

RURY BEZ SZWU

(średnice do 30 mm walcowane lub ciągnięte na zimno, powyżej 30 mm walcowane na gorąco)

(średnic oznaczonych * nie należy stosować)

Srednica zewnetrzna	Grubosc scianki	Pole przekroju	Masa	Moment bezwladnosci	Wskaznik wytrzymalosci	Promien bezwladnosci
D	t	A	G	I	W	i
mm		cm ²	kG/m	cm ⁴	cm ³	cm
20	2.3	1.28	1.00	0.51	0.51	0.63
20	2.6	1.42	1.12	0.55	0.55	0.62
20	2.9	1.56	1.22	0.59	0.59	0.61
20	3.2	1.69	1.33	0.62	0.62	0.60
20	3.6	1.85	1.46	0.65	0.65	0.59
20	4.0	2.01	1.58	0.68	0.68	0.58
21.3	2.3	1.37	1.08	0.63	0.59	0.68
21.3	2.6	1.53	1.20	0.68	0.64	0.67
21.3	2.9	1.68	1.32	0.73	0.68	0.66
21.3	3.2	1.82	1.43	0.77	0.72	0.65
21.3	3.6	2.00	1.57	0.82	0.77	0.64
21.3	4.0	2.17	1.71	0.86	0.80	0.63
25	2.3	1.64	1.29	1.07	0.85	0.81
25	2.6	1.83	1.44	1.16	0.93	0.80
25	2.9	2.01	1.58	1.25	1.00	0.79
25	3.2	2.19	1.72	1.33	1.06	0.78
25	3.6	2.42	1.90	1.42	1.14	0.77
25	4.0	2.64	2.07	1.51	1.21	0.76
26.9	2.3	1.78	1.40	1.36	1.01	0.87
26.9	2.6	1.98	1.56	1.48	1.10	0.86
26.9	2.9	2.19	1.72	1.60	1.19	0.85
26.9	3.2	2.38	1.87	1.70	1.27	0.85
26.9	3.6	2.64	2.07	1.83	1.36	0.83
26.9	4.0	2.88	2.26	1.94	1.45	0.82
30	2.6	2.24	1.76	2.12	1.41	0.97
30	2.9	2.47	1.94	2.29	1.53	0.96
30	3.2	2.69	2.11	2.45	1.64	0.95
30	3.6	2.99	2.34	2.65	1.77	0.94
30	4.0	3.27	2.56	2.83	1.88	0.93
30	4.5	3.60	2.83	3.02	2.01	0.92
31.8	2.9	2.63	2.07	2.78	1.75	1.03
31.8	3.2	2.88	2.26	2.98	1.87	1.02
31.8	3.6	3.19	2.50	3.22	2.03	1.01
31.8	4.0	3.49	2.74	3.44	2.17	0.99
31.8	4.5	3.86	3.03	3.69	2.32	0.98
33.7	2.9	2.81	2.20	3.36	1.99	1.09
33.7	3.2	3.07	2.41	3.60	2.14	1.08
33.7	3.6	3.40	2.67	3.91	2.32	1.07
33.7	4.0	3.73	2.93	4.19	2.49	1.06
33.7	4.5	4.13	3.24	4.50	2.67	1.04
38	2.9	3.20	2.51	4.96	2.61	1.25
38	3.2	3.50	2.75	5.34	2.81	1.24
38	3.6	3.89	3.05	5.82	3.06	1.22
38	4.0	4.27	3.35	6.26	3.29	1.21
38	4.5	4.74	3.72	6.76	3.56	1.20
42.4	2.9	3.60	2.82	7.06	3.33	1.40
42.4	3.2	3.94	3.09	7.62	3.59	1.39
42.4	3.6	4.39	3.44	8.33	3.93	1.38
42.4	4.0	4.83	3.79	8.99	4.24	1.36
42.4	4.5	5.36	4.21	9.76	4.60	1.35
42.4	5.0	5.87	4.61	10.46	4.93	1.33
42.4	5.6	6.47	5.08	11.21	5.29	1.32
44.5	2.9	3.79	2.98	8.24	3.70	1.47
44.5	3.2	4.15	3.26	8.91	4.00	1.46
44.5	3.6	4.63	3.63	9.75	4.38	1.45

44.5	4.0	5.09	4.00	10.54	4.74	1.44
44.5	4.5	5.65	4.44	11.45	5.15	1.42
44.5	5.0	6.20	4.87	12.29	5.53	1.41
44.5	5.6	6.84	5.37	13.21	5.94	1.39
44.5	6.3	7.56	5.94	14.17	6.37	1.37
48.3	2.9	4.14	3.25	10.70	4.43	1.61
48.3	3.2	4.53	3.56	11.59	4.80	1.60
48.3	3.6	5.06	3.97	12.71	5.26	1.59
48.3	4.0	5.57	4.37	13.77	5.70	1.57
48.3	4.5	6.19	4.86	15.01	6.21	1.56
48.3	5.0	6.80	5.34	16.15	6.69	1.54
48.3	5.6	7.51	5.90	17.42	7.21	1.52
48.3	6.3	8.31	6.53	18.74	7.76	1.50
51	2.9	4.38	3.44	12.72	4.99	1.70
51	3.2	4.81	3.77	13.79	5.41	1.69
51	3.6	5.36	4.21	15.14	5.94	1.68
51	4.0	5.91	4.64	16.43	6.44	1.67
51	4.5	6.57	5.16	17.93	7.03	1.65
51	5.0	7.23	5.67	19.34	7.58	1.64
51	5.6	7.99	6.27	20.89	8.19	1.62
51	6.3	8.85	6.94	22.54	8.84	1.60
54	2.9	4.66	3.65	15.24	5.65	1.81
54	3.2	5.11	4.01	16.54	6.13	1.80
54	3.6	5.70	4.47	18.19	6.74	1.79
54	4.0	6.28	4.93	19.76	7.32	1.77
54	4.5	7.00	5.49	21.61	8.00	1.76
54	5.0	7.70	6.04	23.34	8.64	1.74
54	5.6	8.51	6.68	25.27	9.36	1.72
54	6.3	9.44	7.41	27.32	10.12	1.70
54	7.1	10.46	8.21	29.42	10.90	1.68
54	8.0	11.56	9.08	31.50	11.67	1.65
57	2.9	4.93	3.87	18.08	6.35	1.92
57	3.2	5.41	4.25	19.64	6.89	1.91
57	3.6	6.04	4.74	21.63	7.59	1.89
57	4.0	6.66	5.23	23.52	8.25	1.88
57	4.5	7.42	5.83	25.76	9.04	1.86
57	5.0	8.17	6.41	27.86	9.78	1.85
57	5.6	9.04	7.10	30.22	10.60	1.83
57	6.3	10.03	7.88	32.74	11.49	1.81
57	7.1	11.13	8.74	35.34	12.40	1.78
57	8.0	12.32	9.67	37.95	13.31	1.76
57	8.8	13.33	10.46	39.99	14.03	1.73
57	10.0	14.77	11.59	42.62	14.95	1.70
60.3	3.2	5.74	4.51	23.47	7.78	2.02
60.3	3.6	6.41	5.03	25.87	8.58	2.01
60.3	4.0	7.07	5.55	28.17	9.34	2.00
60.3	4.5	7.89	6.19	30.90	10.25	1.98
60.3	5.0	8.69	6.82	33.48	11.10	1.96
60.3	5.6	9.62	7.55	36.37	12.06	1.94
60.3	6.3	10.69	8.39	39.49	13.10	1.92
60.3	7.1	11.87	9.32	42.73	14.17	1.90
60.3	8.0	13.14	10.32	45.99	15.26	1.87
60.3	8.8	14.24	11.18	48.58	16.11	1.85
60.3	10.0	15.80	12.40	51.95	17.23	1.81
63.5	3.2	6.06	4.76	27.63	8.70	2.13
63.5	3.6	6.77	5.32	30.49	9.60	2.12
63.5	4.0	7.48	5.87	33.24	10.47	2.11
63.5	4.5	8.34	6.55	36.50	11.50	2.09
63.5	5.0	9.19	7.21	39.60	12.47	2.08
63.5	5.6	10.19	8.00	43.09	13.57	2.06
63.5	6.3	11.32	8.89	46.86	14.76	2.03
63.5	7.1	12.58	9.88	50.81	16.00	2.01
63.5	8.0	13.95	10.95	54.82	17.27	1.98
63.5	8.8	15.12	11.87	58.02	18.28	1.96

63.5	10.0	16.81	13.19	62.24	19.60	1.92
70	3.2	6.72	5.27	37.54	10.73	2.36
70	3.6	7.51	5.90	41.51	11.86	2.35
70	4.0	8.29	6.51	45.33	12.95	2.34
70	4.5	9.26	7.27	49.89	14.26	2.32
70	5.0	10.21	8.02	54.24	15.50	2.30
70	5.6	11.33	8.89	59.18	16.91	2.29
70	6.3	12.61	9.90	64.57	18.45	2.26
70	7.1	14.03	11.01	70.27	20.08	2.24
70	8.0	15.58	12.23	76.12	21.75	2.21
70	8.8	16.92	13.28	80.85	23.10	2.19
70	10.0	18.85	14.80	87.18	24.91	2.15
76.1	3.2	7.33	5.75	48.78	12.82	2.58
76.1	3.6	8.20	6.44	54.01	14.19	2.57
76.1	4.0	9.06	7.11	59.06	15.52	2.55
76.1	4.5	10.12	7.95	65.12	17.11	2.54
76.1	5.0	11.17	8.77	70.92	18.64	2.52
76.1	5.6	12.40	9.74	77.54	20.38	2.50
76.1	6.3	13.81	10.84	84.82	22.29	2.48
76.1	7.1	15.39	12.08	92.56	24.33	2.45
76.1	8.0	17.12	13.44	100.59	26.44	2.42
76.1	8.8	18.61	14.61	107.14	28.16	2.40
76.1	10.0	20.77	16.30	116.01	30.49	2.36
76.1	11.0	22.50	17.66	122.58	32.22	2.33
82.5 *	3.6	8.92	7.00	69.58	16.87	2.79
82.5 *	4.0	9.86	7.74	76.18	18.47	2.78
82.5 *	4.5	11.03	8.66	84.14	20.40	2.76
82.5 *	5.0	12.17	9.56	91.78	22.25	2.75
82.5 *	5.6	13.53	10.62	100.54	24.37	2.73
82.5 *	6.3	15.08	11.84	110.21	26.72	2.70
82.5 *	7.1	16.82	13.20	120.58	29.23	2.68
82.5 *	8.0	18.72	14.70	131.40	31.85	2.65
82.5 *	8.8	20.38	15.99	140.31	34.01	2.62
82.5 *	10.0	22.78	17.88	152.50	36.97	2.59
82.5 *	11.0	24.71	19.40	161.63	39.18	2.56
88.9	3.6	9.65	7.57	87.90	19.77	3.02
88.9	4.0	10.67	8.38	96.34	21.67	3.00
88.9	4.5	11.93	9.37	106.55	23.97	2.99
88.9	5.0	13.18	10.35	116.37	26.18	2.97
88.9	5.6	14.65	11.50	127.69	28.73	2.95
88.9	6.3	16.35	12.83	140.24	31.55	2.93
88.9	7.1	18.25	14.32	153.76	34.59	2.90
88.9	8.0	20.33	15.96	167.97	37.79	2.87
88.9	8.8	22.14	17.38	179.74	40.44	2.85
88.9	10.0	24.79	19.46	195.98	44.09	2.81
88.9	11.0	26.92	21.13	208.28	46.86	2.78
88.9	12.5	30.00	23.55	224.76	50.57	2.74
101.6	3.6	11.08	8.70	133.24	26.23	3.47
101.6	4.0	12.26	9.63	146.28	28.80	3.45
101.6	4.5	13.73	10.78	162.13	31.92	3.44
101.6	5.0	15.17	11.91	177.47	34.93	3.42
101.6	5.6	16.89	13.26	195.23	38.43	3.40
101.6	6.3	18.86	14.81	215.07	42.34	3.38
101.6	7.1	21.08	16.55	236.62	46.58	3.35
101.6	8.0	23.52	18.47	259.50	51.08	3.32
101.6	8.8	25.66	20.14	278.66	54.85	3.30
101.6	10.0	28.78	22.59	305.42	60.12	3.26
101.6	11.0	31.31	24.58	325.98	64.17	3.23
101.6	12.5	34.99	27.47	354.05	69.70	3.18
101.6	14.2	38.99	30.61	382.12	75.22	3.13
108	4.0	13.07	10.26	176.96	32.77	3.68
108	4.5	14.63	11.49	196.30	36.35	3.66
108	5.0	16.18	12.70	215.06	39.83	3.65
108	5.6	18.02	14.14	236.83	43.86	3.63

108	6.3	20.13	15.80	261.23	48.38	3.60
108	7.1	22.51	17.67	287.83	53.30	3.58
108	8.0	25.13	19.73	316.17	58.55	3.55
108	8.8	27.42	21.53	340.00	62.96	3.52
108	10.0	30.79	24.17	373.45	69.16	3.48
108	11.0	33.52	26.31	399.32	73.95	3.45
108	12.5	37.50	29.44	434.87	80.53	3.41
108	14.2	41.84	32.85	470.76	87.18	3.35
114.3	4.0	13.86	10.88	211.07	36.93	3.90
114.3	4.5	15.52	12.19	234.32	41.00	3.89
114.3	5.0	17.17	13.48	256.92	44.96	3.87
114.3	5.6	19.12	15.01	283.20	49.55	3.85
114.3	6.3	21.38	16.78	312.71	54.72	3.82
114.3	7.1	23.91	18.77	344.99	60.37	3.80
114.3	8.0	26.72	20.97	379.49	66.40	3.77
114.3	8.8	29.17	22.90	408.61	71.50	3.74
114.3	10.0	32.77	25.72	449.66	78.68	3.70
114.3	11.0	35.70	28.02	481.56	84.26	3.67
114.3	12.5	39.98	31.38	525.67	91.98	3.63
114.3	14.2	44.66	35.05	570.56	99.84	3.57
127 *	4.0	15.46	12.13	292.61	46.08	4.35
127 *	4.5	17.32	13.59	325.29	51.23	4.33
127 *	5.0	19.16	15.04	357.14	56.24	4.32
127 *	5.6	21.36	16.77	394.30	62.09	4.30
127 *	6.3	23.89	18.75	436.22	68.70	4.27
127 *	7.1	26.74	20.99	482.28	75.95	4.25
127 *	8.0	29.91	23.48	531.80	83.75	4.22
127 *	8.8	32.68	25.65	573.85	90.37	4.19
127 *	10.0	36.76	28.85	633.55	99.77	4.15
127 *	11.0	40.09	31.47	680.32	107.14	4.12
127 *	12.5	44.96	35.30	745.65	117.42	4.07
127 *	14.2	50.32	39.50	813.03	128.04	4.02
127 *	16.0	55.79	43.80	877.16	138.14	3.97
133	4.0	16.21	12.73	337.53	50.76	4.56
133	4.5	18.17	14.26	375.42	56.45	4.55
133	5.0	20.11	15.78	412.40	62.02	4.53
133	5.6	22.41	17.59	455.61	68.51	4.51
133	6.3	25.08	19.69	504.43	75.85	4.49
133	7.1	28.08	22.04	558.18	83.94	4.46
133	8.0	31.42	24.66	616.11	92.65	4.43
133	8.8	34.34	26.95	665.40	100.06	4.40
133	10.0	38.64	30.33	735.59	110.62	4.36
133	11.0	42.16	33.10	790.77	118.91	4.33
133	12.5	47.32	37.15	868.12	130.54	4.28
133	14.2	53.00	41.60	948.33	142.61	4.23
133	16.0	58.81	46.17	1025.14	154.16	4.18
139.7	4.0	17.05	13.39	392.86	56.24	4.80
139.7	4.5	19.11	15.00	437.20	62.59	4.78
139.7	5.0	21.16	16.61	480.54	68.80	4.77
139.7	5.6	23.59	18.52	531.24	76.05	4.75
139.7	6.3	26.40	20.73	588.62	84.27	4.72
139.7	7.1	29.58	23.22	651.92	93.33	4.69
139.7	8.0	33.10	25.98	720.29	103.12	4.66
139.7	8.8	36.19	28.41	778.61	111.47	4.64
139.7	10.0	40.75	31.99	861.90	123.39	4.60
139.7	11.0	44.48	34.91	927.58	132.80	4.57
139.7	12.5	49.95	39.21	1020.01	146.03	4.52
139.7	14.2	55.99	43.95	1116.36	159.82	4.47
139.7	16.0	62.18	48.81	1209.19	173.11	4.41
159	4.5	21.84	17.15	652.27	82.05	5.46
159	5.0	24.19	18.99	717.88	90.30	5.45
159	5.6	26.99	21.19	794.88	99.99	5.43
159	6.3	30.22	23.72	882.38	110.99	5.40
159	7.1	33.88	26.60	979.36	123.19	5.38

159	8.0	37.95	29.79	1084.67	136.44	5.35
159	8.8	41.52	32.60	1175.01	147.80	5.32
159	10.0	46.81	36.75	1304.88	164.14	5.28
159	11.0	51.15	40.15	1408.09	177.12	5.25
159	12.5	57.53	45.16	1554.66	195.55	5.20
159	14.2	64.60	50.71	1709.27	215.00	5.14
159	16.0	71.88	56.43	1860.34	234.00	5.09
159	17.5	77.79	61.07	1976.79	248.65	5.04
168.3	5.0	25.65	20.14	855.85	101.70	5.78
168.3	5.6	28.62	22.47	948.26	112.69	5.76
168.3	6.3	32.06	25.17	1053.42	125.18	5.73
168.3	7.1	35.96	28.23	1170.19	139.06	5.70
168.3	8.0	40.29	31.63	1297.27	154.16	5.67
168.3	8.8	44.10	34.61	1406.52	167.14	5.65
168.3	10.0	49.73	39.04	1563.99	185.86	5.61
168.3	11.0	54.36	42.67	1689.50	200.77	5.57
168.3	12.5	61.18	48.03	1868.36	222.03	5.53
168.3	14.2	68.75	53.96	2057.92	244.55	5.47
168.3	16.0	76.55	60.10	2244.13	266.68	5.41
168.3	17.5	82.91	65.08	2388.43	283.83	5.37
168.3	20.0	93.18	73.15	2608.21	309.95	5.29
177.8 *	5.0	27.14	21.31	1013.97	114.06	6.11
177.8 *	5.6	30.30	23.78	1124.11	126.45	6.09
177.8 *	6.3	33.94	26.65	1249.62	140.57	6.07
177.8 *	7.1	38.08	29.89	1389.22	156.27	6.04
177.8 *	8.0	42.68	33.50	1541.44	173.39	6.01
177.8 *	8.8	46.72	36.68	1672.55	188.14	5.98
177.8 *	10.0	52.72	41.38	1861.99	209.45	5.94
177.8 *	11.0	57.64	45.25	2013.38	226.48	5.91
177.8 *	12.5	64.91	50.96	2229.80	250.82	5.86
177.8 *	14.2	72.98	57.29	2460.13	276.73	5.81
177.8 *	16.0	81.33	63.84	2687.46	302.30	5.75
177.8 *	17.5	88.13	69.18	2864.47	322.21	5.70
177.8 *	20.0	99.15	77.83	3135.69	352.72	5.62
193.7	5.6	33.09	25.98	1464.87	151.25	6.65
193.7	6.3	37.09	29.12	1630.05	168.31	6.63
193.7	7.1	41.62	32.67	1814.19	187.32	6.60
193.7	8.0	46.67	36.64	2015.54	208.11	6.57
193.7	8.8	51.12	40.13	2189.46	226.07	6.54
193.7	10.0	57.71	45.30	2441.59	252.10	6.50
193.7	11.0	63.14	49.56	2643.87	272.99	6.47
193.7	12.5	71.16	55.86	2934.32	302.98	6.42
193.7	14.2	80.08	62.86	3245.28	335.08	6.37
193.7	16.0	89.32	70.12	3554.27	366.99	6.31
193.7	17.5	96.87	76.04	3796.47	391.99	6.26
193.7	20.0	109.14	85.67	4170.71	430.64	6.18
219.1	6.3	42.12	33.06	2386.14	217.81	7.53
219.1	7.1	47.29	37.12	2659.58	242.77	7.50
219.1	8.0	53.06	41.65	2959.64	270.16	7.47
219.1	8.8	58.14	45.64	3219.74	293.91	7.44
219.1	10.0	65.69	51.57	3598.45	328.48	7.40
219.1	11.0	71.91	56.45	3903.75	356.34	7.37
219.1	12.5	81.13	63.69	4344.59	396.59	7.32
219.1	14.2	91.41	71.75	4820.10	439.99	7.26
219.1	16.0	102.09	80.14	5296.61	483.49	7.20
219.1	17.5	110.84	87.01	5673.23	517.87	7.15
219.1	20.0	125.10	98.20	6261.31	571.55	7.07
219.1	22.2	137.32	107.80	6739.64	615.21	7.01
244.5	7.1	52.95	41.57	3733.79	305.42	8.40
244.5	8.0	59.44	46.66	4160.46	340.32	8.37
244.5	8.8	65.16	51.15	4531.35	370.66	8.34
244.5	10.0	73.67	57.83	5073.16	414.98	8.30
244.5	11.0	80.69	63.34	5511.59	450.85	8.26
244.5	12.5	91.11	71.52	6147.43	502.86	8.21

244.5	14.2	102.74	80.65	6837.21	559.28	8.16
244.5	16.0	114.86	90.16	7532.93	616.19	8.10
244.5	17.5	124.80	97.97	8086.30	661.46	8.05
244.5	20.0	141.06	110.73	8957.22	732.70	7.97
244.5	22.2	155.04	121.71	9672.57	791.21	7.90
273	7.1	59.31	46.56	5245.46	384.28	9.40
273	8.0	66.60	52.28	5851.73	428.70	9.37
273	8.8	73.04	57.34	6380.04	467.40	9.35
273	10.0	82.62	64.86	7154.11	524.11	9.31
273	11.0	90.54	71.07	7782.56	570.15	9.27
273	12.5	102.30	80.30	8697.47	637.18	9.22
273	14.2	115.45	90.63	9694.99	710.26	9.16
273	16.0	129.18	101.41	10706.81	784.38	9.10
273	17.5	140.47	110.27	11516.07	843.67	9.05
273	20.0	158.96	124.79	12798.47	937.62	8.97
273	22.2	174.92	137.31	13860.73	1015.44	8.90
273	25.0	194.78	152.90	15126.80	1108.19	8.81
298.5 *	8.0	73.01	57.31	7707.59	516.42	10.27
298.5 *	8.8	80.09	62.87	8409.88	563.48	10.25
298.5 *	10.0	90.64	71.15	9441.04	632.57	10.21
298.5 *	11.0	99.35	77.99	10280.22	688.79	10.17
298.5 *	12.5	112.31	88.17	11505.30	770.87	10.12
298.5 *	14.2	126.83	99.56	12845.82	860.69	10.06
298.5 *	16.0	142.00	111.47	14211.08	952.17	10.00
298.5 *	17.5	154.49	121.27	15307.32	1025.62	9.95
298.5 *	20.0	174.99	137.36	17052.99	1142.58	9.87
298.5 *	22.2	192.70	151.27	18507.65	1240.04	9.80
298.5 *	25.0	214.81	168.62	20252.87	1356.98	9.71
323.9	8.0	79.39	62.32	9910.10	611.92	11.17
323.9	8.8	87.11	68.38	10820.00	668.11	11.14
323.9	10.0	98.61	77.41	12158.37	750.75	11.10
323.9	11.0	108.13	84.88	13249.72	818.14	11.07
323.9	12.5	122.29	96.00	14846.56	916.74	11.02
323.9	14.2	138.16	108.46	16599.11	1024.95	10.96
323.9	16.0	154.77	121.49	18389.97	1135.53	10.90
323.9	17.5	168.45	132.24	19832.60	1224.61	10.85
323.9	20.0	190.95	149.89	22139.10	1367.03	10.77
323.9	22.2	210.42	165.18	24070.49	1486.29	10.70
323.9	25.0	234.76	184.28	26400.14	1630.14	10.60
323.9	28.0	260.29	204.33	28742.55	1774.78	10.51
323.9	30.0	276.99	217.44	30219.17	1865.96	10.44
355.6	8.0	87.36	68.58	13201.41	742.49	12.29
355.6	8.8	95.88	75.26	14423.16	811.20	12.27
355.6	10.0	108.57	85.23	16223.54	912.46	12.22
355.6	11.0	119.09	93.48	17694.64	995.20	12.19
355.6	12.5	134.74	105.77	19852.22	1116.55	12.14
355.6	14.2	152.30	119.56	22227.49	1250.14	12.08
355.6	16.0	170.70	134.00	24663.06	1387.12	12.02
355.6	17.5	185.88	145.92	26631.55	1497.84	11.97
355.6	20.0	210.86	165.53	29791.78	1675.58	11.89
355.6	22.2	232.52	182.53	32451.29	1825.16	11.81
355.6	25.0	259.65	203.83	35676.80	2006.57	11.72
355.6	28.0	288.17	226.22	38941.41	2190.18	11.62
355.6	30.0	306.87	240.89	41011.59	2306.61	11.56
406.4	8.8	109.92	86.29	21731.78	1069.48	14.06
406.4	10.0	124.53	97.76	24475.87	1204.52	14.02
406.4	11.0	136.64	107.26	26723.88	1315.15	13.98
406.4	12.5	154.68	121.43	30030.74	1477.89	13.93
406.4	14.2	174.96	137.35	33685.34	1657.74	13.88
406.4	16.0	196.24	154.05	37448.91	1842.96	13.81
406.4	17.5	213.81	167.84	40503.38	1993.28	13.76
406.4	20.0	242.78	190.58	45432.25	2235.84	13.68
406.4	22.2	267.95	210.34	49605.93	2441.24	13.61
406.4	25.0	299.55	235.15	54702.22	2692.04	13.51

406.4	28.0	332.86	261.29	59902.34	2947.95	13.42
406.4	30.0	354.75	278.48	63223.88	3111.41	13.35
457	10.0	140.43	110.24	35091.41	1535.73	15.81
457	11.0	154.13	120.99	38346.19	1678.17	15.77
457	12.5	174.56	137.03	43144.91	1888.18	15.72
457	14.2	197.54	155.07	48463.91	2120.96	15.66
457	16.0	221.67	174.01	53959.50	2361.47	15.60
457	17.5	241.63	189.68	58433.73	2557.27	15.55
457	20.0	274.58	215.54	65681.63	2874.47	15.47
457	22.2	303.24	238.05	71847.75	3144.32	15.39
457	25.0	339.29	266.34	79415.30	3475.51	15.30
457	28.0	377.37	296.23	87184.03	3815.49	15.20
457	30.0	402.44	315.91	92173.11	4033.83	15.13
508	11.0	171.75	134.82	53056.11	2088.82	17.58
508	12.5	194.58	152.75	59755.54	2352.58	17.52
508	14.2	220.29	172.93	67198.80	2645.62	17.47
508	16.0	247.31	194.14	74909.22	2949.18	17.40
508	17.5	269.67	211.69	81202.32	3196.94	17.35
508	20.0	306.62	240.70	91428.00	3599.53	17.27
508	22.2	338.81	265.97	100159.56	3943.29	17.19
508	25.0	379.35	297.79	110918.57	4366.87	17.10
508	28.0	422.23	331.45	122016.33	4803.79	17.00
508	30.0	450.51	353.65	129173.42	5085.57	16.93