



# 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)	10-44C +/- 0.7C
Interior Space	147.9 cu.ft.
Total Shelving Floor Area	55.1 sq.ft.
Maximum Growing Height	20.3"
Light Intensity (6" from lamps)	300 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

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

### Lighting System

\*Each tier of shelves lighted by energy efficient T8 fluorescent lamps plus halogen lamps  
 \*Intensity programmable up to 300 micromoles/m2/sec at 6" from lamps on 3 on/off light events  
 \*Two levels of programming of fluorescent lighting and one level of programming of incandescent lighting

### Lighting System cont.

\*Programming and control of the lighting is done via IntellusUltra real time controller

### 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)

### Cabinet Construction

\*Interior and exterior constructed of 22-gauge electro-zinc plated steel  
 \*Stainless steel floor  
 \*Chamber floor equipped with floor drain with attached 3/4" plastic tubing  
 \*Chamber cabinet is attached to angle frame base containing heavy duty swivel casters  
 \*Insulated chamber box built in panel sections each consisting of 2" thick urethane insulation  
 \*Cam-type fasteners and vinyl gaskets (this type of construction allows the chamber to be installed on site without the problems of door, aisle and elevator clearances)  
 \*Two 1 1/4" diameter access ports

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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 reach-in doors each with an opening of 29.3" x 57.5" providing full access to chamber interior (magnetic gasket provides a tight seal to door frame)

## Interior Space

\*147.9 cu.ft. with work area of 55.1 sq.ft. provided on three tiers

## Shelving

\*Six shelves (three tiers) constructed of 22-gauge stainless steel with no perforations (each shelf is 27.8"D x 47.7"W)

\*Shelves are vertically adjustable in 1/2" increments

\*Maximum growing height is 20.3"

## Finish

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

## Convenience Receptacles

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

## Electrical Requirements

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

## Temperature Range

\*10-44C (+/- 0.7C) with lights on (full fresh air) within work area on horizontal plane and 4-44C (+/- 0.5C) with lights off

## Refrigeration

\*Refrigerant is CFC and HCFC free R-134a (HFC-134a)(this refrigerant has an ODP [ozone depletion potential] of 0.0)

\*Scroll type compressor for longer life, quieter and more efficient performance

\*Refrigeration system is self-contained water-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 by alternating cycling refrigerant and hot gas to coil; this also prolongs life of compressor, and eliminates risk of ice build up in coil)

\*Solenoid valves have extended stem for quiet and long life operation

\*Heat rejection to the ambient by standard refrigeration system with a water-cooled self-contained condensing unit is 2000 BTU/hr

\*Heat rejection to the ambient from an optional air-cooled self-contained condensing unit is 14000 BTU/hr

\*Condensing Unit Water Requirement: 65 GPH (average)

\*7.0 PSIG pressure drop

\*1/2" water-regulating valve

\*Water coolant supply is 60F on inlet and 70F at outlet (with evaporator coil at 25F and condenser at 100F)

(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

\*Android-Based Touch Screen

\*CO2 Enrichment Package

\*Dimmable Lighting

\*LED Lighting in Lieu of Fluorescent Lamps



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