

## VACUUM & TEMPERATURE CONTROLLERS

Whether you need vacuum control, temperature control—or both—LACO’s family of controllers provides a comprehensive choice of control solutions for your vacuum system. From manual vacuum control to fully customizable software and test recipes, we thoughtfully designed each controller to support your price range and unique application.



Table-top vacuum system with VC-2500 Vacuum Controller

### VACUUM CONTROLLERS

Take charge of your vacuum process, maximize your uptime, and ensure your product integrity with LACO Vacuum Controllers. Options range from manual control to fully configurable recipes, customizable software, and flexible data logging.



#### VC-1000 VACUUM CONTROL PACKAGE

Automatic setpoint control and manual operation of vacuum and vent valves provides a reliable, low-cost control solution.



#### VC-3500 VACUUM CONTROLLER

Custom test or I/O requirements, turbo pump valve sequencing with interlocks and pumpdown timers, and RS232/Ethernet interface.




#### VC-2500 VACUUM CONTROLLER

Log data, configure test recipes, and program evac, vent, and hold conditions with RS232 interface on color touch screen.

### TEMPERATURE CONTROLLERS

From heat-only control to fully customizable thermal and vacuum control, LACO Temperature Controllers provide flexible, innovative control for vacuum ovens, vacuum degassing, bakeout, curing, environmental testing, moisture removal, and product testing.

See reverse for all controller specifications 



#### HC-1000 TEMPERATURE CONTROLLER

Single temperature zone control, heat over-temperature alarm, and RS485 Interface.



#### HVC-3500 THERMAL VACUUM CONTROLLER

Includes all the features of the VC-3500, plus fully customizable software for heating and cooling control, automated thermal cycles and ramp rates, heat setpoint PID control for multiple zones, and multiple temperature reading display.



#### HVC-2500 HEAT & VACUUM CONTROLLER

Includes all the features of the VC-2500, plus manual or auto heat control, automated thermal cycles and ramp rates, heat setpoint PID control (up to 2 zones), and multiple temperature reading display.



LACO Vacuum Oven with Integrated HVC-2500 Heat & Vacuum Controller

**LACO CONTROLLER SPECIFICATIONS**

	VC-1000	VC-2500	VC-3500	HC-1000	HVC-2500	HVC-3500
						
<b>Description</b>	Vacuum Control Package	Vacuum Controller	Vacuum Controller	Heat Controller	Heat & Vacuum Controller	Thermal Vacuum Controller
<b>Control System</b>	N/A	Micro Controller with 7-inch Color Touch Screen	Micro Controller with 7-inch Color Touch Screen	N/A	Micro Controller with 7-inch Color Touch Screen	Micro Controller with 7-inch Color Touch Screen
<b>Communication Interface</b>	N/A	RS232	RS232/Ethernet	RS485	RS232	RS232/Ethernet
<b>Electrical Requirements</b>	110-250 VAC (5 amps max)	110-240 VAC (15 amps max)	120 VAC/15 Amp or 208-240 VAC/15 Amp	110-240 VAC (15 amps max)	120 VAC/20 Amp or 208-240 VAC/20 Amp	120 VAC/20 Amp or 208-240 VAC/20 Amp
<b>Dimensions (W x L x H)</b>	8" x 8" x 7.5"	8" x 12" x 9"	12" x 12" x 9"	6" x 10" x 12"	12" x 24" x 9"	12" x 24" x 9"
<b>Configuration</b>	Table-top or Cart Mount	Table-top, Cart, or System Frame Mount	Table-top, Cart, or System Frame Mount	Table-top or System Frame Mount	Table-top, Cart, or System Frame Mount	Table-top, Cart, or System Frame Mount
<b>Recipe Types</b>	N/A	Vacuum, Time, and Hold	Vacuum, Time, and Hold	N/A	Vacuum, Time, Hold, and Heat	Vacuum, Time, Hold, and Temperature
<b>Recipe Configurations</b>	N/A	Up to 5 configurable recipes	Up to 20 configurable recipes	N/A	Up to 5 configurable recipes	Up to 20 configurable recipes
<b>Software Customization</b>	N/A	No	Yes	N/A	No	Yes
<b>Data Storage</b>	N/A	USB Drive	Micro SD Card, USB Drive	N/A	USB Drive	Micro SD Card, USB Drive
<b>Turbo Pump Control</b>	N/A	N/A	Auto	N/A	N/A	Auto
<b>Valve Operation Mode</b>	Manual Vent and Evacuation, Auto Evacuation	Manual or Recipe	Manual or Recipe	N/A	Manual or Recipe	Manual or Recipe
<b>Vacuum Level</b>	Atm to 10 <sup>-3</sup> Torr	Atm to 10 <sup>-3</sup> Torr	Atm to 10 <sup>-7</sup> Torr	N/A	Atm to 10 <sup>-3</sup> Torr	Atm to 10 <sup>-7</sup> Torr
<b>Vacuum Pump On/Off Relay Option</b>	N/A	Yes	Yes	N/A	Yes	Yes
<b>Vacuum Valve Type</b>	Electric	Electric	Electric or Pneumatic	N/A	Electric	Electric or Pneumatic
<b>Temperature Control Type</b>	N/A	N/A	N/A	Heat	Heat	Heat or Cool
<b>Temperature Reading Display</b>	N/A	N/A	N/A	Single	Multiple	Multiple
<b>Temperature Setpoint PID Control</b>	N/A	N/A	N/A	1 Zone	1 or 2 Zones	Multiple Zones
<b>Heat Overtemperature Alarm</b>	N/A	N/A	N/A	Yes	Yes	Yes
<b>Vacuum Units</b>	Torr	Torr, psia, psig, inHg, mbar, Atm, Pa, feet, meters, hPa, microns	Torr, psia, psig, inHg, mbar, Atm, Pa, feet, meters, hPa, microns	N/A	Torr, psia, psig, inHg, mbar, Atm, Pa, feet, meters, hPa, microns	Torr, psia, psig, inHg, mbar, Atm, Pa, feet, meters, hPa, microns