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High-Low Alternating Temperature & Humidity test chamber (ATH SERIES)

2/4

SPECIFICATION

1 The key technical indexes

Model	ATH-100	ATH-225	ATH-500	ATH-800	ATH-1000
Workroom dimensions (mm)	410*450*550	500*600*705	700*800*900	800*1000*1000	1000*1000*1000
Exterior dimensions (mm)	950*970*1650	1050*1020*2000	1250*1320*2020	1350*1520*2120	1550*1520*2120
Power	6.0(KW)	7.0(KW)	13.5(KW)	15.0(KW)	16.5(KW)
Temperature range	B:-40℃～180℃ D:-70℃～180℃				
Humidity range	20~98% R.H (10% and 5%RH are available)				
Fluctuation / Uniformity	≤±0.5℃ / ≤±2℃				
Humidity deviation	+2, -3% R.H				
Temperature rise speed	1.0~3.0℃/min				
Temperature fall speed	0.7~1.2℃/min				

Accuracy	Setting		±0.1℃		
	Indicate		±0.1℃		
	Resolution		±0.1℃		
Capacity	100L	225 L	500L	800 L	1000L
Power supply	AC220±10%V, 50--60Hz, single phase + GND AC380V±10%, 50Hz±0.5Hz, 3 phase and 5 wire				
Working environment	5℃~+30℃； ≤85%R.H				

* Remarks: the above datas obtained upon condition of working space without load, ambient tempetarue 25℃

2. Body structure

2.1 The outer skin is make of superior carbon steel plate treated with parkerising electrostatic spray, or SUS304 stainless steel processed with surface fogging and linear grain。

2.2 The inner material is superior stainless steel SUS304, the surface is bright and smooth.

2.3 Heat preservation material is rigid foamed polyurethane or superfine glass fiber wool, can save energy from consumption.

2.4 Heat insulation at doorframe with double layers thermostability silastic seal material.

2.5 Water supplement case is located at lower right of control case, with the function of automatic protection for water lack, be convenient for operator to supplement water .

2.6 Big view observing window, make use of heating element build-in tempering glass, with the help of lamp, the condition in testing case can be see anytime.

2.7 Humidifying pipeline and controling circuit board is divided, enhance safety.

2.8 Water system pipeline and electrical circuit can be convenient to maintain and repair through a door.

2.9 With wheels and adjusting leveling stand, could be move convenient and placed flatly.

2.10 50mm/100mm diameter of cable hole at the left side of chamber body, for application of power wire or signal wire insert.

2 Controll system

3.1 Originally imported microcomputer integrated programmable controller, LCD displayer with touch screen, simple and easy to operate and edit program

3.2 Bilingualism display with Chinese, English and Russian.
Real-time operation diagram also can be displayed.

3.3 Program capacity: 100 groups of formula, 1000 segments 999 cycle, every segment of time can be set with maxium limit of 99 hours 59 minutes. (for reference)

3.4 With automatic lock function, can lock the data and test term after input, to avoid closing down caused by random touch..

3.5 With RS232/485 remote communication interface, operator can design formulas on computor, monitor test procedure and carry out start and shut function, collect data and record, etc.

3.6 With automatic calculating function, can modify temperature and humidity changing term, to refine temperature and humidity control.

4/4

4 Temperature operating system

4.1 Temperature sensor: Platinum resistance PT100Ω/MV.

4.2 Heating system: nichrome electric heater, full independent system

4.3 Refrigeration system is designed as unitary low temperature return circle system.

4.4 Cooling mechanism: totally enclosed air cooling single compress of original French Tecumseh. (the right picture for reference)

4.5 Humidification system: full stainless steel shallow evaporative humidifier, build-out isolate style.

4.6 Dehumidification system: evaporator coiler touch laminar flow at drew-point tempereture.

4.7 Water supply mechanism: automatically control, take the residual water back, reduce waste.

4.8 Cycling mechanism: temperature resistant air conditioner-style electrical machine with low noise, multi-leaf centrifugal fan, force cycling, homogenize temperature in testing space.

4.9 Cycling circle design in air-out and return, air pressure and speed comply to testing criterion, can accelerate temperature back to steady after the door is opened and closed again.

4.10 Heating system and cooling system are individually independent system, this design can enhance effeciency, reduce testing cost, increase equipment life, lower fault possibility.

5 Protection System

Protection for: leakage of electricity, short circuit, extra-temprature, lack of water, over-heating on electrical machine, compressor over load and extra-voltage, over-electricity. Memory function when controller power shut off.

6 Standard configuration and enclosure

Standard configuration:

Multi-layers heating and fog-removal glass window, with illumination --- 1 set;

Specimen shelf --- 2 pieces;

Cable hole (50mm/100mm) --- 1.pcs

Technical material:

certificate of quality, warranty card, operation and maintenance manual.

5/4

7 Train and after-sale service

7.1 Training:

a. The user can come to our company to accept training in factory when the product is ready;

b. We can also, according to the contract, perform a training on place when the equipment is installed and commissioned.

c. Teach users to install and operate our products through other method.

7.2 After-sale service:

a. Consultation for use and maintain;

b. Provide quick-wear parts and spare parts in time;
c. Dispatch technicians to teach users on place about equipment usage and maintenance;
d. Up to THREE years quality warranty term;
e. Problems caused beyond the quality warranty period, we can resolve in time,on a fee basis,providing support and materials upon the conditions agreed.

6/4