



GENEVA SCIENTIFIC
LAB EQUIPMENT SOLUTIONS

ARABIDOPSIS CHAMBER - AR-100L3



Model	AR-100L3
Exterior Dimensions (WxDxH)	100.5" x 40.6" x 111.1"
Temp. Range (w/ lights on)	7-44±0.5
Interior Space	147.9 cu.ft.
Total Shelving Floor Area	55.1 sq.ft.
Maximum Growing Height	22.3"
Light Intensity (6" from lamps)	600 micromoles/m2/sec
Number of Tiers	3

Applications

- *This chamber is frequently used for Arabidopsis thaliana, Brassica sp., lettuce, spinach and other plants with lower light intensity requirements
- *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 (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

- *Three tiers of lighted shelving lit by SciWhite LEDs
- *Intensity programmable up to 600 µmoles/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

Airflow/Circulation

- *Air circulation inside chamber is from a specifically designed air diffuser (air travels along entire back wall, over the shelves and returns to the ceiling fans through an opening between the light fixtures and the doors)

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Cabinet Construction

- *Interior constructed of 26-gauge galvanized steel
- *Interior floor constructed of 24-gauge polished stainless steel
- *Exterior constructed of 18-gauge Galvannealed extra-smooth steel
- *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

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 reach-in doors each with an opening of 29" x 57.3" (73.7 cm x 145.4 cm) providing full access to chamber interior
- *Magnetic gasket provides a tight seal to door frame

Interior Space

- *147.9 ft³ (4.2 m³) with work area of 55.1 ft² (5.1 m²) provided on three tiers

Shelving

- *Three tiers of white epoxy coated steel wire shelving (each shelf is 47.7" W x 27.8" D [121 cm x 70.5 cm])
- *Each shelf is supported by shelf clips allowing ½" vertical adjustments
- *Maximum growing height is 22.3" (56.6 cm) per tier

Electrical Requirements

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

Temperature Range

- 2°-44°C (±0.5°C) lights off and 7°-44°C (±0.5°C) lights on (full fresh air) within work area on horizontal plane with lights on

Refrigeration

- *Self-contained air-cooled condensing unit with hot gas bypass system for continuous compressor operation, extended life and tight temperature control. Continuous running condensing unit ensures precise temperature control by alternately cycling refrigerant and hot gas to coil; also prolongs compressor life, and eliminates risk of ice build up in coil.
- *Extended stem solenoid valves for quiet and long life operation
- *Heat rejection to the ambient (standard refrigeration system) = 9,205 BTU/hr. (Consult Geneva Scientific for water services and heat rejection to the ambient when adding accessories to the chamber.)

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)

Options

- *Additive Humidity Control and Dehumidifier with Sensor
- *IntellusUltra Connect
- *Additive CO₂ control
- *CO₂ removal system
- *Self-contained water-cooled condensing unit
- *Dry alarm contacts
- *Extended temperature ranges available
- *Convenience receptacles



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