



# UNIVERSAL BEAMS: Dimensions and Properties

Designation	Mass per Metre	Depth of Section h	Width of Section b	Thickness Web s	Thickness Flange t	Root Radius r	Depth between fillets d	Ratios for Local Buckling		Second Moment of Area		Radius of Gyration		Elastic Modulus		Plastic Modulus		Buckling Parameter u	Torsional Index x	Warping Constant H	Torsional Constant J	Area of Section
								Flange	Web	Axis x-x	Axis y-y	Axis x-x	Axis y-y	Axis x-x	Axis y-y	Axis x-x	Axis y-y					
								kg/m	mm	mm	mm	mm	mm	mm	mm	mm	mm					
1016 x 305 x 487	487.0	1036.1	308.5	30.0	54.1	30.0	867.8	2.85	29.0	1020400	26720	40.6	6.57	19700	1732	23180	2799	0.867	21.2	64.4	4276	619
1016 x 305 x 438	438.0	1025.9	305.4	26.9	49.0	30.0	868.0	3.12	32.3	908900	23440	40.4	6.49	17720	1535	20740	2467	0.868	23.2	55.9	3166	556
1016 x 305 x 393	393.0	1016.0	303.0	24.4	43.9	30.0	868.2	3.45	35.7	806600	20490	40.2	6.40	15880	1353	18520	2167	0.868	25.6	48.4	2314	500
1016 x 305 x 349	349.0	1008.1	302.0	21.1	40.0	30.0	868.0	3.78	41.2	722100	18460	40.3	6.44	14330	1222	16570	1940	0.872	28.0	43.2	1706	445
1016 x 305 x 314	314.0	1000.0	300.0	19.1	35.9	30.0	868.2	4.18	45.6	643200	16230	40.1	6.37	12860	1082	14830	1712	0.871	30.8	37.7	1253	400
1016 x 305 x 272	272.0	990.1	300.0	16.5	31.0	30.0	868.0	4.84	52.7	552900	14000	40.0	6.36	11170	934	12800	1469	0.872	35.1	32.2	826	346
1016 x 305 x 249	249.0	980.2	300.0	16.5	26.0	30.0	868.0	5.77	52.7	480300	11750	39.0	6.09	9799	784	11330	1244	0.861	40.1	26.8	575	316
1016 x 305 x 222	222.0	970.3	300.0	16.0	21.1	30.0	867.8	7.11	54.4	406900	9544	38.0	5.81	8387	636	9784	1019	0.849	46.0	21.5	384	282
914 x 419 x 388	388.0	921.0	420.5	21.4	36.6	24.1	799.6	5.74	37.4	719600	45440	38.2	9.59	15630	2161	17670	3341	0.885	26.7	88.9	1734	494
914 x 419 x 343	343.3	911.8	418.5	19.4	32.0	24.1	799.6	6.54	41.2	625800	39160	37.8	9.46	13730	1871	15480	2890	0.883	30.1	75.8	1193	437
914 x 305 x 289	289.1	926.6	307.7	19.5	32.0	19.1	824.4	4.81	42.3	504200	15600	37.0	6.51	10880	1014	12570	1601	0.867	31.9	31.2	926	368
914 x 305 x 253	253.4	918.4	305.5	17.3	27.9	19.1	824.4	5.47	47.7	436300	13300	36.8	6.42	9501	871	10940	1371	0.866	36.2	26.4	626	323
914 x 305 x 224	224.2	910.4	304.1	15.9	23.9	19.1	824.4	6.36	51.8	376400	11240	36.3	6.27	8269	739	9535	1163	0.861	41.3	22.1	422	286
914 x 305 x 201	200.9	903.0	303.3	15.1	20.2	19.1	824.4	7.51	54.6	325300	9423	35.7	6.07	7204	621	8351	982	0.854	46.8	18.4	291	256
838 x 292 x 226	226.5	850.9	293.8	16.1	26.8	17.8	761.7	5.48	47.3	339700	11360	34.3	6.27	7985	773	9155	1212	0.870	35.0	19.3	514	289
838 x 292 x 194	193.8	840.7	292.4	14.7	21.7	17.8	761.7	6.74	51.8	279200	9066	33.6	6.06	6641	620	7640	974	0.862	41.6	15.2	306	247
838 x 292 x 176	175.9	834.9	291.7	14.0	18.8	17.8	761.7	7.76	54.4	246000	7799	33.1	5.90	5893	535	6808	842	0.856	46.5	13.0	221	224
762 x 267 x 197	196.8	769.8	268.0	15.6	25.4	16.5	686.0	5.28	44.0	240000	8175	30.9	5.71	6234	610	7176	959	0.869	33.2	11.3	404	251
762 x 267 x 173	173.0	762.2	266.7	14.3	21.6	16.5	686.0	6.17	48.0	205300	6850	30.5	5.58	5387	514	6198	807	0.864	38.1	9.39	267	220
762 x 267 x 147	146.9	754.0	265.2	12.8	17.5	16.5	686.0	7.58	53.6	168500	5455	30.0	5.40	4470	411	5156	647	0.858	45.2	7.40	159	187
762 x 267 x 134	133.9	750.0	264.4	12.0	15.5	16.5	686.0	8.53	57.2	150700	4788	29.7	5.30	4018	362	4644	570	0.854	49.8	6.46	119	171
686 x 254 x 170	170.2	692.9	255.8	14.5	23.7	15.2	615.1	5.40	42.4	170300	6630	28.0	5.53	4916	518	5631	811	0.872	31.8	7.42	308	217
686 x 254 x 152	152.4	687.5	254.5	13.2	21.0	15.2	615.1	6.06	46.6	150400	5784	27.8	5.46	4374	455	5000	710	0.871	35.5	6.42	220	194
686 x 254 x 140	140.1	683.5	253.7	12.4	19.0	15.2	615.1	6.68	49.6	136300	5183	27.6	5.39	3987	409	4558	638	0.868	38.7	5.72	169	178
686 x 254 x 125	125.2	677.9	253.0	11.7	16.2	15.2	615.1	7.81	52.6	118000	4383	27.2	5.24	3481	346	3994	542	0.862	43.9	4.80	116	159
610 x 305 x 238	238.1	635.8	311.4	18.4	31.4	16.5	540.0	4.96	29.3	209500	15840	26.3	7.23	6589	1017	7486	1574	0.886	21.3	14.5	875	303
610 x 305 x 179	179.0	620.2	307.1	14.1	23.6	16.5	540.0	6.51	38.3	153000	11410	25.9	7.07	4935	743	5547	1144	0.886	27.7	10.2	340	228
610 x 305 x 149	149.1	612.4	304.8	11.8	19.7	16.5	540.0	7.74	45.8	125900	9308	25.7	7.00	4111	611	4594	937	0.886	32.7	8.17	200	190