Reach In Plant Growth

E-41L2 Reach in Plant Growth Chamber

Applications This chamber product is 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.

Controller Percival's Intellus Ultra controller is capable of controlling temperature, humidity, CO_2 and lighting. The Intellus Ultra Control System is a single-board electronic solid-state design which includes a10 key membrane keypad with LED indicators and a vacuum fluorescent display. Programs may be configured to run in real time or countdown (circadian) mode. Ramping and non-ramping program methods are available for each programming mode. Multiple programs can be linked to create complex environmental profiles. The Intellus Web Server (optional) allows for monitoring and controlling of the chamber via a web browser (requires Internet Explorer 6.0 +). This option allows for remote monitoring and programming of your 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 Each tier of shelves is lighted by (14)F25T8/TL 741fluorescent lamps and (2) 25W incandescent lamps properly spaced for uniform light intensity over the entire shelf. Intensity is adjustable up to 600 µmoles/m²/s of light irradiance measured @ 6" from the lamps. Programming and control of the lighting is done via Intellus real time controller. There are two levels of programming of fluorescent lighting and one level of programming of incandescent lighting.

Airflow/Circulation Uniform air circulates across the shelf via air diffusers on the rear wall.

Temp Range (with all lights on)	Interior Space (volume)		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions in. (cm)			Light Intensity (6" from lamps unless otherwise noted)	# of Tiers
° C	ft³	m³	ft²	m²	in.	cm	(W)	(D)	(H)	µmoles/m²/s	
10-44±0.5	37.6	1.06	13.8	1.3	22	55.9	41(104.1)	34(86.4)	77(195.6)	600	2

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Cabinet Construction 22-gauge interior and 18-gauge exterior electro-zinc plated steel construction with a stainless steel interior floor. 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.

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

Doors One door opening each 37 3/16" x 57 1/2" (94.4 cm x 146 cm) provides full access to the chamber interior. A magnetic gasket provides tight seal to door frame.

Interior Space 37.6 ft^3 (1.06 m^3) with a total shelf area 13.8 ft^2 (1.3 m^2) provided on two tiers.

Shelving Two tiers of white epoxy coated steel wire shelving. Each shelf is 27" D x 36 1/4" W (68.6 cm x 92.08 cm). Shelves are supported by shelf clips which allow 1/2" vertical adjustments. The maximum growing height is 22" (55.88 cm) per tier with both lampbanks installed or 48 3/4" (123.8 cm) with one lamp bank removed.

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 continous 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 the ambient (standard chamber) = 5000 BTU/hr.

Temperature Range 10° - 44° C with all lights on (± 0.5° C) and 4° - 44° C with all lights off (± 0.5° 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 40% (± 5%) lights on for set temperatures between 15° to 30° C. Humidity control of higher than ambient to 75% (± 5%) lights off for temperatures between 15° to 30° C. Extended humidity ranges available. See other catalog sheets or consult factory for additional information.

Options (most popular) Advanced Intellus Control System (C9), Communications Software (C9+), Advanced Intellus with Touchscreen and Internet capabilities (C10), Ultrasonic Humidifier with advanced RH Sensor (H11), Dehumidification via dehumidifying coil with reheat heaters and Ultrasonic Humidifier (H12), Ultrasonic Humidifier with Electronic RH sensor (H14), CO_2 enrichment package, Self-contained water-cooled condensing unit, Remote water-cooled condensing unit, Dry alarm contacts, Closed loop dimmable lighting (Q22), Open loop dimmable lighting (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 plugs provided - (1) 9-amp cord (1) 10-amp cord.

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