

Temp. & Humid. Chambers

Temp. & Humid. Chamber (Floor Standing Models)



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TH-TG Models



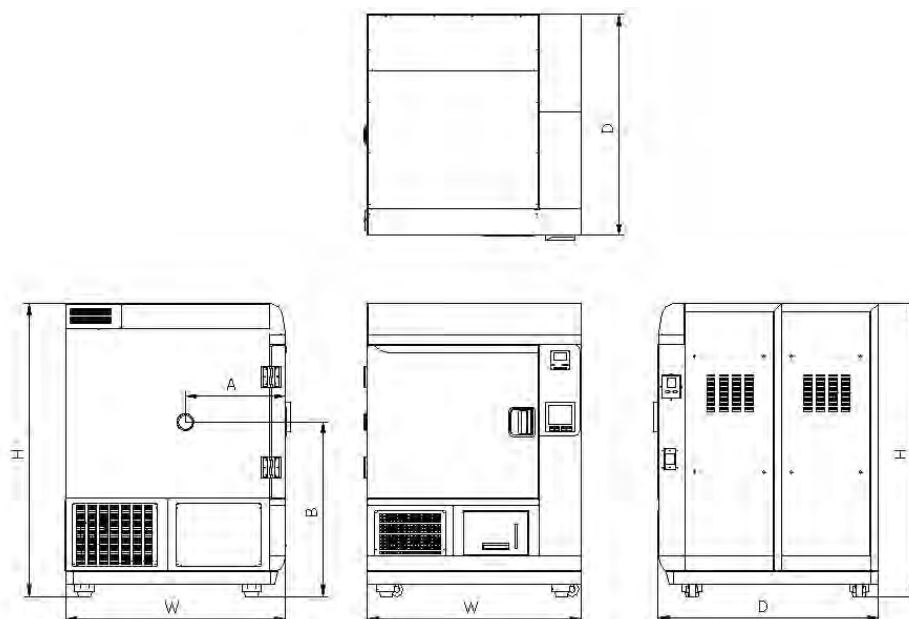
TH-ICH Models

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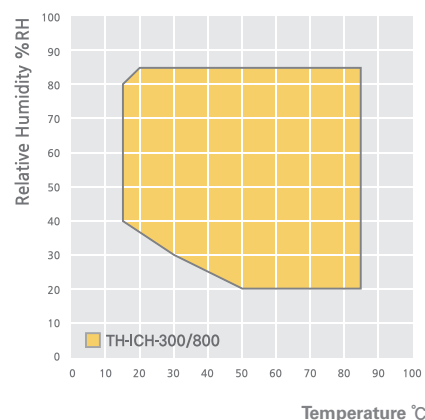
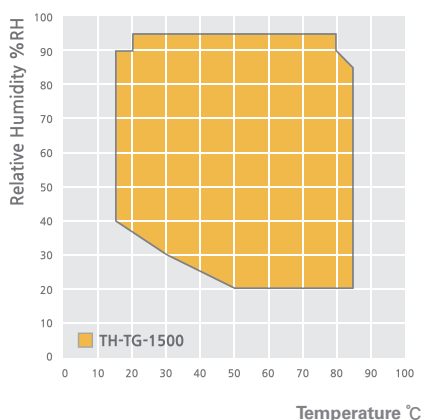
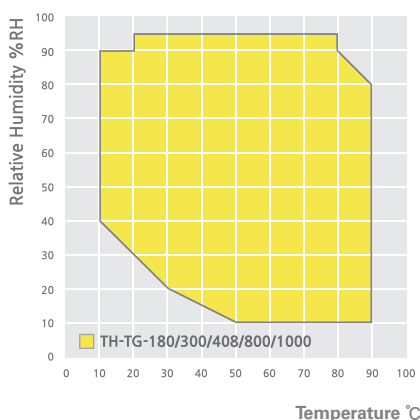
Dimension

(TH-TG / TH-ICH Models)



Model	Capacity	W	D	H	A	B
TH-TG-180	190L (6.7 cu ft)	880mm (34.6")	945mm (37.2")	1465mm (57.7")	420mm (16.5")	880mm (34.6")
TH-TG-300	300L (10.6 cu ft)	1130mm (44.5")	945mm (37.2")	1520mm (59.8")	420mm (16.5")	905mm (35.6")
TH-TG-408	410L (14.5 cu ft)	1130mm (44.5")	1045mm (41.1")	1520mm (59.8")	520mm (20.5")	905mm (35.6")
TH-TG-800	760L (26.8 cu ft)	1220mm (48")	1175mm (46.3")	1965mm (77.4")	520mm (20.5")	1010mm (39.8")
TH-TG-1000	960L (33.9 cu ft)	1220mm (48")	1415mm (55.7")	1965mm (77.4")	635mm (25")	1010mm (39.8")
TH-TG-1500	1500L (53 cu ft)	1450mm (57.1")	1900mm (74.8")	2065mm (81.3")	635mm (25")	800mm (31.5")
TH-ICH-300	300L (10.6 cu ft)	1130mm (44.5")	985mm (38.8")	1520mm (59.8")	460mm (18.1")	905mm (35.6")
TH-ICH-800	760L (26.8 cu ft)	1220mm (48")	1215mm (47.8")	1965mm (77.4")	545mm (21.5")	1185mm (46.7")

Temperature & Humidity Control Range



TH-TG (190 to 960L)

- 40~90% RH at 10°C
- 20~95% RH at 30°C
- 10~95% RH at 50~80°C
- 10~80% RH at 90°C

TH-TG (1500L)

- 40~90% RH at 15°C
- 30~95% RH at 30°C
- 20~95% RH at 50~80°C
- 20~85% RH at 85°C

TH-ICH (300, 760L)

- 40~80% RH at 15°C
- 30~85% RH at 30°C
- 20~85% RH at 50~85°C

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The temperature & humidity chamber units comply with the ICH guidelines.

Stability Testing Q1A (R2)-ICH, TG Chamber Models.

Photostability Testing Q1B (Option 2)-ICH Chamber Models.

► Constructional Features

- High quality #304 stainless steel exterior and interior.
- Casters for easy mobility when installing or moving environmental test chamber.
- Convenient maintenance
 - Available to check total operating time.
- Unique door lock & trim.
- Vice lock type door and foam silicone packing to ensure a perfect seal.
- 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)
- Container type tank for easy adding and changing of water.
 - Maintenance of the water tank can be easily performed from the front side.
- Door lock.
- Cyclic defrost functions does not affect the temperature and humidity control for extended operation. (Under 15°C set value)
- Powerful two Sirocco fans maintains a constant airflow in the chamber.

► Operating Features

- Microprocess PID control / Auto-tuning / Calibration.
- Digital LCD display with touch-sensitive 7 keypads.
- Easy operation with wide LCD screen.
 - Temperature and humidity / timer settings and operation condition.
- Program patterns are memorized for 10 years due to a battery built into the PCB.
- Expansion parameter inputs. (conveniently display by letters)
- Programming operation.
- 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.
- Chart recorder. (optional)
 - 6-point dots type recorder with digital display.
 - Digital recorder. (6-channels)

► Additional TH-ICH 300/800 Features

- In the event of a validation the apparatus correctly controls each light and then transfers accurate data and is equipped with light sensors. (UV light sensor / VIS light sensor)
- Samples that have to be exposed to the light in which it is completely near the UV energy of less than 200W-hr/m² is provided to compare directly the results from overall intensity of less than 1.20 million lux-hr, drug substances and reagent.
- Total fluorescent lamp and UV lamp indicator and operating time indicator.

► Safety Features

- Leakage breaker for power supply.
- Over current protection.
- Overheat protection.
- Switch-off after alarm for over heating.
- Door open alarm.
- Water empty.
- Vice lock door type locking mechanism. (optional)
- Alarm for completed Photostability Test. (only TH-ICH Models)



Temp. & Humid. Chambers

Temp. & Humid. Chamber (Floor Standing Models)

Specifications & Ordering Information



Model			TH-TG-180	TH-TG-300	TH-TG-408	TH-TG-800	TH-TG-1000	TH-TG-1500	
Chamber Volume (L / cu ft)			190 / 6.7	300 / 10.6	410 / 14.5	760 / 26.8	960 / 33.9	1500 / 53	
Controller			PID control (LCD Type)						
Temperature ¹⁾	Range	without Humidity (°C / °F)	-5 to 100 / 23 to 212						
		with Humidity (°C / °F)	+10 to 90 / 50 to 194					+15 to 85	
	Fluctuation ¹⁾ (±°C / °F) at 40°C / 60%RH		0.3 / 0.55					0.5 / 0.9	
	Variation ¹⁾ (±°C / °F) at 40°C / 60%RH		0.5 / 0.9			0.7 / 1.3		1 / 1.8	
Humidity	Range (%RH)	FULL RANGE : 10 to 95 40 to 90 at 10°C (50°F) 30 to 95 at 20°C (68°F) 10 to 95 at 50°C to 80°C (122°F to 176°F) 10 to 80 at 90°C (194°F)						FULL RANGE : 20 to 95 40 to 90 at 15°C (59°F) 30 to 95 at 30°C (86°F) 20 to 95 at 50°C to 80°C (122°F to 176°F) 20 to 85 at 85°C (194°F)	
	Fluctuation ²⁾ (±%RH) at 60%RH / 40°C	2							
	Variation ²⁾ (±%RH) at 60%RH / 40°C	3							
Time	Heating ⁴⁾	50min (-5°C → 100°C)				55min (-5°C → 100°C)			
	Cooling ⁴⁾	120min (100°C → -5°C)				145min (100°C → -5°C)			
Refrigeration	System	Air-cooled							
	Refrigerant	R-404A							
	Capacity (W)	150	250	250	470	470	470x2		
Cooler			Copper plate fin cooler						
Heater	Material	Ni-Cr Wire Heater / SUS Tube Heater							
	Drying Bulb (w)	1000	1500	1500	2300	2300	3000		
	Humidity Bulb (w)	1000	1200	1200	2000	2000	2500		
Sensor	Temperature	Pt 100							
	Humidity	Electronic sensor (Free of drying a wet pack and good response time)							
Air Flow			2 set of sirocco fan (2x60 W) : Vertical type						4 set of sirocco fan(4x60W) : Vertical type
Material	Internal	SUS #304 (2B polish)							
	External	SUS #304 (Hairline finish) & Steel, 2t, Double painted & baked							
	Insulation	Polyurethane (70mm / 2.76")							
	Door	Glasswool							
Operating Temperature			18°C to 30°C / 64.4°F to 56°F, 85%RH (Non-corrosive and pure place)						
Water Tank	Capacity (L / cu ft)	15 / 0.53						30 / 1.1	
	Water Quality	pH6.2 ~ 7.2, Electrical conductivity 20μS / 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")						
Viewing Window (mm / inch)			230x340 / 9.1x13.4 (option)						
Dimension (WxDxH)	Internal (mm / inch)	500x650x600 / 19.7x25.6x23.6	750x650x650 / 29.5x25.6x25.6	750x850x650 / 29.5x33.5x25.6	750x880x1160 / 29.5x34.6x45.7	750x1110x1160 / 29.5x43.7x45.7	1000x1000x1500 / 39.4x39.4x59.1		
	External (mm / inch)	880x945x1465 / 34.6x37.2x57.7	1130x945x1520 / 44.5x37.2x59.8	1130x1045x1520 / 44.5x41.1x59.8	1220x1175x1965 / 48x46.3x77.3	1220x1415 x1965 / 48x55.7x77.4	1450x1900x2065 / 57.1x74.8x81.3		
Net Weight (kg / lbs)			220±10 / 485±22	250±10 / 485±22	280±10 / 617±22	360±10 / 794±22	410±10 / 904±22	480±10 / 1058±22	
Electrical Requirements	AC230V, 1ph, 60Hz	13.1 A	15.4 A	15.4 A	24.5 A	24.5 A	30.5A		
	Cat.No.	AAHC2001K	AAHC2011K	AAHC2021K	AAHC2031K	AAHC2041K	AAHC2051K		
	AC230V, 1ph, 50Hz	12.4 A	14.7 A	14.7 A	23.5 A	23.5 A	29.2A		
	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

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

4) Up to 98% of the set value.

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Specifications & Ordering Information



Model		TH-ICH-300	TH-ICH-800
Chamber Volume (L / cu ft)		300 / 10.6	760 / 26.8
Controller		PID control (LCD Type)	
Temperature ¹⁾	Range	without Humidity (°C / °F)	-5 to 85 / 23 to 185 without Light
			0 to 85 / 32 to 185 with Light
		with Humidity (°C / °F)	+15 to 85 / 59 to 185 with Light
	Fluctuation ¹⁾ (±°C / °F) at 40°C / 60%RH		0.3 / 0.55
	Variation ¹⁾ (±°C / °F) at 40°C / 60%RH		0.7 / 1.3
Humidity	Range (%RH)		FULL RANGE : 20 to 85 40 to 80 at 15°C (59°F) 30 to 85 at 30°C (86°F) 20 to 85 at 50°C to 85°C (122°F to 185°F)
	Fluctuation ²⁾ (±%RH) at 60%RH / 40°C		3
	Variation ²⁾ (±%RH) at 60%RH / 40°C		5
Light Source (ICH Q1B option 2)	Cool White ³⁾		6,000 lux
	Ultraviolet-A ³⁾		5 W/m ²
	Light Uniformity		VIS. : ±10% 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 ²		≒ 50Hr	≒ 40Hr
Time	Heating ⁴⁾		25min (20°C → 85°C)
	Cooling ⁴⁾		35min (20°C → -5°C)
Refrigeration	System		Air-cooled
	Refrigerant		R-404A
	Capacity (W)		250
Cooler		Copper plate fin cooler	
Heater	Material		Ni-Cr Wire Heater / SUS Tube Heater
	Drying Bulb (W)		1500
	Humidity Bulb (W)		1200
Sensor	Temperature		Pt 100
	Humidity		Electronic sensor (Free of drying a wet pack and good response time)
Air Flow		2 set of sirocco fan (2×60W) : Vertical type	
Material	Internal		SUS #304 (2B polish)
	External		SUS #304 (Hairline finish) & Steel, 2t, Double painted & baked
	Insulation		Polyurethane (70mm / 2.76")
	Door		EPDM Sheet
Operating Temperature		18°C to 30°C / 64.4°F to 86°F, 85%RH (Non-corrosive and pure place)	
Water Tank	Capacity (L / cu ft)		15 / 0.53
	Water Quality		pH6.2 ~ 7.2, Electrical conductivity 20μS / 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)		750×650×650 / 29.5×25.6×25.6
	External (mm / inch)		1130×985×1520 / 44.5×38.8×59.8
Net Weight (kg / lbs)		280±10 / 617±22	
Electrical Requirements	AC230V, 1ph, 60Hz		15.4 A
	Cat.No.		AAHC1001K
	AC230V, 1ph, 50Hz		14.7 A
	Cat.No.		AAHC1002K

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.

4) Up to 98% of the set value.