

# plant tissue culture

## Percival® model CU-30L2

### applications

- Specifically designed for plant cell culture
- Unique design of air diffuser with slow vertical airflow, fixed lampbank and slide-out shelves helps to eliminate condensation on Petri dish lids
- Many other applications exist for this product

*Please compare your own requirements to the specifications listed below.*

### percival's IntellusUltra™ controller

- Controls temperature, lighting, humidity (optional) and CO<sub>2</sub> (optional)
- Single-board electronic solid-state design includes 10 key membrane keypad with LED indicators and vacuum fluorescent display
- Programs can be configured to run in real time or elapsed time
- Ramping and non-ramping program methods available for each programming mode
- Multiple programs can be linked creating complex environmental profiles
- Optional IntellusUltra Web Server allows monitoring and controlling of chamber via web browser (requires Internet Explorer 6.0+) (this option allows for remote monitoring and programming of chamber including alerts and current condition updates for up to five e-mail addresses)

*Please refer to [www.percival-scientific.com](http://www.percival-scientific.com) for additional information regarding the control system.*

### lighting system

- Each tier of shelves lighted by (4) F17T8/TL741, fluorescent lamps properly spaced for uniform light intensity over entire shelf
- Intensity programmable up to 235  $\mu\text{moles/m}^2/\text{s}$  of light irradiance measured @ 6" from lamps on 2 on/off light events



### lighting system

- Programming and control of the lighting is done via IntellusUltra real time controller

### airflow/circulation

- Conditioned air circulates through a rear wall duct and is picked up by a specially designed fixed air diffuser located at the bottom of each tier (air is then delivered vertically upward at a slow speed through each shelf)
- Air diffuser insulates shelf level experiments from heat generated by underlying light fixture (this design minimizes condensation on dish lids)

### 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
- Inner shell supported by non-compressing/non-thermal conducting material locking inner liner in place without a metal-to-metal bond to outer case
- Chamber is completely self-contained, suitable for stacking one above the other
- Overall wall thickness is 2" (5.1 cm)

## CU-30L2 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                               | ft³                      | m³  | ft²                          | m²  | in                        | cm   | in                  | cm   | in    | cm   | in     | cm    | µmoles/m²/s  |       |
| 10-44±0.5                        | 9.7                      | 0.3 | 6.1                          | 0.6 | 7.1                       | 18.1 | 31                  | 78.7 | 23.8  | 60.3 | 46.1   | 117.2 | Up To 235  | 2     |

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## 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 26.8" x 29.6" (67.9 cm x 75.2 cm) provides full access to the chamber interior (magnetic gasket provides a tight seal to door frame)

## interior space

- 9.7 ft<sup>3</sup> (0.3 m<sup>3</sup>) with work area of 6.1 ft<sup>2</sup> (0.6 m<sup>2</sup>) provided on two tiers

## shelving

- Two tiers of white epoxy coated steel wire shelving (each shelf is 16.4"D x 26.5"W [41.6 cm x 67.3 cm])
- Shelves slide in and out easily on stainless steel rail assemblies
- Maximum growing height is 7.1" (18.1 cm)

## 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)
- Solenoid valves have an extended stem for quiet and long life operation
- Rear chamber wall mounted evaporator coil incorporates an air circulation fan (heat rejection to ambient [standard chamber] = 3200 BTU/hr.)

## temperature range

- 10°-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)

## options (most popular)

- IntellusUltra™ Web Server (C9)
- Communications Software (C9+)
- IntellusUltra with Touchscreen and Internet capabilities (C10)
- 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)
- 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 - 11 amps (total) for standard chamber (power cord and grounded plug provided)

*Consult factory for electrical services when adding accessories to the chamber*



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