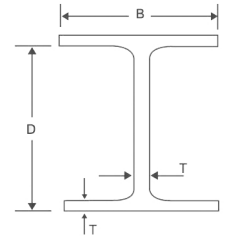


# Universal Bearing Piles



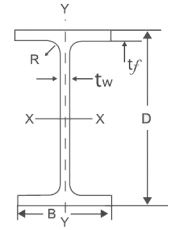
## METRIC / IMPERIAL SIZES

Serial Size mm	Mass kg/m	Depth of Section D mm	Width of Section B mm	Thickness Web and Flange mm	Area of section cm <sup>2</sup>
†400 X 400	235	408	412	25	300
	197	400	408	21	251
	168	394	405	18	214
	140	388	402	15	178
*356 X 368	174	361.5	378.1	20.4	222.2
	152	356.4	375.5	17.9	193.6
	133	351.9	373.3	15.6	169.0
	109	346.4	370.5	12.9	138.4
†350 X 350	156	350	357	19	198.4
	131	344	354	16	166.6
	106	338	351	13	135.3
*305 X 305	223	338.0	325.4	30.5	285.0
	186	328.4	320.5	25.7	237.0
	149	318.2	315.5	20.6	190.0
	126	312.6	312.7	17.8	161.0
	110	307.9	310.3	15.4	140.4
	95	303.8	308.3	13.4	121.0
	88	301.7	307.2	12.3	112.0
79	299.2	306.0	11.1	100.4	
†300 X 300	142	310	310	20	181
	106	300	305	15	134.8
	84.5	294	302	12	107.7
	83.4	294	302	12	106
*254 X 254	85	254.3	259.7	14.3	108.1
	71	249.9	257.5	12.1	91.0
	63	246.9	256.0	10.6	79.7
†250 X 250	82.2	250	255	14	104.7
	64.4	244	252	11	82.06
	63.8	244	252	11	81.3
*203 X 203	54	203.9	207.2	11.3	68.4
	45	202.2	205.4	9.5	57.0
†200 X 200	56.2	200	204	12	71.53

\*BS4: Part 1:1980 sizes

†JIS series

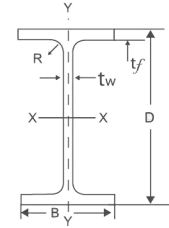
# Universal Beams And Columns



## Metric Units

Section size	Unit weight M	Section depth D	Flange width B	Tickness		Corner radius r	Section area A	Moment of inertia		Radius of gyration		Modulus of section	
				tw	tf			lx	ly	lx	ly	Zx	Zy
mm	kg/m	mm	mm	mm	mm	mm	cm <sup>2</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>
100 x 50	9.30	100	50	5	7	8	11.85	187	14.8	3.98	1.12	37.5	5.91
100 x 100	14.8	100	100	5	7	10	19.2	344	117.0	4.20	2.47	69.0	23.0
	16.9	100	100	8	6	8	21.6	378	134	4.18	2.49	75.6	26.7
	17.2	100	100	6	8	10	21.90	333	134	4.18	2.47	76.5	26.7
125 x 60	13.2	125	60	6	8	9	16.84	413	29.2	4.95	1.32	66.1	9.73
125 x 125	23.6	125	125	6.5	9	8	30.0	840	293	5.29	3.13	134	46.9
	23.8	125	125	6.5	9	10	30.31	847	293	5.29	3.11	136	47.0
150 x 75	14.0	150	75	5	7	8	17.85	666	49.5	6.11	1.66	88.8	13.2
150 x 100	20.7	148	100	6	9	8	26.3	1003	150	6.17	2.39	135	30.1
	21.1	148	100	6	9	11	26.84	1,020	151	6.17	2.37	138	30.1
150 x 150	31.1	150	150	7	10	8	39.6	1623	563	6.40	3.77	216	75.1
	31.5	150	150	7	10	11	40.14	1,640	563	6.39	3.75	219	75.1
	37.4	154	151	8	12	11	47.7	2018	690	6.51	3.80	262	91.4
175 x 90	18.0	175	90	5	8	8	22.9	1205	97.5	7.26	2.06	138	21.7
	18.1	175	90	5	8	9	23.04	1,210	97.5	7.26	2.06	139	21.7
175 x 125	23.3	169	125	5.5	8	12	29.65	1,530	261	7.18	2.97	181	41.8
175 x 175	32.8	171	174	6	9	12	41.7	2304	791	7.43	4.35	269	90.9
	40.2	175	175	7.5	11	13	51.2	2,880	984	7.50	4.38	330	112
	40.4	175	175	7.5	11	12	51.4	2895	984	7.50	4.37	331	112
200 x 100	17.8	198	99	4.5	7	8	22.7	1543	113	8.25	2.24	156	22.9
	18.2	198	99	7	4.5	11	23.2	1582	114	8.26	2.22	160	23.0
	20.9	200	100	5.5	8	8	26.7	1806	134	8.23	2.24	181	26.7
	21.3	200	100	5.5	8	11	27.16	1,840	134	8.24	2.22	184	26.8
200 x 150	29.9	194	150	6	9	8	38.1	2625	507	8.30	3.65	271	67.6
	30.6	194	150	6	9	13	39.01	2,690	507	8.30	3.61	277	67.6
	36.9	198	151	7	11	13	47.0	3331	633	8.42	3.67	336	83.8
200 x 200	41.4	196	199	6.5	10	13	52.7	3846	1315	8.54	5.00	392	132
	49.9	200	200	8	12	13	63.53	4,720	1,600	8.62	5.02	472	160
	56.2	200	204	12	12	13	71.53	4,980	1,700	8.35	4.88	498	167
	57.8	204	201	9	14	13	73.6	5603	1897	5.70	5.08	549	189
	65.7	208	202	16	10	13	83.69	6,530	2,200	8.83	5.13	628	218
250 x 125	25.1	248	124	5	8	8	32.0	3450	255	10.4	2.82	278	41.1
	25.7	248	124	5	8	12	32.68	3,540	255	10.4	2.79	285	41.1
	29.0	250	125	6	9	8	37.0	3965	294	10.4	2.82	317	47.0
	29.6	250	125	6	9	12	37.66	4,050	294	10.4	2.79	324	47.0
250 x 175	43.6	244	175	7	11	13	55.5	6037	984	10.4	4.21	495	112
	44.1	244	175	7	11	16	56.24	6120	985	10.4	4.19	502	113
	51.6	248	176	8	13	16	65.7	7308	1184	10.5	4.24	589	135
	59.1	252	177	9	15	16	75.3	8541	1390	10.7	4.30	678	157

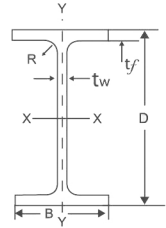
# Universal Beams And Columns



## Metric Units

Section size	Unit weight M	Section depth D	Flange width B	Tickness		Corner radius r	Section area A	Moment of inertia		Radius of gyration		Modulus of section	
				tw	tf			Ix	Iy	Ix	Iy	Zx	Zy
mm	kg/m	mm	mm	mm	mm	mm	cm <sup>2</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>
250 x 250	64.4	244	252	11	11	16	82.06	8,780	2,940	10.3	5.98	720	233
	66.5	248	249	8	13	16	84.7	9,930	3,350	10.8	6.29	801	269
	71.8	250	250	9	14	13	91.4	10,750	3,648	10.8	6.32	860	292
	72.4	250	250	9	14	16	92.18	10,800	3,650	10.8	6.29	867	292
	82.8	250	255	14	14	16	104.7	11,500	3,880	10.5	6.09	919	304
	98.1	260	253	12	19	16	125	15,340	5,134	11.1	6.41	1,180	406
390 x 150	25.0	294	148	4.5	6	16	32.6	4,940	326	12.3	3.16	336	44.0
	32.0	298	149	5.5	8	13	40.80	6,320	442	12.4	3.29	424	59.3
	36.7	300	150	6.5	9	13	46.78	7,210	508	12.4	3.29	481	67.7
	41.4	304	150	6.5	11	13	52.8	8,578	620	12.7	3.43	564	82.7
	46.2	306	151	7.5	12	13	58.8	9,514	691	12.7	3.43	622	91.5
	69.0	318	154	11	18	13	87.9	14,820	1,100	13.0	3.54	932	143
300 x 200	48.3	290	199	7	10	18	61.5	9,431	1,317	12.4	4.63	650	132
	55.8	294	200	8	12	13	71.1	11,110	1,602	12.5	4.75	756	160
	56.8	294	200	8	12	18	72.38	11,300	1,600	12.5	4.71	771	160
	65.4	298	201	9	14	18	83.36	13,300	1,900	12.6	4.77	893	189
	77.3	304	202	10	17	18	98.5	16,280	2,341	12.9	4.88	1,071	232
300 x 300	84.5	294	302	12	12	18	107.7	16,900	5,520	12.5	7.16	1,150	365
	87.0	298	299	9	14	18	110.8	18,800	6,750	13.1	7.51	1,270	450
	93.0	300	300	10	15	13	118	20,190	6,753	13.1	7.55	1,346	450
	94.0	300	300	10	15	18	119.8	20,400	6,750	13.1	7.51	1,360	450
	105	300	305	15	15	13	133.5	21,311	7,102	12.6	7.26	1,421	466
	106	304	301	11	17	18	134.8	23,400	7,730	13.2	7.57	1,540	514
	125	310	303	20	13	18	159	28,130	9,282	13.3	7.64	1,815	613
	130	310	305	15	20	18	165	28,630	9,470	13.2	7.57	1,847	621
	147	312	310	20	21	18	187	31,370	10,450	13.0	7.48	2,011	674
350 x 175	41.2	346	174	6	9	13	52.5	11,040	792	14.5	3.88	638	91.0
	41.4	346	174	6	9	14	52.68	11,100	798	14.5	3.88	641	91.0
	49.4	350	175	7	11	13	62.9	13,500	984	14.6	3.96	771	113
	49.6	350	175	7	11	14	63.14	13,600	984	14.7	3.95	775	112
	57.8	354	176	8	13	14	73.7	16,100	1,184	14.8	4.01	909	135
	66.2	358	177	9	15	14	84.3	18,710	1,390	14.9	4.06	1,045	157
	71.8	360	178	10	16	14	91.4	20,240	1,508	14.9	4.06	1,124	169
	79.7	364	177	11	18	14	101	22,760	1,669	15.0	4.06	1,250	189
350 x 250	69.2	336	249	8	12	20	88.15	18,500	3,090	14.5	5.92	1,100	248
	78.1	340	250	9	14	13	100	21,230	3,649	14.6	6.05	1,249	292
	79.7	340	240	9	14	20	102	21,700	3,650	14.6	6.00	1,280	292
	94.2	346	251	10	17	20	120	26,440	4,488	14.8	6.12	1,528	358
	108	350	253	12	19	20	137	30,190	5,138	14.8	6.12	1,725	406

# Universal Beams And Columns

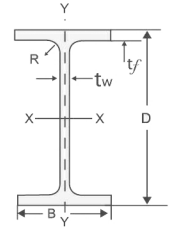


## Metric Units

Section size	Unit weight M	Section depth D	Flange width B	Tickness		Corner radius r	Section area A	Moment of inertia		Radius of gyration		Modulus of section	
				tw	tf			Ix	Iy	Ix	Iy	Zx	Zy
mm	kg/m	mm	mm	mm	mm	mm	mm	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>
350 x 350	106	338	351	13	13	20	135.3	28,200	9,380	14.4	8.33	1,670	534
	113	344	348	10	16	13	144	32,850	11,240	15.1	8.84	1,910	646
	115	344	348	10	16	20	146.0	33,810	11,840	15.1	8.95	1,966	646
	131	344	354	16	16	20	166.6	35,300	11,800	14.6	8.43	2,050	669
	135	350	350	12	19	13	172	39,847	11,840	15.2	8.89	2,277	776
	137	350	350	12	19	20	173.9	40,300	13,583	15.2	8.84	2,303	776
	156	350	357	19	19	20	198.4	42,500	14,400	14.7	8.53	2,450	809
	159	356	352	14	22	20	202.0	47,600	16,000	15.3	8.90	2,674	909
	181	362	354	16	25	20	230	55,190	18,500	15.5	8.96	3,049	1,045
400 x 200	56.1	396	199	7	11	13	71.4	19,770	1,447	16.6	4.50	999	145
	56.5	396	199	7	11	16	72.16	20,020	1,450	16.7	4.48	1,011	145
	65.4	400	200	13	8	13	83.4	23,460	1,736	16.8	4.56	1,173	174
	66.0	400	200	13	8	16	84.12	23,710	1,740	16.8	4.54	1,185	174
	75.5	404	201	9	15	16	96.2	27,490	2,035	16.9	4.60	1,361	202
	88.2	410	202	10	18	16	112	33,060	2,478	17.2	4.70	1,612	245
	140	430	208	16	28	16	179	54,850	4,216	17.5	4.86	2,551	405
400 x 300	94.3	386	299	9	14	22	120.1	33,700	6,240	16.7	7.21	1,740	418
	105	390	300	10	16	13	133	37,860	7,204	16.9	7.35	1,942	480
	107	390	300	10	16	22	136.0	38,680	7,210	16.9	7.28	1,983	481
	127	396	302	12	19	22	162	46,660	8,735	17.0	7.35	2,357	578
400 x 400	140	388	402	15	15	22	178.5	48,930	16,260	16.6	9.55	2,524	809
	147	394	398	11	18	22	186.8	56,150	18,930	17.3	10.1	2,850	951
	168	394	405	18	18	22	214.4	49,700	20,000	16.7	9.65	3,030	985
	172	400	400	13	21	22	218.7	66,620	22,420	17.5	10.1	3,331	1,120
	197	400	408	21	21	22	250.7	70,900	23,800	16.8	9.75	3,540	1,170
	200	406	403	16	24	22	254.9	78,040	26,200	17.5	10.1	3,844	1,300
	232	414	405	18	28	22	295.5	92,770	31,030	17.7	10.2	4,482	1,532
	283	428	407	20	35	22	360.7	119,000	39,360	18.2	10.4	5,570	1,934
	415	458	417	30	50	22	528.6	187,100	60,530	18.8	10.7	8,172	2,903
	605	598	432	45	70	22	770.1	297,900	94,360	19.7	11.1	12,000	4,370
450 x 200	65.1	446	199	8	12	13	83.0	28,130	1,579	18.4	4.36	1,262	159
	66.2	446	199	8	12	18	84.30	28,700	1,580	18.5	4.33	1,287	159
	74.9	450	200	9	14	13	95.4	32,890	1,870	18.6	4.43	1,462	187
	76.0	450	200	9	14	18	96.76	33,500	1,872	18.6	4.40	1,487	187
	88.9	456	201	10	17	18	113	40,400	2,308	18.9	4.51	1,772	230
	98.9	460	202	11	19	18	126	45,430	2,619	19.0	4.56	1,975	259
	110	460	205	14	19	18	140	47,860	2,742	18.5	4.43	2,081	268
	450 x 300	106	434	299	10	15	24	135.0	46,800	6,690	18.6	7.04	2,160
121		440	300	11	18	13	154	54,730	8,106	18.9	7.26	2,488	540
124		440	300	11	18	24	157.4	56,100	8,110	18.9	7.18	2,550	541
145		446	302	13	21	24	184	66,380	9,658	19.0	7.24	2,977	640



# Universal Beams And Columns



## Metric Units

Section size	Unit weight M	Section depth D	Flange width B	Tickness		Corner radius r	Section area A	Moment of inertia		Radius of gyration		Modulus of section	
				tw	tf			Ix	Iy	Ix	Iy	Zx	Zy
mm	kg/m	mm	mm	mm	mm	mm	mm	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>
500 x 200	77.9	496	199	9	14	13	99	40840	1843	20.3	4.31	1647	185
	79.5	496	199	9	14	20	101.3	41,900	1,846	20.3	4.27	1,690	186
	88.2	500	200	10	16	13	112	46810	2138	20.4	4.36	1872	214
	89.6	500	200	10	16	20	114.2	47,800	2,142	20.5	4.33	1,917	214
	102	506	201	11	19	13	129	55480	2578	20.7	4.47	2193	257
	103	506	201	11	19	20	131.3	56,520	2,582	20.7	4.43	2,234	257
	117	512	202	12	22	20	148	65450	3035	21.0	4.52	2557	300
500 x 300	111	482	300	11	15	13	141	58270	6756	20.3	6.92	2418	450
	114	482	300	11	15	26	145.5	60,400	6,768	20.4	6.82	2,505	451
	125	488	300	11	18	13	159	68860	8106	20.8	7.14	2822	540
	128	488	300	11	18	26	163.5	71,000	8,118	20.8	7.05	2,910	541
	150	494	302	13	21	26	191	83810	9663	20.9	7.11	3393	640
600 x 200	79.0	592	197	8	13	22	101	58240	1665	24.1	4.07	1968	169
	92.6	596	199	10	15	13	118	66640	1976	23.8	4.10	2236	199
	94.6	596	199	10	15	22	120.5	68,720	1,982	23.9	4.05	2,310	199
	103	600	200	11	17	13	132	75560	2274	24.0	4.16	2519	227
	106	600	200	11	17	22	134.4	77,630	2,280	24.0	4.12	2,588	228
	118	606	201	12	20	13	150	88320	2716	24.3	4.26	2915	270
	120	606	201	12	20	22	152.5	90,400	2,723	24.3	4.23	2,983	271
	134	612	202	13	23	22	171.7	103,500	3,180	24.6	4.32	3,382	315
	600 x 300	133	582	300	12	17	13	169	98950	7659	24.2	6.73	3400
137		582	300	12	17	28	174.5	102,700	7,675	24.3	6.63	3,530	512
147		588	300	12	20	13	187	114400	9009	24.7	6.94	3889	601
151		588	300	12	20	28	192.5	118,100	9,025	24.8	6.85	4,020	602
170		594	302	14	23	13	217	133,650	10570	24.8	6.98	4497	700
175		594	302	14	23	28	222.4	137,300	10,590	24.9	6.90	4,624	701
203		602	304	16	27	28	259	162600	12680	25.1	7.00	5401	834
217		608	304	16	30	28	277	179300	14090	25.4	7.13	5896	927
700 x 300	166	692	300	13	20	28	211.5	172,400	9,030	28.6	6.53	4,980	602
	182	700	300	13	24	18	232	197500	10820	29.2	6.83	5643	721
	185	700	300	13	24	28	235.5	201,500	10,830	29.3	6.78	5,760	722
	215	708	302	15	28	28	273.6	237,100	12,900	29.5	6.86	6,700	854
800 x 300	191	792	300	14	22	28	243.4	254,000	9,936	32.3	6.39	6,410	662
	207	800	300	14	26	18	264	286,400	11720	33.0	6.67	7159	781
	210	800	300	14	26	28	267.4	291,700	11,740	33.0	6.62	7,292	782
	241	808	302	16	30	28	307.6	339,200	13,820	33.2	6.70	8,400	915
	267	816	303	17	34	28	340	383600	15820	33.6	6.82	9402	1044
900 x 300	210	890	299	15	23	18	267	338500	10280	35.6	6.20	7608	687
	213	890	299	15	23	28	270.9	345,300	10,290	35.7	6.16	7,760	688
	240	900	300	16	28	18	306	404500	12630	36.4	6.43	8989	842
	243	900	300	16	28	28	309.8	411,300	12,650	36.4	6.39	9,140	843
	283	912	302	18	34	18	360	491000	15660	36.9	6.59	10770	1037
	286	912	302	18	34	28	364.0	497,800	15,670	37.0	6.56	10,920	1,038
	304	918	303	19	37	18	387	535400	17210	37.2	6.67	11660	1136
	307	918	303	19	37	28	391	542200	17230	37.2	6.63	11810	1137