



Economy environmental test chamber.  
Stability test in accordance with ICH guidelines Q1A (R2)

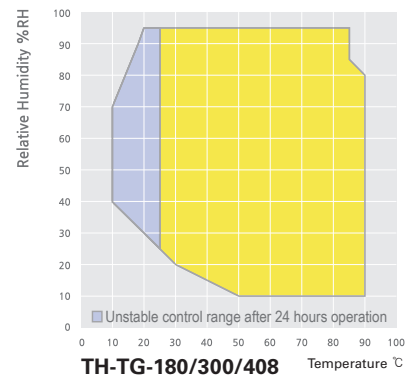


## TH-TG with optional recorder

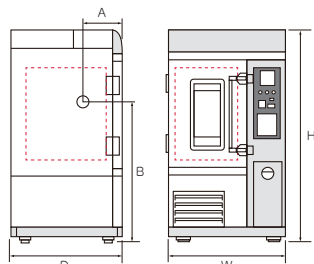
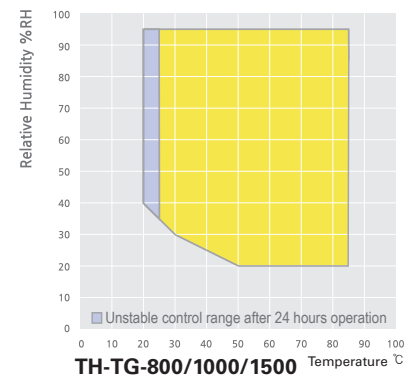
- Standard accessories**
- Viewing window, Wire shelves, Cable port (Ø50mm)
  - Water container, Door key
- Optional accessories**
- Interface converter, Water purifiers, Direct water system
- see page 238

### Control range

- Temperature range from -5 to 100 °C
- Humidity range from 10 to 95% RH

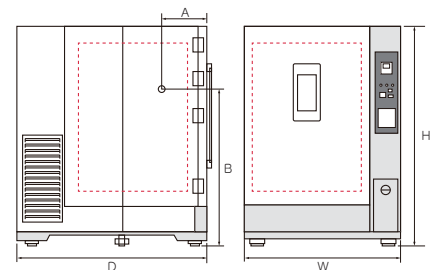


- Temperature range from -5 to 100 °C
- Humidity range from 20 to 95% RH



### Dimension

Model	TH-TG-180	TH-TG-300	TH-TG-408
Capacity	180L (6.4 cu ft)	314L (11.1 cu ft)	419L (14.8 cu ft)
W	950mm (37.4")	1200mm (47.2")	1200mm (47.2")
D	907mm (35.7")	863mm (33.9")	1063mm (41.9")
H	1484mm (58.4")	1524mm (60.0")	1524mm (59.2")
A	321mm (12.6")	295mm (11.6")	421mm (16.6")
B	985mm (38.8")	1015mm (39.9")	995mm (39.2")



### Dimension

Model	TH-TG-800	TH-TG-1000	TH-TG-1500
Capacity	770L (27.2 cu ft)	997L (35.2 cu ft)	1540L (54.4 cu ft)
W	1200mm (47.2")	1200mm (47.2")	1554mm (61.2")
D	1230mm (48.4")	1500mm (59.1")	1876mm (73.9")
H	1973mm (77.7")	1973mm (77.7")	1935mm (76.2")
A	385mm (15.2")	475mm (18.7")	478mm (18.8")
B	1315mm (51.8")	1315mm (51.8")	1354mm (53.3")

# Temperature & Humidity Chambers (Floor Standing - TH-TG)

## Performance

- Microprocessor PID control / Temperature calibration / Automatic tuning.
- Advanced performance of low and high temperature and humidity control, achieved by adapting the humidification tank exterior to the chamber, added benefit for long term test.
- Water recycling and filtering system reduce water consumption for longer operation.
- Air-tight door closure with perfect sealed packing.
  - Heat-resistant silicone packing completely blocks high heat leakage from the inner chamber.
  - Two-point door latch also enhances tightness to door closure.
- Energy efficiency is achieved by optimization of the insulation system.
  - Even if the unit is operating at max. temperature, the surface of the unit doesn't allow high temperatures of over 60 °C.

## Safety

- Built in door lock with a key.
- Automatic shut off after overheat alarm.
- Low and empty water level alarm.
- Power supply leakage breaker.
- Over current protection.
- Open door alarm.

## Convenience

- Spacious chamber volume with a maximum capacity of 1500L.
  - Various volume sizes, available to suit any users' need.
- Corrosion resistance stainless steel chamber and electric polished humidification tank.
- Maintenance of water supply are easily performed with a front water tank.
  - Portable water container makes supplying water convenient.
- Water supply during operation is also available for long term test purposes.
- Direct water system provides user great convenience when performing long-term tests. (optional)
- Clear observation of samples.
  - Tempered glass door with built in heating wire.
  - Energy efficient, long life span LED lighting.
  - Wider view, inner glass door is available for monitoring of samples. (optional)
- Cable port for introduction of external probes or wires.
  - 50mm diameter cable port comes standard on the left side of the unit.
  - Additional 50mm or 80mm diameter cable ports, custom ordered. (optional)
- Casters for easy mobility during installation or relocation.
- User friendly LCD controller.
  - Set value and present value are clearly visible together on display.
  - Operating progress visible in graph mode allow for direct data interpretation.
  - Temperature and other operating parameters recorded with use of selectable recorder. (optional)
- Sufficient programmable control support.



LCD controller



Computer panel



Viewing window



Portable water container

Description	No
Programmable pattern capacity	120
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.
  - RS-485 communication port enables connection of up to maximum 9 units. Simultaneous monitoring and operating of multiple units is an available feature. (optional)
  - Program patterns are simple to set with the use of our software.
  - Storage of program information, backup of value settings, recovery, temperature, humidity values.
  - RS-232 communication port comes standard.

Model		TH-TG-180	TH-TG-300	TH-TG-408	TH-TG-800	TH-TG-1000	TH-TG-1500
Chamber volume (L / cu ft)		180 / 6.4	314 / 11.1	419 / 14.8	770 / 27.2	997 / 35.2	1540 / 54.4
Controller		PID control (LCD Type)					
Temperature <sup>1)</sup>	Range	without humidity (°C / °F)	-5 to 100 / 23 to 212				
		with humidity (°C / °F)	10 to 90 / 50 to 194	20 to 90 / 68 to 194			
	Fluctuation <sup>1)</sup> (±°C / °F) at 40°C / 60%RH	0.3 / 0.55					
	Variation <sup>1)</sup> (±°C / °F) at 40°C / 60%RH	0.5 / 0.9					
Time	Heating	50min (5°C → 100°C)			55min (5°C → 100°C)		
	Cooling	120min (100°C → -5°C)			145min (100°C → -5°C)		
Humidity	Range (%RH)	10 to 95 ※ See page 219 for more detailed humidity range check.	20 to 95 ※ See page 219 for more detailed humidity range check.				
	Fluctuation <sup>2)</sup> (±%RH) at 60%RH / 40°C	2					
	Variation <sup>2)</sup> (±%RH) at 60%RH / 40°C	3					
Refrigeration	System	Air-cooled					
	Refrigerant	R-507A					
	Capacity (W)	250	375	750			
Water tank	Capacity (L / cu ft)	15 / 0.53					30 / 1.1
	Water quality	pH6.2 ~ 7.2, Electrical conductivity 20 <sup>µS</sup> / cm to below					
No. of wire shelves (standard / max.)		2 / 7	2 / 8	2 / 8	2 / 17	2 / 17	2 / 17
Distance of between shelves (mm / inch)		60 / 2.4	60 / 2.4	60 / 2.4	60 / 2.4	60 / 2.4	60 / 2.4
Max. load per shelf (kg / lbs)		20 / 44.1	25 / 55.1	25 / 55.1	40 / 88.2	40 / 88.2	40 / 88.2
Permitted total load (kg / lbs)		50 / 110.2	65 / 143.3	65 / 143.3	100 / 220.5	100 / 220.5	100 / 220.5
Dimension (WxDxH)	Viewing window (mm / inch)	200×330 / 7.9×13					
	Interior (mm / inch)	500×600×600 / 19.7×23.6×23.6	748×600×700 / 29.4×23.6×27.6	748×800×700 / 29.4×31.5×27.6	748×920×1120 / 29.4×36.2×44.1	748×1190×1120 / 29.4×46.9×44.1	1100×1000×1400 / 43.3×39.4×55.1
	Exterior (mm / inch)	950×907×1484 / 37.4×35.7×58.4	1200×863×1524 / 47.2×34×60	1200×1063×1524 / 47.2×41.9×60.0	1200×1230×1973 / 47.2×48.4×77.7	1200×1500×1973 / 47.2×59.1×77.7	1554×1876×1935 / 61.2×73.9×76.2
	Net weight (kg / lbs)	220±10 / 485±22	250±10 / 551±22	280±10 / 617±22	360±10 / 794±22	410±10 / 904±22	480±10 / 1058±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	AC230V, 1ph, 60Hz	12.3 A	14.5 A	14.5 A	15.4 A	15.4 A	25.0A
	Cat.No.	AAHC2001K	AAHC2011K	AAHC2021K	AAHC2031K	AAHC2041K	AAHC2051K
	AC230V, 1ph, 50Hz	14.8A	17.4A	17.4A	18.5A	18.5A	30.0A
	Cat.No.	AAHC2002K	AAHC2012K	AAHC2022K	AAHC2032K	AAHC2042K	AAHC2052K

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

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

※ FDA establishment registered company. FDA listed products.

# Accessories & Options

## for Floor Standing Chambers

### Accessory check list

Standard     Optional

Description	Models					
	TH-G	TH-I	TH-KH	TH-TG	TH-ICH	TH-CR
Recorder (6 points)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recorder (digital, 6 channels)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
interface converter RS-485C → 232C included a cable (5m / 16.4ft)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interface cable (5m / 16.4ft)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warning signal lamp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inner glass door	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
Viewing window	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>
Wire shelf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perforated shelf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cable port (Ø 50mm / 2")	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cable port (Ø 80mm / 3.2")	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temperature sensor (RTD type)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humidity sensor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fluorescent lamp (Cool White)	-	-	-	-	<input type="checkbox"/>	-
UVA lamp	-	-	-	-	<input type="checkbox"/>	-
UV sensor	-	-	-	-	<input type="checkbox"/>	-
Illumination Sensor	-	-	-	-	<input type="checkbox"/>	-
HEPA filter	-	-	-	-	-	<input type="checkbox"/>
ULPA filter	-	-	-	-	-	<input type="checkbox"/>
Water cartridge tank (Water Container)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>
Water purifier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Direct water system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Ordering information

Cat. No.	Description	Suitable for	
AAA8T500	Recorder (6 points)	All models	
AAA8T505	Recorder (digital, 6 channels)	All models	
AAA8T540	interface converter RS-485C → 232C included a cable (5m / 16.4ft)	All models	
AAA8T542	Interface cable (5m / 16.4ft)	All models	
AAA80550	Warning signal lamp	All models	
AAA81552	Inner glass door	TH-G//KH-180	
AAA81551		TH-G//KH-300, 408, CR-270	
AAA81550		TH-G-800, 1000	
AAAC2501		TH-TG-180	
AAAC2502		TH-TG-300, 408	
AAAC2503		TH-TG-800, 1000	
AAA81554		TH-ICH-300	
AAA81555		TH-ICH-800	
AAA8T610		Cable port (Ø 50mm / 2")	All models
AAA8T611		Cable port (Ø 80mm / 3.2")	All models
CFA1185	Temperature sensor (RTD type)	TH-G//GU models	
CFA1923		TH-TG/ICH/CR models	
CFA7113	Humidity sensor	All models	
RTD1190	Fluorescent lamp (cool white)	TH-ICH-300	
RTD1191		TH-ICH-800	
RTD1188	UVA lamp	TH-ICH-300	
RTD1189		TH-ICH-800	
AAA80680	THE-680 UV sensor	TH-ICH-300/800	
AAA80681	THE-681 Illumination sensor	TH-ICH-300/800	
AAA80661	Door lock device	TH-ICH-300/800	
EDA9184	HEPA filter	TH-CR-270	
EDA9175	ULPA filter	TH-CR-270	
AAA80622	Water cartridge tank	All models	

Cat. No.	Description	Suitable for
AAA8T621	Water purifier	All models
AAA80620	Direct water system	All models
EDA8212	Wire shelf	TH-G//KH-180
EDA8213		TH-G//KH-300
EDA8214		TH-G//KH-408
EDA8215		TH-G-800
EDA8216		TH-G-1000
RTD1302		TH-TG-180
RTD1303		TH-TG-300
RTD1300		TH-TG-408
RTD1304		TH-TG-800
RTD1301		TH-TG-1000
RTD1305		TH-G/TG-1500
RTD1196		TH-ICH-300
RTD1198		TH-ICH-800
STT1040		TH-CR-270
AAA80602-1	Perforated shelf	TH-G//KH-180
AAA80602-2		TH-G//KH-300
AAA80602-3		TH-G//KH-408
AAA80602-4		TH-G-800
AAA80602-5		TH-G-1000
AAA80604-11		TH-TG-180
AAA80604-12		TH-TG-300
AAA80604-13		TH-TG-408
AAA80604-14		TH-TG-800
AAA80604-15		TH-TG-1000
AAA80604-16		TH-G/TG-1500
AAA80604-2		TH-ICH-300
AAA80604-4		TH-ICH-800
AAA80603-1		TH-CR-270