

Cold Formed Rectangular Hollow Section (RHS)

AS 1163

Designation		Weight	Cross Sectional Area	Second Moment of Area	Second Moment of Area	Radius of Gyration	Radius of Gyration	Elastic Modulus	Elastic Modulus	Plastic Modulus	Plastic Modulus	Torsional inertia content	Torsional modulus content	Superficial Area per metre length	Nominal Length per tonne	Ratio for Local Buckling
Size	Thickness															
B × H	T	M	A	I_{yy}	I_{zz}	i_{yy}	i_{zz}	W_{elyy}	W_{elzz}	W_{plyy}	W_{plzz}	L_t	C_t	As	L	Flange
mm	mm	Kg/m	cm ²	cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³	m ² /m	m	B/T
19 × 38	1.6	1.300	1.66	2.91	0.97	1.33	0.77	1.53	1.02	1.95	1.20	2.46	1.79	0.11	769.41	6.88
20 × 40	2.0	1.678	2.14	4.05	1.34	1.38	0.79	2.02	1.34	2.61	1.60	3.45	2.36	0.11	596.11	5.00
	2.5	2.032	2.59	4.69	1.54	1.35	0.77	2.35	1.54	3.09	1.88	4.06	2.72	0.11	492.03	3.00
	3.0	2.361	3.01	5.21	1.68	1.32	0.75	2.60	1.68	3.50	2.12	4.57	3.00	0.11	423.47	1.67
25 × 38	1.6	1.450	1.85	3.55	1.85	1.39	1.00	1.87	1.48	2.30	1.72	3.99	2.45	0.12	689.45	10.63
25 × 50	1.6	1.752	2.23	7.02	2.37	1.77	1.03	2.81	1.90	3.53	2.17	5.85	3.29	0.14	570.82	10.63
	2.0	2.149	2.74	8.38	2.81	1.75	1.01	3.35	2.25	4.26	2.62	7.06	3.92	0.14	465.43	7.50
	2.3	2.435	3.10	9.31	3.10	1.73	1.00	3.72	2.48	4.78	2.92	7.90	4.34	0.14	410.64	5.87
	2.5	2.621	3.34	9.89	3.28	1.72	0.99	3.95	2.62	5.11	3.12	8.43	4.60	0.14	381.51	5.00
25 × 75	3.0	3.068	3.91	11.17	3.67	1.69	0.97	4.47	2.93	5.86	3.56	9.64	5.18	0.14	325.95	3.33
	1.6	2.380	3.03	19.74	3.47	2.55	1.07	5.26	2.78	6.81	3.11	9.93	5.05	0.19	420.19	10.63
	1.9	2.797	3.56	22.84	3.98	2.53	1.06	6.09	3.18	7.94	3.61	11.50	5.80	0.19	357.57	8.16
	2.0	2.934	3.74	23.84	4.14	2.53	1.05	6.36	3.31	8.31	3.77	12.01	6.04	0.19	340.89	7.50
	2.3	3.338	4.25	26.70	4.59	2.51	1.04	7.12	3.67	9.37	4.23	13.46	6.72	0.19	299.58	5.87
	2.5	3.602	4.59	28.52	4.87	2.49	1.03	7.60	3.89	10.06	4.53	14.38	7.14	0.19	277.59	5.00
30 × 50	3.0	4.245	5.41	32.72	5.49	2.46	1.01	8.72	4.39	11.69	5.21	16.50	8.10	0.19	235.55	3.33
	4.0	5.346	6.81	37.78	6.25	2.36	0.96	10.07	5.00	14.04	6.22	19.74	9.46	0.18	187.04	-0.25
	4.5	5.883	7.49	40.10	6.55	2.31	0.93	10.69	5.24	15.16	6.66	20.96	9.97	0.18	169.97	-0.94
	2.0	2.306	2.94	9.54	4.29	1.80	1.21	3.81	2.86	4.74	3.33	9.77	4.84	0.15	433.74	10.00
	2.5	2.817	3.59	11.30	5.05	1.77	1.19	4.52	3.37	5.70	3.98	11.74	5.72	0.15	354.94	7.00
30 × 60	3.0	3.303	4.21	12.83	5.70	1.75	1.16	5.13	3.80	6.57	4.58	13.53	6.49	0.15	302.71	5.00
	4.0	4.090	5.21	14.39	6.39	1.66	1.11	5.75	4.26	7.70	5.37	16.27	7.56	0.14	244.48	1.00
	5.0	4.821	6.14	15.53	6.85	1.59	1.06	6.21	4.57	8.66	6.01	18.09	8.25	0.14	207.42	-0.50
	1.6	2.129	2.71	12.49	4.25	2.15	1.25	4.16	2.83	5.19	3.20	10.35	4.90	0.17	469.78	13.75
30 × 80	1.9	2.498	3.18	14.43	4.88	2.13	1.24	4.81	3.25	6.04	3.72	12.03	5.64	0.17	400.26	10.79
	2.3	2.977	3.79	16.82	5.65	2.11	1.22	5.61	3.76	7.11	4.37	14.14	6.56	0.17	335.93	8.04
	3.0	3.774	4.81	20.50	6.80	2.06	1.19	6.83	4.53	8.82	5.39	17.48	7.95	0.17	264.94	5.00
30 × 110	1.6	2.631	3.35	25.79	5.54	2.77	1.29	6.45	3.69	8.22	4.11	15.11	6.62	0.21	380.07	13.75
	1.9	3.095	3.94	29.94	6.38	2.76	1.27	7.48	4.25	9.60	4.79	17.58	7.65	0.21	323.11	10.79
	2.3	3.699	4.71	35.13	7.42	2.73	1.25	8.78	4.94	11.36	5.64	20.69	8.91	0.21	270.34	8.04
	3.0	4.716	6.01	43.35	8.99	2.69	1.22	10.84	6.00	14.23	7.01	25.65	10.87	0.21	212.02	5.00
35 × 65	2.0	4.190	5.34	71.62	9.00	3.66	1.30	13.02	6.00	17.15	6.69	27.35	11.11	0.27	238.69	10.00
	2.5	5.172	6.59	86.79	10.74	3.63	1.28	15.78	7.16	20.97	8.11	33.03	13.29	0.27	193.33	7.00
	3.0	6.129	7.81	100.91	12.29	3.59	1.25	18.35	8.19	24.59	9.44	38.25	15.26	0.27	163.15	5.00
	4.0	7.858	10.01	121.89	14.56	3.49	1.21	22.16	9.71	30.53	11.61	47.18	18.44	0.26	127.25	1.00
	1.6	2.380	3.03	16.87	6.47	2.36	1.46	5.19	3.70	6.39	4.17	15.10	6.32	0.19	420.19	16.88
38 × 65	1.9	2.797	3.56	19.54	7.46	2.34	1.45	6.01	4.26	7.46	4.85	17.61	7.30	0.19	357.57	13.42
	2.0	2.934	3.74	20.40	7.78	2.34	1.44	6.28	4.44	7.80	5.07	18.42	7.62	0.19	340.89	12.50
	2.3	3.338	4.25	22.88	8.69	2.32	1.43	7.04	4.96	8.81	5.72	20.79	8.53	0.19	299.58	10.22
	2.5	3.602	4.59	24.45	9.26	2.31	1.42	7.52	5.29	9.45	6.13	22.31	9.10	0.19	277.59	9.00
	3.0	4.245	5.41	28.10	10.57	2.28	1.40	8.65	6.04	10.99	7.11	25.91	10.44	0.19	235.55	6.67
	4.0	5.346	6.81	32.82	12.30	2.20	1.34	10.10	7.03	13.28	8.58	32.04	12.53	0.18	187.04	2.25
	1.6	2.455	3.13	17.83	7.79	2.39	1.58	5.49	4.10	6.70	4.63	17.39	6.91	0.20	407.29	18.75
38 × 75	1.9	2.886	3.68	20.68	9.00	2.37	1.56	6.36	4.74	7.82	5.40	20.30	8.00	0.20	346.48	15.00
	2.0	3.028	3.86	21.59	9.39	2.37	1.56	6.64	4.94	8.18	5.64	21.24	8.35	0.20	330.28	14.00
	2.3	3.446	4.39	24.23	10.56	2.35	1.55	7.46	5.53	9.24	6.37	24.01	9.36	0.20	290.17	11.52
	2.5	3.720	4.74	25.91	11.20	2.34	1.54	7.97	5.90	9.92	6.83	25.79	10.00	0.20	268.81	10.20
	3.0	4.387	5.59	29.83	12.83	2.31	1.51	9.18	6.75	11.55	7.93	30.02	11.50	0.20	227.96	7.67
	3.2	4.577	5.83	30.36	13.10	2.28	1.50	9.34	6.90	11.88	8.18	31.64	11.97	0.19	218.48	5.38
	4.0	5.535	7.05	35.06	15.03	2.23	1.46	10.79	7.91	14.01	9.62	37.38	13.89	0.19	180.68	3.00
	1.6	2.706	3.45	25.34	8.85	2.71	1.60	6.76	4.66	8.34	5.21	21.15	8.03	0.22	369.49	18.75
40 × 60	1.9	3.184	4.06	29.44	10.24	2.69	1.59	7.85	5.39	9.75	6.08	24.71	9.30	0.22	314.03	15.00
	2.0	3.342	4.26	30.77	10.68	2.69	1.58	8.20	5.62	10.21	6.36	25.86	9.71	0.22	299.25	14.00
	2.3	3.807	4.85	34.61	11.97	2.67	1.57	9.23	6.30	11.55	7.19	29.24	10.90	0.22	262.65	11.52
	2.5	4.113	5.24	37.06	12.78	2.66	1.56	9.88	6.73	12.42	7.72	31.42	11.66	0.22	243.15	10.20
	3.0	4.858	6.19	42.83	14.67	2.63	1.54	11.42	7.72	14.49	8.98	36.62	13.43	0.22	205.86	7.67
	3.2	5.080	6.47	43.75	15.05	2.60	1.52	11.67	7.92	14.96	9.30	38.64	14.02	0.21	196.87	5.38
	4.0	6.163	7.85	50.90	17.36	2.55	1.49	13.57	9.14	17.74	10.98	45.79	16.33	0.21	162.27	3.00
	4.5	6.802	8.66	54.65	18.55	2.51	1.46	14.57	9.76	19.29	11.92	49.70	17.56	0.21	147.02	1.94
	2.0	2.934	3.74	18.41	9.83	2.22	1.62	6.14	4.92	7.47	5.65	20.70	8.12	0.19	340.89	15.00
40 × 80	2.5	3.602	4.59	22.07	11.74	2.19	1.60	7.36	5.87	9.06	6.84	25.14	9.72	0.19	277.59	11.00
	3.0	4.245	5.41	25.38	13.44	2.17	1.58	8.46	6.72	10.53	7.94	29.28	11.17	0.19	235.55	8.33
	4.0	5.346	6.81	29.74	15.73	2.09	1.52	9.91	7.86	12.75	9.62	36.50	13.50	0.18	187.04	3.50
	5.0	6.391	8.14	33.38	17.57	2.02	1.47	11.13	8.79	14.73	11.09	42.22	15.30	0.18	156.47	1.50
	1.6	2.882	3.67	30.71	10.52	2.89	1.69	7.68	5.26	9.47	5.87	25.23	9.08	0.23	346.95	20.00
40 × 100	1.9	3.393	4.32	35.73	12.19											

Cold Formed Rectangular Hollow Section (RHS)

AS 1163

Designation		Weight	Cross Sectional Area	Second Moment of Area	Second Moment of Area	Radius of Gyration	Radius of Gyration	Elastic Modulus	Elastic Modulus	Plastic Modulus	Plastic Modulus	Torsional inertia content	Torsional modulus content	Superficial Area per metre length	Nominal Length per tonne	Ratio for Local Buckling
Size	Thickness															
$B \times H$	T	M	A	I_{yy}	I_{zz}	i_{yy}	i_{zz}	W_{elzy}	W_{elzz}	W_{plyy}	W_{plzz}	L_t	C_t	A_s	L	Flange
mm	mm	Kg/m	cm ²	cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³	m ² /m	m	B/T
50 x 70	2.0	3.562	4.54	31.48	18.76	2.63	2.03	8.99	7.50	10.80	8.58	37.45	12.20	0.23	280.78	20.00
	2.5	4.387	5.59	38.01	22.59	2.61	2.01	10.86	9.04	13.16	10.45	45.75	14.72	0.23	227.93	15.00
	3.0	5.187	6.61	44.05	26.10	2.58	1.99	12.59	10.44	15.40	12.21	53.62	17.06	0.23	192.77	11.67
	4.0	6.602	8.41	52.98	31.36	2.51	1.93	15.14	12.54	18.99	15.06	68.07	21.04	0.22	151.46	6.00
	5.0	7.961	10.14	60.81	35.86	2.45	1.88	17.38	14.34	22.30	17.66	80.33	24.35	0.22	125.61	3.50
50 x 75	1.6	3.008	3.83	30.51	16.39	2.82	2.07	8.14	6.56	9.75	7.40	33.67	10.78	0.24	332.46	26.25
	1.9	3.542	4.51	35.54	19.05	2.81	2.05	9.48	7.62	11.42	8.65	39.46	12.55	0.24	282.29	21.32
	2.0	3.719	4.74	37.16	19.91	2.80	2.05	9.91	7.96	11.96	9.06	41.35	13.12	0.24	268.92	20.00
	2.3	4.241	5.40	41.90	22.41	2.79	2.04	11.17	8.96	13.56	10.26	46.92	14.78	0.24	235.81	16.74
	2.5	4.584	5.84	44.95	24.00	2.77	2.03	11.99	9.60	14.59	11.04	50.54	15.85	0.24	218.17	15.00
	3.0	5.423	6.91	52.17	27.76	2.75	2.00	13.91	11.10	17.09	12.91	59.27	18.38	0.24	184.40	11.67
	4.0	6.916	8.81	63.01	33.48	2.67	1.95	16.80	13.39	21.14	15.98	75.37	22.73	0.23	144.59	6.00
	4.5	7.650	9.74	68.09	36.09	2.64	1.92	18.16	14.44	23.09	17.44	82.52	24.64	0.23	130.73	4.61
	5.0	8.354	10.64	72.61	38.40	2.61	1.90	19.36	15.36	24.90	18.78	89.12	26.87	0.23	119.71	3.50
	6.0	9.674	12.32	79.99	42.14	2.55	1.85	21.33	16.86	28.06	21.13	100.59	29.28	0.22	103.37	1.83
50 x 90	2.0	4.190	5.34	57.88	23.37	3.29	2.09	12.86	9.35	15.74	10.50	53.37	15.88	0.27	238.69	20.00
	2.5	5.172	6.59	70.26	28.24	3.27	2.07	15.61	11.29	19.25	12.82	65.30	19.24	0.27	193.33	15.00
	3.0	6.129	7.81	81.85	32.74	3.24	2.05	18.19	13.10	22.60	15.03	76.67	22.36	0.27	163.15	11.67
	4.0	7.858	10.01	99.91	39.84	3.16	1.99	22.20	15.94	28.20	18.74	97.83	27.81	0.26	127.25	6.00
	5.0	9.531	12.14	116.22	46.03	3.09	1.95	25.83	18.41	33.44	22.16	116.16	32.45	0.26	104.92	3.50
50 x 100	1.6	3.636	4.63	61.29	21.08	3.64	2.13	12.26	8.43	15.04	9.33	50.08	14.53	0.29	275.04	26.25
	1.9	4.288	5.46	71.62	24.55	3.62	2.12	14.32	9.82	17.65	10.94	58.75	16.94	0.29	233.20	21.32
	2.0	4.504	5.74	74.98	25.67	3.62	2.12	15.00	10.27	18.50	11.46	61.59	17.73	0.29	222.05	20.00
	2.3	5.143	6.55	84.83	28.95	3.60	2.10	16.97	11.58	21.03	13.01	69.95	20.02	0.29	194.42	16.74
	2.5	5.565	7.09	91.20	31.06	3.59	2.09	18.24	12.42	22.67	14.01	75.39	21.49	0.29	179.70	15.00
	3.0	6.600	8.41	106.46	36.06	3.56	2.07	21.29	14.42	26.66	16.44	88.56	25.01	0.29	151.50	11.67
	4.0	8.486	10.81	130.68	44.08	3.48	2.02	26.14	17.63	33.41	20.58	113.17	31.20	0.28	117.84	6.00
	4.5	9.416	11.99	142.22	47.78	3.44	2.00	28.44	19.11	36.68	22.56	124.27	33.97	0.28	106.20	4.61
	5.0	10.316	13.14	152.77	51.11	3.41	1.97	30.55	20.44	39.76	24.41	134.63	36.51	0.28	96.94	3.50
	6.0	12.029	15.32	170.96	56.75	3.34	1.92	34.19	22.70	45.34	27.73	153.13	40.92	0.27	83.13	1.83
6.3	12.520	15.95	175.68	58.19	3.32	1.91	35.14	23.27	46.87	28.63	158.08	42.07	0.27	79.87	2.94	
50 x 125	2.3	6.046	7.70	148.24	35.50	4.39	2.15	23.72	14.20	29.94	15.75	93.92	25.25	0.34	165.39	16.74
	2.5	6.546	8.34	159.61	38.12	4.37	2.14	25.54	15.25	32.31	16.98	101.26	27.13	0.34	152.76	15.00
	3.0	7.778	9.91	187.02	44.35	4.34	2.12	29.92	17.74	38.11	19.96	119.03	31.64	0.34	128.57	11.67
	4.0	10.056	12.81	232.13	54.69	4.26	2.07	37.14	21.88	48.17	25.18	152.42	39.68	0.33	99.44	6.00
	4.5	11.182	14.24	253.84	59.46	4.22	2.04	40.61	23.78	53.08	27.68	167.59	43.30	0.33	89.43	4.61
	5.0	12.279	15.64	274.01	63.82	4.19	2.02	43.84	25.53	57.79	30.03	181.85	46.66	0.33	81.44	3.50
	6.0	14.384	18.32	309.82	71.36	4.11	1.97	49.57	28.54	66.37	34.33	207.60	52.58	0.32	69.52	1.83
6.3	14.993	19.10	319.41	73.33	4.09	1.96	51.11	29.33	68.77	35.52	214.59	54.16	0.32	66.70	2.94	
50 x 150	2.3	6.949	8.85	235.71	42.04	5.16	2.18	31.43	16.82	40.28	18.49	118.46	30.49	0.39	143.91	16.74
	3.0	8.955	11.41	298.55	52.65	5.12	2.15	39.81	21.06	51.43	23.49	150.22	38.28	0.39	111.66	11.67
	4.0	11.626	14.81	373.62	65.30	5.02	2.10	49.82	26.12	65.43	29.78	192.52	48.15	0.38	86.01	6.00
	4.5	12.948	16.49	409.97	71.14	4.99	2.08	54.66	28.46	72.29	32.79	211.84	52.64	0.38	77.23	4.61
	5.0	14.241	18.14	444.13	76.53	4.95	2.05	59.22	30.61	78.86	35.66	230.06	56.81	0.38	70.22	3.50
	6.0	16.739	21.32	505.94	85.97	4.87	2.01	67.46	34.39	91.15	40.93	263.18	64.25	0.37	59.74	1.83
	6.3	17.466	22.25	522.83	88.47	4.85	1.99	69.71	35.39	94.62	42.40	272.24	66.26	0.37	57.25	2.94
60 x 80	2.0	4.190	5.34	49.53	31.87	3.05	2.44	12.38	10.62	14.73	12.11	61.22	17.08	0.27	238.69	25.00
	2.5	5.172	6.59	60.13	38.61	3.02	2.42	15.03	12.87	18.02	14.81	75.07	20.73	0.27	193.33	19.00
	3.0	6.129	7.81	70.05	44.89	3.00	2.40	17.51	14.96	21.16	17.37	88.35	24.14	0.27	163.15	15.00
	4.0	7.858	10.01	85.70	54.87	2.93	2.34	21.43	18.29	26.44	21.71	113.37	30.17	0.26	127.25	8.50
	5.0	9.531	12.14	99.81	63.72	2.87	2.29	24.95	21.24	31.37	25.73	135.38	35.38	0.26	104.92	5.50
60 x 100	2.5	5.957	7.59	103.09	46.88	3.69	2.49	20.62	15.63	25.11	17.68	103.25	26.23	0.31	167.86	19.00
	3.0	7.071	9.01	120.57	54.65	3.66	2.46	24.11	18.22	29.57	20.79	121.67	30.64	0.31	141.41	15.00
	4.0	9.114	11.61	149.12	67.44	3.58	2.41	29.82	22.48	37.25	26.19	156.69	38.53	0.30	109.72	8.50
	5.0	11.101	14.14	175.36	78.88	3.52	2.36	35.07	26.29	44.51	31.23	187.94	45.46	0.30	90.08	5.50
	6.0	12.971	16.52	197.51	88.41	3.46	2.31	39.50	29.47	50.98	35.69	215.72	51.40	0.29	77.09	3.50
	6.3	13.510	17.21	203.38	90.91	3.44	2.30	40.68	30.30	52.77	36.92	223.36	53.00	0.29	74.02	4.52
60 x 120	2.5	6.742	8.59	161.23	55.15	4.33	2.53	26.87	18.38	33.20	20.56	132.57	31.75	0.35	148.32	19.00
	3.0	8.013	10.21	189.12	64.40	4.30	2.51	31.52	21.47	39.18	24.21	156.34	37.14	0.35	124.79	15.00
	4.0	10.370	13.21	235.76	80.00	4.22	2.46	39.29	26.67	49.66	30.67	201.69	46.90	0.34	96.43	8.50
	4.5	11.535	14.69	258.21	87.30	4.19	2.44	43.04	29.10	54.77	33.77	222.61	51.37	0.34	86.69	6.83
	5.0	12.671	16.14	279.19	94.05	4.16	2.41	46.53	31.35	59.65	36.73	242.51	55.55	0.34	78.92	5.50
	6.0	14.855	18.92	316.79	105.98	4.09	2.37	52.80	35.33	68.71	42.17	279.18	63.09	0.33	67.32	3.50
	6.3	15.488	19.73	326.97	109.16	4.07	2.35	54.49	36.39	71.24	43.69	289.35	65.14	0.33	64.57	4.52
75 x 100	2.3	6.0														

Cold Formed Rectangular Hollow Section (RHS)

AS 1163

Designation		Weight	Cross Sectional Area	Second Moment of Area	Second Moment of Area	Radius of Gyration	Radius of Gyration	Elastic Modulus	Elastic Modulus	Plastic Modulus	Plastic Modulus	Torsional inertia content	Torsional modulus content	Superficial Area per metre length	Nominal Length per tonne	Ratio for Local Buckling
Size	Thickness															
$B \times H$	T	M	A	I_{yy}	I_{zz}	i_{yy}	i_{zz}	W_{elzy}	W_{elzz}	W_{plyy}	W_{plzz}	L_t	C_t	A_s	L	Flange
mm	mm	Kg/m	cm ²	cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³	m ² /m	m	B/T
75 x 150	2.3	7.852	10.00	298.43	102.71	5.46	3.20	39.79	27.39	48.77	30.28	243.63	47.18	0.44	127.36	27.61
	3.0	10.133	12.91	379.59	129.97	5.42	3.17	50.61	34.66	62.45	38.69	311.78	59.82	0.44	98.69	20.00
	4.0	13.196	16.81	480.22	163.93	5.34	3.12	64.03	43.72	80.03	49.54	405.66	76.44	0.43	75.78	12.25
	4.5	14.715	18.74	529.09	180.07	5.31	3.10	70.55	48.02	88.66	54.82	449.81	84.21	0.43	67.96	10.17
	5.0	16.204	20.64	575.59	195.31	5.28	3.08	76.74	52.08	96.99	59.90	492.42	91.60	0.43	61.71	8.50
	6.0	19.094	24.32	661.55	223.18	5.22	3.03	88.21	59.51	112.75	69.46	572.92	105.30	0.42	52.37	6.00
	6.3	19.939	25.40	685.55	230.88	5.20	3.01	91.41	61.57	117.25	72.18	595.83	109.13	0.42	50.15	6.90
	8.0	24.525	31.24	806.27	269.01	5.08	2.93	107.50	71.74	140.76	86.30	714.49	128.51	0.42	40.77	4.38
9.0	27.066	34.48	865.50	287.29	5.01	2.89	115.40	76.61	153.03	93.60	775.20	138.10	0.41	36.95	3.33	
80 x 100	2.5	6.742	8.59	126.86	90.17	3.84	3.24	25.37	22.54	29.98	25.77	165.84	35.73	0.35	148.32	27.00
	3.0	8.013	10.21	148.81	105.64	3.82	3.22	29.76	26.41	35.39	30.40	196.12	41.91	0.35	124.79	21.67
	4.0	10.370	13.21	186.01	131.95	3.75	3.16	37.20	32.99	44.93	38.60	254.72	53.23	0.34	96.43	13.50
	5.0	12.671	16.14	220.52	156.15	3.70	3.11	44.10	39.04	54.01	46.37	308.31	63.43	0.34	78.92	9.50
	6.0	14.855	18.92	250.59	177.12	3.64	3.06	50.12	44.28	62.26	53.42	357.49	72.48	0.33	67.32	6.83
	6.3	15.488	19.73	258.77	182.81	3.62	3.04	51.75	45.70	64.58	55.39	371.35	74.97	0.33	64.57	7.70
80 x 120	2.5	7.527	9.59	195.75	105.19	4.52	3.31	32.63	26.30	39.07	29.65	215.82	43.23	0.39	132.85	27.00
	3.0	8.955	11.41	230.20	123.43	4.49	3.29	38.37	30.86	46.20	35.02	255.47	50.80	0.39	111.66	21.67
	4.0	11.626	14.81	289.61	155.08	4.42	3.24	48.27	38.77	58.94	44.68	332.47	64.78	0.38	86.01	13.50
	4.5	12.948	16.49	318.27	170.14	4.39	3.21	53.05	42.54	65.17	49.37	368.60	71.30	0.38	77.23	11.28
	5.0	14.241	18.14	345.35	184.31	4.36	3.19	57.56	46.08	71.15	53.87	403.45	77.48	0.38	70.22	9.50
	6.0	16.739	21.32	394.84	210.05	4.30	3.14	65.81	52.51	82.39	62.30	469.16	88.89	0.37	59.74	6.83
	6.3	17.466	22.25	408.50	217.11	4.28	3.12	68.08	54.28	85.57	64.68	487.82	92.07	0.37	57.25	7.70
80 x 140	4.0	12.882	16.41	422.83	178.20	5.08	3.30	60.40	44.55	74.55	50.76	413.10	76.33	0.42	77.63	13.50
	5.0	15.811	20.14	506.46	212.48	5.01	3.25	72.35	53.12	90.29	61.37	502.06	91.54	0.42	63.25	9.50
	6.0	18.623	23.72	581.74	242.98	4.95	3.20	83.11	60.74	104.91	71.18	584.89	105.32	0.41	53.70	6.83
	6.3	19.444	24.77	602.72	251.42	4.93	3.19	86.10	62.85	109.08	73.97	608.51	109.19	0.41	51.43	7.70
	8.0	23.897	30.44	708.09	293.31	4.82	3.10	101.16	73.33	130.82	88.45	731.35	128.77	0.41	41.85	5.00
80 x 160	3.0	10.839	13.81	463.81	159.03	5.80	3.39	57.98	39.76	71.41	44.26	380.34	68.59	0.47	92.26	21.67
	3.2	11.460	14.60	485.75	166.84	5.77	3.38	60.72	41.71	75.09	46.60	405.00	72.53	0.47	87.26	18.50
	4.0	14.138	18.01	588.87	201.33	5.72	3.34	73.61	50.33	91.76	56.84	495.83	87.89	0.46	70.73	13.50
	4.5	15.774	20.09	649.73	221.51	5.69	3.32	81.22	55.38	101.76	62.96	550.39	96.95	0.46	63.39	11.28
	5.0	17.381	22.14	707.86	240.65	5.65	3.30	88.48	60.16	111.43	68.87	603.21	105.61	0.46	57.53	9.50
	6.0	20.507	26.12	816.08	275.91	5.59	3.25	102.01	68.98	129.83	80.06	703.55	121.76	0.45	48.76	6.83
	6.3	21.422	27.29	846.48	285.72	5.57	3.24	105.81	71.43	135.11	83.25	732.25	126.31	0.45	46.68	7.70
	8.0	26.409	33.64	1001.22	334.95	5.46	3.16	125.15	83.74	162.86	99.97	882.33	149.54	0.45	37.87	5.00
	9.0	29.185	37.18	1078.66	359.07	5.39	3.11	134.83	89.77	177.51	108.72	960.40	161.25	0.44	34.26	3.89
100 x 150	3.0	11.310	14.41	460.64	247.64	5.65	4.15	61.42	49.53	73.48	55.76	507.20	81.40	0.49	88.41	28.33
	4.0	14.766	18.81	586.83	315.10	5.59	4.09	78.24	63.02	94.63	71.81	664.16	104.80	0.48	67.72	18.50
	4.5	16.481	20.99	648.21	347.58	5.56	4.07	86.43	69.52	105.03	79.66	738.90	115.87	0.48	60.68	15.72
	5.0	18.166	23.14	707.04	378.61	5.53	4.04	94.27	75.72	115.11	87.26	811.70	126.52	0.48	55.05	13.50
	6.0	21.449	27.32	817.16	436.40	5.47	4.00	108.96	87.28	134.35	101.74	951.33	146.58	0.47	46.62	10.17
	6.3	22.411	28.55	848.27	452.66	5.45	3.98	113.10	90.53	139.88	105.90	991.64	152.27	0.47	44.62	10.87
	8.0	27.665	35.24	1008.13	535.65	5.35	3.90	134.42	107.13	169.16	127.85	1205.89	181.85	0.47	36.15	7.50
	9.0	30.598	38.98	1089.46	577.49	5.29	3.85	145.26	115.50	184.75	139.51	1320.32	197.16	0.46	32.68	6.11
	100 x 180	4.0	16.650	21.21	914.86	370.43	6.57	4.18	101.65	74.09	124.65	83.33	856.92	126.91	0.54	60.06
5.0		20.521	26.14	1106.70	446.36	6.51	4.13	122.97	89.27	152.08	101.51	1048.57	153.60	0.54	48.73	13.50
6.0		24.275	30.92	1284.40	516.03	6.44	4.09	142.71	103.21	178.04	118.66	1230.68	178.39	0.53	41.19	10.17
6.3		25.379	32.33	1334.99	535.75	6.43	4.07	148.33	107.15	185.54	123.61	1283.41	185.46	0.53	39.40	10.87
8.0		31.433	40.04	1598.49	637.47	6.32	3.99	177.61	127.49	225.62	149.93	1565.24	222.49	0.53	31.81	7.50
10.0		38.125	48.57	1859.47	736.41	6.19	3.89	206.61	147.28	267.51	177.25	1858.62	259.61	0.52	26.23	5.00
12.0		44.349	56.50	2069.63	814.47	6.05	3.80	229.96	162.89	303.84	200.74	2108.95	290.07	0.51	22.55	4.33
12.5		45.832	58.38	2114.50	830.92	6.02	3.77	234.94	166.18	312.06	206.02	2164.60	296.68	0.51	21.82	4.00
100 x 200		4.0	17.906	22.81	1185.90	407.32	7.21	4.23	118.59	81.46	146.66	91.01	988.76	141.66	0.58	55.85
	4.5	20.013	25.49	1313.96	450.26	7.18	4.20	131.40	90.05	163.14	101.14	1100.97	156.91	0.58	49.97	15.72
	5.0	22.091	28.14	1437.67	491.52	7.15	4.18	143.77	98.30	179.22	111.01	1210.53	171.65	0.58	45.27	13.50
	6.0	26.159	33.32	1672.20	569.12	7.08	4.13	167.22	113.82	210.16	129.94	1421.61	199.60	0.57	38.23	10.17
	6.3	27.357	34.85	1739.24	591.15	7.06	4.12	173.92	118.23	219.13	135.41	1482.82	207.60	0.57	36.55	10.87
	8.0	33.945	43.24	2090.84	705.36	6.95	4.04	209.08	141.07	267.26	164.65	1810.72	249.60	0.57	29.46	7.50
	9.0	37.663	47.95	2275.59	764.42	6.89	3.99	227.56	152.88	293.45	180.46	1988.26	271.75	0.56	26.55	6.11
	10.0	41.265	52.57	2444.40	817.74	6.82	3.94	244.44	163.55	318.08	195.25	2154.13	292.07	0.56	24.23	5.00
	12.0	48.117	61.30	2735.40	907.98	6.68	3.85	273.54	181.60	362.73	221.86	2450.00	327.36	0.55	20.78	4.33
12.5	49.757	63.38	2798.67	927.27	6.64	3.82	279.87	185.45	372.95	227.90	2516.34	335.10	0.55	20.10	4.00	
100 x 300	6.0	35.579	45.32													

Cold Formed Rectangular Hollow Section (RHS)

AS 1163

Designation		Weight	Cross Sectional Area	Second Moment of Area	Second Moment of Area	Radius of Gyration	Radius of Gyration	Elastic Modulus	Elastic Modulus	Plastic Modulus	Plastic Modulus	Torsional inertia content	Torsional modulus content	Superficial Area per metre length	Nominal Length per tonne	Ratio for Local Buckling
Size	Thickness															
$B \times H$	T	M	A	I_{yy}	I_{zz}	i_{yy}	i_{zz}	W_{elzy}	W_{elzz}	W_{plyy}	W_{plzz}	L_t	C_t	A_s	L	Flange
mm	mm	Kg/m	cm ²	cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³	m ² /m	m	B/T
150 x 200	4.0	21.046	26.81	1570.11	1013.26	7.65	6.15	157.01	135.10	185.86	153.03	1948.68	218.41	0.68	47.51	31.00
	4.5	23.546	29.99	1744.01	1124.70	7.63	6.12	174.40	149.96	207.13	170.51	2176.40	242.79	0.68	42.47	26.83
	5.0	26.016	33.14	1913.08	1232.88	7.60	6.10	191.31	164.38	227.97	187.61	2400.44	266.55	0.68	38.44	23.50
	6.0	30.869	39.32	2236.92	1439.60	7.54	6.05	223.69	191.95	268.36	220.75	2837.30	312.23	0.67	32.39	18.50
	6.3	32.302	41.15	2330.39	1499.15	7.53	6.04	233.04	199.89	280.15	230.41	2965.40	325.47	0.67	30.96	18.81
	8.0	40.225	51.24	2828.55	1815.54	7.43	5.95	282.85	242.07	344.06	282.76	3664.86	396.44	0.67	24.86	13.75
	9.0	44.728	56.98	3097.02	1985.32	7.37	5.90	309.70	264.71	379.40	311.65	4054.82	435.07	0.66	22.36	11.67
	10.0	49.115	62.57	3347.73	2143.36	7.31	5.85	334.77	285.78	413.08	339.17	4428.41	471.45	0.66	20.36	10.00
	12.0	57.537	73.30	3797.16	2425.35	7.20	5.75	379.72	323.38	475.53	390.09	5125.03	537.60	0.65	17.38	8.50
	12.5	59.570	75.88	3898.93	2488.95	7.17	5.73	389.89	331.86	490.13	401.98	5288.40	552.79	0.65	16.79	8.00
150 x 250	4.0	24.186	30.81	2675.32	1226.47	9.32	6.31	214.03	163.53	257.89	182.23	2672.96	275.24	0.78	41.35	31.00
	4.5	27.078	34.49	2976.50	1362.94	9.29	6.29	238.12	181.73	287.74	203.24	2986.81	306.29	0.78	36.93	26.83
	5.0	29.941	38.14	3270.47	1495.79	9.26	6.26	261.64	199.44	317.07	223.86	3296.00	336.62	0.78	33.40	23.50
	6.0	35.579	45.32	3837.00	1750.82	9.20	6.22	306.96	233.44	374.17	263.95	3900.18	395.16	0.77	28.11	18.50
	6.3	37.248	47.45	4001.43	1824.59	9.18	6.20	320.11	243.28	390.90	275.68	4077.70	412.18	0.77	26.85	18.81
	8.0	46.505	59.24	4885.79	2219.25	9.08	6.12	390.86	295.90	482.17	339.56	5050.45	503.96	0.77	21.50	13.75
	9.0	51.793	65.98	5368.89	2433.25	9.02	6.07	429.51	324.43	533.10	375.10	5595.77	554.33	0.76	19.31	11.67
	10.0	56.965	72.57	5825.01	2634.20	8.96	6.02	466.00	351.23	582.00	409.17	6120.70	602.08	0.76	17.55	10.00
	12.0	66.957	85.30	6657.92	2998.11	8.83	5.93	532.63	399.75	673.77	472.89	7107.90	689.93	0.75	14.93	8.50
	12.5	69.382	88.38	6849.92	3081.40	8.80	5.90	547.99	410.85	695.47	487.92	7341.38	710.33	0.75	14.41	8.00
16.0	85.541	108.97	8017.85	3582.48	8.58	5.73	641.43	477.66	833.63	583.18	8821.45	836.17	0.73	11.69	5.38	
150 x 300	6.0	40.289	51.32	6003.62	2062.04	10.82	6.34	400.24	274.94	494.98	307.15	5005.62	478.11	0.87	24.82	18.50
	6.3	42.193	53.75	6265.59	2150.03	10.80	6.32	417.71	286.67	517.39	320.94	5234.42	498.91	0.87	23.70	18.81
	8.0	52.785	67.24	7683.57	2622.95	10.69	6.25	512.24	349.73	640.27	396.36	6490.59	611.52	0.87	18.94	13.75
	10.0	64.815	82.57	9209.37	3125.03	10.56	6.15	613.96	416.67	775.91	479.17	7878.65	732.40	0.86	15.43	10.00
	12.0	76.377	97.30	10584.88	3570.87	10.43	6.06	705.66	476.12	902.01	555.69	9166.79	842.80	0.85	13.09	8.50
	12.5	79.195	100.88	10905.73	3673.85	10.40	6.03	727.05	489.85	932.06	573.86	9472.87	868.02	0.85	12.63	8.00
	16.0	98.101	124.97	12900.37	4304.14	10.16	5.87	860.02	573.88	1126.05	690.38	11431.77	1028.07	0.83	10.19	5.38
180 x 260	5.0	33.081	42.14	4084.92	2332.04	9.85	7.44	314.22	259.12	374.64	292.08	4710.82	425.59	0.86	30.23	29.50
	6.3	41.204	52.49	5012.66	2856.31	9.77	7.38	385.59	317.37	462.88	360.63	5844.33	522.95	0.85	24.27	23.57
	8.0	51.529	65.64	6145.21	3493.23	9.68	7.29	472.71	388.14	572.67	445.78	7266.68	642.43	0.85	19.41	17.50
	10.0	63.245	80.57	7363.31	4174.13	9.56	7.20	566.41	463.79	693.78	539.51	8850.30	771.94	0.84	15.81	13.00
	12.0	74.493	94.90	8461.15	4783.74	9.44	7.10	650.86	531.53	806.30	626.40	10333.50	889.89	0.83	13.42	11.00
	12.5	77.232	98.38	8717.23	4925.33	9.41	7.08	670.56	547.26	833.10	647.06	10688.19	917.61	0.83	12.95	10.40
	16.0	95.589	121.77	10309.90	5800.24	9.20	6.90	793.07	644.47	1006.03	780.07	12984.47	1092.52	0.81	10.46	7.25
200 x 300	4.5	34.143	43.49	5622.60	3034.17	11.37	8.35	374.84	303.42	446.09	339.09	6203.21	500.68	0.98	29.29	37.94
	5.0	37.791	48.14	6192.55	3339.33	11.34	8.33	412.84	333.93	492.43	374.22	6857.25	551.61	0.98	26.46	33.50
	6.0	44.999	57.32	7300.34	3931.08	11.29	8.28	486.69	393.11	583.18	442.96	8143.43	650.75	0.97	22.22	26.83
	6.3	47.139	60.05	7624.39	4103.82	11.27	8.27	508.29	410.38	609.91	463.19	8523.54	679.80	0.97	21.21	26.75
	8.0	59.065	75.24	9389.27	5041.67	11.17	8.19	625.95	504.17	757.07	574.46	10626.50	838.38	0.97	16.93	20.00
	9.0	65.923	83.98	10371.42	5561.31	11.11	8.14	691.43	556.13	840.24	637.25	11822.37	926.98	0.96	15.17	17.22
	10.0	72.665	92.57	11312.70	6057.73	11.05	8.09	754.18	605.77	920.91	698.08	12987.13	1012.19	0.96	13.76	15.00
	12.0	85.797	109.30	13074.64	6982.44	10.94	7.99	871.64	698.24	1074.81	813.93	15221.30	1172.60	0.95	11.66	12.67
	12.5	89.007	113.38	13490.36	7199.71	10.91	7.97	899.36	719.97	1111.75	841.70	15759.60	1210.66	0.95	11.24	12.00
	16.0	110.661	140.97	16130.03	8570.41	10.70	7.80	1075.34	857.04	1353.25	1022.80	19294.21	1454.79	0.93	9.04	8.50
200 x 400	4.5	41.208	52.49	11245.88	3894.28	14.64	8.61	562.29	389.43	686.06	427.07	9211.74	672.67	1.18	24.27	37.94
	5.0	45.641	58.14	12403.69	4290.17	14.61	8.59	620.18	429.02	758.13	471.72	10186.26	741.73	1.18	21.91	33.50
	6.0	54.419	69.32	14665.25	5060.52	14.54	8.54	733.26	506.05	899.80	559.36	12105.10	876.56	1.17	18.38	26.83
	6.3	57.030	72.65	15329.74	5286.10	14.53	8.53	766.49	528.61	941.66	585.22	12672.84	916.17	1.17	17.53	26.75
	8.0	71.625	91.24	18974.42	6517.08	14.42	8.45	948.72	651.71	1173.29	728.06	15820.22	1133.29	1.17	13.96	20.00
	9.0	80.053	101.98	21023.33	7204.17	14.36	8.40	1051.17	720.42	1305.14	809.15	17615.46	1255.32	1.16	12.49	17.22
	10.0	88.365	112.57	23002.65	7864.40	14.30	8.36	1150.13	786.44	1433.74	888.08	19368.49	1373.21	1.16	11.32	15.00
	12.0	104.637	133.30	26755.14	9105.96	14.17	8.27	1337.76	910.60	1681.29	1039.53	22745.82	1596.80	1.15	9.56	12.67
	12.5	108.632	138.38	27650.78	9400.23	14.14	8.24	1382.54	940.02	1741.17	1076.07	23562.97	1650.20	1.15	9.21	12.00
	16.0	135.781	172.97	33453.44	11285.72	13.91	8.08	1672.67	1128.57	2138.10	1317.20	28971.58	1996.80	1.13	7.36	8.50
250 x 350	6.0	54.419	69.32	12362.24	7409.88	13.35	10.34	706.41	592.79	837.19	666.97	14599.69	966.36	1.17	18.38	35.17
	6.3	57.030	72.65	12923.13	7743.81	13.34	10.32	738.46	619.51	876.17	697.96	15291.03	1010.43	1.17	17.53	34.68
	8.0	71.625	91.24	16001.29	9572.62	13.24	10.24	914.36	765.81	1091.98	869.37	19136.32	1252.81	1.17	13.96	26.25
	10.0	88.365	112.57	19407.47	11588.34	13.13	10.15	1109.00	927.07	1334.83	1062.00	23499.74	1522.29	1.16	11.32	20.00
	12.0	104.637	133.30	22585.55	13460.96	13.02	10.05	1290.60	1076.88	1565.85	1244.97					