

# Universal Beams



Dimension Detail

Dimensions		UNIVERSAL BEAMS										
Size mm	kg/m	Approx. metres per tonne	Depth of Section D mm	Width of Section B mm	Thickness of Web t mm	Thickness of Flange T mm	Root Radius r mm	Depth between fillets d mm	Area of Section cm <sup>2</sup>	Surface area per metre m <sup>2</sup>	Surface area per tonne m <sup>2</sup>	Surface area two end faces m <sup>2</sup>
100 x 55 (IPE100)	8.1	123	100.0	55.0	4.1	5.7	7.0	74.6	7.64	0.328	54.8	-
127 x 76	13	77	127.0	76.2	4.2	7.6	7.6	96.6	16.5	0.537	41.3	0.0033
152 x 89	16	63	152.4	88.9	4.6	7.7	7.6	121.8	20.3	0.638	39.8	0.0041
178 x 102	19	53	177.8	101.6	4.7	7.9	7.6	146.8	24.3	0.738	38.8	0.0049
203 x 102	23	44	203.2	101.9	5.2	9.3	7.6	169.4	29.4	0.790	34.2	0.0059
203 x 133	25	40	203.2	133.4	5.8	7.8	7.6	172.4	32.0	0.915	36.4	0.0064
203 x 133	30	33	206.8	133.8	6.3	9.6	7.6	172.4	38.2	0.923	30.8	0.0076
254 x 102	22	46	254.0	101.6	5.8	6.8	7.6	225.2	28.0	0.890	40.5	0.0056
254 x 102	25	40	257.0	101.9	6.1	8.4	7.6	225.2	32.0	0.897	35.6	0.0064
254 x 102	28	36	260.4	102.1	6.4	10.0	7.6	225.2	36.1	0.904	31.9	0.0072
254 x 146	31	32	251.5	146.1	6.1	8.6	7.6	219.0	39.7	1.06	34.2	0.0079
254 x 146	37	27	256.0	146.4	6.4	10.9	7.6	219.0	47.2	1.07	29.0	0.0094
254 x 146	43	23	259.6	147.3	7.3	12.7	7.6	219.0	54.8	1.08	25.1	0.0110
305 x 102	25	40	304.8	101.6	5.8	6.8	7.6	275.9	31.6	0.992	40.0	0.0063
305 x 102	28	36	308.9	101.9	6.1	8.9	7.6	275.9	35.9	1.00	35.4	0.0072
305 x 102	33	30	312.7	102.4	6.6	10.8	7.6	275.9	41.8	1.01	30.8	0.0084
305 x 127	37	27	303.8	123.5	7.2	10.7	8.9	265.2	47.2	1.07	29.0	0.0094
305 x 127	42	24	306.6	124.3	8.0	12.1	8.9	265.2	53.4	1.08	25.8	0.0107
305 x 127	48	21	310.4	125.2	8.9	14.0	8.9	265.2	61.2	1.09	22.7	0.0122
305 x 165	40	25	303.8	165.1	6.1	10.2	8.9	265.2	51.3	1.24	30.8	0.0103
305 x 165	46	22	307.1	165.7	6.7	11.8	8.9	265.2	58.7	1.25	27.1	0.0117
305 x 165	54	19	310.9	166.8	7.7	13.7	8.9	265.2	68.8	1.26	23.3	0.0138
356 x 127	33	30	348.5	125.4	5.9	8.5	10.2	311.6	42.1	1.17	35.4	0.0084
356 x 127	39	26	352.8	126.0	6.5	10.7	10.2	311.6	49.8	1.18	30.2	0.0100
356 x 171	45	22	352.0	171.0	6.9	9.7	10.2	311.6	57.3	1.36	30.1	0.0115
356 x 171	51	20	355.6	171.5	7.3	11.5	10.2	311.6	64.9	1.36	26.7	0.0130
356 x 171	57	18	358.6	172.1	8.0	13.0	10.2	311.6	72.6	1.37	24.1	0.0145
356 x 171	67	15	364.0	173.2	9.1	15.7	10.2	311.6	85.5	1.38	20.6	0.0171
406 x 140	39	25	397.3	141.8	6.3	8.6	10.2	360.4	49.7	1.33	34.2	0.0099
406 x 140	46	22	402.3	142.4	6.9	11.2	10.2	360.4	58.6	1.34	29.2	0.0117
406 x 178	54	19	402.6	177.6	7.6	10.9	10.2	360.4	69.0	1.48	27.4	0.0138
406 x 178	60	17	406.4	177.8	7.8	12.8	10.2	360.4	76.5	1.49	24.8	0.0153
406 x 178	67	15	409.4	178.8	8.8	14.3	10.2	360.4	85.5	1.50	22.3	0.0171
406 x 178	74	14	412.8	179.7	9.7	16.0	10.2	360.4	94.5	1.51	20.3	0.0189
457 x 152	52	19	449.8	152.4	7.6	10.9	10.2	407.6	66.6	1.48	28.2	0.0133
457 x 152	60	17	454.7	152.9	8.0	13.3	10.2	407.6	76.2	1.50	24.9	0.0152
457 x 152	67	15	458.0	153.8	9.0	15.0	10.2	407.6	85.6	1.50	22.3	0.0171
457 x 152	74	14	461.3	152.7	9.9	17.0	10.2	407.6	94.5	1.50	20.3	0.0189
457 x 152	82	12	465.1	153.5	10.7	18.9	10.2	407.6	105.0	1.51	18.4	0.0209
457 x 191	67	15	453.6	189.9	8.5	12.7	10.2	407.6	85.5	1.63	24.3	0.0171
457 x 191	74	14	457.2	190.5	9.1	14.5	10.2	407.6	94.6	1.64	22.1	0.0189
457 x 191	82	12	460.2	191.3	9.9	16.0	10.2	407.6	104.0	1.65	20.1	0.0209
457 x 191	89	11	466.0	192.0	10.6	17.7	10.2	407.6	114.0	1.66	18.5	0.0228
457 x 191	98	10	467.4	192.8	11.4	19.6	10.2	407.6	125.0	1.67	16.9	0.0251
Specification to BS EN 10025:S355JR: 2004												
533 x 210	82		528.3	208.8	9.6	13.2	12.7	476.5	105.0	1.85	22.5	0.0209
533 x 210	92		533.1	209.3	10.1	15.6	12.7	476.5	117.0	1.86	20.2	0.0235
533 x 210	101		536.7	210.0	10.8	17.4	12.7	476.5	129.0	1.87	18.5	0.0257
533 x 210	109		539.5	210.8	11.6	18.8	12.7	476.5	139.0	1.88	17.2	0.0278
533 x 210	122		544.5	211.9	12.7	21.3	12.7	476.5	155.0	1.89	15.5	0.0311



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Dimensions		UNIVERSAL COLUMNS									
Size mm	kg/m	Approx. metres per tonne	Depth of Section D-mm	Width of Section B-mm	Thickness of Web		Root Radius	Depth between fillets d-mm	Area of Section cm <sup>2</sup>	Surface area per metre m <sup>2</sup>	Surface area per tonne m <sup>2</sup>
					t-mm	T-mm	r-mm				
152 x 152	23	44	152.4	152.4	6.1	6.8	7.6	123.6	29.2	0.889	38.7
152 x 152	30	33	157.5	152.9	6.6	9.4	7.6	123.6	38.3	0.901	30.0
152 x 152	37	27	161.8	155.4	8.1	11.5	7.6	123.6	47.1	0.912	27.7
203 x 203	46	22	203.2	203.2	7.3	11.0	10.2	160.8	58.7	1.19	25.8
203 x 203	52	19	206.2	203.9	8.0	12.5	10.2	160.8	66.3	1.20	23.0
203 x 203	60	17	209.6	205.2	9.3	14.2	10.2	160.8	76.4	1.21	20.1
203 x 203	71	14	215.9	206.2	10.3	17.3	10.2	160.8	90.4	1.22	17.2
203 x 203	86	12	222.3	208.8	13.0	20.5	10.2	160.8	110.0	1.24	14.4
254 x 254	73	14	254.0	254.0	8.6	14.2	12.7	200.3	93.1	1.49	20.4
254 x 254	89	11	260.4	255.9	10.5	17.3	12.7	200.3	113.0	1.50	16.9
254 x 254	107	9	266.7	258.3	13.0	20.5	12.7	200.3	136.0	1.52	14.2
254 x 254	132	7	276.4	261.0	15.6	25.3	12.7	200.3	168.0	1.55	11.7
254 x 254	167	6	289.1	265.2	19.2	31.7	12.7	200.3	213.0	1.58	9.45
305 x 305	97	10	307.8	304.8	9.9	15.4	15.2	246.7	123.0	1.79	18.5
305 x 305	118	8	314.5	306.8	11.9	18.7	15.2	246.7	150.0	1.81	15.3
305 x 305	137	7	320.5	308.7	13.8	21.7	15.2	246.7	174.0	1.82	13.3
305 x 305	158	6	327.1	310.6	15.7	25.0	15.2	246.7	201.0	1.84	11.6
305 x 305	198	5	339.9	314.5	19.1	31.4	15.2	246.7	252.0	1.87	9.46
305 x 305	240	4	352.5	318.4	23.0	37.7	15.2	246.7	306.0	1.91	7.94
305 x 305	283	4	363.5	322.2	26.8	44.1	15.2	246.7	360.0	1.94	6.86
356 x 368	129	8	355.6	368.6	10.4	17.5	15.2	290.2	164.0	2.14	16.6
356 x 368	153	7	362.0	370.5	12.3	20.7	15.2	290.2	195.0	2.16	14.1
356 x 368	177	6	368.2	372.6	14.4	23.8	15.2	290.2	226.0	2.17	12.3
356 x 368	202	5	374.6	374.7	16.5	27.0	15.2	290.2	257.0	2.19	10.8