

LPVT-23-FA

Product Description

Our Precision Series Lab Touchscreen Freezers deliver superior cooling to laboratory environments. Engineered with variable speed compressors (VSCs), these units feature ultra-quiet operation and significant energy savings. VSCs optimize energy consumption by self-adjusting to cooling demands. These compressors also deliver enhanced system performance and provide a longer lifespan than other compressor variations.

This touchscreen line showcases our most elite features including state-of-the-art touchscreen controllers, advanced alarm systems and data logging capabilities. All units are powered by microprocessor temperature control. These units also utilize natural, hydrocarbon refrigerants for environmental health and energy efficiency. Upgrade your laboratory with these advanced units and welcome energy savings, noise reduction, smooth operation, and improved system performance to your work environment.

Images



Certifications



General Description and Application

Storage capacity (cu. ft)	23 Cu. Ft.
Door	Single, solid, swing, right hinged door
Shelves	Five adjustable shelves with guard rail on back
Drawers	Optional pull-out drawers available
Mounting and installation	Four preinstalled swivel casters, front casters locking
Interior lighting	Shielded, switched LED lighting, full coverage, balanced spectrum
External probe access	Rear wall port (3/4" dia.
Insulation	Cabinet is foamed-in-place with EPA compliant high density urethane foam
Exterior materials	White powder coated steel
Access control	Keyed door lock
General warranty	Three (3) year parts and labor warranty
Compressor warranty	Seven (7) year compressor warranty
Product Weight (lbs)	272
Shipping Weight (lbs)	331
Rated Amperage	7 Amps
Power Plug/Power Cord	NEMA 5-15 plug
Facility Electrical Requirement	110-120V AC: 15 A (minimum)
Agency Listing and Certification	ETL, C-ETL listed and certified to UL471 standard, hydrocarbon refrigerant safety

Performance

Uniformity ¹ (Cabinet air)	±0.7
Stability ² (Cabinet air)	±1.8
Maximum temperature variation (Cabinet air)	±1.8
Energy Consumption (KWh/day)	8.58
Average Heat Rejection (BTU/hr)	1710
Noise Pressure Level (dBA)	43 or less installed
Pull down time to nominal operating temp	78 min

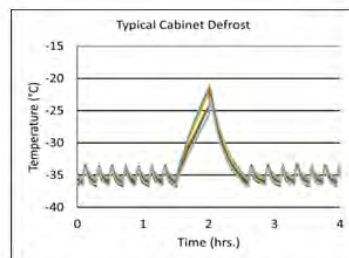
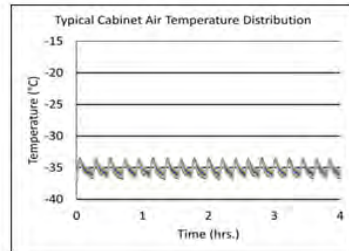
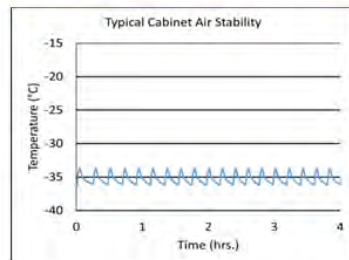
Features

Data Logging and Reporting	Customizable Data Capture Intervals: Logs data every 5, 10, or 15 minutes. Alarm History with Timestamped Logs: Captures and stores all alarms (door ajar, power loss, temperature deviations).
Real-Time Graphing	View temperature trends over 24 hours or 7 days with zoom/scroll capabilities. Statistics Summary: Displays minimum, maximum, average, and number of samples in selected time ranges.

Probe	Ave	Min	Max
1	-35.4	-36.6	-33.7
2	-34.9	-36.0	-33.6
3	-34.8	-35.7	-33.5
4	-35.0	-36.0	-33.6
5	-35.2	-36.3	0.0
6	-35.3	-36.4	-33.6
7	-35.2	-36.3	-33.5
8	-35.7	-37.0	-33.5
9	-35.3	-36.6	-33.5
10	-35.4	-36.6	-33.6
11	-35.2	-36.4	-33.7
12	-35.5	-36.6	-33.7
13	-35.5	-36.6	-33.9
14	-35.6	-36.7	-33.8
15	-35.7	-36.9	-33.8
Bal	N/A	N/A	N/A
Bag	N/A	N/A	N/A



Temperature Charts ³



Performance data acquired at 22°C ambient, -35°C nominal set point in an empty cabinet with shelves using air probes, during stabilized steady state operation and a DAQ sampling rate of one measurement every 10 seconds

- 1 - Uniformity is defined as the maximum variance in temperature across all probes at any point in time over the testing period.
- 2 - Stability is defined as the maximum variance in temperature experienced by any single probe over the testing period.
- 3- Charts are representative of the product and actual performance may vary slightly.

Refrigeration System	
Compressor	Hermetic, variable speed (VSC). Rated speed range: 2000-4500 rpm
Refrigerant	EPA SNAP compliant, R290
Condenser	Anti-fouling tube and grid design, ultra-quiet multi-speed fan
Evaporator	Fin and tube design, high efficiency fan
Defrost	Cycle optimized, automatic

Controller, Configuration, Alarms and Monitoring	
Controller technology	Microprocessor with color touchscreen (8in) input and display, C or F
Battery Backup	12V high-capacity battery, controller, all alarms active, temperature monitoring DAQ and event logging active on battery backup, touch screen display
Controller probe	Bottle with glass bead thermal media
Data Transfer	USB port for temperature and alarm log download. Data and time stamps in .csv and .pdf
Reliability and Compliance	Battery Reset Reminder: Alerts users to replace the battery proactively. New Power Supply with Low Voltage Shutoff: Reduces risk of damage from power fluctuations.
Adjustable Temperature Range	-35°C to -15°C
External alarm connection	State switching remote alarm contacts
Alarm Management	Audible & Visual Alarms: Customizable sounds and volumes; silent mode with visual persistence. Alarm Delays: Adjustable settings for door, temperature, and power loss alarms to prevent nuisance alerts. Ring-Back Functionality: Audible alarms re-engage after a preset delay if the condition persists.
Security and Access	Multi-Level Password Protection: User, Supervisor, and Admin roles for access and control. Automatic Logout: Enhances security by requiring re-login after inactivity. Customizable Passwords/PINs: Ensures tailored access for your team.
Advanced Controls	Calibration Adjustments: Fine-tune temperature offsets for precise measurements. Defrost Options: Force defrost and cycle settings for freezers. Cycle Control: Adjustable intervals and duration for various operational conditions
Visual and User Interface	Intuitive Touch Screen: Pinch-to-zoom, scrollable graphs, and customizable display options. Dual Temperature Probes (Optional): Displays readings for up to two zones. Adjustable Display Settings: Screen brightness, real-time temperature comparison to alarm points, and selectable °C/°F display with 0.1 resolution.

Dimensions					
	Width (in.)	Depth (in.)	Height (in.)	Door Swing (in.)	Total open Depth (in.)
Exterior	26.875"	36.375"	81.5"	23"	59.375"
Interior	22"	26.5"	59"		

