Temp. & Humid. Chambers
Temp. & Humid. Chambers (Tabletop Models)

Please visit **JEIOTECH**.com

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

CE

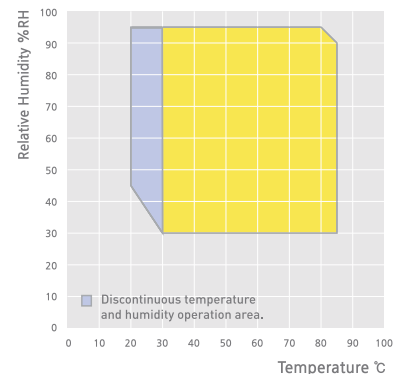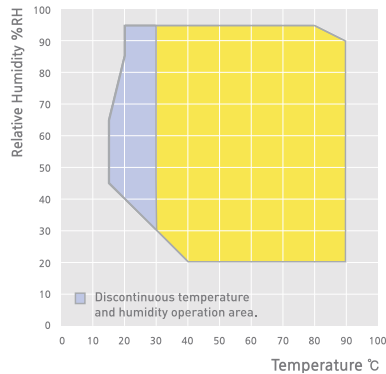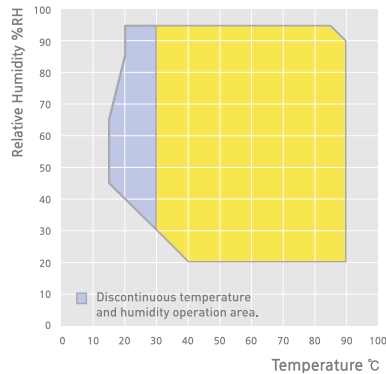CE Certification only for TH-ME / PE models

TH-ME/KE/PE Models
with optional Viewing Windows

※ In the year of 2014, this products design can be changed without prior notice.
※ Inner glass door is not equipped to the unit since 2013.

Temperature & Humidity Control Range

▶ TH-KE (25 to 100L)

- 45~65% RH at 15℃
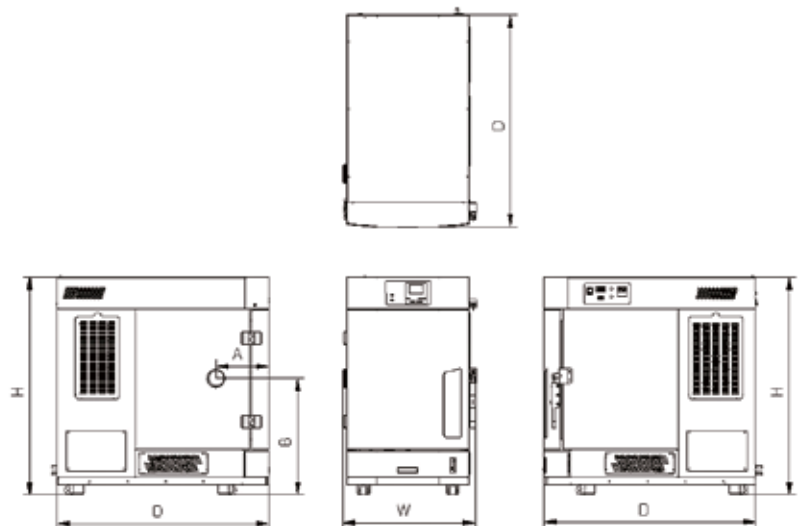- 20~95% RH at 40~85℃
- 20~90% RH at 90℃

▶ TH-ME (25 to 100L)

- 45~65% RH at 15℃
- 20~95% RH at 40~80℃
- 20~90% RH at 90℃

▶ TH-PE (25 to 100L)

- 45~95% RH at 20℃
- 30~95% RH at 30~80℃
- 30~90% RH at 85℃

Dimension
(TH-KE / ME / PE Models)

Models	Capacity	W	D	H	A	B
TH-KE TH-ME TH-PE	25L (0.9 cu ft)	610mm (24")	875mm (34.4")	920mm (36.2")	220mm (8.7")	498mm (19.6")
	65L (2.3 cu ft)	660mm (26")	1040mm (40.9")	1065mm (41.9")	258mm (10.2")	570mm (22.4")
	100L (3.53 cu ft)	760mm (29.9")	1110mm (43.7")	1085mm (42.7")	270mm (10.6")	586mm (23.1")

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Temp. & Humid. Chambers
Temp. & Humid. Chambers (Tabletop Models)

Operating & Constructional Features

Stainless Steel Inner Chamber

Controller

Portable Digital Recorder (optional)

Constructional Features

- Small size and light weight.
- Compact design with high performance.
- Choose from 9 different model chambers based on size and temperature preference.
  - The series comes in 3 different models based on temp. and humid. ranging in -35℃ to 150℃, -20℃ to 120℃, -0℃ to 120℃ / upmost 20 to 95% RH and three different volume capacities of 20L, 65L, 100L.
- Efficient system with durable materials.
  - The evaporating system for better thermal efficiency with corrosion-resistant materials.
  - The heating system with minimized potential heat when heating or cooling for prompt reaction time and advanced performance.
- Water tank for easy water supply.
  - Maintenance can be done easily from the front side.
- Viewing window (optional)
  - A tempered glass window provides a clear view of samples in the chamber, beneficial during testing.
- Cable port for external probes or wires.
  - 50mm diameter cable port comes standard on the left side of the unit. Additional 50mm or 80mm diameter cable ports can be custom ordered. (optional)
- Optional stand for space-saving layout.
  - For use in limited spaces: stand and casters.
- ※ Be sure to secure the stand onto floor with earthquake resistant fitting for your safety when using stand.

Safety Features

- Leakage breaker for power supply.
- Over current protection.
- Overheat protection.
- Switch-off after alarm for over heating.
- Door open alarm.
- Water empty alarm. (TH-KE / ME / PE)

Temp. & Humid. Chambers
Temp. & Humid. Chambers (Tabletop Models)

Operating Features

- Microprocessor PID control / Auto-tuning / Calibration.
- Digital LCD display with touch-sensitive keys.
- Easy operation with wide LCD screen.
  - Temperature and humidity / timer settings and operating condition.
- Program patterns are memorized for 10 years due to a battery built into the PCB.
- Expansion parameter inputs. (displayed by letters)
- Programming operation

Description	TH-KE / ME / PE
Programmable Pattern Capacity	10
Pattern Repeat Time	999
Max. Segments per a Pattern	100
Available Max. Segments*	100
Programmable Process Time per a Segment	0 to 99 hr 59 min

* Even though the max. segments per a pattern are 100, available total segments are up to 300 not 3000, so you need to arrange the number of segment and patterns properly.

- Computer interface. (optional)
  - Software provided
  - Save data in excel format.
  - Storage of program information, backup of value settings / recovery, and temperature and humidity values.
  - RS-232C port as standard offer.
- Chart Recorder. (optional)
  - 6 point dot type recorder with digital display.
- RS-485 communication port offers a maximum of 9 temp. and humidity chambers to be connected by one PC. (optional)
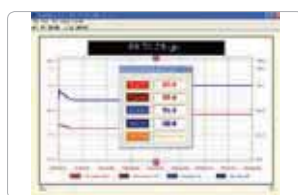
⸭ WaterTank

⸭ Multi-control Display

⸭ Single-control Display

⸭ Program setting Display

⸭ Graph Display

⸭ Stand with Caster (optional)

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Temp. & Humid. Chambers
Temp. & Humid. Chambers (Tabletop Models)

Specifications & Ordering Information

Model		TH-KE-025	TH-KE-065	TH-KE-100
Chamber Volume (L / cu ft)		25 / 0.9	65 / 2.3	100 / 3.53
Controller		Program controller (LCD type)		
Temperature [1]	Range (℃ / ℉)	-35 to 150 / -31 to 302 without humidity +15 to 90 / 59 to 194 with humidity		
	Fluctuation[2] (±℃ / ℉) at 50℃ / 60%RH	0.4 / 0.72	0.4 / 0.72	0.3 / 0.54
	Variation[2] (±℃ / ℉) at 50℃ / 60%RH	0.3 / 0.54	0.4 / 0.72	0.4 / 0.72
Time	Heating[3] → without Humidity (Min.)	60 (-35℃ → 100℃)		
	Cooling[3] → without Humidity (Min.)	70 (25℃ → -35℃)		
Humidity	Range (%RH)	Full Range : 20 to 95		
		45 to 65 at 15℃ (59℉) 20 to 95 at 40 to 80℃ (104 to 176℉) 20 to 90 at 90℃ (194℉)		
	Fluctuation[2] (±%RH) at 60%RH / 50℃	4.1 / 7.38	2.8 / 5.04	1.8 / 3.24
	Variation[2] (±%RH) at 60%RH / 50℃	0.9 / 1.62	1.0 / 1.8	1.2 / 2.16
Refrigeration	System	Mechanical single stage refrigerator system (air-cooled condenser)		
	Refrigerant	R-404A		
	Capacity (W)	470	656	750
Cooler		Plate fin cooler (cooper)		
Heater	Material	Ni-Cr Wire Heater/SUS TUBE Heater		
	Drying Bulb (W)	800	1000	1200
	Humidity Bulb (W)	800	1000	1200
Sensor	Temperature	Pt 100		
	Humidity	Electronic sensor - Free of drying a wet pack and good reaction time		
Air Flow		2 sets of sirocco fan		
Material	Internal	Stainless steel #304 (2B polish)		
	External	SUS #304 & Steel, 0.8t, Double painted & baked		
	Insulation	Polyurethane foam 100mm [3.94"]		
	Door	Glasswool		
Water Tank	Capacity (L / cu ft)	6.0 / 0.21	7.5 / 0.26	10.0 / 0.35
	Quality	pH6.2 ~ 7.2, Electrical conductivity 20℃ / cm to below		
Interface Port		Basically RS-232C, [RS-485: optional]		
Cable Port		Basically one hole provided / Ø 50mm (2") Optionally max. two holes available/ Ø 50 or 80mm (2 or 3.2")		
Dimension (W×D×H)	Internal (mm / inch)	350×220×350 / 13.8×8.7×13.8	400×330×495 / 15.7×13×19.5	500×380×530 / 19.7×15×20.9
	External (mm / inch)	610×875×920 / 24×34.4×36.2	660×1040×1065 / 26×40.9×41.9	760×1110×1085 / 29.9×43.7×42.7
	Net Weight (kg / lbs)	110 ±10 / 242.5 ±22	140 ±10 / 308.6 ±22	150 ±10 / 330.7 ±22
Electrical Requirements (AC230V, 1ph, 60Hz)		10.1A	12.4A	16A
Cat. No.		AAH82411K	AAH82421K	AAH82431K
Electrical Requirements (AC230V, 1ph, 50Hz)		9.7A	11.8A	15.6A
Cat. No.		AAH82412K	AAH82422K	AAH82432K

1) All specifications are under ambient temperature 20℃ (68℉), No load.
2) Technical data according to DIN 12880, IEC 60068.
3) Up to 98% of the set value.

※ Permissible environmental conditions: temperature (18 to 30℃) and relative humidity (up to 85%).
※ Recommended ambient temperature: +20℃(68℉).

Temp. & Humid. Chambers

Temp. & Humid. Chambers (Tabletop Models)

Specifications & Ordering Information

Model		TH-ME-025	TH-ME-065	TH-ME-100
Chamber Volume (L / cu ft)		25 / 0.9	65 / 2.3	100 / 3.53
Controller		Program controller (LCD type)		
Temperature	Range (℃ / ℉)	-20 to 150 / -4 to 302 without humidity		
	Fluctuation [1] (±℃ / ℉) at 25℃ / 60%RH	0.3 / 0.54	0.2 / 0.36	0.2 / 0.36
	Variation [1] (±℃ / ℉) at 25℃ / 60%	0.6 / 1.08	0.2 / 0.36	0.2 / 0.36
Time	Heating -without Humidity (min.)	60	67	73
		from -20℃ to 120℃ (-4℉ to 248℉)		
	Cooling -without Humidity (min.)	174	144	153
		from 120℃ to -20℃ (248℉ to -4℉)		
Humidity	Range (%RH)	Full Range : 20 to 95		
		45 to 65% at 15℃ (59℉) 20 to 95% at 40 to 80℃ (104 to176℉) 20 to 90% at 90℃ (194℉)		
	Fluctuation [1] (±%RH) at 60%RH / 55℃	2.0 / 3.6	2.7 / 4.86	2.7 / 4.86
	Variation [1] (±%RH) at 60%RH / 55℃	0.6 / 1.08	1.1 / 1.98	1.2 / 2.16
Refrigeration	System	Mechanical single stage refrigerator system (air-cooled condenser)		
	Refrigerant	R-404A		
	Capacity (W)	250	250	375
Cooler		Plate fin cooler (cooper)		
Heater	Material	Ni-Cr Wire Heater / SUS sheath Heater		
	Drying Bulb (W)	800	1000	1200
	Humidity Bulb (W)	500	650	1000
Sensor	Temperature	Pt 100		
	Humidity	Electronic sensor - Free of drying a wet pack and good reaction time		
Material	Interior	Stainless steel #304		
	Exterior	SUS #304 & Steel, 0.8t, Double painted & baked		
	Insulation	Polyurethane foam 100mm [3.94"]		
	Door	Glass wool		
Air Flow		2 sets of sirocco fan		
Water Tank	Capacity (L / cu ft)	6.0 / 0.21	7.5 / 0.26	10.0 / 0.35
	Water Quality	pH6.2 to 7.2 / Electrical conductivity 20℃/cm to below		
Dimension (W×D×H)	Interior (mm / inch)	350×220×350 / 13.8×8.7×13.8	400×330×495 / 15.7×13×19.5	500×380×530 / 19.7×15×20.9
	Exterior (mm / inch)	610×875×920 / 24×34.4×36.2	660×1040×1065 / 26×40.9×41.9	760×1110×1085 / 29.9×43.7×42.7
	Net Weight (kg / lbs)	80±5 / 176±11	110±5 / 242±11	130±5 / 286±11
Cable Port		Basically one hole provided / Ø 50mm (2") Optionally max. two holes available / Ø 50 or 80mm (2 or 3.2")		
Interface Port		Basically RS-232C [RS-485-optional]		
Electrical Requirements (230V, 1ph, 60Hz)		9.6A	12A	14.4A
Cat. No.		AAH82111K	AAH82121K	AAH82131K
Electrical Requirements (230V, 1ph, 50Hz)		9.2A	11.1A	13.8A
Cat. No.		AAH82112K	AAH82122K	AAH82132K

1) Technical data according to DIN 12880, IEC 60068.

∗ 80mm cable access hole is NOT available for 25L chamber. (TH-ME-025).

∗ Above the dimensions are NOT included size of attached accessories.

※ Permissible environmental conditions: temperature (18 to 30℃) and relative humidity (up to 85%).

※ All specifications are under ambient temperature 20℃ (68℉), No load.

Specifications & Ordering Information

Model	TH-PE-025	TH-PE-065	TH-PE-100
Chamber Volume (L / cu ft)	25 / 0.9	65 / 2.3	100 / 3.53
Controller	Program controller (LCD type)		
Temperature — Range (℃ / ℉)	0 to 120 / 32 to 248 - without humidity		
Fluctuation [1] (±℃ / ℉) at 25℃ / 60%RH	0.2 / 0.36	0.3 / 0.54	0.2 / 0.36
Variation [1] (±℃ / ℉) at 25℃ / 60%	0.3 / 0.54		
Time — Heating - without Humidity (Min.)	40 From 0℃ to 120℃ (32℉ to 248℉)		
Cooling - without Humidity (Min.)	30 From 20℃ to 0℃ (68℉ to 32℉) on singe point control *		
Humidity — Range (%RH)	Full Range : 30 to 95 45 to 95 at 20℃ (68℉) 30 to 95 at 30 to 80℃ (86 to176℉) 30 to 90 at 85℃ (185℉)		
Fluctuation [1] (±%RH) at 60%RH / 55℃	1.6 / 2.88	0.4 / 0.72	0.5 / 0.9
Variation [1] (±%RH) at 60%RH / 55℃	3.0 / 5.4		
Refrigeration — System	Mechanical single stage refrigerator system (air-cooled condenser)		
Refrigerant	R-404A		
Capacity (W)	250	250	375
Cooler	Plate fin cooler (cooper)		
Heater — Material	Ni-Cr Wire Heater/ SUS sheath Heater		
Drying Bulb (W)	800	1000	1200
Humidity Bulb (W)	500	650	1000
Sensor — Temperature	Pt 100		
Humidity	Electronic sensor - Free of drying a wet pack and good reaction time		
Material — Interior	Stainless steel #304		
Exterior	SUS #304 & Steel, 0.8t, Double painted & baked		
Insulation	Polyurethane foam 100mm [3.94"]		
Door	Glass wool		
Air Flow	2 sets of sirocco fan		
Water Tank — Capacity (L / cu ft)	6.0 / 0.21	7.5 / 0.26	10.0 / 0.35
Water Quality	pH6.2 ~ 7.2, Electrical conductivity 20℃ / cm to below		
Dimension (W×D×H) — Interior (mm / inch)	350×220×350 / 13.8×8.7×13.8	400×330×495 / 15.7×13×19.5	500×380×530 / 19.7×15×20.9
Exterior (mm / inch)	610×875×920 / 24×34.4×36.2	660×1040×1065 / 26×40.9×41.9	760×1110×1085 / 29.9×43.7×42.7
Net Weight (kg / lbs)	80±5 / 176±11	110±5 / 242±11	130±5 / 286±11
Cable Port	Basically one hole provided / Ø 50mm (2") Optionally max. two holes available / Ø 50 or 80mm (2 or 3.2")		
Interface Port	Basically RS-232C [RS-485-optional]		
Electrical Requirements (230V, 1hp, 60Hz)	9.6A	12A	14.4A
Cat. No.	AAH82211K	AAH82221K	AAH82231K
Electrical Requirements (230V, 1hp, 50Hz)	9.2A	11.1A	13.8A
Cat. No.	AAH82212K	AAH82222K	AAH82232K

1) Technical data according to DIN 12880, IEC 60068.

＊ 80mm cable access hole is NOT available for 25L chamber (TH-PE-025).

＊ Above the dimensions are NOT included size of attached accessories.

※ Permissible environmental conditions: temperature (18 to 30℃) and relative humidity (up to 85%).

※ All specifications are under ambient temperature 20℃ (68℉), No load.

Temp. & Humid. Chambers

Fingerprint Development Chamber

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

TH-PF-100

Temperature & Humidity Control Range

TH-PF-100

- 80 ~ 90% RH at 40℃
- 65 ~ 95% RH at 50℃
- 50 ~ 95% RH at 60℃
- 50 ~ 90% RH at 90℃

Temp. & Humid. Chambers
Fingerprint Development Chamber

Exceptional design for Ninhydrin, DFO and other fingerprint development processes.

Highly precise controlled microprocessor PID controller for rapid performance. Advanced safety features for protecting evidence. A clear display with LED light indicator and heated glass window.

▶ Constructional Features

- Small size & light weight.
- Compact design with high performance.
- Efficient system with durable materials.
  - The evaporating system for better thermal efficiency with corrosion-resistant materials.
  - The heating system with minimized potential heat when heating or cooling for prompt reaction time and advanced performance.
- Stainless steel interior.
  - High quality and corrosion-resistant.
- Water tank for easy water supply.
  - Maintenance can be done easily from the front side.
    (optional direct water system.)
- Large viewing window.
  - A tempered glass door provides a clear view of your specimen during testing.
- Vice lock type door and foam silicone packing to ensure a perfect seal.
- Cable port for external probes or wires.
  - B50mm diameter cable port comes standard on the left side of the unit.
  - Additional 50mm or 80mm diameter cable ports can be custom ordered. (optional)
- Optional stand for space-saving layout.
  - For use in limited spaces: stand & casters.
  - Chambers can be stacked maximum two high.
- ※ Be sure to secure the stand to the floor with an earthquake resistant fitting for safety.

∵ Control Board

▶ Operating Features

- Intuitive Control Panel.
  - Sight Lamp, Window Clean, Water Level indicators.
- Microprocessor PID control / auto tuning / calibration.
  - Precise temperature & humidity control.
  - Faster fingerprint development.
  - Rapid recovery time after the door has been opened.
- Touch screen type digital LCD display with touch-sensitive keys.
- Easy operation with wide LCD screen.
  - Temperature and humidity / timer settings and operating condition.
- Digital Timer with acoustic alarm.
  - Start / Stop button for easy operation.
  - Digital display for time remaining.
  - Set time expiring alarm.
- Programming operation.
- Program patterns are memorized for 10 years due to a battery built into the PCB.
- Expansion parameter inputs.
  (conveniently display by letters.)
- Computer Interface. (optional)
  - Software provided.
  - Save data in excel format.
  - Storage of program information, backup of value settings / recovery, and temperature / humidity values.
  - RS-232C port standard.
- Chart Recorder. (optional)
  - 6-point dot type recorder with a digital display.

▶ Safety Features

- Key lockable door for your evidences.
- Leakage breaker for power supply.
- Over current protection.
- Over heat protection.
- Switch-off after alarm for overheating.
- Automatic shut off after overheat alarm.
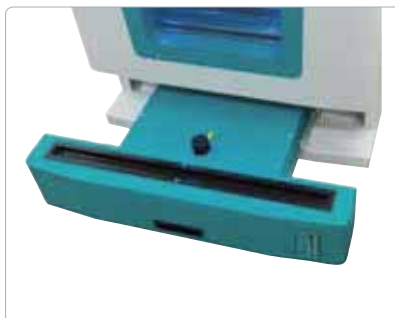- Low and empty water level alarm.

Temp. & Humid. Chambers
Fingerprint Development Chamber

Large window for viewing samples and with LED lighting on left and right of the interior door window.
Heated glass window eliminates condensation.

Water Tank included
Easy maintenance.
Direct water system. (optional)

Key Lockable Door
for your evidences.

▶ Specifications & Ordering Information

Model	TH-PF-100	
Chamber Volume (L / cu ft)	100 / 3.53	
Controller	PID control (LCD Type)	
Temperature	Range (℃ / ℉)	40 to 100 / 104 to 212 without humidity
	Fluctuation (±℃ / ℉) at 100℃	0.5 / 0.9
	Variation (±℃ / ℉) at 100℃	0.5 / 0.9
Humidity	Range (%RH)	Full Range : 50 to 95 80 to 90 at 40℃ 65 to 95 at 50℃ 50 to 90 at 90℃
	Fluctuation (±%RH)	3
	Variation (±%RH)	3
Heater	Material	Ni-Cr Wire Heater / SUS cartridge Heater
	Drying Bulb	400W
	Humidity Bulb	400W
Sensor	Temperature	Pt 100
	Humidity	Electronic sensor (free of drying a wet pack and good response time)
Air Flow	2 set of sirocco fan	
Material	Interior	SUS #304 (2B polish)
	Exterior	SUS #304 & Steel, 1t, Double painted & baked
	Insulation	Polyurethane (70mm)
	Door	Glasswool
Water Tank	Capacity (L / cu ft)	9 / 0.32
	Quality	pH6.2 ~ 7.2, Electrical conductivity 20μs / cm to below
Viewing Window (mm / inch)	280×430 / 11.02×16.9	
Cable Port	Basically one hole provided / Ø 50mm (2") Optionally max. two holes available/ Ø 50 or 80mm (2 or 3.2")	
Interface	Basically RS-232C [RS-485-optional]	
Dimension (W×D×H)	Interior (mm / inch)	500×380×530 / 1.97×15×20.9
	Exterior (mm / inch)	670×845×1045 / 26.4×33.3× 41.15
	Net Weight (kg / lbs)	115kg±5kg / 253.5±11
Electrical Requirements AC230V, 1ph, 60Hz	4.5A	
Cat. No.	AAH82331K	
Electrical Requirements AC230V, 1ph, 50Hz	4.3A	
Cat. No.	AAH82332K	

※ Permissible environmental conditions: temperature (18 to 30℃) and relative humidity (up to 85%).
※ Recommended ambient temperature: +20℃(68℉)
※ All specifications are under ambient temperature 20℃(68℉), No load.

Temp. & Humid. Chambers
Clean Temp. & Humid Chamber

TH-CR-270 with optional Recorder

Temperature & Humidity Control Range

Relative Humidity %RH

Discontinuous temperature and humidity operation area.

Temperature ℃

TH-CR-270

- 50 to 90% RH at 20℃
- 40 to 90% RH at 30℃
- 30 to 90% RH at 40 to 85℃

Lab Companion

Temp. & Humid. Chambers
Clean Temp. & Humid Chamber

Dimension

(TH-CR-270)

Models	Capacity	W	D	H*	A	B
TH-CR-270	270L (9.5 cu ft)	1180mm (46.5")	1120mm (44.1")	1935mm (76.1")	325mm (12.8")	1155mm (45.5")

Operating & Constructional Features

▶ User-friendly Design

- Standard clean environmental test chambers.
- Silicone-free safe construction.
- High quality type 304 grade stainless steel exterior and interior.
- Casters for easy mobility when installing or moving environmental test chamber.
- Convenient maintenance-available to view total operating time.
- Unique door lock & trim.
  - Vice lock type door and foam silicone packing to ensure a perfect seal.
  - Door open warning alarm.
- Inner door.
  - Optional inner glass door comes with four holes to handle samples inside the chamber.
- Exhaust duct.
  - Exhaust duct is located at the upper right side of the unit.
- Chart Recorder. (optional)
  - 6 point dot type recorder with digital display.
- Container type tank for easy adding and changing of water.
  - Maintenance of the water tank can be easily performed from the front side.
  - Checking of the water level and the amount of water remaining in the tank can be performed by looking through the center viewing window.

- Viewing window.
  - Tempered glass window provides a clear view of samples in the chamber, beneficial during testing.
  - Fluorescent lighting source included.
- Cable port for external probes or wires.
  - 50mm diameter cable port comes standard on the left side of the unit.
  - Additional 50mm or 80mm diameter cable ports can be custom ordered. (optional)
- Easy cleaning of condenser air-filter.
  - To prevent deterioration of refrigeration system and keep filter dust free by periodically cleaning the filter.

∵ Inner Chamber

Temp. & Humid. Chambers
Clean Temp. & Humid Chamber

Capable for the best cleaned temperature and humidity chamber!

By employing a HEPA filter and a top to bottom laminar air flow system, a class 100 controlled chamber is achieved.

Operating & Constructional Features

▶ Operating Features

- Microprocess PID control / Auto-tuning / Calibration.
- Chamber supports three different languages: English, Chinese, and Korean.
- CPU logic control system.
  - Optimum control of temperature / humidity with economical power consumption.
- Touch Screen Type Display.
  - 5.7-inch Color LCD display with interactive input system.
  : Easily visible set value: set point value (SV) /present value (PV) are also added on the colorful LCD controller.
  - Temperature & humidity, timer settings, and operation conditions.
  - Temperature, humidity, and other operating parameters can be recorded using a chart recorder. (optional)
- Programming operation.

Description	TH-CR-270
Programmable Pattern Capacity	120
Pattern Repeat Time	999
Max. Segments per a Pattern	100
Available Max. Segments*	1200
Programmable Process Time per a Segment	0 to 99 hr 59 min

* Even though the max. segments per a pattern are 100, available total segments are up to 1200 not 12000, so you need to arrange the number of segment and patterns properly.

- Computer interface.
  - Software provided.
  - Save data in excel format.
  - Storage of program information, backup of value settings / recovery, and temperature / humidity values.
  - RS-232C port as standard offer.
  - RS-485 communication port offers connection of a maximum of 9 temperature & humidity chamber units to one PC. (optional)

▶ Safety Features

- Leakage breaker for power supply.
- Over current protection.
- Over heat protection.
- Automatic shut off after overheat alarm.
- Low and empty water level alarm.
- Door opening alarm.
- Vice lock door closing equipment.

∴ Control Panel

∴ Door Catch & Trim

∴ Air-filter

Temp. & Humid. Chambers

Clean Temp. & Humid Chamber

▶ Specifications & Ordering Information

Model	TH-CR-270		
Chamber Volume (L / cu ft)	270 / 9.5		
Controller	Programmable, Touch screen type controller (5.7" Color monitor) Local controller (Fixed - command control)		
Temperature	Range (℃ / ℉)	-35 to 100 / -31 to 212 without humidity	
	Fluctuation[1] (±℃ / ℉) at 40℃ / 60%RH	0.5 / 0.9	
	Variation[1] (±℃ / ℉) at 40℃ / 60%RH	0.5 / 0.9	
Time	Heating - without Humidity (Min.)	60 From -35℃ to 120℃ (-31℉ to 248℉)	
	Cooling - without Humidity (Min.)	65 From 20℃ to -35℃ (68℉ to -31℉)	
Humidity	Range (%RH)	Full Range : 30 to 90	
		50 to 90 at 20℃ (68℉) 40 to 90 at 30℃ (86℉) 30 to 90 at 40 to 85℃ (104 to185℉)	
	Fluctuation[1] (±%RH)	3	
	Variation[1] (±%RH) at 60%RH	3	
Cleanliness		Class 100 (ISO 14644-1)	
Refrigeration	System	Mechanical single stage refrigerator system (air-cooled condenser)	
	Refrigerant	R-404A	
	Capacity (W)	1500	
Cooler		Plate fin cooler	
Heater	Material	Ni-Cr Wire Heater / SUS sheath Heater	
	Drying Bulb (W)	2000	
	Humidity Bulb (W)	2000	
Sensor	Temperature	Pt 100	
	Humidity	Electronic sensor - Free of drying a wet pack and good reaction time	
Material	Interior	Stainless steel #304	
	Exterior	Stainless steel #304 (Base & Control panels are made of Stainless steel with powder coating)	
	Insulation	Polyurethane	
	Door	Glass wool	
	*Silicon Free (optional)	EPDM for door packing, chamber sealing and tube Poly Urethane for DI water inlet & drainage	
Air Flow		Sirocco fan	
Water Supply	Capacity	15L (0.53cu ft) - Cartridge type	
	Water Quality	pH6.2 to 7.2 / Electrical conductivity 20μs /cm to below	
Dimension (W×D×H)	Interior (mm / inch)	600×700×648 / 23.6×27.6×25.4	
	Exterior (mm / inch)	1180×1120×1935 / 46.5×44.1×76.2	
	Viewing Windows (mm / inch)	200×330 / 7.9×13	
	Net Weight (kg / lbs)	400±10 / 881.8±22	
Cable Port		Basically one hole provided / Ø 50mm (2") Optionally max. two holes available / Ø 50 or 80mm (2 or 3.2")	
Interface Port		Basically RS-232C [RS-485-optional]	
Electrical Requirements (230V, 1ph)		60Hz / 29A	50Hz / 29A
Cat. No.		AAH83011K	AAH83012K
Electrical Requirements (380V, 3ph)		50Hz / 9.6A	
Cat. No.		AAH83018K	

1) Technical data according to DIN 12880, IEC 60068.

※ Permissible environmental conditions: temperature (18 to 30℃) and relative humidity (up to 85%).
※ All specifications are under ambient temperature 20℃ (68℉), No load.
※ Upon request, other sizes of chambers are available. Please contact with us.

Temp. & Humid. Chambers
Accessories & Options

for TH Chambers

▶ Viewing Window
- A tempered dual window provides a clear of view of samples during testing.

▶ Inner Door
- An inner glass door comes installed with the clean temperature & humidity chamber for quick viewing of samples and to prevent outside air from flowing in. (Table top - without hand entry ports.)

▶ Temperature and Humidity Recorder
- 6-point dot type recorder.
- digital display.

▶ Water Supply
- Water supply system for supplying pure water for humidification.
  - Maintenance of the water tank can be easily performed from the front side.

▶ Cable Port
- A through hole of 50 or 80mm dia. (2.0 or 3.2″ dia.) is provided on the wall of chamber to allow electrical cables to be introduced into the chamber. A 50mm hole is provided, maximum two holes (50 or 80mm) are optional.

▶ Water Purifier
- Water purifier with reverse osmosis membrane. (optional)

▶ Shelves
- Wire and perforated type shelves (shelf brackets included) are made of durable stainless steel. Standard shelves and shelf brackets come standard.

▶ Warning Signal Light
- A malfunction indicator can be placed on the right upper side.

▶ Tabletop Chambers

Cat. No.	Description	Models	
		TH-KE/ME/PE	TH-PF
AAA8T504	Portable Recorder (6 points)	●	●
AAA8T506	Portable Recorder (Digital, 6 channels)	●	●
AAA8T540	Interface Converter CRS-485 → 232C Included a Cable (5m / 16.4ft)	●	●
AAA8T542	Interface Cable (5m / 16.4ft)	●	●
AAA8T550	Warning Signal Lamp	●	●
AAA82501	Viewing window for TH-KE/ME/PE-025	●	-
AAA82502	Viewing window for TH-KE/ME/PE-065 / 100	●	-
RTD679	Wire Shelf for TH-KE/ME/PE-025	●	-
RTD680	Wire Shelf for TH-KE/ME/PE-065	●	-
RTD681	Wire Shelf for TH-KE/ME/PE-100	●	●
AAA80602-6	Perforated Shelf for TH-KE/ME/PE-025	●	-
AAA80602-7	Perforated Shelf for TH-KE/ME/PE-065	●	-
AAA80602-8	Perforated Shelf for TH-KE/ME/PE-PF-100	●	●
AAA8T612	Cable Port (Ø 50mm / 2.0″) for TH-ME/PE Models	●	●
AAA8T613	Cable Port (Ø 80mm / 3.2″) for TH-ME/PE Models	●	●
AAA8T610	Cable Port (Ø 50mm / 2.0″) for TH-KE Models	●	-
AAA8T611	Cable Port (Ø 80mm / 3.2″) for TH-KE Models	●	-
AAA80631	Stand for TH-KE/ME/PE-025	●	-
AAA80632	Stand for TH-KE/ME/PE-065	●	-
AAA80633	Stand for TH-KE/ME/PE/PF-100	●	●
AAA80634	Two Step Stand for TH-KE/ME/PE-025	●	-
AAA80635	Two Step Stand for TH-KE/ME/PE-065	●	-
AAA8T621	Water Purifier	●	●
CFA7113	Humidity Sensor	●	●
CFA1910	Temperature Sensor (RTD type)	●	●

※ 80mm cable access hole is NOT available for 25L chamber.

▌ Wire & Perforated Shelves for Tabletop Chambers

Models	Description			
	Included*	Maximum	Space	Dimension (W×L)
TH-KE/ME/PE-025	2	7	20mm (0.8″)	195×310mm (7.7×12.2″)
TH-KE/ME/PE-065	2	10	20mm (0.8″)	280×360mm (11×14.2″)
TH-KE/ME/PE/PF-100	2	10	20mm (0.8″)	330×460mm (13×18.1″)

∗ Only for wire shelf.

for TH Chambers

▶ Floor Standing Chambers

Cat. No.	Description	Models				
		TH-G	TH-I	TH-TG	TH-ICH	TH-CR
AAA8T500	Recorder (6 points)	•	•	•	•	•
AAA8T505	Recorder (Digital, 6 channels)	•	•	•	•	•
AAA8T540	Interface Converter CRS-485 → 232C Included a Cable (5m / 16.4ft)	•	•	•	•	•
AAA8T542	Interface Cable (5m / 16.4ft)	•	•	•	•	•
AAA80550	Warning Signal Lamp	•	•	•	•	•
AAA81552	Inner Glass Door for TH-G/I-180	•	•	-	-	-
AAA81551	Inner Glass Door for TH-G/I/GU-300, 408	•	•	-	-	-
AAA81550	Inner Glass Door for TH-G/I-800, 1000	•	•	-	-	-
AAA81553	Inner Glass Door for TH-TG-180	-	-	•	-	-
AAA81554	Inner Glass Door for TH-TG-300, 408	-	-	•	-	-
AAA81555	Inner Glass Door for TH-TG-800, 1000	-	-	•	-	-
AAA80671	Viewing Window for TH-TG-180	-	-	•	-	-
AAA80672	Viewing Window for TH-TG-300, 408	-	-	•	-	-
AAA80673	Viewing Window for TH-TG-800, 1000, 1500	-	-	•	-	-
EDA8212	Wire Shelf for TH-G/I-180	•	•	-	-	-
EDA8213	Wire Shelf for TH-G/I/GU-300	•	•	-	-	-
EDA8214	Wire Shelf for TH-G/I-408	•	•	-	-	-
EDA8215	Wire Shelf for TH-G-800	•	-	-	-	-
EDA8216	Wire Shelf for TH-G-1000	•	-	-	-	-
RTD1195	Wire Shelf for TH-TG-180	-	-	•	-	-
RTD1196	Wire Shelf for TH-TG/ICH-300	-	-	•	•	-
RTD1197	Wire Shelf for TH-TG-408	-	-	•	-	-
RTD1198	Wire Shelf for TH-TG/ICH-800	-	-	•	•	-
RTD1199	Wire Shelf for TH-TG-1000	-	-	•	-	-
EDA8234	Wire Shelf for TH-TG-1500					
STT1040	Wire Shelf for TH-CR-270	-	-	-	-	•
AAA80602-1	Perforated Shelf for TH-G/I-180	•	•	-	-	-
AAA80602-2	Perforated Shelf for TH-G/I/GU-300	•	•	-	-	-
AAA80602-3	Perforated Shelf for TH-G/I-408	•	•	-	-	-
AAA80602-4	Perforated Shelf for TH-G-800	•	-	-	-	-
AAA80602-5	Perforated Shelf for TH-G-1000	•	-	-	-	-
AAA80604-1	Perforated Shelf for TH-TG-180	-	-	•	-	-
AAA80604-2	Perforated Shelf for TH-TG/ICH-300	-	-	•	•	-
AAA80604-3	Perforated Shelf for TH-TG-408	-	-	•	-	-
AAA80604-4	Perforated Shelf for TH-TG/ICH-800	-	-	•	•	-
AAA80604-5	Perforated Shelf for TH-TG-1000/1500	-	-	•	-	-
AAA80630-1	Perforated Shelf for TH-CR-270	-	-	-	-	•
AAA8T610	Cable Port (Ø 50mm / 2")	•	•	•	•	•
AAA8T611	Cable Port (Ø 80mm / 3.2")	•	•	•	•	•
AAA8T621	Water Purifier	•	•	•	•	•
AAA80622	Water Cartridge Tank	•	•	-	-	•
CFA7113	Humidity Sensor	•	•	•	•	•
CFA1185	Temperature Sensor (RTD type)	•	•	•	•	•
RTD1190	Fluorescent Lamp (Cool White) for TH-ICH-300	-	-	-	•	-
RTD1191	Fluorescent Lamp (Cool White) for TH-ICH-800	-	-	-	•	-
RTD1188	UVA Lamp for TH-ICH-300	-	-	-	•	-
RTD1189	UVA Lamp for TH-ICH-800	-	-	-	•	-
AAA80680	THE-680 UV Sensor TH-ICH	-	-	-	•	-
AAA80681	THE-681 Illumination Sensor for TH-ICH	-	-	-	•	-
EDA9175	ULPA Filter (optional)	-	-	-	-	•
EDA9184	HEPA Filter (1EA included)	-	-	-	-	•
AAA80620	Direct Water System	•	•	•	•	•

▶ Wire & Perforated Shelves for Floor Standing Chambers

Models	Description			
	Included*	Maximum	Space	Dimension (W×L)
TH/I-180	2	9	40mm (1.6")	463×518mm (17.2×20.4")
TH/I-300	2	10	40mm (1.6")	518×558mm (20.4×22")
TH/I-408	2	10	40mm (1.6")	560×740mm (22×29.1")
TH/I-800	2	14	40mm (1.6")	750×960mm (30×37.8")
TH/I-1000, 1500	2	14	40mm (1.6")	950×960mm (37.4×37.8")
TH-TG-180	2	7	60mm (2.4")	458×608 (18×23.9)
TH-TG/ICH-300	2	8	60mm (2.4")	708×608 (27.9×23.9)
TH-TG-408	2	8	60mm (2.4")	708×808 (27.9×31.8)
TH-TG/ICH-800	2	17	60mm (2.4")	708×718 (27.9×28.3)
TH-TG-1000	2	17	60mm (2.4")	1008×708 (39.7×27.9)
TH-TG-1500	4	34	60mm (2.4")	960×480 (37.8×18.9)
TH-CR-270	2	10	40mm (1.6")	640×558mm (25.2×22")

* Only for wire shelf.

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

CE

GC-1000TLH

Lab
Companion

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℃ to 50℃ (lamp off) / 10℃ to 50℃. (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℃)
  50 to 90% RH for GC-1000TLH. (at 20~35℃)
- Max. 5,000ppm CO_2 ON/OFF system. (optional)
- Microprocessor PID control / Auto-tuning / Calibration.
- Digital timer: 1 min to 99 hr 59 min.
- 10 step programmable temperature, humidity, and illumination profiles and repeat the steps up to 999 cycles. (self-testing)
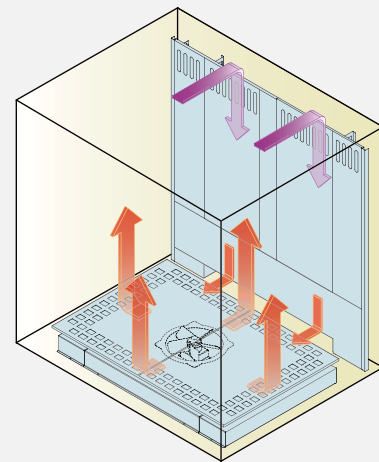
▶ Constructional Features

- 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.
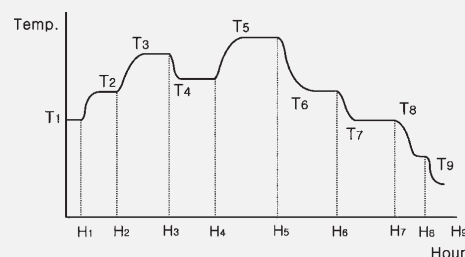- Adjustable water tank positions. (only for GC-300TLH)

- 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)

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.

Specifications & Ordering Information

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 (℃ / ℉)	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 (±℃ / ℉) at 25℃	0.1 / 0.18 - without humidity					
	Variation (±℃ / ℉) at 25℃	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℃		50 to 90 at 20 to 35℃	
				70 to 90 at 36 to 50℃		60 to 90 at 36 to 50℃	
	Fluctuation (±RH) at 60% RH	-		3			
CO_2(optional)	Range (ppm)	Max. 5,000					
	Sensor	NDIR CO_2 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 /	
	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.

GC-300 Lamp Arrangement

GC-1000 Lamp Arrangement

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

for Plant Growth Chambers

⋰ Wire Shelves

⋰ Perforated Shelves

⋰ Recorder

⋰ CO₂ Sensor

Wire Shelves

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

Perforated Shelves

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