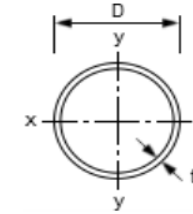


COLD-FORMED CIRCULAR HOLLOW SECTIONS

Hybox® CHS

Dimensions and properties



Cold Formed

Section Designation		Mass per Metre	Area of Section	Ratio for Local Buckling D/t	Second Moment of Area	Radius of Gyration	Elastic Modulus	Plastic Modulus	Torsional Constants		Surface Area	
Outside Diameter D	Thickness t								J	C	Per Metre	Per Tonne
mm	mm	kg/m	cm ²		cm ⁴	cm	cm ³	cm ⁴	cm ³	m ²	m ²	
33.7	3.0	2.27	2.89	11.2	3.44	1.09	2.04	2.84	6.88	4.08	0.106	46.6
42.4	4.0	3.79	4.83	10.6	8.99	1.36	4.24	5.92	18	8.48	0.133	35.2
48.3	3.0	3.35	4.27	16.1	11	1.61	4.55	6.17	22	9.11	0.152	45.3
	3.5	3.87	4.93	13.8	12.4	1.59	5.15	7.04	24.9	10.3	0.152	39.2
	4.0	4.37	5.57	12.1	13.8	1.57	5.7	7.87	27.5	11.4	0.152	34.7
60.3	3.0	4.24	5.4	20.1	22.2	2.03	7.37	9.86	44.4	14.7	0.189	44.7
	4.0	5.55	7.07	15.1	28.2	2	9.34	12.7	56.3	18.7	0.189	34.1
76.1	3.0	5.41	6.89	25.4	46.1	2.59	12.1	16	92.2	24.2	0.239	44.2
	4.0	7.11	9.06	19	59.1	2.55	15.5	20.8	118	31	0.239	33.6
88.9	3.0	6.36	8.1	29.6	74.8	3.04	16.8	22.1	150	33.6	0.279	43.9
	3.5	7.37	9.39	25.4	85.7	3.02	19.3	25.5	171	38.6	0.279	37.9
	4.0	8.38	10.7	22.2	96.3	3	21.7	28.9	193	43.3	0.279	33.3
	5.0	10.3	13.2	17.8	116	2.97	26.2	35.2	233	52.4	0.279	27
114.3	6.3	12.8	16.3	14.1	140	2.93	31.5	43.1	280	63.1	0.279	21.8
	3.0	8.23	10.5	38.1	163	3.94	28.4	37.2	325	56.9	0.359	43.6
	3.5	9.56	12.2	32.7	187	3.92	32.7	43	374	65.5	0.359	37.5
	4.0	10.9	13.9	28.6	211	3.9	36.9	48.7	422	73.9	0.359	33
139.7	5.0	13.5	17.2	22.9	257	3.87	45	59.8	514	89.9	0.359	26.6
	6.0	16	20.4	19.1	300	3.83	52.5	70.4	600	105	0.359	22.4
	4.0	13.4	17.1	34.9	393	4.8	56.2	73.7	786	112	0.439	32.8
	5.0	16.6	21.2	27.9	481	4.77	68.8	90.8	961	138	0.439	26.4
168.3	6.0	19.8	25.2	23.3	564	4.73	80.8	107	1130	162	0.439	22.2
	8.0	26	33.1	17.5	720	4.66	103	139	1440	206	0.439	16.9
	10.0	32	40.7	14	862	4.6	123	169	1720	247	0.439	13.7
	4.0	16.2	20.6	42.1	697	5.81	82.8	108	1390	166	0.529	32.6
193.7	5.0	20.1	25.7	33.7	856	5.78	102	133	1710	203	0.529	26.3
	6.0	24	30.6	28.1	1010	5.74	120	158	2020	240	0.529	22
	8.0	31.6	40.3	21	1300	5.67	154	206	2600	308	0.529	16.7
	10.0	39	49.7	16.8	1560	5.61	186	251	3130	372	0.529	13.5
	12.5	48	61.2	13.5	1870	5.53	222	304	3740	444	0.529	11
193.7	4.0	18.7	23.8	48.4	1070	6.71	111	144	2150	222	0.609	32.5

Section Designation		Mass per Metre	Area of Section	Ratio for Local Buckling D/t	Second Moment of Area	Radius of Gyration	Elastic Modulus	Plastic Modulus	Torsional Constants		Surface Area	
Outside Diameter D mm	Thickness t mm								J cm ⁴	C cm ³	Per Metre m ²	Per Tonne m ²
	4.5	21	26.7	43	1200	6.69	124	161	2400	247	0.609	29
	5.0	23.3	29.6	38.7	1320	6.67	136	178	2640	273	0.609	26.2
	6.0	27.8	35.4	32.3	1560	6.64	161	211	3120	322	0.609	21.9
	8.0	36.6	46.7	24.2	2020	6.57	208	276	4030	416	0.609	16.6
	10.0	45.3	57.7	19.4	2440	6.5	252	338	4880	504	0.609	13.4
	12.5	55.9	71.2	15.5	2930	6.42	303	411	5870	606	0.609	10.9
219.1	4.5	23.8	30.3	48.7	1750	7.59	159	207	3490	319	0.688	28.9
	5.0	26.4	33.6	43.8	1930	7.57	176	229	3860	352	0.688	26.1
	6.0	31.5	40.2	36.5	2280	7.54	208	273	4560	417	0.688	21.8
	8.0	41.6	53.1	27.4	2960	7.47	270	357	5920	540	0.688	16.5
	10.0	51.6	65.7	21.9	3600	7.4	328	438	7200	657	0.688	13.3
	12.0	61.3	78.1	18.3	4200	7.33	383	515	8400	767	0.688	11.2
	12.5	63.7	81.1	17.5	4350	7.32	397	534	8690	793	0.688	10.8
	16.0	80.1	102	13.7	5300	7.2	483	661	10600	967	0.688	8.59
244.5	5.0	29.5	37.6	48.9	2700	8.47	221	287	5400	441	0.768	26
	6.0	35.3	45	40.8	3200	8.43	262	341	6400	523	0.768	21.8
	8.0	46.7	59.4	30.6	4160	8.37	340	448	8320	681	0.768	16.5
	10.0	57.8	73.7	24.5	5070	8.3	415	550	10100	830	0.768	13.3
	12.0	68.8	87.7	20.4	5940	8.23	486	649	11900	972	0.768	11.2
	12.5	71.5	91.1	19.6	6150	8.21	503	673	12300	1010	0.768	10.7
	16.0	90.2	115	15.3	7530	8.1	616	837	15100	1230	0.768	8.52
273	5.0	33	42.1	54.6	3780	9.48	277	359	7560	554	0.858	26
	6.0	39.5	50.3	45.5	4490	9.44	329	428	8970	657	0.858	21.7
	8.0	52.3	66.6	34.1	5850	9.37	429	562	11700	857	0.858	16.4
	10.0	64.9	82.6	27.3	7150	9.31	524	692	14300	1050	0.858	13.2
	12.0	77.2	98.4	22.8	8400	9.24	615	818	16800	1230	0.858	11.1
	12.5	80.3	102	21.8	8700	9.22	637	849	17400	1270	0.858	10.7
	16.0	101	129	17.1	10700	9.1	784	1060	21400	1570	0.858	8.46
323.9	5.0	39.3	50.1	64.8	6370	11.3	393	509	12700	787	1.02	25.9
	6.0	47	59.9	54	7570	11.2	468	606	15100	935	1.02	21.6
	8.0	62.3	79.4	40.5	9910	11.2	612	799	19800	1220	1.02	16.3
	10.0	77.4	98.6	32.4	12200	11.1	751	986	24300	1500	1.02	13.1
	12.0	92.3	118	27	14300	11	884	1170	28600	1770	1.02	11
	12.5	96	122	25.9	14800	11	917	1210	29700	1830	1.02	10.6
	16.0	121	155	20.2	18400	10.9	1140	1520	36800	2270	1.02	8.38
355.6	5.0	43.2	55.1	71.1	8460	12.4	476	615	16900	952	1.12	25.8
	6.0	51.7	65.9	59.3	10100	12.4	566	733	20100	1130	1.12	21.6
	8.0	68.6	87.4	44.5	13200	12.3	742	967	26400	1490	1.12	16.3
	10.0	85.2	109	35.6	16200	12.2	912	1200	32400	1830	1.12	13.1
	12.0	102	130	29.6	19100	12.2	1080	1420	38300	2150	1.12	11
	12.5	106	135	28.4	19900	12.1	1120	1470	39700	2230	1.12	10.6

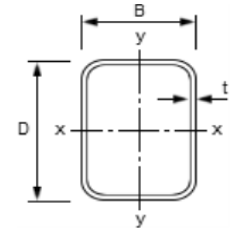
Section Designation		Mass per Metre kg/m	Area of Section A cm ²	Ratio for Local Buckling D/t	Second Moment of Area I cm ⁴	Radius of Gyration r cm	Elastic Modulus Z cm ³	Plastic Modulus S cm ³	Torsional Constants		Surface Area	
Outside Diameter D mm	Thickness t mm								J cm ⁴	C cm ³	Per Metre m ²	Per Tonne m ²
	16.0	134	171	22.2	24700	12	1390	1850	49300	2770	1.12	8.34
406.4	6.0	59.2	75.5	67.7	15100	14.2	745	962	30300	1490	1.28	21.5
	8.0	78.6	100	50.8	19900	14.1	978	1270	39700	1960	1.28	16.2
	10.0	97.8	125	40.6	24500	14	1210	1570	49000	2410	1.28	13.1
	12.0	117	149	33.9	28900	14	1420	1870	57900	2850	1.28	10.9
	12.5	121	155	32.5	30000	13.9	1480	1940	60100	2960	1.28	10.5
	16.0	154	196	25.4	37400	13.8	1840	2440	74900	3690	1.28	8.29
457	6.0	66.7	85	76.2	21600	15.9	946	1220	43200	1890	1.44	21.5
	8.0	88.6	113	57.1	28400	15.9	1250	1610	56900	2490	1.44	16.2
	10.0	110	140	45.7	35100	15.8	1540	2000	70200	3070	1.44	13
	12.0	132	168	38.1	41600	15.7	1820	2380	83100	3640	1.44	10.9
	12.5	137	175	36.6	43100	15.7	1890	2470	86300	3780	1.44	10.5
	16.0	174	222	28.6	54000	15.6	2360	3110	108000	4720	1.44	8.25
508	6.0	74.3	94.6	84.7	29800	17.7	1170	1510	59600	2350	1.6	21.5
	8.0	98.6	126	63.5	39300	17.7	1550	2000	78600	3090	1.6	16.2
	10.0	123	156	50.8	48500	17.6	1910	2480	97000	3820	1.6	13
	12.0	147	187	42.3	57500	17.5	2270	2950	115000	4530	1.6	10.9
	12.5	153	195	40.6	59800	17.5	2350	3070	120000	4710	1.6	10.4
	16.0	194	247	31.8	74900	17.4	2950	3870	150000	5900	1.6	8.22

© 2006-2008, Corus Construction Services and Development

COLD-FORMED RECTANGULAR HOLLOW SECTIONS

Hybox® RHS

Dimensions and properties



Cold Formed

Section Designation		Mass per Metre kg/m	Area of Section A cm ²	Ratios for Local Buckling		Second Moment of Area		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants		Surface Area	
Size D x B mm	Thickness t mm			d/t ⁽¹⁾	d/t ⁽¹⁾	Axis x-x cm ⁴	Axis y-y cm ⁴	Axis x-x cm	Axis y-y cm	Axis x-x cm ³	Axis y-y cm ³	Axis x-x cm ³	Axis y-y cm ³	J cm ⁴	C cm ³	Per Metre m ²	Per Tonne m ²
50 x 25	2.0	2.15	2.74	20.0	7.5	8.4	2.8	1.8	1.0	3.4	2.3	4.3	2.6	7.1	3.9	0.1	66.6
50 x 25	3.0	3.07	3.91	11.7	3.3	11.2	3.7	1.7	1.0	4.5	2.9	5.9	3.6	9.6	5.2	0.1	45.5
50 x 30	2.5	2.82	3.59	15.0	7.0	11.3	5.1	1.8	1.2	4.5	3.4	5.7	4.0	11.7	5.7	0.2	53.7
	3.0	3.30	4.21	11.7	5.0	12.8	5.7	1.8	1.2	5.1	3.8	6.6	4.6	13.5	6.5	0.2	45.3
	4.0	4.20	5.35	7.5	2.5	15.3	6.7	1.7	1.1	6.1	4.5	8.1	5.6	16.5	7.7	0.1	34.8
60 x 30	3.0	3.77	4.81	15.0	5.0	20.5	6.8	2.1	1.2	6.8	4.5	8.8	5.4	17.5	8.0	0.2	45.0
	4.0	4.83	6.15	10.0	2.5	24.7	8.1	2.0	1.1	8.2	5.4	10.9	6.6	21.5	9.5	0.2	34.5
60 x 40	3.0	4.25	5.41	15.0	8.3	25.4	13.4	2.2	1.6	8.5	6.7	10.5	7.9	29.3	11.2	0.2	44.7
	4.0	5.45	6.95	10.0	5.0	31.0	16.3	2.1	1.5	10.3	8.1	13.2	9.9	36.7	13.7	0.2	34.2
	5.0	6.56	8.36	7.0	3.0	35.3	18.4	2.1	1.5	11.8	9.2	15.4	11.5	42.8	15.6	0.2	27.9
70 x 40	3.0	4.72	6.01	18.3	8.3	37.3	15.5	2.5	1.6	10.7	7.8	13.4	9.1	36.5	13.2	0.2	44.5
	4.0	6.08	7.75	12.5	5.0	46.0	18.9	2.4	1.6	13.1	9.4	16.8	11.3	45.8	16.2	0.2	33.9
70 x 50	3.0	5.19	6.61	18.3	11.7	44.1	26.1	2.6	2.0	12.6	10.4	15.4	12.2	53.6	17.1	0.2	44.3
	4.0	6.71	8.55	12.5	7.5	54.7	32.2	2.5	1.9	15.6	12.9	19.5	15.4	68.1	21.2	0.2	33.7
80 x 40	3.0	5.19	6.61	21.7	8.3	52.3	17.6	2.8	1.6	13.1	8.8	16.5	10.2	43.9	15.3	0.2	44.3
	4.0	6.71	8.55	15.0	5.0	64.8	21.5	2.8	1.6	16.2	10.7	20.9	12.8	55.2	18.8	0.2	33.7
	5.0	8.13	10.40	11.0	3.0	75.1	24.6	2.7	1.5	18.8	12.3	24.7	15.0	65.0	21.7	0.2	27.4
80 x 50	3.0	5.66	7.21	21.7	11.7	61.1	29.4	2.9	2.0	15.3	11.8	18.8	13.6	65.0	19.7	0.3	44.1
	4.0	7.34	9.35	15.0	7.5	76.4	36.5	2.9	2.0	19.1	14.6	24.0	17.2	82.7	24.6	0.2	33.6
	5.0	8.91	11.40	11.0	5.0	89.2	42.3	2.8	1.9	22.3	16.9	28.5	20.5	98.4	28.7	0.2	27.2
80 x 60	3.0	6.13	7.81	21.7	15.0	70.0	44.9	3.0	2.4	17.5	15.0	21.2	17.4	88.3	24.1	0.3	44.0
	4.0	7.97	10.10	15.0	10.0	87.9	56.1	2.9	2.4	22.0	18.7	27.0	22.1	113.0	30.3	0.3	33.4
	5.0	9.70	12.40	11.0	7.0	103.0	65.7	2.9	2.3	25.8	21.9	32.2	26.4	136.0	35.7	0.3	27.1
90 x 50	3.0	6.13	7.81	25.0	11.7	81.9	32.7	3.2	2.1	18.2	13.1	22.6	15.0	76.7	22.4	0.3	44.0
	4.0	7.97	10.10	17.5	7.5	103.0	40.7	3.2	2.0	22.8	16.3	28.8	19.1	97.7	28.0	0.3	33.4
	5.0	9.70	12.40	13.0	5.0	121.0	47.4	3.1	2.0	26.8	18.9	34.4	22.7	116.0	32.7	0.3	27.1
100 x 40	3.0	6.13	7.81	28.3	8.3	92.3	21.7	3.4	1.7	18.5	10.8	23.7	12.4	59.0	19.4	0.3	44.0
	4.0	7.97	10.10	20.0	5.0	116.0	26.7	3.4	1.6	23.1	13.3	30.3	15.7	74.5	24.0	0.3	33.4
	5.0	9.70	12.40	15.0	3.0	136.0	30.8	3.3	1.6	27.1	15.4	36.1	18.5	87.9	27.9	0.3	27.1
100 x 50	3.0	6.60	8.41	28.3	11.7	106.0	36.1	3.6	2.1	21.3	14.4	26.7	16.4	88.6	25.0	0.3	43.9
	4.0	8.59	10.90	20.0	7.5	134.0	44.9	3.5	2.0	26.8	18.0	34.1	20.9	113.0	31.3	0.3	33.3

Section Designation		Mass per Metre kg/m	Area of Section A cm ² <SUP>td>	Ratios for Local Buckling		Second Moment of Area		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants		Surface Area	
Size D x B mm	Thickness t mm			d/t ⁽¹⁾	d/t ⁽¹⁾	Axis x-x cm ⁴	Axis y-y cm ⁴	Axis x-x cm	Axis y-y cm	Axis x-x cm ³	Axis y-y cm ³	Axis x-x cm ³	Axis y-y cm ³	J cm ⁴	C cm ³	Per Metre m ²	Per Tonne m ²
	5.0	10.50	13.40	15.0	5.0	158.0	52.5	3.4	2.0	31.6	21.0	40.8	25.0	135.0	36.8	0.3	27.0
	6.0	12.30	15.60	11.7	3.3	179.0	58.7	3.4	1.9	35.8	23.5	46.9	28.5	154.0	41.4	0.3	22.8
100 x 60	3.0	7.07	9.01	28.3	15.0	121.0	54.6	3.7	2.5	24.1	18.2	29.6	20.8	122.0	30.6	0.3	43.8
	3.5	8.16	10.40	23.6	12.1	137.0	61.9	3.6	2.4	27.4	20.6	33.8	23.8	139.0	34.8	0.3	37.7
	4.0	9.22	11.70	20.0	10.0	153.0	68.7	3.6	2.4	30.5	22.9	37.9	26.6	156.0	38.7	0.3	33.2
	5.0	11.30	14.40	15.0	7.0	181.0	80.8	3.6	2.4	36.2	26.9	45.6	31.9	188.0	45.8	0.3	26.9
	6.0	13.20	16.80	11.7	5.0	205.0	91.2	3.5	2.3	41.1	30.4	52.5	36.6	216.0	51.9	0.3	22.7
100 x 80	3.0	8.01	10.20	28.3	21.7	149.0	106.0	3.8	3.2	29.8	26.4	35.4	30.4	196.0	41.9	0.4	43.6
	4.0	10.50	13.30	20.0	15.0	189.0	134.0	3.8	3.2	37.9	33.5	45.6	39.2	254.0	53.4	0.3	33.0
	5.0	12.80	16.40	15.0	11.0	226.0	160.0	3.7	3.1	45.2	39.9	55.1	47.2	308.0	63.7	0.3	26.7
120 x 40	3.0	7.1	9.0	35.0	8.3	148.0	25.8	4.1	1.7	24.7	12.9	32.2	14.6	74.6	23.5	0.3	43.8
	4.0	9.2	11.7	25.0	5.0	187.0	31.9	4.0	1.7	31.1	15.9	41.2	18.5	94.2	29.2	0.3	33.2
	5.0	11.3	14.4	19.0	3.0	221.0	36.9	3.9	1.6	36.8	18.5	49.4	22.0	111.0	34.1	0.3	26.9
120 x 60	3.0	8.0	10.2	35.0	15.0	189.0	64.4	4.3	2.5	31.5	21.5	39.2	24.2	156.0	37.1	0.4	43.6
	3.5	9.3	11.8	29.3	12.1	216.0	73.1	4.3	2.5	35.9	24.4	44.9	27.7	179.0	42.2	0.3	37.6
	4.0	10.5	13.3	25.0	10.0	241.0	81.2	4.3	2.5	40.1	27.1	50.5	31.1	201.0	47.0	0.3	33.0
	5.0	12.8	16.4	19.0	7.0	287.0	96.0	4.2	2.4	47.8	32.0	60.9	37.4	242.0	55.8	0.3	26.7
	6.0	15.1	19.2	15.0	5.0	328.0	109.0	4.1	2.4	54.7	36.3	70.6	43.1	280.0	63.6	0.3	22.5
120 x 80	4.0	11.7	14.9	25.0	15.0	295.0	157.0	4.4	3.2	49.1	39.3	59.8	45.2	331.0	64.9	0.4	32.9
	5.0	14.4	18.4	19.0	11.0	353.0	188.0	4.4	3.2	58.9	46.9	72.4	54.7	402.0	77.8	0.4	26.6
	6.0	17.0	21.6	15.0	8.3	406.0	215.0	4.3	3.2	67.7	53.8	84.3	63.5	469.0	89.4	0.4	22.3
	8.0	21.4	27.2	10.0	5.0	476.0	252.0	4.2	3.0	79.3	62.9	102.0	76.9	584.0	108.0	0.4	17.1
140 x 80	3.0	9.9	12.6	41.7	21.7	334.0	141.0	5.2	3.4	47.8	35.3	58.2	39.6	317.0	59.7	0.4	43.4
	4.0	13.0	16.5	30.0	15.0	430.0	180.0	5.1	3.3	61.4	45.1	75.5	51.3	412.0	76.5	0.4	32.8
	5.0	16.0	20.4	23.0	11.0	517.0	216.0	5.0	3.3	73.9	54.0	91.8	62.2	501.0	91.8	0.4	26.5
	6.0	18.9	24.0	18.3	8.3	597.0	248.0	5.0	3.2	85.3	62.0	107.0	72.4	584.0	106.0	0.4	22.2
	8.0	23.9	30.4	12.5	5.0	708.0	293.0	4.8	3.1	101.0	73.3	131.0	88.4	731.0	129.0	0.4	17.0
	10.0	28.7	36.6	9.0	3.0	804.0	330.0	4.7	3.0	115.0	82.6	152.0	103.0	851.0	147.0	0.4	13.8
150 x 100	3.0	11.3	14.4	45.0	28.3	461.0	248.0	5.7	4.2	61.4	49.5	73.5	55.8	507.0	81.4	0.5	43.3
	4.0	14.9	18.9	32.5	20.0	595.0	319.0	5.6	4.1	79.3	63.7	95.7	72.5	662.0	105.0	0.5	32.7
	5.0	18.3	23.4	25.0	15.0	719.0	384.0	5.6	4.1	95.9	76.8	117.0	88.3	809.0	127.0	0.5	26.3
	6.0	21.7	27.6	20.0	11.7	835.0	444.0	5.5	4.0	111.0	88.8	137.0	103.0	948.0	147.0	0.5	22.1
	8.0	27.7	35.2	13.8	7.5	1010.0	536.0	5.4	3.9	134.0	107.0	169.0	128.0	1210.0	182.0	0.5	16.8
	10.0	33.4	42.6	10.0	5.0	1160.0	614.0	5.2	3.8	155.0	123.0	199.0	150.0	1430.0	211.0	0.5	13.7
160 x 80	4.0	14.2	18.1	35.0	15.0	598.0	204.0	5.7	3.4	74.7	50.9	92.9	57.4	494.0	88.0	0.5	32.7
	5.0	17.5	22.4	27.0	11.0	722.0	244.0	5.7	3.3	90.2	61.0	113.0	69.7	601.0	106.0	0.5	26.4
	6.0	20.7	26.4	21.7	8.3	836.0	281.0	5.6	3.3	105.0	70.2	132.0	81.3	702.0	122.0	0.5	22.1
	8.0	26.4	33.6	15.0	5.0	1000.0	335.0	5.5	3.2	125.0	83.7	163.0	100.0	882.0	150.0	0.4	16.9
180 x 80	4.0	15.5	19.7	40.0	15.0	802.0	227.0	6.4	3.4	89.1	56.7	112.0	63.5	578.0	99.6	0.5	32.7
	5.0	19.1	24.4	31.0	11.0	971.0	272.0	6.3	3.3	108.0	68.1	137.0	77.2	704.0	120.0	0.5	26.3
	6.0	22.6	28.8	25.0	8.3	1130.0	314.0	6.3	3.3	125.0	78.5	160.0	90.2	823.0	139.0	0.5	22.1
	8.0	28.9	36.8	17.5	5.0	1360.0	377.0	6.1	3.2	151.0	94.1	198.0	111.0	1040.0	170.0	0.5	16.8

Section Designation		Mass per Metre kg/m	Area of Section A cm ² <SUP>td>	Ratios for Local Buckling		Second Moment of Area		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants		Surface Area	
Size D x B mm	Thickness t mm			d/t ⁽¹⁾	d/t ⁽¹⁾	Axis x-x cm ⁴	Axis y-y cm ⁴	Axis x-x cm	Axis y-y cm	Axis x-x cm ³	Axis y-y cm ³	Axis x-x cm ³	Axis y-y cm ³	J cm ⁴	C cm ³	Per Metre m ²	Per Tonne m ²
	10.0	35.0	44.6	13.0	3.0	1570.0	429.0	5.9	3.1	174.0	107.0	234.0	131.0	1210.0	196.0	0.5	13.6
180 x 100	4.0	16.8	21.3	40.0	20.0	926.0	374.0	6.6	4.2	103.0	74.8	126.0	84.0	854.0	127.0	0.5	32.6
	5.0	20.7	26.4	31.0	15.0	1120.0	452.0	6.5	4.1	125.0	90.4	154.0	103.0	1050.0	154.0	0.5	26.2
	6.0	24.5	31.2	25.0	11.7	1310.0	524.0	6.5	4.1	146.0	105.0	181.0	120.0	1230.0	179.0	0.5	22.0
	8.0	31.4	40.0	17.5	7.5	1600.0	637.0	6.3	4.0	178.0	127.0	226.0	150.0	1570.0	222.0	0.5	16.7
	10.0	38.1	48.6	13.0	5.0	1860.0	736.0	6.2	3.9	207.0	147.0	268.0	177.0	1860.0	260.0	0.5	13.6
200 x 100	4.0	18.0	22.9	45.0	20.0	1200.0	411.0	7.2	4.2	120.0	82.2	148.0	91.7	985.0	142.0	0.6	32.5
	5.0	22.3	28.4	35.0	15.0	1460.0	497.0	7.2	4.2	146.0	99.4	181.0	112.0	1210.0	172.0	0.6	26.2
	6.0	26.4	33.6	28.3	11.7	1700.0	577.0	7.1	4.1	170.0	115.0	213.0	132.0	1420.0	200.0	0.6	21.9
	8.0	33.9	43.2	20.0	7.5	2090.0	705.0	7.0	4.0	209.0	141.0	267.0	165.0	1810.0	250.0	0.6	16.7
	10.0	41.3	52.6	15.0	5.0	2440.0	818.0	6.8	3.9	244.0	164.0	318.0	195.0	2150.0	292.0	0.6	13.5
200 x 120	4.0	19.3	24.5	45.0	25.0	1350.0	618.0	7.4	5.0	135.0	103.0	164.0	115.0	1350.0	172.0	0.6	32.5
	5.0	23.8	30.4	35.0	19.0	1650.0	750.0	7.4	5.0	165.0	125.0	201.0	141.0	1650.0	210.0	0.6	26.1
	6.0	28.3	36.0	28.3	15.0	1930.0	874.0	7.3	4.9	193.0	146.0	237.0	166.0	1950.0	245.0	0.6	21.9
	8.0	36.5	46.4	20.0	10.0	2390.0	1080.0	7.2	4.8	239.0	180.0	298.0	209.0	2510.0	308.0	0.6	16.6
	10.0	44.4	56.6	15.0	7.0	2810.0	1260.0	7.0	4.7	281.0	210.0	356.0	250.0	3010.0	364.0	0.6	13.4
200 x 150	4.0	21.2	26.9	45.0	32.5	1580.0	1020.0	7.7	6.2	158.0	136.0	187.0	154.0	1940.0	219.0	0.7	32.4
	5.0	26.2	33.4	35.0	25.0	1940.0	1250.0	7.6	6.1	193.0	166.0	230.0	189.0	2390.0	267.0	0.7	26.1
	6.0	31.1	39.6	28.3	20.0	2270.0	1460.0	7.6	6.1	227.0	194.0	271.0	223.0	2830.0	313.0	0.7	21.8
	8.0	40.2	51.2	20.0	13.8	2830.0	1820.0	7.4	6.0	283.0	242.0	344.0	283.0	3670.0	396.0	0.7	16.5
	10.0	49.1	62.6	15.0	10.0	3350.0	2140.0	7.3	5.9	335.0	286.0	413.0	339.0	4430.0	471.0	0.7	13.4
250 x 150	5.0	30.1	38.4	45.0	25.0	3300.0	1510.0	9.3	6.3	264.0	201.0	320.0	225.0	3290.0	337.0	0.8	26.0
	6.0	35.8	45.6	36.7	20.0	3890.0	1770.0	9.2	6.2	311.0	236.0	378.0	266.0	3890.0	396.0	0.8	21.8
	8.0	46.5	59.2	26.3	13.8	4890.0	2220.0	9.1	6.1	391.0	296.0	482.0	340.0	5050.0	504.0	0.8	16.5
	10.0	57.0	72.6	20.0	10.0	5830.0	2630.0	9.0	6.0	466.0	351.0	582.0	409.0	6120.0	602.0	0.8	13.3
	12.0	66.0	84.1	15.8	7.5	6460.0	2930.0	8.8	5.9	517.0	390.0	658.0	463.0	7090.0	684.0	0.7	11.2
	12.5	68.3	87.0	15.0	7.0	6630.0	3000.0	8.7	5.9	531.0	400.0	678.0	477.0	7320.0	704.0	0.7	10.8
300 x 100	6.0	35.8	45.6	45.0	11.7	4780.0	842.0	10.2	4.3	318.0	168.0	411.0	188.0	2400.0	306.0	0.8	21.8
	8.0	46.5	59.2	32.5	7.5	5980.0	1050.0	10.0	4.2	399.0	209.0	523.0	238.0	3080.0	385.0	0.8	16.5
	10.0	57.0	72.6	25.0	5.0	7110.0	1220.0	9.9	4.1	474.0	245.0	631.0	285.0	3680.0	455.0	0.8	13.3
	12.5	68.3	87.0	19.0	3.0	8010.0	1370.0	9.6	4.0	534.0	275.0	732.0	330.0	4290.0	521.0	0.7	10.8
300 x 200	6.0	45.2	57.6	45.0	28.3	7370.0	3960.0	11.3	8.3	491.0	396.0	588.0	446.0	8120.0	651.0	1.0	21.6
	8.0	59.1	75.2	32.5	20.0	9390.0	5040.0	11.2	8.2	626.0	504.0	757.0	574.0	10600.0	838.0	1.0	16.3
	10.0	72.7	92.6	25.0	15.0	11300.0	6060.0	11.1	8.1	754.0	606.0	921.0	698.0	13000.0	1010.0	1.0	13.2
	12.0	84.8	108.0	20.0	11.7	12800.0	6850.0	10.9	8.0	853.0	685.0	1060.0	801.0	15200.0	1170.0	0.9	11.1
	12.5	88.0	112.0	19.0	11.0	13200.0	7060.0	10.8	7.9	879.0	706.0	1090.0	828.0	15800.0	1200.0	0.9	10.6
400 x 200	8.0	71.6	91.2	45.0	20.0	19000.0	6520.0	14.4	8.5	949.0	652.0	1170.0	728.0	15800.0	1130.0	1.2	16.3
	10.0	88.4	113.0	35.0	15.0	23000.0	7860.0	14.3	8.4	1150.0	786.0	1430.0	888.0	19400.0	1370.0	1.2	13.1
	12.0	104.0	132.0	28.3	11.7	26200.0	8980.0	14.1	8.2	1310.0	898.0	1660.0	1030.0	22800.0	1590.0	1.1	11.0
	12.5	108.0	137.0	27.0	11.0	27100.0	9260.0	14.1	8.2	1360.0	926.0	1710.0	1060.0	23600.0	1640.0	1.1	10.6
450 x 250	8.0	84.2	107.0	51.3	26.3	29300.0	11900.0	16.5	10.5	1300.0	953.0	1590.0	1060.0	27200.0	1630.0	1.4	16.2
	10.0	104.0	133.0	40.0	20.0	35700.0	14500.0	16.4	10.4	1590.0	1160.0	1950.0	1300.0	33500.0	1980.0	1.4	13.0

Section Designation		Mass per Metre kg/m	Area of Section A cm ² <SUP><td>	Ratios for Local Buckling		Second Moment of Area		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants		Surface Area	
Size D x B mm	Thickness t mm			d/t ⁽¹⁾	d/t ⁽¹⁾	Axis x-x cm ⁴	Axis y-y cm ⁴	Axis x-x cm	Axis y-y cm	Axis x-x cm ³	Axis y-y cm ³	Axis x-x cm ³	Axis y-y cm ³	J cm ⁴	C cm ³	Per Metre m ²	Per Tonne m ²
	12.0	123.0	156.0	32.5	15.8	41100.0	16700.0	16.2	10.3	1830.0	1330.0	2260.0	1520.0	39600.0	2310.0	1.3	10.9
	12.5	127.0	162.0	31.0	15.0	42500.0	17200.0	16.2	10.3	1890.0	1380.0	2350.0	1570.0	41100.0	2390.0	1.3	10.5
500 x 300	8.0	96.7	123.0	57.5	32.5	42800.0	19600.0	18.6	12.6	1710.0	1310.0	2060.0	1460.0	42800.0	2200.0	1.6	16.2
	10.0	120.0	153.0	45.0	25.0	52300.0	23900.0	18.5	12.5	2090.0	1600.0	2540.0	1790.0	52700.0	2690.0	1.6	13.0
	12.0	141.0	180.0	36.7	20.0	60600.0	27700.0	18.3	12.4	2420.0	1850.0	2960.0	2090.0	62600.0	3160.0	1.5	10.9
	12.5	147.0	187.0	35.0	19.0	62700.0	28700.0	18.3	12.4	2510.0	1910.0	3070.0	2170.0	65000.0	3270.0	1.5	10.5

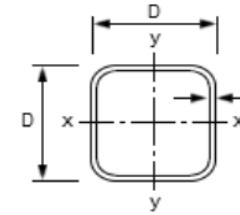
Table 8.5.3. Hybox® RHS. Dimensions and properties

© 2006-2008, Corus Construction Services and Development

COLD-FORMED SQUARE HOLLOW SECTIONS

Hybox® SHS

Dimensions and properties



Cold Formed

Section Designation		Mass per Metre kg/m	Area of Section A cm ²	Ratio for Local Buckling d/t ⁽¹⁾	Second Moment of Area I cm ⁴	Radius of Gyration r cm	Elastic Modulus Z cm ³	Plastic Modulus S cm ³	Torsional Constants		Surface Area	
Size D x B mm	Thickness t mm								J cm ⁴	C cm ³	Per Metre m ²	Per Tonne m ²
25 x 25	2.0	1.4	1.7	7.5	1.48	0.924	1.19	1.47	2.53	1.8	0.093	68.30
	2.5	1.6	2.1	5.0	1.69	0.899	1.35	1.71	2.97	2.07	0.091	55.70
	3.0	1.9	2.4	3.3	1.84	0.874	1.47	1.91	3.33	2.27	0.09	47.40
30 x 30	2.5	2.0	2.6	7.0	3.16	1.1	2.1	2.61	5.4	3.2	0.111	54.80
	3.0	2.4	3.0	5.0	3.5	1.08	2.34	2.96	6.15	3.58	0.11	46.50
40 x 40	2.0	2.3	2.9	15.0	6.94	1.54	3.47	4.13	11.3	5.23	0.153	66.40
	2.5	2.8	3.6	11.0	8.22	1.51	4.11	4.97	13.6	6.21	0.151	53.70
	3.0	3.3	4.2	8.3	9.32	1.49	4.66	5.72	15.8	7.07	0.15	45.30
50 x 50	4.0	4.2	5.4	5.0	11.1	1.44	5.54	7.01	19.4	8.48	0.146	34.80
	2.5	3.6	4.6	15.0	16.9	1.92	6.78	8.07	27.5	10.2	0.191	53.10
	3.0	4.3	5.4	11.7	19.5	1.9	7.79	9.39	32.1	11.8	0.19	44.70
60 x 60	4.0	5.5	7.0	7.5	23.7	1.85	9.49	11.7	40.4	14.4	0.186	34.20
	5.0	6.6	8.4	5.0	27	1.8	10.8	13.7	47.5	16.6	0.183	27.90
	3.0	5.2	6.6	15.0	35.1	2.31	11.7	14	57.1	17.7	0.23	44.30
70 x 70	4.0	6.7	8.6	10.0	43.6	2.26	14.5	17.6	72.6	22	0.226	33.70
	5.0	8.1	10.4	7.0	50.5	2.21	16.8	20.9	86.4	25.6	0.223	27.40
	2.5	5.2	6.6	23.0	49.4	2.74	14.1	16.5	78.5	21.2	0.271	52.50
80 x 80	3.0	6.1	7.8	18.3	57.5	2.71	16.4	19.4	92.4	24.7	0.27	44.00
	3.5	7.1	9.0	15.0	65.1	2.69	18.6	22.2	106	28	0.268	38.00
	4.0	8.0	10.1	12.5	72.1	2.67	20.6	24.8	119	31.1	0.266	33.40
	5.0	9.7	12.4	9.0	84.6	2.62	24.2	29.6	142	36.7	0.263	27.10
90 x 90	3.0	7.1	9.0	21.7	87.8	3.12	22	25.8	140	33	0.31	43.80
	3.5	8.2	10.4	17.9	99.8	3.1	25	29.5	161	37.6	0.308	37.70
	4.0	9.2	11.7	15.0	111	3.07	27.8	33.1	180	41.8	0.306	33.20
	5.0	11.3	14.4	11.0	131	3.03	32.9	39.7	218	49.7	0.303	26.90
90 x 90	6.0	13.2	16.8	8.3	149	2.98	37.3	45.8	252	56.6	0.299	22.70
	3.0	8.0	10.2	25.0	127	3.53	28.3	33	201	42.5	0.35	43.60
	3.5	9.3	11.8	20.7	145	3.51	32.2	37.9	232	48.5	0.348	37.60
	4.0	10.5	13.3	17.5	162	3.48	36	42.6	261	54.2	0.346	33.00
90 x 90	5.0	12.8	16.4	13.0	193	3.43	42.9	51.4	316	64.7	0.343	26.70
	6.0	15.1	19.2	10.0	220	3.39	49	59.5	368	74.2	0.339	22.50

Section Designation		Mass per Metre kg/m	Area of Section A cm ²	Ratio for Local Buckling d/t ⁽¹⁾	Second Moment of Area I cm ⁴	Radius of Gyration r cm	Elastic Modulus Z cm ³	Plastic Modulus S cm ³	Torsional Constants		Surface Area	
Size D x B mm	Thickness t mm								J cm ⁴	C cm ³	Per Metre m ²	Per Tonne m ²
100 x 100	3.0	9.0	11.4	28.3	177	3.94	35.4	41.2	279	53.2	0.39	43.50
	4.0	11.7	14.9	20.0	226	3.89	45.3	53.3	362	68.1	0.386	32.90
	5.0	14.4	18.4	15.0	271	3.84	54.2	64.6	441	81.7	0.383	26.60
	6.0	17.0	21.6	11.7	311	3.79	62.3	75.1	514	94.1	0.379	22.30
	8.0	21.4	27.2	7.5	366	3.67	73.2	91.1	645	114	0.366	17.10
120 x 120	4.0	14.2	18.1	25.0	402	4.71	67	78.3	637	101	0.466	32.70
	5.0	17.5	22.4	19.0	485	4.66	80.9	95.4	778	122	0.463	26.40
	6.0	20.7	26.4	15.0	562	4.61	93.7	112	913	141	0.459	22.10
	8.0	26.4	33.6	10.0	677	4.49	113	138	1160	175	0.446	16.90
	10.0	31.8	40.6	7.0	777	4.38	129	162	1380	203	0.437	13.70
140 x 140	4.0	16.8	21.3	30.0	652	5.52	93.1	108	1020	140	0.546	32.60
	5.0	20.7	26.4	23.0	791	5.48	113	132	1260	170	0.543	26.20
	6.0	24.5	31.2	18.3	920	5.43	131	155	1480	198	0.539	22.00
	8.0	31.4	40.0	12.5	1130	5.3	161	194	1900	248	0.526	16.70
	10.0	38.1	48.6	9.0	1310	5.2	187	230	2270	291	0.517	13.60
150 x 150	4.0	18.0	22.9	32.5	808	5.93	108	125	1270	162	0.586	32.50
	5.0	22.3	28.4	25.0	982	5.89	131	153	1550	197	0.583	26.20
	6.0	26.4	33.6	20.0	1150	5.84	153	180	1830	230	0.579	21.90
	8.0	33.9	43.2	13.8	1410	5.71	188	226	2360	289	0.566	16.70
	10.0	41.3	52.6	10.0	1650	5.61	220	269	2840	341	0.557	13.50
160 x 160	4.0	19.3	24.5	35.0	987	6.34	123	143	1540	185	0.626	32.50
	5.0	23.8	30.4	27.0	1200	6.29	150	175	1900	226	0.623	26.10
	6.0	28.3	36.0	21.7	1410	6.25	176	206	2240	264	0.619	21.90
	8.0	36.5	46.4	15.0	1740	6.12	218	260	2900	334	0.606	16.60
	10.0	44.4	56.6	11.0	2050	6.02	256	311	3490	395	0.597	13.40
180 x 180	5.0	27.0	34.4	31.0	1740	7.11	193	224	2720	290	0.703	26.10
	6.0	32.1	40.8	25.0	2040	7.06	226	264	3220	340	0.699	21.80
	8.0	41.5	52.8	17.5	2550	6.94	283	336	4190	432	0.686	16.50
	10.0	50.7	64.6	13.0	3020	6.84	335	404	5070	515	0.677	13.40
	12.0	58.5	74.5	10.0	3320	6.68	369	454	5870	584	0.658	11.30
	12.5	60.5	77.0	9.4	3410	6.65	378	467	6050	600	0.656	10.80
200 x 200	5.0	30.1	38.4	35.0	2410	7.93	241	279	3760	362	0.783	26.00
	6.0	35.8	45.6	28.3	2830	7.88	283	330	4460	426	0.779	21.80
	8.0	46.5	59.2	20.0	3570	7.76	357	421	5820	544	0.766	16.50
	10.0	57.0	72.6	15.0	4250	7.65	425	508	7070	651	0.757	13.30
	12.0	66.0	84.1	11.7	4730	7.5	473	576	8230	743	0.738	11.20
	12.5	68.3	87.0	11.0	4860	7.47	486	594	8500	765	0.736	10.80
250 x 250	6.0	45.2	57.6	36.7	5670	9.92	454	524	8840	681	0.979	21.60
	8.0	59.1	75.2	26.3	7230	9.8	578	676	11600	878	0.966	16.30
	10.0	72.7	92.6	20.0	8710	9.7	697	822	14200	1060	0.957	13.20
	12.0	84.8	108.0	15.8	9860	9.55	789	944	16700	1230	0.938	11.10
	12.5	88.0	112.0	15.0	10200	9.52	813	975	17300	1270	0.936	10.60

Section Designation		Mass per Metre kg/m	Area of Section A cm ²	Ratio for Local Buckling d/t ⁽¹⁾	Second Moment of Area I cm ⁴	Radius of Gyration r cm	Elastic Modulus Z cm ³	Plastic Modulus S cm ³	Torsional Constants		Surface Area	
Size D x B mm	Thickness t mm								J cm ⁴	C cm ³	Per Metre m ²	Per Tonne m ²
300 x 300	6.0	54.7	69.6	45.0	9960	12	664	764	15400	997	1.18	21.60
	8.0	71.6	91.2	32.5	12800	11.8	853	991	20300	1290	1.17	16.30
	10.0	88.4	113.0	25.0	15500	11.7	1040	1210	25000	1570	1.16	13.10
	12.0	104.0	132.0	20.0	17800	11.6	1180	1400	29500	1830	1.14	11.00
	12.5	108.0	137.0	19.0	18300	11.6	1220	1450	30600	1890	1.14	10.60
350 x 350	8.0	84.2	107.0	38.8	20700	13.9	1180	1370	32600	1790	1.37	16.20
	10.0	104.0	133.0	30.0	25200	13.8	1440	1680	40100	2180	1.36	13.00
	12.0	123.0	156.0	24.2	29100	13.6	1660	1950	47600	2550	1.34	10.90
	12.5	127.0	162.0	23.0	30000	13.6	1720	2020	49400	2640	1.34	10.50
400 x 400	8.0	96.7	123.0	45.0	31300	15.9	1560	1800	48900	2360	1.57	16.20
	10.0	120.0	153.0	35.0	38200	15.8	1910	2210	60400	2890	1.56	13.00
	12.0	141.0	180.0	28.3	44300	15.7	2220	2590	71800	3400	1.54	10.90
	12.5	147.0	187.0	27.0	45900	15.7	2290	2680	74600	3520	1.54	10.50

© 2006-2008. Corus Construction Services and Development