

Temp. & Humid. Chambers

Temp. & Humid. Chambers (Floor Standing Models)



CE Certification only for the TH-G-180-300-408

Floor Standing Models

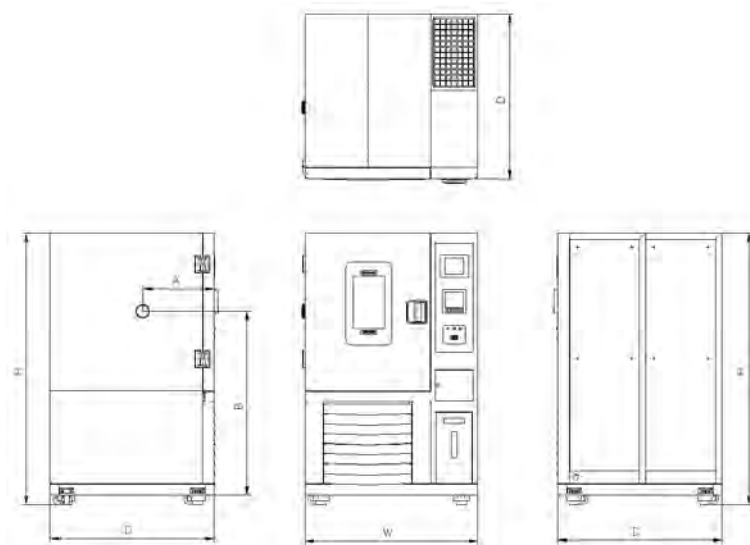


TH-G / I / GU Models

Temp. & Humid. Chambers

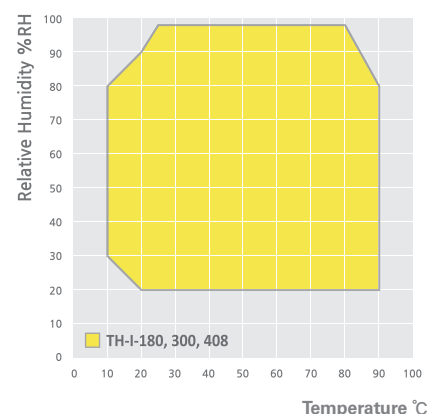
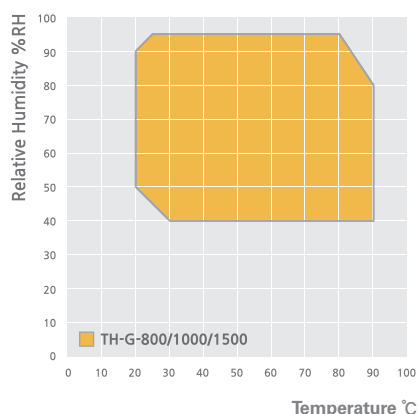
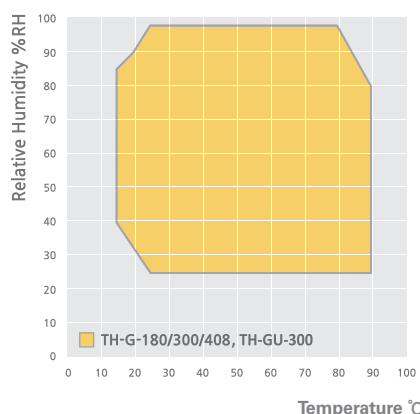
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Dimension



Models	Capacity	W	D	H	A	B
TH-G TH-I	180L (6.4cu ft)	1025mm (40.4")	1035mm (40.7")	1530mm (60.2")	450mm (17.7")	1230mm (48.4")
	300L (10.6cu ft)	1120mm (44.1")	1070mm (42.1")	1730mm (68.1")	450mm (17.7")	1230mm (48.4")
	408L (14.4cu ft)	1120mm (44.1")	1240mm (48.8")	1730mm (68.1")	520mm (20.5")	1230mm (48.4")
TH-G	800L (28.3cu ft)	1570mm (61.8")	1245mm (48.8")	2060mm (81.1")	490mm (19.3")	1260mm (49.6")
	1000L (35.3cu ft)	1570mm (61.8")	1445mm (56.9")	2060mm (81.1")	560mm (22")	1260mm (49.6")
	1500L (53 cu ft)	1570mm (61.8")	2045mm (80.5")	2050mm (80.7")	560mm (22")	800mm (31.5")

Temperature & Humidity Control Range



TH-G (180, 300, 408L) TH-GU-300

- 40 ~ 85% RH at 15°C
- 25 ~ 98% RH at 25 ~ 80°C
- 25 ~ 80% RH at 90°C

TH-G (800, 1000, 1500L)

- 50 ~ 90% RH at 20°C
- 45 ~ 95% RH at 25°C
- 40 ~ 95% RH at 30 ~ 80°C
- 40 ~ 80% RH at 90°C

TH-I (180, 300, 408L)

- 30 ~ 80% RH at 10°C
- 20 ~ 90% RH at 20°C
- 20 ~ 98% RH at 25 ~ 80°C
- 20 ~ 80% RH at 90°C

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Operating & Constructional Features



Door Catch & Trim



Color LCD Controller



Digital Recorder (optional)

Constructional Features

- Standard environmental test chambers.
- High quality #304 stainless steel exterior and interior.
- Casters for easy mobility when installing or moving temp. and Humid. test chamber.
- Convenient maintenance-available to view total operating time.
- Spacious chamber volume maximum capacity of 1500L.
- Choose from 10 different model chambers based on size and temperature preference.
 - The series comes in 3 different models based on temp. and humid. ranges ranging in -35°C to 150°C, -60°C to 150°C / upmost 20 to 98% RH and six different volume capacities of 180L, 300L, 408L, 800L, 1000L and 1500L.
- 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. (excludes chambers with volume capacities of 800L or 1500L)
- Ventilation.
 - Ventilation vent is located at the upper right side of the unit.
- Chart recorder. (optional)
 - 6-point dot type recorder with a 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 for observation.
 - 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.

Safety Features

- Leakage breaker for power supply.
- Over current protection.
- Overheat / overcool protection.
- Switch-off after alarm for over heating.
- Water empty alarm.
- Door open alarm.
- Vice lock door type locking mechanism.

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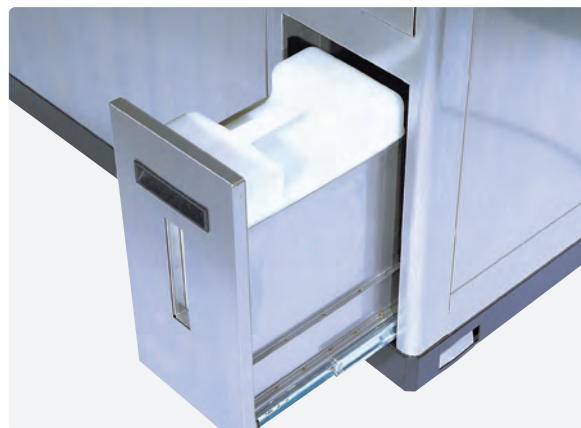
► Operating Features

- Microprocess PID control / Auto-tuning / Calibration.
- Chamber supports three different languages: English, Chinese, and Korean.
- Optimize CPU logic control system.
 - Optimum control of temperature 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 and humidity / timer settings and operation condition.
 - Temperature, humidity, and other operating parameters can be recorded using a chart recorder.
- Programming operation.

Description	TH-G, I, GU
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 an patterns properly.

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



WaterTank



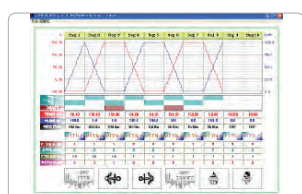
Air Filter



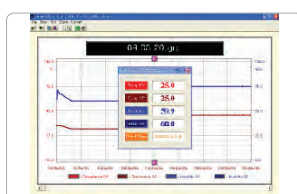
Multi-control Display



Single-control Display



Program Setting Display



Graph Display



Ventilation

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Specifications & Ordering Information



CE Certification only for the TH-G-180-300-408

Model		TH-G-180	TH-G-300	TH-G-408	TH-G-800	TH-G-1000	TH-G-1500
Chamber Volume (L / cu ft)		180 / 6.4	300 / 10.6	408 / 14.4	800 / 28.3	1000 / 35.3	1500 / 53
Control System		BDBC2 system - Balanced Dehumidifying & Bath Cooling control					
Controller		Programmable, Touch screen type controller (5.7" Color monitor)					
Temperature	Range (°C / °F) - without Humidity	-35 to 150 / -31 to 302 * best programmable control range : -30 to 140 / -22 to 284					
	Fluctuation ¹⁾ (±°C / °F) at 55°C / 60%RH	0.1 / 0.18	0.2 / 0.36	0.2 / 0.36	0.3 / 0.55	0.3 / 0.55	0.3 / 0.55
	Variation ¹⁾ (±°C / °F) at 55°C / 60%RH	0.6 / 1.08	0.5 / 0.9	0.5 / 0.9	0.5 / 0.9	0.5 / 0.9	0.5 / 0.9
Time	Heating - without Humidity (Min.)	50 From -35°C to 120°C (-31°F to 248°F)			60 From -35°C to 120°C (-31°F to 248°F)		
	Cooling - without Humidity (Min.)	60 From 20°C to -35°C (68°F to -31°F)					85 From 20°C to -35°C (68°F to -31°F)
		On single point control *					
Humidity	Range (%RH)	40 to 85 at 15°C (59°F)			50 to 90 at 20°C (68°F)		
		25 to 98 at 25°C to 80°C (77°F to 176°F)			45 to 95 at 30°C to 80°C (86°F to 176°F)		
		25 to 80 at 90°C (194°F)			40 to 80 at 30°C to 90°C (86°F to 194°F)		
	Fluctuation ¹⁾ (±%RH) at 60%RH / 55°C	0.3	0.4	0.3	0.5	0.6	1
	Variation ¹⁾ (±%RH) at 60%RH / 55°C	3					3.5
Refrigeration	System	Mechanical single stage refrigerator system (air-cooled condenser)			Mechanical dual stage refrigerator system (air-cooled condenser)		
	Refrigerant	R-404A			R-404A (1st step), R-23 (2nd step)		
	Capacity (W)	1500			4250	6000	
Cooler		Plate fin cooler					
Heater	Material	Ni-Cr Wire Heater / SUS sheath Heater			SUS Tube Heater		
	Drying Bulb (W)	2000			3000		5000
	Humidity Bulb (W)	1500			2000		3500
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					
	Insulation	Polyurethane foam 100mm (3.94")					
	Door	Glass wool					
Air Flow		Tangent blower (90W)			4 sets of sirocco fan (4×90W)		
Water Supply	Capacity	15L (0.53cu ft) - Cartridge type			Direct water supplying system		
	Water Quality	pH6.2 to 7.2 / Electrical conductivity 20μs /cm to below					
Dimension (W×D×H)	Interior (mm / inch)	500×630×600 / 19.7×24.8×23.6	600×630×800 / 23.6×24.8×31.5	600×850×800 / 23.6×33.5×31.5	1000×800×1000 / 39.4×31.5×39.4	1000×1000×1000 / 39.4×39.4×39.4	1000×1000×1500 / 39.4×39.4×59.1
	Exterior (mm / inch)	1025×1035×1530 / 40.4×40.7×60.2	1120×1070×1730 / 44.1×42.1×68.1	1120×1240×1730 / 44.1×44.8×68.1	1570×1245×2060 / 61.8×49×81.1	1570×1445×2060 / 61.8×56.9×81.1	1570×2045×2060 / 61.8×80.5×80.7
	Viewing Windows (mm / inch)	200×330 / 7.9×13			270×330 / 10.6×13		
	Net Weight (kg / lbs)	310±10 / 683.4±22	375±10 / 826.7±22	400±10 / 881.8±22	610±10 / 1345±22	670±10 / 1477±22	750±10 / 1653.5±22
Cable Port		Basically one hole provided / Ø50mm (2") Optionally max. two holes available / Ø50 or 80mm (2 or 3.2")					
Interface Port		Basically RS-232C (RS-485(Maximum 999 Units Control)-optional)					
Electrical Requirements (230V, 60Hz)		1ph / 23A			-		-
Cat. No.		AAH80011K	AAH80021K	AAH80031K	AAH80041K	AAH80051K	-
Electrical Requirements (230V, 50Hz)		1ph / 23A			3ph / 22.5A		3ph / 37.7A
Cat. No.		AAH80012K	AAH80022K	AAH80032K	AAH80042K	AAH80052K	AAH80072K
Electrical Requirements (380V, 50Hz)		3ph / 7.7A			3ph / 13A		3ph / 20.6A
Cat. No.		AAH80018K	AAH80028K	AAH80038K	AAH80048K	AAH80058K	AAH80078K

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

※ CE Certification only for the TH-G-180-300-408.

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

※ All specifications are under ambient temperature 20°C (68°F), No load.

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Specifications & Ordering Information



Model		TH-I-180	TH-I-300	TH-I-408
Chamber Volume (L / cu ft)		180 / 6.4	300 / 10.6	408 / 14.4
Control System		BDBC2 system - Balanced Dehumidifying & Bath Cooling control		
Controller		Programmable, Touch screen type controller (5.7" Color monitor)		
Temperature	Range (°C / °F)	-35 to 150 / -31 to 302 without humidity * best programmable control range : -30 to 140 / -22 to 284		
	Fluctuation ¹⁾ (±°C / °F) at 55°C / 60%RH	0.1 / 0.18	0.2 / 0.36	0.2 / 0.36
	Variation ¹⁾ (±°C / °F) at 55°C / 60%	0.6 / 1.08	0.5 / 0.9	0.5 / 0.9
Time	Heating - without Humidity (Min.)	50 From -35°C to 120°C (-31°F to 248°F)		
	Cooling - without Humidity (Min.)	60 From 20°C to -35°C (68°F to -31°F) on single point control *		
Humidity	Range (%RH)	30 to 80 at 10°C (50°F)		
		20 to 98 at 20 to 80°C (68°F to 176°F)		
		20 to 80 at 90°C (194°F)		
	Fluctuation ¹⁾ (±%RH) at 60%RH / 55°C	0.3	0.4	0.3
	Variation ¹⁾ (±%RH) at 60%RH / 55°C	3	3	3
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)	1500		
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		
	Insulation	Polyurethane foam 100mm (3.94")		
	Door	Glass wool		
Air Flow		Tangent blower (90W)		
Water Supply	Capacity	15L (0.53cu ft) - Cartridge type		
	Water Quality	pH6.2 to 7.2 / Electrical conductivity 20μs /cm to below		
Dimension (WxDxH)	Interior (mm / inch)	500×630×600 / 19.7×24.8×23.6	600×630×800 / 23.6×24.8×31.5	600×850×800 / 23.6×33.5×31.5
	Exterior (mm / inch)	1025×1035×1530 / 40.4×40.7×60.2	1120×1070×1730 / 44.1×42.1×68.1	1120×1240×1730 / 44.1×44.8×68.1
	Viewing Windows (mm / inch)	200×330 / 7.9×13		
	Net Weight (kg / lbs)	310±10 / 683.4±22	375±10 / 826.7±22	400±10 / 881.8±22
Cable Port		Basically one hole provided / Ø50mm (2") Optionally max. two holes available / Ø50 or 80mm (2 or 3.2")		
Interface Port		Basically RS-232C [RS-485(Maximum 999 Units Control)-optional]		
Electrical Requirements (230V, 60Hz)		1ph / 23A		
Cat. No.	AAH80111K	AAH80121K	AAH80131K	
Electrical Requirements (230V, 50Hz)		1ph / 23A		
Cat. No.	AAH80112K	AAH80122K	AAH80132K	
Electrical Requirements (380V, 50Hz)		3ph / 7.7A		
Cat. No.	AAH80118K	AAH80128K	AAH80138K	

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

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※ All specifications are under ambient Temperature 20°C (68°F), No Load.

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Specifications & Ordering Information



Model		TH-GU-300
Chamber Volume (L / cu ft)		300 / 10.6
Controller		Programmable, Touch screen type controller (5.7" Color monitor)
Temperature	Range (°C / °F)	-60 to 150 / -76 to 302 without humidity *best programmable control range : -50 to 140 / -58 to 284
	Fluctuation ¹⁾ (±°C / °F) at 40°C / 60%RH	0.3 / 0.54
	Variation ¹⁾ (±°C / °F) at 40°C / 60%RH	0.5 / 0.9
Time	Heating - without Humidity (Min.)	60 From -60°C to 120°C (-76°F to 248°F)
	Cooling - without Humidity (Min.)	65 From 20°C to -60°C (68°F to -76°F) on single point control
Humidity	Range (%RH)	40 to 85 at 15°C (59°F)
		25 to 98 at 25 to 80°C (77°F to 176°F)
		25 to 80 at 90°C (194°F)
	Fluctuation ¹⁾ (±%RH)	3
Refrigeration	Variation ¹⁾ (±%RH)	3
	System	Mechanical dual stage refrigerator system (air-cooled condenser)
	Refrigerant	R-404A(1st step), R-23(2nd step)
Capacity (W)		3000
Cooler		Plate fin cooler
Heater	Material	Ni-Cr Wire Heater / SUS sheath Heater
	Drying Bulb (W)	2000
	Humidity Bulb (W)	1500
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
	Insulation	Polyurethane foam 100mm (3.94")
	Door	Glass wool
Air Flow		Tangent blower (90W)
Water Supply	Capacity	15L (0.53cu ft) - Cartridge type
	Water Quality	pH6.2 to 7.2/ Electrical conductivity 20µs / cm to below
Dimension (WxDxH)	Interior (mm / inch)	600×630×800 / 23.6×24.8×31.5
	Exterior (mm / inch)	1120×1070×1730 / 44.1×42.1×68.1
	Viewing Windows (mm / inch)	200×330 / 7.9×13
	Net Weight (kg / lbs)	395±10 / 870.8±22
Cable Port		Basically one hole provided / Ø50mm (2") Optionally max. two holes available / Ø50 or 80mm (2 or 3.2")
Interface Port		Basically RS-232C [RS-485(Maximum 999 Units Control)-optional]
Electrical Requirements (230V, 60Hz)		1ph / 23A
Cat. No.		AAH80321K
Electrical Requirements (230V, 50Hz)		1ph / 23A
Cat. No.		AAH80322K
Electrical Requirements (380V, 50Hz)		3ph / 7.7A
Cat. No.		AAH80328K

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

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

※ Upon request, other sizes of chambers are available. Please contact with us.

※ All specifications are under ambient temperature 20°C (68°F). No load.