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Temp. & Humid. Chambers

Plant Growth Chambers



Please visit JEIOTECH.com

For further information on Jeio Tech's Temperature & Humidity Chamber products
Information is readily available on our website.



GC-1000TLH

Temp. & Humid. Chambers

Plant Growth Chambers

Enough capacity, maximum 1000L to satisfy the user's plant growth needs.

User-friendly programmable logic microprocessor, streamlined design, with optimized air flow and temperature flexibility.

► Operating Features

- +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 20~35°C)
50 to 90% RH for GC-1000TLH. (at 20~35°C)
- 300 to 5,000ppm CO₂ control. (optional)
- Microprocessor PID control / Auto-tuning / Calibration.
- Digital timer: 1 min to 99 hr 59 min.
- Over-temperature limit / Door open alarm.
- 10 step programmable temperature, humidity, and illumination profiles and repeat the steps up to 999 cycles. (self-testing)

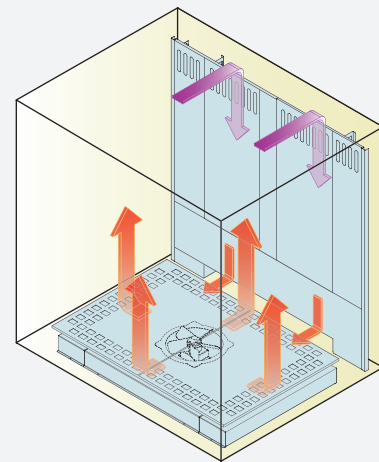
- Adjustable water tank positions. (only for GC-300TLH)
- Removable shelving and rounded inner chamber corners for easy cleaning.

► Safety Features

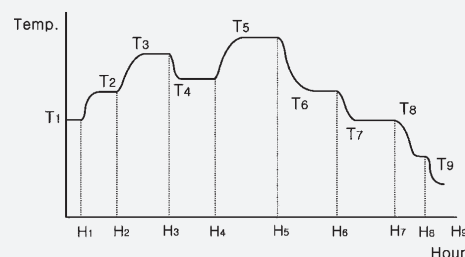
- Leakage breaker for power supply.
- Over current protection.
- Over heat protection with alarm.
- Door opening alarm.
- Low and empty water level alarm. (TLH Models only)

► Constructional Features

- High quality #304 grade stainless steel interior and dirt repellent powder coated exterior surface.
- User-friendly door system.
 - Silicone packing for keep inner chamber perfectly.
 - External door with magnetic sealing for dual airtight.
 - Smoothly open to minimize damage of samples.
- Wide inner tempered glass door provides a full view of the samples.
 - A tempered window provides a clear view of your specimen during testing.
- Powerful air circulator for smooth airflow.
 - Air flow system very efficient for plant growth.
 - One propeller for GC-1000TLH / tangent blower and a sirocco fan for GC-300 Models.
- High frequency electronic ballast lamps.
 - Reinforced Blue and Red spectrums lighting system for plant photosynthesis.
 - Economical with stable light and long life span.
 - Easy-to change bulbs.
- Heat rise restraint.
 - Unique construction to minimize the heat from rising due to the luminous light source.
 - Designed to exhaust the heated air through the upper holes. (only for GC-1000TLH)
- Easy cleaning of condenser air-filter.
 - To prevent deterioration of refrigeration system and keep filter dust free by periodically cleaning the filter.
- Casters for easy mobility when installing or moving environmental testing chamber.
- Electronic humidity sensor is fast acting and easy to calibrate.
- Dual type water level sensor.



Efficient airflow for plant growth (1000L)



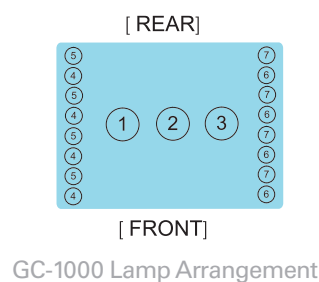
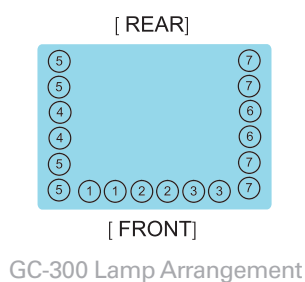
Temperature setting graph

* 00:00 time value setting for the step 10 makes total number of step is 9 as the above graph.

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		50 to 90 at 20 to 35°C		
			70 to 90 at 36 to 50°C		60 to 90 at 36 to 50°C		
	Fluctuation (±RH) at 60% RH	-	3				
Co ² (optional)	Range (ppm)	300 to 5,000					
	Sensor	NDIR CO2 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.		AAHA1011K	AAHA1012K	AAHA1021K	AAHA1022K	AAHA1031K	AAHA1032K

Lamps Setting

Control illumination values with the below lamp setting arrangements.



Lamps Setting for GC-300

No.	Lux (lx)	Set Values on Display	Lamp Diagram
1	1,500	0000 010	2
2	3,500	0000 101	1,3
3	5,500	0000 111	1,2,3
4	6,000	0101 010	2,4,6
5	8,000	0101 101	1,3,4,6
6	10,000	1010 010	2,5,7
7	12,000	1010 101	1,3,5,7
8	14,000	1111 010	2,4,5,6,7
9	17,000	1111 101	1,3,4,5,6,7
10	20,000	1111 111	1,2,3,4,5,6,7

※ Above the set values are measured at the center of chamber toward upside.

Lamps Setting for GC-1000

No.	Lux (lx)	Set Values on Display	Lamp Diagram
1	5,000	0101 000	4,6 (or 5,7)
2	7,500	0000 010	2
3	9,500	1111 000	4,5,6,7
4	12,500	0101 010	2 with 4,6 (or 5,7)
5	15,000	0000 101	1,3
6	18,500	1111 010	2,4,5,6,7
7	21,000	0101 101	1,3 with 4,6 (or 5,7)
8	24,000	0000 111	1,2,3
9	28,000	1111 101	1,3,4,5,6,7
10	31,500	0101 111	1,2,3 with 4,6 (or 5,7)
11	35,000	1111 111	1,2,3,4,5,6,7

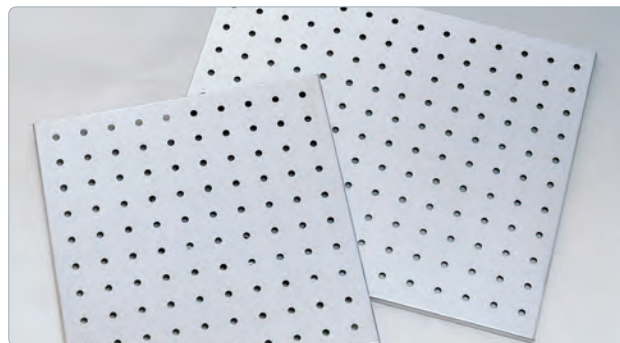
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Accessories & Options

for Plant Growth Chambers



Wire Shelves



Perforated Shelves



Recorder



CO² Sensor

Wire Shelves

Cat. No.	Description		Dimensions (WxL)	Models
	Included	Maximum		
EDA8220	3	15	466×490mm (18.3×19.3")	GC-300TL GC-300TLH
EDA8222	6	30	770×580mm (30.3×22.8")	GC-1000TLH

Perforated Shelves

Cat. No.	Description		Dimensions (WxL)	Models
	Included	Maximum		
AAA22522	-	15	466×490mm (18.3×19.3")	GC-300TL GC-300TLH
AAAA1512	-	30	770×580mm (30.3×22.8")	GC-1000TLH

Recorder

Cat. No.	Description	Models
AAAA1501	Recorder (6 points) with humidity sensor	All GC series

CO² Control System

Cat. No.	Description	Models
AAAA1521	CO2 control system	All GC series

※ In addition to providing standard accessories, we will manufacture customized accessories to meet your specific requirements. Contact us for details.