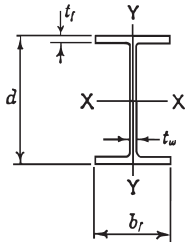


# DISCLAIMER

**Chatham Steel Co.** does not produce or test any item described in this reference manual. All information contained in this book is founded upon data provided to Chatham Steel Co. by manufacturers of the described products. The information is intended for general reference only and should not be substituted for professional expertise which is necessary for any specific application. Chatham Steel Co. does not make any express nor implied warranty regarding the data contained in this book. Anyone making use of this information or materials must do so at his own risk and assumes any responsibility for loss or damage that may result.

*Serving Industry Since 1915*

January 2008

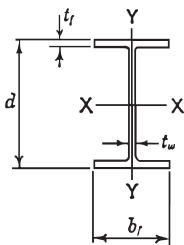


# WIDE FLANGE BEAMS

ASTM A36

W SHAPES  
Dimensions

Designation (Nominal Depth in Millimetres and Mass in Kilograms per Metre)	Area $A$ , $\text{mm}^2$	Depth $d$ , mm	Flange		Web Thick- ness $t_{w1}$ mm
			Width $b_f$ , mm	Thick- ness, $t_f$ , mm	
W100x 19.3	2 470	106	103	8.8	7.1
W130x 23.8	3 040	127	127	9.1	6.1
x 28.1	3 590	131	128	10.9	6.9
W150x 13.5	1 730	150	100	5.5	4.3
x 18.0	2 290	153	102	7.1	5.8
x 24.0	3 060	160	102	10.3	6.6
W150x 22.5	2 860	152	152	6.6	5.8
x 29.8	3 790	157	153	9.3	6.6
x 37.1	4 740	162	154	11.6	8.1
W200x 15.0	1 910	200	100	5.2	4.3
x 19.3	2 480	203	102	6.5	5.8
x 22.5	2 860	206	102	8.0	6.2
W200x 26.6	3 390	207	133	8.4	5.8
x 31.3	3 970	210	134	10.2	6.4
W200x 35.9	4 570	201	165	10.2	6.2
x 41.7	5 320	205	166	11.8	7.2
W200x 46.1	5 890	203	203	11.0	7.2
x 52	6 650	206	204	12.6	7.9
x 59	7 550	210	205	14.2	9.1
x 71	9 100	216	206	17.4	10.2
x 86	11 000	222	209	20.6	13.0
x 100	12 700	229	210	23.7	14.5
W250x 17.9	2 280	251	101	5.3	4.8
x 22.3	2 850	254	102	6.9	5.8
x 25.3	3 220	257	102	8.4	6.1
x 28.4	3 630	260	102	10.0	6.4
W250x 32.7	4 190	258	146	9.1	6.1
x 38.5	4 910	262	147	11.2	6.6
x 44.8	5 700	266	148	13.0	7.6
W250x 49.1	6 260	247	202	11.0	7.4
x 58	7 420	252	203	13.5	8.0
x 67	8 580	257	204	15.7	8.9

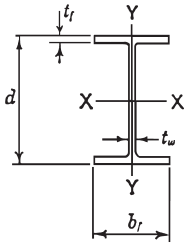


# WIDE FLANGE BEAMS

ASTM A36

## W SHAPES Dimensions

Designation (Nominal Depth in Millimetres and Mass in Kilograms per Metre)	Area $A$ $\text{mm}^2$	Depth $d$ , mm	Flange		Web Thick- ness $t_w$ , mm
			Width $b_f$ , mm	Thick- ness, $t_f$ , mm	
W 250x 73	9 290	253	254	14.2	8.6
x 80	10 200	256	255	15.6	9.4
x 89	11 400	260	256	17.3	10.7
x 101	12 900	264	257	19.6	11.9
x 115	14 600	269	259	22.1	13.5
x 131	16 700	275	261	25.1	15.4
x 149	19 000	282	263	28.4	17.3
x 167	21 200	289	265	31.8	19.2
W 310x 21.0	2 680	303	101	5.7	5.1
x 23.8	3 040	305	101	6.7	5.6
x 28.3	3 590	309	102	8.9	6.0
x 32.7	4 180	313	102	10.8	6.6
W 310x 38.7	4 940	310	165	9.7	5.8
x 44.5	5 670	313	166	11.2	6.6
x 52	6 650	317	167	13.2	7.6
W 310x 60	7 610	303	203	13.1	7.5
x 67	8 520	306	204	14.6	8.5
x 74	9 480	310	205	16.3	9.4
W 310x 79	10 100	306	254	14.6	8.8
x 86	11 000	310	254	16.3	9.1
W 310x 97	12 300	308	305	15.4	9.9
x 107	13 600	311	306	17.0	10.9
x 117	15 000	314	307	18.7	11.9
x 129	16 500	318	308	20.6	13.1
x 143	18 200	323	309	22.9	14.0
x 158	20 100	327	310	25.1	15.5
x 179	22 800	333	313	28.1	18.0
x 202	25 700	341	315	31.8	20.1
x 226	28 800	348	317	35.6	22.1
x 253	32 300	356	319	39.6	24.4
x 283	36 000	365	322	44.1	26.9
x 313	39 900	374	325	48.3	30.0
x 342	43 700	382	328	52.6	32.6
x 375	47 800	391	330	57.2	35.4
x 415	52 800	403	334	62.7	38.9
x 454	57 800	415	336	68.7	41.3
x 500	63 700	427	340	75.1	45.1

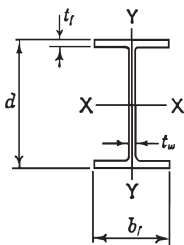


# WIDE FLANGE BEAMS

ASTM A36

## W SHAPES Dimensions

Designation (Nominal Depth in Millimetres and Mass in Kilograms per Metre)	Area $A$ $\text{mm}^2$	Depth $d$ , mm	Flange		Web Thick- ness $t_w$ , mm
			Width $b_f$ , mm	Thick- ness, $t_f$ , mm	
W 360x 32.9	4 190	349	127	8.5	5.8
x 39.0	4 960	353	128	10.7	6.5
W 360x 44	5 710	352	171	9.8	6.9
x 51	6 450	355	171	11.6	7.2
x 57.8	7 230	358	172	13.1	7.9
W 360x 64	8 130	347	203	13.5	7.7
x 72	9 100	350	204	15.1	8.6
x 79	10 100	354	205	16.8	9.4
W 360x 91	11 500	353	254	16.4	9.5
x 101	12 900	357	255	18.3	10.5
x 110	14 100	360	256	19.9	11.4
x 122	15 500	363	257	21.7	13.0
W 360x 134	17 100	356	369	18.0	11.2
x 147	18 800	360	370	19.8	12.3
x 162	20 600	364	371	21.8	13.3
x 196	25 000	372	374	26.2	16.4
x 179	22 800	368	373	23.9	15.0
W 360x 216	27 500	375	394	27.7	17.3
x 237	30 100	380	395	30.2	18.9
x 262	33 400	387	398	33.3	21.1
x 287	36 600	393	399	36.6	22.6
x 314	40 000	399	401	39.6	24.9
x 347	44 200	407	404	43.7	27.2
x 382	48 800	416	406	48.0	29.8
x 421	53 700	425	409	52.6	32.8
x 463	59 000	435	412	57.4	35.8
x 509	65 200	446	416	62.7	39.1
x 551	70 300	455	418	67.6	42.0
x 592	75 500	465	421	72.3	45.0
x 634	80 600	474	424	77.1	47.6
x 677	86 500	483	428	81.5	51.2
x 744	94 800	498	432	88.9	55.6
x 818	105 000	514	437	97.0	60.5
x 900	115 000	531	442	106.0	65.9
x 990	126 000	550	448	115.0	71.9
x1086	139 000	559	454	125.0	78.0

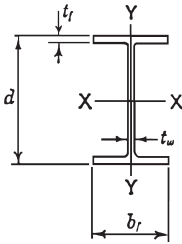


# WIDE FLANGE BEAMS

ASTM A36

## W SHAPES Dimensions

Designation (Nominal Depth in Millimetres and Mass in Kilograms per Metre)	Area $A$ $\text{mm}^2$	Depth $d$ , mm	Flange		Web Thick- ness $t_w$ , mm
			Width $b_f$ , mm	Thick- ness, $t_f$ , mm	
x1202	153 000	580	471	130.0	95.0
x1299	165 000	600	476	140.0	100.0
W 410x 38.8	4 950	399	140	8.8	6.4
x 46.1	5 880	403	140	11.2	7.0
W 410x 53	6 840	403	177	10.9	7.5
x 60	7 610	407	178	12.8	7.7
x 67	8 580	410	179	14.4	8.8
x 75	9 480	413	180	16.0	9.7
x 85	10 800	417	181	18.2	10.9
W 410x 100	12 700	415	260	16.9	10.0
x 114	14 600	420	261	19.3	11.6
x 132	16 900	425	263	22.2	13.3
x 149	19 000	431	265	25.0	14.9
W 460x 52	6 650	450	152	10.8	7.6
x 60	7 610	455	153	13.3	8.0
x 68	8 710	459	154	15.4	9.1
W 460x 74	9 480	457	190	14.5	9.0
x 82	10 500	460	191	16.0	9.9
x 89	11 400	463	192	17.7	10.5
x 97	12 300	466	193	19.0	11.4
x 106	13 400	469	194	20.6	12.6
W 460x 113	14 400	463	280	17.3	10.8
x 128	16 300	467	282	19.6	12.2
x 144	18 400	472	283	22.1	13.6
x 158	20 100	476	284	23.9	15.0
x 177	22 600	482	286	26.9	16.6
x 193	24 666	489	283	30.5	17.0
x 213	27 148	495	285	33.5	18.5
x 235	29 899	501	287	36.6	20.6
x 260	33 120	509	289	40.4	22.6
x 286	36 405	517	291	44.4	24.4
x 315	40 103	525	293	48.5	26.9
x 349	44 423	535	296	53.6	29.5
x 384	48 956	545	299	58.4	32.5

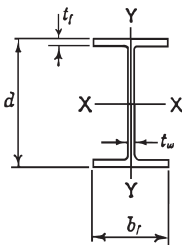


# WIDE FLANGE BEAMS

ASTM A36

W SHAPES  
Dimensions

Designation (Nominal Depth in Millimetres and Mass in Kilograms per Metre)	Area $A$ $\text{mm}^2$	Depth $d$ , mm	Flange		Web Thick- ness $t_{w1}$ mm
			Width $b_f$ , mm	Thick- ness, $t_f$ , mm	
x 421	53 676	555	302	63.5	35.6
x 464	59 060	567	305	69.6	38.6
W 530x 66	8 390	525	165	11.4	8.9
x 74	9 480	529	166	13.6	9.7
x 85	10 800	535	166	16.5	10.3
W 530x 92	11 800	533	209	15.6	10.2
x101	12 900	537	210	17.4	10.9
x109	13 900	539	211	18.8	11.6
x123	15 700	544	212	21.2	13.1
x138	17 600	549	214	23.6	14.7
W 530x150	19 200	543	312	20.3	12.7
x165	21 100	546	313	22.2	14.0
x182	23 200	551	315	24.4	15.2
x196	25 000	554	316	26.3	16.5
x219	27 900	560	318	29.2	18.3
W 530x248	31 524	571	315	34.5	19.0
x272	34 620	577	317	37.6	21.1
x300	38 222	585	319	41.4	23.1
x331	42 197	593	322	45.5	25.4
x370	47 121	603	324	50.5	25.2
x409	52 137	613	327	55.6	31.0
x447	56 896	623	330	60.5	33.5
x496	63 168	635	334	66.5	37.1
x543	69 229	647	337	72.4	40.4
x599	76 361	661	340	79.5	43.9
W 610x 82	10 500	599	178	12.8	10.0
x 92	11 700	603	179	15.0	10.9
W 610x101	13 000	603	228	14.9	10.5
x113	14 500	608	228	17.3	11.2
x125	15 900	612	229	19.6	11.9
x140	17 900	617	230	22.2	13.1
W 610x155	19 700	611	324	19.0	12.7
x174	22 200	616	325	21.6	14.0

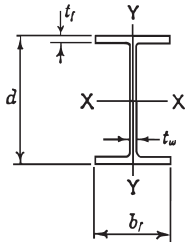


# WIDE FLANGE BEAMS

ASTM A36

## W SHAPES Dimensions

Designation (Nominal Depth in Millimetres and Mass in Kilograms per Metre)	Area $A$ $\text{mm}^2$	Depth $d$ , mm	Flange		Web Thick- ness $t_w$ , mm
			Width $b_f$ , mm	Thick- ness, $t_f$ , mm	
x195	24 800	622	327	24.4	15.4
x217	27 700	628	328	27.7	16.5
x241	30 800	635	329	31.0	17.1
x262	33 348	641	327	34.0	19.0
x285	36 125	647	329	37.1	20.6
x307	39 169	653	330	39.9	22.1
x341	43 383	661	333	43.9	24.4
x372	47 437	669	335	48.0	26.4
x415	52 902	679	338	53.1	29.5
x455	57 929	689	340	57.9	32.0
x498	63 495	699	343	63.0	35.1
x551	70 201	711	347	69.1	38.6
x608	77 402	725	351	75.9	41.9
x670	85 359	739	354	83.1	46.0
x732	93 304	753	359	89.9	50.0
W 690x125	16 000	678	253	16.3	11.7
x140	17 900	684	254	18.9	12.4
x152	19 400	688	254	21.1	13.1
x170	21 600	693	256	23.6	14.5
W 690x217	27 700	695	355	24.8	15.4
x240	30 600	701	356	27.4	16.8
x265	33 700	706	358	30.2	18.4
x289	36 765	714	356	34.0	19.0
x323	41 130	722	359	38.1	21.1
x350	44 608	728	360	40.9	23.1
x384	48 869	736	362	45.0	24.9
x419	53 320	744	364	49.0	26.9
x457	58 180	752	367	53.1	29.5
x500	63 664	762	369	57.9	32.0
x548	69 762	772	372	63.0	35.1
x605	77 074	784	376	69.1	38.6
x667	84 914	798	379	75.9	41.9
x735	93 580	812	383	83.1	46.0
x802	102 208	826	387	89.9	50.0
W 760x134	17 041	750	264	15.5	11.9
x147	18 800	753	265	17.0	13.2
x173	22 100	762	267	21.6	14.4
x185	23 500	766	267	23.6	14.9
x196	25 100	770	268	25.4	15.6

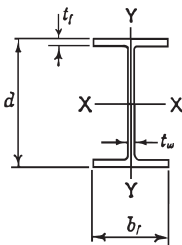


# WIDE FLANGE BEAMS

ASTM A36

## W SHAPES Dimensions

Designation (Nominal Depth in Millimetres and Mass in Kilograms per Metre)	Area $A$ $\text{mm}^2$	Depth $d$ , mm	Flange		Web Thick- ness $t_w$ , mm
			Width $b_f$ , mm	Thick- ness, $t_f$ , mm	
W 760x257	32 800	773	381	27.1	16.6
x284	36 200	779	382	30.1	18.0
x314	40 000	786	384	33.4	19.7
x350	44 541	795	382	38.1	21.1
x389	49 499	803	385	41.9	23.6
x434	55 293	813	387	47.0	25.9
x484	61 718	823	390	52.1	29.0
x531	67 617	833	393	56.9	31.5
x582	74 171	843	396	62.0	34.5
x644	82 013	855	399	68.1	38.1
x710	90 408	869	403	74.9	41.4
x783	99 697	883	407	82.0	45.5
x865	110 226	899	411	89.9	50.0
W 840x176	22 400	835	292	18.8	14.0
x193	24 700	840	292	21.7	14.7
x210	26 800	846	293	24.4	15.4
x226	28 800	851	294	26.8	16.1
W 840x299	38 100	855	400	29.2	18.2
x329	41 900	862	401	32.4	19.7
x359	45 700	868	403	35.6	21.1
x392	49 915	877	401	39.9	22.1
x433	55 218	885	404	43.9	24.4
x473	60 316	893	406	48.0	26.4
x527	67 173	903	409	53.1	29.5
x577	73 455	913	411	57.9	32.0
x631	80 425	923	414	63.0	35.1
x697	88 793	935	418	69.1	38.6
x767	97 688	949	421	75.9	41.9
x845	107 584	963	425	83.1	46.0
x922	117 414	977	430	89.9	50.0
W 920x201	25 600	903	304	20.1	15.2
x223	28 500	911	304	23.9	15.9
x238	30 300	915	305	25.9	16.5
x253	32 300	919	306	27.9	17.3
x271	34 600	923	307	30.0	18.4
x289	36 800	927	308	32.0	19.4
x313	39 900	932	309	34.5	21.1



# WIDE FLANGE BEAMS

ASTM A36

## W SHAPES Dimensions

Designation (Nominal Depth in Millimetres and Mass in Kilograms per Metre)	Area $A$ $\text{mm}^2$	Depth $d$ , mm	Flange		Web Thick- ness $t_w$ , mm
			Width $b_f$ , mm	Thick- ness, $t_f$ , mm	
W 920x 342	43 600	912	418	32.0	19.3
x 365	46 500	916	419	34.3	20.3
x 387	49 400	921	420	36.6	21.3
x 417	53 200	928	422	39.9	22.5
x 446	57 000	933	423	42.7	24.0
x 488	62 165	942	422	47.0	25.9
x 534	68 004	950	425	51.1	28.4
x 585	71 559	960	427	55.9	31.0
x 653	83 195	972	431	62.0	34.5
x 722	91 948	984	434	68.1	38.1
x 784	99 835	996	437	73.9	40.9
x 876	111 562	1 012	442	82.0	45.5
x 967	123 210	1 028	446	89.9	50.0
x1072	136 581	1 046	451	99.1	55.0
x1188	151 347	1 066	457	109.0	60.5
x1262	160 753	1 078	461	115.1	64.0
x1369	174 438	1 078	473	115.1	76.7
W 1000x222	28 232	970	300	21.1	16.0
x249	31 675	980	300	26.0	16.5
x272	34 647	990	300	31.0	16.5
W 1000x314	40 000	1 000	300	35.9	19.1
x350	44 600	1 008	302	40.0	21.1
x393	50 100	1 016	303	43.9	24.4
W 1000x415	52 869	1 020	304	46.0	26.0
x494	62 913	1 036	309	54.0	31.0
x584	74 373	1 056	314	64.0	36.0
x694	88 363	1 078	321	75.0	42.5
W 1000x258	32 885	970	400	21.0	16.5
x477	60 797	1 018	404	45.0	25.5
x554	70 581	1 032	408	52.0	29.5
x642	81 765	1 048	412	60.0	34.0
x748	95 345	1 068	417	70.0	39.0
W 1000x296	37 699	982	400	27.1	16.5
x321	40 849	990	400	31.0	16.5
x371	40 271	1 000	400	36.1	19.0
x412	52 470	1 008	402	40.0	21.1
x443	56 387	1 012	402	41.9	23.6
x883	112 517	1 092	424	82.0	45.5