

reach in plant growth

Percival® model E-36VL

applications

- This chamber is frequently used for seed germination, seedling development, growth of algae in flasks, plant production, plant pathology research and growth of Arabidopsis
- 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

- Two externally mounted lampbanks, each containing fluorescent lights, reduce interior heat load while eliminating need to open chamber and remove shelves when changing light bulbs
- Externally mounted lamp banks separated from chamber growth space by glass side wall
- Intensity programmable up to 300 $\mu\text{moles}/\text{m}^2/\text{s}$ of light irradiance measured @ 6" from lamps on 2 on/off light events (without drop-off due to low temperature)
For higher light intensity refer to E-36VLHO product page.
- Programming and control of the lighting is done via IntellusUltra real time controller

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



cabinet construction (continued)

- Inner shell supported by non-compressing/non-thermal conducting material locking inner liner in place without a metal-to-metal bond to outer case
- Overall wall thickness is 2" (5.1 cm)
- Side walls constructed with dual-pane, tempered, argon-filled glass inserts which let light through, yet keep lamp heat out of the chamber environment
- Chamber floor equipped with floor drain and hose assembly
- Contains caster assembly and adjustable leveling legs to compensate for floor unevenness in the lab

insulation

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

door

- One door opening 29.2" x 57.5" (74 cm x 146 cm) provides full access to the chamber interior (magnetic gasket provides a tight seal to door frame)

E-36VL 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		
4-44±0.5	29.7	0.8	27	2.5	9.5	24.1	42.3	107.3	33.6	85.4	77.2	196.1	300	5

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interior space

- 29.7 ft³ (0.8 m³) with work area of 27 ft² (2.5 m²) provided on five tiers

shelving

- Five tiers of white epoxy coated steel wire shelving (each shelf is 28.8"D x 27"W [73 cm x 68.6 cm])
- Shelves are supported by shelf clips allowing ½" vertical adjustments
- Maximum clearance between shelves is 9.5" (24.1 cm) per tier with all five shelves installed

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)
- Top mounted refrigeration system allows easy access for maintenance (e.g. cleaning)
- As heat is rejected, it rises and is dissipated into room without having any effect on inside temperature of cabinet
- Solenoid valves have extended stem for quiet and long life operation
- Ceiling mounted evaporator coil
- Heat rejection to ambient (standard chamber) = 3950 BTU/hr.

temperature range

- 4°-44°C (±0.5°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)

This section outlines the H1 option

- Additive humidity control of higher than ambient to 85% (±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

humidity control (optional, continued)

- Extended humidity ranges available
See other specification sheets or consult factory for additional information. If humidity system is selected as an option, a de-mineralized water supply is required which terminates to a ½" MPT connector.

options (most popular)

- Phenolic Coated Coils (required for drosophila research) (Q9)
- Glass door (Q12)
- IntellusUltra Connect (C9)
- IntellusUltra Connect and Android-based Touchscreen (C9T)
- IntellusUltra (standard) and Android-based Touchscreen (C8T)
- Pan-type humidifier with Electronic RH Sensor (H1)
- Pan-type humidifier and dehumidifier with Electronic RH sensor (H3)
- 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=9.1 & cord #2 RLA=9.5 (combined MCA=23.3)



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