

# arabidopsis

## Percival® model AR-66L3

AR-66L2 chamber shown

### applications

- Designed for growth of the Arabidopsis plant
- Provides adequate space for growing the plant to maturity under controlled temperature, humidity and light conditions
- Many other applications exist for this product  
*Please compare your own requirements to the specifications listed below.*

### percival's IntellusUltra™ controller

- Controls temperature, lighting, humidity (optional) and CO<sub>2</sub> (optional)
- Single-board electronic solid-state design includes 10 key membrane keypad with LED indicators and vacuum fluorescent display
- Programs can be configured to run in real time or elapsed time
- Ramping and non-ramping program methods available for each programming mode
- Multiple programs can be linked creating complex environmental profiles
- Optional IntellusUltra Web Server allows monitoring and controlling of chamber via web browser (requires Internet Explorer 6.0+) (this option allows for remote monitoring and programming of chamber including alerts and current condition updates for up to five e-mail addresses)  
*Please refer to [www.percival-scientific.com](http://www.percival-scientific.com) for additional information regarding the control system.*

### lighting system

- Each tier of shelves lighted by (6) 32W cool white fluorescent lamps, (8) 17W cool white fluorescent lamps and (4) 15W incandescent lamps properly spaced for uniform light intensity over entire shelf
- Intensity programmable up to 275  $\mu\text{moles}/\text{m}^2/\text{s}$  of light irradiance measured @ 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 (continued)

- 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 the 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 constructed of 22-gauge electro-zinc plated steel
- Exterior constructed of 18-gauge exterior electro-zinc plated steel
- Welded seams and joints on outer and inner shells
- Inner shell supported by non-compressing/non-thermal conducting material locking inner liner in place without a metal-to-metal bond to outer case
- Chamber is completely self-contained
- Overall wall thickness is 2" (5.1 cm)
- Two 1¼" diameter access ports
- Stainless steel chamber floor equipped with floor drain and hose assembly
- Contains caster assembly and adjustable leveling legs to compensate for floor unevenness in the lab

## AR-66L3 specifications (subject to change without notice)

| Temp Range<br>with all lights on | Interior Space<br>volume |                 | Total Shelving<br>Floor Area |                 | Maximum<br>Growing Height |      | Exterior Dimensions |       |      |       |      |        | Light Intensity<br>6" from lamps unless<br>otherwise noted | Tiers |
|----------------------------------|--------------------------|-----------------|------------------------------|-----------------|---------------------------|------|---------------------|-------|------|-------|------|--------|--|-------|
|                                  | °C                       | ft <sup>3</sup> | m <sup>3</sup>               | ft <sup>2</sup> | m <sup>2</sup>            | in   | cm                  | width |      | depth |      | height |  |       |
| 10-44±0.7                        | 62.4                     | 1.8             | 30.4                         | 2.8             | 11.3                      | 28.6 | 66                  | 167.6 | 33.6 | 85.4  | 78.6 | 199.7  | 275  | 3     |

# arabidopsis Percival model AR-66L3

## insulation

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

## doors

- Two doors each with an opening of 29.2" x 57.5" (74 cm x 146 cm) providing full access to chamber interior (magnetic gasket provides a tight seal to door frame)

## interior space

- 62.4 ft<sup>3</sup> (1.8 m<sup>3</sup>) with work area of 30.4 ft<sup>2</sup> (2.8 m<sup>2</sup>) provided on three tiers

## shelving

- Two tiers of 22-gauge stainless steel with no perforations (each tier is 24"D x 60.8"W [60.9 cm x 154.3 cm])
- Shelves are vertically adjustable in ½" increments (maximum growing height is 11.8" [29.8 cm] per tier)

## finish

- Interior and exterior painted with highly reflective, environmentally friendly, high temperature baked white powder coating, except for interior stainless steel floor

## 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 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
- Ceiling mounted evaporator coil incorporates five air circulation fans in aluminum housing

## temperature range

- 12°-44°C (±0.7°C) lights on and 2°-44°C (±0.5°C) 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 the chamber, activating 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 70% (±10%) lights on for set temperatures between 15° to 30°C
- Humidity control of higher than ambient to 90% (±10%) lights off for set temperatures between 15° to 30°C
- Extended humidity ranges available  
*See other specification sheets or consult factory for additional information.*

## options (most popular)

- Advanced IntellusUltra™ Control System (C9)
- Communications Software (C9+)
- IntellusUltra with Touchscreen and Internet capabilities (C10)
- Ultrasonic Humidifier with advanced RH Sensor (H11)
- Dehumidification via independent dehumidifying coil with reheat heaters and Ultrasonic Humidifier (H12)
- Ultrasonic Humidifier with Electronic RH sensor (H14)
- CO<sub>2</sub> enrichment package
- Door with observation window and cover (Q2)
- Door with fresh air ports (Q1)
- Self-contained water-cooled condensing unit
- Dry alarm contacts
- Dimmable lighting (closed loop with PAR light sensor) (Q22)
- Dimmable lighting (open loop control) (Q23)
- Extended temperature ranges available  
*See other catalog sheets or consult factory for additional accessories.*

## convenience receptacles

- Two 115/1/60 convenience receptacles provided inside chamber

## electrical service requirements

- 115/1/60 - (two grounded cords and plug provided, [1] 15 amp cord and [1] 14 amp cord) (allow 25 amp service)

*Consult factory for electrical services when adding accessories to the chamber*



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