

# reach in plant growth

## Percival® model PGC-9/2

Specifications outlined on the following pages represent (1) PGC-9 compartment. Chart at bottom details PGC-9/2 information.

### applications

- Frequently used for research applications such as lighting for vascular plants to facilitate standard plant production, plant pathology research and seedling germination and development

- 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

- Balanced spectrum for plant growth using fluorescent and incandescent lamps
- Maximum light intensity of 500  $\mu\text{moles/m}^2/\text{s}$  of light irradiance measured @ 6" from lamps
- Two fluorescent and one incandescent lighting events provide multiple lighting levels

### cabinet construction

- Interior and exterior constructed of 22-gauge electro-zinc plated steel
- Stainless steel floor
- Perforated aluminum channel work bench
- Inner shell supported by thermal conducting insulator locking inner liner in place without a metal-to-metal bond to outer case
- Chamber floor equipped with floor drain with attached  $\frac{3}{4}$ " plastic tubing
- Chamber cabinet is attached to angle frame base containing heavy duty swivel casters

## PGC-9/2 specifications (subject to change without notice)

Temp Range with all lights on	Interior Space volume		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions						Light Intensity 6" from lamps unless 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	69.5	2	22.2	2.1	27.8	70.6	74.9	190.3	37.6	95.6	79.1	201	500	2
specifications for each compartment														
10-44±0.5	34.8	1	11.1	1	27.8	70.6	-	-	-	-	-	-	500	1

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## airflow/circulation

- Conditioned air moves in uniform upward direction through entire work bench through perforations in aluminum channels

## insulation

- Woodless construction using foam-in-place 2" [5.1 cm] thick CFC free urethane insulation foam (this is an environmentally friendly foam with global warming potential [GWP] of 0.0 and ozone depletion potential [ODP] of 0.0)

## doors (per compartment)

- Two reach-in doors each with an opening of 26.1" x 21.9" (66.3 cm x 74 cm) (magnetic gasket provides a tight seal to door frame)

## interior space (per compartment)

- 34.8 ft<sup>3</sup> (1 m<sup>3</sup>) with work area of 11.1 ft<sup>2</sup> (1 m<sup>2</sup>) provided on one tier

## 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 extended stem for quiet and long life operation
- Heat rejection to ambient (standard refrigeration system) with air-cooled self-contained condensing unit = 4800 BTU/hr.

## temperature range

- 2°-44°C (±0.5°C) lights off and 10°-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 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)

- Additive control of humidity in %RH through use of ultrasonic humidifiers or spray nozzles will maintain humidity levels of up to 95% RH lights off and 75% lights on, between 15° and 30°C
- Humidifier requires distilled or de-mineralized water
- Optional dehumidification via independent cooling coil and reheat heaters will maintain humidity levels down to 40% RH between 15°C and 30°C

## options (most popular)

- IntellusUltra™ Web Server (C9)
  - Communications Software (C9+)
  - IntellusUltra with Touchscreen and Internet capabilities (C10)
  - Spray nozzle humidifier with advanced RH sensor and some dehumidification via reheat heaters (H9)
  - Dehumidification via independent cooling coil with reheat heaters and spray nozzle humidifier (H8)
  - Ultrasonic Humidifier with advanced RH Sensor (H11)
  - Dehumidification via independent dehumidifying coil with reheat heaters and Ultrasonic Humidifier (H12)
  - Ultrasonic Humidifier with Electronic RH sensor (H14)
  - CO<sub>2</sub> enrichment package
  - 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

- One 120/1/60 convenience receptacle provided inside each compartment

## electrical service requirements

- 120-208/1/60
  - R.L.A. 9.6 leg
  - Minimum circuit capacity: 20 leg
- Consult factory for electrical services when adding accessories to the chamber*



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