

Pre-Defined Parameters:	
Voltage:	360
Max Current:	850
Coil ID (mm):	10
*Snubber Rating (Watts):	5000

*The pulse-power rating of the device that will dissipate the coil's energy

Color Key:	Purple Cell:	Informational
	Grey Cell:	User-defined value
	Blue Cell:	Input from coil calculator
	Red Text:	Maximum value exceeded
Green Cell, Yellow Cell, or Red Cell:		Calculated value
Positive	Neutral	Negative

Coil Calculator instructions:	
Go to	https://www.acorninstruments.com/Magnetic/Magnetic-field-calculator.html
Set inner radius to half your specified coil ID	
Set the coil length to specified value	
Set wire diameter with and without insulation*	
Input the number of turns calculated by this sheet	
Set current to 1A	
Set distance from center to 0mm	
Set permeability and Compax factor to 1	
Input resulting resistance, inductance, and field values into their respective blue boxes	
*Not accounting for enamel thickness only has a marginal impact on accuracy	

- Notes:**
- Power the coil will consume when fully charged by the specified voltage source. It is also how much heat the coil will generate when fully charged.
 - Energy stored within the coil when it is fully charged. It will need to dissipate this when discharging.
 - Amount of power that a device will dissipate when removing energy from the coil. Many devices can handle dozens of times their rated power for a short period of time.
 - Strength of field the coil generates per amp of current flowing through it. Some coils generate weaker overall fields, but do it more efficiently.
 - How strong the field will be after it is fully charged by the voltage source specified.
 - How long the coil will take to build OR collapse %98.1 field strength.
 - This value indicates the average linear rate that a coil will build/collapse its field. In reality the coil's initial rate will be much higher, and will slow down asymptotically.
 - This is an arbitrary value that multiplies the field constant by the field rate. It is only intended for comparing coils.

To clear this sheet, highlight the blue and grey columns and press 'del' on your keyboard.

Wire diameter:	Coil Length:	Coil OD:	Coil Volume:	Layers:	Turns/Layer:	Total Turns:	Resistance:	Inductance:	Max Current:	Note 1:	Note 2:	Note 3:	Note 4:	Note 5:	Note 6:	Note 7:	Note 8:
(Millimeter)	(Millimeter)	(Millimeter)	(Cubic Cent.)	#	#	#	(Ohms)	(Microhenry)	(Amperes)	Max Power:	Energy Stored:	Snub Power:	Field Constant:	Max Field:	Charge Time:	Field Rate:	Rating:
										(Kilowatts)	(Joules)	(Kilowatts)	(Millitesla)	(Tesla)	(Milliseconds)	(Tesla/Second)	(Arbitrary)
0.68	50	30	94.25	29	74	2163	9.22	44811.9	42.3	16.5	40	2.1	46.6437	1.97	19.44	101	4734
0.68	50	30	31.42	15	74	1081	3.04	6032.2	128.5	50.1	50	6.3	25.2611	3.25	7.95	408	19314
0.68	50	20	11.78	7	74	541	1.13	951.8	345.7	134.8	57	16.9	13.0530	4.51	3.38	1337	17453
0.68	30	50	56.55	29	44	1298	5.53	21326.7	70.5	27.5	53	3.4	39.9978	2.78	15.42	180	7096
0.68	30	30	18.85	15	44	649	1.82	3085.9	213.8	83.4	71	10.4	22.8047	4.88	6.77	721	16431
0.68	30	20	7.07	7	44	324	0.68	509.2	577.8	225.3	85	28.2	12.2262	7.06	3.02	2341	28822
0.68	20	50	37.70	29	29	865	3.89	11281.1	105.8	41.3	63	5.2	32.1722	3.40	12.24	278	8946
0.68	20	30	12.57	15	29	433	1.22	1738	320.5	125.0	89	15.6	16.7216	6.32	5.71	1106	21816
0.68	20	20	4.71	7	29	216	0.45	300.4	869.7	338.0	113	42.3	11.0319	9.56	2.67	3581	39501
0.68	10	50	18.85	29	15	433	1.85	3499	211.2	82.3	78	10.3	19.9381	4.21	7.58	556	11077
0.68	10	30	6.28	15	15	216	0.61	587.4	643.6	251.0	122	31.4	13.0865	8.42	3.88	2172	28426
0.68	10	20	2.36	7	15	108	0.23	111.7	1733.3	676.0	168	84.5	7.8710	13.64	1.99	6870	54076
1.02	50	50	94.25	20	48	961	1.80	8842.6	218.8	84.5	208	10.6	20.7781	4.50	19.68	329	4700
1.02	50	30	31.42	10	48	481	0.59	1195.4	661.0	257.8	261	32.2	11.2589	7.44	8.10	918	10339
1.02	50	20	11.78	5	48	240	0.22	187.1	1787.2	700.9	302	87.6	5.8017	10.43	3.45	3023	17540
1.02	30	50	56.55	20	29	577	1.08	4215	360.8	140.7	274	17.6	17.9999	6.35	15.60	407	7165
1.02	30	30	18.85	10	29	288	0.35	607	1104.6	430.9	370	53.9	10.1709	11.24	6.88	1634	16616
1.02	30	20	7.07	5	29	144	0.13	100.6	3000.0	1170.0	453	146.3	5.4570	16.37	3.10	5289	28861
1.02	20	50	37.70	20	20	384	0.72	2221.2	542.4	211.5	327	26.4	14.3946	7.81	12.36	532	9595
1.02	20	30	12.57	10	20	192	0.24	341.2	1659.6	947.2	470	80.9	8.8179	14.83	5.81	2520	22219
1.02	20	20	4.71	5	20	96	0.09	59.3	4482.8	1748.3	596	218.5	4.9413	22.15	2.73	8124	40145
1.02	10	50	18.85	20	10	192	0.36	686.9	1066.4	423.7	405	53.0	8.9572	9.73	7.65	1271	11388
1.02	10	30	6.28	10	10	96	0.12	116	3305.1	1289.0	634	161.1	5.8985	19.50	3.93	4958	29244
1.02	10	20	2.36	5	10	48	0.04	22.1	9069.8	3537.2	909	442.2	3.5536	32.23	2.06	15678	56712
1.29	50	50	94.25	16	39	601	0.70	3459.5	559.5	218.2	542	27.3	13.0188	7.28	19.85	367	4777
1.29	50	30	31.42	8	39	300	0.23	464.1	1718.1	670.0	685	83.8	7.0351	12.09	8.18	1478	10398
1.29	50	20	11.78	4	39	150	0.08	73.1	4698.8	1832.5	807	229.1	3.6309	17.06	3.52	4843	17584
1.29	30	50	56.55	16	23	361	0.42	1650.9	930.8	363.0	715	45.4	11.0520	10.29	15.76	653	7214
1.29	30	30	18.85	8	23	180	0.14	237.1	2867.6	1118.4	975	139.8	6.3801	18.30	6.97	2624	16739
1.29	30	20	7.07	4	23	90	0.05	39.3	7800.0	3042.0	1196	380.3	3.4214	28.69	3.14	8488	29042
1.29	20	50	37.70	16	16	240	0.28	867.4	1402.9	547.1	854	64.4	9.0515	12.70	12.48	1017	9209
1.29	20	30	12.57	8	16	120	0.09	133.3	4285.7	1671.4	1224	208.9	5.5449	23.76	5.86	4056	22489
1.29	20	20	4.71	4	16	60	0.03	23.2	11818.2	4609.1	1620	578.1	3.1062	36.71	2.81	13054	46549
1.29	10	50	18.85	16	8	120	0.14	268.3	2805.8	1094.2	1056	136.8	6.5530	15.86	7.72	2054	11613
1.29	10	30	6.28	8	8	60	0.05	45.3	8666.7	3380.0	1701	422.5	3.7276	32.31	4.03	8023	29906
1.29	10	20	2.36	4	8	30	0.02	8.6	22941.2	8947.1	2263	1118.4	2.2475	51.56	2.02	25480	57267

< Option 1

< Option 2

< Option 3

< Original plan

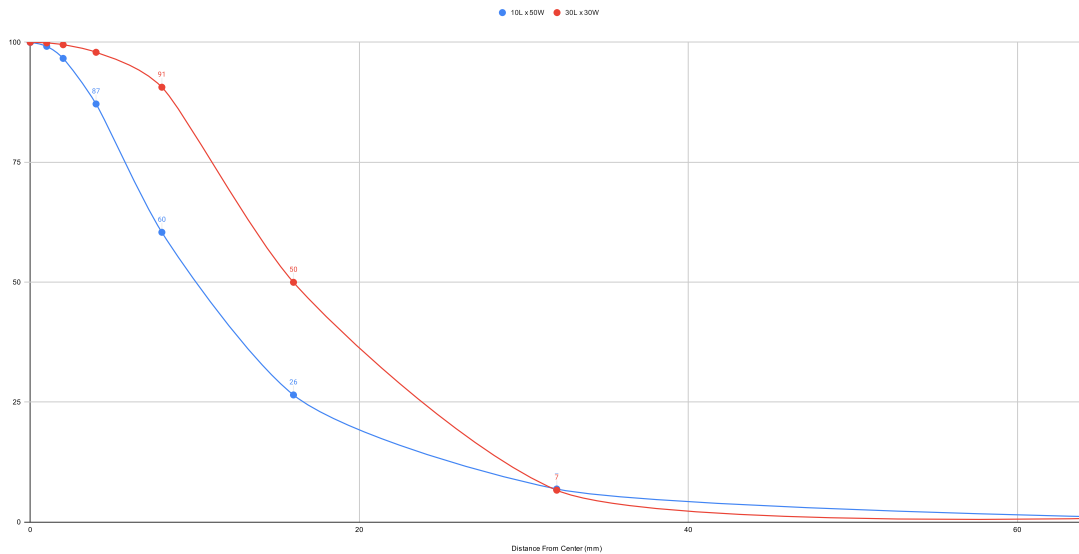
Coil Field vs Distance

	Coil 1	Coil 2
Wire diameter:	0.68mm	0.68
Turns:	423	649
Dimensions:	10L X 50W	30L X 30W
Volume:	18.85	18.85
Current:	211.2	213.8
Time constant:	1.69	1.69
Field:	4.21	4.86

Coil Field vs Time

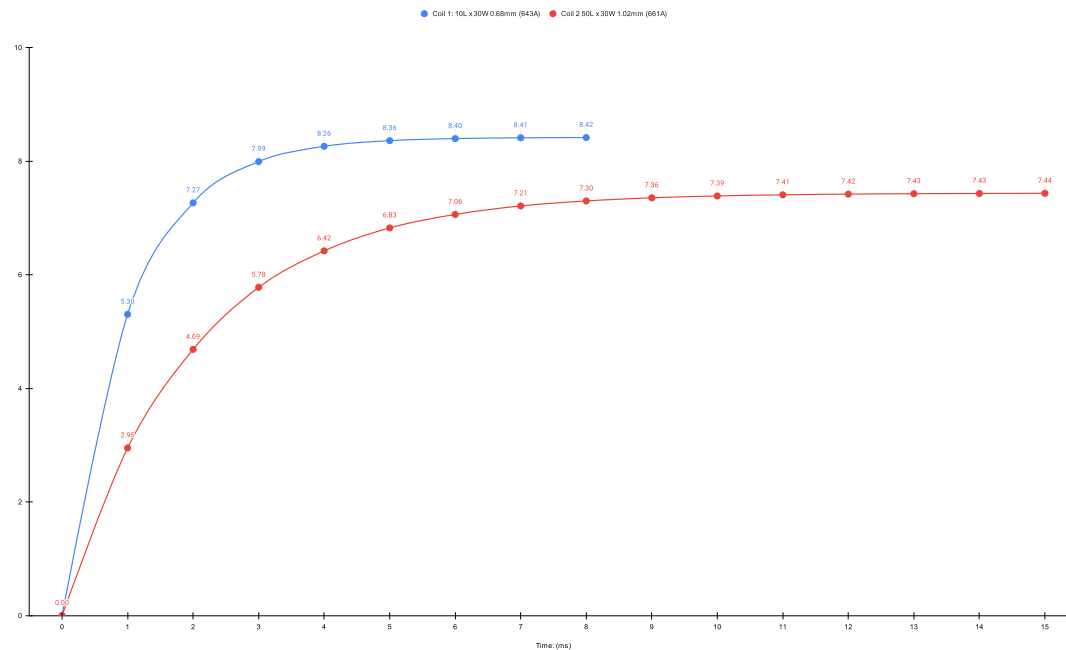
	Coil 1	Coil 2
Wire diameter:	0.68mm	1.02mm
Dimensions:	10L X 30W	50L X 30W
Current:	643.6A	661A
Time constant:	0.97ms	2.20ms
Field:	8.42	7.44

Distance vs Field Strength (%)



Field vs Time

1ms Time Constant vs 2ms Time Constant



Coil force mapping
coil: 328T 30 x 20

536µH @ 0.86 ohm

Distance (mm)	7.5 x 20mm steel rod			100.53			7.5 x 100mm steel rod			157.57			
	force	impulse	time constant	force	impulse	time constant	force	impulse	time constant	force	impulse	time constant	
0.0 mm	0.0 g	0.000 N	2.270 µs	0.0 g	0.000 N	2.270 µs	0.0 g	0.000 N	2.270 µs	0.0 g	0.000 N	2.270 µs	
0.5 mm	8.3 g	0.081 N	2.285 µs	4.428	2.63 ms	1.4 g	0.014 N	2.200 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
1.0 mm	16.3 g	0.160 N	2.280 µs	4.421	2.63 ms	1.4 g	0.014 N	2.200 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
1.5 mm	24.0 g	0.242 N	2.255 µs	4.420	2.62 ms	1.4 g	0.014 N	2.200 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
2.0 mm	32.0 g	0.322 N	2.250 µs	4.418	2.62 ms	1.4 g	0.014 N	2.200 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
2.5 mm	40.5 g	0.396 N	2.245 µs	4.418	2.61 ms	1.4 g	0.014 N	2.200 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
3.0 mm	48.5 g	0.475 N	2.240 µs	4.419	2.60 ms	1.4 g	0.014 N	2.200 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
3.5 mm	56.3 g	0.552 N	2.235 µs	4.417	2.60 ms	1.4 g	0.014 N	2.200 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
4.0 mm	64.6 g	0.633 N	2.230 µs	4.416	2.59 ms	1.4 g	0.014 N	2.200 µs	4.463	2.92 ms	1.4 g	0.014 N	2.200 µs
4.5 mm	73.5 g	0.721 N	2.220 µs	4.414	2.58 ms	1.4 g	0.014 N	2.200 µs	4.463	2.92 ms	1.4 g	0.014 N	2.200 µs
5.0 mm	82.6 g	0.809 N	2.210 µs	4.413	2.57 ms	1.3 g	0.012 N	2.100 µs	4.463	2.92 ms	1.4 g	0.014 N	2.200 µs
5.5 mm	91.5 g	0.898 N	2.195 µs	4.405	2.55 ms	1.4 g	0.014 N	2.200 µs	4.462	2.92 ms	1.4 g	0.014 N	2.200 µs
6.0 mm	100.9 g	0.986 N	2.180 µs	4.407	2.53 ms	1.6 g	0.016 N	2.200 µs	4.470	2.93 ms	1.4 g	0.014 N	2.200 µs
6.5 mm	109.2 g	1.070 N	2.170 µs	4.404	2.52 ms	1.7 g	0.017 N	2.200 µs	4.470	2.93 ms	1.4 g	0.014 N	2.200 µs
7.0 mm	117.7 g	1.153 N	2.160 µs	4.403	2.51 ms	1.8 g	0.018 N	2.200 µs	4.471	2.93 ms	1.4 g	0.014 N	2.200 µs
7.5 mm	127.3 g	1.248 N	2.140 µs	4.393	2.49 ms	2.0 g	0.019 N	2.150 µs	4.469	2.92 ms	1.4 g	0.014 N	2.200 µs
8.0 mm	136.9 g	1.342 N	2.120 µs	4.385	2.47 ms	2.1 g	0.021 N	2.100 µs	4.468	2.92 ms	1.4 g	0.014 N	2.200 µs
8.5 mm	146.8 g	1.438 N	2.100 µs	4.378	2.44 ms	2.2 g	0.022 N	2.100 µs	4.468	2.92 ms	1.4 g	0.014 N	2.200 µs
9.0 mm	156.6 g	1.535 N	2.080 µs	4.381	2.42 ms	2.4 g	0.024 N	2.100 µs	4.463	2.92 ms	1.4 g	0.014 N	2.200 µs
9.5 mm	165.9 g	1.622 N	2.060 µs	4.383	2.40 ms	2.6 g	0.026 N	2.100 µs	4.463	2.92 ms	1.4 g	0.014 N	2.200 µs
10.0 mm	174.7 g	1.710 N	2.040 µs	4.386	2.37 ms	2.8 g	0.027 N	2.100 µs	4.463	2.92 ms	1.4 g	0.014 N	2.200 µs
10.5 mm	181.9 g	1.783 N	2.015 µs	4.379	2.34 ms	2.9 g	0.029 N	2.100 µs	4.463	2.92 ms	1.4 g	0.014 N	2.200 µs
11.0 mm	189.3 g	1.855 N	1.990 µs	4.373	2.31 ms	3.1 g	0.034 N	2.100 µs	4.463	2.92 ms	1.4 g	0.014 N	2.200 µs
11.5 mm	195.7 g	1.918 N	1.970 µs	4.361	2.30 ms	3.2 g	0.032 N	2.050 µs	4.474	2.91 ms	1.4 g	0.014 N	2.200 µs
12.0 mm	202.1 g	1.981 N	1.967 µs	4.360	2.29 ms	3.4 g	0.034 N	2.050 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
12.5 mm	206.9 g	2.027 N	1.935 µs	4.310	2.25 ms	3.6 g	0.036 N	2.000 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
13.0 mm	211.6 g	2.074 N	1.910 µs	4.350	2.21 ms	3.8 g	0.037 N	2.000 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
13.5 mm	214.9 g	2.106 N	1.871 µs	4.340	2.18 ms	4.0 g	0.039 N	2.000 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
14.0 mm	218.2 g	2.138 N	1.838 µs	4.329	2.14 ms	4.2 g	0.041 N	2.000 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
14.5 mm	219.1 g	2.147 N	1.806 µs	4.328	2.10 ms	4.4 g	0.041 N	2.000 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
15.0 mm	220.0 g	2.156 N	1.773 µs	4.328	2.06 ms	4.6 g	0.042 N	2.000 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
15.5 mm	221.7 g	2.172 N	1.737 µs	4.321	2.02 ms	4.7 g	0.049 N	2.050 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
16.0 mm	223.3 g	2.188 N	1.701 µs	4.314	1.98 ms	5.0 g	0.049 N	2.000 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
16.5 mm	222.8 g	2.182 N	1.664 µs	4.304	1.94 ms	5.2 g	0.049 N	2.000 µs	4.464	2.91 ms	1.4 g	0.014 N	2.200 µs
17.0 mm	222.3 g	2.179 N	1.626 µs	4.304	1.89 ms	5.4 g	0.037 N	2.000 µs	4.460	2.90 ms	1.4 g	0.014 N	2.200 µs
17.5 mm	220.7 g	2.162 N	1.590 µs	4.296	1.85 ms	5.7 g	0.050 N	2.000 µs	4.466	2.90 ms	1.4 g	0.014 N	2.200 µs
18.0 mm	219.0 g	2.146 N	1.554 µs	4.289	1.81 ms	5.9 g	0.053 N	2.000 µs	4.466	2.90 ms	1.4 g	0.014 N	2.200 µs
18.5 mm	216.7 g	2.126 N	1.520 µs	4.286	1.77 ms	6.1 g	0.054 N	2.000 µs	4.466	2.90 ms	1.4 g	0.014 N	2.200 µs
19.0 mm	214.3 g	2.100 N	1.486 µs	4.272	1.73 ms	6.2 g	0.052 N	2.000 µs	4.467	2.88 ms	1.4 g	0.014 N	2.200 µs
19.5 mm	211.3 g	2.070 N	1.450 µs	4.275	1.69 ms	6.6 g	0.052 N	2.000 µs	4.467	2.88 ms	1.4 g	0.014 N	2.200 µs
20.0 mm	208.3 g	2.040 N	1.414 µs	4.268	1.64 ms	6.8 g	0.054 N	2.000 µs	4.467	2.88 ms	1.4 g	0.014 N	2.200 µs
20.5 mm	204.1 g	2.000 N	1.376 µs	4.266	1.60 ms	7.0 g	0.055 N	2.000 µs	4.468	2.88 ms	1.4 g	0.014 N	2.200 µs
21.0 mm	200.0 g	1.960 N	1.337 µs	4.244	1.55 ms	7.5 g	0.055 N	2.000 µs	4.468	2.87 ms	1.4 g	0.014 N	2.200 µs
21.5 mm	196.7 g	1.918 N	1.302 µs	4.248	1.51 ms	7.6 g	0.056 N	2.000 µs	4.468	2.87 ms	1.4 g	0.014 N	2.200 µs
22.0 mm	191.4 g	1.871 N	1.266 µs	4.232	1.47 ms	8.1 g	0.056 N	2.000 µs	4.468	2.87 ms	1.4 g	0.014 N	2.200 µs
22.5 mm	186.9 g	1.832 N	1.226 µs	4.235	1.44 ms	8.4 g	0.059 N	2.000 µs	4.469	2.86 ms	1.4 g	0.014 N	2.200 µs
23.0 mm	182.4 g	1.788 N	1.205 µs	4.248	1.40 ms	8.7 g	0.060 N	2.000 µs	4.471	2.85 ms	1.4 g	0.014 N	2.200 µs
23.5 mm	177.9 g	1.742 N	1.182 µs	4.266	1.36 ms	9.1 g	0.060 N	2.000 µs	4.462	2.84 ms	1.4 g	0.014 N	2.200 µs
24.0 mm	172.7 g	1.692 N	1.158 µs	4.213	1.32 ms	9.5 g	0.063 N	2.000 µs	4.462	2.84 ms	1.4 g	0.014 N	2.200 µs
24.5 mm	167.1 g	1.638 N	1.108 µs	4.203	1.29 ms	10.0 g	0.060 N	2.000 µs	4.454	2.83 ms	1.4 g	0.014 N	2.200 µs
25.0 mm	161.6 g	1.583 N	1.074 µs	4.204	1.25 ms	10.4 g	0.059 N	2.000 µs	4.455	2.81 ms	1.4 g	0.014 N	2.200 µs
25.5 mm	156.3 g	1.531 N	1.044 µs	4.147	1.21 ms	10.9 g	0.071 N	2.000 µs	4.455	2.81 ms	1.4 g	0.014 N	2.200 µs
26.0 mm	151.0 g	1.480 N	1.013 µs	4.180	1.18 ms	11.3 g	0.071 N	2.000 µs	4.457	2.80 ms	1.4 g	0.014 N	2.200 µs
26.5 mm	145.8 g	1.428 N	987 µs	4.180	1.15 ms	11.8 g	0.071 N	2.000 µs	4.487	2.81 ms	1.4 g	0.014 N	2.200 µs
27.0 mm	140.5 g	1.377 N	960 µs	4.171	1.12 ms	12.2 g	0.072 N	2.000 µs	4.459	2.78 ms	1.4 g	0.014 N	2.200 µs
27.5 mm	134.8 g	1.321 N	933 µs	4.171	1.08 ms	12.7 g	0.075 N	2.000 µs	4.450	2.77 ms	1.4 g	0.014 N	2.200 µs
28.0 mm	129.0 g	1.264 N	906 µs	4.160	1.05 ms	13.2 g	0.075 N	2.000 µs	4.440	2.77 ms	1.4 g	0.014 N	2.200 µs
28.5 mm	123.0 g	1.207 N	879 µs	4.141	1.02 ms	13.6 g	0.076 N	2.000 µs	4.443	2.76 ms	1.4 g	0.014 N	2.200 µs
29.0 mm	116.9 g	1.146 N	853 µs	4.151	0.99 ms	14.5 g	0.075 N	2.000 µs	4.436	2.72 ms	1.4 g	0.014 N	2.200 µs
29.5 mm	111.0 g	1.087 N	830 µs	4.158	0.96 ms	15.0 g	0.075 N	2.000 µs	4.437	2.71 ms	1.4 g	0.014 N	2.200 µs
30.0 mm	105.0 g	1.029 N	806 µs	4.154	0.94 ms	15.8 g	0.075 N	2.000 µs	4.428	2.70 ms	1.4 g	0.014 N	2.200 µs
30.5 mm	99.5 g	0.972 N	783 µs	4.145	0.91 ms	16.5 g	0.077 N	2.000 µs	4.420	2.68 ms	1.4 g	0.014 N	2.200 µs
31.0 mm	93.9 g	0.920 N	765 µs	4.147	0.89 ms	17.1 g	0.076 N	2.000 µs	4.430	2.66 ms	1.4 g	0.014 N	2.200 µs
31.5 mm	88.3 g	0.865 N	746 µs	4.131	0.87 ms	17.9 g	0.076 N	2.000 µs	4.425	2.64 ms	1.4 g	0.014 N	2.200 µs
32.0 mm	82.6 g	0.810 N	728 µs	4.134	0.84 ms	18.6 g	0.076 N	2.000 µs	4.426	2.63 ms	1.4 g	0.014 N	2.200 µs
32.5 mm	77.1 g	0.756 N	708 µs	4.130	0.82 ms	19.5 g	0.076 N	2.000 µs	4.417	2.60 ms	1.4 g	0.014 N	2.200 µs
33.0 mm	71.6 g	0.702 N	689 µs	4.128	0.80 ms	20.4 g	0.076 N	2.000 µs	4.412	2.58 ms	1.4 g	0.014 N	2.200 µs
33.5 mm	66.0 g	0.647 N	674 µs	4.127	0.78 ms	21.2 g	0.076 N	2.000 µs	4.414	2.56 ms	1.4 g	0.014 N	2.200 µs
34.0 mm	60.5 g	0.592 N	658 µs	4.128	0.77 ms	22.1 g	0.076 N	2.000 µs	4.407	2.53 ms	1.4 g	0.014 N	2.200 µs
34.5 mm	55.0 g	0.539 N	645 µs	4.123	0.75 ms	22.8 g	0.076 N	2.000 µs	4.411	2.50 ms	1.4 g	0.014 N	2.200 µs
35.0 mm	50.0 g	0.490 N	632 µs	4.119	0.73 ms	23.6 g	0.076 N	2.000 µs	4.395	2.47 ms	1.4 g	0.014 N	2.200 µs
35.5 mm	45.0 g	0.441 N	618 µs	4.116	0.71 ms	24.5 g	0.076 N	2.000 µs	4.389	2.43 ms	1.4 g	0.014 N	2.200 µs
36.0 mm	40.0 g	0.392 N	609 µs	4.116	0.71 ms	25.0 g	0.076 N	2.000 µs	4.383	2.40 ms	1.4 g	0.014 N	2.200 µs
36.5 mm	35.0 g	0.349 N	600 µs	4.118	0.70 ms	25.7 g	0.076 N	2.000 µs	4.378	2.35 ms	1.4 g	0.014 N	2.200 µs
37.0 mm	31.0 g	0.306 N	590 µs	4.101	0.69 ms	26.4 g	0.076 N	2.000 µs	4.373	2.31 ms	1.4 g	0.014 N	2.200 µs
37.5 mm	27.0 g	0.263 N	580 µs	4.108	0.68 ms	26.8 g	0.076 N	2.000 µs	4.372	2.29 ms	1.4 g	0.014 N	2.200 µs
38.0 mm	23.0 g	0.232 N	576 µs	4.107	0.67 ms	27.2 g	0.076 N	2.000 µs	4.361	2.28 ms	1.4 g	0.014 N	2.200 µs
38.5 mm	20.0 g	0.203 N	571 µs	4.104	0.66 ms	27.5 g	0.076 N	2.000 µs	4.356	2.24 ms	1.4 g	0.014 N	2.200 µs
39.0 mm	17.0 g	0.171 N	566 µs	4.104	0.66 ms	27.6 g	0.076 N	2.000 µs	4.341	2.21 ms	1.4 g	0.014 N	2.200 µs
39.5 mm	15.0 g	0.149 N	562 µs										

Distance	40L		30L	496.2	20L	7.5	10L		
0			12.225	6066.045	11.0311	82.73325			
0.5	0	0	12.21895	6063.04299	11.0134	82.6005	0	0	
1			12.2129	6060.04098	10.9957	82.46775			
1.5	0	0	12.19455	6050.93571	10.9415	82.06125	0	0	
2			12.1762	6041.83044	10.8873	81.65475			
2.5	0	0	12.1446	6026.15052	10.79375	80.953125	0	0	
3			12.113	6010.4706	10.7002	80.2515			
3.5	0	0	12.0667	5987.49654	10.5625	79.21875	0	0	
4			12.0204	5964.52248	10.4248	78.186			
4.5	0	0	11.95715	5933.13783	10.2364	76.773	0	0	
5			11.8939	5901.75318	10.048	75.36			
5.5	0	0	11.81045	5860.34529	9.8017	73.51275	0	0	
6			11.727	5818.9374	9.5554	71.6655			
6.5	0	0	11.61925	5765.47185	9.2449	69.33675	0	0	
7			11.5115	5712.0063	8.9344	67.008			
7.5	0	0	11.37395	5643.75399	8.55825	64.186875	0	0	
8			11.2364	5575.50168	8.1821	61.36575			
8.5	0	0	11.06225	5489.08845	7.74875	58.115625	0	0	
9			10.8881	5402.67522	7.3154	54.8655			
9.5	0	0	10.66945	5294.18109	6.84685	51.351375	0	0	
10			10.4508	5185.68696	6.3783	47.83725			
10.5	0	0	10.1791	5050.86942	5.90735	44.305125	0	0	
11			9.9074	4916.05188	5.4364	40.773			
11.5	0	0	9.57555	4751.38791	4.99575	37.468125	0	0	
12			9.2437	4586.72394	4.5551	34.16325			
12.5	0	0	8.84945	4391.09709	4.1665	31.24875	0	0	
13			8.4552	4195.47024	3.7779	28.33425			
13.5	0	0	8.0064	3972.77568	3.4494	25.8705	0	0	
14			7.5576	3750.08112	3.1209	23.40675			
14.5	0	0	7.0758	3511.01196	2.85035	21.377625	0	0	
15			6.594	3271.9428	2.5798	19.3485			
15.5	0	0	6.1165	3032.60073	2.36	17.7	0	0	
16			5.6293	2793.25866	2.1402	16.0515			
16.5	0	0	5.17875	2569.69575	1.96275	14.720625	0	0	
17			4.7282	2346.13284	1.7853	13.38975			
17.5	0	0	4.33105	2149.06701	1.64205	12.315375	0	0	
18			3.9339	1952.00118	1.4988	11.241			
18.5	0	0	3.5979	1785.27798	1.3829	10.37175	0	0	
19			3.2619	1618.55478	1.267	9.5025			
19.5	0	0	2.98475	1481.03295	1.17275	8.795625	0	0	
20			2.7076	1343.51112	1.0785	8.08875			
20.5	0	0	2.482	1231.5684	1.0014	7.5105	0	0	
21			2.2564	1119.62568	0.9243	6.93225			
21.5	0	0	2.07385	1029.04437	0.8608	6.456	0	0	
22			1.8913	938.46306	0.7973	5.97975			
22.5	0	0	1.7435	865.1247	0.7447	5.58525	0	0	
23			1.5957	791.78634	0.6921	5.19075			
23.5	0	0	1.47575	732.26715	0.6482	4.8615	0	0	
24			1.3558	672.74796	0.6043	4.53225			
24.5	0	0	1.25795	624.19479	0.56745	4.255875	0	0	
25			1.1601	575.64162	0.5306	3.9795			
25.5	0	0	1.07975	535.77195	0.49945	3.745875	0	0	
26			0.9994	495.90228	0.4683	3.51225			
26.5	0	0	0.93305	462.97941	0.4418	3.3135	0	0	
27			0.8667	430.05654	0.4153	3.11475			
27.5	0	0	0.81145	402.64149	0.39265	2.944875	0	0	
28			0.7562	375.22644	0.37	2.775			
28.5	0	0	0.70995	352.27719	0.3505	2.62875	0	0	
29			0.6637	329.32794	0.331	2.4825			
29.5	0	0	0.62475	310.00095	0.31415	2.356125	0	0	
30			0.5885	290.67396	0.2973	2.22975			
30.5	0	0	0.5527	274.24974	0.28265	2.119875	0	0	
31			0.5196	257.82552	0.268	2.01			
31.5	0	0	0.49135	243.80787	0.25525	1.914375	0	0	
32			0.4631	229.79022	0.2425	1.81875			
32.5	0	0	0.43885	217.75737	0.2313	1.73475	0	0	
33			0.4146	205.72452	0.2201	1.65075			
33.5	0	0	0.39365	195.32913	0.21025	1.576875	0	0	
34			0.3727	184.93374	0.2004	1.503			
34.5	0	0	0.3545	175.9029	0.1917	1.43775	0	0	
35			0.3363	166.87206	0.183	1.3725			
35.5	0	0	0.32045	159.00729	0.17525	1.314375	0	0	
36			0.3046	151.14252	0.1675	1.25625			
36.5	0	0	0.2907	144.24534	0.1606	1.2045	0	0	
37			0.2768	137.34816	0.1537	1.15275			
37.5	0	0	0.26455	131.28971	0.1476	1.107	0	0	
38			0.2523	125.19126	0.1415	1.06125			
38.5	0	0	0.2415	119.8323	0.136	1.02	0	0	
39			0.2307	114.47334	0.1305	0.97875			
39.5	0	0	0.2211	109.70982	0.12555	0.941625	0	0	
40			0.2115	104.9463	0.1206	0.9045			
40.5	0	0	0.20295	100.70379	0.11615	0.871125	0	0	
41			0.1944	96.46128	0.1117	0.83775			
41.5	0	0	0.18675	92.66535	0.10765	0.807375	0	0	
42			0.1791	88.86942	0.1036	0.777			
42.5	0	0	0.1723	85.49526	0.09995	0.749625	0	0	
43			0.1655	82.1211	0.0963	0.72225			
43.5	0	0	0.15935	79.06947	0.093	0.6975	0	0	
44			0.1532	76.01784	0.0897	0.67275			
44.5	0	0	0.14765	73.26393	0.0867	0.65025	0	0	
45			0.1421	70.51002	0.0837	0.62775			
45.5	0	0	0.13705	68.00421	0.08095	0.607125	0	0	
46			0.132	65.4984	0.0782	0.5865			
46.5	0	0	0.12745	63.24069	0.0757	0.56775	0	0	
47			0.1229	60.98298	0.0732	0.549			
47.5	0	0	0.1188	58.94856	0.0709	0.53175	0	0	
48			0.1147	56.91414	0.0686	0.5145			
48.5	0	0	0.1109	55.02858	0.06645	0.498375	0	0	
49			0.1071	53.14302	0.0643	0.48225			
49.5	0	0	0.1037	51.45594	0.0624	0.468	0	0	

			TRUE	80.0 mm	0.000 N	536 µH		80.0 mm	503 µH	0.003 N		#DIV/0!
								81.0 mm	503 µH	0.002 N		
								82.0 mm	503 µH	0.002 N		
								83.0 mm	503 µH	0.002 N		
								84.0 mm	503 µH	0.001 N		
								85.0 mm	503 µH	0.001 N		
								86.0 mm	503 µH	0.001 N		
								87.0 mm	503 µH	0.001 N		
								88.0 mm	502 µH	0.001 N		
								89.0 mm	503 µH	0.001 N		
								90.0 mm	502 µH	0.001 N		
								91.0 mm	502 µH	0.000 N		
								92.0 mm	502 µH	0.000 N		
								93.0 mm	502 µH	0.000 N		
								94.0 mm	502 µH	0.000 N		
								95.0 mm	501 µH	0.000 N		
								96.0 mm	502 µH	0.000 N		
								97.0 mm	502 µH	0.000 N		
								98.0 mm	502 µH	0.000 N		
								99.0 mm	502 µH	0.000 N		
								100.0 mm	502 µH	0.000 N		