

# LACO TECHNOLOGIES

## LVO SERIES VACUUM OVENS

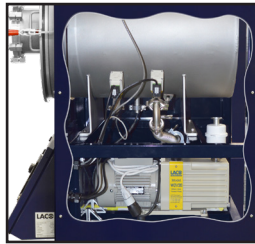
### 20" CUBE

## Take Charge of Your Vacuum Process with LACO's Complete Oven Solution

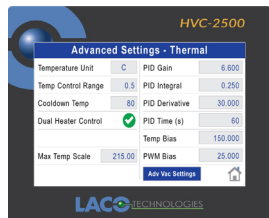
Don't settle for a basic out-of-the-box vacuum oven for your unique application. Take control of your vacuum levels and part temperatures — LACO's complete solution gives you the control you need.

### SYSTEM INTEGRATION

The LVO Series vacuum oven is available in benchtop or mobile cart configurations with a fully integrated process controller and vacuum pump for a complete vacuum oven solution. Options for either two-stage rotary vane pumps or dry, oil-free, vacuum pumps ensure a comprehensive solution, completely contained within the oven enclosure.



### PROCESS AUTOMATION



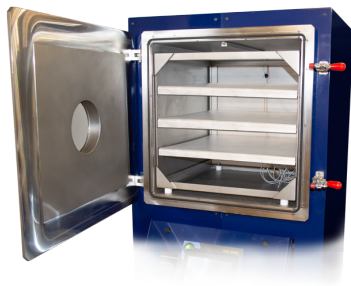
Featuring an automated and fully programmable heat & vacuum controller, take complete control of your process by selecting vacuum levels and shelf temperatures at pre-determined time intervals. While most vacuum ovens only

offer a single temperature setpoint control, the LVO Series vacuum oven allows for multiple setpoint controls with up to 5 unique recipes and up to 20 control steps each. Parameters, logged at specific time intervals, are graphed in real time via the color touchscreen and are stored for later retrieval.

### INTERNAL HEATING

Featuring internal heaters with direct contact to the shelves, the LVO Series vacuum oven takes full advantage of conduction heating, creating a cost effective, efficient and uniform process.

Don't settle for substandard vacuum ovens that only heat and measure the outside walls of the vacuum oven.



20" Cube Vacuum Oven

### STANDARD FEATURES/OPTIONS

Vacuum Chamber (inside dimensions)

- 20" W x 20" L x 20" D Cube (4.6 ft<sup>3</sup>)

Door Types

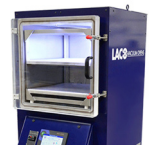
- 304 SS solid door
- 304 SS door with 6" viewport and internal lighting
- Clear door with internal lighting



Stainless Steel Door



Stainless Steel Door with 6" Viewport



Clear Door with Internal Lighting

Mounting

- Benchtop
- Benchtop with Cart Setup

Heated Control Zones & Shelves

- 1 zone heating — 1, 2, 3 or 4 shelves
- 2 zone heating — 2, 3 or 4 shelves

System Voltage

- 20 Amp, 120 VAC
- 20 Amp, 208-240 VAC

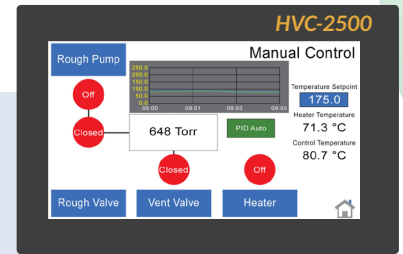
Vacuum Pumps

- Dual-stage, oil-sealed, rotary vane pump
- Dry, oil-free, vacuum pump

# POWERFUL SYSTEM CONTROLLER

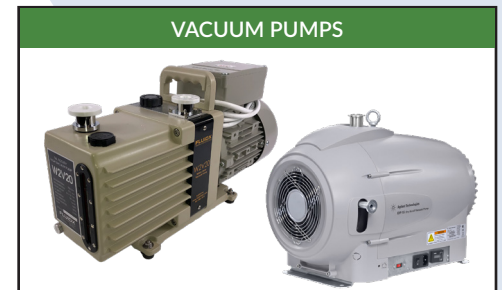
Utilizing the powerful features of LACO's HVC-2500 Thermal Vacuum Controller, the LVO Series oven is the complete solution for your thermal vacuum test processes. Controller interface is easy to use – designed specifically to support a wide range of thermal testing features. Key features include:

- Easily navigate menus via 7-inch color touchscreen display
- Five configurable test recipes – maximum of 20 steps per recipe
- Effortlessly program evacuation, vent, hold, and temperature/heat conditions in any sequence
- Graphs & reports – evaluate vacuum and temperature test data
- Remotely control/communicate via RS232 serial interface or Ethernet port
- Data access – stored internally on SD card and downloadable via USB drive



HVC-2500 Controller

## OPTIONAL FEATURES



## SPECIFICATIONS / COMPARISONS

20" CUBE LVO SERIES SPECIFICATIONS	
COMPONENT	DESCRIPTION
Controller (HVC-2500)	Micro Controller w/ 7-inch Color Touchscreen Display
Remote Communication Interface	RS232   Ethernet
Electrical Requirements	120 VAC, 20 Amp or 208-240 VAC, 20 Amp
Data Storage	Internal Micro SD Card, USB Drive (download)
Temp Setpoint PID Control	1 or 2 Zones
Recipes	Vacuum, Vent, Hold and Heat Up to 5 Recipes, Maximum 20 Steps Per Recipe
Vacuum Level	ATM to 10 <sup>-3</sup> Torr or 29.9 inHg
Vacuum Pumps	Two-stage Rotary Vane Pump Dry, Oil-free, Scroll Vacuum Pump
Vacuum Valve Type	Electric (automated)
Heat Over-Temp Alarm	Yes
Vacuum Units	Torr, psia, psig, inHgA, inHg, mbar, Atm, Pa, feet, meters, hPa, microns
Internal Lighting	LED Light Strips (mounted on ceiling of chamber)

COMPARISON MATRIX		
FEATURE	LVO SERIES OVENS	TRADITIONAL OVENS
Heating Method	Internally Heated Shelves	Heated Chamber Walls
Automatic Vacuum Control	YES	No
Data Logging (USB Drive)	YES	No
Test Recipes with Time, Temp, & Vacuum Setpoints	YES	No
Integrated Vacuum Pump with Oven	YES	No
Multiple Heating Zones with Multiple Shelves	YES	No
Real-time Graphical Logging/Interface	YES	No

SHELF HEATER SPECIFICATIONS					
CHAMBER SIZE	VOLTAGE	WATTS (1 HEATER)	AMPS (1 HEATER)	WATTS (4 HEATERS)	AMPS (4 HEATERS)
20" x 20" Cube	120	300	2.50	1200	10
20" x 20" Cube	240	600	2.50	2400	10

### About LACO

LACO Technologies, Inc. is a leading manufacturer of vacuum and leak testing systems. Driven by innovation, service, and quality, we strive to be the best provider of standard and custom vacuum and leak testing solutions. Established in 1975, LACO Technologies is located in Salt Lake City, Utah, and serves customers across the United States and internationally. Owned by engineers, LACO is uniquely situated to provide innovative solutions for vacuum and leak testing applications. We work with diverse customer applications and are dedicated to Engineering Solutions You Can Trust.

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