

reach in plant growth

Percival model E-75L1

E-75L1 uses patented high efficiency lamp bank

applications

- Frequently used for research applications such as lighting for vascular plants to facilitate standard plant production, plant pathology research and seedling germination and development
- Many other applications exist for this product

Please compare your own requirements to the specifications listed below.

percival's intellus ultra controller

- Controls temperature, lighting, humidity (optional) and CO₂ (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 Intellus 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 for additional information regarding the control system.

lighting system

- Single tier plant growth bench lit by patented lamp bank specifically designed to optimize energy efficiency by managing the heat inside the lamp bank
- Design produces a constant light irradiance throughout a chamber's temperature range
- Intensity programmable up to 1100 $\mu\text{moles}/\text{m}^2/\text{s}$ measured @ 6" from barrier, utilizing a balanced spectrum for plant growth using compact fluorescent lamps and extended life tungsten incandescent lamps on 3 on/off light events



lighting system (continued)

- Two levels of programming of fluorescent lighting and one level of programming of incandescent lighting done via Intellus real time controller
- Utilizing the patent pending high efficiency lamp bank results in cost savings of over \$1,799 annually (assuming lights are energized for 14 hours per day in region with electrical costs of 10 cents per KW/hr.)

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
- Stainless steel floor
- Chamber floor equipped with floor drain with attached $\frac{3}{4}$ " plastic tubing
- Chamber cabinet is attached to angle frame base containing heavy duty swivel caster assembly and adjustable leveling legs to compensate for floor unevenness in the lab

E-75L1 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		
							in	cm	in	cm	in	cm	$\mu\text{moles}/\text{m}^2/\text{s}$	
10-44±0.5	71.6	2	10.8	1	54	137.2	76.9	195.3	37.1	94.3	78.5	199.4	1100	1

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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)

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)

doors

- Two reach-in 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 ft³ (2 m³) with work area of 10.8 ft² (1 m²) provided on one tier

shelving

- One tier of white epoxy coated steel wire shelving (shelf is 28.8"D x 27"W [73 cm x 68.6 cm])
- Shelf is supported by shelf clips allowing ½" vertical adjustments
- Maximum growing height is 54" (137.2 cm)

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] = 9400 BTU/hr.)

temperature range

- 10°-44°C (±0.5°C) lights on and 2°-44°C (±0.5°C) lights off

convenience receptacles

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

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 control of humidity in %RH through use of ultrasonic humidifiers or spray nozzles will maintain humidity levels of up to 95% RH lights off and 75% lights on, between 15° and 30°C
- Humidifier requires distilled or de-mineralized water
- Optional dehumidification via independent cooling coil and reheat heaters will maintain humidity levels down to 40% RH between 15°C and 30°C

options (most popular)

- Intellus Ultra Web Server (C9)
- Communications Software (C9+)
- Intellus Ultra with Touchscreen and Internet capabilities (C10)
- Spray nozzle humidifier with advanced RH sensor and some dehumidification via reheat heaters (H9)
- Dehumidification via independent cooling coil with reheat heaters and spray nozzle humidifier (H8)
- 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
- 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.

electrical service requirements

- 208 VAC/3 phase/60 Hz, 4 wires plus ground
- Total amp draw for standard chambers without any options is 17 amps/leg
Consult factory for electrical services when adding accessories to the chamber



Donauwörther Str. 9
86637 Wertingen
Tel.: +49 (0) 8272 6430 60
Fax: +49 (0) 8272 6430 61

info@plantclimatics.de
www.plantclimatics.de