

# Temp. & Humid. Chambers

Ver. 2017 ~ 2018

# Best Products for Reliable Results



**JEIO TECH** was established in 1988 with the goal of delivering the best laboratory equipments for the reliable results. We always strive to develop high technology with ergonomic design for better products. We are eager to take on new challenges in developing a product the best suits you!

Our reliable instruments will offer you analytical solutions in the field of biology , chemistry, medicine, pharmacology and so forth. We are driven by innovation and our extensive product lines are at the cutting-edge globally in both scientific and industrial research instrument markets.

While continuously focusing on human resources and technology, development, we strive to make a significant difference in various research areas. our top priority is to provide the world's best products and services through outstanding quality and customer satisfaction at affordable prices.

We hope you enjoy the discovery of JeioTech and it's products.

## **Best Products for Reliable Results**

CE, UL, CSA, RoHS, GD (Good Design Award)

Jeio Tech (Lab Companion) obtained ISO 9001, ISO 13485

FDA establishment registered company. FDA listed products.





## Climate Chambers

### Floor Standing Models

- 40 to 150°C, 25 to 95% ..... TH-G-180/300/408/800/1000
- 40 to 150°C, 20 to 95% ..... TH-I-180/300/408
- 70 to 150°C, 25 to 95% ..... TH-KH-180/300/408
- 5 to 100°C, 10 to 95% ..... TH-TG-180/300/408
- 20 to 95% ..... TH-TG-800/1000/1500
- 5 to 100°C, 15 to 90% ..... TH-DG-150/300/400

### Tabletop Models

- 40 to 150°C, 20 to 95% ..... TH-KE-025/065/100
- 20 to 150°C, 20 to 95% ..... TH-ME-025/065/100
- 0 to 120°C, 30 to 95% ..... TH-PE-025/065/100

## Clean Temp. & Humid. Chamber

- 35 to 100°C, 30 to 90% ..... TH-CR-270

## Pharmaceutical Stability Test Chambers

- 5 to 85°C, 20 to 85% ..... TH-ICH-300/800

## Plant Growth Chambers

- 5 to 50°C, 40 to 90% ..... GC-300TL/300TLH
- 50 to 90% ..... GC-1000TLH



# Technical Benefit

For Climate Chambers (TH-G/I/KH/TG/DG TH-KE/ME/PE)

## Wide selection of models



Select the most suitable chamber for your application among Lab Companion's diverse Temp. & Humid. Chambers

Various Floor Standing Chambers and Tabletop Chambers are on the general environmental test chamber list. Each model series based on temp. and humid. ranges and different volume capacities

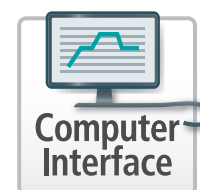
Save data in excel format

Storage of program information, backup of value settings / recovery, and temperature values

Software, RS-232C port as standard offer  
(In case of TH-DG, RS-485C port is standard)

RS-485 communication port offers connection of more than 9 temp. chamber units to one PC (optional)

## Computer interface



## Viewing window



Clear observation of samples

- Tempered glass door with built in heating wire
- Energy efficient, long life span lighting
- Wider view, inner glass door is available for monitoring of samples

## Dual Chamber (for TH-DG)



Environmental test equipment with dual chambers

Specially designed for conducting each different experiment at once

Stability test in accordance with ICH guidelines Q1A (R2)

## Programming operation



Description		TH-G/I/KH	TH-KE/ME/PE, TH-TG/DG
Programmable Pattern Capacity	120		100
Pattern Repeat Time	999		999
Max. Segments per a Pattern	100		100
Available Max. Segments	1200		2000
Programmable Process Time per a Segment	0 to 999hr 59 min		0 to 99 hr 59 min

# Technical Benefit

For Pharmaceutical Stability Test Chambers (TH-ICH)

## Accordance with ICH guideline



### Stability Testing Q1A <sup>(R2)</sup>

- Optimum temperature and humidity control system for long-term stability test

### Photostability Testing Q1B <sup>(Option 2)</sup>

- Independent luminescence control system for photostability test

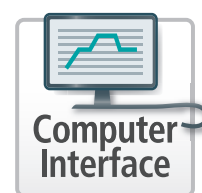
## Save data in excel format

Storage of program information, backup of value settings / recovery, and temperature values

Software, RS-232C port as standard offer

RS-485 communication port offers connection of maximum 32 temp. chamber units to one PC <sup>(optional)</sup>

## Computer interface



## Water level indicator



Maintenance of water supply are easily performed with a front water tank

- Water level check indicated by water level bar in the tank

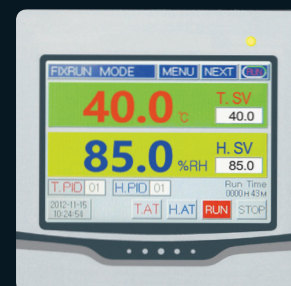
Water supply during operation is also available for long term test purposes

## Microprocessor PID control / Auto-tuning / Calibration

Colorful interactive touch type LCD controller

- Temperature and humidity / timer settings and operating condition

## Precise control



## Individual illumination controller



## Programming operation

Description	TH-ICH
Programmable Pattern Capacity	100
Pattern Repeat Time	999
Max. Segments per a Pattern	100
Available Max. Segments	2000
Programmable Process Time per a Segment	0 to 99 hr 59 min

# Technical Benefit

For Clean Temp. & Humid. Chamber (TH-CR)

Clean Temp. & Humid  
Chamber

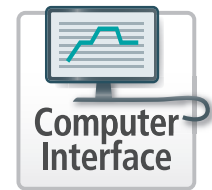


Viewing Window



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

Computer interface



Specially designed for processes requiring clean and controlled environmental test conditions (ISO Class 5 air cleanliness as per ISO 14644-1)

Heat-resisting HEPA filter provides clean environment

ULPA filter provides for better air cleanliness of the chamber (optional)

No external exhaust system required

Water level Indication



Maintenance of water supply are easily performed with a front water tank.

- Water level check indicated by water level bar in the tank.

- Clear observation of samples
- Tempered glass door with built in heating wire
  - Wider view, inner glass door is available for monitoring of samples

Programming operation



Description		TH-CR
Programmable Pattern Capacity		120
Pattern RepeatTime		999
Max. Segments per a Pattern		100
Available Max. Segments		1200
Programmable ProcessTime per a Segment		0 to 999hr 59 min 59 sec

# Technical Benefit

For Plant Growth Chambers (GC)

## Optimum illumination



Illumination values are controlled with lamp setting arrangements

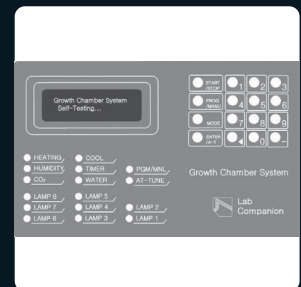
- Max. 35,000Lux for GC-1000TLH
- Max. 20,000Lux for GC-300TL/TLH

## Microprocessor PID control/Auto-tuning/Calibration

40 to 80% RH for GC-300TLH (at 20~35℃)  
50 to 90% RH for GC-1000TLH (at 20~35℃)

Max. 5,000ppm CO<sub>2</sub> ON/OFF system (optional)

## Functional controller



## User-friendly door system



Silicone packing for keeping inner chamber perfectly

External door with magnetic sealing for dual airtight

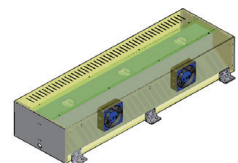
Smoothly open to minimize damage of samples

Wide inner tempered glass door providing a full view of the samples

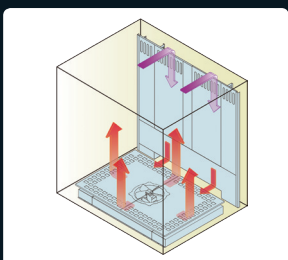
Unique construction to minimize the heat from rising due to the luminous light source

Designed to exhaust the heated air through the upper holes (GC-1000TLH only)

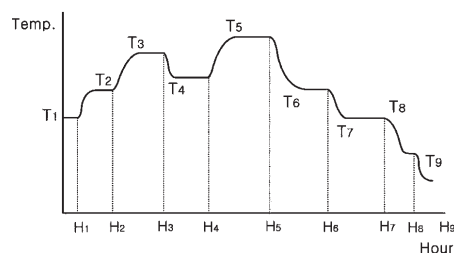
## Heat rise restraint



## Efficient temp. condition on program mode



Efficient airflow for plant growth (1000L)



## Temperature setting graph

10 step programmable temperature, humidity, and illumination profiles and repeat the steps up to 999 cycles. (self-testing)

# Climate Chambers (Floor Standing Models)

TH-G-180/300/408/800/1000/1500 (-40 to 150°C, 25 to 95%)

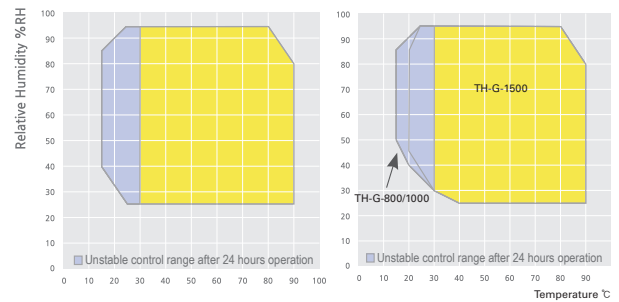
## Standard Environmental Test Chamber

Highly interactive LCD controller, beneficial for sophisticated long-term test cycles



TH-G with the optional recorder

## Temp. & Humid. Control Range



TH-G-180/300/408

TH-G-800/1000/1500

Model		TH-G-180	TH-G-300	TH-G-408	TH-G-800	TH-G-1000	TH-G-1500
Chamber volume (L / cu ft)		189 / 7.4	302 / 11.9	408 / 14.4	800 / 28.3	1000 / 35.3	1540 / 54.4
Temperature	Range (°C / °F)	-40 to 150 / -40 to 302 without humidity, 15 to 90 / 59 to 194 with humidity * Best programmable control range : -30 to 140 / -22 to 284					
	Fluctuation <sup>1)</sup> (°C / °F) at 40°C / 75%RH	0.3 / 0.54					
	Variation <sup>1)</sup> (°C / °F) at 40°C / 75%RH	0.5 / 0.9					
Time	Heating - without humidity (min.)	70 from -40°C to 120°C			70 from -40°C to 120°C		90 from -40°C to 120°C
	Cooling - without humidity (min.)	75 from 20°C to -40°C			85 from 20°C to -40°C		90 from 20°C to -40°C
Humidity	Range (%RH)	25 to 95					
	Fluctuation <sup>1)</sup> (±%RH) at 75%RH / 40°C	0.4			1.0		2.0
	Variation <sup>1)</sup> (±%RH) at 75%RH / 40°C	3					
Water Supply	Capacity	15L (0.53cu ft) - Cartridge type					
	Water quality	pH6.2 to 7.2 / Electrical conductivity 20μs /cm to below					
No. of wire shelves (standard / max.)		2 / 9	2 / 10	2 / 10	2 / 14	2 / 14	2 / 14
Distance of between shelves (mm / inch)		40 / 1.6	40 / 1.6	40 / 1.6	40 / 1.6	40 / 1.6	40 / 1.6
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	1000×800×1000 / 39.4×31.5×39.4	1000×1000×1000 / 39.4×39.4×39.4	1100×1000×1400 / 43.3×39.4×55.1
	Exterior (mm / inch)	1003×1139×1468 / 39.5×44.8×57.8	1103×1139×1668 / 43.4×44.8×65.7	1103×1359×1668 / 43.4×53.5×65.7	1503×1319×1968 / 59.2×51.9×77.5	1503×1519×1968 / 59.2×59.8×77.5	1603×1960×1950 / 63.1×77.2×76.8
	Net weight (kg / lbs)	320 / 705.5	385 / 848.8	410 / 903.9	620 / 1366.9	680 / 1499.1	860 / 1895.9
Electrical requirements (230V, 60Hz)		1ph / 26.3A	1ph / 26.7A		1ph / 35.5A		
Cat. No.		AAH80011K	AAH80021K	AAH80031K	AAH80041K	AAH80051K	-
Electrical requirements (230V, 50Hz)		3ph / 15.3A	3ph / 15.6A		3ph / 20.6A		3ph / 26.3A
Cat. No.		AAH80012K	AAH80022K	AAH80032K	AAH80042K	AAH80052K	AAH80072K
Electrical requirements (380V, 50Hz)		3ph / 9.1A	3ph / 9.2A		3ph / 12.2A		3ph / 15.5A
Cat. No.		AAH80018K	AAH80028K	AAH80038K	AAH80048K	AAH80058K	AAH80078K

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

※ 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.

※ FDA establishment registered company. FDA listed products.

### Safety Systems

- Built in door lock
- Auto shut off after overheat alarm
- Low and empty water level alarm
- Power supply leakage breaker
- Over current protection
- Door open alarm

Microprocessor PID control / Auto-tuning / Calibration

User friendly LCD with touch-sensitive keys

Operating progress visible in graph mode

### Built-in SD card drive

Temp. and other operating parameters recorded with use of an optional recorder (optional)

### Programming operation

- Programmable patterns up to 120
- Max. segments up to 1200
- Pattern repeats up to 999

### Computer interface

- Software provided
- RS-232C port as standard offer
- RS-485 communication port offers maximum of 9 temp. and humid. chambers (optional)

Advanced performance of low and high temp. and humid. control, achieved by adapting the humidification tank exterior to the chamber

Water recycling system reduces water consumption

Corrosion resistance stainless steel chamber and electric polished humidification tank

Air-tight door closure with two-point door latch and heat-resistant silicone packing

### Great insulation system

- Surface of the unit doesn't allow high temp. of over 60°C even at max. temp operating

Portable water container makes supplying water convenient

Direct water system is beneficial for long-term tests (optional)

Tempered glass window with built in heating wire and LED lamp provides a clear view inside of the chamber.

Cable port for introduction of external probes or wires

### STANDARD

- Viewing window, Wire shelves, Cable port (Ø50mm)
- Water container, Door key

# Climate Chambers (Floor Standing Models)

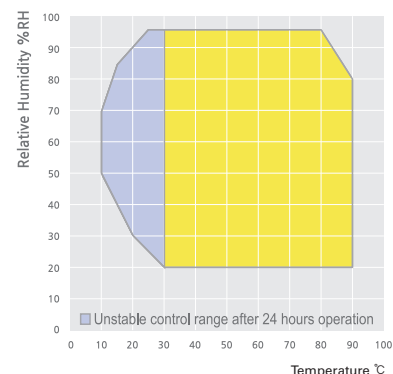
TH-I-180/300/408 (-40 to 150°C, 20 to 95%)

Great low temperature and humidity control performance



TH-I with the optional recorder

## Temp. & Humid. Control Range



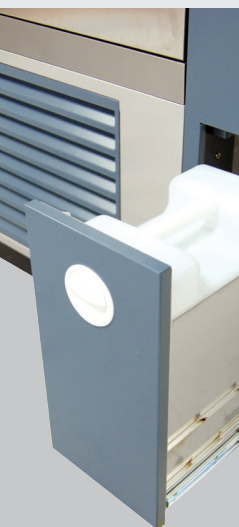
Model		TH-I-180	TH-I-300	TH-I-408
Chamber volume (L / cu ft)		189 / 7.4	302 / 11.9	408 / 14.4
Temperature	Range (°C / °F)	-40 to 150 / -40 to 302 without humidity, 15 to 90 / 59 to 194 with humidity * Best programmable control range : -30 to 140 / -22 to 284		
	Fluctuation <sup>1)</sup> (±°C / °F) at 40°C / 75%RH	0.3 / 0.54		
	Variation <sup>1)</sup> (±°C / °F) at 40°C / 75%RH	0.5 / 0.9		
Time	Heating - without humidity (min.)	70 from -40°C to 120°C		
	Cooling - without humidity (min.)	75 from 20°C to -40°C		
Humidity	Range (%RH)	20 to 95		
	Fluctuation <sup>1)</sup> (±%RH) at 75%RH / 40°C	0.4		
	Variation <sup>1)</sup> (±%RH) at 75%RH / 40°C	3		
Water Supply	Capacity	15L (0.53cu ft) - Cartridge type		
	Water quality	pH6.2 to 7.2 / Electrical conductivity 20µs /cm to below		
No. of wire shelves (standard / max.)		2 / 9	2 / 10	2 / 10
Distance of between shelves (mm / inch)		40 / 1.6	40 / 1.6	40 / 1.6
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)	1003×1139×1468 / 39.5×44.8×57.8	1103×1139×1668 / 43.4×44.8×65.7	1103×1359×1668 / 43.4×53.5×65.7
	Net weight (kg / lbs)	320 / 705.5	385 / 848.8	410 / 903.9
Electrical requirements (230V, 60Hz)		1ph / 26.3A	1ph / 26.7A	
Cat. No.		AAH80111K	AAH80121K	AAH80131K
Electrical requirements (230V, 50Hz)		3ph / 15.3A	3ph / 15.6A	
Cat. No.		AAH80112K	AAH80122K	AAH80132K
Electrical requirements (380V, 50Hz)		3ph / 9.1A	3ph / 9.2A	
Cat. No.		AAH80118K	AAH80128K	AAH80138K

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

※ 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.

※ FDA establishment registered company. FDA listed products.



### Safety Systems

- Built in door lock
- Auto shut off after overheat alarm
- Low and empty water level alarm
- Power supply leakage breaker
- Over current protection
- Door open alarm

Microprocessor PID control / Auto-tuning / Calibration

User friendly LCD with touch-sensitive keys

Operating progress visible in graph mode

### Built-in SD card drive

Temp. and other operating parameters recorded with use of an optional recorder (optional)

### Programming operation

- Programmable patterns up to 120
- Max. segments up to 1200
- Pattern repeats up to 999

### Computer interface

- Software provided
- RS-232C port as standard offer
- RS-485 communication port offers maximum of 9 temp. and humid. chambers (optional)

Advanced performance of low and high temp. and humid. control, achieved by adapting the humidification tank exterior to the chamber

Water recycling system reduces water consumption

Corrosion resistance stainless steel chamber and electric polished humidification tank

Air-tight door closure with two-point door latch and heat-resistant silicone packing

### Great insulation system

- Surface of the unit doesn't allow high temp. of over 60°C even at max. temp operating

Portable water container makes supplying water convenient

Direct water system is beneficial for long-term tests (optional)

Tempered glass window with built in heating wire and LED lamp provides a clear view inside of the chamber.

Cable port for introduction of external probes or wires

### STANDARD

- Viewing window, Wire shelves, Cable port (Ø50mm)
- Water container, Door key

# Climate Chambers (Floor Standing Models)

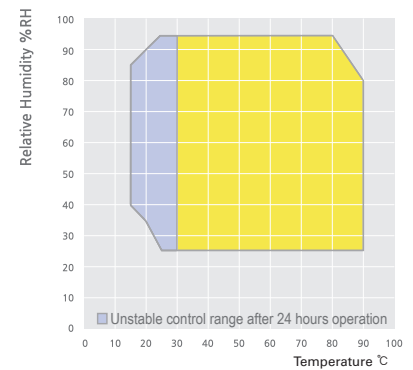
TH-KH-180/300/408 (-70 to 150°C, 25 to 95%)

Wide temperature range down to -70°C and high advanced safety features for quality and reliability



TH-KH with the optional recorder

## Temp. & Humid. Control Range



Model		TH-KH-180	TH-KH-300	TH-KH-408
Chamber volume (L / cu ft)		189 / 7.4	302 / 11.9	408 / 14.4
Temperature	Range (°C / °F)	-70 to 150 / -94 to 302 without humidity, 15 to 90 / 59 to 194 with humidity * Best programmable control range : -60 to 140 / -76 to 284		
	Fluctuation <sup>1)</sup> (±°C / °F) at 40°C / 75%RH	0.3 / 0.54		
	Variation <sup>1)</sup> (±°C / °F) at 40°C / 75%RH	0.5 / 0.90		
Time	Heating - without humidity (min.)	70 from -70°C to 120°C		
	Cooling - without humidity (min.)	80 from 20°C to -70°C		
Humidity	Range (%RH)	25 to 95		
	Fluctuation <sup>1)</sup> (±%RH) at 75%RH / 40°C	0.4		
	Variation <sup>1)</sup> (±%RH) at 75%RH / 40°C	3.0		
Water supply	Capacity	15L (0.53cu ft) - Cartridge type		
	Water quality	pH6.2 to 7.2 / Electrical conductivity 20µS /cm to below		
No. of wire shelves (standard / max.)		2 / 9	2 / 10	2 / 10
Distance of between shelves (mm / inch)		60 / 2.4	60 / 2.4	60 / 2.4
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)	1043×1613×1558 / 41.1×63.5×61.3	1143×1833×1758 / 45.0×72.2×69.2	1143×2053×1758 / 45.0×80.8×69.2
	Net weight (kg / lbs)	320 / 705.5	385 / 848.8	410 / 903.9
Electrical requirements (230V, 50Hz)		3ph / 17.2A	3ph / 17.3A	
Cat. No.		<b>AAHC3012K</b>	<b>AAHC3112K</b>	<b>AAHC3212K</b>
Electrical requirements (380V, 50Hz)		3ph / 10.1A	3ph / 10.2A	
Cat. No.		<b>AAHC3014K</b>	<b>AAHC3114K</b>	<b>AAHC3214K</b>

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

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### Safety Systems

- Built in door lock
- Auto shut off after overheat alarm
- Low and empty water level alarm
- Power supply leakage breaker
- Over current protection
- Door open alarm

Microprocessor PID control / Auto-tuning / Calibration

User friendly LCD with touch-sensitive keys

Operating progress visible in graph mode

### Built-in SD card drive

Temp. and other operating parameters recorded with use of an optional recorder (optional)

### Programming operation

- Programmable patterns up to 120
- Max. segments up to 1200
- Pattern repeats up to 999

### Computer interface

- Software provided
- RS-232C port as standard offer
- RS-485 communication port offers maximum of 9 temp. and humid. chambers (optional)

Advanced performance of low and high temp. and humid. control, achieved by adapting the humidification tank exterior to the chamber

Water recycling system reduces water consumption

Corrosion resistance stainless steel chamber and electric polished humidification tank

Air-tight door closure with two-point door latch and heat-resistant silicone packing

### Great insulation system

- Surface of the unit doesn't allow high temp. of over 60°C even at max. temp operating

Portable water container makes supplying water convenient

Direct water system is beneficial for long-term tests (optional)

Tempered glass window with built in heating wire and LED lamp provides a clear view inside of the chamber.

Cable port for introduction of external probes or wires

### STANDARD

- Viewing window, Wire shelves, Cable port (Ø50mm)
- Water container, Door key

# Climate Chambers (Floor Standing Models)

TH-TG-180/300/408/800/1000/1500 (-5 to 100°C, 10 to 95%)

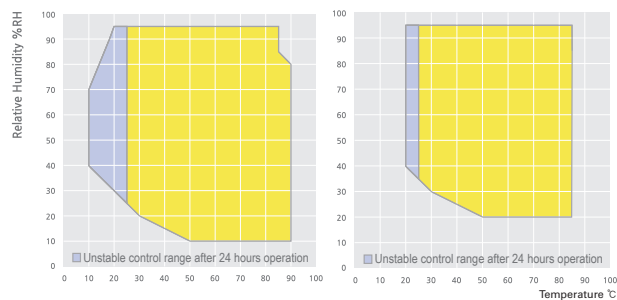
Economy Environmental Test Chamber

Stability Test in accordance with ICH Guidelines Q1A (R2)



TH-TG with the optional recorder

## Temp. & Humid. Control Range



TH-TG-180/300/408

TH-TG-800/1000/1500

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
Temperature <sup>1)</sup>	Range (°C / °F)	-5 to 100 / 23 to 212 without humidity 10 to 90 / 50 to 194 with humidity			-5 to 100 / 23 to 212 without humidity 20 to 90 / 68 to 194 with humidity		
	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			20 to 95		
	Fluctuation <sup>2)</sup> (±%RH) at 60%RH / 40°C	2					
	Variation <sup>2)</sup> (±%RH) at 60%RH / 40°C	3					
Water tank	Capacity (L / cu ft)	15 / 0.53					30 / 1.1
	Water quality	pH6.2 ~ 7.2, Electrical conductivity 20µS / 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
Dimension (WxDxH)	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
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.



### Safety Systems

- Built in door lock
- Auto shut off after overheat alarm
- Low and empty water level alarm
- Power supply leakage breaker
- Over current protection
- Door open alarm

Microprocessor PID control / Auto-tuning / Calibration

Colorful interactive touch type LCD controller

Operating progress visible in graph mode

Temp. and other operating parameters recorded with use of an optional recorder (optional)

### Programming operation

- Programmable patterns up to 100
- Max. segments up to 2000
- Pattern repeats up to 999

### Computer interface

- Software provided
- RS-232C port as standard offer
- RS-485 communication port offers maximum of 9 temp. and humid. chambers (optional)

Advanced performance of low and high temp. and humid. control, achieved by adapting the humidification tank exterior to the chamber

Water recycling system reduces water consumption

Corrosion resistance stainless steel chamber and electric polished humidification tank

Air-tight door closure with two-point door latch and heat-resistant silicone packing

### Great insulation system

- Surface of the unit doesn't allow high temp. of over 60°C even at max. temp operating

Portable water container makes supplying water convenient

Direct water system is beneficial for long-term tests (optional)

Tempered glass window with built in heating wire and LED lamp provides a clear view inside of the chamber.

Cable port for introduction of external probes or wires

### STANDARD

- Viewing window, Wire shelves, Cable port (Ø50mm)
- Water container, Door key

# Climate Chambers (Floor Standing Models, Dual)

TH-DG-150/300/400 (-5 to 100°C, 15 to 90%)

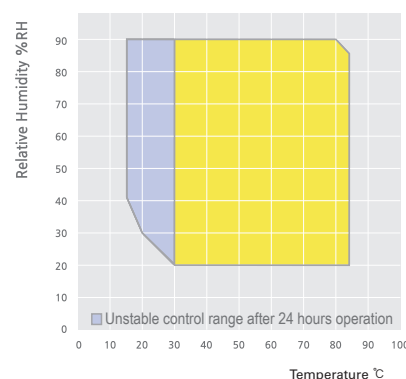
Environmental test equipment with dual chambers.

Specially designed for conducting each different experiment at once. Stability test in accordance with ICH guidelines Q1A (R2)



TH-DG with the optional recorder

## Temp. & Humid. Control Range



Model		TH-DG-150	TH-DG-300	TH-DG-400
Chamber volume (L / cu ft)		150 / 5.30 x 2 chambers	288 / 10.17 x 2 chambers	384 / 13.56 x 2 chambers
Temp.	Range (°C / °F)	-5 to 100 / 23 to 212 without humidity, 15 to 90 / 59 to 194 with humidity		
	Fluctuation <sup>1)</sup> (±°C / °F) at 40°C / 75%RH	0.3 / 0.55		
	Variation <sup>1)</sup> (±°C / °F) at 40°C / 75%RH	0.5 / 0.9		
Humidity	Range (%RH)	15 to 90		
	Fluctuation <sup>1)</sup> (±%RH) at 75%RH / 40°C	0.8		
	Variation <sup>1)</sup> (±%RH) at 75%RH / 40°C	3.0		
Water Supply	Capacity (L / cu ft)	20 / 0.70	24 / 0.84	
	Water quality	pH6.2 to 7.2 / Electrical conductivity 20µs /cm to below		
No. of wire shelves (standard / max.)		2 / 7	2 / 8	2 / 8
Distance of between shelves (mm / inch)		60 / 2.4	60 / 2.4	60 / 2.4
Dimension (WxDxH)	Interior (mm / inch)	600x500x500 / 23.6x19.7x19.7	800x600x600 / 31.5x23.6x23.6	800x600x800 / 31.5x23.6x31.5
	Exterior (mm / inch)	1055x1320x1725 / 41.5x52.0x67.9	1255x1470x1925 / 49.4x57.9x75.8	1255x1670x1925 / 49.4x65.7x75.8
	Net weight (kg / lbs)	420 / 925.9	516 / 1137.6	560 / 1234.6
Electrical requirements (230V, 60Hz)		1ph / 13.6 A x 2ea		1ph / 17.5 A x 2ea
Cat. No.		AAHC6001K	AAHC6011K	AAHC6021K
Electrical requirements (230V, 50Hz)		1ph / 13.6 A x 2ea		1ph / 17.5 A x 2ea
Cat. No.		AAHC6002K	AAHC6012K	AAHC6022K

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

※ 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.

※ FDA establishment registered company. FDA listed products.



### Efficient lab space use with dual chamber

- Designed to offer an ideal and cost-effective solution for laboratories with limited space and budget. Two chambers merged into a single unit
- Optimum model selection between three sized chambers according to application demand
- Suitable for conducting each different experiment at once. Independent temperature and humidity control of each chamber using microprocessor PID

### Safety Systems

- Built in door lock
- Auto shut off after overheat alarm
- Low and empty water level alarm
- Power supply leakage breaker
- Over current protection
- Door open alarm

Microprocessor PID control / Auto-tuning / Calibration

Colorful interactive touch LCD

Operating progress visible in graph mode

Temp. and other operating parameters recorded with use of an optional recorder (optional)

Programming operation

- Programmable patterns up to 100
- Max. segments up to 2000
- Pattern repeats up to 999

Computer interface

- Software provided
- RS-485 communication port offers maximum of 32 temp. and humid. chambers
- RS-232C port (optional)

Advanced performance of low and high temp. and humid. control, achieved by adapting the humidification tank exterior to the chamber

Water recycling system reduces water consumption

Corrosion resistance stainless steel chamber and electric polished humidification tank

Air-tight door closure with two-point door latch and heat-resistant silicone packing

Great insulation system

Water supply during operation is also available for long term test purposes

Direct water system is beneficial for long-term tests (optional)

Tempered glass window with built in heating wire and LED lamp provides a clear view inside of the chamber.

Cable port for introduction of external probes or wires

STANDARD

- Viewing window, Wire shelves, Cable port (Ø50mm)
- Water container, Door key

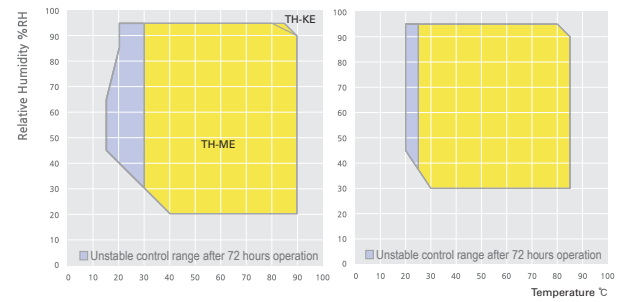
# Climate Chambers (Tabletop Models)

TH-KE/ME/PE-025/065/100 (-40 to 150°C, 20 to 95% / -20 to 150°C, 20 to 95% / 0 to 120°C, 30 to 95%)

Light weight and compact design with high performance.



## Temp. & Humid. Control Range



TH-KE / ME

TH-PE

Model		TH-KE-025	TH-KE-065	TH-KE-100	TH-ME-025	TH-ME-065	TH-ME-100	TH-PE-025	TH-PE-065	TH-PE-100
Chamber volume (L / cu ft)		25 / 0.9	65 / 2.3	100 / 3.5	25 / 0.9	65 / 2.3	100 / 3.5	25 / 0.9	65 / 2.3	100 / 3.5
Temperature	Range (°C / °F)	-40 to 150 / -40 to 302 without humidity, 15 to 90 / 59 to 194 with humidity			-20 to 150 / -4 to 302 without humidity, 15 to 90 / 59 to 194 with humidity			0 to 120 / 32 to 248 without humidity, 15 to 90 / 59 to 194 with humidity		
	Fluctuation <sup>1)</sup> (±°C / °F) at 50°C / 60%RH	0.4 / 0.72	0.4 / 0.72	0.3 / 0.54	0.3 / 0.54	0.2 / 0.36	0.2 / 0.36	0.2 / 0.36	0.3 / 0.54	0.2 / 0.36
	Variation <sup>1)</sup> (±°C / °F) at 50°C / 60%RH	0.3 / 0.54	0.4 / 0.72	0.4 / 0.72	0.6 / 1.08	0.2 / 0.36	0.2 / 0.36	0.3 / 0.54	0.3 / 0.54	0.3 / 0.54
Humidity	Range (%RH)	20 to 95			20 to 95			30 to 95		
	Fluctuation <sup>2)</sup> (±%RH) at 60%RH / 50°C	4.1	2.8	1.8	2.0	2.7	2.7	1.6	0.4	0.5
	Variation <sup>2)</sup> (±%RH) at 60%RH / 50°C	0.9	1.0	1.2	0.6	1.1	1.2	3.0	3.0	3.0
Water tank	Capacity (L / cu ft)	7.5 / 0.26	10 / 0.35	14.5 / 0.51	7.5 / 0.26	10 / 0.35	14.5 / 0.51	7.5 / 0.26	10 / 0.35	14.5 / 0.51
	Water quality	pH6.2 ~ 7.2, Electrical conductivity 20°C / cm to below								
No. of wire shelves (standard / max.)		2 / 7	2 / 10	2 / 10	2 / 7	2 / 10	2 / 10	2 / 7	2 / 10	2 / 10
Distance of between shelves (mm / inch)		20 / 1.6	20 / 1.6	20 / 1.6	20 / 1.6	20 / 1.6	20 / 1.6	20 / 1.6	20 / 1.6	20 / 1.6
Dimension (WxDxH)	Interior (mm)	348x220x353	398x330x498	498x390x538	348x220x353	398x330x498	498x390x538	348x220x353	398x330x498	498x390x538
	External (mm)	552x878x919	602x1048x1056	760x1108x1096	552x878x919	602x1048x1056	760x1108x1096	552x878x919	602x1048x1056	760x1108x1096
	Net weight (kg / lbs)	110 ± 10 / 242.5 ± 22	140 ± 10 / 308.6 ± 22	150 ± 10 / 330.7 ± 22	80 ± 5 / 176 ± 11	110 ± 5 / 242 ± 11	130 ± 5 / 286 ± 11	80 ± 5 / 176 ± 11	110 ± 5 / 242 ± 11	130 ± 5 / 286 ± 11
Electrical requirements (AC230V, 1ph, 60Hz)		10.1A	12.4A	16A	9.6A	12A	15.5A	9.6A	12A	14.4A
Cat. No.		AAH82411K	AAH82421K	AAH82431K	AAH82111K	AAH82121K	AAH82131K	AAH82211K	AAH82221K	AAH82231K
Electrical requirements (AC230V, 1ph, 50Hz)		9.7A	11.8A	15.6A	9.2A	11.1A	13.8A	9.2A	11.1A	13.8A
Cat. No.		AAH82412K	AAH82422K	AAH82432K	AAH82112K	AAH82122K	AAH82132K	AAH82212K	AAH82222K	AAH82232K

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

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

\* Recommended ambient temperature: +20°C(68°F).

\* FDA establishment registered company. FDA listed products.



### Safety Systems

- Built in door lock
- Auto shut off after overheat alarm
- Low and empty water level alarm
- Power supply leakage breaker
- Over current protection
- Door open alarm

Microprocessor PID control / Auto-tuning / Calibration

Colorful interactive touch type LCD controller

Operating progress visible in graph mode

Temp. and other operating parameters recorded with use of an optional recorder (optional)

### Programming operation

- Programmable patterns up to 100
- Max. segments up to 2000
- Pattern repeats up to 999

### Computer interface

- Software provided
- RS-232C port as standard offer
- RS-485 communication port offers maximum of 9 temp. and humid. chambers (optional)

Compact design and quite operation

Uniform temperature and humidity control guarantees reliable test result

Water recycling system reduces water consumption

Corrosion resistance stainless steel chamber and electric polished humidification tank

Air-tight door closure with perfect sealed packing

Great insulation system

Water level condition is easy to check by the water level indicator

Direct water system is beneficial for long-term tests (optional)

Operating condition is clearly noticed by the front LED indicator (status of running, stop, and power off condition)

Tempered glass window with built in heating wire and LED lamp provides a clear view inside of the chamber

Cable port for introduction of external probes or wires

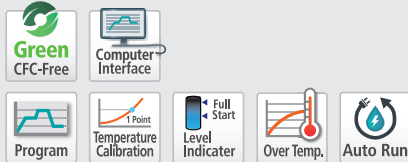
STANDARD

Viewing window, Wire shelves, Cable port (Ø50mm), Door key

# Clean temp. & Humid. Chamber

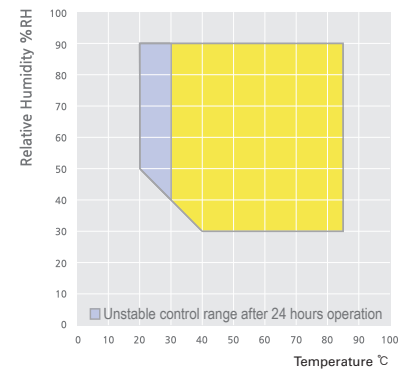
TH-CR-270 (-35 to 100°C, 30 to 90%)

Specially designed for processes requiring clean and controlled environmental test conditions  
(ISO Class 5 air cleanliness as per ISO 14644-1)



TH-CR-270 with the optional recorder

## Temp. & Humid. Control Range



Model		TH-CR-270	
Chamber volume (L / cu ft)		270 / 9.5	
Temp.	Range (°C / °F)	-35 to 100 / -31 to 212 without humidity, 20 to 85 / 104 to 185 with humidity	
	Fluctuation <sup>1)</sup> (±°C / °F) at 40°C / 60%RH	0.5 / 0.9	
	Variation <sup>1)</sup> (±°C / °F) at 40°C / 60%RH	0.5 / 0.9	
Time	Heating - without humidity (min.)	60 from -35°C to 120°C (-31°F to 248°F)	
	Cooling - without humidity (min.)	65 from 20°C to -35°C (68°F to -31°F)	
Humidity	Range (%RH)	30 to 90	
	Fluctuation <sup>1)</sup> (±%RH) at 60%RH / 40°C	3	
	Variation <sup>1)</sup> (±%RH) at 60%RH / 40°C	3	
Cleanliness		Class 100 (ISO 14644-1)	
Water supply	Capacity	15L (0.53cu ft) - Cartridge type	
	Water quality	pH6.2 to 7.2 / Electrical conductivity 20µS /cm to below	
No. of wire shelves (standard / max.)		2 / 10	
Distance of between shelves (mm / inch)		40 / 1.6	
Dimension (WxDxH)	Interior (mm / inch)	600×700×648 / 23.6×27.6×25.4	
	Exterior (mm / inch)	1180×1120×1935 / 46.5×44.1×76.2	
	Net weight (kg / lbs)	400±10 / 881.8±22	
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°C) and relative humidity (up to 85%).
- ※ All specifications are under ambient temperature 20°C (68°F), No load.
- ※ Upon request, other sizes of chambers are available. Please contact with us.
- ※ FDA establishment registered company. FDA listed products.

<p><b>Heat-resisting HEPA filter</b> provides clean environment</p> <ul style="list-style-type: none"> <li>• 0.3 µm and larger particulates are removed with 99.99% efficiency</li> </ul> <p><b>ULPA filter</b> provides for better air cleanliness of the chamber (optional)</p> <ul style="list-style-type: none"> <li>• 0.1 µm and larger particulates are removed with 99.999% efficiency</li> </ul> <p><b>No external exhaust system</b> required</p> <p><b>Safety Systems</b></p> <ul style="list-style-type: none"> <li>• Auto shut off after overheat alarm</li> <li>• Low and empty water level alarm</li> <li>• Power supply leakage breaker</li> <li>• Over current protection</li> <li>• Door open alarm</li> </ul>	<p><b>Microprocessor PID control / Auto-tuning / Calibration</b></p> <p><b>5.7 inch color touch type LCD</b></p> <p><b>Operating progress</b> visible in graph mode</p> <p><b>Temp. and other operating parameters</b> recorded with use of an optional recorder (optional)</p> <p><b>Programming operation</b></p> <ul style="list-style-type: none"> <li>• Programmable patterns up to 120</li> <li>• Max. segments up to 1200</li> <li>• Pattern repeats up to 999</li> </ul> <p><b>Computer interface</b></p> <ul style="list-style-type: none"> <li>• Software provided</li> <li>• RS-232C port as standard offer</li> <li>• RS-485 communication port offers maximum of 9 temp. and humid. chambers (optional)</li> </ul>	<p><b>Silicone-free construction</b> for clean environment</p> <p><b>Corrosion resistance</b> stainless steel chamber</p> <p><b>Built-in differential pressure gauge</b> for easy observation of HEPA filter condition</p> <p><b>Exhaust duct</b> is located at the upper right side of the unit to avoid influence other devices</p> <p><b>Air-tight door closure</b> with perfect sealed packing</p> <ul style="list-style-type: none"> <li>• Heat-resistant silicone packing completely blocks high heat leakage from the inner chamber</li> </ul>	<p><b>Water level check</b> indicated by level bar in the water tank</p> <p><b>Direct water system</b> is beneficial for long-term tests (optional)</p> <p><b>Clear observation</b> of samples</p> <ul style="list-style-type: none"> <li>• Tempered glass window with heating wire and lighting provides a clear view of samples in the chamber, beneficial for during testing</li> <li>• Inner glass door with entry ports for handling samples without affecting inner chamber temperature and humidity (optional)</li> </ul> <p><b>Cable port</b> for introduction of external probes or wires</p>
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STANDARD

- Viewing window, Wire shelves, Cable port (Ø50mm), HEPA filter, Water container

Pharmaceutical stability test chamber units comply with the ICH guidelines

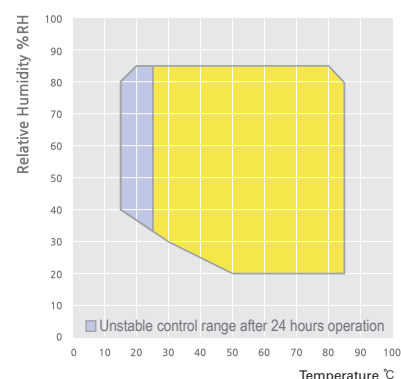
Stability Testing Q1A (R2)

Photostability Testing Q1B (Option 2)



TH-ICH with the optional recorder

## Temp. & Humid. Control Range



Model		TH-ICH-300	TH-ICH-800
Chamber volume (L / cu ft)		300 / 10.6	760 / 26.8
Controller		PID control (LCD Type)	
Temperature <sup>1)</sup>	Range (°C / °F)	-5 to 85 / 23 to 185 without Light, 0 to 85 / 32 to 185 with Light (without humidity) +15 to 85 / 59 to 185 with Light (with humidity)	
	Fluctuation <sup>1)</sup> (±°C / °F)	0.3 / 0.55 at 40°C / 60%RH	0.3 / 0.55 at 40°C / 60%RH
	Variation <sup>1)</sup> (±°C / °F)	0.5 / 0.9 at 40°C / 60%RH	0.7 / 1.3 at 40°C / 60%RH
Time	Heating	25min (20°C → 85°C)	30min (20°C → 85°C)
	Cooling	35min (20°C → 5°C)	40min (20°C → 5°C)
	Range (%RH)	20 to 85	
Humidity	Fluctuation <sup>2)</sup> (±%RH)	3 at 60%RH / 40°C	
	Variation <sup>2)</sup> (±%RH)	5 at 60%RH / 40°C	
	Cool white <sup>3)</sup>	6,000 lux	6,500 lux
Light source (ICH Q1B option 2)	Ultraviolet-A <sup>3)</sup>	4.5 W/m <sup>2</sup>	5 W/m <sup>2</sup>
	Light uniformity	VIS. : ±10%, UVA : ±15%	VIS. : ±15%, UVA : ±15%
Typical time required to reach ICH Recommendation of 1.2 million lux-hr		≈ 200Hr	≈ 184Hr
Typical time required to reach ICH recommendation of 200 W-hr/m <sup>2</sup>		≈ 50Hr	≈ 40Hr
Water tank	Capacity (L / cu ft)	15 / 0.53	
	Water quality	pH6.2 ~ 7.2, Electrical conductivity 20μs / cm to below	
No. of wire shelves (standard / max.)		2 / 8	2 / 17
Distance of between shelves (mm / inch)		60 / 2.4	60 / 2.4
Dimension (WxDxH)	Interior (mm / inch)	750×650×650 / 29.5×25.6×25.6	750×880×1160 / 29.5×34.6×45.7
	Exterior (mm / inch)	1130×985×1520 / 44.5×38.8×59.8	1220×1215×1965 / 48×47.8×77.4
	Net weight (kg / lbs)	280±10 / 617±22	400±10 / 882±22
Electrical requirements	AC230V, 1ph, 60Hz	15.4 A	24.5 A
	Cat.No.	AAHC1001K	AAHC1011K
	AC230V, 1ph, 50Hz	14.7 A	23.5 A
	Cat.No.	AAHC1002K	AAHC1012K

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

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

3) The value is measured on the center of chamber at the point of vertical direction.

\* FDA establishment registered company. FDA listed products.



Optimum temperature and humidity control system for long-term stability test

Independent luminescence control system for photostability test

### Safety Systems

- Completed photostability test alarm
- Built in door locking mechanism
- Auto shut off after overheat alarm
- Low and empty water level alarm
- Power supply leakage breaker
- Over current protection
- Door open alarm

Microprocessor PID control / Auto-tuning / Calibration

Colorful interactive touch type LCD controller

Operating progress visible in graph mode

### Programming operation

- Programmable patterns up to 100
- Max. segments up to 2000
- Pattern repeats up to 999

### Computer interface

- Software provided
- RS-232C port as standard offer
- RS-485 communication port offers maximum of 9 temp. and humid. chambers (optional)

Rapid humidity control is achieved by adapting the humidification tank interior to the chamber

Corrosion resistant stainless steel chamber

Air-tight door closure with perfect sealed packing

Cable port for introduction of external probes or wires

Inner glass door with entry ports for handling samples without affecting inner chamber temp. and humidity (optional)

### Features for Stability Test ICH Guideline Q1A (R2)

- Operating progress visible through graph mode
- Cyclic defrost system for the long period stability test operation
- Water level check indicated by level bar in the water tank
- Direct water system is beneficial for performing long-term test (optional)

### Features for Photostability Test ICH Guideline Q1B (Option 2)

- Built in UV and fluorescent lamps for uniformed luminescence
- Equipped with movable UV and VIS sensors
- Independent lamp controller: An indicator for Total usage time of UV and fluorescent lamps
- Convenient set function of cumulative dosage and lamp Off



- Wire shelves, Cable port (Ø50mm)
- Fluorescent lamp (cool white), UVA lamp, UV sensor, Illumination sensor, Door key

# Plant Growth Chambers

GC-300TLH/1000TLH (5 to 50°C, 40 to 90%)

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 with the optional recorder

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	FI lamp (32W×18ea)				FL lamp (32W×16ea), Metal lamp (400W×3ea)	
Humidity	Range (% RH)	-		40 to 80 at 20 to 35℃ 70 to 90 at 36 to 50℃	50 to 90 at 20 to 35℃ 60 to 90 at 36 to 50℃		
	Fluctuation (±RH) at 60% RH	-		3			
CO <sub>2</sub> (optional)	Range (ppm)	Max. 5,000					
	Sensor	NDIR CO <sub>2</sub> sensor					
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 / 15A	50Hz / 15A	60Hz / 15A	50Hz / 15A	60Hz / 17A	50Hz / 17A
Cat. No.		AAHA1011K	AAHA1012K	AAHA1021K	AAHA1022K	AAHA1031K	AAHA1032K

※ FDA establishment registered company. FDA listed products.



## 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

## Safety Systems

- Auto shut off after overheat alarm
- Low and empty water level alarm
- Power supply leakage breaker
- Over current protection
- Overheat protection
- Door open alarm

## Microprocessor PID control / Auto-tuning / Calibration

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 (only 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 (only for GC-1000TLH)
- Stable and long lasting lighting through introduction of high frequency electronic ballast lamps

## 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 air filter no longer cumbersome with our detachable condenser air filter



- Inner glass door, Wire shelves

## for Tabletop Chambers &amp; Floor Standing Chambers

## Accessory check list

☐ Standard    ☐ Optional

Description	Models									
	TH-G	TH-I	TH-KH	TH-TG	TH-DG	TH-KE	TH-ME	TH-PE	TH-ICH	TH-CR
Recorder (6 points)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recorder (digital, 6 channels)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interface converter (RS-485C → 232C included a cable, 5m / 16.4ft)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interface cable (5m / 16.4ft)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Warning signal lamp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inner glass door	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	-	<input type="radio"/>	-
Viewing window	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perforated shelf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cable port (Ø 50mm / 2")	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cable port (Ø 80mm / 3.2") <sup>1)</sup>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Temperature sensor (RTD type)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<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"/>	<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="radio"/>
Water cartridge tank (Water Container)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	<input type="checkbox"/>
Water purifier	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct water system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stand	-	-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-
Two step stand	-	-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-

1) 80mm cable access hole is NOT available for 25L chamber.

## for Tabletop Chambers &amp; Floor Standing Chambers

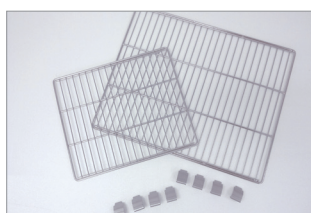
## Ordering information

Cat. No.	Description	Suitable for
AAA8T504	Recorder (6 points)	Tabletop models
AAA8T500		Floor standing models
AAA8T506	Recorder (digital, 6 channels)	Tabletop models
AAA8T505		Floor standing 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
AAAC6511		TH-DG-150
AAAC6512		TH-DG-300
AAAC6513		TH-DG-400
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//DG TH-TG/ICH/CR, TH-KE/ME/PE
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
AAA8T621	Water purifier	All models
AAA80620	Direct water system	All models
AAA80631	Stand	TH-KE/ME/PE-025
AAA80632		TH-KE/ME/PE-065
AAA80633		TH-KE/ME/PE-100
AAA80634	Two step stand	TH-KE/ME/PE-025
AAA80635		TH-KE/ME/PE-065

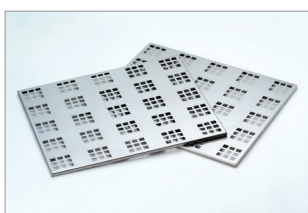
Cat. No.	Description	Suitable for
RTD679	Wire shelf	TH-KE/ME/PE-025
RTD680		TH-KE/ME/PE-065
RTD681		TH-KE/ME/PE-100
EDA8212		TH-G//KH-180
EDA8213		TH-G//KH-300
EDA8214		TH-G//KH-408
EDA8215		TH-G-800
EDA8216		TH-G-1000
RTD1302		TH-TG-180
RTD1303		TH-TG-300
RTD1300		TH-TG-408
RTD1304		TH-TG-800
RTD1301		TH-TG-1000
RTD1305		TH-G/TG-1500
EDA8251		TH-DG-150
RTD1280		TH-DG-300
EDA8250		TH-DG-400
RTD1196		TH-ICH-300
RTD1198		TH-ICH-800
STT 1040		TH-CR-270
AAA80602-6	Perforated shelf	TH-KE/ME/PE-025
AAA80602-7		TH-KE/ME/PE-065
AAA80602-8		TH-KE/ME/PE-100
AAA80602-1		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
AAAC6501		TH-DG-150
AAAC6502		TH-DG-300
AAAC6503		TH-DG-400
AAA80604-2		TH-ICH-300
AAA80604-4		TH-ICH-800
AAA80603-1		TH-CR-270

## for Plant Growth Chamber

## Accessories &amp; Options



Wire shelves



Perforated shelves



Recorder (dot type)

CO<sub>2</sub> sensor

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



- / Autoclaves
- / Baths & Circulators
- / Desiccators
- / Furniture
- / Hoods
- / Incubators
- / Ovens
- / Pumps
- / Recirculating Coolers (Chillers)
- / Refrigerators & Freezers
- / Rotator
- / Shakers
- / Heating & Cooling Blocks
- / Hotplates & Stirrers
- / Vortex mixers
- / Temperature Chambers
- / Temperature & Humidity Chambers
- / Electrophoresis Systems
- / Pipettes
- / Ultrasonic Cleaners
- / Plasticware & Others