# Plant Growth

## Percival® model PGC-9/2

*Standard SciWhite® LED lighting for plant growth*
*SciBrite® LED lighting (optional)*



Specifications, excluding exterior dimensions, are per compartment only.

### Applications

- Designed for alfalfa/forages, peanut, potato, bluegrass, other short plants, short-term plant growth and many other applications

### IntellusUltra Controller

The IntellusUltra (C8T) 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

### IntellusUltra Touchscreen Interface

This high-resolution touchscreen displays advanced settings and data for fine-tuning experiments, including graphs and charts.

- 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

*Please visit www.percival-scientific.com for more information on our control systems.*

### SciWhite LED Lighting System

- One tier of lighted shelving lit by SciWhite LEDs with enhanced red for plant growth
- Intensity programmable up to 660 µmoles/m²/s of light irradiance measured @ 6" from LEDs
- Programmable through the IntellusUltra real-time touchscreen
- Dimmable output from 10-100% in one-percent increments

### Cabinet Construction

- Interior constructed of 24-gauge galvanized steel
- Interior floor constructed of 22-gauge polished stainless steel
- Exterior constructed of 24-gauge Galvannealed extra-smooth steel
- Overall wall thickness is 2" (5.1 cm)
- Integrated floor drain
- Contains casters assembly and adjustable leveling legs
- One 1.25" diameter access port with air-tight plug per compartment
- Highly durable and reflective white coating

## PGC-9/2 specifications

Specifications, excluding exterior dimensions, are per compartment only. (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 | ft³ | m³ | ft² | m² | in | cm | in | cm | in | cm | in | cm | µmoles/m²/s | |
| 7-44±0.5 | 34.8* | 1* | 22.2 | 2.1 | 27.8* | 70.6* | 75.8 | 192.6 | 37.8 | 96 | 79.3 | 201.3 | 660* | 1* |

*05/19/2026*

# Plant Growth Percival model PGC-9/2

## Airflow/Circulation

- Conditioned air moves in uniform upward direction through entire work bench through perforations in aluminum channels
- Direction: vertical
- Airspeed fpm (feet per minute): 30

## Insulation

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

## Door

- Two doors each with an opening of 29.1" x 26.1" (74 cm x 66.4 cm), providing full access to chamber interior
- Magnetic gasket provides a tight seal to door frame

## Interior Space

- 34.8 $ft^3$ (1 $m^3$) with work area of 11.1 $ft^2$ (1 $m^2$) provided on one tier

## 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)
- Extended stem solenoid valves for quiet and long life operation
- Heat rejection to the ambient (standard refrigeration system) = 3,062 BTU/hr

## Temperature Range

- 2°-44°C (±0.5°C) lights off and 7°-44°C (±0.5°C) lights on (full fresh air) within work area on horizontal plane with lights on

## 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)

- Ultrasonic humidifier with advanced RH sensor (H11)
- Ultrasonic humidifier and dehumidifer with advanced RH sensor (H12)
- 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.*

## Options (most popular)

- IntellusUltra Connect (C9)
- Additive $CO_2$ control
- $CO_2$ removal system
- Self-contained water-cooled condensing unit
- Dry alarm contacts
- Closed loop dimmable lighting with PAR light sensor (Q22)
- Extended temperature ranges available
- Convenience receptacles

*Contact info@percival-scientic.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=7.4
  Cord #2 RLA=6.4 (combined MCA=17.2)

## Regulatory Standards

- Electrical Safety: UL-508A, certified and labelled by Percival Scientific under UL file number E340161
- Quality System: ISO 9001:2015, certified under DQS, Inc. under certification number 10017261

## 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.

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