



GENEVA SCIENTIFIC

LAB EQUIPMENT SOLUTIONS

ALGAE CHAMBER - AL-22L



Model	AL-22L
Exterior Dimensions (WxDxH)	33.5" x 36.6" x 77.9"
Temp. Range (w/ lights on)	7-44C +/- 0.5C
Interior Space	14.6 cu.ft.
Total Shelving Floor Area	10.8 sq.ft.
Maximum Growing Height	8.8"
Light Intensity (6" from LEDs)	350 micromoles/m2/sec
Number of Tiers	2
Specifications for the 22 series are per compartment unless otherwise noted. All of the 22 series units are designed to have two different environments per chamber. (i.e. 22 with AR on top and E on the bottom)	

Applications

- *This chamber is specifically designed for algae with higher light intensity requirements
- *Also, frequently used for short plants with moderate light intensity requirements
- *Many other applications exist for this product

Percival's IntellusUltra Controller

- *The IntellusUltra control system (C8) 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 (cont)

allows users to interact with their controlled environment in new and intuitive ways.

- *10.1" IPS, high resolution display and 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

- *Two tiers of lighted shelving, lit by SciWhite LEDs
- *Intensity programmable up to 350 micromoles/m2/sec of light irradiance measured at 6" from LED tiles
- *Programming and control of the lighting is done via IntellusUltra real time controller
- *Dimmable between 10-100% output
- *Chamber is completely self-contained

Airflow/Circulation

*Conditioned air circulates through a real wall plenum and travels horizontally across each shelf (air then flows vertically upward through the space between the door and shelves back to the unit cooler)

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Cabinet Construction

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

Insulation

- *Woodless construction using 2" thick foamed-in-place non-CFC Urethane insulation with 97% closed cell-structure density of 2.2 lbs/ft³

Door

- *One door opening is 29.3" x 27.8" (74.3 cm x 70.5 cm) provides full access to chamber interior
- *Magnetic gasket provides a tight seal to door frame
- *Lift-off hinge design allows for simple removal of door

Interior Space

- *14.6 cu.ft. (0.4 m³) with work area of 10.8 sq.ft. provided per compartment

Shelving

- *Two tiers per compartment of white epoxy coated steel wire shelving (each shelf is 27"D x 28.8"W)
- *Shelves are supported by shelf clips allowing 1/2" vertical adjustments
- *Maximum growing height is 8.8" (22.4 cm)

Finish

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

Refrigeration

- *Twin condensing unit (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)
- *Extended stem solenoid valves for quiet and long life operation
- *Heat rejection to the ambient (standard refrigeration system) = 2,650 BTU/hr.

Temperature Range

- *7-44C (+/- 0.5C) with lights on, 2-44C (+/- 0.5C) with lights off

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 *
- *System automatically resets when temperature returns to normal range.

Electrical Requirements

- *120/1/60 with NEMA 5-15P plug provided (with standard chamber)
- *RLA=10.6, MCA=13.3

Options

- *Additive Humidity Control with Sensor
- *Dehumidifier with Sensor
- *IntellusUltra Connect
- *Additive CO₂ control
- *CO₂ removal system
- *Self-Contained Water-Cooled Condensing Unit
- *Dry Alarm Contacts
- *Closed loop dimmable lighting with PAR light sensor
- *Open loop dimmable lighting per tier
- *Extended temperature ranges available



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