

arabidopsis

Percival® model AR-41L2

applications

- This chamber is frequently used for *Arabidopsis thaliana*, tobacco and other low light plant growth
- Many other applications exist for this product
Please compare your own requirements to the specifications listed below.

percival's IntellusUltra controller

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

Please refer to www.percival-scientific.com for additional information regarding the control system.

lighting system

- Each tier of shelves lighted by fluorescent lamps and incandescent lamps properly spaced for uniform light intensity over entire shelf
- Intensity programmable up to 370 $\mu\text{moles}/\text{m}^2/\text{s}$ of light irradiance measured @ 6" from lamps 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

- Conditioned air circulates through a rear 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)



cabinet construction

- 26-gauge smooth galvanized white side walls and top reinforced with 24-gauge backer plates
- Interior floor constructed of 24-gauge #304-4 stainless steel
- 24-gauge smooth white galvanized exterior
- NSF compliant seam design
- Overall wall thickness 2"
- Foamed-in-place non-CFC insulation (refer to insulation section)
- One 1 1/4" diameter access port on right hand wall
- Chamber floor equipped with floor drain and hose assembly
- Contains casters assembly and adjustable leveling legs to compensate for floor unevenness in the lab

AR-41L2 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 ³	m ³	ft ²	m ²	in	cm	width		depth		height		
7-44±0.5	37.2	1.1	13.6	1.3	21.1	53.5	41	104.1	33.6	85.4	77.2	196.1	370	2
							in	cm	in	cm	in	cm	$\mu\text{moles}/\text{m}^2/\text{s}$	

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insulation

- Woodless construction using 2" thick foamed-in-place non-CFC Urethane insulation with 93% closed cell, R-value of 12.5, K-value of 0.16 and density of 2.2 lbs/ft³

doors

- One door opening 36.7" x 57.5" (93 cm x 146 cm) providing full access to chamber interior (magnetic gasket provides a tight seal to door frame)

interior space

- 37.2 ft³ (1.1 m³) with work area of 13.6 ft² (1.3 m²) provided on two shelves

shelving

- Two tiers of 22-gauge stainless steel with no perforations (each shelf is 27"D x 36.3"W [68.6 cm x 92.1 cm])
- Shelves slide in and out easily on stainless steel rail assemblies (at lower elevation only)
- When shelves are not mounted on rail assemblies, they are vertically adjustable in ½" increments
- Maximum growing height is 21.1" (53.5 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)
- Solenoid valves have extended stem for quiet and long life operation
- Ceiling mounted evaporator coil incorporates twin air circulation fans in aluminum housing (heat rejection to ambient [standard chamber] = 3500 BTU/hr.)

temperature range

- 7°-44°C (±0.5°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)

- Additive humidity control of higher than ambient to 75% (±5%) lights on for set temperatures between 15° to 30°C
- Humidity control of higher than ambient to 95% (±5%) 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)

- IntellusUltra Connect (C9)
- IntellusUltra Connect and Android-based Touchscreen (C9T)
- IntellusUltra (standard) and Android-based Touchscreen (C8T)
- 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)
- CO₂ 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 each with NEMA 5-15P plug provided for standard chamber
- Cord #1 RLA=8.1 & cord #2 RLA=9.5 (combined MCA=22)



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