



Pinnacle
SCIENTIFIC AND MEDICAL EQUIPMENT

Plant Growth Chamber

Designed for scientific and research applications, our plant growth chambers provide precise control of temperature, humidity, and lighting conditions to support reproducible plant growth studies. Suitable for universities, research institutes, agricultural laboratories, and biotechnology facilities.

Custom light spectra can be designed to suit the specific needs of specialised plant species. In addition, the chambers are suitable for conducting high- and low-temperature and humidity stress experiments.



Plant Growth Chamber

A high-quality plant growth chamber can provide researchers with precise control over environmental factors such as temperature, humidity, light, and carbon dioxide concentration, ensuring long-term and reproducible experiments.



Control System **Refrigeration Unit** **Insulated Shelf**
Rear Air Output **LED Lighting Panel** **Piano Baking Paint**
Observation Window **Full Mesh Airflow Wall**

PRODUCT ADVANTAGES



Customizable Supplemental Lighting Solutions

- **Spectral Ratio:** Features a proprietary continuous visible spectrum designed to support most plant species across all growth stages, allowing a single unit to be used for multiple applications.
- **Light Intensity:** Infinitely adjustable from 0–100%, enabling gradual changes in light levels throughout the day to accurately simulate natural sunlight cycles.
- **Rich Spectrum Options:** Available in single-spectrum (450 nm, 660 nm, 735 nm), three-spectrum, four-spectrum, and eighteen-spectrum configurations to suit diverse research and cultivation needs.
- **Eye Protection:** Utilises composite LED technology rather than separate red, green, and blue LEDs, reducing glare and minimising potential eye strain for operators.



Heat Recovery Patent Technology

- **Energy Efficiency:** Light intensity can be precisely adjusted to match different plant types and growth stages, minimising unnecessary energy consumption. The proprietary environmental control system, combined with patented heat recovery technology, achieves energy savings of over 50% compared to comparable products.



Air circulation system

- **Advanced Air Circulation:** Pinnacle's patented circulation design, featuring rear air output and top air return, greatly enhances the uniformity of temperature, humidity, and gas concentration throughout the chamber.



Smart Environmental Control for Precision and Efficiency

- **Environmental Simulation:** Temperature, humidity, light intensity, and CO₂ concentration can be scheduled and precisely controlled at any time.
- **Precise Control:** The PID control system allows temperature and humidity to reach set points quickly and accurately.
- **User Programming:** Supports customizable protection and energy-saving settings, with independently operating units for flexible use.
- **Remote App:** A standard mobile application provides convenient remote control and full system management.



Meticulous Craftsmanship, Aesthetic and Durable

- **Premium Construction:** The piano-painted exterior, all-stainless-steel interior, and one-piece polyurethane foam moulding deliver excellent insulation and a robust, durable structure.
- **Exquisite Craftsmanship:** Precise manufacturing ensures minimal dimensional deviations, while the built-in insulated door combines functionality with an elegant, refined appearance.
- **Long-Lasting Reliability:** Engineered for durability, the unit can operate continuously for up to 10 years after a single start-up.



Product Models	BPC300H	BPC500H	BPC500DH	BPC500FH	BPC600H	BPC800H	BPC1000H	BPC1600H	BPC2000H
External dimensions WxDxH [mm]	770 x 720 x 1760	900 x 800 x 1940	900 x 800 x 1940	1070 x 720 x 1940	900 x 800 x 1940	1165 x 800 x 1940	1920 x 753 x 2010	2255 x 823 x 2010	2400 x 1000 x 2010
Internal dimensions WxDxH [mm]	685 x 498 x 967	816 x 578 x 1122	(753 x 578 x 555) x 2	(686 x 499 x 388) x 4	755 x 558 x 1474	781 x 656 x 1515	1297 x 597 x 1567	1631 x 667 x 1603	1715 x 744 x 1802
Volume[L]	310L	501L	Dual Cabinet 237Lx2	Four Cabinet 138Lx4	618L	790L	1135L	1640L	2138L
Default lighting layers	4	4	2 x 2	1 x 4	4	4	5	5	5
Cultivation area [m2]	1.3	1.8	0.8 x 2	0.3 x 4	1.6	2.0	3.8	5.4	6.3
Temperature	Temperature range: 3~45°C, Low temperature option: -10~45°C, Temperature accuracy: 0.1°C, Temperature fluctuation: ≤0.5°C, Temperature uniformity: ±0.5°C								
Humidity	Humidity range: 50~90%RH, Low humidity option: 30~90%RH, Humidity accuracy: 1%RH, Humidity fluctuation: ≤3%RH, Humidity uniformity: ±2% RH								
Default lighting	380nm to 780nm (Cool White), BPC300H Standard Equipped with 250μmol/m2•S (@10cm from the lights), BPC500 to BPC2000H Standard Equipped with 300μmol/m2•S (@10cm from the lights)								
Upgrade lighting	Blue (450nm±5nm), Red (660nm±5nm), Far Red (735nm±5m), Three colors RBIR (450nm±5nm, 660nm±5nm, 735nm±5nm). Four colors RBIRW (450nm±5nm, 660nm±5nm, 735nm±5nm, white light), Eighteen colors/UVA/UVB/UVC								
Peak Power (220V) [KW]	2.7	2.7	3.3	4.9	2.7	2.9	3.9	4.3	4.7
Working voltage	220VAC / 50HZ								
Working environment temperature	5~35°C								
Other options	CO ₂ Control module: Ambient concentration ~2000ppm/5000ppm, Accuracy: 70ppm, Observation window								

