



东莞中力仪器科技有限公司

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Add: No.62, Xinhe Management of Area, Wanjiang District, Dongguan, Guangdong, China

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# Introduction

**Name: ZL-6004A programmable constant temperature and humidity testing machine**



**Machine is made of stainless steel 304:**

## **Equipment summary:**

The machine is applied to test the materials in heat-resistance, cold-resistance, dry-resistance, moisture-resistance. It is simple to operate and program easy to edit. It can show the set values and operative time.



## Features:

- 1.High-texture appearance, the surface handled through the matte stripes, and use of planar non-reactive handles, easy to operate, safe and reliable.
- 2.Rectangular complex glass window can be viewed the testing sample, windows with anti-sweat heater device that prevents water vapor condensation, and high-brightness PL light.
- 3.Double-insulated airtight container, which can effectively isolate the internal temperature of leakage.
- 4.With an external water supply system can be easy to supply water and automatically reuse.
- 5.Compressor circulatory system from French "Taikang", more effective removal of oil between the condenser and the capillary and use environmentally refrigerants (R23, R404, R507).
- 6.Controller imported LCD display screen can be displayed measuring values and setting the value and time.
- 7.Controller with multi-segment program edited, temperature and humidity can be controlled quickly (OUICK) or slope (SLOP).
- 8.Built-in mobile pulley easy to move and has a strong positioning screw fixed position

## Corresponding standard:

- 1.International Electrotechnical Commission Standard:  
IEC68-2-03\_test method Ca\_Steady damp-heat  
IEC68-2-01\_test method A\_cold  
IEC68-2-02\_test method B\_dry heat
2. Military Standards:  
MIL-STD-810F-507.4 humidity  
MIL-STD-810F-501.4 high temperature  
MIL-STD-810F-502.4 low temperature  
MIL-STD883C test method 1004.2 temperature and humidity cycling test  
MIL-STD810D test method 502.2  
MIL-STD810 test method 507.2 procedure 3
3. Japanese Industrial Standard:  
JIS C60068-2-3-1987 test method Ca: Steady damp-heat  
JIS C60068-2-2-1995 test method B:dry heat  
JIS C60068-2-1-1995 test method A:low temperature
4. USA Semiconductor Industry Standard:  
JESD22-A101-B-2004 Constant temperature and humidity test  
JESD22-A103-C-2004 High Temperature Storage Test  
JESD22-A119-2004 Low Temperature Storage Test
5. Chinese National Standard:  
GB11158 Technical conditions for high-temperature testing box  
GB10589-89 Technical conditions for low-temperature testing box  
GB10592-89 Technical conditions for high and low temperature testing box  
GB/T10586-89 technical conditions for humidity testing chamber



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- GB/T2423.1-2001 Low-temperature testing methods
- GB/T2423.2-2001 High-temperature testing methods
- GB/T2423.3-93 Testing Method for humidity Test Chamber
- GB/T2423.4-93 Alternating hot and humid testing method
- GB/T2423.22-2001 temperature testing method
- 6. China's National Military Environment Test Equipment
- GJB150.3 high-temperature testing
- GJB150.4 low-temperature testing
- GJB150.9 hot and humid condition testing

### Applicable industries:

Applied to control the product quality, such as electronic, plastic products, electrical appliances, instruments, food, vehicles, metals, chemicals, building materials, aerospace, medical care and so on.

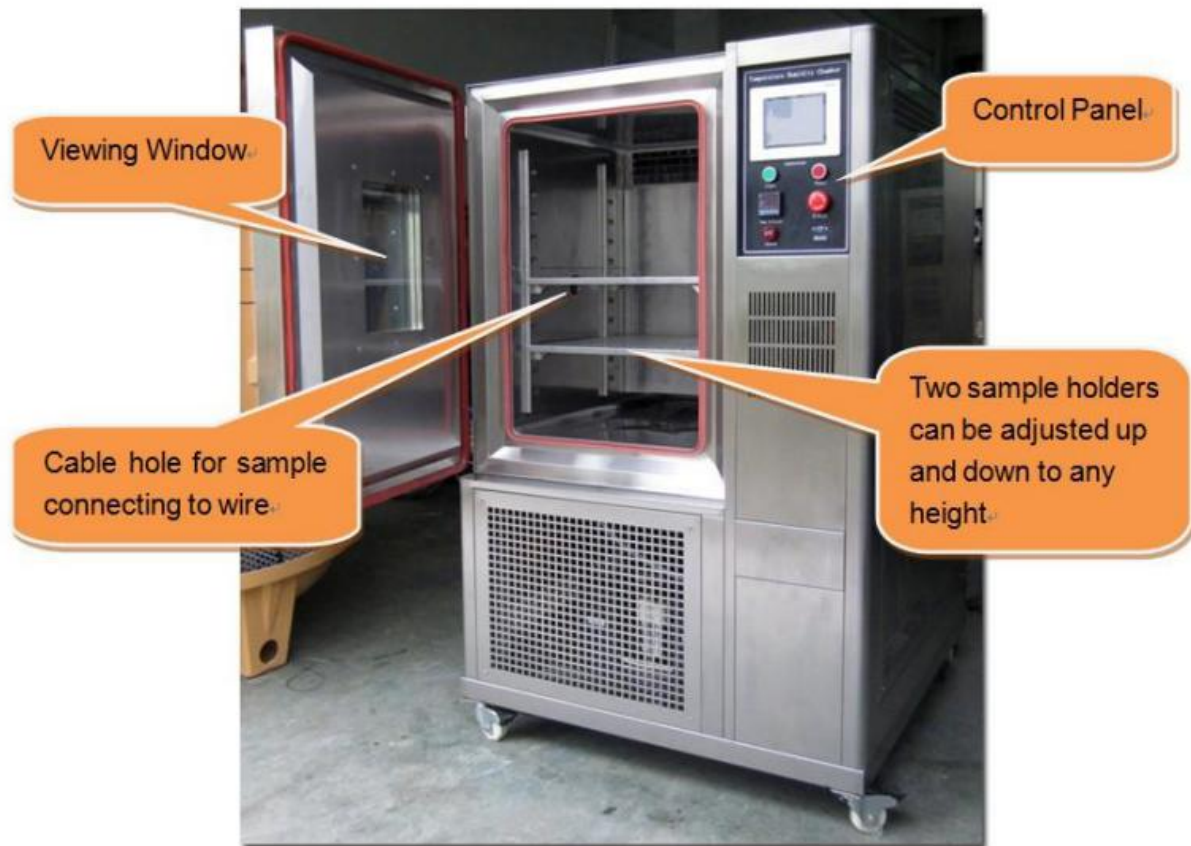
### Detailed parameters:

model	ZL-80 (A~G)	ZL-150 (A~G)	ZL-225 (A~G)	ZL-408 (A~G)	ZL-608 (A~G)	ZL -800 (A~G)	ZL-1000 (A~G)
Inside size WxHxD (cm)	40x50x40	50x60x50	50x75x60	60x85x80	80x95x80	100x100x80	100x100x100
Outside size WxHxD (cm)	<b>100x170x87</b>	<b>105x175x97</b>	<b>115x190x97</b>	<b>135x195x115</b>	<b>145x185x137</b>	<b>145x210x130</b>	<b>147x210x140</b>
Temperature range	-70℃~+100℃(150℃) (A:+25℃ B:0℃ C:-20℃ D:-40℃ E:-50℃ F:-60℃ G:-70℃)						
Humidity range	20%~98%R.H.(10%-98%R.H/5%~98%R.H is the specific condition)						



<p>Temperature Humidity Control Chart</p>	
Accuracy/ uniformly	±0.1°C; ±0.1%R.H./ ±1.0°C; ±3.0%R.H.
Accuracy / volatility	±1.0°C; ±2.0%R.H./ ±0.5°C; ±2.0%R.H.
Heating / cooling time	About 4.0°C/min; about 1.0°C/min (5~10°C/mm is the specific condition)
Inside material	Stainless steel SUS 304#
Insulation material	High-temperature high-density amino acid ethyl ester foam insulation materials,
Cooling system	Air-cooled/ single-stage compressor(-20°C) , wind, water cooled/two-stage compressor(-40°C~-70°C)
protection	compressor overload switch, high and low pressure protection switch, over-humidity-temperature protection switches, fuses, warning system
accessories	recorder(purchase)、view window、50mm testing hole、PL lamp、clapboard、Dry and wet gauze ball
controller	TEMI300 digital controller from South Korea
compressor	France Tecumceh
power	1Φ 220VAC±10% 50/60Hz & 3Φ 380VAC±10% 50/60Hz

**Detailed Configuration and function of software :**



#### A. wind circulative system

- 1.Using multi-wing centrifugal Rewind fans, strengthen the axis is made of aluminum alloy in order to attain loop forced convection
- 2.Stainless steel added long axis
- 3.Stainless Steel Multi-blade centrifugal wind wheel

#### B.water Supply system

- 1.with water tank at the back
- 2.automatically supply water
- 3.warning for the shortage of water

#### C. cooling system (diego-style、single machine、refrigerator;)

- 1.compressor: France“Tecumceh ”Hermetic Refrigeration Compressor TFHK2522K two unit



2.refrigerator: Air-cool condenser coil

3.Evaporator: pomfret Chip Multi-Segment

4.Other Accessories: Imported desiccant cooling, Freon-borne window, the U.S. oil-water separator

5.Expansion System: Italian expansion valve

#### **D.Temperature and humidity control system**

.Control Specifications: Original South Korea TEMI850 color LCD touch screen in English and Chinese

Accuracy:  $\pm 0.5\text{ }^{\circ}\text{C} \pm 1\% \text{ R.H}$

Resolution:  $0.1\text{ }^{\circ}\text{C} 1\% \text{ R.H}$

2. Functions can accommodate memory 999 program, optional single-stage control or multi-segment program control, operating as a functional form model, can be

directly programmed and solid curve of function and the RS-232 communication interface.

3.connect with computer, directly monitored by the computer to operate program, it also records temperature data and print! (Need anther purchase)

4.The main components of the system is equipped with a safe inspection and interface devices, when an fault occurs, immediately through the LCD to display fault status and cut off the power

5.With the cumulative operating time, display the run time

6.Sensor: PT100 Sensor

#### **E.Standard Accessories**

1 two groups adjustable shelf board made of stainless steel, the distance can be arbitrarily changed

2.Perspective vacuum glass windows, explosion-proof type

3.Wide-angle lighting, using energy-saving high-efficiency fluorescent lights

4.The machine is equipped with 4 group adjustable fixed wheel axle and control indicator light

5. a pair of  $\Phi 50\text{mm}$  hole for testing

#### **Power:**

Three-phase  $380\text{V} \pm 10\%$  Power frequency:  $50\text{Hz} \pm 2\%$  4KW

#### **Information and services**

1. To provide equipment drawing, electrical schematics, electrical wiring diagram, consume parts, operating manuals and other technical information, copy of two, and to provide essential technical information.

2. Trained how to operate and maintain the equipment, so the staff grasp to the skill of of equipment.

3. Equipment, one year warranty for free maintenance service: after one year provide the accessories for paying costs price.



**ZL-6004B following list of the programmable constant temperature and humidity testing machine:**

Structure	material	Model	From	description
box	Shell	Stainless steel SUS304B	import	Antirust
	Liner	Stain steel SUS304B	import	Antirust
	insulation	Rigid polyurethane foam, ultra-fine glass fiber	Hongkong	insulation
	Door	Stainless steel SUS304B	import	Good sealing performance
	View window	38026 insulating glass		Observed the testing sample
	Frame	Stainless steel ring	export	Diameter 8mm
	Testing hole	Diameter 60MM		Wire through directly
Heating system	Heating pipe	Stainless steel heat sink	Hongkong	Storage's temperature rise up
Air circulation system	fan	YYF100-25-4S	Japan	Storage back to ring
Cooling system	compressor	CAJ2464	France	cooling
	Condenser	Tecumceh	France	Storage back to ring
	Coolant	R23/404/environmentally	United States	cooling
	electromagnetic valve	1028/3 Castor	Italy	Refrigerant opening and closing
	Expansion valve	TY2 Danfoss	United States	Refrigerator throttling
	filters	0835 Danfoss	United States	Filter oxide cooling pipe
Humidity system	Humidity tube	Stainless steel	304 import	The effective protection of laboratory humidity
	Humidity box	Made by oneself		Provide temperature