

Shape	t <sub>nom</sub> in.	Design Wall Thickness, t in.	OD in.	ID in.	Nominal Wt lb/ft	Area, A in. <sup>2</sup>	D/t	I in. <sup>4</sup>	S in. <sup>3</sup>	r in.	Z in. <sup>3</sup>	Torsion		Surface Area ft <sup>2</sup> /ft
												J in. <sup>4</sup>	C in. <sup>3</sup>	
HSS 18x0.750	0.750	0.750	18	16.500	138.30	40.64	24.00	1514.6	168.29	6.10	223.31	3029.3	336.59	4.71
x0.625	0.625	0.625	18	16.750	116.09	34.12	28.80	1289.1	143.23	6.15	188.76	2578.1	286.46	4.71
x0.562	0.562	0.562	18	16.876	104.76	30.79	32.03	1171.5	130.17	6.17	170.95	2343.0	260.33	4.71
x0.500	0.500	0.500	18	17.000	93.54	27.49	36.00	1053.2	117.02	6.19	153.17	2106.3	234.04	4.71
x0.437	0.437	0.437	18	17.126	82.05	24.11	41.19	930.3	103.36	6.21	134.82	1860.5	206.73	4.71
x0.375	0.375	0.375	18	17.250	70.66	20.76	48.00	806.6	89.63	6.23	116.51	1613.3	179.25	4.71
x0.313	0.313	0.313	18	17.375	59.09	17.36	57.60	679.3	75.47	6.25	97.78	1358.5	150.95	4.71
x0.250	0.250	0.250	18	17.500	47.44	13.94	72.00	549.1	61.02	6.28	78.77	1098.3	122.03	4.71
HSS 16x0.750	0.750	0.750	16	14.500	122.27	35.93	21.33	1047.1	130.88	5.40	174.56	2094.2	261.77	4.19
x0.656	0.656	0.656	16	14.688	107.60	31.62	24.39	932.3	116.54	5.43	154.54	1864.7	233.08	4.19
x0.625	0.625	0.625	16	14.750	102.73	30.19	25.60	893.5	111.69	5.44	147.83	1787.0	223.38	4.19
x0.500	0.500	0.500	16	15.000	82.85	24.35	32.00	731.9	91.49	5.48	120.17	1463.9	182.99	4.19
x0.375	0.375	0.375	16	15.250	62.64	18.41	42.67	562.1	70.26	5.53	91.57	1124.2	140.52	4.19
x0.313	0.313	0.313	16	15.375	52.41	15.40	51.20	474.0	59.25	5.55	76.92	947.9	118.49	4.19
x0.250	0.250	0.250	16	15.500	42.09	12.37	64.00	383.7	47.96	5.57	62.02	767.3	95.92	4.19
HSS 14x0.750	0.750	0.750	14	12.500	106.23	31.22	18.67	687.3	98.19	4.69	131.81	1374.6	196.38	3.67
x0.625	0.625	0.625	14	12.750	89.36	26.26	22.40	588.5	84.08	4.73	111.89	1177.1	168.15	3.67
x0.593	0.593	0.593	14	12.814	84.99	24.98	23.61	562.3	80.33	4.74	106.66	1124.6	160.65	3.67
x0.500	0.500	0.500	14	13.000	72.16	21.21	28.00	483.8	69.11	4.78	91.17	967.5	138.22	3.67
x0.437	0.437	0.437	14	13.126	63.36	18.62	32.04	428.6	61.23	4.80	80.42	857.2	122.46	3.67
x0.375	0.375	0.375	14	13.250	54.62	16.05	37.33	372.8	53.25	4.82	69.63	745.5	106.50	3.67
x0.313	0.313	0.313	14	13.375	45.73	13.44	44.80	314.9	44.98	4.84	58.56	629.7	89.96	3.67
x0.250	0.250	0.250	14	13.500	36.75	10.80	56.00	255.3	36.47	4.86	47.27	510.6	72.94	3.67

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												J in. <sup>4</sup>	C in. <sup>3</sup>	
<b>HSS 14x0.750</b>	0.750	0.750	14	12.500	106.23	31.22	18.67	687.3	98.19	4.69	131.81	1374.6	196.38	3.67
<b>x0.625</b>	0.625	0.625	14	12.750	89.36	26.26	22.40	588.5	84.08	4.73	111.89	1177.1	168.15	3.67
<b>x0.593</b>	0.593	0.593	14	12.814	84.99	24.98	23.61	562.3	80.33	4.74	106.66	1124.6	160.65	3.67
<b>x0.500</b>	0.500	0.500	14	13.000	72.16	21.21	28.00	483.8	69.11	4.78	91.17	967.5	138.22	3.67
<b>x0.437</b>	0.437	0.437	14	13.126	63.36	18.62	32.04	428.6	61.23	4.80	80.42	857.2	122.46	3.67
<b>x0.375</b>	0.375	0.375	14	13.250	54.62	16.05	37.33	372.8	53.25	4.82	69.63	745.5	106.50	3.67
<b>x0.313</b>	0.313	0.313	14	13.375	45.73	13.44	44.80	314.9	44.98	4.84	58.56	629.7	89.96	3.67
<b>x0.250</b>	0.250	0.250	14	13.500	36.75	10.80	56.00	255.3	36.47	4.86	47.27	510.6	72.94	3.67
<b>HSS 12.75x0.750</b>	0.750	0.750	12.75	11.250	96.21	28.27	17.00	510.9	80.15	4.25	108.14	1021.9	160.29	3.34
<b>x0.688</b>	0.688	0.688	12.75	11.374	88.71	26.07	18.53	475.7	74.62	4.27	100.21	951.4	149.23	3.34
<b>x0.625</b>	0.625	0.625	12.75	11.500	81.01	23.81	20.40	438.7	68.81	4.29	91.97	877.3	137.62	3.34
<b>x0.562</b>	0.562	0.562	12.75	11.626	73.22	21.52	22.69	400.4	62.81	4.31	83.54	800.8	125.62	3.34
<b>x0.500</b>	0.500	0.500	12.75	11.750	65.48	19.24	25.50	361.5	56.71	4.33	75.07	723.1	113.43	3.34
<b>x0.406</b>	0.406	0.406	12.75	11.938	53.58	15.74	31.40	300.2	47.09	4.37	61.89	600.4	94.18	3.34
<b>x0.375</b>	0.375	0.375	12.75	12.000	49.61	14.58	34.00	279.3	43.82	4.38	57.45	558.7	87.63	3.34
<b>x0.313</b>	0.313	0.313	12.75	12.125	41.55	12.21	40.80	236.3	37.06	4.40	48.35	472.5	74.12	3.34
<b>x0.250</b>	0.250	0.250	12.75	12.250	33.41	9.82	51.00	191.8	30.09	4.42	39.07	383.6	60.18	3.34
<b>HSS 10.75x0.750</b>	0.750	0.750	10.75	9.250	80.18	23.56	14.33	296.2	55.10	3.55	75.14	592.4	110.21	2.81
<b>x0.718</b>	0.718	0.718	10.75	9.314	77.00	22.63	14.97	286.1	53.23	3.56	72.38	572.3	106.47	2.81
<b>x0.625</b>	0.625	0.625	10.75	9.500	67.65	19.88	17.20	255.7	47.58	3.59	64.15	511.5	95.15	2.81
<b>x0.593</b>	0.593	0.593	10.75	9.564	64.39	18.92	18.13	244.8	45.55	3.60	61.25	489.7	91.10	2.81
<b>x0.500</b>	0.500	0.500	10.75	9.750	54.79	16.10	21.50	212.0	39.43	3.63	52.57	423.9	78.87	2.81
<b>x0.375</b>	0.375	0.375	10.75	10.000	41.59	12.22	28.67	164.7	30.64	3.67	40.38	329.3	61.27	2.81
<b>x0.365</b>	0.365	0.365	10.75	10.020	40.52	11.91	29.45	160.7	29.90	3.67	39.38	321.5	59.81	2.81
<b>x0.313</b>	0.313	0.313	10.75	10.125	34.87	10.25	34.40	139.7	25.98	3.69	34.05	279.3	51.97	2.81
<b>x0.250</b>	0.250	0.250	10.75	10.250	28.06	8.25	43.00	113.7	21.16	3.71	27.57	227.4	42.31	2.81
<b>x0.188</b>	0.188	0.188	10.75	10.375	21.17	6.22	57.33	86.8	16.15	3.73	20.92	173.6	32.30	2.81

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												J in. <sup>4</sup>	C in. <sup>3</sup>	
												<b>HSS 8.625x0.750</b>	0.750	
<b>x0.718</b>	0.718	0.718	8.625	7.189	60.69	17.84	12.01	140.5	32.59	2.81	45.01	281.1	65.18	2.26
<b>x0.625</b>	0.625	0.625	8.625	7.375	53.45	15.71	13.80	126.4	29.32	2.84	40.08	252.9	58.63	2.26
<b>x0.594</b>	0.594	0.594	8.625	7.437	51.00	14.99	14.52	121.5	28.17	2.85	38.38	243.0	56.34	2.26
<b>x0.500</b>	0.500	0.500	8.625	7.625	43.43	12.76	17.25	105.7	24.51	2.88	33.05	211.4	49.03	2.26
<b>x0.406</b>	0.406	0.406	8.625	7.813	35.67	10.48	21.24	88.7	20.58	2.91	27.45	177.5	41.15	2.26
<b>x0.375</b>	0.375	0.375	8.625	7.875	33.07	9.72	23.00	82.9	19.21	2.92	25.54	165.7	38.43	2.26
<b>x0.322</b>	0.322	0.322	8.625	7.981	28.58	8.40	26.79	72.5	16.81	2.94	22.21	145.0	33.62	2.26
<b>x0.313</b>	0.313	0.313	8.625	8.000	27.77	8.16	27.60	70.6	16.37	2.94	21.60	141.2	32.74	2.26
<b>x0.250</b>	0.250	0.250	8.625	8.125	22.38	6.58	34.50	57.7	13.38	2.96	17.54	115.4	26.77	2.26
<b>x0.188</b>	0.188	0.188	8.625	8.250	16.91	4.97	46.00	44.3	10.26	2.98	13.35	88.5	20.52	2.26
<b>HSS 6.625x0.625</b>	0.625	0.625	6.625	5.375	40.09	11.781	10.60	53.59	16.178	2.13	22.581	107.18	32.36	1.73
<b>x0.562</b>	0.562	0.562	6.625	5.501	36.43	10.705	11.79	49.61	14.977	2.15	20.718	99.22	29.95	1.73
<b>x0.500</b>	0.500	0.500	6.625	5.625	32.74	9.621	13.25	45.42	13.711	2.17	18.799	90.84	27.42	1.73
<b>x0.432</b>	0.432	0.432	6.625	5.761	28.60	8.405	15.34	40.49	12.224	2.19	16.595	80.98	24.45	1.73
<b>x0.375</b>	0.375	0.375	6.625	5.875	25.06	7.363	17.67	36.08	10.893	2.21	14.666	72.16	21.79	1.73
<b>x0.313</b>	0.313	0.313	6.625	6.000	21.09	6.197	21.20	30.94	9.342	2.23	12.463	61.89	18.68	1.73
<b>x0.280</b>	0.280	0.280	6.625	6.065	18.99	5.581	23.66	28.14	8.496	2.25	11.280	56.28	16.99	1.73
<b>x0.250</b>	0.250	0.250	6.625	6.125	17.04	5.007	26.50	25.47	7.690	2.26	10.165	50.95	15.38	1.73
<b>x0.188</b>	0.188	0.188	6.625	6.250	12.90	3.792	35.33	19.66	5.935	2.28	7.772	39.32	11.87	1.73
<b>x0.134</b>	0.134	0.134	6.625	6.357	9.30	2.733	49.44	14.40	4.346	2.30	5.647	28.79	8.69	1.73
<b>HSS 5.563x0.500</b>	0.500	0.500	5.563	4.563	27.06	7.953	11.13	25.73	9.251	1.80	12.859	51.46	18.50	1.46
<b>x0.375</b>	0.375	0.375	5.563	4.813	20.80	6.112	14.83	20.67	7.431	1.84	10.111	41.34	14.86	1.46
<b>x0.258</b>	0.258	0.258	5.563	5.047	14.63	4.300	21.56	15.16	5.451	1.88	7.267	30.32	10.90	1.46
<b>x0.250</b>	0.250	0.250	5.563	5.063	14.20	4.173	22.25	14.76	5.305	1.88	7.062	29.51	10.61	1.46
<b>x0.188</b>	0.188	0.188	5.563	5.188	10.77	3.166	29.67	11.45	4.117	1.90	5.420	22.90	8.23	1.46
<b>x0.134</b>	0.134	0.134	5.563	5.295	7.78	2.285	41.51	8.43	3.029	1.92	3.950	16.85	6.06	1.46

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HSS 5x0.250	0.250	0.250	5	4.500	12.690	3.731	20.00	10.55	4.220	1.68	5.646	21.10	8.44	1.31
x0.188	0.188	0.188	5	4.625	9.650	2.835	26.67	8.22	3.288	1.70	4.345	16.44	6.58	1.31
x0.134	0.134	0.134	5	4.732	6.970	2.048	37.31	6.07	2.427	1.72	3.174	12.14	4.85	1.31
x0.125	0.125	0.125	5	4.750	6.510	1.914	40.00	5.69	2.276	1.72	2.971	11.38	4.55	1.31
x0.120	0.120	0.120	5	4.760	6.260	1.840	41.67	5.48	2.192	1.73	2.858	10.96	4.38	1.31
HSS 4.5x0.250	0.250	0.250	4.5	4.000	11.360	3.338	18.00	7.56	3.361	1.51	4.521	15.13	6.72	1.18
x0.237	0.237	0.237	4.5	4.026	10.800	3.174	18.99	7.23	3.214	1.51	4.311	14.47	6.43	1.18
x0.188	0.188	0.188	4.5	4.125	8.640	2.540	24.00	5.92	2.630	1.53	3.489	11.83	5.26	1.18
x0.134	0.134	0.134	4.5	4.232	6.250	1.838	33.58	4.38	1.948	1.54	2.555	8.77	3.90	1.18
x0.125	0.125	0.125	4.5	4.250	5.850	1.718	36.00	4.11	1.828	1.55	2.393	8.23	3.66	1.18
x0.120	0.120	0.120	4.5	4.260	5.620	1.651	37.50	3.96	1.761	1.55	2.303	7.93	3.52	1.18
HSS 4x0.237	0.237	0.237	4	3.526	9.530	2.802	16.88	4.98	2.489	1.33	3.360	9.96	4.98	1.05
x0.226	0.226	0.226	4	3.548	9.120	2.680	17.70	4.79	2.394	1.34	3.223	9.58	4.79	1.05
x0.188	0.188	0.188	4	3.625	7.640	2.246	21.33	4.09	2.045	1.35	2.728	8.18	4.09	1.05
x0.125	0.125	0.125	4	3.750	5.180	1.522	32.00	2.86	1.430	1.37	1.878	5.72	2.86	1.05
x0.120	0.120	0.120	4	3.760	4.980	1.463	33.33	2.76	1.378	1.37	1.807	5.51	2.76	1.05
x0.100	0.100	0.100	4	3.800	4.169	1.225	40.00	2.33	1.165	1.38	1.521	4.66	2.33	1.05
x0.095	0.095	0.095	4	3.810	3.966	1.165	42.11	2.22	1.111	1.38	1.449	4.45	2.22	1.05
x0.083	0.083	0.083	4	3.834	3.475	1.021	48.19	1.96	0.980	1.39	1.274	3.92	1.96	1.05
HSS 3.5x0.216	0.216	0.216	3.5	3.068	7.580	2.228	16.20	3.02	1.724	1.16	2.333	6.03	3.45	0.916
x0.188	0.188	0.188	3.5	3.125	6.640	1.951	18.67	2.68	1.534	1.17	2.060	5.37	3.07	0.916
x0.125	0.125	0.125	3.5	3.250	4.510	1.325	28.00	1.89	1.080	1.19	1.424	3.78	2.16	0.916
x0.120	0.120	0.120	3.5	3.260	4.340	1.274	29.17	1.82	1.041	1.20	1.372	3.64	2.08	0.916
x0.109	0.109	0.109	3.5	3.282	3.951	1.161	32.11	1.67	0.955	1.20	1.254	3.34	1.91	0.916
x0.100	0.100	0.100	3.5	3.300	3.635	1.068	35.00	1.54	0.883	1.20	1.156	3.09	1.77	0.916
x0.083	0.083	0.083	3.5	3.334	3.032	0.891	42.17	1.30	0.744	1.21	0.969	2.60	1.49	0.916

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												<b>HSS 3x0.188</b>	0.188	
<b>x0.134</b>	0.134	0.134	3	2.732	4.110	1.207	22.39	1.241	0.828	1.01	1.101	2.48	1.66	0.785
<b>x0.125</b>	0.125	0.125	3	2.750	3.840	1.129	24.00	1.169	0.779	1.02	1.034	2.34	1.56	0.785
<b>x0.120</b>	0.120	0.120	3	2.760	3.690	1.086	25.00	1.128	0.752	1.02	0.996	2.26	1.50	0.785
<b>x0.109</b>	0.109	0.109	3	2.782	3.369	0.990	27.52	1.036	0.690	1.02	0.911	2.07	1.38	0.785
<b>x0.100</b>	0.100	0.100	3	2.800	3.100	0.911	30.00	0.959	0.639	1.03	0.841	1.92	1.28	0.785
<b>x0.095</b>	0.095	0.095	3	2.810	2.950	0.867	31.58	0.916	0.610	1.03	0.802	1.83	1.22	0.785
<b>HSS 2.875x0.203</b>	0.203	0.203	2.875	2.469	5.800	1.704	14.16	1.530	1.0640	0.947	1.452	3.059	2.13	0.753
<b>x0.188</b>	0.188	0.188	2.875	2.500	5.390	1.583	15.33	1.436	0.9991	0.952	1.356	2.872	2.00	0.753
<b>x0.134</b>	0.134	0.134	2.875	2.607	3.926	1.154	21.46	1.086	0.7556	0.970	1.008	2.172	1.51	0.753
<b>x0.125</b>	0.125	0.125	2.875	2.625	3.670	1.080	23.00	1.023	0.7116	0.973	0.946	2.046	1.42	0.753
<b>x0.120</b>	0.120	0.120	2.875	2.635	3.530	1.039	23.96	0.987	0.6868	0.975	0.911	1.975	1.37	0.753
<b>x0.109</b>	0.109	0.109	2.875	2.657	3.223	0.947	26.38	0.907	0.6311	0.979	0.834	1.814	1.26	0.753
<b>x0.100</b>	0.100	0.100	2.875	2.675	2.966	0.872	28.75	0.840	0.5845	0.982	0.770	1.681	1.17	0.753
<b>x0.083</b>	0.083	0.083	2.875	2.709	2.477	0.728	34.64	0.710	0.4939	0.988	0.647	1.420	0.99	0.753
<b>HSS 2.5x0.188</b>	0.188	0.188	2.5	2.125	4.640	1.362	13.33	0.9165	0.7332	0.820	1.005	1.833	1.466	0.654
<b>x0.134</b>	0.134	0.134	2.5	2.232	3.389	0.996	18.66	0.6992	0.5594	0.838	0.751	1.398	1.119	0.654
<b>x0.125</b>	0.125	0.125	2.5	2.250	3.170	0.933	20.00	0.6594	0.5275	0.841	0.706	1.319	1.055	0.654
<b>x0.120</b>	0.120	0.120	2.5	2.260	3.050	0.897	20.83	0.6369	0.5095	0.843	0.680	1.274	1.019	0.654
<b>HSS 2.375x0.188</b>	0.188	0.188	2.375	2.000	4.380	1.289	12.67	0.7764	0.6538	0.776	0.899	1.553	1.308	0.622
<b>x0.154</b>	0.154	0.154	2.375	2.067	3.660	1.075	15.42	0.6657	0.5606	0.787	0.761	1.331	1.121	0.622
<b>x0.134</b>	0.134	0.134	2.375	2.107	3.210	0.943	17.72	0.5943	0.5005	0.794	0.674	1.189	1.001	0.622
<b>x0.125</b>	0.125	0.125	2.375	2.125	3.010	0.884	19.00	0.5609	0.4723	0.797	0.633	1.122	0.945	0.622
<b>x0.109</b>	0.109	0.109	2.375	2.157	2.640	0.776	21.79	0.4992	0.4204	0.802	0.560	0.998	0.841	0.622
<b>x0.100</b>	0.100	0.100	2.375	2.175	2.432	0.715	23.75	0.4633	0.3901	0.805	0.518	0.927	0.780	0.622
<b>x0.095</b>	0.095	0.095	2.375	2.185	2.315	0.680	25.00	0.4429	0.3730	0.807	0.494	0.886	0.746	0.622
<b>x0.083</b>	0.083	0.083	2.375	2.209	2.034	0.598	28.61	0.3930	0.3309	0.811	0.436	0.786	0.662	0.622

Shape	t <sub>nom</sub> in.	Design Wall Thickness, t in.	OD in.	ID in.	Nominal Wt lb/ft	Area, A in. <sup>2</sup>	D/t	I in. <sup>4</sup>	S in. <sup>3</sup>	r in.	Z in. <sup>3</sup>	Torsion		Surface Area ft <sup>2</sup> /ft
												J in. <sup>4</sup>	C in. <sup>3</sup>	
<b>HSS 2.25x0.188</b>	0.188	0.188	2.25	1.875	4.130	1.215	12.00	0.6514	0.5790	0.732	0.800	1.303	1.158	0.589
<b>x0.125</b>	0.125	0.125	2.25	2.000	2.840	0.834	18.00	0.4727	0.4201	0.753	0.565	0.945	0.840	0.589
<b>HSS 1.9x0.145</b>	0.145	0.145	1.9	1.610	2.720	0.799	13.10	0.3099	0.3262	0.623	0.448	0.620	0.652	0.497
<b>x0.125</b>	0.125	0.125	1.9	1.650	2.370	0.697	15.20	0.2759	0.2904	0.629	0.394	0.552	0.581	0.497
<b>x0.120</b>	0.120	0.120	1.9	1.660	2.280	0.671	15.83	0.2670	0.2810	0.631	0.381	0.534	0.562	0.497
<b>x0.109</b>	0.109	0.109	1.9	1.682	2.090	0.613	17.43	0.2468	0.2598	0.634	0.350	0.494	0.520	0.497
<b>x0.100</b>	0.100	0.100	1.9	1.700	1.920	0.565	19.00	0.2297	0.2418	0.637	0.324	0.459	0.484	0.497
<b>x0.083</b>	0.083	0.083	1.9	1.734	1.612	0.474	22.89	0.1959	0.2062	0.643	0.274	0.392	0.412	0.497
<b>HSS 1.66x0.140</b>	0.140	0.140	1.66	1.380	2.270	0.669	11.86	0.1947	0.2346	0.540	0.324	0.389	0.469	0.435
<b>x0.134</b>	0.134	0.134	1.66	1.392	2.190	0.642	12.39	0.1884	0.2270	0.542	0.313	0.377	0.454	0.435
<b>x0.125</b>	0.125	0.125	1.66	1.410	2.050	0.603	13.28	0.1787	0.2153	0.545	0.295	0.357	0.431	0.435
<b>x0.109</b>	0.109	0.109	1.66	1.442	1.810	0.531	15.23	0.1605	0.1934	0.550	0.263	0.321	0.387	0.435
<b>x0.100</b>	0.100	0.100	1.66	1.460	1.668	0.490	16.60	0.1497	0.1804	0.553	0.244	0.299	0.361	0.435
<b>x0.095</b>	0.095	0.095	1.66	1.470	1.589	0.467	17.47	0.1435	0.1729	0.554	0.233	0.287	0.346	0.435
<b>x0.083</b>	0.083	0.083	1.66	1.494	1.400	0.411	20.00	0.1282	0.1544	0.558	0.207	0.256	0.309	0.435
<b>HSS 1.5x0.134</b>	0.134	0.134	1.5	1.232	1.957	0.575	11.19	0.1354	0.1806	0.485	0.251	0.271	0.361	0.393
<b>x0.125</b>	0.125	0.125	1.5	1.250	1.837	0.540	12.00	0.1287	0.1716	0.488	0.237	0.257	0.343	0.393
<b>x0.120</b>	0.120	0.120	1.5	1.260	1.770	0.520	12.50	0.1248	0.1664	0.490	0.229	0.250	0.333	0.393
<b>x0.109</b>	0.109	0.109	1.5	1.282	1.621	0.476	13.76	0.1159	0.1545	0.493	0.211	0.232	0.309	0.393
<b>x0.100</b>	0.100	0.100	1.5	1.300	1.497	0.440	15.00	0.1083	0.1444	0.496	0.196	0.217	0.289	0.393
<b>x0.083</b>	0.083	0.083	1.5	1.334	1.257	0.369	18.07	0.0931	0.1241	0.502	0.167	0.186	0.248	0.393
<b>x0.065</b>	0.065	0.065	1.5	1.370	0.997	0.293	23.08	0.0756	0.1008	0.508	0.134	0.151	0.202	0.393
<b>HSS 1.315x0.133</b>	0.133	0.133	1.315	1.049	1.680	0.494	9.89	0.0873	0.1328	0.421	0.187	0.175	0.266	0.344
<b>x0.125</b>	0.125	0.125	1.315	1.065	1.590	0.467	10.52	0.0836	0.1272	0.423	0.178	0.167	0.254	0.344
<b>x0.120</b>	0.120	0.120	1.315	1.075	1.533	0.451	10.96	0.0812	0.1235	0.425	0.172	0.162	0.247	0.344
<b>x0.109</b>	0.109	0.109	1.315	1.097	1.410	0.413	12.06	0.0757	0.1151	0.428	0.159	0.151	0.230	0.344
<b>x0.100</b>	0.100	0.100	1.315	1.115	1.299	0.382	13.15	0.0709	0.1079	0.431	0.148	0.142	0.216	0.344
<b>x0.083</b>	0.083	0.083	1.315	1.149	1.090	0.321	15.84	0.0612	0.0931	0.437	0.126	0.122	0.186	0.344

Shape	t <sub>nom</sub> in.	Design Wall Thickness, t in.	OD in.	ID in.	Nominal Wt lb/ft	Area, A in. <sup>2</sup>	D/t	I in. <sup>4</sup>	S in. <sup>3</sup>	r in.	Z in. <sup>3</sup>	Torsion		Surface Area ft <sup>2</sup> /ft
												J in. <sup>4</sup>	C in. <sup>3</sup>	
<b>HSS 1.25x0.120</b>	0.120	0.120	1.25	1.010	1.450	0.426	10.42	0.0688	0.1100	0.402	0.1538	0.1375	0.220	0.327
<b>x0.100</b>	0.100	0.100	1.25	1.050	1.229	0.361	12.50	0.0602	0.0963	0.408	0.1326	0.1204	0.1926	0.327
<b>x0.095</b>	0.095	0.095	1.25	1.060	1.173	0.345	13.16	0.0579	0.0926	0.410	0.1270	0.1157	0.1852	0.327
<b>x0.083</b>	0.083	0.083	1.25	1.084	1.035	0.304	15.06	0.0521	0.0833	0.414	0.1132	0.1041	0.1666	0.327
<b>x0.065</b>	0.065	0.065	1.25	1.120	0.823	0.242	19.23	0.0426	0.0682	0.420	0.0914	0.0852	0.1363	0.327
<b>HSS 1.05x0.113</b>	0.113	0.113	1.05	0.824	1.130	0.333	9.29	0.0370	0.0705	0.334	0.0997	0.0741	0.1411	0.275
<b>x0.109</b>	0.109	0.109	1.05	0.832	1.096	0.322	9.63	0.0361	0.0688	0.335	0.0969	0.0723	0.1377	0.275
<b>x0.100</b>	0.100	0.100	1.05	0.850	1.016	0.298	10.50	0.0340	0.0648	0.338	0.0906	0.0681	0.1297	0.275
<b>x0.083</b>	0.083	0.083	1.05	0.884	0.858	0.252	12.65	0.0297	0.0566	0.343	0.0778	0.0594	0.1131	0.275
<b>HSS 1x0.125</b>	0.125	0.125	1	0.750	1.169	0.344	8.00	0.0336	0.0671	0.313	0.0964	0.0671	0.1342	0.262
<b>x0.109</b>	0.109	0.109	1	0.782	1.038	0.305	9.17	0.0307	0.0615	0.317	0.0870	0.0615	0.1229	0.262
<b>x0.100</b>	0.100	0.100	1	0.800	0.962	0.283	10.00	0.0290	0.0580	0.320	0.0813	0.0580	0.1159	0.262
<b>x0.095</b>	0.095	0.095	1	0.810	0.919	0.270	10.53	0.0280	0.0559	0.322	0.0781	0.0559	0.1118	0.262
<b>x0.083</b>	0.083	0.083	1	0.834	0.814	0.239	12.05	0.0253	0.0507	0.326	0.0700	0.0507	0.1014	0.262
<b>x0.065</b>	0.065	0.065	1	0.870	0.650	0.191	15.38	0.0210	0.0419	0.331	0.0569	0.0419	0.0839	0.262
<b>HSS 0.84x0.109</b>	0.109	0.109	0.84	0.622	0.850	0.250	7.71	0.0171	0.0407	0.261	0.0587	0.0342	0.0814	0.220
<b>x0.083</b>	0.083	0.083	0.84	0.674	0.672	0.197	10.12	0.0143	0.0341	0.269	0.0478	0.0286	0.0681	0.220