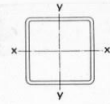


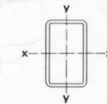
## Appendix B – HSS Tables



## STEEL

## SQUARE Hollow Structural Sections

Designation	Size	Mass	Dead Load	Area	I	S	r	Z	Torsion J	Surface Area	Shear C <sub>rt</sub>
mm x mm x mm	mm x mm x mm	kg/m	kN/m	mm <sup>2</sup>	10 <sup>6</sup> mm <sup>4</sup>	10 <sup>3</sup> mm <sup>3</sup>	mm	10 <sup>3</sup> mm <sup>3</sup>	10 <sup>3</sup> mm <sup>4</sup>	m <sup>2</sup> /m	mm <sup>2</sup>
HSS 305x305x13	HSS 305x305x12.7	113	1.110	14 400	202	1 330	118	1 560	324 000	1.18	6 450
x 11	x 11.1	100	0.982	12 800	181	1 190	119	1 390	288 000	1.18	5 790
x 9.5	x 9.53	86.5	0.848	11 000	158	1 040	120	1 210	250 000	1.19	5 080
x 8.0	x 7.95	72.8	0.714	9 280	135	886	121	1 030	211 000	1.19	4 340
x 6.4	x 6.35	58.7	0.576	7 480	110	723	121	833	171 000	1.20	3 550
HSS 254x254x13	HSS 254x254x12.7	93.0	0.912	11 800	113	888	97.6	1 060	183 000	0.972	5 160
x 11	x 11.1	82.4	0.808	10 500	102	799	98.4	945	163 000	0.978	4 600
x 9.5	x 9.53	71.3	0.699	9 090	89.3	703	99.1	825	142 000	0.983	4 110
x 8.0	x 7.95	60.1	0.590	7 660	76.5	602	99.9	702	121 000	0.989	3 530
x 6.4	x 6.35	48.6	0.476	6 190	62.7	494	101	571	97 900	0.994	2 900
HSS 203x203x13	HSS 203x203x12.7	72.7	0.713	9 260	54.7	538	76.8	650	90 700	0.769	3 870
x 11	x 11.1	64.6	0.634	8 230	49.6	488	77.6	584	81 200	0.775	3 530
x 9.5	x 9.53	56.1	0.550	7 150	43.9	432	78.4	513	71 000	0.780	3 150
x 8.0	x 7.95	47.5	0.465	6 050	37.9	373	79.2	438	60 500	0.786	2 730
x 6.4	x 6.35	38.4	0.377	4 900	31.3	308	79.9	359	49 300	0.791	2 290
HSS 178x178x13	HSS 178x178x12.7	62.6	0.614	7 970	35.2	366	66.4	484	59 200	0.668	3 230
x 11	x 11.1	55.7	0.547	7 100	32.1	361	67.2	436	53 200	0.673	2 970
x 9.5	x 9.53	48.5	0.476	6 180	28.6	322	68.0	385	46 700	0.678	2 650
x 8.0	x 7.95	41.1	0.403	5 240	24.8	279	68.8	330	39 900	0.684	2 320
x 6.4	x 6.35	33.4	0.327	4 250	20.6	231	69.6	271	32 700	0.689	1 940
x 4.8	x 4.78	25.5	0.250	3 250	16.1	181	70.3	209	25 200	0.695	1 520
HSS 152x152x13	HSS 152x152x12.7	52.4	0.514	6 680	21.0	275	56.0	341	36 000	0.566	2 580
x 11	x 11.1	46.9	0.460	5 970	19.3	253	56.8	310	32 500	0.571	2 400
x 9.5	x 9.53	40.9	0.401	5 210	17.3	227	57.6	275	28 700	0.577	2 180
x 8.0	x 7.95	34.8	0.341	4 430	15.1	198	58.4	237	24 600	0.582	1 920
x 6.4	x 6.35	28.3	0.278	3 610	12.6	166	59.2	195	20 300	0.588	1 610
x 4.8	x 4.78	21.7	0.213	2 760	9.93	130	59.9	152	15 700	0.593	1 270
HSS 127x127x11	HSS 127x127x11.1	38.0	0.373	4 840	10.4	164	46.4	205	18 000	0.470	1 840
x 9.5	x 9.53	33.3	0.327	4 240	9.47	149	47.2	183	16 000	0.475	1 690
x 8.0	x 7.95	28.4	0.279	3 620	8.35	132	48.0	159	13 900	0.481	1 510
x 6.4	x 6.35	23.2	0.228	2 960	7.05	111	48.8	132	11 500	0.486	1 290
x 4.8	x 4.78	17.9	0.175	2 280	5.60	88.1	49.6	103	8 920	0.492	1 030
HSS 102x102x9.5	HSS 102x102x9.53	25.7	0.252	3 280	4.44	87.4	36.8	110	7 740	0.374	1 210
x 8.0	x 7.95	22.1	0.217	2 820	3.98	78.4	37.6	96.6	6 780	0.379	1 110
x 6.4	x 6.35	18.2	0.178	2 320	3.42	67.3	38.4	81.3	5 670	0.385	968
x 4.8	x 4.78	14.1	0.138	1 790	2.75	54.2	39.2	64.3	4 450	0.390	789
HSS 89x89x9.5	HSS 89x89x9.53	21.9	0.215	2 790	2.79	62.7	31.6	80.2	4 970	0.323	968
x 8.0	x 7.95	18.9	0.186	2 410	2.53	57.0	32.4	71.2	4 390	0.328	908
x 6.4	x 6.35	15.6	0.153	1 990	2.20	45.3	33.2	60.5	3 700	0.334	806
x 4.8	x 4.78	12.2	0.119	1 550	1.79	34.0	34.0	48.2	3 030	0.339	687
HSS 76x76x8.0	HSS 76.2x76.2x7.95	15.8	0.155	2 010	1.49	39.0	27.2	49.7	2 630	0.278	706
x 6.4	x 6.35	13.1	0.129	1 670	1.31	34.4	28.0	42.7	2 250	0.283	645
x 4.8	x 4.78	10.3	0.101	1 310	1.08	28.5	28.8	34.4	1 800	0.288	546
HSS 64x64x6.4	HSS 63.5x63.5x6.35	10.6	0.104	1 350	0.701	22.1	22.8	28.0	1 230	0.232	484
x 4.8	x 4.78	8.35	0.082	1 060	0.593	18.7	23.6	22.9	1 000	0.238	424
x 3.8	x 3.81	6.85	0.067	872	0.506	15.9	24.1	19.2	836	0.241	368
x 3.2	x 3.18	5.82	0.057	741	0.441	13.9	24.4	16.5	717	0.243	323
HSS 51x51x6.4	HSS 50.8x50.8x6.35	8.05	0.079	1 030	0.317	12.5	17.6	16.3	580	0.181	323
x 4.8	x 4.78	6.45	0.063	821	0.278	10.9	18.4	13.8	485	0.187	303
x 3.8	x 3.81	5.33	0.052	679	0.242	9.54	18.9	11.7	410	0.190	271
x 3.2	x 3.18	4.55	0.045	580	0.214	8.42	19.2	10.2	355	0.192	242
x 2.8	x 2.79	4.05	0.040	516	0.194	7.64	19.4	9.15	318	0.194	221
HSS 38x38x4.8	HSS 38.1x38.1x4.78	4.54	0.044	578	0.100	5.27	13.2	6.91	184	0.136	181
x 3.8	x 3.81	3.81	0.037	485	0.091	4.77	13.7	6.04	160	0.139	174
x 3.2	x 3.18	3.28	0.032	418	0.082	4.31	14.0	5.34	141	0.141	161
x 2.5	x 2.54	2.71	0.026	345	0.071	3.71	14.3	4.51	118	0.144	142
HSS 32x32x3.8	HSS 31.8x31.8x3.81	3.06	0.030	389	0.048	3.01	11.1	3.92	87.0	0.114	126
x 3.2	x 3.18	2.65	0.026	338	0.044	2.77	11.4	3.51	77.6	0.116	121
x 2.5	x 2.54	2.20	0.022	281	0.039	2.44	11.7	3.01	66.1	0.118	110
HSS 25x25x3.2	HSS 25.4x25.4x3.18	2.01	0.020	257	0.020	1.56	8.79	2.05	36.3	0.091	80.6
x 2.5	x 2.54	1.69	0.017	216	0.018	1.41	9.12	1.79	31.6	0.093	77.4



## STEEL

## RECTANGULAR Hollow Structural Sections

Designation	Size	Mass	Dead Load	Area	I <sub>x</sub>	S <sub>x</sub>	r <sub>x</sub>	Z <sub>x</sub>	I <sub>y</sub>	S <sub>y</sub>	r <sub>y</sub>	Z <sub>y</sub>	Torsion J	Shear C <sub>rt</sub>
		kg/m	kN/m	mm <sup>2</sup>	10 <sup>6</sup> mm <sup>4</sup>	10 <sup>3</sup> mm <sup>3</sup>	mm	10 <sup>3</sup> mm <sup>3</sup>	10 <sup>6</sup> mm <sup>4</sup>	10 <sup>3</sup> mm <sup>3</sup>	mm	10 <sup>3</sup> mm <sup>3</sup>	10 <sup>3</sup> mm <sup>4</sup>	mm <sup>2</sup>
HSS 305x203x13	HSS 305x203x12.7	93.0	0.912	11 800	147	964	111	1 190	78.1	769	81.2	896	167 000	6 450
x 11	x 11.1	82.4	0.808	10 500	132	867	112	1 060	70.5	693	81.9	802	149 000	5 790
x 9.5	x 9.53	71.3	0.699	9 090	116	782	113	925	62.1	611	82.7	701	130 000	5 080
x 8.0	x 7.95	60.1	0.590	7 660	99.4	652	114	787	53.3	524	83.4	596	111 000	4 340
x 6.4	x 6.35	48.6	0.476	6 190	81.5	535	115	640	43.8	431	84.1	486	89 800	3 550
HSS254x152x13	HSS254x152x12.7	72.7	0.713	9 260	75.2	592	90.1	746	33.6	441	60.2	522	78 200	5 160
x 11	x 11.1	64.6	0.634	8 230	68.2	537	91.0	671	30.6	401	61.0	470	70 200	4 660
x 9.5	x 9.53	56.1	0.550	7 150	60.3	475	91.9	589	27.2	357	61.7	413	61 800	4 110
x 8.0	x 7.95	47.5	0.465	6 050	52.0	409	92.7	503	23.5	309	62.4	353	52 600	3 530
x 6.4	x 6.35	38.4	0.377	4 900	42.9	338	93.6	411	19.5	256	63.1	290	43 000	2 900
HSS 203x152x13	HSS 203x152x12.7	62.6	0.614	7 970	43.0	123	73.4	528	27.3	358	58.5	432	56 400	3 870
x 11	x 11.1	55.7	0.547	7 100	39.1	385	74.2	476	24.9	327	59.3	390	50 800	3 530
x 9.5	x 9.53	48.5	0.476	6 180	34.8	343	75.1	419	22.3	292	60.0	344	44 600	3 150
x 8.0	x 7.95	41.1	0.403	5 240	30.2	297	75.9	360	19.3	254	60.7	295	38 200	2 730
x 6.4	x 6.35	33.4	0.327	4 250	25.0	246	76.7	295	16.1	211	61.5	243	31 200	2 260
x 4.8	x 4.78	25.5	0.250	3 250	19.5	192	77.5	228	12.6	165	62.2	188	24 100	1 760
HSS 203x102x13	HSS 203x102x12.7	52.4	0.514	6 680	31.2	307	68.4	405	10.2	201	39.1	246	27 000	3 870
x 11	x 11.1	46.9	0.460	5 970	28.7	282	69.3	367	9.46	186	39.8	224	24 600	3 530
x 9.5	x 9.53	40.9	0.401	5 210	25.8	253	70.3	325	8.56	168	40.5	199	21 900	3 150
x 8.0	x 7.95	34.8	0.341	4 430	22.5	211	71.2	281	7.54	148	41.2	172	18 900	2 730
x 6.4	x 6.35	28.3	0.278	3 610	18.8	185	72.2	232	6.35	125	42.0	143	15 600	2 260
x 4.8	x 4.78	21.7	0.213	2 760	14.7	145	73.1	180	5.03	99.0	42.7	111	12 200	1 760
HSS 178x127x13	HSS 178x127x12.7	52.4	0.514	6 680	26.4	297	62.8	377	15.5	243	48.1	298	33 600	3 230
x 11	x 11.1	46.9	0.460	5 970	24.2	272	63.7	342	14.2	224	48.8	270	30 400	2 970
x 9.5	x 9.53	40.9	0.401	5 210	21.7	244	64.6	303	12.8	202	49.6	240	26 900	2 660
x 8.0	x 7.95	34.8	0.341	4 430	18.9	213	65.4	281	11.2	177	50.3	207	23 100	2 320
x 6.4	x 6.35	28.3	0.278	3 610	15.8	178	72.2	232	6.35	125	42.0	143	15 600	2 260
x 4.8	x 4.78	21.7	0.213	2 760	12.4	140	73.1	180	5.03	99.0	42.7	111	12 200	1 760
HSS 152x102x11	HSS 152x102x11.1	38.0	0.373	4 840	13.6	179	53.1	230	7.13	140	38.4	172	16 300	2 400
x 9.5	x 9.53	33.3	0.327	4 240	12.4	162	54.0	205	6.50	128	39.1	154	14 500	2 180
x 8.0	x 7.95	28.4	0.279	3 620	10.9	143	54.8	178	5.76	113	39.9	134	12 600	1 920
x 6.4	x 6.35	23.2	0.228	2 960	9.18	121	55.7	148	4.88	96.1	40.6	112	10 500	1 610
x 4.8	x 4.78	17.9	0.175	2 280	7.28	95.6	56.5	116	3.89	76.6	41.3	87.8	8 160	1 270
HSS 127x76x9.5	HSS 127x76.2x9.53	25.7	0.252	3 280	6.12	96.4	43.2	126	2.69	70.5	28.6	87.5	6 800	1 690
x 8.0	x 7.95	22.1	0.217	2 820	5.48	86.4	44.1	111	2.43	63.8	29.4	77.2	5 810	1 510
x 6.4	x 6.35	18.2	0.178	2 320	4.70	74.0	45.1	93.3	2.15	53.3	30.1	63.2	4 890	1 290
x 4.8	x 4.78	14.1	0.138	1 790	3.78	59.5	45.9	73.8	1.70	44.7	30.8	51.7	3 860	1 030
HSS 127x64x9.5	HSS 127x63.5x9.53	23.8	0.234	3 030	5.28	83.2	41.7	112	1.70	53.6	23.7	67.4	4 460	1 690
x 8.0	x 7.95	20.5	0.201	2 610	4.77	75.1	42.7	98.9	1.56	49.1	24.4	60.0	4 130	1 510
x 6.4	x 6.35	16.9	0.166	2 150	4.11	64.8	43.7	83.6	1.36	42.9	25.1	51.0	3 150	1 290
x 4.8	x 4.78	13.1	0.129	1 670	3.33	52.4	44.6	66.3	1.12	35.2	25.9	40.7	2 800	1 030
HSS 127x51x9.5	HSS 127x50.8x9.53	21.9	0.215	2 790	4.45	70.0	39.9	97.7	0.961	37.8	18.6	48.9	2 930	1 690
x 8.0	x 7.95	18.9	0.186	2 410	4.05	63.8	41.0	86.9	0.983	35.3	19.3	44.0	2 650	1 510
x 6.4	x 6.35	15.6	0.153	1 990	3.53	55.5	42.1	73.8	0.798	31.4	20.0	37.9	2 280	1 290
x 4.8	x 4.78	12.2	0.119	1 550	2.83	43.3	45.9	58.9	0.685	25.5	18.6	31.4	1 940	958
HSS 102x76x9.5	HSS 102x76.2x9.53	21.9	0.215	2 790	3.41	67.2	35.0	87.6	0.75	35.3	27.7	71.3	4 170	1 210
x 8.0	x 7.95	18.9	0.186	2 410	3.10	61.0	35.8	77.7	0.96	31.4	28.5	63.5	4 170	1 110
x 6.4	x 6.35	15.6	0.153	1 990	2.68	52.8	36.7	65.9	0.71	24.8	29.3	54.0	3 530	968
x 4.8	x 4.78	12.2	0.119	1 550	2.18	43.0	37.5	52.5	1.39	36.6	30.1	43.1	2 800	789
HSS 102x51x9.5	HSS 102x50.8x7.95	15.8	0.155	2 010	2.21	43.5	33.2	58.8	0.709	27.9	18.8	35.4	1 950	1 110
x 6.4	x 6.35	13.1	0.129	1 670	1.95	38.4	34.2	50.6	0.638	25.1	19.5	30.7	1 690	910
x 4.8	x 4.78	10.1	0.101	1 310	1.36	31.8	35.1	40.8	0.536	21.1	20.3	24.9	1 370	789
x 3.8	x 3.81	8.37	0.082	1 070	1.36	26.8	35.1	33.9	0.456	18.0	20.7	20.8	1 140	658
x 3.2	x 3.18	7.09	0.069	903	1.17	23.1	36.1	29.0	0.397	15.6	21.0	17.9	979	565
HSS 89x64x8.0	HSS 88.9x63.5x7.95	15.8	0.155	2 010	1.87	42.1	30.5	54.9	0.70	34.3	23.3	43.2	2 450	900
x 6.4	x 6.35	13.1	0.129	1 670	1.65	37.1	31.4	47.1	0.966	30.4	24.0	37.2	2 100	806
x 4.8	x 4.78	10.3	0.101	1 310	1.36	30.6	32.3	38.0	0.803	25.3	24.8	30.1	1 690	667
x 3.8	x 3.81	8.37	0.082	1 070	1.15	25.8	32.8	31.5	0.679	21.4	25.2	25.0	1 400	561
x 3.2	x 3.18	7.09	0.069	903	0.990	22.3	33.1	27.0	0.588	18.5	25.5	21.4	1 190	405
HSS 76x51x8.0	HSS 76.2x50.8x7.95	12.6	0.123	1 600	1.01	26.6	25.1	35.9	0.522	20.5	18.0	26.7	1 770	645
x 6.4	x 6.35	10.4	0.104	1 310	0.817	21.8	27.1	26.7	0.474	16.7	19.3	21.8	1 400	561
x 4.8	x 4.78	8.35	0.082	1 060	0.774	20.3	27.0	25.7	0.407	16.0	19.6	19.3	911	546
x 3.8	x 3.81	6.85	0.067	872	0.660	17.3	27.5	21.6	0.349	13.8	20.0	16.3	762	445
HSS 51x25x3.2	HSS 50.8x25.4x3.18	3.28	0.032	418	0.122	4.81	17.1	6.33	0.040	3.14	9.77	3.84	106	242
x 2.5	x 2.54	2.71	0.026	345	0.105	4.15	17.5	5.35	0.035	2.75	10.1	3.27	89.8	206