



GENEVA SCIENTIFIC

LAB EQUIPMENT SOLUTIONS

LOW TEMPERATURE CHAMBER - LT-105



Model	LT-105
Exterior Dimensions (WxDxH)	117.3" x 38.8" x 78.8"
Temp. Range (w/ lights on)	-10-44±0.5
Interior Space	122.9 cu.ft.
Total Shelving Floor Area	16 sq.ft.
Maximum Growing Height	56"
Light Intensity (6" from lamps)	1450 micromoles/m2/sec @ 25C
Number of Tiers	1

Applications

- *This chamber is frequently used to measure cold hardness, freeze tolerance, heat stress 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

IntellusUltra control graphical user interface (cont.)

- environment in new and 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

- *One tier of lighted shelving lit by SciWhite LEDs
- *Intensity programmable up to 1,450 μ moles/m2/s of light irradiance measured @ 6" from LEDs
- *Programming and control of the lighting is done via IntellusUltra real time controller
- *Lamp bank is vertically adjustable
- *Dimmable between 10-100% output

Airflow/Circulation

- *Conditioned air moves in uniform upward direction through entire work bench through perforations in aluminum channels

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Insulation

*Woodless construction using foam-in-place 2" thick CFC free urethane insulation foam (this is an environmentally friendly foam with global warming potential [GWP] of 0.0 and ozone depletion potential [ODP] of 0.0)

Doors

*Two door openings each 25.8" x 48.3"
*Magnetic gasket provides a tight seal to door frame

Interior Space

*122.9 cu.ft. with work area 16 sq.ft. provided on one tier

Cabinet Construction

*Interior constructed of 24-gauge galvanized steel
*Interior floor constructed of 22-gauge polished stainless steel
*Exterior constructed of 24-gauge Galvannealed extra-smooth steel
*Overall wall thickness is 2" (5.1 cm)
*Integrated floor drain
*Contains casters assembly and adjustable leveling legs
*Two 1.25" access ports with air-tight plugs
*Highly durable and reflective coating

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)
*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) = 6,953 BTU/hr.

Temperature Range

*-15°C (-44°C) (±0.5°C) lights off and -10°C (-44°C) (±0.5°C) lights on (full fresh air) within work area on horizontal plane with lights on

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
*CO₂ Enrichment Package
*Self-Contained Water-Cooled Condensing Unit
*Dry Alarm Contacts
*Extended temperature ranges available
*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. under certification number 10017261



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Specifications are subject to change without notice.
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