



GENEVA SCIENTIFIC

LAB EQUIPMENT SOLUTIONS

LOW TEMPERATURE CHAMBER - LT-36VL



Model	LT-36VL
Exterior Dimensions (WxDxH)	42.3" x 33.6" x 77.2"
Temp. Range (w/ lights on)	-10-44C +/- 0.5C
Interior Space	29.7 cu.ft.
Total Shelving Floor Area	10.8 sq.ft.
Maximum Growing Height	21.5"
Light Intensity (6" from lamps)	300 micromoles/m2/sec
Number of Tiers	2

Applications

*Offers ability to measure cold hardiness, freeze tolerance, heat stress and exposure to a series of temperatures (spring, summer, fall and winter-like conditions)
*“Constant temperature defrost” allows chamber to operate at low temperature under full lighting without temperature defrost spikes
*Glass side walls give full view of each shelf without disturbing experiment, and glass is evenly heated over its entire surface eliminating condensation

Percival's IntellusUltra Controller

*Percival Scientific has built a reputation of providing flexible, customized options for research scientists around the world. We have taken the philosophy to the next level with our improved IntellusUltra Controller. Now choose from the levels of functionality that meet your needs.

Lighting System

*Two externally mounted lamp banks (fluorescent) reduce interior heat load while eliminating need to open chamber and remove shelves when changing light bulbs

Lighting System cont.

*Externally mounted lamp banks separated from chamber growth space by glass side wall
*Glass is evenly heated over its entire surface eliminating condensation
*Intensity programmable up to 300 micromoles/m2/sec of light irradiance measured at 6" from lamps on 2 on/off light events (without drop-off due to low temperature)
*Programming and control of the lighting is done via IntellusUltra real time controller

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.

LOW TEMPERATURE CHAMBER - LT-36VL

Cabinet Construction

- *Interior constructed of 22-gauge electro-zinc plated steel
- *Exterior constructed of 18-gauge electro-zinc plated steel
- *Welded seams and joints on outer and inner shells
- *Inner shell supported by non-compressing/non-thermal conducting material locking inner liner in place without a metal-to-metal bond to outer case
- *Each side wall has evenly heated glass with viewing dimensions of 49" x 21.5"
- *Externally mounted lamp banks on each side wall (if enough room is allowed on side of chamber, lamp banks swing like a door allowing full view of each shelf without disturbing the experiment [allow clearance when replacing bulbs])

Shelving

- *Two tiers of white epoxy coated steel wire shelving (each shelf is 27"D x 28.8"W)
- *Shelves are vertically adjustable in 1/2" increments
- *Maximum growing height is 43.8" for one shelf and 21.5" for two shelves

Finish

- *Interior and exterior painted with high reflective, environmentally friendly, high temperature baked white powder coating

Refrigeration

- *Refrigerant: R-407c
- *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)

Temperature Range

- *-10-44C (+/- 0.5C) lights on and -12-44C (+/- 0.5C) 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)

Convenience Receptacles

- *Two 115/1/60 convenience receptacles provided inside chamber

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
- *Dimmable Lighting
- *LED Lighting in Lieu of Fluorescent Lamps



GENEVA SCIENTIFIC
LAB EQUIPMENT SOLUTIONS

