



# Algae Chambers

## AL-41L4

AL-41L2 Shown

### Applications

This chamber was specifically designed for growth of the Algae in flasks. It provides adequate space with controlled temperature, humidity and light conditions.

### Controller

The IntellusUltra™ controller is capable of controlling temperature, humidity, CO2 and lighting events. The controller is a single-board electronic solid-state design with vacuum fluorescent display and ten-key membrane touch pad. Programs can be created in four modes: manual, diurnal, 24-hour, and non circadian.

### Lighting System

Each tier of shelves is lighted by (6) F25T8/TL741 fluorescent lamps properly spaced for uniform light intensity over entire shelf. Irradiance measured @ 6". Lighting events are programmable up to 2 on/off events; two levels of programming of fluorescent lighting. Programming is done via IntellusUltra™ controller.

### Air Flow

Uniform air is delivered horizontally across each self from air diffusers on the rear wall.

### Cabinet Construction

22-gauge interior and 18-gauge exterior electro-zinc plated steel construction. All seams and joints on the outer and inner shells are welded. Inner shell is supported by a non-compressing and non thermal conducting material to lock the inner liner in place without a metal-to-metal bond to the outer case. The chamber is completely self-contained. Overall wall thickness is 2" (5.1cm). One 1 ¼" diameter access ports are provided on the R.H. wall. Chamber has a stainless steel floor that is equipped with a floor drain and hose assembly. The chamber also contains caster assembly and adjustable leveling legs to compensate for floor unevenness in the lab.

### Insulation

Woodless construction using CFC free insulation. Overall wall thickness is 2" (5.1 cm), ample insulation for maintenance of stated temperature range.

### Door

One door opening 37.2" x 57.5" (94 cm x 146 cm) provides full access to the chamber interior. A magnetic gasket provides a tight seal to door frame.

### Interior Space

37.6 ft<sup>3</sup> (1.06 m<sup>3</sup>) with a work area 27.6 ft<sup>2</sup> (2.56 m<sup>2</sup>) provided on four tiers.

| Temp Range<br>Lights On | Interior Space<br>(volume) |                 | Work Area      |                 | Maximum<br>Growing Height |      | Exterior Dimension<br>in (cm) |                |                 | Light<br>Intensity<br>6" from lamp<br><br>µmoles/m <sup>2</sup> /s | # of Tiers |
|-------------------------|----------------------------|-----------------|----------------|-----------------|---------------------------|------|-------------------------------|----------------|-----------------|--|------------|
|                         | °C                         | ft <sup>3</sup> | m <sup>3</sup> | ft <sup>2</sup> | m <sup>2</sup>            | in   | cm                            | (W)            | (D)             |  |            |
| 7-44<br>±0.5            | 37.2                       | 1.1             | 27.2           | 2.5             | 8.5                       | 21.7 | 41<br>(104.1)                 | 33.6<br>(85.4) | 77.2<br>(196.1) | 330  | 4          |

# AL-41L4 Algae Chambers



## Shelving

Four tiers of white epoxy coated steel wire shelving. Each shelf is 27" D x 36.2" W (68.58 cm x 92.07 cm). Shelves are vertically adjustable in 1/2" increments. The maximum growing height is 8.25" (21.7 cm) per tier with all four shelves installed.

## Finish

Interior and exterior painted with highly reflective, environmentally friendly, high temperature baked white powder coating.

## Refrigeration

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 by alternately cycling refrigerant and hot gas to the coil; this also prolongs the life of the compressor, and eliminates the risk of ice build up in the coil. Solenoid valves have an extended stem for quiet and long life operation. Evaporator coil is ceiling mounted and incorporates twin air circulation fans in an aluminum housing. Heat rejection to ambient (standard chamber) =4500 BTU/hr.

## Temperature Range

7° - 44° C lights on ( $\pm 0.5^\circ$  C) and 2° - 44° C lights off ( $\pm 0.5^\circ$  C).

## Temperature Safety Limit Controls

(Experiment Protection) Adjustable high and low temperature controls, audible alarms, and visual indicators are provided. The controls shut down all the power to the chamber, and activates alarms. When the temperature returns to the normal range the system will automatically reset.

## Humidity Control (Optional)

Additive humidity control of higher than ambient to 65% lights on for set temperatures between 20° to 30° C. Humidity control of higher than ambient to 85% lights off for temperatures between 15° to 30° C. Extended humidity ranges available. Humidifier requires distilled or demineralized water. Optional dehumidification via independent dehumidifying coil and reheat heaters will maintain humidity levels down to 40% between 15° to 30° C. Humidity control  $\pm 10\%$  with Humichip Electric Sensor and  $\pm 5\%$  with Advanced Sensor. Additional humidity ranges available.

## Options (most popular)

Access Port with cover (Q10), Glass door (Q12), IntellusUltra™ Web Server with Gateway Device (C9), Communications Software (C9+), IntellusUltra™ with Touchscreen and Internet capabilities (C10), CO2 enrichment package, door with observation window and cover (Q2), door with fresh air ports (Q1), self-contained water-cooled condensing unit, temperature alarm contacts (S2), dimmable lighting (closed loop with PAR light sensor)(Q22), dimmable lighting (open loop control)(Q23), extended temperature ranges available. Contact Geneva Scientific for additional options available.

## Convenience Receptacles

Two unswitched convenience receptacle provided inside chamber.

## Electrical Service Requirements

115/1/60 - Two power cords and grounded plugs provided - Consult Geneva Scientific for amperage draw and other electrical requirements.

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*Specifications are subject to change without notice.  
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