

EN 10210 S355J2H Properties hot formed rectangular hollow sections																
Size		Thickness	Mass	Sectional area	Moment of inertia		Radius of gyration		Elastic modulus		Plastic modulus		Torsional constants		Superficial area/m	Approx. length /tonne
D	B	T	M	A	I <sub>xx</sub>	I <sub>yy</sub>	i <sub>xx</sub>	i <sub>yy</sub>	W <sub>el,xx</sub>	W <sub>el,yy</sub>	W <sub>pl,xx</sub>	W <sub>pl,yy</sub>	I <sub>t</sub>	C <sub>t</sub>	A <sub>s</sub>	/tonne
mm	mm	mm	kg/m	cm <sup>2</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>4</sup>	cm <sup>3</sup>	m <sup>2</sup> /m	m
50	30	3,2	3.61	4.60	14.2	6.20	1.76	1.16	5.68	4.13	7.25	5.00	14.2	6.80	0.152	277
60	40	3,0	4.35	5.54	26.5	13.9	2.18	1.58	8.82	6.95	10.9	8.19	29.2	11.2	0.192	230
60	40	4,0	5.64	7.19	32.8	17.0	2.14	1.54	10.9	8.52	13.8	10.3	36.7	13.7	0.190	177
60	40	5,0	6.85	8.73	38.1	19.5	2.09	1.50	12.7	9.77	16.4	12.2	43.0	15.7	0.187	146
80	40	3,2	5.62	7.16	57.2	18.9	2.83	1.63	14.3	9.46	18.0	11.0	46.2	16.1	0.232	178
80	40	4,0	6.90	8.79	68.2	22.2	2.79	1.59	17.1	11.1	21.8	13.2	55.2	18.9	0.230	145
80	40	5,0	8.42	10.7	80.3	25.7	2.74	1.55	20.1	12.9	26.1	15.7	65.1	21.9	0.227	119
80	40	6,3	10.3	13.1	93.3	29.2	2.67	1.49	23.3	14.6	31.1	18.4	75.6	24.8	0.224	97.2
80	40	8,0	12.5	16.0	106	32.1	2.58	1.42	26.5	16.1	36.5	21.2	85.8	27.4	0.219	79.9
90	50	3,6	7.40	9.42	98.3	38.7	3.23	2.03	21.8	15.5	27.2	18.0	89.4	25.9	0.271	135
90	50	5,0	9.99	12.7	127	49.2	3.16	1.97	28.3	19.7	36.0	23.5	116	32.9	0.267	100
90	50	6,3	12.3	15.6	150	57.0	3.10	1.91	33.3	22.8	43.2	28.0	138	38.1	0.264	81.5
100	50	3,0	6.71	8.54	110	36.8	3.58	2.08	21.9	14.7	27.3	16.8	88.4	25.0	0.292	149
100	50	3,2	7.13	9.08	116	38.8	3.57	2.07	23.2	15.5	28.9	17.7	93.4	26.4	0.292	140
100	50	4,0	8.78	11.2	140	46.2	3.53	2.03	27.9	18.5	35.2	21.5	113	31.4	0.290	114
100	50	5,0	10.8	13.7	167	54.3	3.48	1.99	33.3	21.7	42.6	25.8	135	36.9	0.287	92.8
100	50	6,3	13.3	16.9	197	63.0	3.42	1.93	39.4	25.2	51.3	30.8	160	42.9	0.284	75.4
100	50	8,0	16.3	20.8	230	71.7	3.33	1.86	46.0	28.7	61.4	36.3	186	48.9	0.279	61.4
100	60	3,6	8.53	10.9	145	64.8	3.65	2.44	28.9	21.6	35.6	24.9	142	35.6	0.311	117
100	60	5,0	11.6	14.7	189	83.6	3.58	2.38	37.8	27.9	47.4	32.9	188	45.9	0.307	86.5
100	60	6,3	14.2	18.1	225	98.1	3.52	2.33	45.0	32.7	57.3	39.5	224	53.8	0.304	70.2
100	60	8,0	17.5	22.4	264	113	3.44	2.25	52.8	37.8	68.7	47.1	265	62.2	0.299	57.0
120	60	3,6	9.66	12.3	227	76.3	4.30	2.49	37.9	25.4	47.2	28.9	183	43.3	0.351	104
120	60	5,0	13.1	16.7	299	98.8	4.23	2.43	49.9	32.9	63.1	38.4	242	56.0	0.347	76.1
120	60	6,3	16.2	20.7	358	116	4.16	2.37	59.7	38.8	76.7	46.3	290	65.9	0.344	61.6
120	60	8,0	20.1	25.6	425	135	4.08	2.30	70.8	45.0	92.7	55.4	344	76.6	0.339	49.9
120	80	5,0	14.7	18.7	365	193	4.42	3.21	60.9	48.2	74.6	56.1	401	77.9	0.387	68.0
120	80	6,3	18.2	23.2	440	230	4.36	3.15	73.3	57.6	91.0	68.2	487	92.9	0.384	54.9
120	80	8,0	22.6	28.8	525	273	4.27	3.08	87.5	68.1	111	82.6	587	110	0.379	44.3
120	80	10,0	27.4	34.9	609	313	4.18	2.99	102	78.1	131	97.3	688	126	0.374	36.5

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D	B	T	M	A	I <sub>xx</sub>	I <sub>yy</sub>	i <sub>xx</sub>	i <sub>yy</sub>	W <sub>el,xx</sub>	W <sub>el,yy</sub>	W <sub>pl,xx</sub>	W <sub>pl,yy</sub>	I <sub>t</sub>	C <sub>t</sub>	A <sub>s</sub>	
mm	mm	mm	kg/m	cm <sup>2</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>4</sup>	cm <sup>3</sup>	m <sup>2</sup> /m	m
150	100	5,0	18.6	23.7	739	392	5.58	4.07	98.5	78.5	119	90.1	807	127	0.487	53.7
150	100	6,3	23.1	29.5	898	474	5.52	4.01	120	94.8	147	110	986	153	0.484	43.2
150	100	8,0	28.9	36.8	1087	569	5.44	3.94	145	114	180	135	1203	183	0.479	34.7
150	100	10,0	35.3	44.9	1282	665	5.34	3.85	171	133	216	161	1432	214	0.474	28.4
150	100	12,5	42.8	54.6	1488	763	5.22	3.74	198	153	256	190	1679	246	0.468	23.3
160	80	4,0	14.4	18.4	612	207	5.77	3.35	76.5	51.7	94.7	58.3	493	88.1	0.470	69.3
160	80	5,0	17.8	22.7	744	249	5.72	3.31	93.0	62.3	116	71.1	600	106	0.467	56.0
160	80	6,3	22.2	28.2	903	299	5.66	3.26	113	74.8	142	86.8	730	127	0.464	45.1
160	80	8,0	27.6	35.2	1091	356	5.57	3.18	136	89.0	175	106	883	151	0.459	36.2
160	80	10,0	33.7	42.9	1284	411	5.47	3.10	161	103	209	125	1041	175	0.454	29.7
200	100	5,0	22.6	28.7	1495	505	7.21	4.19	149	101	185	114	1204	172	0.587	44.3
200	100	6,3	28.1	35.8	1829	613	7.15	4.14	183	123	228	140	1475	208	0.584	35.6
200	100	8,0	35.1	44.8	2234	739	7.06	4.06	223	148	282	172	1804	251	0.579	28.5
200	100	10,0	43.1	54.9	2664	869	6.96	3.98	266	174	341	206	2156	295	0.574	23.2
200	100	12,5	52.7	67.1	3136	1004	6.84	3.87	314	201	408	245	2541	341	0.568	19.0
200	120	5,0	24.1	30.7	1685	762	7.40	4.98	168	127	205	144	1648	210	0.627	41.5
200	120	6,3	30.1	38.3	2065	929	7.34	4.92	207	155	253	177	2028	255	0.624	33.3
200	120	8,0	37.6	48.0	2529	1128	7.26	4.85	253	188	313	218	2495	310	0.619	26.6
200	120	10,0	46.3	58.9	3026	1337	7.17	4.76	303	223	379	263	3001	367	0.614	21.6
200	150	8,0	41.4	52.8	2971	1894	7.50	5.99	297	253	359	294	3643	398	0.679	24.1
200	150	10,0	51.0	64.9	3568	2264	7.41	5.91	357	302	436	356	4409	475	0.674	19.6
250	100	10,0	51.0	64.9	4733	1072	8.54	4.06	379	214	491	251	2908	376	0.674	19.6
250	100	12,5	62.5	79.6	5622	1245	8.41	3.96	450	249	592	299	3436	438	0.668	16.0
250	150	5,0	30.4	38.7	3360	1527	9.31	6.28	269	204	324	228	3278	337	0.787	32.9
250	150	6,3	38.0	48.4	4143	1874	9.25	6.22	331	250	402	283	4054	413	0.784	26.3
250	150	8,0	47.7	60.8	5111	2298	9.17	6.15	409	306	501	350	5021	506	0.779	21.0
250	150	10,0	58.8	74.9	6174	2755	9.08	6.06	494	367	611	426	6090	605	0.774	17.0
250	150	12,5	72.3	92.1	7387	3265	8.96	5.96	591	435	740	514	7326	717	0.768	13.8
250	150	16,0	90.3	115	8879	3873	8.79	5.80	710	516	906	625	8868	849	0.759	11.1

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mm	mm	mm	kg/m	cm <sup>2</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>4</sup>	cm <sup>3</sup>	m <sup>2</sup> /m	m
300	100	8,0	47.7	60.8	6305	1078	10.2	4.21	420	216	546	245	3069	387	0.779	21.0
300	100	10,0	58.8	74.9	7613	1275	10.1	4.13	508	255	666	296	3676	458	0.774	17.0
300	200	6,3	47.9	61.0	7829	4193	11.3	8.29	522	419	624	472	8476	681	0.984	20.9
300	200	8,0	60.3	76.8	9717	5184	11.3	8.22	648	518	779	589	10562	840	0.979	16.6
300	200	10,0	74.5	94.9	11819	6278	11.2	8.13	788	628	956	721	12908	1015	0.974	13.4
300	200	12,5	91.9	117	14273	7537	11.0	8.02	952	754	1165	877	15677	1217	0.968	10.9
300	200	16,0	115	147	17390	9109	10.9	7.87	1159	911	1441	1080	19252	1468	0.959	8.67
400	200	8,0	72.8	92.8	19562	6660	14.5	8.47	978	666	1203	743	15735	1135	1.18	13.7
400	200	10,0	90.2	115	23914	8084	14.4	8.39	1196	808	1480	911	19259	1376	1.17	11.1
400	200	12,5	112	142	29063	9738	14.3	8.28	1453	974	1813	1111	23438	1656	1.17	8.97
400	200	16,0	141	179	35738	11824	14.1	8.13	1787	1182	2256	1374	28871	2010	1.16	7.12
450	250	8,0	85.4	109	30082	12142	16.6	10.6	1337	971	1622	1081	27083	1629	1.38	11.7
450	250	10,0	106	135	36895	14819	16.5	10.5	1640	1185	2000	1331	33284	1986	1.37	9.44
450	250	12,5	131	167	45026	17973	16.4	10.4	2001	1438	2458	1631	40719	2406	1.37	7.62
450	250	16,0	166	211	55705	22041	16.2	10.2	2476	1763	3070	2029	50545	2947	1.36	6.04
500	300	8,0	97.9	125	43728	19951	18.7	12.6	1749	1330	2100	1480	42563	2203	1.58	10.2
500	300	10,0	122	155	53762	24439	18.6	12.6	2150	1629	2595	1826	52450	2696	1.57	8.22
500	300	12,5	151	192	65813	29780	18.5	12.5	2633	1985	3196	2244	64389	3281	1.57	6.63
500	300	16,0	191	243	81783	36768	18.3	12.3	3271	2451	4005	2804	80329	4044	1.56	5.24
500	300	20,0	235	300	98777	44078	18.2	12.1	3951	2939	4885	3408	97447	4842	1.55	4.25