



Optimal photosynthesis condition guaranteed when using our plant growth chamber.

Ample capacity, maximum capacity of 1000L to satisfy user's plant growth needs



## GC-1000TLH / GC-300TLH

with optional recorder

**Standard accessories** • Inner glass door, Wire shelves

**Optional accessories** • Perforated shelves, CO<sub>2</sub> sensors  
see page 241

### Optimal photosynthesis condition for plant growth.

- ▶ Uniform temperature and humidity. (TLH models)
- ▶ Reinforced Blue and Red spectrums lighting system for plant photosynthesis.
- ▶ Optional CO<sub>2</sub> sensor (optional)
- ▶ Programmable temperature, humidity, and lighting.
- ▶ Progressive temperature, humidity, illumination program control for optimization of plant growth environment for night and day.

# Plant Growth Chambers (GC)

## Performance

### General control system

- 5 °C to 50 °C (lamp off) / 10 °C to 50 °C. (lamp on)
- Max. to 35,000Lux for GC-1000.  
Max. to 20,000Lux for GC-300 Models.
- 40 to 80% RH for GC-300TLH. (at 20 to 35 °C)  
50 to 90% RH for GC-1000TLH. (at 20 to 35 °C)
- Max. 5,000ppm CO<sub>2</sub> on/off system. (optional)
- Microprocessor PID control / Temperature calibration / Automatic tuning.
- 10 step programmable temperature, humidity, and illumination profiles and repeatable steps of up to 999 cycles.

### Illuminance control system

- Uniformed luminescence distribution.
- Broad distribution of side lamps for hastening the growth of plants.
- High intensity illumination of upper lamp for light efficient and low thermal load. (for GC-1000TLH/1000TL)
- Unique construction for minimization of heat increase from surrounding lamps.
  - Tempered glass door blocks heated air from lamps.
  - Designed to exhaust heated air through upper vent holes. (for GC-1000TLH)
- Stable and long lasting lighting through introduction of high frequency electronic ballast lamps.

## Convenience

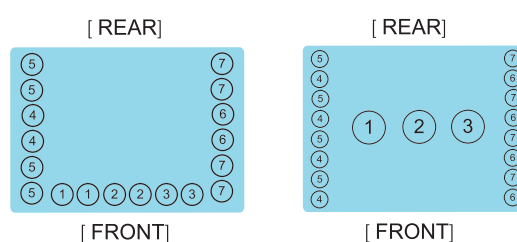
- Ergonomically designed door construction.
  - Inner glass door with silicone and external door with magnetic sealing for dual airtight packing.
  - Well designed providing a smooth open for minimization of damage to plants.
- Wide inner tempered glass door for clear observation of plant growth without affecting inner chamber's environment.
- Tall plants can be grown inside of the chamber with adjustment of shelf level.
- Maintenance of water supply are easily performed with a front water tank. (GC-1000TLH)
  - Water level check indicated by water level bar in the tank.
- Water supply during operation is also available for long term test purposes.
- Adjustable water tank position. (for GC-300TLH)
- Detachable condenser air-filter for easy maintenance of refrigerating efficiency.
  - Maintenance of air filter no longer cumbersome with our detachable condenser air filter.
- Casters for easy mobility during installation or relocation.
- Eco-friendly CFC-free refrigerant use.

## Safety

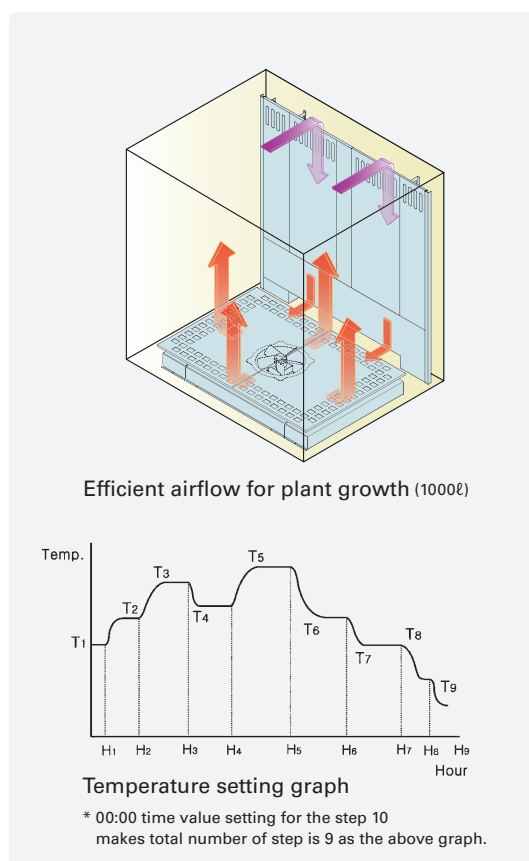
- Automatic shut off after overheat alarm.
- Low and empty water level alarm.
- Power supply leakage breaker.
- Over current protection,
- Open door alarm.

## Lamps setting

- Control illumination values with the below lamp setting arrangements.



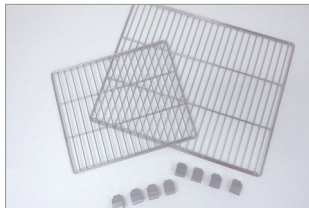
GC-300 lamp arrangement GC-1000 lamp arrangement



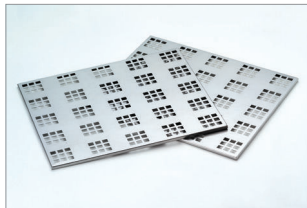
Model	GC-300TL		GC-300TLH		GC-1000TLH	
Chamber volume (L / cu ft)	300 / 10.6				1000 / 35.3	
Control system	Microprocessor PID controller					
Temperature	Range (°C / °F)	5 to 50 / 41 to 122 - Lamp off				
		10 to 50 / 50 to 122 - Lamp on				
		20 to 50 / 68 to 122 - with humidity				
	Fluctuation (±°C / °F) at 25°C	0.1 / 0.18 - without humidity				
Variation (±°C / °F) at 25°C	0.8 / 1.43 - without humidity					
Illumination	Range (Lux)	0 to 20,000			0 to 35,000	
	Control (steps)	10			11	
	Lamp	Fl lamp (32W×18ea)			FL lamp (32W×16ea) Metal lamp (400W×3ea)	
Humidity	Range (% RH)	-	40 to 80 at 20 to 35°C 70 to 90 at 36 to 50°C		50 to 90 at 20 to 35°C 60 to 90 at 36 to 50°C	
	Fluctuation (±RH) at 60% RH	-	3			
CO <sub>2</sub> (optional)	Range (ppm)	Max. 5,000				
	Sensor	NDIR CO <sub>2</sub> sensor				
Refrigerant (HP)	1/2			3/4		
Temp. heater power (W)	750×2ea			1,500×2ea		
Humid. heater power (W)	-		1300		1500	
Dimension (W×D×H)	Interior (mm / inch)	510×540×1100 / 20×21.3×43.3			1200×800×1080 / 47.2×31.5×42.5	
	Exterior (mm / inch)	700×805×1900 / 27.6×30.1×74.8			1410×1070×2150 / 55.5×42.1×84.7	
	Net weight (kg / lbs)	250 / 551.2			550 / 1212.5	
Electrical requirements (230V)	60Hz / 12.5A	50Hz / 12.5A	60Hz / 16A	50Hz / 16A	60Hz / 30A	50Hz / 30A
Cat. No.	<b>AAHA1011K</b>	<b>AAHA1012K</b>	<b>AAHA1021K</b>	<b>AAHA1022K</b>	<b>AAHA1031K</b>	<b>AAHA1032K</b>

※ FDA establishment registered company. FDA listed products.

## Accessories & Options



Wire shelves



Perforated shelves



Recorder (dot type)



CO<sub>2</sub> sensor

Model	Wire shelves			Perforated shelves			Recorder	CO <sub>2</sub> sensor
	Cat. No.	Dimension (W×L, mm / inch)	No. of shelves (standard/max.)	Cat. No.	Dimension (W×L, mm / inch)	No. of shelves (max.)	Cat. No.	Cat. No.
GC-300TL	<b>EDA8220</b>	466×490 / 18.3×19.3	3 / 14	<b>AAA22522</b>	466×490 / 18.3×19.3	14	<b>AAAA1501</b>	<b>AAAA1521</b>
GC-300TLH	<b>EDA8220</b>		3 / 14	<b>AAA22522</b>		14	<b>AAAA1501</b>	<b>AAAA1521</b>
GC-1000TLH	<b>EDA8222</b>	580×770 / 2.8×30.3	6 / 29	<b>AAAA1512</b>	580×770 / 22.8×30.3	29	<b>AAAA1502</b>	<b>AAAA1521</b>