

# Incubators

## Percival® model I-41VL

Standard IncuWhite® LED lighting



### Applications

- Designed for mosquitos and other insects, simple or low-cost seed germination and many more lighted applications

### IntellusUltra Controller

The IntellusUltra (C8) control system adapts to nearly any programming style with a large range of options for optimal control over experiments.

- Robust and reliable, industrial-grade integrated hardware design
- Highly flexible programming capabilities for customized configurations and expansion
- Precise, simultaneous control of up to 7 environmental parameters
- Industry-leading experiment protection and system diagnostics

### IncuWhite LED Lighting System

- Linear LEDs vertically mounted
- Intensity programmable up to 120  $\mu\text{moles}/\text{m}^2/\text{s}$  of light irradiance measured @ 6" from LEDs
- Programmable through the IntellusUltra real-time controller
- Dimmable output from 5-100% in one-percent increments

### Airflow/Circulation

- Direction: horizontal
- Airspeed fpm (feet per minute): 30

### 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

### Cabinet Construction (continued)

- Overall wall thickness is 2" (5.1 cm)
- One 1.25" access port on right-hand wall with air-tight plug
- Integrated floor drain
- Contains casters assembly and adjustable leveling legs

### Insulation

- Construction using 2" high-grade materials, such as closed-cell and non-CFC Urethane insulation

### Door

- One door opening 36.8" x 57.5" (93.3 cm x 146.1 cm) provides full access to the chamber interior
- Magnetic gasket provides a tight seal to door frame

### Interior Space

- 37.2  $\text{ft}^3$  (1.1  $\text{m}^3$ ) with work area of 34  $\text{ft}^2$  (3.2  $\text{m}^2$ ) provided on five tiers

### I-41VL specifications (subject to change without notice)

| Temp Range<br>with all lights on | Interior Space<br>volume |                | Total Shelving<br>Floor Area |                | Maximum<br>Growing Height |      | Exterior Dimensions |       |       |      |        | Light Intensity<br>6" from lamps unless<br>otherwise noted | Tiers |
|----------------------------------|--------------------------|----------------|------------------------------|----------------|---------------------------|------|---------------------|-------|-------|------|--------|------------------------------------------------------------|-------|
|                                  |                          |                |                              |                |                           |      | width               |       | depth |      | height |                                                            |       |
| °C                               | ft <sup>3</sup>          | m <sup>3</sup> | ft <sup>2</sup>              | m <sup>2</sup> | in                        | cm   | in                  | cm    | in    | cm   | in     | $\mu\text{moles}/\text{m}^2/\text{s}$                      |       |
| 4-44±0.5                         | 37.2                     | 1.1            | 34                           | 3.2            | 10                        | 25.4 | 41                  | 104.1 | 33.6  | 85.4 | 77.2   | 120                                                        | 5     |

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## Shelving

- Five tiers of white epoxy coated steel wire shelving (each shelf is 27"D x 36.3"W [68.6 cm x 92.2 cm])
- Shelves are supported by shelf clips allowing ½" vertical adjustments
- Maximum clearance between shelves is 10" (25.4 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 (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 buildup in coil)
- Top-mounted refrigeration system allows easy access for maintenance and cleaning
- As heat is rejected, it rises and is dissipated into room without having any effect on inside temperature of cabinet
- Extended stem solenoid valves for quiet and long life operation
- Ceiling-mounted evaporator coils incorporate dual air circulation fans in aluminum housing
- Heat rejection to ambient (standard chamber) = 2,719 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/low temperature control, audible alarms and visual indicators)
- Controls shut down all power to the chamber, activating alarms
- System automatically resets when temperature returns to normal range

## Humidity Control (optional)

- 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 95% (±5%) lights off for set temperatures between 15° to 30°C
- Extended humidity ranges available
- 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)

## Humidity Control (optional), continued

- Ultrasonic humidifier with electronic RH sensor (H14)
  - Ultrasonic humidifier and dehumidifier with electronic RH sensor (H15)
- See other specification sheets or contact Percival Scientific 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)

- Coated coil (required for Drosophila research) (Q9)
  - IntellusUltra Connect (C9)
  - IntellusUltra Connect and Android-based touchscreen (C9T)
  - IntellusUltra (standard) and Android-based touchscreen (C8T)
  - CO<sub>2</sub> 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)
  - Extended temperature ranges available
  - Convenience receptacles
- Contact [info@percival-scientific.com](mailto:info@percival-scientific.com) for additional information.*

## Electrical Service Requirements

- 120/1/60: two grounded cords each with NEMA 5-15P plug provided (with standard chamber)
- Cord #1 RLA=5.1  
Cord #2 RLA=9.8 (combined MCA=18.7)

## Helping You Create Better Science

Percival Scientific controlled environment systems are the culmination of over 60 years of design and manufacturing experience. We developed our high-quality products through direct partnerships within the scientific community. Our controlled environments are known for their customizable designs and superior, long-lasting performance. Creativity, passion, technical expertise and attention to detail drive our scientific innovation, and we are proud to help you create better science.



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