GENEVA SCIENTIFIC
LAB EQUIPMENT SOLUTIONS

REACH IN PLANT GROWTH CHAMBER - E-41VL

Model	E-41VL
Exterior Dimensions (WxDxH)	46.3” x 33.6” x 77.2”
Temp. Range (w/ lights on)	7-44±0.5
Interior Space	37.2 cu.ft.
Total Shelving Floor Area	34 sq.ft.
Maximum Growing Height	9.5”
Light Intensity (6” from lamps)	515 micromoles/m2/sec
Number of Tiers	5

Applications
*Frequently used for research application such as seed germination, seedling development, growth of algae in flasks, lighting for vascular plants to facilitate standard plant production, plant pathology research, growth of the Arabidopsis plant
*Many other applications exist for this product

Percival’s IntellusUltra Controller
*The IntellusUltra control system was purpose-built for controlled environments and is standard on all Percival chambers.
*Robust and reliable, industrial-grade integrated hardware design
*Highly flexible architecture facilitates configuration, expansion and customization
*Precise, simultaneous control of up to 7 environmental parameters
*Industry-leading experiment protection and system diagnostics

IntellusUltra control graphical user interface
*A touchscreen user interface is provided as standard on all Percival Scientific plant growth chambers and allows users to interact with their controlled environment in new and intuitive ways.
*10.1” IPS, high resolution display with 10-point multi-touch sensitivity
*Tabular and graphical presentation of chamber programs and parameters
*Highly visible process values and alarm notifications
*Enhanced user feedback menus

SciWhite LED Lighting System
*Externally mounted SciWhite LEDs separated from chamber growth space by glass side wall
*Glass is evenly heated over its entire surface eliminating condensation
*Intensity programmable up to 515 µmoles/m2/s of light irradiance measured @ 6” from LEDs
*Programming and control of the lighting is done via IntellusUltra real time controller
*Dimmable between 10-100% output

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Cabinet Construction
*Interior constructed of 18-gauge electro-zinc plated steel
*Exterior constructed of 18-gauge exterior electro-zinc plated steel
*Interior floor constructed of 22-gauge polished stainless steel
*Welded seams and joints on outer and inner shells
*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", ample insulation for maintenance of stated temperature range)

Door
*One door opening of 36.8" x 57.5" providing full access to chamber interior (magnetic gasket provides a tight seal to door frame)

Interior Space
*31.2 cu.ft. with work area of 34 sq.ft. provided on five tiers

Shelving
*Five tiers of white epoxy coated steel wire shelving (each shelf is 36.3"D x 27"W)
*Shelves are supported by shelf clips allowing 1/2" vertical adjustments
*Maximum clearance between shelves is 9.5" per tier with all five shelves installed

Refrigeration
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 coil; this also prolongs life of

Refrigeration (cont.)
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)=2,887 BTU/hr

Temperature Range
*7°-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 chamber, activating alarms (when the temperature returns to the normal range the system will automatically reset)

Electrical Requirements
*Consult Geneva Scientific for electrical requirements and amperage draw.

Options
*Additive Humidity Control with Sensor
*Dehumidifier with Sensor
*IntellusUltra Connect
*CO2 Enrichment Package
*Self-Contained Water-Cooled Condensing Unit
*Dry Alarm Contacts
*LED Lighting in Lieu of Fluorescent Lamps
*Convenience Receptacles

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