



GENEVA SCIENTIFIC

LAB EQUIPMENT SOLUTIONS

LOW TEMPERATURE CHAMBER - LT-36VL



Model	LT-36VL
Exterior Dimensions (WxDxH)	38.8" x 33.6" x 79.9"
Temp. Range (w/ lights on)	-10-44±0.5
Interior Space	29.7 cu.ft.
Total Shelving Floor Area	10.8 sq.ft.
Maximum Growing Height	21.5"
Light Intensity (6" from lamps)	515 micromoles/m2/sec
Number of Tiers	2

Applications

- *This chamber is frequently used to measure cold hardness, freeze tolerance, and exposure to a series of temperatures
- * Many other applications exist for this product

Percival's IntellusUltra Controller

- *The IntellusUltra control system was purpose-built for controlled environments and is standard on all Percival chambers.
- *Robust and reliable, industrial-grade integrated hardware design
- *Highly flexible architecture facilitates configuration, expansion and customization
- *Precise, simultaneous control of up to 7 environmental parameters
- *Industry-leading experiment protection and system diagnostics

IntellusUltra control graphical user interface

- *A touchscreen user interface is provided as standard on all Percival Scientific plant growth chambers and allows users to interact with their controlled environment in new

IntellusUltra control graphical user interface cont.

- intuitive ways.
- *10.1" IPS, high resolution display with 10-point multi-touch sensitivity
- *Tabular and graphical presentation of chamber programs and parameters
- *Highly visible process values and alarm notifications
- *Enhanced user feedback menus

SciWhite LED Lighting System

- *Externally mounted SciWhite LEDs separated from chamber growth space by glass side wall
- *Glass is evenly heated over its entire surface eliminating condensation
- *Intensity programmable up to 515 μ moles/m2/s of light irradiance measured @ 6" from LEDs
- *Programming and control of the lighting is done via IntellusUltra real time controller
- *Dimmable between 10-100% output

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Insulation

*Woodless construction using CFC free insulation (overall wall thickness is 2", ample insulation for maintenance of stated temperature range)

Door

*One door opening 29.2" x 57.5" provides full access to chamber interior (magnetic gasket provides a tight seal to door frame)

Interior Space

*29.7 cu.ft. with work area 10.8 sq.ft. provided on two tiers.

Cabinet Construction

- *Interior constructed of 18-gauge smooth, galvanized steel
- *Interior floor constructed of 22-gauge polished stainless steel
- *Exterior constructed of 18-gauge smooth, galvanized steel
- *NSF-compliant seam design
- *Overall wall thickness is 2" (5.1 cm)
- *Integrated floor drain
- *Contains casters assembly and adjustable leveling legs
- *One 1.25" access port with air-tight plug
- *Highly durable and reflective coating

Shelving

- *Two tiers of white epoxy coated steel wire shelving (each shelf is 27"D x 28.8"W)
- *Shelves are vertically adjustable in ½" increments
- *Maximum growing height is 43.8" for one shelf and 21.5" for two shelves

Refrigeration

- *Refrigerant: R-449a
- *Constant temperature defrost allows chamber to operate at low temperature under full lighting without temperature defrost spikes (typically, low temperature systems are defrosted by the diversion of hot gas through the coil or via electric heaters, causing a significant temperature spike during the defrost period)
- *Dual coil system has been utilized in order to maintain a constant low temperature within chamber
- *Coils work in tandem (as one coil is cooling, the other coil is defrosted via hot gas)

Refrigeration (cont.)

- *Self-contained air-cooled condensing unit with hot gas bypass system for continuous compressor operation, extended life and close temperature control (this continuous running condensing unit ensures precise temperature control and provides defrost of cooling coils via hot gas without the need of electric heaters)
- *Heat rejection to ambient (standard chamber) = 3,151 BTU/hr

Temperature Range

*-10-44C ($\pm 0.5^{\circ}\text{C}$) lights on and -15-44C ($\pm 0.5^{\circ}\text{C}$) lights off (chamber gives greater temperature uniformity and allows for lower temperature limit under full lighting)

Temperature Safety Limit Controls

- *Experiment Protection: Adjustable high and low temperature controls, audible alarms, and visual indicators provided
- *Controls shut down all power to chamber, activating alarms (when the temperature returns to the normal range the system will automatically reset)

Electrical Requirements

- *Consult Geneva Scientific for electrical requirements and amperage draw.

Options

- *Additive Humidity Control with Sensor
- *Dehumidifier with Sensor
- *IntellusUltra Connect
- *Android-Based Touch Screen
- *CO2 Enrichment Package
- *Self-Contained Water-Cooled Condensing Unit
- *Dry Alarm Contacts
- *Convenience Receptacles

Regulatory Standards

- *Electrical Safety: UL-508A, certified and labelled by Percival Scientific under UL file number E340161
- *Quality System: ISO 9001:2015, certified under DQS, Inc.



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