

# arabidopsis

## Percival® model AR-75L2

### 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 (10) F32T8 fluorescent lamps and (8) 25W incandescent lamps properly spaced for uniform light intensity over entire shelf
- Intensity programmable up to 300  $\mu\text{moles/m}^2/\text{s}$  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
- Programming and control of the lighting is done via IntellusUltra real time controller



### airflow/circulation

- Uniform air circulation across each shelf via air diffusers on the rear wall
- 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

- Chambers built in panel sections each consisting of 2" (5.1 cm) thick urethane insulation
- Metal interior and exterior surfaces
- Cam-type fasteners and vinyl gaskets
- Interior and exterior constructed of 22-gauge electro-zinc plated steel
- Two 1¼" diameter access ports
- Stainless steel chamber floor equipped with floor drain and hose assembly
- Chamber cabinet is attached to angle frame base containing heavy duty swivel casters

### insulation

- Woodless construction using foam-in-place 2" [5.1 cm] 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)

## AR-75L2 specifications (subject to change without notice)

Temp Range with all lights on	Interior Space volume		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions						Light Intensity 6" from lamps unless 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±1.0	ft <sup>3</sup>	m <sup>3</sup>	ft <sup>2</sup>	m <sup>2</sup>	in	cm	in	cm	in	cm	in	cm	in	cm	$\mu\text{moles/m}^2/\text{s}$	2
	71.6	2	21.5	2	25.9	65.9	76.9	195.3	37.1	94.3	78.5	199.4		300		

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## doors

- Two doors each with an opening of 22.8" x 57.8" (57.8 cm x 146.7 cm) providing full access to chamber interior (magnetic gasket provides a tight seal to door frame)

## interior space

- 71.6 ft<sup>3</sup> (2 m<sup>3</sup>) with work area of 21.5 ft<sup>2</sup> (2 m<sup>2</sup>) provided on two tiers

## shelving

- Two tiers of 22-gauge stainless steel with no perforations
- Four shelves (two tiers) of stainless steel with no perforations or wires
- Each shelf is 27.3"D x 28.4"W [69.2 cm x 72 cm]
- Shelves are vertically adjustable in ½" increments (maximum growing height is 25.3" [64.1 cm] per tier)

## 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 coil; this also prolongs life of compressor, and eliminates risk of ice build up in coil)
- Optional outdoor all weather air-cooled condensing unit or self contained water-cooled condensing unit available upon request
- Solenoid valves have extended stem for quiet and long life operation
- Heat rejection to ambient (standard chamber) = 6450 BTU/hr.

## temperature range

- 10°-44°C (±1°C) lights on and 4°-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)

- Relative humidity range of 40% -75% (± 5%) lights on and 40% -95% (± 5%) lights off for set temperatures between 15° to 30° C
- Several humidity options available  
*Consult factory for additional information.*

## options (most popular)

- IntellusUltra™ Web Server (C9)
- Communications Software (C9+)
- IntellusUltra with Touchscreen and Internet capabilities (C10)
- Pan- type Humidifier with Electronic RH Sensor (H1)
- Pan-type Humidifier and Dehumidifier with Electronic RH Sensor (H3)
- Pan-type Humidifier and Dehumidifier with Advanced RH Sensor (H6)
- 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

- 120 VAC/208 VAC/1-phase/60Hz, 3 wires plus ground, R.L.A.13/leg
- Minimum circuit ampacity: 16/leg
- Convenience outlet amperage draw not included  
*Consult factory for electrical services when adding accessories to the chamber*



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