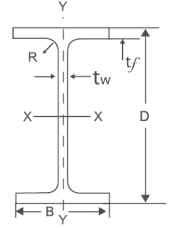
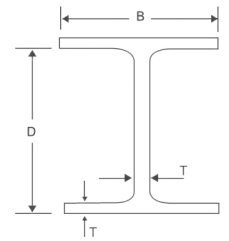


# Universal Beams And Columns (Continued)



Section Number and Nominal size	Moment of inertia				Radius of gyration				Modulus of section			
	$I_x$		$I_y$		$i_x$		$i_y$		$Z_x$		$Z_y$	
mm./(in.)	in. <sup>4</sup>	cm <sup>4</sup>	in. <sup>4</sup>	cm <sup>4</sup>	in.	cm	in.	cm	in. <sup>3</sup>	cm <sup>3</sup>	in. <sup>3</sup>	cm <sup>3</sup>
W27 686 x 254 (27 x 10)	6,950	289,300	277	11,540	11.4	29.0	2.28	5.78	488	7993	54.4	887
	5,953	247,800	234	9750	11.3	28.7	2.57	5.69	423	6940	46.1	756
	5,333	222,000	208	8678	11.3	28.7	2.23	5.67	383	6272	41.4	678
	4,757	198,000	184	7670	11.2	28.5	2.21	5.61	344	5644	36.8	603
	4,090	170,000	159	6,620	11.0	27.9	2.18	5.54	299	4,900	31.5	516
	3,620	151,000	139	5,790	11.0	27.9	2.15	5.46	267	4,380	27.8	456
	3,270	136,000	124	5,160	10.9	27.7	2.12	5.38	243	3,980	24.8	406
2,850	119,000	106	4,410	10.7	27.2	2.07	5.26	213	3,490	21.2	347	
W27 686 X 356 (27 x 14)	8,870	369,200	704	29,310	11.8	30.0	3.32	8.44	624	10,230	99.8	1635
	7,820	325,500	618	25,720	11.7	29.8	3.29	8.36	556	9,118	88.1	1,444
	6,990	291,000	555	23,100	11.6	29.5	3.26	8.28	502	8,230	78.8	1,290
	6,280	261,000	497	20,700	11.5	29.2	3.24	8.23	455	7,460	70.9	1,160
	5,630	234,000	443	18,400	11.4	29.0	3.21	8.15	411	6,740	63.5	1,040
W30 762 x 267 (30 x 10½)	8,486	353,200	294	12,240	12.5	31.7	2.33	5.91	544	8,909	55.3	906
	7,464	310,700	256	10,640	12.4	31.5	2.30	5.84	483	7,914	48.4	794
	6,684	278,200	227	9,463	12.4	31.5	2.29	5.81	436	7,142	43.4	711
	5,770	240,000	196	8,160	12.2	31.0	2.25	5.71	380	6,230	37.2	610
	5,360	223,000	181	7,530	12.1	30.7	2.23	5.66	355	5,820	34.4	564
	4,930	205,000	164	6,830	12.0	30.5	2.19	5.56	329	5,390	31.3	513
	4,470	186,000	146	6,080	11.9	30.2	2.15	5.46	299	4,900	27.9	457
	4,000	166,000	128	5,330	11.7	29.7	2.10	5.33	269	4,410	24.5	401
3,621	150,700	115	4,788	11.7	29.7	2.09	5.30	245	4,018	22.1	362	
W30 762 x 381 (30 x 15)	13,062	543,700	959	39,920	13.0	33.1	3.54	8.98	826	13,540	126.6	2,074
	11,674	485,900	855	35,570	13.0	33.0	3.52	8.94	746	12,220	113.5	1,860
	10,300	429,000	757	31,500	12.9	32.8	3.49	8.86	663	10,900	100	1,640
	9,170	382,000	673	28,000	12.8	32.5	3.46	8.79	598	9,800	89.5	1,470
	8,200	341,000	598	24,000	12.7	32.3	3.43	8.71	539	8,830	79.8	1,310
W33 838 x 292 (33 x 11½)	11,364	473,000	386	16,050	13.8	35.0	2.54	6.45	663	10,860	66.3	1,086
	10,340	430,400	348	14,470	13.7	34.8	2.51	6.38	607	9,950	60.0	984
	9,286	386,500	310	12,920	13.7	34.8	2.50	6.36	549	8,999	54.0	884
	8,160	340,000	273	11,400	13.5	34.3	2.47	6.27	487	7,980	47.2	773
	7,450	310,000	246	10,200	13.4	34.0	2.43	6.17	448	7,340	42.7	700
	6,710	279,000	218	9,070	13.2	33.5	2.38	6.05	406	6,640	37.9	621
	5,900	246,000	187	7,780	13.0	33.0	2.32	5.89	359	5,880	32.6	534
W33 838 x 400 (33 x 15½)	17,668	735,400	1,163	48,390	14.4	36.5	3.69	9.36	1,104	16,620	146.2	2,396
	15,832	659,000	1,035	43,070	14.3	36.3	3.66	9.29	917	15,030	131.0	2,146
	14,200	591,000	932	38,800	14.1	35.8	3.63	9.22	829	13,600	118	1,930
	12,800	533,000	840	35,000	14.1	35.8	3.59	9.12	757	12,400	106	1,740
	11,500	479,000	749	31,200	14.0	35.6	3.56	9.04	684	11,200	95.2	1,560
W36 914 x 305 (36 x 12)	16,743	696,900	528	21,980	14.9	37.9	2.65	6.72	895	14,660	86.4	1,416
	15,020	625,200	468	19,480	14.8	37.7	2.62	6.66	809	13,260	77.3	1,266
	13,200	549,000	411	17,100	14.6	37.1	2.58	6.55	719	11,800	67.5	1,110
	12,100	504,000	375	15,600	14.6	37.1	2.56	6.50	664	10,900	61.9	1,010
	11,300	470,000	347	14,400	14.5	36.8	2.55	6.48	623	10,200	57.6	944
	10,500	437,000	320	13,300	14.5	36.8	2.53	6.43	580	9,500	53.2	872
	9,760	406,000	295	12,300	14.4	36.6	2.50	6.35	542	8,880	49.1	805
	9,040	376,000	270	11,200	14.3	36.3	2.47	6.27	504	8,260	45.1	739
	7,800	325,000	225	9,370	14.0	35.6	2.38	6.04	439	7,190	37.7	618
W36 914 x 419 (36 x 16½)	24,772	1,031,000	1,572	65,450	15.3	38.9	3.86	9.81	1,324	21,700	188	3,081
	22,497	936,400	1,422	59,170	15.3	38.8	3.84	9.76	1,213	19,880	171	2,801
	20,300	845,000	1,300	54,100	15.2	38.6	3.83	9.73	1,110	18,200	156	2,560
	18,900	787,900	1,200	49,900	15.1	38.4	3.81	9.68	1,030	16,900	144	2,360
	17,300	720,000	1,090	45,400	15.0	38.1	3.78	9.60	953	15,600	132	2,160
	16,100	670,000	1,010	42,000	15.0	38.1	3.75	9.52	895	14,700	123	2,020
	15,000	624,000	940	39,100	14.9	37.8	3.73	9.47	837	13,700	114	1,870

# Universal Bearing Piles



## IMPERIAL DIMENSIONS

US term	Serial size in	Weight per ft lb	Depth of Section D in	Width of Section B in	Thickness Web and Flange in	Area of section in <sup>2</sup>
HP14	14 X 14½	117	14.234	14.885	0.805	34.40
		102	14.032	14.784	0.704	30.00
		89	13.856	14.696	0.616	26.10
		73	13.636	14.586	0.506	21.40
No imperial equivalent						
HP12	12 X 12	150	13.308	12.810	1.200	44.17
		125	12.928	12.620	1.010	36.73
		100	12.528	12.420	0.810	29.40
		85	12.308	12.310	0.700	24.60
		74	12.122	12.217	0.607	21.80
		64	11.960	12.136	0.526	18.40
		59	11.878	12.095	0.485	17.36
53	11.780	12.046	0.436	15.50		
No imperial equivalent						
HP10	10 X 10	57	10.012	10.224	0.564	16.80
		48	9.838	10.137	0.477	14.10
		42	9.72	10.078	0.418	12.40
No imperial equivalent						
HP8	8 X 8	36	8.026	81.58	0.446	10.60
		30	7.880	8.085	0.373	8.83
No imperial equivalent						