

# reach in plant growth

## Percival® model PGC40L2

PGC-40L2 uses patented high efficiency lamp bank

### applications

- This chamber is frequently used for cereals, citrus, grapes, grasses and other plants that require high light intensity and higher growth height
- 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](http://www.percival-scientific.com) for additional information regarding the control system.*

### lighting system

- Two light fixtures per tier
- Intensity programmable up to 900  $\mu\text{moles}/\text{m}^2/\text{s}$  of light irradiance measured @ 6" from lamps on 4 on/off light events
- Lamp provides balanced spectrum for plant growth using T-5 fluorescent lamps plus extended life tungsten incandescent lamps
- Programming and control of the lighting is done via IntellusUltra real time controller



Don't have open door version.

I do have PGC-40LED pics with open doors.

### airflow/circulation

- Uniform air circulation moves across each shelf through air diffusers on the rear wall
- Air travels along the entire back wall, over the shelves and returns to the ceiling fans through an opening between the light fixture and the door

### cabinet construction

- Chambers built in panel sections each consisting of 2" (5.1 cm) thick urethane insulation
- Metal interior and exterior surfaces
- Cam-type fasteners and vinyl gaskets
- Interior and exterior constructed of 22-gauge electro-zinc plated steel
- Stainless steel floor
- 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-40L2 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
	°C	ft <sup>3</sup>	m <sup>3</sup>	ft <sup>2</sup>	m <sup>2</sup>	in	cm	width		depth		height		
10-44±1.0	147.9	4.2	36.7	3.4	30.2	76.6	100.5	255.3	40.6	103.2	111.1	282.3	900	2

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## 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

- Two reach-in doors each with an opening of 29.3" x 57.3" (74.3 cm x 145.4 cm) (magnetic gasket provides a tight seal to door frame)

## interior space

- 147.9 ft<sup>3</sup> (4.2 m<sup>3</sup>) with work area of 36.7 ft<sup>2</sup> (3.4 m<sup>2</sup>) provided on two tiers

## finish

- Interior and exterior painted with highly reflective, environmentally friendly, high temperature baked white powder coating

## refrigeration

- Self-contained water-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 the ambient (standard refrigeration system) with water-cooled self-contained condensing unit = 2500 BTU/hr.
- Optional outdoor all weather air-cooled condensing unit or self contained water-cooled condensing unit available upon request

## temperature range

- 2°-44°C (±0.5°C) lights off and 10°-44°C (±1°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 spray nozzles will maintain humidity levels up to 75% (+/-5%) RH lights on up to 95% (+/-5%) lights off, 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 Connect (C9)
- IntellusUltra Connect and Android-based Touchscreen (C9T)
- IntellusUltra (standard) and Android-based Touchscreen (C8T)
- 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
- Outdoor all weather air-cooled condensing unit or 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 convenience receptacles provided inside chamber

## electrical service requirements

- 120-208/3/60, RLA=26.6, MCA=33.3  
*Chamber must be direct-wired to a terminal block inside of the mechanical section.*



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