



品質、技術、服務

弘達儀器股份有限公司

HUNG TA INSTRUMENT CO., LTD.

# 環境試驗機系列

VARIOUS ENVIRONMENTAL  
TESTING CHAMBERS

## 先進的系統測試

幫助世界各地的工程師發展出一套更安全  
更值得信賴的儀器和零配件



# H T-8045A, HT-8045C

## HT-8045A 可程式恒溫恒濕試驗機 PROG. HUMIDITY CHAMBER

### 完美的造型設計

圓弧造型及霧面線條處理，高質感外觀，並採用平面無反作用把手，操作容易，安全可靠。

### Hung Ta has achieved a perfect design

The rounded corners of the front face give a pleasing appearance the bump-free. Smoothly locking door has a flush surface that is free from any protrusions such as handles.

## 次型號示意 ORDER INFORMATION

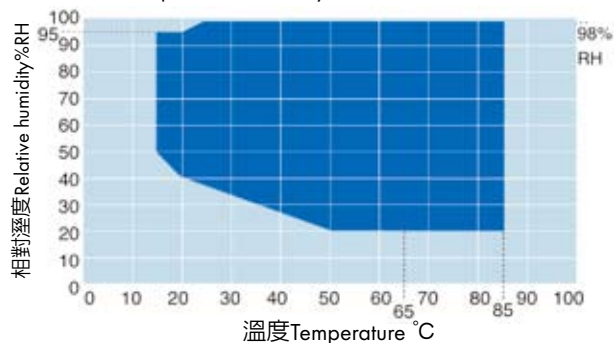
HTL	225	A	T
Temperature range 溫度範圍			Temperature only 僅有溫度，不做溼度
HTL : -70°C~+150°C			
HTN : -50°C~+150°C			
HTM : -40°C~+150°C		Mode of control 控制方式	
HT : -30°C~+150°C		A : Programmable 可程式	
HTC : 0°C~+150°C		B : Set point 直讀式	
Volume of chamber 內容積			
80 : 40×50×40cm	800 : 100×100×80cm		
150 : 50×60×50cm	3000 : 150×100×200cm		
225 : 50×75×60cm	4500 : 150×150×200cm		
408 : 60×85×80cm	8000 : 200×200×200cm		

## HT-8045C 桌上型恒溫恒濕試驗機 (單點直讀式) BENCH TOP HUMIDITY CHAMBER (SET POINT)

型號 Model	HT-8045C
系統 System	平衡調溫調濕控制系統 Balanced temperature & humidity control system
溫度範圍 Temp. range	0°C~+100°C
濕度範圍 Humid range	30~98%RH
溫度精度 Temp. constancy	±1.0°C
濕度精度 Humid constancy	±3%RH
溫度分布均度 Temp. uniformity	±1.0°C
濕度分布均度 Humid uniformity	±3%RH 中心點 (in the center)
升溫時間 Heat-up time	+25°C~+100°C約需35分鐘approx 35 min.
降溫時間 Cool down time	+25°C~ 0°C約需20分鐘within 20min.
內箱尺寸 Inside dimensions	40(W)x45(H)x40(D) cm
外箱尺寸 Outside dimensions	120(W)x80(H)x75(D) cm
內箱材質 Interior material	SUS#304 stainless steel plate不銹鋼一級鏡面光板
外箱材質 Exterior material	SUS#304 stainless steel plate不銹鋼霧面線條處理
保溫材質 Insulation material	硬質發泡(150°C時為玻璃棉) Rigid polyurethane foam (glass wool 吃150°C)
冷凍系統 Refrigeration system	全密封式壓縮機，單段式 hermetic compressor, single stage refrigeration system
保護裝置 Safety devices	無熔絲開關，壓縮機過載保護開關，冷媒高壓保護開關，超高溫保護開關，陶瓷保險絲，水盤缺水保護開關，電磁保護開關，故障警告系統，警報器No fuse breaker, refrigerator overload relay, refrigerator high pressure switch, air circulator thermal switch, protection relay, protection fuse, boil dry protector, system trouble monitor alarm and overheat protector
配件 Accessories	視窗，上下可調隔板兩片，測試孔Ø50mm，室內燈 viewing window, shelves (freely adjustable 2 pcs), cable port (50 mm dia.) and chamber lamp
使用電源 Power supply	AC 1Ø, AC220/240V, 50/60Hz

註：所有機型之記錄器為選購配備  
Note: Recorder for all models is optional.

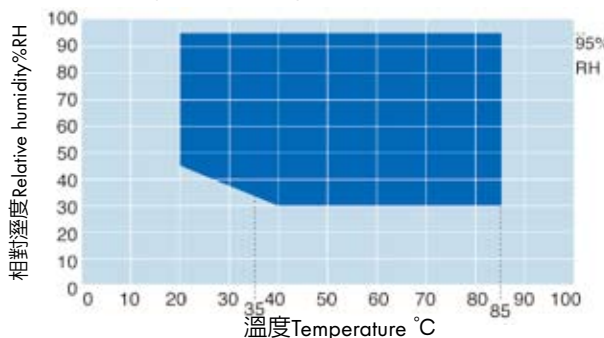
HT-8045A 溫濕度控制能力圖  
Temperature Humidity Control Chart



HT-8045C



HT-8045C 溫濕度控制能力圖  
Temperature Humidity Control Chart



# H

## T-8045A, HT-8045AT, HT-8045B, HT-8045BT

### HT-8045A 可程式恆溫恆濕試驗機 PROG. HUMIDITY CHAMBER

- LCD液晶顯示、中英文設定、100個程式記憶，100個段次，99次循環設定。
- LCD display, Chinese/English setting, maximum 100 programs, 100 steps in total, 99 cycles repeat setting.

HT-8045A



### HT-8045B 直讀式恆溫恆濕試驗機 DIRECT DISPLAY HUMIDITY CHAMBER

- LED顯示、中英文設定、解析度0.1°C，1%RH，PID控制方式。
- LED display, Chinese/English setting, 0.1°C, 1%RH resolution fix point, PID control.

HT-8045B



可程式溫溼度控制器因型式不斷推陳出新，若有更換恕不另行通知。  
The model of programmable temperature/ humidity controller is under continuous improvement and so subject to change without notice.

### HT-8045AT 可程式恆溫試驗機 PROG. TEMPERATURE CHAMBER

- LCD液晶顯示、中英文設定、100個程式記憶，100個段次，99次循環設定。
- LCD display, Chinese/English setting, maximum 100 programs, 100 steps in total, 99 cycles repeat setting.

HT-8045AT



### HT-8045BT 直讀式恆溫試驗機 DIRECT DISPLAY TEMPERATURE CHAMBER

- LED顯示、中英文設定、解析度0.1°C，1%RH，PID控制方式。
- LED display, Chinese/English setting, 0.1°C, 1%RH resolution fix point, PID control.

HT-8045BT



可程式溫溼度控制器因型式不斷推陳出新，若有更換恕不另行通知。

The model of programmable temperature/ humidity controller is under continuous improvement and so subject to change without notice.

註：可程式機型含USB模組為選購配備

Note: USB models for all types are optional.

# H T-8045A, HT-8045B

## HT-8045A/B 恆溫恆濕試驗機

### PROG. / SET POINT HUMIDITY CHAMBER SPECIFICATIONS

型號 Model	HTL-80A/B	HTL-150 A/B	HTL-225 A/B	HTL-408 A/B	HTL-800 A/B	HTN-80 A/B	HTN-150 A/B	HTN-225 A/B	HTN-408 A/B	HTN-800 A/B	
系統 System	平衡調溫調濕控制系統 Balanced temperature & humidity control system										
溫度範圍 Temp. range	-70°C~+150°C					-50°C~+150°C					
濕度範圍 Humid range	20~98% RH					20~98% RH					
溫度精度 Temp. constancy	±0.3°C					±0.3°C					
濕度精度 Humid constancy	±3%RH					±3%RH					
溫度分布均度 Temp. uniformity	±1.0°C					±1.0°C					
濕度分布均度 Humid uniformity	±3%RH中心點 (in the center)					±3%RH中心點 (in the center)					
升溫時間 Heat-up time	-70°C~+150°C 約需70分鐘					-50°C~+150°C 約需45分鐘					
降溫時間 Cool down time	+20°C~-70°C 約需70分鐘					+20°C~-50°C 約需50分鐘					
內箱尺寸 Inside dimensions(WxHxD)cm	40x50x40	50x60x50	50x75x60	60x85x80	100x100x80	40x50x40	50x60x50	50x75x60	60x85x80	100x100x80	
外箱尺寸 Outside dimensions	110x137x67	120x147x77	120x162x87	130x172x107	170x187x107	110x137x67	120x147x77	120x162x87	130x172x107	170x187x107	
內箱材質 Interior material	SUS#304 stainless steel plate 不銹鋼四號沙面光板										
外箱材質 Exterior material	SUS#304 stainless steel plate 不銹鋼四號沙面光板										
保溫材質 Insulation material	硬質發泡及玻璃棉 Rigid polyurethane foam & glass wool										
冷凍系統 Refrigeration system	二段式全密閉式壓縮機 hermetic compressor, cascade refrigeration system				氣冷式 Air cooled			二段式全密閉式壓縮機 hermetic compressor, dual stage refrigeration system			單段式全密閉式壓縮機 hermetic compressor, single stage refrigeration system
保護裝置 Safety devices	無熔絲開關, 壓縮機過載保護開關, 冷媒高壓保護開關, 超高溫保護開關, 保險絲, 水盤缺水保護開關, 電磁保護開關, 故障警告系統 no fuse breaker, refrigerator overload relay, refrigerator high pressure switch, over-temp. protector, protection fuse, water level protector, protection relay, system trouble monitor alarm										
配件 Accessories	視窗, 上下可調隔板兩片, 測試孔Ø50mm, 室內燈 viewing window, shelves (freely adjustable 2 pcs), cable port (50 mm dia.) and chamber lamp										
使用電源 Power supply	1Ø, AC220~240V, 50/60Hz				3Ø, AC220V~415V, 50/60Hz			1Ø, AC220~240V, 50/60Hz			3Ø, AC220V~415V, 50/60Hz

## HT-8045A/B 可程式恆溫恆濕試驗機

### PROG. / SET POINT HUMIDITY CHAMBER SPECIFICATIONS

型號 Model	HTM-80A/B	HTM-150 A/B	HTM-225 A/B	HTM-408 A/B	HTM-800 A/B	HT-80 A/B	HT-150 A/B	HT-225 A/B	HT-408 A/B	HT-800 A/B	
系統 System	平衡調溫調濕控制系統 Balanced temperature & humidity control system										
溫度範圍 Temp. range	-40°C~+150°C					-30°C~+150°C					
濕度範圍 Humid range	20~98% RH					20~98% RH					
溫度精度 Temp. constancy	±0.3°C					±0.3°C					
濕度精度 Humid constancy	±3%RH					±3%RH					
溫度分布均度 Temp. uniformity	±1.0°C					±1.0°C					
濕度分布均度 Humid uniformity	±3%RH中心點 (in the center)					±3%RH中心點 (in the center)					
升溫時間 Heat-up time	-40°C~+150°C 約需40分鐘					-30°C~+150°C 約需35分鐘					
降溫時間 Cool down time	+20°C~-40°C 約需45分鐘					+20°C~-35°C 約需35分鐘					
內箱尺寸 Inside dimensions(WxHxD)cm	40x50x40	50x60x50	50x75x60	60x85x80	100x100x80	40x50x40	50x60x50	50x75x60	60x85x80	100x100x80	
外箱尺寸 Outside dimensions	110x137x67	120x147x77	120x162x87	130x172x107	170x187x107	110x137x67	120x147x77	120x162x87	130x172x107	170x187x107	
內箱材質 Interior material	SUS#304 stainless steel plate 不銹鋼四號沙面光板										
外箱材質 Exterior material	SUS#304 stainless steel plate 不銹鋼四號沙面光板										
保溫材質 Insulation material	硬質發泡及玻璃棉 Rigid polyurethane foam & glass wool										
冷凍系統 Refrigeration system	二段式全密閉式壓縮機 hermetic compressor, cascade refrigeration system				氣冷式 Air cooled			二段式全密閉式壓縮機 hermetic compressor, dual stage refrigeration system			單段式全密閉式壓縮機 hermetic compressor, single stage refrigeration system
保護裝置 Safety devices	無熔絲開關, 壓縮機過載保護開關, 冷媒高壓保護開關, 超高溫保護開關, 保險絲, 水盤缺水保護開關, 電磁保護開關, 故障警告系統 no fuse breaker, refrigerator overload relay, refrigerator high pressure switch, over-temp. protector, protection fuse, water level protector, protection relay, system trouble monitor alarm										
配件 Accessories	視窗, 上下可調隔板兩片, 測試孔Ø50mm, 室內燈 viewing window, shelves (freely adjustable 2 pcs), cable port (50 mm dia.) and chamber lamp										
使用電源 Power supply	1Ø, AC220~240V, 50/60Hz				3Ø, AC220~415V, 50Hz			1Ø, AC220~240V, 50/60Hz			3Ø, AC220~415V, 50Hz

# H T-8045AT, HT-8045BT

## HT-8045AT/BT 恆溫試驗機

### PROG. / SET POINT TEMPERATURE CHAMBER SPECIFICATIONS

型號 Model	HTL-80AT/BT	HTL-150AT/BT	HTL-225 AT/BT	HTL-408AT/BT	HTL-800 AT/BT	HTN-80 AT/BT	HTN-150 AT/BT	HTN-225 AT/BT	HTN-408 AT/BT	HTN-800 AT/BT
系統 System	平衡調溫調濕控制系統 Balanced temperature & humidity control system									
溫度範圍 Temp. range	-70°C~+150°C					-50°C~+150°C				
溫度精度 Temp. constancy	±0.3°C					±0.3°C				
溫度分布均度 Temp. uniformity	±1.0°C					±1.0°C				
升溫時間 Heat-up time	-70°C~+150°C 約需70分鐘					-50°C~+150°C 約需45分鐘				
降溫時間 Cool down time	+20°C~-70°C 約需70分鐘					+20°C~-50°C 約需50分鐘				
內箱尺寸 Inside Dimensions (WxHxD)cm	40x50x40	50x60x50	50x75x60	60x85x80	100x100x80	40x50x40	50x60x50	50x75x60	60x85x80	100x100x80
外箱尺寸 Outside dimensions	110x137x67	120x147x77	120x162x87	130x172x107	170x187x107	110x137x67	120x147x77	120x162x87	130x172x107	170x187x107
內箱材質 Interior material	SUS#304 stainless steel plate 不銹鋼四號沙面光板									
外箱材質 Exterior material	SUS#304 stainless steel plate 不銹鋼四號沙面光板									
保溫材質 Insulation material	硬質發泡及玻璃棉 Rigid polyurethane foam & glass wool									
冷凍系統 Refrigeration system	二段式全密閉式壓縮機 hermetic compressor, cascade refrigeration system					氣冷式 Air cooled 二段式全密閉式壓縮機 hermetic compressor, dual stage refrigeration system			單段式全密閉式壓縮機 hermetic compressor, single stage refrigeration system	
保護裝置 Safety devices	無熔絲開關, 壓縮機過載保護開關, 冷媒高壓保護開關, 超高溫保護開關, 保險絲, 水盤缺水保護開關, 電磁保護開關, 故障警告系統 no fuse breaker, refrigerator overload relay, refrigerator high pressure switch, over-temp. protector, protection fuse, water level protector, protection relay, system trouble monitor alarm									
配件 Accessories	視窗, 上下可調隔板兩片, 測試孔Ø50mm, 室內燈 viewing window, shelves (freely adjustable 2 pcs), cable port (50 mm dia.) and chamber lamp									
使用電源 Power supply	1Ø, AC220~240V, 50/60Hz			3Ø, AC220~415V, 50/60Hz		1Ø, AC220~240V, 50/60Hz			3Ø, AC220~415V, 50/60Hz	

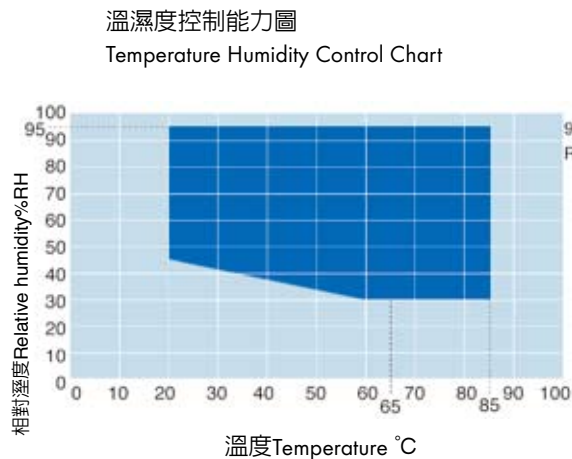
## HT-8045AT/BT 恆溫試驗機

### PROG. / SET POINT TEMPERATURE CHAMBER SPECIFICATIONS

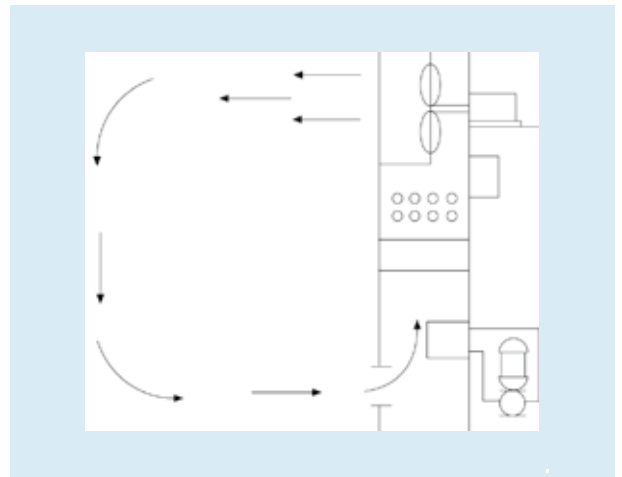
型號 Model	HTM-80AT/BT	HTM-150AT/BT	HTM-225 AT/BT	HTM-408AT/BT	HTM-800 AT/BT	HT-80 AT/BT	HT-150 AT/BT	HT-225 AT/BT	HT-408 AT/BT	HT-800 AT/BT
系統 System	平衡調溫調濕控制系統 Balanced temperature & humidity control system									
溫度範圍 Temp. Range	-40°C~+150°C					-30°C~+150°C				
溫度精度 Temp. Constancy	±0.3°C					±0.3°C				
溫度分布均度 Temp. Uniformity	±1.0°C					±1.0°C				
升溫時間 Heat-up time	-40°C~+150°C 約需40分鐘					-30°C~+150°C 約需35分鐘				
降溫時間 Cool down time	+20°C~-40°C 約需45分鐘					+20°C~-35°C 約需35分鐘				
內箱尺寸 Inside dimensions (WxHxD)cm	40x50x40	50x60x50	50x75x60	60x85x80	100x100x80	40x50x40	50x60x50	50x75x60	60x85x80	100x100x80
外箱尺寸 Outside dimensions	110x137x67	120x147x77	120x162x87	130x172x107	170x187x107	110x137x67	120x147x77	120x162x87	130x172x107	170x187x107
內箱材質 Interior material	SUS#304 stainless steel plate 不銹鋼四號沙面光板									
外箱材質 Exterior material	SUS#304 stainless steel plate 不銹鋼四號沙面光板									
保溫材質 Insulation material	硬質發泡及玻璃棉 Rigid polyurethane foam & glass wool									
冷凍系統 Refrigeration system	二段式全密閉式壓縮機 hermetic compressor, cascade refrigeration system					氣冷式 Air cooled 二段式全密閉式壓縮機 hermetic compressor, dual stage refrigeration system			單段式全密閉式壓縮機 hermetic compressor, single stage refrigeration system	
保護裝置 Safety devices	無熔絲開關, 壓縮機過載保護開關, 冷媒高壓保護開關, 超高溫保護開關, 保險絲, 水盤缺水保護開關, 電磁保護開關, 故障警告系統 no fuse breaker, refrigerator overload relay, refrigerator high pressure switch, over-temp. protector, protection fuse, water level protector, protection relay, system trouble monitor alarm									
配件 Accessories	視窗, 上下可調隔板兩片, 測試孔Ø50mm, 室內燈 viewing window, shelves (freely adjustable 2 pcs), cable port (50 mm dia.) and chamber lamp									
使用電源 Power supply	1Ø, AC220~240V, 50/60Hz			3Ø, AC220~415V, 50/60Hz		1Ø, AC220~240V, 50/60Hz			3Ø, AC220~415V, 50/60Hz	

# H T-9745 PROGRAMMABLE TEMPERATURE & HUMIDITY WALK-IN CHAMBER

溫濕度控制能力圖  
Temperature Humidity Control Chart



溫濕度控制系統  
Temperature Humidity Control System



## HT-9745 步入式恆溫恆溼試驗機 Programmable Temperature & Humidity Walk-In Chamber

型號 Model	HTN-S HTN-M HTN-L	HTM-S HTM-M HTM-L	HT-S HT-M HT-L	HC-S HC-M HC-L
系統 System	平衡調溫調溼控制系統 Balanced Temperature & Humidity Control System			
溫度範圍 Temp. range	-50°C~+80°C	-40°C~+80°C	-30°C~+80°C	0°C~+80°C
濕度範圍 Humi. range	35~95% RH			60~95% RH
溫度精度 Temp. constancy	±0.3°C			
濕度精度 Humi. constancy	±3%RH			
溫度分佈均度 Temp. uniformity	±2.0°C			
濕度分佈均度 Humi. uniformity	±5%RH中心點 (in the center)			
升溫時間 Heat-up time	+20°C~+80°C約需60分鐘			
降溫時間 Pull-down time	+20°C~-50°C約需100分鐘	+20°C~-40°C約需80分鐘	+20°C~-30°C約需60分鐘	+20°C~0°C約需30分鐘
地板負荷 Floor load	200 Kg/m2			
冷凍系統 Refrigeration system	水冷式二段式全密閉式壓縮機 hermetic compressor, dual stage refrigeration system		水冷式單段全密閉式壓縮機 Water-cooled hermetically sealed single stage compressor system (cascade refrigeration for HL & TL)	
保護裝置 Safety devices	無熔絲開關, 壓縮機過載保護開關, 冷媒高壓保護開關, 超高溫保護開關, 陶瓷保險絲, 水盤水保護開關, 電磁保護開關, 故障警告系統, 警報器 No fuse breaker, refrigerator overload relay, high pressure switch, air circulator thermal switch, protection relay, protection fuse, boil dry protector, system trouble monitor, alarm			
配件 Accessories	觀視窗 Viewing window, 測試孔(50mm) cable port (50mm), 箱內燈 chamber lamp			
電源 Power supply	3Ø, 220/380/415V ±10%, 50/60Hz			
尺寸 Size	Volume(m³)	Square measure(m²)	Inside dimensions (WxHxD cm)	Outside dimensions (WxHxD cm)
S	9.0	4.3	210x210x205	325x236x225
M	12.9	6.1	300x210x205	425x236x225
L	16.8	8.1	390x210x430	505x236x225

※其他規格另議：Other specifications available upon request

# H T-9745 PROGRAMMABLE TEMPERATURE & HUMIDITY WALK-IN CHAMBER

HT-9745



## HT-9745 選用配備 OPTIONAL ACCESSORIES

- 測試孔：有兩種尺寸，內徑分別為50及100mm
  - 門板：有兩種門板尺寸：雙開旋啓式 (140W-180Hcm) 及單開旋啓式 (80W-180Hcm)
  - 門簾：避免開門時影響到箱內的溫溼度環境
  - 強化地板：不鏽鋼板，避免移 試件時造成凹洞或刮痕
  - 攜入式傾斜板：移入或移出試件時，如果地板低於門檻，可免除部必要之撞擊。
  - 全天花板吹出場：即寬的空氣入流，可降低空氣流 率（最低可到0.5m/s）
  - 電源插座：箱內附有防水插座，每孔並附有防水插頭
  - 溫溼度紀錄器：Y-100-6：100mm，溫溼度各3個點；Y-180-12：180mm，溫溼度各6個點
  - 純水器：用以提供加濕電熱器及濕球溫度的純水
- 
- Cable port: Two sizes of cable port are available: 50mm and 100mm.
  - Doors: Two types of doors are available: double swing door (140W-180Hcm) and single swing door (80W-180Hcm).
  - Entrance curtain: Provided to avoid disturbance of atmospheric temperature and humidity while opening the door.
  - Floor reinforcement: A stainless steel plate prevents dents and gouges on the floor while moving the specimen.
  - Carry-in inclined platform: Provided below the door to facilitate moving of specimens in and out through the door.
  - Entire ceiling blow-out duct: The extremely wide airinlet reduces the airflow rate (down to approx 0.5m/s)
  - Plug socket: A waterproof plug socket is provided inside the chamber, and is attached with an individual waterproof plug.
  - Temperature and humidity recorder: Y-100-6:100mm Temp. 3 dots, Humid. 3 dots; Y-180-12:180mm Temp. 6 dots, Humid. 6 dots.
  - Water purifier: Provided to keep the humidifying heater and wet-bulb temperature detecting wick free from scale.

# H T-1245A PROGRAMMABLE TEMPERATURE & HUMIDITY CHAMBER

## HT-1245A 可程式恆溫恆濕試驗機 PROG. HUMIDITY CHAMBER SPECIFICATIONS

型號 Model	HTL-3000A HTL-4500A HTL-8000A	HTN-3000A HTN-4500A HTN-8000A	HTM-3000A HTM-4500A HTM-8000A	HT-3000A HT-4500A HT-8000A
系統 System	平衡調溫調濕控制系統 Balanced temperature & humidity control system			
溫度範圍 Temp. range	-70~+150°C	-50~+150°C	-40~+150°C	-30~+150°C
濕度範圍 Humid range	20~98%RH			
溫度精度 Temp. constancy	±0.3°C			
濕度精度 Humid constancy	±3%RH			
溫度分布均度 Temp. uniformity	±1.0°C			
濕度分布均度 Humid uniformity	±3% RH 中心點 (in the center)			
升溫時間 Heat-up time	每升溫2°C 約需1分鐘 Each 2°C up needs approx. 1 min.			
降溫時間 Cool down time	每降溫1°C 約需1分鐘 Each 1°C down needs approx. 1 min.			
內箱材質 Interior material	SUS#304 stainless steel plate 不銹鋼四號沙面板			
外箱材質 Exterior material	SUS#304 stainless steel plate 不銹鋼四號沙面板			
保溫材質 Insulation material	硬質發泡及玻璃棉 Rigid polyurethane foam & glass wool			
冷凍系統 Refrigeration system	氣冷式 Air cooled 二段式全密閉式壓縮機 hermetic compressor, dual stage refrigeration system			單段式全密閉式壓縮機 hermetic compressor, single stage refrigeration system
保護裝置 Safety devices	無熔絲開關，壓縮機過載保護開關，冷媒高壓保護開關，超高溫保護開關， 保險絲，水盤缺水保護開關，電磁保護開關，故障警告系統 no fuse breaker, refrigerator overload relay, refrigerator high pressure switch, over-temp. protector, protection fuse, water level protector, protection relay, system trouble monitor alarm			
配件 Accessories	視窗，測試孔Ø50mm，室內燈 viewing window, cable port (50 mm dia.) and chamber lamp			
使用電源 Power supply	3Ø, AC220V~415V, 50/60Hz			

次型號	內容積 Inside volume (Liter)	內箱尺寸 Inside Dimensions (WXDxH cm)	外箱尺寸 (WXDXH cm)
3000A	3000	150x100x200	205x190x240
4500A	4500	150x150x200	205x240x240
8000A	8000	200x200x200	320x230x240



HT-1245A



# H T-2451A XENON LONG LIFE WEATHER METER

## HT-2451A 氙弧燈耐候試驗機 XENON LONG LIFE WEATHER METER

- 本機係用於測試各種工業材料及製品之耐光/耐候，所使用的氙弧燈為長壽命、高效率型。
- This tester is used for testing the fade/weather resistance of various industrial materials or products. The light source of Xenon Arc is with long life and high efficiency.

### 特點 FEATURES

1. 目前所有模擬光源中最近似太陽光。
  2. 可連續長時間、高效率點燈。
  3. 將波長過短之紫外線過濾，以防止試片再老化。
  4. 安全便捷的長時間測試。
  5. 可選擇做耐光或耐候試驗。
1. Among all imitated light sources, Xenon Arc is the closest one to the sun light.
  2. Available to have high efficiency lighting under a long time.
  3. Filter the UV light out whose wavelength is too short, preventing test sample from being re-aged.
  4. Safe, prompt and convenient long-time test.
  5. Available to select Fade or Weather test.

### 規格 SPECIFICATION

型式 Type	A	B
光源 Light source	Xenon Arc	
黑球溫度範圍 Digital B.P.T.	Constantly $63 \pm 3^\circ$ $83 \pm 3^\circ \text{C}$ auto matically	
溫度範圍 Temperature range	$Rt+10^\circ \text{C} \sim 85^\circ \text{C}$	
溼度範圍 Humidity range	30% ~ 85% RH	
試片數 Number of specimen	76 pcs	
弧燈壽命 Lamp life	Above 2000 hr	
電源 Power source	3 $\phi$ , 220 / 380 / 415 V	
冷卻方式 Cooling method	Air cooling	
過濾玻璃 Filter glass	BORO/SODA LIME	
氙弧燈 Xenon arc	2500W, 3500W, 4500W	
試片轉架 Specimen drum	508 mm	960 mm
轉架速度 Drum rotation speed	3 rpm	1 rpm
內徑 Inside dimension	700 x 700 x 900 mm	1100 x 1100 x 1100 mm

HT-2451A



# H T-2145A

## HT-2145A 冷熱衝擊試驗機 THERMAL SHOCK TESTING CHAMBER

■ 本冷熱衝擊試驗機的轉換時間是在10秒內,符合MIL, IEC, JIS等世界標準。復歸時間則不超出5分鐘,也符合多國的標準。LCD顯示控制器,並有中英文可供選擇。

■ The transfer time of this Thermal Shock Test Chamber is within 10 seconds, meeting MIL, IEC, JIS standards. And the recovery time of this chamber is within 5 minutes, which is available to meet various international standards. Graphic LCD display with Chinese/English dual selection for direct operation.

型式	Type	401	402	403	501	502	503	601	602	603
測試區尺寸	Test area space (WxHxD) cm	35x35x40	50x40x40	60x50x50	35x35x40	50x40x40	60x50x50	35x35x40	50x40x40	60x50x50
高溫範圍	High temp. range	+80°C ~ +200°C			+80°C ~ +200°C			+80°C ~ +200°C		
低溫範圍	Low temp. range	-10°C ~ -45°C			-10°C ~ -60°C			-10°C ~ -70°C		
測試區溫度範圍	Test area temp. range	+60°C ~ +150°C 0°C ~ -4°C			+60°C ~ +150°C -10°C ~ -55°C			+60°C ~ +150°C -10°C ~ -65°C		
升溫時間	Heat-up speed	Rt ~ +200°C 約 about 25 min (室溫在 Room temp range 10°C ~ 30°C)								
降溫時間	Cool-down speed	Rt ~ -70°C 約 about 70 min (室溫在 Room temp range 10°C ~ 30°C)								
復歸時間	Recover speed	5分鐘內 Within 5 min								
溫度穩定度	Temp. accuracy	±2°C								
冷凍系統	Refrigeration system	全密閉式壓縮機 full hermetic compressor			半密閉式壓縮機 semi hermetic compressor		全密閉式壓縮機 full hermetic compressor		半密閉式壓縮機 semi hermetic compressor	
保溫材質	Insulation material	高溫槽:高密度玻璃棉 / 低溫槽:高強度PU發泡 / 測試區:高密度玻璃纖維棉 + 高強度PU發泡 High temp. area: High-density glass wool / Low tem. Area: rigid polyurethane foam / test area: high-density glass fiber wool + rigid Polyurethane foam								
閥門驅動裝置	Valve driving apparatus	氣壓缸 pneumatic cylinder								
控制器	Controller	FUJI 人機介面控制系統 7.7 吋彩色液晶顯示觸控式螢幕 FUJI user-friendly interface control system, 7.7" color LCD touch panel display								
保護裝置	Safety devices	蓄冷、蓄熱槽超溫保護,傳感器故障偵測器,壓縮機過載保護開關,氣壓保護開關,水流保護開關,歐製欠相保護開關,無熔絲開關 over-temperature protection for high/low temperature area, transducer trouble detector, compressor overload protecting switch, pneumatic protection switch, water flow protection switch, 3-phase monitoring relay, Non-fuse breaker								
供氣氣壓	Air pressure	5 ~ 8 kg/cm2								
供水水壓	Water pressure	2 kg/cm2								
供水水量	Water flow	進/出 in/out 4.2 m3/hr								
進出水口管徑	Water pipe diameter	1 1/2 英寸 inch								
電源	Power	3Ø, 220 V, 75 A or 3Ø, 380 V, 60 A				3Ø, 220 V, 100 A or 3Ø, 380 V, 75 A		3Ø, 220V, 75A or 3Ø, 380V, 60A	3Ø, 220 V, 100 A or 3Ø, 380 V, 75 A	
外箱尺寸	Dimensions (WxHxD) cm	150x187 x153	171x192 x153	181x207 x153	156x187 x153	171x192 x153	181x207 x153	156x187 x153	171x192 x153	181x207 x153
重量	Weight kg	900	1200	1500	900	1200	1500	900	1200	1500

# H T-2145A, HT-8753

## HT-2145A 冷熱衝擊試驗機 THERMAL SHOCK TESTING CHAMBER

T-2145A



## HT-8753 耐臭氧試驗機 OZONE TEST CHAMBER

ASTM D1149, D1171, D3041 / ASTM D470, D1352, D1373

■ 本機係用來測試在臭氧的環境下，橡膠製品耐龜裂的特。

■ The chamber is used to determine the crack resistance for rubber products under ozone circumstance.

型式 Model	0500	0500A
臭氧濃度範圍 Ozone range	0-250 ppm/vol.	50-300 ppm/vol.
系統精度 System accuracy	量測讀值 3% of reading, 控制設定 4% of set-point	
溫度 Temperature	Up to 90°C 以上	
適用標準 Applied standards	ASTM D1149, D1171, D3041 ASTM D470, D1352, D1373	
內部空間 Net oven dimensions	61 × 51 × 46 cm	
臭氧產生方式 Ozone generator	紫外線 Quartz Ultra Violet	靜電弧放電 Silent Arc Discharge
箱內空氣速度 Oven air velocity	In excess of 2 feet/sec以上	
入室空氣流量 Inlet air flow	0-6 cfm	10-20 cfm
附件 Accessories	Static stretching apparatus 靜態拉力夾具 × 4組 sets	
電源 Power	1ø, 220V, 50/60Hz	
重量 Weight	182 kg	186 kg
材積 Dimensions	122 × 64 × 84 cm	

HT-8753



註：美國原廠製造  
Note : Made in USA

# H T-8054B COMPUTER TYPE DEFLECTION TEMPERATURE BATH(H.D.T)

HT-8054B



## HT-8054B 電腦式熱變形溫度試驗機 COMPUTER TYPE DEFLECTION TEMPERATURE BATH(H.D.T)

參考規範: ASTM-D648, JIS-K7191, ISO-2507, GB/T 8802

- 本機主要係參考ASTM-D648規範製作，塑膠試片加負載的變形溫度，動作原理係將試片裝於規定治具下，將軟體計算的加載值，加載於壓刀上，設定其加熱速率及溫度，測試其塑件之加熱變形。
- This machine is designed and manufactured mainly according to the testing standard of ASTM D648, plus the assistance of computer calculation and analysis, you can get the ultimate.

型式 Model	HT-8054B-6	HT-8054B-3
試件 Number of sample	6組 6 sets	3組 3 sets
箱體 Bath	絕緣不鏽鋼材質 insulated stainless steel	
變形感測 Deformation sensor	磁性尺 magnetic ruler	
變形顯示 Deformation display	電腦系統顯示，分解度0.001 mm computer system display, with resolution 0.001 mm	
控制方式 Control method	軟體控制 (含面板操作) software control (incl. panel operation)	
變形精度 Deformation accuracy	< ±0.03% F.S	
試驗方式 Testing modes	HDT/VICAT	
溫度範圍 Temp. range	20°C~300°C (壓縮機冷卻) / 或水冷式 (選用) cooling by compressor or water (optional)	
溫度精度 Temp. accuracy	±0.5 °C	
升溫速度 Heat-up rate	2 ± 0.2°C / min	
冷卻方式 Cooling method	水冷式 / 壓縮機冷卻 (選用) cooling by compressor or water (optional)	
電源 Power	1Ø, 110/220V AC, 50/60Hz	
體積 (W×D×H) cm	167x73x165	
重量 Weight	About 500 kg	

# H T-8043 FREEZING TESTER

## HT-8043 耐寒試驗機 FREEZING TESTER



JIS K6545, ASTM-D1790, D1593

- 本試驗機適用於橡膠、塑膠、電線PVC鞋底，成品鞋，合成皮革…等之耐寒測試，將材料或成品試樣置入設定低溫之環境室內測試，以瞭解材料或成品適應低溫或寒冷地區的使用情形，確保品質的保證。
- 本儀器低環境室內可依測試需求選擇裝置各種物 彎曲、撓曲、捲彎等機構裝置，配備全部採不鏽鋼製成，並符合各種測試規範標準。
- This tester is used to test the cold resistance for the materials of rubber, plastic, cable sheath, outsole, whole shoe leather and synthetic leather, in order to understand the feathers of those materials under a freezing circumstance. This tester would be excellent equipment for quality improvement.
- Inside the chamber there are many selections available for different test purposes. Please refer to the following table.

型式 MODEL	HT-8043H-A	HT-8043V-A	HT-8043H-B	HT-8043V-B
溫度範圍 Temperature range	RT~-30°C		RT~-50°C	
環境室內尺寸 Chamber size(cm)	60x60x50	60x50x60	60x60x50	60x50x60
控溫精度 Temperature accuracy	±0.3°C			
溫度均勻度 Temperature uniformity	±1°C			
降溫能力 Cooling down system	約需60分 About 60 min.		約需70分 About 70 min.	
溫控系統 Temperature control system	電子式數位顯示溫度控制器自平衡調溫SCR裝置 Digital display temperature controller + automatic balanced temperature system + SCR setup			
冷凍系統 Refrigeration system	全密閉式壓縮機、氣冷式均溫調節控制、壓縮機底溫啓時間電流保護裝置、環保冷媒規格 Hermetic compressor, air-cooled even-temperature adjusting control, compressor protection setup of startup under low temperature, CFC refrigerant			
機體結構 Chamber structure	內外箱體不鏽鋼材質、採高密度硬質發泡材料、機身結構內部補強堅固 Stainlesssteel SUS#304 plate for interior and exterior, rigid polyurethane foam as insulating material, internally reinforced structure design			
電源 Power	1Ø, 220V, 50Hz			

夾具依本公司鞋業目錄，選項A,B,C,D,E,F,G,H等參考購配，價格另議。

In-chamber fixtures can be ordered by options A, B, C, D, E, F, G, H as per our footwear catalog, at extra charges.

# HT-8046, HT-8047 AGING OVEN TESTER

## HT-8046 換氣式老化試驗機 GEER'S AGING OVEN TESTER

■ 本機專門針對橡膠、塑膠及各種絕緣材料之熱老化做測試，其能與一般老化爐不同，本機之設計具備有：

- A. 溫度調節精度。
- B. 溫度分佈均勻。
- C. 開門後溫度回升速率。
- D. 試驗槽內之風速及換氣率。
- E. 試驗槽內之隔熱密。
- F. 特殊換氣率調整裝置。
- G. 依據測試標準

JIS-K 7212, K 6723, K6301  
ASTM-D2436, D573  
UL-746B  
IEC-540  
BS-6746,903  
ISO/DIS 4577

■ This tester is designed to test the aging resistance specially for rubber, plastic and some insulator materials. Different from normal aging oven, this tester has:

- a. Temperature constancy
- b. Temperature uniformity
- c. Heat-up speed after door open.
- d. Wind speed & air exchange rate of testing chamber.
- e. Seal of heat-isolation of testing chamber.
- f. Special adjusting apparatus of air exchange.
- g. Conform to testing norms: JIS K-7212, K-6723, K-6301, ASTM D-2436, D-573, UL-746B, IEC-540, BS-6746, 903, ISO/DIS 4577

## 規格 SPECIFICATION

型式 Model	A	B
內徑尺寸 Inner dimension (WxHxD)	450x450x450 mm	600x600x600 mm
溫度範圍 Temp. range	RT ~ +200° C	RT ~ +300° C
溫度顯示 Temperature indication	±0.3° C	
溫度精確度 Temperature uniformity	±0.5%	
迴轉速度 Rotation speed	8-10 rpm	
空氣循環 Air refresh	option1: 1-10 times/hour option2: 10-200 times/hour	
電源供應 Power consumption	220V single phase 5KW	220V single phase 7KW
附件 Accessories	1. square shelves x (2 pcs) 2. test specimen x (2 pcs) 3. running meter x (1 pcs) 4. time meter x (1 pcs)	
選購 Optional	air flow meter (recorder)	

## 換氣率測定方法 Measuring method of air change

■ This method measures the air change rate of the std type oven as follows:  
equation

$$N = \frac{3590 (X - Y) \cdot 2}{V \cdot D \cdot \Delta T}$$

where

N : Number of change of air per hour.

X : Power consumption during air change (W).

Y : Power consumption during no air change(W).

V : total volume of over (cm3).

D : Density of over ambient air (g/cm3).

ΔT : Temperature difference inside/outside over(°C)

HT-8046



## HT-8047 老化試驗機 AGING OVEN TESTER

JIS K-630, K-7212, ASTM D-2436, E-145, JTTC SPEC.-151 CNS 3556

■ 本烘箱係用來研究橡膠等試片在固定時間內，以迴轉方式受熱下的變化。在70°C下測試1天，理論上相當於曝露在大氣中6個月的時間，本烘箱配備有馬達驅式迴轉盤。熱風循環的功能可以確保溫度的均勻分佈。

■ The oven is used for degradation study of plastics & rubber when subjected to heat in a rotational condition for a specified time. One day test at 70°C is theoretically equivalent to a six-month usage in normal environmental condition. The machine is equipped with a motor-driven rotary plate. Hot air circulation will ensure even temperature distribution.

型式	Type	A	B
內徑	Inner dimension	40x40x45cm	50x50x60cm
電熱	Heat	1.8KW	3.2KW
溫度	Temperature	RT-200 or 300 degree ceisius	
馬達速度	Motor(speed)	8-10 rpm	
重量	Net weight (kg)	80	120
材積	Dimension(cm)	84x54x100	95x65x118
馬達	Motor	1/4 HP	1/2HP

HT-8047



# HT-8052 SALT SPRAY TESTER

## HT-8052 鹽水噴霧試驗機 SALT SPRAY TESTER

CNS-4158

- 鹽水噴霧試驗機，乃針對各種材質表面處理，包含塗料、電鍍、有機及無機皮膜，陽極處理，防鏽油，化成處理之耐蝕品質，進而達成製品長時間之耐蝕。
- The salt spray corrosion tester is used to test the corrosion resistance of all kinds of metals whether plated or organic coated or inorganic coated by exposing to atomized salt solution. Check if the specimen has the conditions of denting, rusting, cracking or blister after test.

### 特點 Features

1. 整台採P.V.C.板製，內襯採用先進的環帶立體補強技術，結構強實，永不變形。
2. 試驗室以五面加溫方式加溫，可確實掌握試驗室內立均溫(±1°C)。
3. 噴咀：採用伯努特定理吸取鹽水而霧化，將使霧氣擴散速度加倍，並自然落於試片上，其落霧量差可控制於±0.3ml/80cm<sup>2</sup>-H。
4. 飽和空氣採用亨利定律。予以加熱加濕，並提供試驗室所需之濕度。
5. 溫度為直接影響腐蝕速率之先決條件，本公司採用P.I.D.方式之溫度控制器，控制誤差±0.5°C以內。
6. 唯一採用試液過低之預警設，當試液其夠再進行5小時之噴霧，蜂鳴器將通知使用者進行補充，以確保連續噴霧之試驗價值。
7. 唯一探全偵測預警系統，故障時自亮燈指示。
1. Spray tube warranty testing: 2000 hours.
2. All functions setting are included in one control panel.
3. Over heating protection device and water warning device are installed.
4. Digital temperature control. (SSR control accuracy ±1°C)
5. Tank capacity: 251 salt solution.
6. Mist spray distributed evenly.
7. Full self-diagnostic alarm & trouble display.



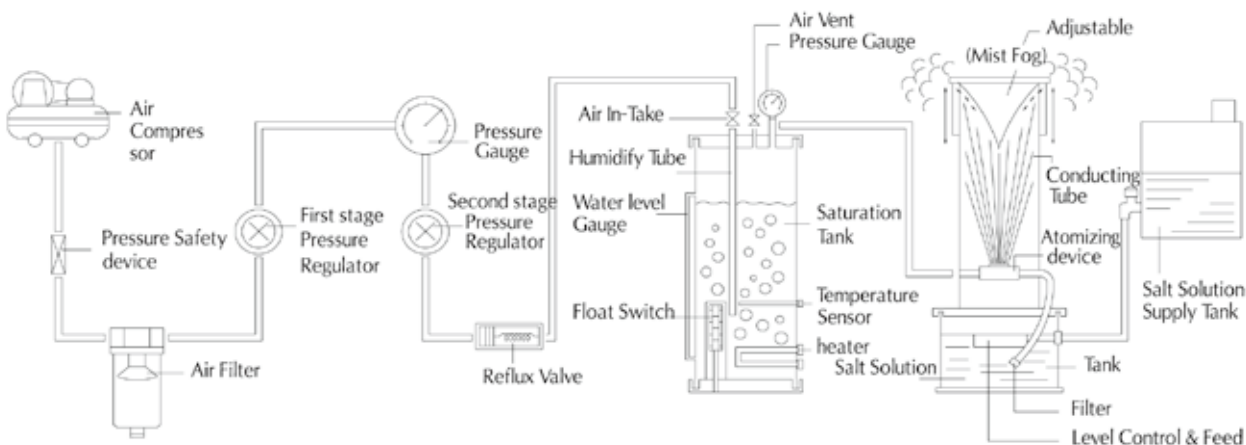
HT-8052 鹽水噴霧試驗機  
Salt Spray Tester

### HT-8052 規格SPECIFICATIONS

型號 Model	HT-8052A	HT-8052B	HT-8052C
測試溫度 Test temperature	35 ± 1°C/50 ± 1°C	35 ± 1°C/50 ± 1°C	35 ± 1°C/50 ± 1°C
內部規格 Inside dimension (cm)	160 × 100 × 50 (WxHxL)	90 × 60 × 50 (WxHxL)	60 × 40 × 45 (WxHxL)
試樣角度 Test specimen	15°/30°		
耗電量 Power consumption	220V1Ø15KW	220V1Ø6KW	220V1Ø3KW

\* 壓縮機客戶自備 Air compressor to be prepared by buyer

### 系統示意圖 SYSTEM DIAGRAM



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## HUNG TA INSTRUMENT CO., LTD.

### Headquarters & Factory

No. 20, Jingke Central Rd. Nantun Dist.,  
Taichung City, 408, Taiwan  
TEL : +886-4-23590108  
FAX : +886-4-23593110  
E-mail : [info@hungta.com](mailto:info@hungta.com)

### Sales & Service in China

TEL : +86-21-57744978  
FAX : +86-21-57744980  
Mobile : +86-139-16418127  
+86-139-17764730

### Global Office

Taipei Office  
TEL : +886-2-27467770  
FAX : +886-2-27686430

Kaohsiung Office  
TEL : +886-7-3429618-9  
FAX : +886-7-3427499



Thailand Office  
TEL : +66-2-3120446-8  
FAX : +66-2-3120445

Malaysia Office  
TEL : +60-6-7636031  
FAX : -60-6-7637692

Vietnam Office  
TEL : +84-283-7517821

Indonesia Office  
TEL : +62-21-42884548, 42802050  
FAX : +62-21-42884558