Technical Specifications

Technical Specs GC2000		
	Standard	**Option**
Temp. Range Lights ON Lights OFF	0°C to +50°C 0°C to +50°C	- -10°C to +50°C
Temp. Display Precision	0.1°C	
Temp. Fluctuation	±0.5°C	
Temp. Uniformity	±0.5°C	
Humidity Range Lights ON Lights OFF	60% RH to 90% RH 60% RH to 90% RH	
Humidity Display Precision	0.1%RH	
Humidity Fluctuation	±2.0%RH	
Humidity Uniformity	±3.0%RH	
Temp. & Hum. Sensor	Equipped with VAISALA HMP60	
Control System	Programmable Man-Machine Interactive Control system with 7" Touch Screen	
Smart Phone APP Remote Control System	Equipped with smart phone APP remote control system	
Fresh Air System	Equipped with fresh air system	
Growing Space	1640L	
Shelves	Equipped with 5 modular shelves	
Max. Growing Height	175 cm	
Lights & Intensity	LED lighting panels & 700μmol/m²/s (@10cm from the lights)	
Lights Color	Cool white	One/three/four/eighteen color(s)
CO■	-	Ambient to 2000/5000 PPM
Electrical Supply	AC 220V ±5%, 50/60Hz, 23Amp	
Peak Power Consumption	5.0KW	
Warranty	24 months	

Note: Lights with a different spectrum are available on request

Product Overview/Applications

• Unit is specifically designed for plant growth light sufficiently for quality studies and other experiments requiring specific wavelengths or full-spectrum wavelengths of light, capable of achieving extreme conditions of temperature, lighting levels and humidity. This product is well suited for research applications requiring a high level of control in a relatively small footprint. In addition to customizable environmental control parameters, options are also available for growth height and gas levels. This chamber offers a maximum growth height of 68.9" (175 cm) or a 58.9 ft2 (5.47 m2) growth area.

• Many other applications exist for this product.

Lighting System

• This facilitates precise light intensity levels to be maintained throughout the life of experiment. Standard light intensity is 700 umol/m2/s (@10 cm from the lights), measured by a quantum light meter and transmitted to the controller for user readout.
• Standard color choices include cool white, full-spectrum LEDs.
• Non-standard color choices include blue, red, far red, red-blue-far red, red-green-blue, and red-blue-far red-white combination LEDs.
• Non-standard light intensity choices include 500/700/1000/1600 umol/m2/s (@10 cm from the lights).
• The controller provides closed-loop PPFD adjustable lighting. Light intensity is dimmable from 0% to 100%.
• Programming and control of the lighting is done via controller.

Air Flow

Airflow for this chamber is distributed uniformly outward from the back side of the wall and back through the air pump on top of the cabinet, using a horizontal-air-refresh distribution plenum. Airflow is sufficient to ensure uniformity as well as proper air exchange on the leaf surface. Fresh air intake is adjustable, which also helps ensure adequate ambient gas exchange.

Refrigeration

• Self-contained air-cooled condensing unit with hot air bypass system for continuous compressor operation, extended life and close temperature control. An electronic modulating valve provides tight temperature control while ensuring quiet operation. Pressure transducers are included for monitoring the status of the refrigeration system.
• Solenoid valves have extended stem for quiet and long-life operation.
• Rear chamber wall mounted evaporator coil incorporates an air circulation fan.

Safety Limit Controls

• Adjustable high and low temperature/humidity/pressure controls, audible alarms, and visual indicators display on the screen.

• Controls shut down all power to the chamber, activating alarms; when temperature/humidity/pressure returns to the normal range, the system automatically resets.

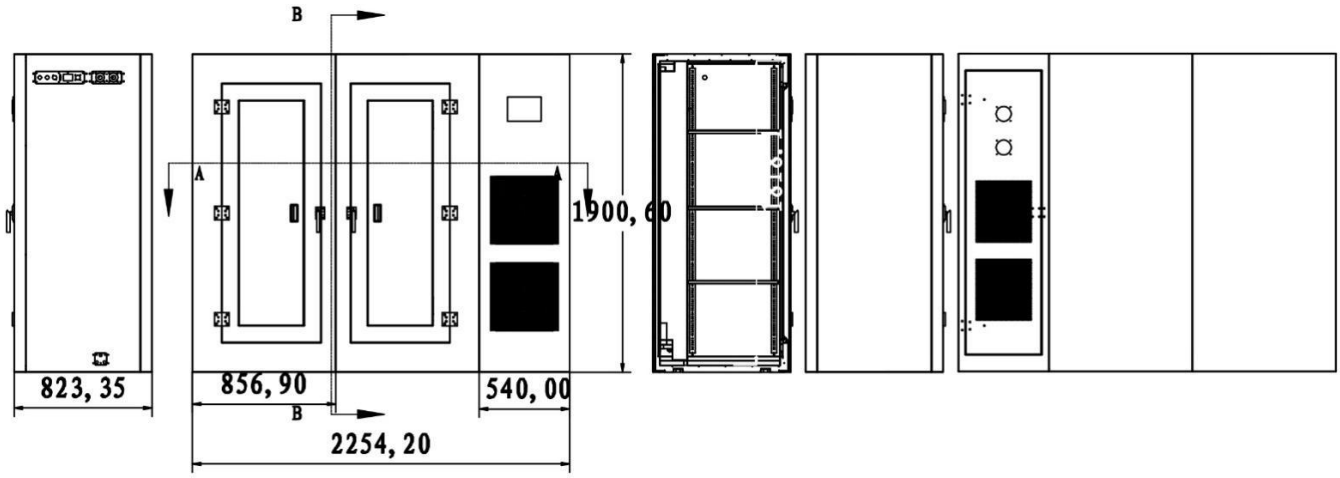
• Backup "high/low" alarms provide a further level of protection with visual and audible notification. Contacts for connection to a remote management system are also included.

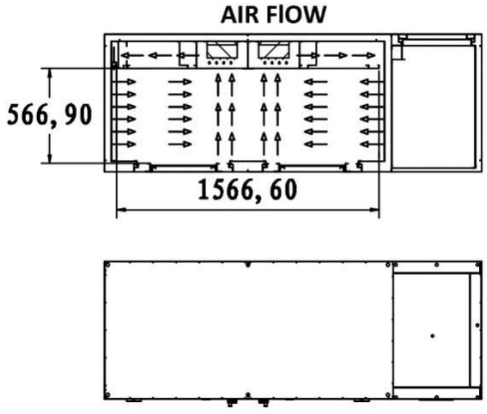
Key Product Attributes

• Counterbalanced lighting system
• Standard lighting provides a wide spectrum at high intensity
• Certifications: ISO9001:2015, CE, RoHS, FCC, SPE-1000
• Temperature range: 0°C to +50°C
• Humidity range: 60% RH to 90% RH
• Programmable lighting conditions under regulated control
• Temperature regulation with resistive temperature sensor
• Humidity regulation with capacitive humidity sensor and vapor humidification
• Software JPCS19V4 Basic Edition
• Equipped with smart phone APP remote control system
• Equipped with fresh air system
• LCD displays temperature and humidity along with additional information and alarms
• Independent temperature safety device with visual and audible temperature alarm
• Reliable regulating system working with an HMI (Human-Machine Interface) touchscreen display
• Intuitive touchscreen controller with time-segment and real-time programming
• Internal data logger; measured values can be read out in open format via USB and includes graphing capability
• Flush-mounted dual-door design for better air impermeability
• Equipped with 4 stable castors, two with brakes

Dimensions and Technical Drawings

Dimensions GC2000			
	Width	**Depth**	**Height**
Interior	61.7"	22.9"	70.9"
Exterior	88.7"	32.4"	79.1"
Packing	93.3"	36.3"	87"





Product Show