 Profile 4 Sides	 Profile 3 Sides	 Box 4 Sides	 Box 3 Sides
W10 x 10	112	254x254x167	1.81	2.17	2.57	3.38
W10 x 10	100	† 254x254x149	1.63	1.96	2.33	3.07
W10 x 10	88	254x254x132	1.45	1.75	2.09	2.76
W10 x 10	77	† 254x254x115	1.28	1.54	1.85	2.45
UC10 x 10	72	254x254x107	1.20	1.44	1.73	2.30
W10 x 10	68	† 254x254x101	1.14	1.37	1.65	2.20
W10 x 10	60	254x254x89	1.02	1.22	1.48	1.96
W10 x 10	54	† 254x254x80	0.916	1.11	1.34	1.78
W10 x 10	49	254x254x73	0.839	1.01	1.23	1.64
W10 x 5 ³ / ₄	30	† 254x146x45	0.697	0.806	0.922	1.12
UB10 x 5 ³ / ₄	29	254x146x43	0.679	0.786	0.902	1.10
W10 x 5 ³ / ₄	26	† 254x146x39	0.606	0.700	0.803	0.979
UB10 x 5 ³ / ₄	25	254x146x37	0.591	0.684	0.787	0.962
W10 x 5 ³ / ₄	22	† 254x146x33	0.520	0.602	0.692	0.845
UB10 x 5 ³ / ₄	21	254x146x31	0.500	0.580	0.668	0.818
W10 x 4	19	254x102x28	0.537	0.605	0.669	0.779
W10 x 4	17	254x102x25	0.481	0.543	0.601	0.700
W10 x 4	15	254x102x22	0.428	0.483	0.536	0.625
W8 x 8	67	† 203x203x100	1.36	1.63	1.94	2.55
W8 x 8	58	203x203x86	1.19	1.44	1.71	2.26
W8 x 8	48	203x203x71	0.999	1.20	1.44	1.91
W8 x 8	40	203x203x59	0.842	1.02	1.22	1.62
W8 x 8	35	203x203x52	0.744	0.897	1.08	1.44
W8 x 8	31	203x203x46	0.664	0.801	0.969	1.29
W8 x 5 ¹ / ₄	21	† 203x133x31	0.572	0.668	0.773	0.959
UB8 x 5 ¹ / ₄	20	203x133x30	0.554	0.648	0.751	0.935
W8 x 5 ¹ / ₄	18	† 203x133x27	0.493	0.576	0.668	0.831
UB8 x 5 ¹ / ₄	17	203x133x25	0.466	0.545	0.634	0.790
UB8 x 4	16	203x102x23	0.499	0.573	0.646	0.775
UB7 x 4	13	178x102x19	0.440	0.510	0.582	0.710
W6 x 6	25	152x152x37	0.696	0.838	1.00	1.33
W6 x 6	20	152x152x30	0.565	0.681	0.819	1.09
W6 x 6	15	152x152x23	0.432	0.522	0.631	0.841
UB6 x 3 ¹ / ₂	11	152x89x16	0.426	0.495	0.564	0.691
UB5 x 3	9	127x76x13	0.410	0.478	0.543	0.668

For notes to tables, see page 30.

UNIVERSAL BEARING PILING

in accordance with ASTM A6/A6M and BS4: Part 1



ASTM Size in	Mass per foot lb	Metric/BS4 Equivalent	Depth of Section D in	Width of Section B in	Thickness of Web t in	Thickness of Flange T in	Root Radius r in	Depth between fillets d in	Ratios for Local Buckling		Second Moment of Area	
									Flange B/2T	Web d/t	Axis x-x in ⁴	Axis y-y in ⁴
HP14 x14 ^{1/2}	117	356x368x174	14.21	14.885	0.805	0.805	0.60	11.40	9.25	14.2	1224	443
HP14 x14 ^{1/2}	102	356x368x152	14.01	14.785	0.705	0.705	0.60	11.40	10.5	16.2	1053	380
HP14 x14 ^{1/2}	89	356x368x133	13.83	14.695	0.615	0.615	0.60	11.40	11.9	18.5	904	326
HP14 x14 ^{1/2}	73	356x368x109	13.61	14.585	0.505	0.505	0.60	11.40	14.4	22.6	729	261
UP12 x12	150	305x305x223	13.30	12.825	1.195	1.195	0.60	9.71	5.37	8.13	1265	422
UP12 x12	125	305x305x186	12.93	12.635	1.005	1.005	0.60	9.71	6.29	9.67	1023	339
UP12 x12	100	305x305x149	12.54	12.440	0.810	0.810	0.60	9.71	7.68	12.0	791	260
HP12 x12	84	305x305x126	12.28	12.295	0.685	0.685	0.60	9.71	8.97	14.2	650	213
HP12 x12	74	305x305x110	12.13	12.215	0.610	0.610	0.60	9.71	10.0	15.9	570	186
HP12 x12	63	305x305x95	11.94	12.125	0.515	0.515	0.60	9.71	11.8	18.9	472	153
UP12 x12	59	305x305x88	11.88	12.120	0.490	0.485	0.60	9.71	12.5	19.8	444	144
HP12 x12	53	305x305x79	11.78	12.045	0.435	0.435	0.60	9.71	13.8	22.3	393	127
HP10 x 10	57	254x254x85	9.99	10.225	0.565	0.565	0.50	7.86	9.05	13.9	294	101
UP10 x10	48	254x254x71	9.83	10.155	0.475	0.475	0.50	7.86	10.7	16.6	243	83.0
HP10 x 10	42	254x254x63	9.70	10.075	0.420	0.420	0.50	7.86	12.0	18.7	211	71.7
HP8 x 8	36	203x203x54	8.02	8.155	0.445	0.445	0.40	6.33	9.16	14.2	119	40.3
UP8 x 8	30	203x203x45	7.88	8.110	0.375	0.375	0.40	6.33	10.8	16.9	98.7	33.4

Notes

† These sizes are in addition to the standard BS4 range.

Sections additional to ASTM range.

- For the beam size 12 x 6^{1/2} the weights and dimensions shown are those in BS4: Part 1 and differ slightly from the W12 x 6^{1/2} section shown in ASTM A6/A6M.

* Based on 2000 lb/ton

The Dimension $n = \frac{D-d}{2}$ to the nearest 2mm above. The Dimension $C = t/2 + 2mm$ to the nearest 1mm.

The Dimension N is based upon the outstand from web face to flange edge + 10mm, to the nearest 2mm above and makes due allowance for rolling tolerance.

This brochure is designed to give information on the product range available from Corus Construction & Industrial.

Any enquiries, with regards to volume and production, should be referred to the Account Manager.

Structural sections in accordance with ASTM specifications

Radius of Gyration		Elastic Modulus		Plastic Modulus		Buckling Parameter u	Torsional Index x	Warping Constant H in ⁶	Torsional Constant J in ⁴	Area of Section in ²	ASTM Size in	Mass per foot lb
Axis x-x in	Axis y-y in	Axis x-x in ³	Axis y-y in ³	Axis x-x in ³	Axis y-y in ³							
5.96	3.59	172	59.5	194	91.4	0.821	15.7	19910	8.02	34.4	HP14 x14^{1/2}	117
5.92	3.56	150	51.4	169	78.8	0.821	17.8	16830	5.39	30.0	HP14 x14^{1/2}	102
5.88	3.53	131	44.3	146	67.7	0.822	20.2	14210	3.60	26.1	HP14 x14^{1/2}	89
5.84	3.49	107	35.8	118	54.6	0.823	24.2	11220	2.01	21.4	HP14 x14^{1/2}	73
5.36	3.10	190	65.8	223	102	0.826	9.55	15450	22.6	44.0	UP12 x12	150
5.28	3.04	158	53.6	183	83.2	0.827	11.2	12050	13.4	36.7	UP12 x12	125
5.20	2.98	126	41.9	144	64.6	0.828	13.6	8960	7.00	29.3	UP12 x12	100
5.14	2.94	106	34.6	120	53.2	0.829	15.8	7144	4.24	24.6	HP12 x12	84
5.10	2.91	93.9	30.4	106	46.6	0.830	17.6	6157	3.01	21.9	HP12 x12	74
5.06	2.88	79.1	25.3	88.3	38.7	0.831	20.5	4999	1.83	18.4	HP12 x12	63
5.05	2.88	74.7	23.8	83.2	36.4	0.830	21.6	4677	1.55	17.4	UP12 x12	59
5.03	2.86	66.7	21.1	74.0	32.2	0.832	23.9	4080	1.12	15.5	HP12 x12	53
4.18	2.45	58.8	19.7	66.5	30.3	0.825	15.6	2239	1.97	16.8	HP10 x 10	57
4.15	2.43	49.4	16.3	55.4	25.1	0.826	18.3	1816	1.18	14.1	UP10 x10	48
4.12	2.40	43.4	14.2	48.4	21.8	0.827	20.4	1543	0.822	12.4	HP10 x 10	42
3.36	1.95	29.8	9.88	33.6	15.2	0.827	15.9	578	0.771	10.6	HP8 x 8	36
3.33	1.94	25.1	8.23	28.1	12.6	0.827	18.6	470	0.466	8.89	UP8 x 8	30

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