



Woodruff Scientific Inc

4000 Aurora Ave N,

Suites 5 & 6, Seattle, WA 98103

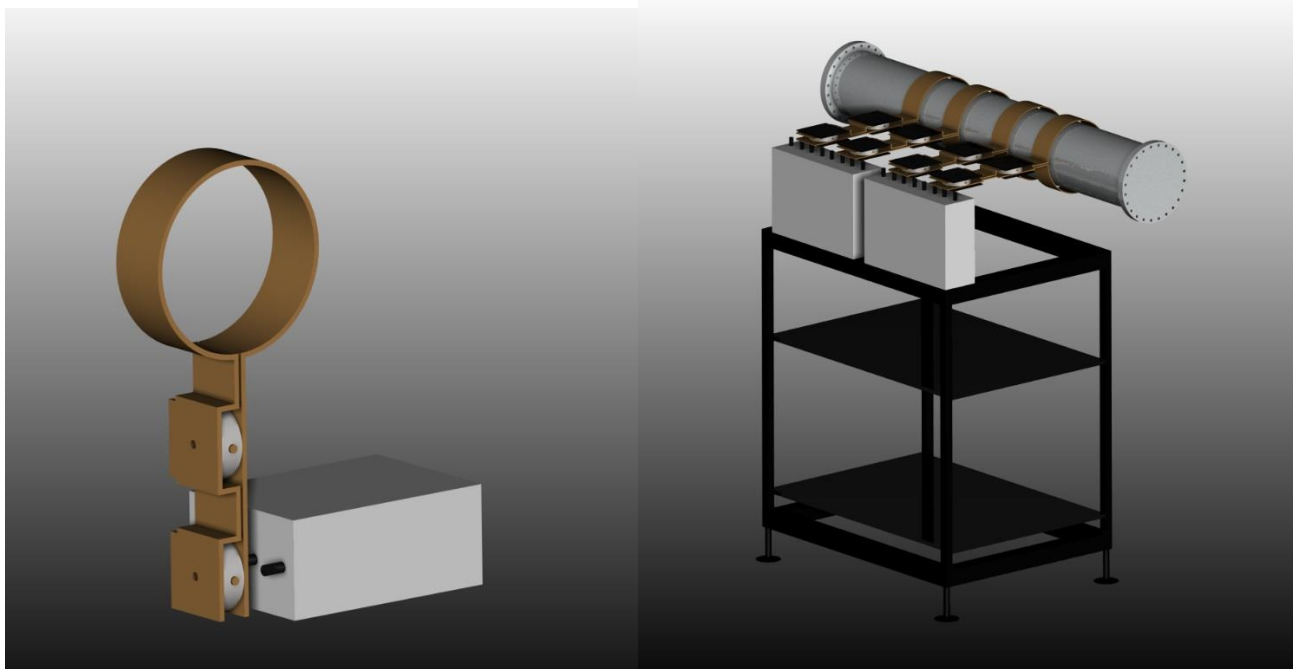
(206) 905 9477 8am to 5pm Pacific

[sales@woodruffscientific.com](mailto:sales@woodruffscientific.com)

<http://www.woodruffscientific.com>

**Model number(s):** LowL-Air

**Descriptive name:** Low Inductance High Current Coil for use in air



**Features:**

- Single turn Copper coil has low inductance and can carry large currents
- Designed to be used in air
- Custom sizing and materials based on customer specifications
- Custom harnessing
- Demountable assembly allows for repositioning of coils (variable distances)
- Pulsed Power designs including capacitor sourcing, crowbar diodes, switching available

**Operational ratings:**

Temperature:  $\leq 150\text{C}$  (set by polyimide coating on wires)

Field strength:  $\leq 10\text{ T}$  (set by fuse limit in wire)

© Woodruff Scientific Inc, 4000 Aurora Ave N, Suites 5&6, Seattle, WA 98103

Sales: [sales@woodruffscientific.com](mailto:sales@woodruffscientific.com) (206) 905 9477



**Woodruff Scientific Inc**  
 4000 Aurora Ave N,  
 Suites 5 & 6, Seattle, WA 98103  
 (206) 905 9477 8am to 5pm Pacific  
[sales@woodruffscientific.com](mailto:sales@woodruffscientific.com)  
<http://www.woodruffscientific.com>

**Model number(s):** LowL-Air  
**Descriptive name:** Low Inductance High Current Coil for use in air

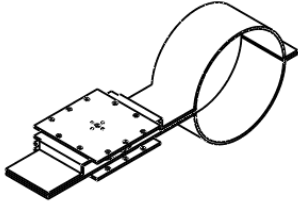
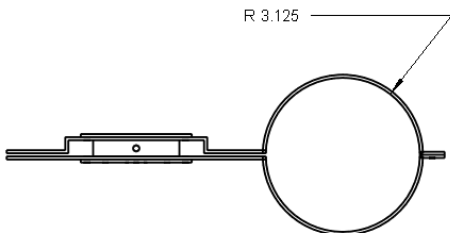
**Options:**

- **Electronics:** Static / time-varying  
 Power supplies can be provided to program waveforms of almost arbitrary functions, from continuous operation to low duty-cycle operations. Computer control can be provided as well as thermal monitoring.

**Engineering drawing:**

Revisions				
Size	Rev	Description	Date	Approved

Unless Otherwise Specified: Dimensions in Inches Tolerances: Fractional ± Angular: Mach ± Bend ± Two Place Decimal ± Three Place Decimal ±	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Name</th> <th style="width: 50%;">Date</th> </tr> <tr> <td>Drawn</td> <td> </td> </tr> <tr> <td>Checked</td> <td> </td> </tr> <tr> <td>ENG Appr.</td> <td> </td> </tr> <tr> <td>MFR Appr.</td> <td> </td> </tr> <tr> <td>QA</td> <td> </td> </tr> </table>	Name	Date	Drawn		Checked		ENG Appr.		MFR Appr.		QA		<b>Woodruff Scientific</b>  <b>Low L Coil</b> With Crowbar
Name	Date													
Drawn														
Checked														
ENG Appr.														
MFR Appr.														
QA														
Material: Copper Finish: .. Do Not Scale Drawing	Comments: CAD Generated Drawing Do Not Manually Update	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 20%;">Size</th> <th style="width: 60%;">Drawing No.</th> <th style="width: 20%;">Rev</th> </tr> <tr> <td style="text-align: center;"><b>A</b></td> <td style="text-align: center;"><b>0001</b></td> <td style="text-align: center;"><b>A</b></td> </tr> <tr> <td>Scale</td> <td style="text-align: center;"><b>1:1</b></td> <td>CAD File</td> </tr> <tr> <td> </td> <td> </td> <td style="text-align: right;">Sheet <b>1 of 1</b></td> </tr> </table>	Size	Drawing No.	Rev	<b>A</b>	<b>0001</b>	<b>A</b>	Scale	<b>1:1</b>	CAD File			Sheet <b>1 of 1</b>
Size	Drawing No.	Rev												
<b>A</b>	<b>0001</b>	<b>A</b>												
Scale	<b>1:1</b>	CAD File												
		Sheet <b>1 of 1</b>												

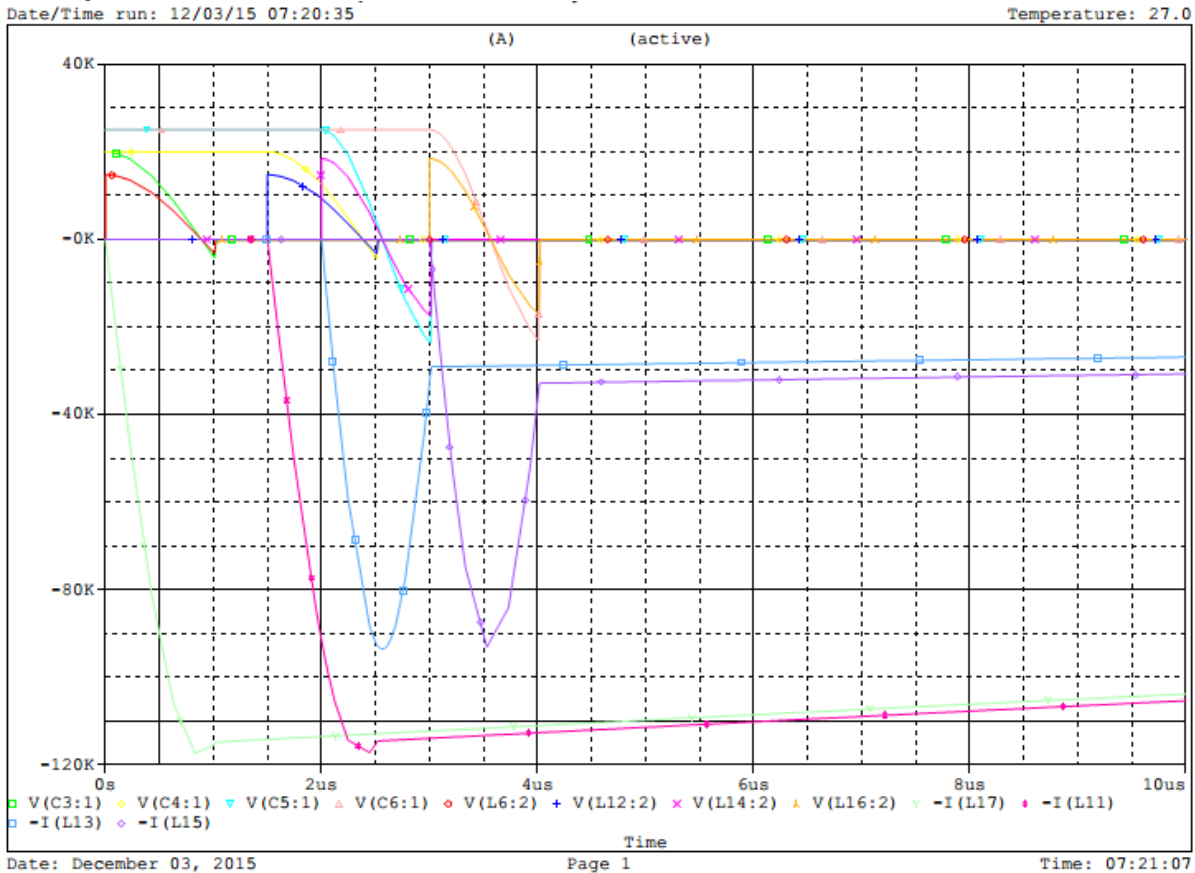


Woodruff Scientific Inc

4000 Aurora Ave N,  
Suites 5 & 6, Seattle, WA 98103  
(206) 905 9477 8am to 5pm Pacific  
[sales@woodruffscientific.com](mailto:sales@woodruffscientific.com)  
<http://www.woodruffscientific.com>

Model number(s): LowL-Air  
Descriptive name: Low Inductance High Current Coil for use in air

Flux plots





Woodruff Scientific Inc

4000 Aurora Ave N,

Suites 5 & 6, Seattle, WA 98103

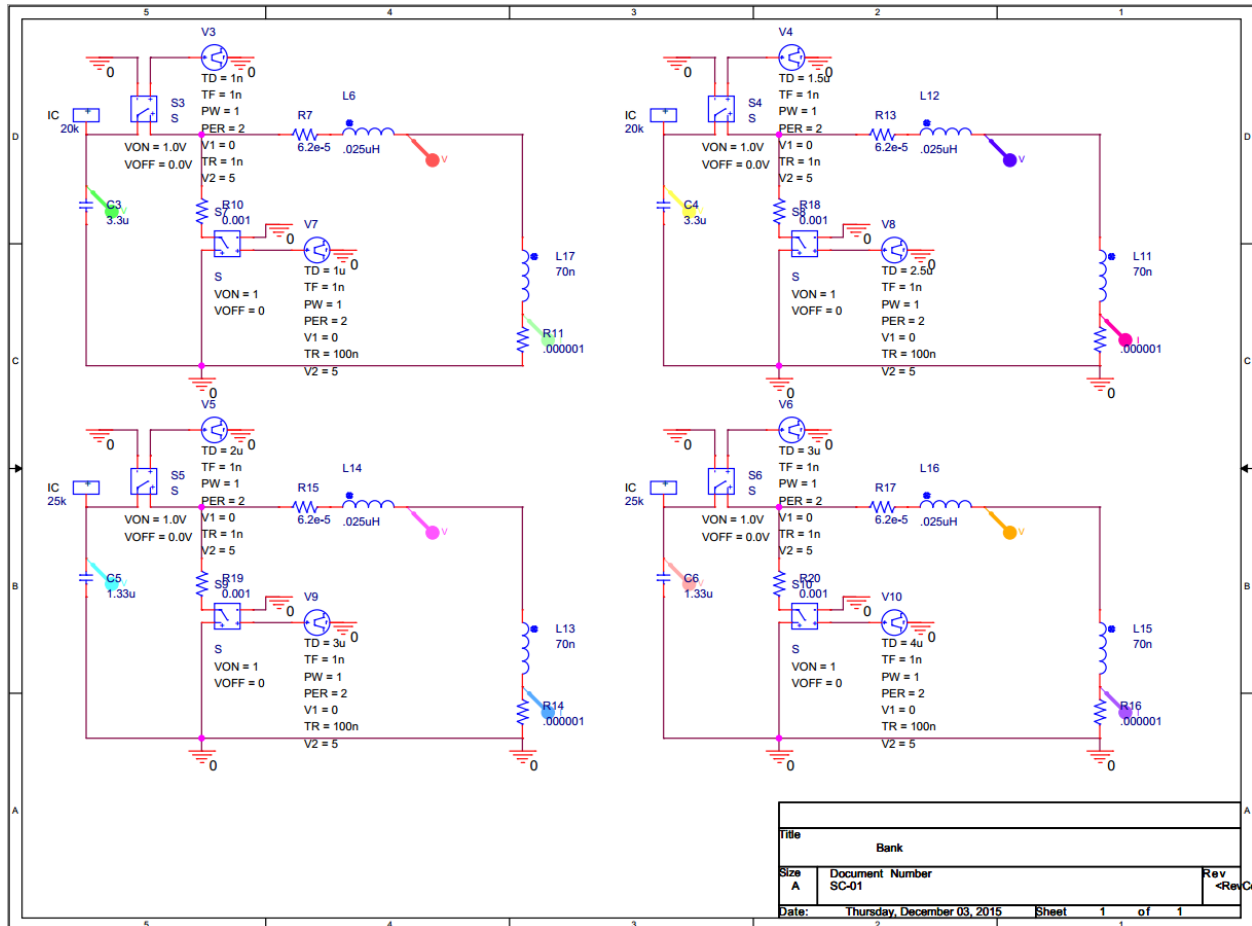
(206) 905 9477 8am to 5pm Pacific

[sales@woodruffscientific.com](mailto:sales@woodruffscientific.com)

<http://www.woodruffscientific.com>

Model number(s): LowL-Air

Descriptive name: Low Inductance High Current Coil for use in air



Title		Bank
Size	Document Number	Rev
A	SC-01	<Rev C
Date:	Thursday, December 03, 2015	Sheet 1 of 1

**Customization:**

In addition to the options listed previously, the Low L coil can be customized in many different ways. For example, if the application is for pulsed operation with timescales short relative to the resistive diffusion time through the coil form, then an insulating break can be provided in the coil form itself. Other customizations can include form materials selection, wire selection, harnessing, shroud, orientation (two axis systems), and so forth.