

Temperature & Humidity Chamber

General type (-5 ~ 100°C)

Stable control for long-term temperature and humidity tests



TH-TG-180

with Wire Shelves 2ea, Φ 50 Cable Port (standard), Recorder (option)



TH-TG-1500

with Wire Shelves 2ea, Φ 50 Cable Port (standard), Recorder, Signal Lamp (option)

▮ Optimized For Long-term Testing

- Superior defrosting control technology ensures stable temperature and humidity control for long-term tests.
- Recommended in case no low temperature testing.
- 6 models up to 1500L depending on capacity.
- Satisfies ICH Guideline Q1A (R2) Stability Test.
- Recorder for maintaining test records. (option)
- Options available for convenient internal observation during long-term testing and access to samples under testing. (inner glass door and hand-in port)

▮ Structural Functional Features

- Optimum temperature and humidity test can be carried out even with minimum refrigeration performance, it makes reduce the electric energy efficiently.
- Excellent thermal insulation and sealing to ensure stable temperature and humidity reproducibility even for repeated test use.
- Proven reproducibility and reliability with structural design optimized for each capacity.
- The door part is a double-sealed structure that provides enhanced airtightness.

Use Convenience Features

- Convenient operation with large color touch display controller.
- Efficient water supply and recirculation system minimizes water refilling even for long-term high-humidity tests.
- Drawer-type water tank structure makes refill the water easily at the front part.
- Possible structure to refill the water even during operation.
- Convenient checking the water level at the front of the chamber.
- Direct water supply system. (option)
- Easy observation of samples with tempered glass door with built in heating wire and LED lamp.
- Open/close door with latches on either side.
- Door handle with built-in key lock.
- Cable port (Ø50 mm) is included as standard, making it convenient to connect external equipment.
- Easy to clean as it is easy to remove refrigerator condenser grill, making it convenient to maintain efficiency of refrigeration.



Drawer-type water tank



Door handle and locking device

Multifunction Control System

- Save program information and back up the set values.
- Includes temperature and humidity auto-tuning.
- Highly reliable control through temperature calibration.
- PID zone subdivided into 9 zones for more precise control stability.
- RS-232 port (default) and RS-485 port (option) supported.
- Control and data processing by connecting up to 32 devices to PC at same time via RS-485 port.
- Convenient checking with useful graph display.



Cable port



Tempered glass window with wire heater and LED lamp

Description	No.
Pattern	100
Repeat time	999
Part repeat time	255
Max. segments / pattern	100
Available max. segments	2000
Programmable process time / segment	99 hr. 59 min.

* It is possible to set 100 segments per pattern, but the maximum number of segments is not 10,000 (100 pattern x 100 segment) but 2,000.

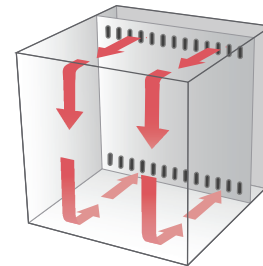
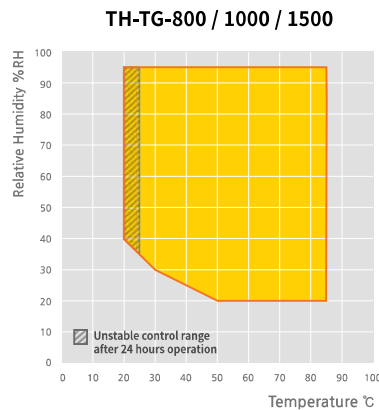
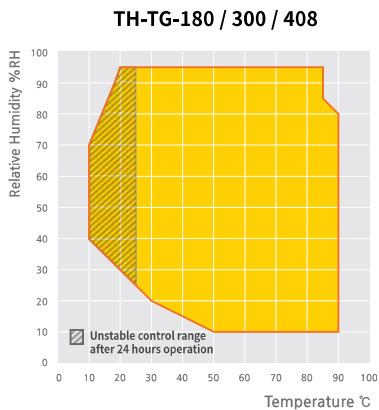


Controller



▮ Outstanding Safety

- Electronic over temperature shutdown system (advanced over temperature (A-OT) limiter)
Independent precision temperature sensor and controller for safer and more accurate over temperature shutdown.
- General-type over power shutdown system. (B-OT, backup over temperature limiter)
A backup device for electronic system failure, mechanically preventing over temperature even when it occurs electronic errors.
- Ensures that the surface temperature is kept below 60°C.
- Low and empty water level alarm and automatic shut off.
- Door open warning and automatic shut off.
- Overcurrent and short circuit protection of device.
- Fuse installed for each heater for safety.
- Auto stop when operating current of compressor is overloaded.
- Auto stop when compressor is overheating.
- Auto shut off in case refrigerant pressure (high/low pressure) is abnormal.



Humidity & Temperature Chamber

Specification

Model	TH-TG-180	TH-TG-300	TH-TG-408	TH-TG-800	TH-TG-1000	TH-TG-1500
Interior dimensions						
Chamber volume (L / cu ft)	180 / 6.4	314 / 11.1	419 / 14.8	770 / 27.2	997 / 35.2	1540 / 54.4
Width (mm / inch)	500 / 19.7	748 / 29.4	748 / 29.4	748 / 29.4	748 / 29.4	1100 / 43.3
Depth (mm / inch)	600 / 23.6	600 / 23.6	800 / 31.5	920 / 36.2	1190 / 46.9	1000 / 39.4
Height (mm / inch)	600 / 23.6	700 / 27.6	700 / 27.6	1120 / 44.1	1120 / 44.1	1400 / 55.1
Quantity of 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
Cable port (∅, mm / inch)	50 / 2.0	50 / 2.0	50 / 2.0	50 / 2.0	50 / 2.0	50 / 2.0
Water tank capacity (L / cu ft)	15 / 0.5	15 / 0.5	15 / 0.5	15 / 0.5	15 / 0.5	15 / 0.5
Weight (kg / lbs)	220 / 485.0	250 / 551.2	280 / 617.3	360 / 793.7	410 / 903.9	480 / 1058.2
Temperature data						
Range without humidity (°C / °F)	-5 to 100 / 23 to 212	-5 to 100 / 23 to 212	-5 to 100 / 23 to 212	-5 to 100 / 23 to 212	-5 to 100 / 23 to 212	-5 to 100 / 23 to 212
Fluctuation (±°C / °F) ¹⁾	0.3 / 0.54	0.3 / 0.54	0.3 / 0.54	0.3 / 0.54	0.3 / 0.54	0.3 / 0.54
Variation (±°C / °F) ¹⁾	0.5 / 0.9	0.5 / 0.9	0.5 / 0.9	0.5 / 0.9	0.5 / 0.9	0.5 / 0.9
Heating time (-5°C to 100°C) (min)	50	50	50	55	55	55
Cooling time (100°C to -5°C) (min)	120	120	120	145	145	145
Humidity data (※ Ref.: Temp./ Humid. control range graph)						
Range (%RH)	10 to 95	10 to 95	10 to 95	25 to 95	25 to 95	25 to 95
Fluctuation (±%RH) ¹⁾	2	2	2	2	2	2
Variation (±%RH) ¹⁾	3	3	3	3	3	3
Electrical data & Ordering information						
Electrical requirements (230V, 1ph, 50/60Hz, A)	11.8	13.9	13.9	14.9	14.9	24
Cat. No.	AAHC2002K	AAHC2012K	AAHC2022K	AAHC2032K	AAHC2042K	AAHC2052K

※ The above specifications are tested according to IEC 60068 standard.

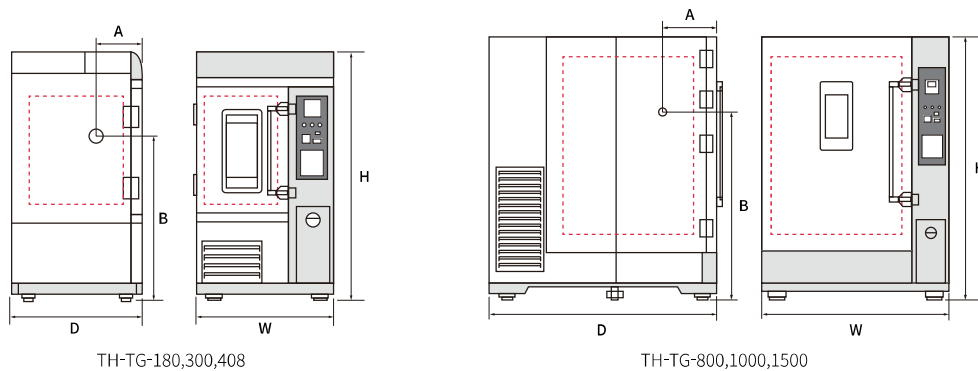
※ Permissible environmental conditions are 18 - 30°C (recommended 20°C), 85%RH or less, under 2000m above sea level.

※ The DI water condition is pH 6.2 - 7.2 and the electrical conductivity is less than 20µs/cm.

1) The set value is set under the conditions of 40°C, 60%RH.

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Cable Port, Shelves, Signal Lamp, Recorder, Water Purifier, Direct Water System, Inner Glass Door



Dimension

Model	TH-TG-180	TH-TG-300	TH-TG-408	TH-TG-800	TH-TG-1000	TH-TG-1500
W (mm / inch)	952 / 37.5	1201 / 47.3	1201 / 47.3	1201 / 47.3	1201 / 47.3	1554 / 61.2
D (mm / inch)	907 / 35.7	907 / 35.7	1107 / 43.6	1228 / 48.3	1498 / 59.0	1872 / 73.7
H (mm / inch)	1503 / 591.7	1525 / 60.0	1525 / 60.0	1993 / 78.5	1993 / 78.5	1935 / 76.2
A (mm / inch)	321 / 12.6	366 / 14.4	366 / 14.4	385 / 15.2	520 / 20.5	447 / 17.6
B (mm / inch)	1004 / 39.5	1016 / 40.0	1016 / 40.0	1335 / 52.6	1335 / 52.6	1384 / 54.5