

Environmental Chambers



mrc

High/Low Constant Temperature Chamber

Viewing window with interior light • Stainless steel access ports with plug, for convenient access to test items • Swivel casters for mobility • Easily accessible service areas • Stainless steel internal chamber • Solid state heating switching • Refrigeration system: high efficiency , maximum reliability & low vibration and low noise. The air cooled refrigeration is working with CFC free refrigerant. The total cooling circuits is working with solenoid valve bypass technique ensuring that the compressor will only be disconnected if cooling capacity has not been required for a prolonged period • Heating system: low mass electric resistance heater is located directly in front of the recirculating air blower. The PID microprocessor controllers with the solid state relays allows extremely precise and constant control • Adjustable stainless steel shelves • Optional 100mm chart recorder • Over / under temp. protection devices • Volumes from 36 Liter up to 800 Liters.



Model	HC-30	HC-40	HC-50	HC-60	HC-80	FC-40	FC-50	FC-60	FC-80	LC-40	LC-50	LC-60	LC-80	TC-50	TC-60	TC-80	
Internal Dimensions (mm)	W	300	400	500	700	1000	400	500	700	1000	400	500	700	1000	500	700	1000
	H	400	500	600	850	1000	500	600	850	1000	500	600	850	1000	600	850	1000
	D	300	400	500	700	800	400	500	700	800	400	500	700	800	500	700	800
External Dimensions (mm)	W	720	930	1030	1230	1530	930	1030	1230	1530	930	1030	1230	1530	1030	1230	1530
	H	1060	1310	1410	1660	1810	1310	1410	1660	1810	1310	1410	1660	1810	1410	1660	1810
	D	620	810	910	1210	1310	810	910	1210	1310	810	910	1210	1310	910	1210	1310
Volume (Liters)	36	80	150	416	800	80	150	416	800	80	150	416	800	150	416	800	
Temperature Range	0°C~100°C(150°)					-20°C~100°C(150°)				-40°C~100°C(150°)				-70°C~100°C(150°)			
Temperature Uniformity	±0.5°C				±1°C	±0.5°C			±1°C	±0.5°C			±1°C	±0.5°C		±1°C	
Temp. Rising Speed	0°C~100°C about 20min					-20°C~100°C about 35min				-40°C~100°C about 40min				-70°C~100°C about 60min			
Cooling Speed	20°C~100°C about 20min					20°C~-20°C about 45min				20°C~-40°C about 60min				20°C~-70°C about 90min			
Temperature Stability	±0.2°C																
Freezing System	Simoleon type full airtight air-cooled refrigeration system										Binary full airtight air-cooled refrigeration system						
Internal Material	SUS304 # Stainless steel																
External Material	SUS304 # Stainless steel																
Temp. Preservation	Material rock wool hard PU polyurethane foams																
Circulation System	Fan forced recycling convection																
Temp. Preservation Heating System	Stainless steel heating type humidifier																
Safety Device	Power leakage & overload protective device, compressor overload protective device, over-temp. & over-humidity circuit breaker protection, water shortage protection, humidifier over-heating protection, temperature limit protective device.																
Standard Accessory	2 x Stainless steel adjustable shelves, vacuum glass perspective window, testing aperture, operating room light, motion wheel, control indicator																
Optional Accessory	Recorder																
Power	AC220V, 1PH, 50/60Hz																



Programmable Temperature and Humidity Test Chamber Vertical Type

Programmable Temperature and Humidity Test Chamber simulates a full range of temperature and humidity conditions to test reliability, durability, climatic, freezing resistance, quality assurance, thermal endurance etc.

Features:

- Chamber exterior material is stainless steel with environmentally baking paint resists corrosion & provides impact resistance. Interior material is SUS304# stainless steel with excellent heat resistance and easy to clean.
- MRC HL-1000 touch screen controller is designed to save chamber programming and setup time with temperature limit and alarm to protect your product.
- Safety relay connection is provided to protect your device under test by removing power to it when the chamber is not running.
- RS-232 communications is for computer connection, programming can be set on computer by software, monitor testing process and automatically execute power on/off functions.
- Fog-free viewing window and interior light makes viewing workspace freely and observe the test under best conditions.
- Adjustable product shelf slides out for easier product access. Shelf design is non-tipping and supports large product loads.
- Left side of chamber with diameter 50mm cable port for power-on test.
- Optional electronic humidity sensor is used on all test chambers for accuracy and minimal maintenance.

Application:

- Electronics, electrical appliances, sensors
- Semiconductor, PCB, LCD & LED
- Medicals tests
- Mechanical, Military, aerospace products
- Vehicles, Transport, automobile supply industries
- Chemicals, Petrochemical industries
- Building materials, Plastics, Textile industries
- Testing metal related industries like plating etc.
- Instrumentation.

Optional Accessories:

Cable Port: Size of cable port is available for Ø100mm

Water purifier RO 80: Continuously provide purified water for humidifying heater and wet-bulb

Dehumidifier: The rotation regenerating dehumidifier M-120 ensures precise control of low humidity (10C, 15%RH) for electrostatic reliability tests.

Defrosting Device: The chamber automatically detects and melts the frost on the evaporator when operating below 0°C in order to allow continuous operation

Electronic humidity sensor: Precision Humidity Sensor with stainless steel protection tube.

Conform standards:

- IEC68-2-1 (GB-2423.1-2008) Testing A: Low temperature testing method
- IEC68-2-2 (GB-2423.2-2008) Testing B: High temperature testing method
- MIL-STD-202F (GJB360.8-87) High temperature life testing
- MIL-STD-810D (GJB150.3) High temperature method
- MIL-STD810D (GJB150.4) Low temperature method
- IEC68-2-3 (GB2423.3-93) Testing Ca: Constant moist heat testing method.
- IEC68-2-30 (GB2423.4-93) Testing Db: Alternate moist heat testing method.
- MIL-STD-810D (GJB150.9-93) Moist heat testing method.

Model	Temp./Humid. Ranges	Internal Dimension (W x H x D) cm	Outer Dimension (W x H x D) cm
HP-40V	0°C ~ +150°C 20% ~ 98%RH	40x50x40	60x110x95
HP-50V		50x60x50	70x120x105
HP-55V		50x75x60	70x135x115
HP-60V		70x85x70	90x145x125
HP-80V		100x100x80	120x160x135
HP-100V		100x100x100	120x160x155
FP-40V	-20°C ~ +150°C 20% ~ 98%RH	40x50x40	60x110x95
FP-50V		50x60x50	70x120x105
FP-55V		50x75x60	70x135x115
FP-60V		70x85x70	90x145x125
FP-80V		100x100x80	120x160x135
FP-100V		100x100x100	120x160x155
LP-40V	-40°C ~ +150°C 20% ~ 98%RH	40x50x40	60x110x95
LP-50V		50x60x50	70x120x105
LP-55V		50x75x60	70x135x115
LP-60V		70x85x70	90x145x125
LP-80V		100x100x80	120x160x135
LP-100V		100x100x100	120x160x155
TP-40V	-70°C ~ +150°C 20% ~ 98%RH	40x50x40	60x110x95
TP-50V		50x60x50	70x120x105
TP-55V		50x75x60	70x135x115
TP-60V		70x85x70	90x145x125
TP-80V		100x100x80	120x160x135
TP-100V		100x100x100	120x160x155

***For temperature only add suffix-T to model number**

20%~98%RH is standard range, optional customized 10%~98%RH or 5%~98%RH. Dimensions are also available for customized.

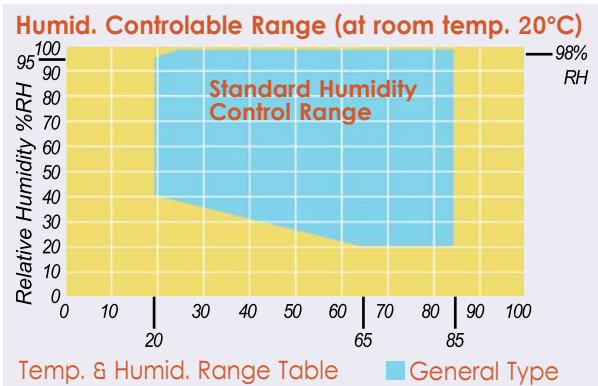
Control Mode	Balanced Temperature and Humidity Control System
Operating Temp. & Humid. Range	+5°C ~ +35°C; <85%RH
Temp. range	HP=0°C, FP=-20°C, LP=-40°C, TP=-70°C ~ +100°C (150°C)
Humid. range	20% ~ 98%RH (Optional: 5% ~ 98%RH)
Temp. & Humid. fluctuation	±0.5°C; ±2.5%RH
Temp. & Humid. uniformity	≤2.0°C; ≤3%RH
Temp. & Humid. Deviation	≤1.0°C; ≤2%RH
Temp. Heating Time	0°C ~ +100°C within 30min; -20°C ~ +150°C within 45min
Temp. Cooling Time	20°C ~ -40°C within 60min; 20°C ~ -70°C within 85min
Power Supply	AC380V, 50/60HZ, Three-phase (Specified by User)
Exterior Material	stainless steel with baking paint
Interior material	SUS304# Stainless steel
Insulation material	Rigid Polyurethane foam
Refrigeration system	Mechanical cascade refrigeration system; Fin type radiator
Circulation system	Mechanical convection system
Humidification Water Supply	Automatic water regulating, recoverable supply system, water shortage alarm system
Water quality	Distilled water only, 20L Water tank capacity
Controller	Touch Screen Controller
Safety devices	Overheat protector Switch, Compressor overload protector Switch water shortage protector Switch, Humidifier protector Switch Fault alarm system
Accessories	Viewing window, Chamber Illumination, Cable port Ø50mm, Product shelf slides 2 pieces, universal casters HL-1000 touch screen controller

Note:

- The performance values are no specimen inside the test area.
- At 20°C ambient temperature, relative humidity 65%rh, rated voltage
- According to IEC60068-3-5:2001 and IEC60068-3-6:2001
- The above specifications are for reference only.

CCG/PCG-Series, (Programmable) Bench Top Constant Temperature & Humidity Chamber, 80 or 120 Liter

Bench top Temperature & Humidity Test Chambers offer flexibility, uniformity and control accuracy required for cost effective testing for a variety of products. Ideal for testing smaller products such as computer components, automobile sensors or cellular phones, these chambers combine superior performance with compact design that is perfect for research and development or personal point-of-use testing. Available in two sizes, the Bench top Series chambers allow you to cost effectively select the exact chamber that best meets your environmental test criteria. These chambers can be mounted in an instrument rack or will easily sit on a laboratory bench top. This humidity chambers include an removable water storage tank, avoiding the need for water hook-ups.



CCG-80: Fix point PID control LED display.
PCG-80: 5 Programs. 50 steps. 999 cycles. LCD display

Features:

- Viewing window with interior light.
- Stainless steel access port with plug, for convenient access to test items.
- Easily accessible service areas.
- Stainless steel internal and external chamber.
- Solid state heating switching.
- Refrigeration system: high efficiency, maximum reliability & low vibration and low noise. The air cooled refrigeration is working with CFC free refrigerant. The total cooling circuits is working with solenoid valve bypass technique ensuring that the compressor will only be disconnected if cooling capacity has not been required for a prolonged period.
- Heating system: low mass electric resistance heater is located directly in front of the recirculating air blower.
- The PID microprocessor controllers with the solid state relays allows extremely precise & constant control.
- Adjustable stainless steel shelves.
- Optional 100mm chart recorder.



Model Controller	CCG-80
Model Programmer	PCG-80
Temp. range	-20°C~100°C
Humid. range	20%~98% R.H
Temp&Humid. constancy	±0.5°C±2.5% R.H
Temp&Humid. uniformity	±1°C±3%R.H
Heating up time	20°C~100°C within 30 min
Pull down time	20°C~20°C within 60 min
Volume (Liter)	80Liter
Interior dimensions(mm)	W400xD400xH500
Exterior dimensions(mm)	W860xD810xH810
Interior/Exterior material	Stainless steel plate (SUS304)/(SUS304) tough powder-coated
Insulation	Rigid polyurethane foam
Refrigeration system	Single stage refrigeration
Safety devices	Refrigerator overload relay, refrigeration high pressure switch, protection relay protection fuse, boil dry protector, overheat protector, alarm viewing window
Accessories	Shelves (freely adjustable) 2pcs. Chamber lamp
Power source	AC220V 50/60Hz 1Φ

**CCG-100/150/250,
Constant Temperature & Humidity Chamber**



CCG-100, 100 Liter



Air duct structure
It applies circular airflow design concept & forced convection simulated air circulation principle. The large power air circulating blades designed specially can produce higher air flow rate and guarantee high even and stable inner bag temperature and humidity.



Electronic humid. sensor
It is used for absolute precise humidity measurement. The humidifying and dehumidifying system is control led electronically. ROTRONIC electronic humid. sensor can guarantee the reliability of humidity inspection even if the samples are changed frequently. The sensor does not require maintenance.



Innovative refrigerating system
International famous brand refrigerant compressor and Germany EBM condenser applying 134a refrigerant and featuring fluorine free, environmental protection, precision and high efficiency are applied.



Test hole
One test hole with the diameter of 45mm made with special mould is arranged on the left and right of the incubator respectively for observation. Internal silica gel soft plugs are provided to make sure the temperature and humidity inside the incubator are not affected during the test.



Easy for maintenance
It is easy to maintain and clean condenser to improve the refrigerating performance and save energy.

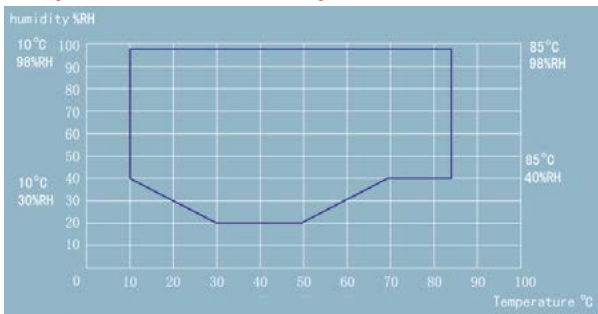


RS232 interface
It is a special interface for PC. One software CD (WINDOWS2000 or simplified Chinese WINDOWS XP operating system) is attached. Test program is written, monitored & saved with special PC software. Test data is directly displayed and printed with special PC software.



Ponded water inside inner bag can be discharged easily
The inner bag applies side, high, middle and low structures to discharge water easily and keep the incubator clean.

Temperature and humidity



Features:

- The incubator is made with imported NC machine tool and laser processing technology. The outside incubator body applies high quality cold rolling plate, which is strongly resistant to rusting. The inner bag applies SUS304 stainless plate
- The incubator bottom truckle is imported from Japan. Its direction is adjustable and it can be locked. The outside incubator body is sprayed with American Dupont powder.
- One test hole with the diameter of 45mm made with special mould is arranged on the left and right of the incubator respectively for observation. Two silica gel soft plugs are provided inside.
- Temperature and humidity
- The heat insulating material of incubator applies Germany Bayer freon-free polyurethane one-time

foaming technology to improve the insulating property and reduce energy consumption. It can save over 30% energy in comparison with similar products. The overall strength of incubator is good.

- Rational air duct structure; balance type control method; imported special electric motor and blade are applied to make temperature and humidity distribution even and greatly improve test precision and evenness of temperature and humidity.
- International famous brand refrigerant compressor and Germany EBM condenser applying 134a refrigerant and featuring fluorine free, environmental protection are applied and conform to the world trends.
- Programmed temperature and humidity control; micro-computer fuzzy control PID control; temperature priority and time priority; optional for the user. Intelligent programmed mode is applied. The control part applies high brightness super large LCD and fuzzy PID control method to be more humanized.
- Temperature sensor PT1 00 applies Honeywell product. The humidity sensor applies Swiss Rotronic capacitive sensor.
- Over-temperature protection, creepage protection, door open alarm, current failure; e alarm and sensor alarm functions are provided to improve the safety. Meanwhile, automatic start, stop, timed operation, clock display and self recover after power fails are provided.
- Automatic defrosting and manual defrosting functions are provided for long term test to solve the problem of temperature and humidity drifting.

Model	CCG-100	CCG-150	CCG-250
Convection method	Compulsory convection method		
Control method	Balance type		
Temperature range	-10°C ~ +80°C		
Humidity control scope	20 ~ 98%		
Temperature resolution	0.1°C		
Temperature fluctuation	±0.1°C		
Temperature evenness	±0.5°C (65°C)		
Humidity fluctuation	Within ± 1.5% (65°C)		
Working room temperature	5 ~ 35°C		
Insulating material	Overall foaming of polyurethane		
Programmed control	Fuzzy logistic PID control method common operating mode/programmed operating mode		
Overall dimension(mm)	W590 x D733 x H1140	W665 x D733 x H1300	W765 x D773 x H1490
Inner dimension (mm)	W465 x D400 x H540	W540 x D400 x H700	W640 x D440 x H890
Weight	About 93KG	About 114.5KG	About 137KG
Effective volume	100L	151L	250L
Total power of heating and humidifying	1000W	1450W	2000W
Refrigerating power- refrigerant	175W,R134a	245W,R134a	270W,R134a
Water supply volume	Inside: 10 L Outside: 25 L		
Power voltage	AC-220V 50/60Hz		
Tray (standard configuration)	Two layers	Three layers	Three layers

- Performance parameter test under empty load: Ambient temperature of 20°C, ambient humidity of 50%RH.
- Temperature and humidity fluctuation exceeding the scope noted in the table is normal under defrosting condition.
- The change of product appearance and parameter will not be notified additionally. Product appearance may deviate due to shooting and printing reasons.

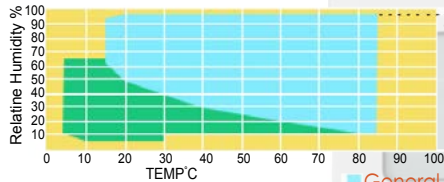


Features: Adjustable stainless steel shelves • Optional 100mm chart recorder • Over / under temp. protection devices • Automatic water level control • Volumes from 36 Liter up to 800 Liters • Viewing window with interior light • Stainless steel access ports with plug, for convenient access to test items • Swivel casters for mobility • Easily accessible service areas • Stainless steel internal chamber • Solid state heating & humidity switching • Stainless steel humidity generator with viewing window • Low water level humidity heater protection • Wet Dry bulb humidity sensor • Refrigeration system: high efficiency, maximum • reliability & low vibration & low noise. The air cooled refrigeration is working with CFC free refrigerant. The total cooling circuits is working with solenoid valve bypass technique ensuring that

Temp.&Humidity Environmental Chamber

Temperature and Temperature/Humidity test chambers provide superior performance over a wide range of applications. From prototype to durability to product component screening tests, the chambers has been designed to meet quality standards while still offering flexibility uniformity and control accuracy for cost-effective testing. Available in a multitude of chamber sizes, MRC is sure to have the exact chamber that best meets your environmental test criteria. For testing smaller products or for customers with limited space, MRC offers chambers starting at 36Liter capacity up to 800 Liters. MRC Test Chambers are able to perform both high and low temperature tests. Many of these chambers have a temperature range of -70°C to +150°C. Hermetically sealed compressors provide moderate temp. change rates while allowing the chamber to consume less power than comparable chambers. Temp./ Humidity models are equipped with a reliable, accurate and efficient full range humidity system capable of simulating conditions from 20 to 98% RH.

Humidity Controllable Range (at room temp. 20°C)



Temp. & Humid. Range Table

the compressor will only be disconnected if cooling capacity has not been required for a prolonged period • Heating system: low mass electric resistance heater is located directly in front of the recirculating air blower. The PID microprocessor controllers with the solid state relays allows extremely precise and constant control.

Model Programer	HP-30	HP-40	HP-50	HP-60	HP-80	FP-40	FP-50	FP-60	FP-80	LP-40	LP-50	LP-60	LP-80	TP-50	TP-60	TP-80	
Model Controller	HG-30	HG-40	HG-50	HG-60	HG-80	FG-40	FG-50	FG-60	FG-80	LG-40	LG-50	LG-60	LG-80	TG-50	TG-60	TG-80	
Internal Dimensions (mm)	W	300	400	500	700	1000	400	500	700	1000	400	500	700	1000	500	700	1000
	H	400	500	600	850	1000	500	600	850	1000	500	600	850	1000	600	850	1000
	D	300	400	500	700	800	400	500	700	800	400	500	700	800	500	700	800
External Dimensions (mm)	W	720	930	1030	1230	1530	930	1030	1230	1530	930	1030	1230	1530	1030	1230	1530
	H	1060	1310	1410	1660	1810	1310	1410	1660	1810	1310	1410	1660	1810	1410	1660	1810
	D	620	810	910	1210	1310	810	910	1210	1310	810	910	1210	1310	910	1210	1310
Volume (Liters)	36	80	150	416	800	80	150	416	800	80	150	416	800	150	416	800	
Temperature Range	0°C~100°C(150°)					-20°C~100°C(150°)				-40°C~100°C(150°)				-70°C~100°C(150°)			
Humidity & Temp. Uniformity	±0.5°C ±3%RH				±1°C ±5%	±0.5°C ±3%RH			±1°C ±5%	±0.5°C ±3%RH			±1°C ±5%	±0.5°C ±3%RH		±1°C ±5%	
Temp. Rising Speed	0°C~100°C about 20min					-20°C~100°C about 35min				-40°C~100°C about 40min				-70°C~100°C about 60min			
Cooling Speed	20°C~0°C about 20min					20°C~-20°C about 45min				20°C~-40°C about 60min				20°C~-70°C about 90min			
Freezing System	Simoleon type full airtight air-cooled refrigeration system										Binary full airtight air-cooled refrigeration system						
Humidity Range	20%~98%RH							Temp. & humid. stability			±0.2% ±2%RH						
Temp. & Humidity Adjustment	Balancing temperature & humidity adjustment method							External material			SUS304 # Stainless steel						
Internal Material	SUS304 # Stainless steel							Humidification			Surface Steam type, stainless heating humidifier, with humid. water shortage power interruption & thermal protection						
Temp. Preservation	Material rock wool hard PU polyurethane foams							Temp. preservation heating system			Stainless steel heating type humidifier						
Circulation System	Fan forced recycling convection							Xeransis system			refrigeration invisible heat xeransis method						
Water Supply System	Front-positioned water tank, fully automatic water supply control, recycling filter re-utilization with water shortage alarm device																
Safety Device	Power leakage & overload protective device, compressor overload protective device, over-temperature & over-humidity circuit breaker protection, water shortage protection, humidifier over-heating protection, temperature limit protective device.																
Standard Accessory	2x Stainless steel adjustable board sets, vacuum glass perspective window, testing aperture, operating room light,motion wheel, control indicator																
Optional Accessory	Recorder							Power			AC220V, 1PH, 50/60Hz						

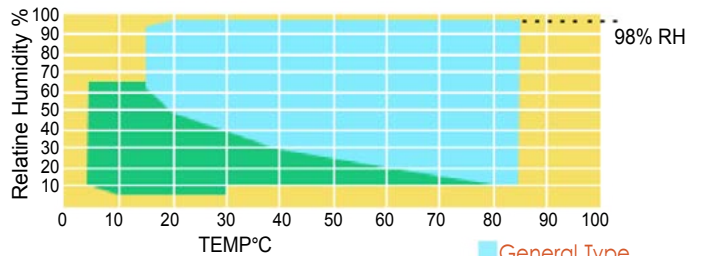


H243-LPVST

H243-LPVST, The Walk-In Environmental Test Room

The walk-in environmental test room is composed of the thermal wallboard by means of pu foaming. It is easy to disassemble & transport. According to the environmental conditions that customers required, the test machine may be used as the burning room, thermostat room and thermostat-humidistat room if it is equipped with the accurate control system of microcomputer for test room have two kinds to be selected: one is the stainless steel and the other one is the sheet baked by paintings.

Humidity Controllable Range (at room temp. 20°C)



Temperature & Humidity Range Table ■ General Type ■ Low Humidity Type

Model description: H243-LPVST			
H	Width A=900mm B=1800mm C=2700mm D=3600mm E=4500mm F=5400mm G=6300mm H=7200mm I=8100mm		
24	Height 21=2100mm 24=2400mm 27=2700mm 36=3600mm		
3	Deep 1=1800mm 2=2700mm 3=3600mm 4=4500mm 5=5400mm 6=6300mm 7=7200mm 8=8100mm		
L	Temp. Range B=rm. temp. +5°C~70°C H=0°C~70°C F=20°C~70°C G=30°C~70°C L=40°C~70°C T60°C~70°C		
P	G=set value of thermostat and humidistat, P=programmable thermostat and humidistat, C=thermostat room		
V	O=thermostat&humidistat control by set value, T=T-type programmable thermostat and humidistat control, E=E-type Programmable thermostat and humidistat control humidistat room, M=M-type programmable thermostat and humidistat control, N=thermostat control by set value, V=V-type programmable control, P=P-type programmable control, H=H-type programmable control		
S	Outside material , S=stainless steel, T=sheet coated with resin		
T	Inside material , S=stainless steel, T=sheet coated with resin		
Construction	Thermostat and humidity	Thermostat room	Heat engine room
Temperature Range	H=0°C~70°C L=40°C~70°C F=20°C~70°C T=60°C~70°C G=30°C~70°C		B=RT. +5°C~70°C
Control accuracy	±0.3°C ±3%RH		±0.3°C
Accuracy of distribution	±1°C ±5%RH		±1°C
Circulatory system	Convection by fan forced circulation		Convection by fan forced circulation with an additional hot air exhausting unit
Humidifying system	Vaporized from surface		
Heating system	Heat dissipated by stainless steel		
Dehumidifying system	Desiccated by frozen latent heat		
Freezing system	Heat desiccated by way of air or water cooling with high effective freezing unit		
Power source	AC220V/AC380V, 50/60Hz		
Safety device	Leakage and overload protection device, compressor overload protection device, power-off device for over-temperature and over humidity, water insufficient protection device, over-temperature protection, device for humidifier and the protection device for limit of temperature		



MSS-A/B, Salt Spray Testers

Testing Chamber: It is made of P.V.C. sheet, its internal structure uses advance technical of stainless steel pipe. The feature is well-reinforced, temperature well kept, and deformed free & keep temperature stable

- Heat-up method of chamber is "5 direction heat-up method", able to control constant temperature inside chamber ($\pm 1^{\circ}\text{C}$)
- Saturated air tank: The heating air purpose saturated air tank for mist spraying is made of stainless steel SUS 304, its feature with press-resistant, water-leakage free, air-leakage free, and deformed free, This installation also included auto-deleted when over pressure, to ensure a longer life span
- Heating constant temperature installation: It using 5 directions heating up by water type to control temp. Ensure temperature kept and constantly. It is also help to prevent the Choppy temperature- Electricity saving for long period use

• Specimen placement: The specimen angle is $15^{\circ}/30^{\circ}$. Place them average ready to test, standard specimen size is 150 x 70mm or 100 x 65mm, finished-products test directly is also available. It is use glass-made nozzle and conformed to Bernoulli theorem to make salt a mist shape & fallen mist capacity is adjustable. (Generally use 1-2cc/hour) **Usage:** Salt spray tester is used for testing rust-proof treatment of material, such as metal surface that after painting, coating, electroplating, anodizing, films of organic and non-organic...etc. It's a corrosion and Rust-Resistant test. It is for checking the corrosion-resistant of products (specimen) under long time corrosion after treatment like anodize, rustproof oil, chemical, etc.

Accessories: 1) Air compressor: 1Set. 2) Testing purpose pharmaceutical products: NaCl (Sodium chloride), NaOH (sodium hydroxide), CuCl (copper (I) chloride), and CH₃COOH (glacial acetic acid) each one bottle. Adjust appliances: Litmus paper, spoon, straw, and concoct tank for each • The main difference between the above stated types are the testing chamber's capacity. Other functions are the same • The industrial standard request the testing capacity reached 0.43m³ or above. Selecting proper type according to consumer's specimen size requirement.

Model		MSS-A	MSS-B
Internal Dim. (cm)		W60xD40xH45	W90xD50xH60
External Dim. (cm)		W125xD106xH94	W155xD120xH105
Quantity of collecting cup		1PC	2PC
Power of heater (Watt)		1000W	2000W
Temp. range	Chamber	Room temp. ~50°C	
	Air	Room temp. ~63°C	
Features	Temp. constancy	$\pm 0.5^{\circ}\text{C}$	
	Saturated air pressure (kg/cm ²)	0.8~2.0 ± 0.01	
	Spray volume (ml/80cm ² /hr)	0.5~0.3	
	PH-salt spray test	6.5~7.2	
	PH-CASS test	3.0~3.2	
Material	Exterior	P.V.C or P.P	
	Interior	P.V.C or P.P	
System	Salt spray vehicle	Air+acid (base) liquid	
	Heating	SUS#316 Stainless steel heater+Teflon coating	
	Control	Digital electronic control	
Power source		AC 1Ø, 220V $\pm 10\%$, 50/60Hz	



ECUV-P, UV Weather Resistance Test Chamber

UV Weather resistance test chamber is equipped with fluorescent UV lamp which can completely simulate the UV spectra of sunlight, exposes materials to alternating cycles of UV light and moisture at controlled, elevated temperatures. It simulates dew and rain with condensing humidity and/or water spray.

The UV Weather resistance test chamber is the world's most widely used weathering tester to test types of damages include color change, gloss loss, chalking, cracking, crazing, hazing, blistering, strength loss and oxidation.

Models:

● **UV/BASIC**

UV/basic uses fluorescent UV lamps and a condensation system for moisture simulation, does not include the SOLAR EYE irradiance control.

● **UV/CW**

Some industry test methods specify the use of cool white fluorescent lamps for indoor photostability testing. To reproduce these indoor light conditions the UV/cw uses ordinary cool white fluorescent lamps. It has a SOLAR EYE irradiance control system that monitors & controls visible light output, rather than UV.

● **UV/SPRAY**

The UV/spray has the same functions as a standard UV/se, but also includes a water spray system. Short periods of spray can be used to create a thermal shock. Longer periods can be used to achieve mechanical erosion.

● **UV/SE**

UV/se is the most popular model features the SOLAR EYE Irradiance control, for precise maintenance of UV light intensity. The UV/SE tester uses a proven condensation mechanism to simulate outdoor moisture attack.

UV Lamps:

- **UVA-340** – Especially suitable for comparison tests of the different formulations. Recommended for most plastics, textiles, paints, pigments, & UV stabilizers and other products testing, as also outdoor test results correlation test.
- **UVB-313EL** – Suitable for the quality control and research, development applications, recommended for the testing of some durable materials, such as roofing point.
- **QFS-40(F40 UVB)** – Test the vehicle exterior point.
- **UVA-351** – Suitable for the gloss solar UV simulation, Recommended for use in automotive interior parts, textiles and ink testing.

The solar eye system:

Most UV Weather resistance test chamber are equipped with solar eye irradiance control. It is a precision control system that automatically maintains light intensity through a feedback loop. The controller monitors UV intensity and compensates for lamp aging and variability by adjusting power to the lamps.

- **Extends lamp life** – Operates lamps until set point can't be maintained Reduces maintenance
- **Accelerate results** –Maximizes effects with high irradiance operates at 75% higher irradiance than noon, summer sunlight
- **Controls irradiance** – Monitors light intensity. Maintains preprogrammed intensity. Maximizes repeatability & reproducibility.

Model	ECUV-P
Workroom Dimensions	1150X400X400 (WxHxD) mm
Exterior Dimensions	1312X1500X500 (WxHxD) mm
Controller	LCD touch screen controller, programmable of temperature, humidity, UV(sun), spray (rain) and time. Maximum 999 cycles.
Temp. Range	RT+10°C - 70°C
Humidity Range	≥95%R.H
Temp. Resolution	±0.5°C
Temp. Uniformity	±2°C
Humid. Fluctuation	±2%
Humid. Uniformity	± 2%
Black board Temperature	63°C ~ 83°C ± 0.3°C
Distance Between Lamps	70mm
Distance of Lamps And Samples	50mm
Lamp Power	40W
UV Wave Length	290nm - 400nm
Specimen Standard Dimension	150X75 (mm)
Number of Specimens	48 pcs
Range of Radiation	0.5-0.83w/m²/nm