Atlas HSS Section Properties (Rectangle) - CSA G40

Shape	Shape			Design Wall Thickness, t	Mass	Dead Load	Area, A	b/t	h/t	Axis X-X				Axis Y-Y				Workable Flat		Torsion		Surface Area
	H	B	t_{nom}							I	S	r	Z	I	S	r	Z	Depth	Width	J	C	
	mm	mm	mm	mm	kg/m	kN/m	mm^2			10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	mm	mm	10^3 mm^4	10^3 mm^3	m^2/m
HSS 34 x 10 x 1	863.6	254	25.40	25.40	412	4.04	52500	7.0	31.0	4240	9820	284	13100	587	4620	106	5340	749	140	1780000	9670	2.15
HSS 34 x 10 x 7/8	863.6	254	22.23	22.23	364	3.57	46400	8.4	35.9	3800	8800	286	11700	532	4190	107	4780	764	154	1603000	8630	2.16
HSS 34 x 10 x 3/4	863.6	254	19.05	19.05	316	3.10	40200	10.3	42.3	3340	7740	288	10200	473	3720	108	4190	778	168	1412000	7530	2.17
HSS 34 x 10 x 5/8	863.6	254	15.88	15.88	266	2.61	33800	13.0	51.4	2850	6600	290	8630	408	3210	110	3580	792	183	1209000	6390	2.18
HSS 30 x 10 x 1	762	254	25.40	25.40	372	3.65	47400	7.0	27.0	3040	7980	253	10600	519	4090	105	4750	648	140	1522000	8490	1.94
HSS 30 x 10 x 7/8	762	254	22.23	22.23	329	3.23	41900	8.4	31.3	2730	7170	255	9420	471	3710	106	4260	662	154	1370000	7580	1.96
HSS 30 x 10 x 3/4	762	254	19.05	19.05	285	2.79	36300	10.3	37.0	2410	6330	258	8230	419	3300	107	3740	676	168	1208000	6620	1.97
HSS 30 x 10 x 0.690	762	254	17.53	17.53	264	2.59	33600	11.5	40.5	2240	5880	258	7650	393	3090	108	3480	683	175	1126000	6150	1.97
HSS 30 x 10 x 5/8	762	254	15.88	15.88	240	2.35	30600	13.0	45.0	2060	5410	259	7000	363	2860	109	3190	691	183	1034000	5630	1.98
HSS 30 x 10 x 1/2	762	254	12.70	12.70	194	1.90	24700	17.0	57.0	1690	4440	262	5710	301	2370	110	2620	705	197	849000	4580	1.99
HSS 24 x 16 x 1	609.6	406.4	25.40	25.40	372	3.65	47400	13.0	21.0	2350	7710	223	9500	1251	6160	162	7180	495	292	2669000	11240	1.94
HSS 24 x 16 x 7/8	609.6	406.4	22.23	22.23	329	3.23	41900	15.3	24.4	2110	6920	224	8470	1126	5540	164	6410	510	306	2380000	9990	1.96
HSS 24 x 16 x 3/4	609.6	406.4	19.05	19.05	285	2.79	36300	18.3	29.0	1860	6100	226	7400	993	4890	165	5600	524	321	2078000	8690	1.97
HSS 24 x 16 x 5/8	609.6	406.4	15.88	15.88	240	2.35	30600	22.6	35.4	1590	5220	228	6290	852	4190	167	4760	538	335	1764000	7350	1.98
HSS 24 x 16 x 1/2	609.6	406.4	12.70	12.70	194	1.90	24700	29.0	45.0	1300	4270	229	5120	701	3450	168	3890	552	349	1436000	5960	1.99
HSS 24 x 16 x 3/8	609.6	406.4	9.53	9.53	147	1.44	18800	39.7	61.0	1003	3290	231	3910	540	2660	169	2970	567	364	1096000	4530	2.00
HSS 24 x 12 x 1	609.6	304.8	25.40	25.40	331	3.25	42200	9.0	21.0	1910	6270	213	7990	640	4200	123	4900	495	191	1604000	8230	1.74
HSS 24 x 12 x 7/8	609.6	304.8	22.23	22.23	294	2.88	37400	10.7	24.4	1720	5640	214	7150	580	3810	125	4390	510	205	1439000	7340	1.75
HSS 24 x 12 x 3/4	609.6	304.8	19.05	19.05	255	2.50	32500	13.0	29.0	1520	4990	216	6260	514	3370	126	3860	524	219	1263000	6400	1.76
HSS 24 x 12 x 5/8	609.6	304.8	15.88	15.88	215	2.11	27400	16.2	35.4	1300	4270	218	5330	444	2910	127	3290	538	233	1077000	5430	1.77
HSS 24 x 12 x 1/2	609.6	304.8	12.70	12.70	174	1.71	22200	21.0	45.0	1070	3510	220	4350	367	2410	129	2690	552	248	882000	4420	1.79
HSS 24 x 12 x 3/8	609.6	304.8	9.53	9.53	132	1.29	16800	29.0	61.0	828	2720	222	3330	285	1870	130	2070	567	262	676000	3370	1.80
HSS 22 x 18 x 1	558.8	457.2	25.40	25.40	372	3.65	47400	15.0	19.0	2080	7440	209	9020	1526	6680	179	7850	445	343	2859000	11640	1.94
HSS 22 x 18 x 7/8	558.8	457.2	22.23	22.23	329	3.23	41900	17.6	22.1	1870	6690	211	8040	1373	6010	181	7010	459	357	2547000	10330	1.96
HSS 22 x 18 x 3/4	558.8	457.2	19.05	19.05	285	2.79	36300	21.0	26.3	1646	5890	213	7030	1209	5290	182	6130	473	371	2222000	8980	1.97
HSS 22 x 18 x 5/8	558.8	457.2	15.88	15.88	240	2.35	30600	25.8	32.2	1408	5040	215	5970	1035	4530	184	5210	487	386	1884000	7590	1.98
HSS 22 x 18 x 1/2	558.8	457.2	12.70	12.70	194	1.90	24700	33.0	41.0	1155	4130	216	4860	850	3720	186	4240	502	400	1532000	6160	1.99
HSS 22 x 18 x 3/8	558.8	457.2	9.53	9.53	147	1.44	18800	45.0	55.7	889	3180	217	3710	655	2870	187	3240	516	414	1168000	4680	2.00
HSS 20 x 16 x 1	508	406.4	25.40	25.40	331	3.25	42200	13.0	17.0	1500	5910	189	7220	1063	5230	159	6190	394	292	2039000	9280	1.74
HSS 20 x 16 x 7/8	508	406.4	22.23	22.23	294	2.88	37400	15.3	19.9	1360	5350	191	6460	960	4720	160	5540	408	306	1821000	8250	1.75
HSS 20 x 16 x 3/4	508	406.4	19.05	19.05	255	2.50	32500	18.3	23.7	1197	4710	192	5650	848	4170	162	4850	422	321	1593000	7190	1.76
HSS 20 x 16 x 5/8	508	406.4	15.88	15.88	215	2.11	27400	22.6	29.0	1026	4040	194	4810	728	3580	163	4130	437	335	1353000	6090	1.77
HSS 20 x 16 x 1/2	508	406.4	12.70	12.70	174	1.71	22200	29.0	37.0	845	3330	195	3930	601	2960	165	3380	451	349	1103000	4950	1.79
HSS 20 x 16 x 3/8	508	406.4	9.53	9.53	132	1.29	16800	39.7	50.3	652	2570	197	3010	464	2280	166	2590	465	364	843000	3770	1.80
HSS 20 x 12 x 1	508	304.8	25.40	25.40	291	2.85	37000	9.0	17.0	1200	4720	180	5980	539	3540	121	4180	394	191	1243000	6790	1.54
HSS 20 x 12 x 7/8	508	304.8	22.23	22.23	258	2.53	32900	10.7	19.9	1090	4290	182	5360	489	3210	122	3760	408	205	1117000	6060	1.55
HSS 20 x 12 x 3/4	508	304.8	19.05	19.05	224	2.20	28600	13.0	23.7	965	3800	184	4710	435	2850	123	3300	422	219	982000	5300	1.56
HSS 20 x 12 x 5/8	508	304.8	15.88	15.88	190	1.86	24100	16.2	29.0	831	3270	186	4020	376	2470	125	2820	437	233	838000	4500	1.57
HSS 20 x 12 x 1/2	508	304.8	12.70	12.70	154	1.51	19600	21.0	37.0	687	2700	187	3290	312	2050	126	2320	451	248	687000	3670	1.58
HSS 20 x 12 x 3/8	508	304.8	9.53	9.53	117	1.15	14900	29.0	50.3	531	2090	189	2530	243	1590	128	1780	465	262	527000	2800	1.59
HSS 20 x 12 x 5/16	508	304.8	7.95	7.95	98.2	0.963	12500	35.3	60.9	451	1780	190	2130	206	1350	128	1510	472	269	445000	2360	1.60
HSS 20 x 8 x 1	508	203.2	25.40	25.40	250	2.45	31900	5.0	17.0	903	3560	168	4730	205	2020	80.2	2430	394	89	579000	4300	1.34
HSS 20 x 8 x 7/8	508	203.2	22.23	22.23	223	2.19	28400	6.1	19.9	823	3240	170	4260	189	1860	81.6	2200	408	103	527000	3870	1.35
HSS 20 x 8 x 3/4	508	203.2	19.05	19.05	194	1.90	24700	7.7	23.7	734	2890	172	3760	170	1670	83.0	1950	422	117	469000	3400	1.36
HSS 20 x 8 x 5/8	508	203.2	15.88	15.88	164	1.61	20900	9.8	29.0	636	2500	174	3220	149	1470	84.4	1680	437	132	405000	2910	1.37
HSS 20 x 8 x 1/2	508	203.2	12.70	12.70	133	1.30	17000	13.0	37.0	528	2080	176	2650	125	1230	85.7	1390	451	146	336000	2390	1.38
HSS 20 x 8 x 3/8	508	203.2	9.53	9.53	102	0.997	13000	18.3	50.3	411	1620	178	2040	98.4	969	87.0	1080	465	160	260000	1840	1.39
HSS 20 x 8 x 5/16	508	203.2	7.95	7.95	85.5	0.838	10900	22.6	60.9	350	1380	179	1730	84.1	828	87.8	912	472	167	221000	1550	1.40
HSS 20 x 4 x 1/2	508	101.6	12.70	12.70	113	1.11	14400	5.0	37.0	370	1460	160	2010	25.7	506	42.2	590	451	44.5	85500	1110	1.18
HSS 20 x 4 x 3/8	508	101.6	9.53	9.53	86.5	0.848	11000	7.7	50.3	291	1150	163	1560	20.9	411	43.6	467	465	58.7	68900	871	1.19
HSS 20 x 4 x 5/16	508	101.6	7.95	7.95	72.8	0.714	9280	9.8	60.9	249	980	164	1330	18.2	358	44.3	399	472	65.8	59500	743	1.19
HSS 20 x 4 x 1/4	508	101.6	6.35	6.35	58.7	0.576	7480	13.0	77.0	203	799	165	1080	15.1	297	44.9	327	479	73.0	49100	606	1.20

Atlas HSS Section Properties (Rectangle) - CSA G40

Shape	Shape			Design Wall Thickness, t	Mass	Dead Load	Area, A	b/t	h/t	Axis X-X				Axis Y-Y				Workable Flat		Torsion		Surface Area
	H	B	t_{nom}							I	S	r	Z	I	S	r	Z	Depth	Width	J	C	
	mm	mm	mm	mm	kg/m	kN/m	mm^2			10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	mm	mm	10^3 mm^4	10^3 mm^3	m^2/m
HSS 18 x 6 x 3/4	457.2	152.4	19.05	19.05	164	1.61	20800	5.0	21.0	465	2030	150	2730	77.9	1022	61.2	1220	371	66.7	232000	2200	1.15
HSS 18 x 6 x 5/8	457.2	152.4	15.88	15.88	139	1.36	17700	6.6	25.8	406	1780	151	2360	69.2	908	62.5	1060	386	81.0	203000	1900	1.16
HSS 18 x 6 x 1/2	457.2	152.4	12.70	12.70	113	1.11	14400	9.0	33.0	340	1490	154	1950	58.9	773	64.0	883	400	95.3	171000	1570	1.18
HSS 18 x 6 x 3/8	457.2	152.4	9.53	9.53	86.5	0.848	11000	13.0	45.0	267	1170	156	1510	47.0	617	65.4	689	414	110	134000	1220	1.19
HSS 18 x 6 x 5/16	457.2	152.4	7.95	7.95	72.8	0.714	9280	16.2	54.5	228	997	157	1280	40.4	530	66.0	587	421	117	114000	1030	1.19
HSS 18 x 6 x 1/4	457.2	152.4	6.35	6.35	58.7	0.576	7480	21.0	69.0	186	814	158	1040	33.3	437	66.7	478	429	124	93300	835	1.20
HSS 16 x 12 x 1	406.4	304.8	25.40	25.40	250	2.45	31900	9.0	13.0	688	3390	147	4230	438	2870	117	3460	292	191	896000	5340	1.34
HSS 16 x 12 x 7/8	406.4	304.8	22.23	22.23	223	2.19	28400	10.7	15.3	626	3080	148	3810	399	2620	119	3120	306	205	807000	4780	1.35
HSS 16 x 12 x 3/4	406.4	304.8	19.05	19.05	194	1.90	24700	13.0	18.3	557	2740	150	3350	356	2340	120	2750	321	219	711000	4190	1.36
HSS 16 x 12 x 5/8	406.4	304.8	15.88	15.88	164	1.61	20900	16.2	22.6	482	2370	152	2870	309	2030	122	2360	335	233	608000	3570	1.37
HSS 16 x 12 x 1/2	406.4	304.8	12.70	12.70	133	1.30	17000	21.0	29.0	400	1970	153	2360	257	1690	123	1940	349	248	499000	2910	1.38
HSS 16 x 12 x 3/8	406.4	304.8	9.53	9.53	102	1.00	13000	29.0	39.7	311	1530	155	1820	201	1320	124	1500	364	262	384000	2230	1.39
HSS 16 x 12 x 5/16	406.4	304.8	7.95	7.95	85.5	0.838	10900	35.3	48.1	265	1300	156	1540	171	1120	125	1270	371	269	324000	1880	1.40
HSS 16 x 8 x 7/8	406.4	203.2	22.23	22.23	187	1.83	23800	6.1	15.3	459	2260	139	2940	152	1500	79.9	1790	306	103	390000	3050	1.14
HSS 16 x 8 x 3/4	406.4	203.2	19.05	19.05	164	1.61	20800	7.7	18.3	412	2030	141	2600	137	1350	81.2	1590	321	117	347000	2690	1.15
HSS 16 x 8 x 5/8	406.4	203.2	15.88	15.88	139	1.36	17700	9.8	22.6	359	1770	142	2240	121	1190	82.7	1380	335	132	301000	2310	1.16
HSS 16 x 8 x 1/2	406.4	203.2	12.70	12.70	113	1.11	14400	13.0	29.0	300	1480	144	1850	102	1000	84.2	1140	349	146	250000	1900	1.18
HSS 16 x 8 x 3/8	406.4	203.2	9.53	9.53	86.5	0.848	11000	18.3	39.7	235	1160	146	1440	80.3	790	85.4	888	364	160	194000	1460	1.19
HSS 16 x 8 x 5/16	406.4	203.2	7.95	7.95	72.8	0.714	9280	22.6	48.1	201	989	147	1220	68.7	676	86.0	754	371	167	164000	1240	1.19
HSS 16 x 8 x 1/4	406.4	203.2	6.35	6.35	58.7	0.576	7480	29.0	61.0	164	807	148	987	56.3	554	86.8	613	378	175	134000	999	1.20
HSS 16 x 4 x 5/8	406.4	101.6	15.88	15.88	114	1.12	14500	3.4	22.6	236	1160	128	1610	23.5	463	40.3	561	335	30.2	75800	1050	0.961
HSS 16 x 4 x 1/2	406.4	101.6	12.70	12.70	93.0	0.912	11800	5.0	29.0	200	984	130	1350	20.5	404	41.7	476	349	44.5	65600	881	0.972
HSS 16 x 4 x 3/8	406.4	101.6	9.53	9.53	71.3	0.699	9080	7.7	39.7	159	782	132	1050	16.8	331	43.0	377	364	58.7	52900	693	0.983
HSS 16 x 4 x 5/16	406.4	101.6	7.95	7.95	60.1	0.589	7660	9.8	48.1	136	669	133	895	14.6	287	43.7	324	371	65.8	45600	591	0.989
HSS 16 x 4 x 1/4	406.4	101.6	6.35	6.35	48.6	0.477	6190	13.0	61.0	112	551	135	729	12.2	240	44.4	266	378	73.0	37700	483	0.994
HSS 14 x 10 x 7/8	355.6	254	22.23	22.23	187	1.83	23800	8.4	13.0	388	2180	128	2740	228	1800	98	2160	256	154	482000	3390	1.14
HSS 14 x 10 x 3/4	355.6	254	19.05	19.05	164	1.61	20800	10.3	15.7	348	1960	129	2430	205	1610	99	1920	270	168	428000	2990	1.15
HSS 14 x 10 x 5/8	355.6	254	15.88	15.88	139	1.36	17700	13.0	19.4	303	1700	131	2090	179	1410	101	1660	284	183	368000	2550	1.16
HSS 14 x 10 x 1/2	355.6	254	12.70	12.70	113	1.11	14400	17.0	25.0	253	1420	133	1730	150	1180	102	1370	298	197	304000	2090	1.18
HSS 14 x 10 x 3/8	355.6	254	9.53	9.53	86.5	0.848	11000	23.7	34.3	198	1110	134	1340	118	929	104	1060	313	211	235000	1610	1.19
HSS 14 x 10 x 5/16	355.6	254	7.95	7.95	72.8	0.714	9280	28.9	41.7	169	951	135	1130	101	795	104	901	320	218	199000	1360	1.19
HSS 14 x 10 x 1/4	355.6	254	6.35	6.35	58.7	0.576	7480	37.0	53.0	138	776	136	918	82.5	650	105	731	327	225	161000	1100	1.20
HSS 14 x 6 x 5/8	355.6	152.4	15.88	15.88	114	1.12	14500	6.6	19.4	210	1180	120	1540	54.1	710	61.1	839	284	81.0	147000	1460	0.961
HSS 14 x 6 x 1/2	355.6	152.4	12.70	12.70	93.0	0.912	11800	9.0	25.0	177	996	122	1280	46.3	608	62.6	703	298	95.3	123000	1210	0.972
HSS 14 x 6 x 3/8	355.6	152.4	9.53	9.53	71.3	0.699	9080	13.0	34.3	140	787	124	1000	37.1	487	63.9	551	313	110	97000	939	0.983
HSS 14 x 6 x 5/16	355.6	152.4	7.95	7.95	60.1	0.589	7660	16.2	41.7	120	675	125	851	32.0	420	64.6	470	320	117	82800	797	0.989
HSS 14 x 6 x 1/4	355.6	152.4	6.35	6.35	48.6	0.477	6190	21.0	53.0	98.5	554	126	693	26.4	346	65.3	384	327	124	67600	647	0.994
HSS 14 x 6 x 3/16	355.6	152.4	4.78	4.78	36.9	0.362	4700	28.9	71.5	75.9	427	127	531	20.5	269	66.0	295	334	131	51900	494	1.00
HSS 14 x 4 x 5/8	355.6	101.6	15.88	15.88	101	0.991	12900	3.4	19.4	163	917	112	1270	20.5	404	39.9	492	284	30.2	64300	909	0.860
HSS 14 x 4 x 1/2	355.6	101.6	12.70	12.70	82.8	0.812	10600	5.0	25.0	139	782	115	1060	18.0	354	41.2	418	298	44.5	55700	766	0.871
HSS 14 x 4 x 3/8	355.6	101.6	9.53	9.53	63.7	0.625	8110	7.7	34.3	111	624	117	833	14.7	289	42.6	333	313	58.7	44900	604	0.882
HSS 14 x 4 x 5/16	355.6	101.6	7.95	7.95	53.8	0.528	6850	9.8	41.7	95.7	538	118	711	12.9	254	43.4	286	320	65.8	38800	516	0.887
HSS 14 x 4 x 1/4	355.6	101.6	6.35	6.35	43.5	0.427	5540	13.0	53.0	78.8	443	119	580	10.7	211	43.9	235	327	73.0	32100	421	0.893
HSS 14 x 4 x 3/16	355.6	101.6	4.78	4.78	33.1	0.325	4220	18.3	71.5	61.0	343	120	446	8.44	166	44.7	182	334	80.1	24900	324	0.898
HSS 12 x 10 x 5/8	304.8	254	15.88	15.88	126	1.24	16100	13.0	16.2	208	1360	114	1660	157	1240	98.7	1460	233	183	292000	2170	1.06
HSS 12 x 10 x 1/2	304.8	254	12.70	12.70	103	1.01	13100	17.0	21.0	175	1150	116	1380	132	1040	100	1210	248	197	242000	1780	1.07
HSS 12 x 10 x 3/8	304.8	254	9.53	9.53	78.9	0.774	10000	23.7	29.0	137	899	117	1070	104	819	102	943	262	211	187000	1370	1.09
HSS 12 x 10 x 5/16	304.8	254	7.95	7.95	66.5	0.652	8470	28.9	35.3	117	768	118	907	88.7	698	102	801	269	218	159000	1160	1.09
HSS 12 x 10 x 1/4	304.8	254	6.35	6.35	53.6	0.526	6830	37.0	45.0	95.8	629	118	737	72.6	572	103	651	276	225	129000	938	1.10

Atlas HSS Section Properties (Rectangle) - CSA G40

Shape	Shape			Design Wall Thickness, t	Mass	Dead Load	Area, A	b/t	h/t	Axis X-X				Axis Y-Y				Workable Flat		Torsion		Surface Area
	H	B	t_{nom}							I	S	r	Z	I	S	r	Z	Depth	Width	J	C	
	mm	mm	mm	mm	kg/m	kN/m	mm^2			10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	mm	mm	10^3 mm^4	10^3 mm^3	m^2/m
HSS 12 x 8 x 5/8	304.8	203.2	15.88	15.88	114	1.12	14500	9.8	16.2	174	1140	110	1430	92.2	907	79.7	1080	233	132	200000	1700	0.961
HSS 12 x 8 x 1/2	304.8	203.2	12.70	12.70	93.0	0.912	11800	13.0	21.0	147	965	112	1190	78.2	770	81.4	897	248	146	167000	1410	0.972
HSS 12 x 8 x 3/8	304.8	203.2	9.53	9.53	71.3	0.699	9080	18.3	29.0	116	761	113	925	62.1	611	82.7	700	262	160	130000	1090	0.983
HSS 12 x 8 x 5/16	304.8	203.2	7.95	7.95	60.1	0.589	7660	22.6	35.3	99.4	652	114	787	53.3	525	83.4	596	269	167	110000	920	0.989
HSS 12 x 8 x 1/4	304.8	203.2	6.35	6.35	48.6	0.477	6190	29.0	45.0	81.5	535	115	640	43.8	431	84.1	486	276	175	89700	745	0.994
HSS 12 x 8 x 3/16	304.8	203.2	4.78	4.78	36.9	0.362	4700	39.6	60.8	62.8	412	116	490	33.8	333	84.8	372	283	182	68600	568	1.00
HSS 12 x 6 x 5/8	304.8	152.4	15.88	15.88	101	0.991	12900	6.6	16.2	141	925	105	1190	46.5	610	60.0	729	233	81.0	119000	1240	0.860
HSS 12 x 6 x 1/2	304.8	152.4	12.70	12.70	82.8	0.812	10600	9.0	21.0	119	781	106	1000	40.0	525	61.4	613	248	95.3	100000	1030	0.871
HSS 12 x 6 x 3/8	304.8	152.4	9.53	9.53	63.7	0.625	8110	13.0	29.0	95.1	624	108	782	32.2	423	63.0	482	262	110	79000	800	0.882
HSS 12 x 6 x 5/16	304.8	152.4	7.95	7.95	53.8	0.528	6850	16.2	35.3	81.6	535	109	667	27.8	365	63.7	412	269	117	67400	680	0.887
HSS 12 x 6 x 1/4	304.8	152.4	6.35	6.35	43.5	0.427	5540	21.0	45.0	67.1	440	110	544	23.0	302	64.4	337	276	124	55100	553	0.893
HSS 12 x 6 x 3/16	304.8	152.4	4.78	4.78	33.1	0.325	4220	28.9	60.8	51.9	341	111	418	17.9	235	65.1	259	283	131	42300	423	0.898
HSS 12 x 4 x 5/8	304.8	101.6	15.88	15.88	88.3	0.866	11200	3.4	16.2	107	702	97.7	961	17.5	344	39.5	422	233	30.2	52800	771	0.758
HSS 12 x 4 x 1/2	304.8	101.6	12.70	12.70	72.7	0.713	9260	5.0	21.0	91.9	603	99.6	810	15.4	303	40.8	361	248	44.5	45900	652	0.769
HSS 12 x 4 x 3/8	304.8	101.6	9.53	9.53	56.1	0.550	7150	7.7	29.0	74.0	486	102	639	12.7	250	42.1	288	262	58.7	37100	515	0.780
HSS 12 x 4 x 5/16	304.8	101.6	7.95	7.95	47.5	0.466	6050	9.8	35.3	63.8	419	103	547	11.1	219	42.8	248	269	65.8	32000	440	0.786
HSS 12 x 4 x 1/4	304.8	101.6	6.35	6.35	38.4	0.377	4900	13.0	45.0	52.7	346	104	448	9.28	183	43.5	204	276	73.0	26500	360	0.791
HSS 12 x 4 x 3/16	304.8	101.6	4.78	4.78	29.3	0.287	3730	18.3	60.8	41.0	269	105	345	7.30	144	44.2	158	283	80.1	20600	277	0.796
HSS 12 x 3 x 3/8	304.8	76.2	9.53	9.53	52.3	0.513	6660	5.0	29.0	63.4	416	97.6	568	6.49	170	31.2	201	262	33.3	20700	372	0.729
HSS 12 x 3 x 5/16	304.8	76.2	7.95	7.95	44.3	0.434	5640	6.6	35.3	54.9	360	98.7	487	5.75	151	31.9	174	269	40.4	18200	320	0.735
HSS 12 x 3 x 1/4	304.8	76.2	6.35	6.35	35.9	0.352	4570	9.0	45.0	45.6	299	99.9	400	4.87	128	32.6	144	276	47.6	15200	264	0.740
HSS 12 x 3 x 3/16	304.8	76.2	4.78	4.78	27.4	0.269	3490	13.0	60.8	35.5	233	101	308	3.87	102	33.3	112	283	54.7	12000	204	0.746
HSS 10 x 8 x 5/8	254	203.2	15.88	15.88	101	0.991	12900	9.8	13.0	111	874	92.8	1080	78.0	768	77.8	925	183	132	153000	1400	0.860
HSS 10 x 8 x 1/2	254	203.2	12.70	12.70	82.8	0.812	10600	13.0	17.0	94.1	741	94.2	903	66.5	655	79.2	774	197	146	127000	1160	0.871
HSS 10 x 8 x 3/8	254	203.2	9.53	9.53	63.7	0.625	8110	18.3	23.7	74.8	589	96.0	707	53.0	522	80.8	607	211	160	99500	899	0.882
HSS 10 x 8 x 5/16	254	203.2	7.95	7.95	53.8	0.528	6850	22.6	28.9	64.2	506	96.8	602	45.6	449	81.6	517	218	167	84700	762	0.887
HSS 10 x 8 x 1/4	254	203.2	6.35	6.35	43.5	0.427	5540	29.0	37.0	52.8	416	97.6	491	37.5	369	82.3	422	225	175	69000	618	0.893
HSS 10 x 8 x 3/16	254	203.2	4.78	4.78	33.1	0.325	4220	39.6	50.2	40.8	321	98.3	377	29.1	286	83.0	324	233	182	52800	472	0.898
HSS 10 x 6 x 5/8	254	152.4	15.88	15.88	88.3	0.866	11200	6.6	13.0	87.8	691	88.5	888	39.0	512	59.0	619	183	81.0	91900	1020	0.758
HSS 10 x 6 x 1/2	254	152.4	12.70	12.70	72.7	0.713	9260	9.0	17.0	75.3	593	90.2	747	33.7	442	60.3	522	197	95.3	77700	848	0.769
HSS 10 x 6 x 3/8	254	152.4	9.53	9.53	56.1	0.550	7150	13.0	23.7	60.3	475	91.8	589	27.2	357	61.7	413	211	110	61300	662	0.780
HSS 10 x 6 x 5/16	254	152.4	7.95	7.95	47.5	0.466	6050	16.2	28.9	52.0	409	92.7	503	23.6	310	62.5	354	218	117	52500	563	0.786
HSS 10 x 6 x 1/4	254	152.4	6.35	6.35	38.4	0.377	4900	21.0	37.0	42.9	338	93.6	411	19.5	256	63.1	290	225	124	42900	458	0.791
HSS 10 x 6 x 3/16	254	152.4	4.78	4.78	29.3	0.287	3730	28.9	50.2	33.3	262	94.5	317	15.2	199	63.8	223	233	131	33000	351	0.796
HSS 10 x 5 x 5/8	254	127	15.88	15.88	82.0	0.804	10400	5.0	13.0	76.4	602	85.7	792	25.0	394	49.0	481	183	55.6	65100	825	0.707
HSS 10 x 5 x 1/2	254	127	12.70	12.70	67.6	0.663	8620	7.0	17.0	65.9	519	87.4	669	21.9	345	50.4	409	197	69.9	55700	693	0.718
HSS 10 x 5 x 3/8	254	127	9.53	9.53	52.3	0.513	6660	10.3	23.7	53.1	418	89.3	529	17.8	280	51.7	325	211	84.1	44400	544	0.729
HSS 10 x 5 x 5/16	254	127	7.95	7.95	44.3	0.434	5640	13.0	28.9	45.9	361	90.2	453	15.5	244	52.4	279	218	91.2	38100	464	0.735
HSS 10 x 5 x 1/4	254	127	6.35	6.35	35.9	0.352	4570	17.0	37.0	38.0	299	91.2	372	12.9	203	53.1	230	225	98.4	31300	378	0.740
HSS 10 x 5 x 3/16	254	127	4.78	4.78	27.4	0.269	3490	23.6	50.2	29.5	232	91.9	286	10.1	159	53.8	177	233	105.5	24200	290	0.746
HSS 10 x 4 x 5/8	254	101.6	15.88	15.88	75.6	0.741	9630	3.4	13.0	64.9	511	82.1	696	14.5	285	38.8	353	183	30.2	41600	633	0.657
HSS 10 x 4 x 1/2	254	101.6	12.70	12.70	62.6	0.614	7970	5.0	17.0	56.5	445	84.2	591	12.8	252	40.1	304	197	44.5	36200	537	0.668
HSS 10 x 4 x 3/8	254	101.6	9.53	9.53	48.5	0.476	6180	7.7	23.7	45.9	361	86.2	470	10.6	209	41.4	244	211	58.7	29300	425	0.678
HSS 10 x 4 x 5/16	254	101.6	7.95	7.95	41.1	0.403	5240	9.8	28.9	39.8	313	87.2	404	9.32	183	42.2	210	218	65.8	25400	364	0.684
HSS 10 x 4 x 1/4	254	101.6	6.35	6.35	33.4	0.328	4250	13.0	37.0	33.0	260	88.1	332	7.82	154	42.9	174	225	73.0	21000	299	0.689
HSS 10 x 4 x 3/16	254	101.6	4.78	4.78	25.5	0.250	3250	18.3	50.2	25.8	203	89.1	256	6.16	121	43.5	135	233	80.1	16300	230	0.695
HSS 10 x 3.5 x 3/8	254	88.9	9.53	9.53	46.6	0.457	5940	6.3	23.7	42.3	333	84.4	441	7.78	175	36.2	205	211	46.0	22600	366	0.653
HSS 10 x 3.5 x 5/16	254	88.9	7.95	7.95	39.5	0.387	5040	8.2	28.9	36.7	289	85.3	379	6.86	154	36.9	178	218	53.1	19700	315	0.659
HSS 10 x 3.5 x 1/4	254	88.9	6.35	6.35	32.1	0.315	4090	11.0	37.0	30.5	240	86.4	312	5.78	130	37.6	147	225	60.3	16400	259	0.664
HSS 10 x 3.5 x 3/16	254	88.9	4.78	4.78	24.5	0.240	3120	15.6	50.2	23.9	188	87.5	241	4.58	103	38.3	115	233	67.4	12800	200	0.669
HSS 10 x 3.5 x 0.134	254	88.9	3.40	3.40	17.7	0.174	2260	23.1	71.6	17.6	139	88.2	176	3.42	76.9	38.9	84.1	239	73.6	9400	146	0.674

Atlas HSS Section Properties (Rectangle) - CSA G40

Shape	Shape			Design Wall Thickness, t	Mass	Dead Load	Area, A	b/t	h/t	Axis X-X				Axis Y-Y				Workable Flat		Torsion		Surface Area
	H	B	t_{nom}							I	S	r	Z	I	S	r	Z	Depth	Width	J	C	
	mm	mm	mm	mm	kg/m	kN/m	mm^2			10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	mm	mm	10^3 mm^4	10^3 mm^3	m^2/m
HSS 10 x 3 x 3/8	254	76.2	9.53	9.53	44.7	0.438	5690	5.0	23.7	38.6	304	82.4	411	5.41	142	30.8	168	211	33.3	16600	307	0.628
HSS 10 x 3 x 5/16	254	76.2	7.95	7.95	38.0	0.373	4830	6.6	28.9	33.7	265	83.5	354	4.80	126	31.5	146	218	40.4	14500	265	0.633
HSS 10 x 3 x 1/4	254	76.2	6.35	6.35	30.8	0.302	3930	9.0	37.0	28.1	221	84.6	292	4.08	107	32.2	122	225	47.6	12200	219	0.639
HSS 10 x 3 x 3/16	254	76.2	4.78	4.78	23.6	0.231	3000	13.0	50.2	22.0	173	85.6	226	3.25	85.3	32.9	95.0	233	54.7	9570	170	0.644
HSS 10 x 3 x 0.134	254	76.2	3.40	3.40	17.0	0.167	2170	19.4	71.6	16.2	128	86.4	165	2.44	64.0	33.5	70.0	239	60.9	7080	124	0.649
HSS 10 x 2 x 3/8	254	50.8	9.53	9.53	40.9	0.401	5210	2.3	23.7	31.4	247	77.6	352	2.03	79.9	19.7	99.1	211	7.94	6850	189	0.577
HSS 10 x 2 x 5/16	254	50.8	7.95	7.95	34.8	0.341	4430	3.4	28.9	27.6	217	78.9	304	1.84	72.4	20.4	87.5	218	15.0	6200	166	0.582
HSS 10 x 2 x 1/4	254	50.8	6.35	6.35	28.3	0.278	3610	5.0	37.0	23.1	182	80.0	252	1.60	63.0	21.1	73.8	225	22.2	5340	139	0.588
HSS 10 x 2 x 3/16	254	50.8	4.78	4.78	21.7	0.213	2760	7.6	50.2	18.2	143	81.2	196	1.31	51.6	21.8	58.4	233	29.3	4310	109	0.593
HSS 9 x 7 x 5/8	228.6	177.8	15.88	15.88	88.3	0.866	11200	8.2	11.4	76.2	667	82.5	836	51.2	576	67.6	701	157	106	103000	1080	0.758
HSS 9 x 7 x 1/2	228.6	177.8	12.70	12.70	72.7	0.713	9260	11.0	15.0	65.3	571	84.0	703	44.1	496	69.0	591	171	121	87000	897	0.769
HSS 9 x 7 x 3/8	228.6	177.8	9.53	9.53	56.1	0.550	7150	15.7	21.0	52.3	458	85.5	554	35.4	398	70.4	466	186	135	68400	699	0.780
HSS 9 x 7 x 5/16	228.6	177.8	7.95	7.95	47.5	0.466	6050	19.4	25.8	45.1	395	86.3	473	30.6	344	71.1	399	193	142	58300	594	0.786
HSS 9 x 7 x 1/4	228.6	177.8	6.35	6.35	38.4	0.377	4900	25.0	33.0	37.2	325	87.1	387	25.3	285	71.9	326	200	149	47600	483	0.791
HSS 9 x 7 x 3/16	228.6	177.8	4.78	4.78	29.3	0.287	3730	34.2	44.9	28.9	253	88.0	298	19.7	222	72.7	251	207	156	36600	369	0.796
HSS 9 x 5 x 5/8	228.6	127	15.88	15.88	75.6	0.741	9630	5.0	11.4	57.9	507	77.5	664	22.5	354	48.3	436	157	55.6	56100	735	0.657
HSS 9 x 5 x 1/2	228.6	127	12.70	12.70	62.6	0.614	7970	7.0	15.0	50.2	439	79.4	564	19.7	310	49.7	372	171	69.9	48000	619	0.668
HSS 9 x 5 x 3/8	228.6	127	9.53	9.53	48.5	0.476	6180	10.3	21.0	40.7	356	81.2	448	16.2	255	51.2	297	186	84.1	38400	487	0.678
HSS 9 x 5 x 5/16	228.6	127	7.95	7.95	41.1	0.403	5240	13.0	25.8	35.3	309	82.1	384	14.1	222	51.9	255	193	91.2	33000	416	0.684
HSS 9 x 5 x 1/4	228.6	127	6.35	6.35	33.4	0.328	4250	17.0	33.0	29.2	255	82.9	315	11.8	186	52.7	210	200	98.4	27100	340	0.689
HSS 9 x 5 x 3/16	228.6	127	4.78	4.78	25.5	0.250	3250	23.6	44.9	22.8	199	83.8	244	9.22	145	53.3	163	207	106	21000	261	0.695
HSS 8 x 6 x 5/8	203.2	152.4	15.88	15.88	75.6	0.741	9630	6.6	9.8	49.6	488	71.8	623	31.4	412	57.1	508	132	81.0	65900	797	0.657
HSS 8 x 6 x 1/2	203.2	152.4	12.70	12.70	62.6	0.614	7970	9.0	13.0	43.0	423	73.5	528	27.3	358	58.5	432	146	95.3	56000	668	0.668
HSS 8 x 6 x 3/8	203.2	152.4	9.53	9.53	48.5	0.476	6180	13.0	18.3	34.8	343	75.0	419	22.3	293	60.1	344	160	110	44400	524	0.678
HSS 8 x 6 x 5/16	203.2	152.4	7.95	7.95	41.1	0.403	5240	16.2	22.6	30.2	297	75.9	360	19.3	253	60.7	295	167	117	38100	447	0.684
HSS 8 x 6 x 1/4	203.2	152.4	6.35	6.35	33.4	0.328	4250	21.0	29.0	25.0	246	76.7	295	16.1	211	61.5	243	175	124	31200	364	0.689
HSS 8 x 6 x 3/16	203.2	152.4	4.78	4.78	25.5	0.250	3250	28.9	39.6	19.5	192	77.5	228	12.6	165	62.3	188	182	131	24000	279	0.695
HSS 8 x 4 x 5/8	203.2	101.6	15.88	15.88	63.0	0.618	8020	3.4	9.8	35.5	349	66.5	471	11.5	226	37.9	284	132	30.2	30500	494	0.555
HSS 8 x 4 x 1/2	203.2	101.6	12.70	12.70	52.4	0.514	6680	5.0	13.0	31.3	308	68.5	405	10.3	203	39.3	246	146	44.5	26700	422	0.566
HSS 8 x 4 x 3/8	203.2	101.6	9.53	9.53	40.9	0.401	5210	7.7	18.3	25.8	254	70.4	326	8.57	169	40.6	199	160	58.7	21700	336	0.577
HSS 8 x 4 x 5/16	203.2	101.6	7.95	7.95	34.8	0.341	4430	9.8	22.6	22.5	221	71.3	281	7.54	148	41.3	172	167	65.8	18800	289	0.582
HSS 8 x 4 x 1/4	203.2	101.6	6.35	6.35	28.3	0.278	3610	13.0	29.0	18.8	185	72.2	232	6.35	125	41.9	143	175	73.0	15600	237	0.588
HSS 8 x 4 x 3/16	203.2	101.6	4.78	4.78	21.7	0.213	2760	18.3	39.6	14.7	145	73.0	180	5.03	99.0	42.7	111	182	80.1	12100	183	0.593
HSS 8 x 3 x 1/2	203.2	76.2	12.70	12.70	47.4	0.465	6040	3.0	13.0	25.4	250	64.8	344	5.05	133	28.9	165	146	19.1	14800	299	0.515
HSS 8 x 3 x 3/8	203.2	76.2	9.53	9.53	37.1	0.364	4730	5.0	18.3	21.2	209	66.9	279	4.33	114	30.3	136	160	33.3	12500	243	0.526
HSS 8 x 3 x 5/16	203.2	76.2	7.95	7.95	31.6	0.310	4030	6.6	22.6	18.6	183	67.9	241	3.86	101	30.9	119	167	40.4	10900	210	0.532
HSS 8 x 3 x 1/4	203.2	76.2	6.35	6.35	25.8	0.253	3280	9.0	29.0	15.6	154	69.0	200	3.29	86.4	31.7	99.1	175	47.6	9180	174	0.537
HSS 8 x 3 x 3/16	203.2	76.2	4.78	4.78	19.8	0.194	2520	13.0	39.6	12.3	121	69.9	156	2.63	69.0	32.3	77.7	182	54.7	7230	135	0.542
HSS 8 x 3 x 1/8	203.2	76.2	3.18	3.18	13.4	0.131	1710	21.0	61.0	8.61	84.7	71.0	107	1.87	49.1	33.1	53.9	189	61.9	5020	92.6	0.548
HSS 8 x 2 x 3/8	203.2	50.8	9.53	9.53	33.3	0.327	4240	2.3	18.3	16.7	164	62.8	232	1.61	63.4	19.5	79.2	160	7.94	5230	149	0.475
HSS 8 x 2 x 5/16	203.2	50.8	7.95	7.95	28.4	0.279	3620	3.4	22.6	14.8	146	63.9	202	1.47	57.9	20.2	70.2	167	15.0	4740	131	0.481
HSS 8 x 2 x 1/4	203.2	50.8	6.35	6.35	23.2	0.228	2960	5.0	29.0	12.5	123	65.0	168	1.28	50.4	20.8	59.4	175	22.2	4100	110	0.486
HSS 8 x 2 x 3/16	203.2	50.8	4.78	4.78	17.9	0.176	2280	7.6	39.6	10.0	98.4	66.2	132	1.05	41.3	21.5	47.3	182	29.3	3310	86.8	0.492
HSS 8 x 2 x 1/8	203.2	50.8	3.18	3.18	12.1	0.119	1550	13.0	61.0	7.00	68.9	67.2	91.2	0.763	30.0	22.2	33.2	189	36.5	2360	60.4	0.497
HSS 7 x 5 x 1/2	177.8	127	12.70	12.70	52.4	0.514	6680	7.0	11.0	26.4	297	62.9	378	15.5	244	48.2	298	121	69.9	33300	471	0.566
HSS 7 x 5 x 3/8	177.8	127	9.53	9.53	40.9	0.401	5210	10.3	15.7	21.7	244	64.5	303	12.8	202	49.6	240	135	84.1	26700	373	0.577
HSS 7 x 5 x 5/16	177.8	127	7.95	7.95	34.8	0.341	4430	13.0	19.4	19.0	214	65.5	261	11.2	176	50.3	207	142	91.2	23000	320	0.582
HSS 7 x 5 x 1/4	177.8	127	6.35	6.35	28.3	0.278	3610	17.0	25.0	15.8	178	66.2	216	9.40	148	51.0	171	149	98.4	19000	262	0.588
HSS 7 x 5 x 3/16	177.8	127	4.78	4.78	21.7	0.213	2760	23.6	34.2	12.4	139	67.0	167	7.40	117	51.8	133	156	106	14700	202	0.593
HSS 7 x 5 x 1/8	177.8	127	3.18	3.18	14.7	0.144	1870	37.0	53.0	8.61	96.9	67.9	115	5.16	81.3	52.5	91.4	164	113	10100	137	0.599

Atlas HSS Section Properties (Rectangle) - CSA G40

Shape	Shape			Design Wall Thickness, t	Mass	Dead Load	Area, A	b/t	h/t	Axis X-X				Axis Y-Y				Workable Flat		Torsion		Surface Area
	H	B	t_{nom}							I	S	r	Z	I	S	r	Z	Depth	Width	J	C	
	mm	mm	mm	mm	kg/m	kN/m	mm^2			10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	mm	mm	10^3 mm^4	10^3 mm^3	m^2/m
HSS 7 x 4 x 1/2	177.8	101.6	12.70	12.70	47.4	0.465	6040	5.0	11.0	22.0	247	60.4	325	8.97	177	38.5	218	121	44.5	22100	365	0.515
HSS 7 x 4 x 3/8	177.8	101.6	9.53	9.53	37.1	0.364	4730	7.7	15.7	18.3	206	62.2	263	7.54	148	39.9	177	135	58.7	18000	292	0.526
HSS 7 x 4 x 5/16	177.8	101.6	7.95	7.95	31.6	0.310	4030	9.8	19.4	16.0	180	63.0	227	6.66	131	40.7	154	142	65.8	15600	251	0.532
HSS 7 x 4 x 1/4	177.8	101.6	6.35	6.35	25.8	0.253	3280	13.0	25.0	13.5	152	64.2	188	5.62	111	41.4	127	149	73.0	13000	206	0.537
HSS 7 x 4 x 3/16	177.8	101.6	4.78	4.78	19.8	0.194	2520	18.3	34.2	10.6	119	64.9	146	4.46	87.8	42.1	99.5	156	80.1	10100	160	0.542
HSS 7 x 4 x 1/8	177.8	101.6	3.18	3.18	13.4	0.131	1710	29.0	53.0	7.38	83.0	65.7	101	3.13	61.6	42.8	68.7	164	87.3	6960	109	0.548
HSS 7 x 3 x 1/2	177.8	76.2	12.70	12.70	42.3	0.415	5390	3.0	11.0	17.6	198	57.1	271	4.39	115	28.5	145	121	19.1	12400	258	0.464
HSS 7 x 3 x 3/8	177.8	76.2	9.53	9.53	33.3	0.327	4240	5.0	15.7	14.9	168	59.3	222	3.79	99.5	29.9	120	135	33.3	10400	210	0.475
HSS 7 x 3 x 5/16	177.8	76.2	7.95	7.95	28.4	0.279	3620	6.6	19.4	13.1	147	60.2	193	3.38	88.7	30.6	105	142	40.4	9180	182	0.481
HSS 7 x 3 x 1/4	177.8	76.2	6.35	6.35	23.2	0.228	2960	9.0	25.0	11.1	125	61.2	160	2.89	75.9	31.2	87.8	149	47.6	7710	151	0.486
HSS 7 x 3 x 3/16	177.8	76.2	4.78	4.78	17.9	0.176	2280	13.0	34.2	8.78	98.8	62.1	125	2.32	60.9	31.9	69.1	156	54.7	6080	118	0.492
HSS 7 x 3 x 1/8	177.8	76.2	3.18	3.18	12.1	0.119	1550	21.0	53.0	6.15	69.2	63.0	86.6	1.65	43.3	32.6	48.0	164	61.9	4230	80.9	0.497
HSS 6 x 5 x 1/2	152.4	127	12.70	12.70	47.4	0.465	6040	7.0	9.0	17.9	235	54.4	297	13.4	211	47.1	261	95.3	69.9	26200	398	0.515
HSS 6 x 5 x 3/8	152.4	127	9.53	9.53	37.1	0.364	4730	10.3	13.0	14.8	194	55.9	240	11.2	176	48.7	212	110	84.1	21200	316	0.526
HSS 6 x 5 x 5/16	152.4	127	7.95	7.95	31.6	0.310	4030	13.0	16.2	13.0	171	56.8	208	9.79	154	49.3	183	117	91.2	18300	271	0.532
HSS 6 x 5 x 1/4	152.4	127	6.35	6.35	25.8	0.253	3280	17.0	21.0	10.9	143	57.6	172	8.23	130	50.1	152	124	98.4	15100	223	0.537
HSS 6 x 5 x 3/16	152.4	127	4.78	4.78	19.8	0.194	2520	23.6	28.9	8.60	113	58.4	134	6.50	102	50.8	118	131	106	11700	172	0.542
HSS 6 x 5 x 1/8	152.4	127	3.18	3.18	13.4	0.131	1710	37.0	45.0	5.99	2.87	59.2	92.1	4.54	71.5	51.5	81.4	138	113	8040	117	0.548
HSS 6 x 4 x 1/2	152.4	101.6	12.70	12.70	42.3	0.415	5390	5.0	9.0	14.7	193	52.2	252	7.69	151	37.8	189	95.3	44.5	17500	308	0.464
HSS 6 x 4 x 3/8	152.4	101.6	9.53	9.53	33.3	0.327	4240	7.7	13.0	12.4	163	54.1	206	6.52	128	39.2	155	110	58.7	14400	247	0.475
HSS 6 x 4 x 5/16	152.4	101.6	7.95	7.95	28.4	0.279	3620	9.8	16.2	10.9	143	54.9	179	5.77	114	39.9	135	117	65.8	12500	213	0.481
HSS 6 x 4 x 1/4	152.4	101.6	6.35	6.35	23.2	0.228	2960	13.0	21.0	9.19	121	55.7	148	4.89	96.3	40.6	112	124	73.0	10400	176	0.486
HSS 6 x 4 x 3/16	152.4	101.6	4.78	4.78	17.9	0.176	2280	18.3	28.9	7.28	95.5	56.5	116	3.89	76.6	41.3	87.8	131	80.1	8140	136	0.492
HSS 6 x 4 x 1/8	152.4	101.6	3.18	3.18	12.1	0.119	1550	29.0	45.0	5.09	66.8	57.3	80.0	2.74	53.9	42.0	60.7	138	87.3	5610	93.1	0.497
HSS 6 x 3 x 1/2	152.4	76.2	12.70	12.70	37.3	0.366	4750	3.0	9.0	11.6	152	49.4	207	3.73	97.9	28.0	124	95.3	19.1	9960	217	0.414
HSS 6 x 3 x 3/8	152.4	76.2	9.53	9.53	29.5	0.289	3760	5.0	13.0	9.90	130	51.3	171	3.24	85.0	29.4	104	110	33.3	8440	178	0.424
HSS 6 x 3 x 5/16	152.4	76.2	7.95	7.95	25.3	0.248	3220	6.6	16.2	8.79	115	52.2	149	2.91	76.4	30.1	91.2	117	40.4	7450	155	0.430
HSS 6 x 3 x 1/4	152.4	76.2	6.35	6.35	20.7	0.203	2640	9.0	21.0	7.47	98.0	53.2	125	2.50	65.6	30.8	76.6	124	47.6	6270	129	0.435
HSS 6 x 3 x 3/16	152.4	76.2	4.78	4.78	16.0	0.157	2030	13.0	28.9	5.95	78.1	54.1	98.0	2.01	52.8	31.5	60.4	131	54.7	4950	100	0.441
HSS 6 x 3 x 1/8	152.4	76.2	3.18	3.18	10.9	0.107	1390	21.0	45.0	4.19	55.0	54.9	68.0	1.43	37.5	32.1	42.1	138	61.9	3440	69.1	0.446
HSS 6 x 2 x 3/8	152.4	50.8	9.53	9.53	25.7	0.252	3270	2.3	13.0	7.42	97.4	47.6	136	1.19	46.9	19.1	59.2	110	7.94	3630	109	0.374
HSS 6 x 2 x 5/16	152.4	50.8	7.95	7.95	22.1	0.217	2820	3.4	16.2	6.68	87.7	48.7	120	1.09	42.9	19.7	52.9	117	15.0	3310	96.5	0.379
HSS 6 x 2 x 1/4	152.4	50.8	6.35	6.35	18.2	0.178	2320	5.0	21.0	5.75	75.5	49.8	101	0.962	37.9	20.4	45.1	124	22.2	2870	81.5	0.385
HSS 6 x 2 x 3/16	152.4	50.8	4.78	4.78	14.1	0.138	1790	7.6	28.9	4.63	60.8	50.9	80.1	0.795	31.3	21.1	36.1	131	29.3	2320	64.5	0.390
HSS 6 x 2 x 1/8	152.4	50.8	3.18	3.18	9.61	0.0942	1220	13.0	45.0	3.30	43.3	52.0	56.0	0.580	22.8	21.8	25.5	138	36.5	1650	45.0	0.395
HSS 5 x 4 x 1/2	127	101.6	12.70	12.70	37.3	0.366	4750	5.0	7.0	9.16	144	43.9	188	6.41	126	36.7	160	69.9	44.5	13200	250	0.414
HSS 5 x 4 x 3/8	127	101.6	9.53	9.53	29.5	0.289	3760	7.7	10.3	7.81	123	45.6	155	5.49	108	38.2	132	84.1	58.7	10900	203	0.424
HSS 5 x 4 x 5/16	127	101.6	7.95	7.95	25.3	0.248	3220	9.8	13.0	6.93	109	46.4	135	4.88	96.1	38.9	116	91.2	65.8	9550	175	0.430
HSS 5 x 4 x 1/4	127	101.6	6.35	6.35	20.7	0.203	2640	13.0	17.0	5.88	92.6	47.2	113	4.15	81.7	39.6	96.8	98.4	73.0	7970	145	0.435
HSS 5 x 4 x 3/16	127	101.6	4.78	4.78	16.0	0.157	2030	18.3	23.6	4.69	73.9	48.1	88.6	3.32	65.4	40.4	76.0	106	80.1	6240	113	0.441
HSS 5 x 4 x 1/8	127	101.6	3.18	3.18	10.9	0.107	1390	29.0	37.0	3.30	52.0	48.7	61.4	2.35	46.3	41.1	52.8	113	87.3	4310	77.3	0.446
HSS 5 x 3 x 1/2	127	76.2	12.70	12.70	32.2	0.316	4100	3.0	7.0	7.04	111	41.4	151	3.07	80.6	27.4	104	69.9	19.1	7590	176	0.363
HSS 5 x 3 x 3/8	127	76.2	9.53	9.53	25.7	0.252	3270	5.0	10.3	6.13	96.5	43.3	126	2.70	70.9	28.7	87.7	84.1	33.3	6500	146	0.374
HSS 5 x 3 x 5/16	127	76.2	7.95	7.95	22.1	0.217	2820	6.6	13.0	5.49	86.5	44.1	111	2.44	64.0	29.4	77.4	91.2	40.4	5750	127	0.379
HSS 5 x 3 x 1/4	127	76.2	6.35	6.35	18.2	0.178	2320	9.0	17.0	4.70	74.0	45.0	93.4	2.10	55.1	30.1	65.3	98.4	47.6	4860	106	0.385
HSS 5 x 3 x 3/16	127	76.2	4.78	4.78	14.1	0.138	1790	13.0	23.6	3.78	59.5	46.0	73.7	1.70	44.6	30.8	51.7	106	54.7	3840	83.0	0.390
HSS 5 x 3 x 1/8	127	76.2	3.18	3.18	9.61	0.0942	1220	21.0	37.0	2.68	42.2	46.9	51.4	1.22	32.0	31.6	36.2	113	61.9	2680	57.3	0.395
HSS 5 x 2.5 x 1/4	127	63.5	6.35	6.35	16.9	0.166	2150	7.0	17.0	4.12	64.9	43.8	83.7	1.37	43.1	25.2	51.1	98.4	34.9	3480	86.6	0.359
HSS 5 x 2.5 x 3/16	127	63.5	4.78	4.78	13.1	0.128	1670	10.3	23.6	3.33	52.4	44.7	66.3	1.12	35.3	25.9	40.7	106	42.0	2780	68.1	0.365
HSS 5 x 2.5 x 0.165	127	63.5	4.19	4.19	11.6	0.114	1480	12.2	27.3	3.00	47.2	45.0	59.3	1.01	31.8	26.1	36.5	108	44.6	2490	60.8	0.367
HSS 5 x 2.5 x 1/8	127	63.5	3.18	3.18	8.98	0.0881	1140	17.0	37.0	2.37	37.3	45.6	46.4	0.808	25.4	26.6	28.7	113	49.2	1960	47.3	0.370

Atlas HSS Section Properties (Rectangle) - CSA G40

Shape	Shape			Design Wall Thickness, t	Mass	Dead Load	Area, A	b/t	h/t	Axis X-X				Axis Y-Y				Workable Flat		Torsion		Surface Area
	H	B	t_{nom}							I	S	r	Z	I	S	r	Z	Depth	Width	J	C	
	mm	mm	mm	mm	kg/m	kN/m	mm^2			10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	mm	mm	10^3 mm^4	10^3 mm^3	m^2/m
HSS 5 x 2 x 3/8	127	50.8	9.53	9.53	21.9	0.215	2790	2.3	10.3	4.46	70.2	40.0	97.9	0.977	38.5	18.7	49.2	84.1	7.94	2840	89.0	0.323
HSS 5 x 2 x 5/16	127	50.8	7.95	7.95	18.9	0.185	2410	3.4	13.0	4.06	63.9	41.0	87.1	0.905	35.6	19.4	44.2	91.2	15.0	2600	79.2	0.328
HSS 5 x 2 x 1/4	127	50.8	6.35	6.35	15.6	0.153	1990	5.0	17.0	3.53	55.6	42.1	73.9	0.801	31.5	20.1	37.9	98.4	22.2	2260	67.1	0.334
HSS 5 x 2 x 3/16	127	50.8	4.78	4.78	12.2	0.120	1550	7.6	23.6	2.87	45.2	43.0	58.9	0.666	26.2	20.7	30.5	106	29.3	1840	53.3	0.339
HSS 5 x 2 x 1/8	127	50.8	3.18	3.18	8.34	0.0818	1060	13.0	37.0	2.06	32.4	44.1	41.4	0.489	19.3	21.5	21.7	113	36.5	1310	37.3	0.345
HSS 4 x 3 x 3/8	101.6	76.2	9.53	9.53	21.9	0.215	2790	5.0	7.7	3.43	67.5	35.1	87.8	2.16	56.7	27.8	71.6	58.7	33.3	4630	114	0.323
HSS 4 x 3 x 5/16	101.6	76.2	7.95	7.95	18.9	0.185	2410	6.6	9.8	3.11	61.2	35.9	77.9	1.97	51.7	28.6	63.6	65.8	40.4	4120	99.7	0.328
HSS 4 x 3 x 1/4	101.6	76.2	6.35	6.35	15.6	0.153	1990	9.0	13.0	2.69	53.0	36.8	66.0	1.71	44.9	29.3	54.0	73.0	47.6	3500	83.5	0.334
HSS 4 x 3 x 3/16	101.6	76.2	4.78	4.78	12.2	0.120	1550	13.0	18.3	2.18	42.9	37.5	52.5	1.39	36.5	29.9	43.1	80.1	54.7	2780	65.6	0.339
HSS 4 x 3 x 1/8	101.6	76.2	3.18	3.18	8.34	0.0818	1060	21.0	29.0	1.56	30.7	38.4	36.9	1.00	26.2	30.7	30.3	87.3	61.9	1950	45.5	0.345
HSS 4 x 2.5 x 1/4	101.6	63.5	6.35	6.35	14.4	0.141	1830	7.0	13.0	2.32	45.7	35.6	58.3	1.10	34.6	24.5	41.9	73.0	34.9	2540	68.1	0.308
HSS 4 x 2.5 x 3/16	101.6	63.5	4.78	4.78	11.2	0.110	1430	10.3	18.3	1.90	37.4	36.5	46.7	0.908	28.6	25.2	33.6	80.1	42.0	2030	53.9	0.314
HSS 4 x 2.5 x 1/8	101.6	63.5	3.18	3.18	7.71	0.0756	982	17.0	29.0	1.37	27.0	37.4	32.9	0.661	20.8	25.9	23.8	87.3	49.2	1440	37.6	0.319
HSS 4 x 2 x 3/8	101.6	50.8	9.53	9.53	18.1	0.178	2310	2.3	7.7	2.40	47.2	32.2	65.6	0.768	30.2	18.2	39.2	58.7	7.94	2070	69.1	0.272
HSS 4 x 2 x 5/16	101.6	50.8	7.95	7.95	15.8	0.155	2010	3.4	9.8	2.22	43.7	33.2	59.0	0.717	28.2	18.9	35.6	65.8	15.0	1910	61.9	0.278
HSS 4 x 2 x 1/4	101.6	50.8	6.35	6.35	13.1	0.128	1670	5.0	13.0	1.96	38.6	34.3	50.7	0.641	25.2	19.6	30.8	73.0	22.2	1670	52.8	0.283
HSS 4 x 2 x 3/16	101.6	50.8	4.78	4.78	10.2	0.100	1310	7.6	18.3	1.61	31.7	35.1	40.8	0.537	21.1	20.2	25.0	80.1	29.3	1360	42.1	0.288
HSS 4 x 2 x 1/8	101.6	50.8	3.18	3.18	7.08	0.0694	901	13.0	29.0	1.17	23.0	36.0	29.0	0.397	15.6	21.0	17.9	87.3	36.5	975	29.6	0.294
HSS 3.5 x 2.5 x 1/4	88.9	63.5	6.35	6.35	13.1	0.128	1670	7.0	11.0	1.65	37.1	31.4	47.2	0.969	30.5	24.1	37.3	60.3	34.9	2080	58.9	0.283
HSS 3.5 x 2.5 x 3/16	88.9	63.5	4.78	4.78	10.2	0.100	1310	10.3	15.6	1.36	30.6	32.2	38.0	0.803	25.3	24.8	30.1	67.4	42.0	1670	46.8	0.288
HSS 3.5 x 2.5 x 1/8	88.9	63.5	3.18	3.18	7.08	0.0694	901	17.0	25.0	0.989	22.2	33.1	27.0	0.588	18.5	25.5	21.4	74.6	49.2	1190	32.7	0.294
HSS 3.5 x 2 x 1/4	88.9	50.8	6.35	6.35	11.8	0.116	1510	5.0	11.0	1.38	31.0	30.2	40.6	0.561	22.1	19.3	27.2	60.3	22.2	1380	45.6	0.258
HSS 3.5 x 2 x 3/16	88.9	50.8	4.78	4.78	9.30	0.0912	1180	7.6	15.6	1.15	25.9	31.2	32.9	0.472	18.6	20.0	22.2	67.4	29.3	1130	36.6	0.263
HSS 3.5 x 2 x 1/8	88.9	50.8	3.18	3.18	6.44	0.0632	821	13.0	25.0	0.841	18.9	32.0	23.5	0.351	13.8	20.7	15.9	74.6	36.5	811	25.8	0.268
HSS 3.5 x 1.5 x 3/16	88.9	38.1	4.78	4.78	8.34	0.0818	1060	5.0	15.6	0.931	20.9	29.6	27.8	0.237	12.4	15.0	15.0	67.4	16.6	653	26.4	0.238
HSS 3.5 x 1.5 x 1/8	88.9	38.1	3.18	3.18	5.81	0.0570	740	9.0	25.0	0.693	15.6	30.6	20.0	0.181	9.50	15.6	11.0	74.6	23.8	482	18.9	0.243
HSS 3 x 2.5 x 1/4	76.2	63.5	6.35	6.35	11.8	0.116	1510	7.0	9.0	1.12	29.4	27.2	37.1	0.837	26.4	23.5	32.7	47.6	34.9	1640	49.7	0.258
HSS 3 x 2.5 x 3/16	76.2	63.5	4.78	4.78	9.30	0.0912	1180	10.3	13.0	0.929	24.4	28.1	30.1	0.698	22.0	24.3	26.5	54.7	42.0	1330	39.6	0.263
HSS 3 x 2.5 x 1/8	76.2	63.5	3.18	3.18	6.44	0.0632	821	17.0	21.0	0.682	17.9	28.8	21.5	0.514	16.2	25.0	19.0	61.9	49.2	945	27.8	0.268
HSS 3 x 2 x 1/4	76.2	50.8	6.35	6.35	10.6	0.104	1350	5.0	9.0	0.920	24.1	26.1	31.5	0.481	18.9	18.9	23.6	47.6	22.2	1100	38.4	0.232
HSS 3 x 2 x 3/16	76.2	50.8	4.78	4.78	8.34	0.0818	1060	7.6	13.0	0.775	20.3	27.0	25.7	0.408	16.1	19.6	19.4	54.7	29.3	903	31.0	0.238
HSS 3 x 2 x 1/8	76.2	50.8	3.18	3.18	5.81	0.0570	740	13.0	21.0	0.574	15.1	27.9	18.6	0.305	12.0	20.3	14.0	61.9	36.5	652	22.0	0.243
HSS 3 x 1.5 x 3/16	76.2	38.1	4.78	4.78	7.39	0.0725	942	5.0	13.0	0.620	16.3	25.7	21.4	0.203	10.7	14.7	13.0	54.7	16.6	529	22.3	0.212
HSS 3 x 1.5 x 1/8	76.2	38.1	3.18	3.18	5.18	0.0508	660	9.0	21.0	0.467	12.3	26.6	15.6	0.156	8.19	15.4	9.57	61.9	23.8	392	16.1	0.218
HSS 3 x 1 x 3/16	76.2	25.4	4.78	4.78	6.44	0.0632	820	2.3	13.0	0.465	12.2	23.8	17.1	0.074	5.83	9.50	7.41	54.7	3.91	227	13.6	0.187
HSS 3 x 1 x 1/8	76.2	25.4	3.18	3.18	4.54	0.0445	579	5.0	21.0	0.359	9.42	24.9	12.7	0.060	4.72	10.2	5.64	61.9	11.1	179	10.2	0.192

Atlas HSS Section Properties (Rectangle) - CSA G40

Shape	Shape			Design Wall Thickness, t	Mass	Dead Load	Area, A	b/t	h/t	Axis X-X				Axis Y-Y				Workable Flat		Torsion		Surface Area
	H	B	t_{nom}							I	S	r	Z	I	S	r	Z	Depth	Width	J	C	
	mm	mm	mm	mm	kg/m	kN/m	mm^2			10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	10^6 mm^4	10^3 mm^3	mm	10^3 mm^3	mm	mm	10^3 mm^4	10^3 mm^3	m^2/m
HSS 2.5 x 2 x 1/4	63.5	50.8	6.35	6.35	9.31	0.0913	1190	5.0	7.0	0.572	18.0	21.9	23.5	0.400	15.7	18.3	20.0	34.9	22.2	824	31.3	0.207
HSS 2.5 x 2 x 3/16	63.5	50.8	4.78	4.78	7.39	0.0725	942	7.6	10.3	0.489	15.4	22.8	19.4	0.343	13.5	19.1	16.6	42.0	29.3	685	25.4	0.212
HSS 2.5 x 2 x 1/8	63.5	50.8	3.18	3.18	5.18	0.0508	660	13.0	17.0	0.367	11.6	23.6	14.1	0.260	10.2	19.8	12.1	49.2	36.5	498	18.1	0.218
HSS 2.5 x 1.5 x 3/16	63.5	38.1	4.78	4.78	6.44	0.0632	820	5.0	10.3	0.384	12.1	21.6	15.8	0.169	8.87	14.4	11.0	42.0	16.6	407	18.3	0.187
HSS 2.5 x 1.5 x 1/8	63.5	38.1	3.18	3.18	4.54	0.0445	579	9.0	17.0	0.294	9.26	22.5	11.7	0.131	6.88	15.0	8.16	49.2	23.8	304	13.3	0.192
HSS 2.5 x 1 x 3/16	63.5	25.4	4.78	4.78	5.49	0.0538	700	2.3	10.3	0.279	8.79	20.0	12.3	0.0612	4.82	9.35	6.16	42.0	3.91	178	11.2	0.161
HSS 2.5 x 1 x 1/8	63.5	25.4	3.18	3.18	3.91	0.0383	499	5.0	17.0	0.221	6.96	21.0	9.25	0.0501	3.94	10.0	4.75	49.2	11.1	141	8.40	0.167
HSS 2 x 1.5 x 3/16	50.8	38.1	4.78	4.78	5.49	0.0538	700	5.0	7.6	0.215	8.46	17.5	11.0	0.1354	7.11	13.9	8.97	29.3	16.6	290	14.2	0.161
HSS 2 x 1.5 x 1/8	50.8	38.1	3.18	3.18	3.91	0.0383	499	9.0	13.0	0.168	6.61	18.3	8.26	0.1069	5.61	14.6	6.76	36.5	23.8	219	10.5	0.167
HSS 2 x 1 x 1/8	50.8	25.4	3.18	3.18	3.28	0.0322	418	5.0	13.0	0.122	4.80	17.1	6.34	0.0401	3.16	9.79	3.85	36.5	11.1	104	6.61	0.141