Incubators

Percival® model I-41LL

Standard IncuWhite® lighting

Applications

- This chamber is frequently used for Cyanobacteria, insects and simple/low cost seed germination
- 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.

IncuWhite LED Lighting System

- Linear LEDs horizontally mounted in pairs above each shelf
- Intensity programmable up to 100 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 5-100% output

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
- Overall wall thickness 2"
- Foamed-in-place non-CFC insulation (refer to insulation section)
- One 1¼" diameter access port on right hand wall

Cabinet Construction (continued)

- Chamber floor equipped with floor drain and hose assembly
- Contains casters assembly and adjustable leveling legs to compensate for floor unevenness in the lab

Air Flow/Circulation

- Uniform air circulates across shelf via air diffusers on rear wall

Insulation

- Woodless construction using 2" thick foamed-in-place non-CFC Urethane insulation with 93% closed cell, R-value of 12.5, K-value of 0.16 and density of 2.2 lbs/ft^3

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 ft^3 (1.1 m^3) with work area of 27.2 ft^2 (2.5 m^2) provided on four tiers

I-41LL specifications (subject to change without notice)

Temp Range with all lights on	Interior Space volume		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions width		depth		height		Light Intensity 6" from lamps unless otherwise noted	Tiers
°C	ft^3	m^3	ft^2	m^2	in	cm	in	cm	in	cm	in	cm	µmoles/m^2/s	
4-44±0.5	37.2	1.1	27.2	2.5	11.25	28.6	41	104.1	33.6	85.4	77.2	196.1	100	4

Incubators Percival model I-41LL

Shelving

- Four 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 11.25" (28.6 cm) per tier with all four 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 incorporates twin air circulation fans in aluminum housing (heat rejection to ambient [standard chamber] = 2675 BTU/hr.)

Temperature Range

- 4°-44°C (±0.5°C) lights on and 2°-44°C (±0.5°C) lights off

Temperature Range

- (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 80% (±10%) lights on for set temperatures between 15° to 30°C
- Humidity control of higher than ambient to 90% (±5%) lights off for temperatures between 15° to 30°C
- 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)
- 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)
- Ultrasonic Humidifier with Electronic RH sensor (H14)
- Ultrasonic Humidifier and dehumidifier with Electronic RH Sensor (H15)
- CO_2 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)
- Open loop dimmable lighting control per tier
- Extended temperature ranges available
- Convenience receptacles

See other catalog sheets or consult factory for additional accessories.

Electrical Service Requirements

- 120/1/60 - two grounded cords each with NEMA 5-15P plug provided for standard chamber
- Cord #1 RLA=5.1 & cord #2 RLA=6.4 (combined MCA=14.4)

Helping You Create Better Science

Percival Scientific controlled environment systems are the culmination of over 60 years of design and manufacturing experience. Our high quality products have been developed through direct partnerships with the scientific community and offer platforms that are highly customizable and provide superior performance. We understand that scientific innovation is bred through creativity, passion, technical expertise and attention to detail, and we are proud to help you create better science.

PERCIVAL
Percival Scientific, Inc.
505 Research Drive • Perry, IA 50220 USA
800.695.2743 • 515.465.9363 • Fax: 515.465.9464
www.percival-scientific.com