

## **Altitude Test Chambers**

### **Applications 1:**

KOMEG Altitude Test Chambers combine temperature and altitude with optional humidity for simultaneous environment testing. Utilizing this low temperature and high altitude chamber users can control the temperature while subjecting the product to various altitudes up to 100,000 feet standard. This combination of elements allows precise simulation of any real-life conditions a product might face and allows for a wide range of test profiles to be performed.

Apart from its commercial and military aerospace applications, altitude chambers are used for automotive tests to simulate mountainous conditions and to test computers, electronics and packaging materials that may be used in that environment or shipped via air freight.

### **Features:**

Disassembled structure; shell is made of high-quality cold-rolled steel sheet after acid-cleaning electrostatic spray, the inner chamber made of SUS304 # high-quality stainless steel; original international brands powerful and efficient industrial chillers (group) and high-quality refrigeration parts, using R404A, R23 refrigerants; imported German Siemens PLC Chinese color LCD touch screen programmable intelligent temperature and humidity control.

### **Standard configuration:**

Two sample holders; an observation window;  $\phi 25$  or  $\phi 50$  cable hole.

### **Optional parts:**

Communication interface RS232 or RS485, logger, micro printer, remote temperature and humidity control system (including printers, communications software, and computer), mobile casters.

### **Structure:**

Overall structure, new test chamber designed very easy to operation and maintenance:  
Water and electricity system separation design;  
External humidifying design;  
Three levels of overheat protection, easy access for refrigeration servicing, etc.

### **Material:**

TRUMPF machines for sheet metal processing;  
Tecumseh, Bock Compressor;  
High quality electronic components (e.g. DANFOSS, ALCO, RANCO, SPORLAN, SAGINOMIYA, Schneider solenoid valve)

Specifications					
Model		KU-504L	KU-1000L	KU-504S	KU-1000S
Inner Size (D*W*H)mm		800*700*900	1000*1000*1000	800*700*900	1000*1000*1000
Capacity (KW)		11	15	16	18
Chamber Volume (L)		504	1000	504	1000
Performance	Temp range	-40°C ~ +150°C		-70°C ~ +150°C	
	Temp constancy	±0.5%			
	Temp deviation	≥100°C, ±3.0°C (at constant pressure with empty load)			
		<100°C, ±2.0°C (at constant pressure with empty load)			
	Cooling rate	0.7°C ~ 1.0°C/min (Overall average)			
	Pressure range	Constant pressure ~1kPa			
	Pressure constancy	When ≥40kPa, ±2kPa, 4kPa ~ 40pKa ±0.5kPa, when ≤4kPa, ±0.1kPa			
	Depressurization rate	Constant pressure ~1kPa ≤ 30mins (Normal temp)			
Pressure recovery rate	10kPa/Min (adjustable)				
Material	Exterior material	Cold-rolled steel sheet (Rust proof & Plastic Spray treated) / Stainless Steel plate			
	Interior material	Stainless steel (SUS304)			
	Pressurized parts	High quality steel plate (Rust proof & Plastic spray treated)			
	Insulation material	High quality glass wool			
Cooling System	Compressor	Semi-Hermetic Compressor			
	Cooling Mode	Water cooled			
Temp regulating method	Balanced Temperature & Humidity Control System (BTHC)				
Pump	Rotary vane type vacuum pump				
Heater	Iron-chrome wire heater				
Sight window	Circular viewing glass incorporating heat generator				
Temp Sensor	Pt-100				
Controller	Touch Screen Controller				
Safety Devices	Over pressure, over heat and over current protection for compressor, over temp. protection, over load protection for blower, Hydraulic and Water lack Protection, leakage protection, phase-lack protection, Pump failure alarm				
Standard Accessory	Sight window, Cable Port (1 located on the left side), Baffle, Baffle frame*2				
Power	AC380V/50Hz, 3Phase 5 wires+ Ground Wire.				
Note: 1. We reserve the right to change specifications without prior notice 2. Customized sizes and configurations available					

## **Standards Implemented and Met**

GB10592-89 Technical requirements for high and low temperature test chamber

GB2423.1-1989 Low temperature test

GB2423.2-1989 High temperature test mode

Thermostat regulator balanced manner BTPC thermostat (regulator) mode

Ambient temperature: 5 °C ~ 35 °C; Humidity≤90% RH; Atmospheric pressure: 86-106kPa

Material cold rolled steel shell, surface spray

SUS304 stainless steel inner tank

Rigid polyurethane foam insulation foam glass +

Regulator heater Nichrome heater

Fan shaft seal magnetic fluid flow fan

Refrigeration machinery contraction two binary cascade refrigeration (cooling)

Refrigeration compressor: Semi-hermetic compressors

Refrigerant: R404a / R23

Controller Display: 7 "color screen, liquid crystal display (LCD)

Run the program mode, setting mode

Setting mode Touch (piezoelectric)

Program capacity 32 programs, each up to 800 steps (segments), maximum 999 cycles

Setting range operating temperature range adjustment device according to (limit 5 °C, the lower limit of -5 °C)

Display Resolution time: 0.1min; temperature: 0.1 °C; pressure: 0.1kPa

Enter thermal resistance, pressure sensors

Anti-windup PID control mode

Power: AC380 (1 ± 10%) V (50 ± 0.5) Hz three-phase four-wire protective earth

Maximum power current: (A) 35 35

## **Safety devices**

1. Power owed to reverse protection
2. No fuse switch
3. Dry compustion prevention switch
4. The water protection switch
5. Over-temperature protection
6. Motor overload protection
7. The high-pressure compressor protection
8. The compressor overheating protection
9. The compressor overcurrent protection
10. The vacuum pump overcurrent protection

## **Packing Details:**

We use PP Film wrapping the test chamber to protect the test chamber from moisture or being scratched first, then use strong plywood case for easyload and transport, and to keep the chambers from potential crash or impact.

### **After-sale Service:**

If you face any problems in future during testing process we promise we will give you a reply within 48 hours and solution provide within 3 working days. We can offer operation video and English operation manual. We can provide video-conference. If customers require on-site service, the transport and travel expense shall be borne by customer.

### **Why Choose KOMEG?**

#### **Company information:**

Being a first-class supplier and reliable partner, we are certified to ISO 9001 and got CE approval for all our products. All equipment are 7 x 24 hours tested before delivery. That explains why Komeg is the private brand of choice for many well-known brand enterprises, and also one of the very few designated suppliers who were recognized by many top 500 enterprises. Let Komeg's 26 years of professional experience work for you too.

1. Dedicate touch and excellent user experience
2. Unique and compact design, top grade appearance, stable performance and easy operation
3. Can simulate a wide range of temperature and humidity environments
4. Capable of testing large components, assemblies and finished products
5. Customized sizes and configurations available
6. One year warranties

#### **Better Idea, Design and Quality**

We strive for continuous innovation, releasing no less than five new designs each year. Our strong R&D team and skilled workers is the key to our success. No matter it is standard or custom-made project, we have rich experience in handling such so that customers worldwide can benefit more when working with us. And to ensure your specific test standards are met, the key components and parts we are using are imported famous brands. That's why SGS, Konica Minolta, Senko, Midea, TCL and Huawei are among our long-term clients.

Establish a cultural KOMEG, Build a century brand.

Quality conscious enterprise for quality conscious people.

We'd rather explain for the price than apologize for the Quality life long

***Experienced and skilled staff;***

***High precision & reliability performance;***

***Prompt after-sale service;***

***Persist on the philosophy all the time***

**Besides this, we have a lot of other chamber for your reference:**

3-zone/ 2-zone Thermal Shock Chamber  
Walk-in Constant Temp. And Humidity Chamber  
Rapid Temp. Change Chamber  
Precise Drying Test Chamber  
Temperature/ humidity/ vibration three integrated Chamber  
Precise Drying Chamber  
Vacuum oven/ no oxidation oven  
Air Exchange Type Aging Oven  
Burn-in Room  
Salt spray Chamber  
Vibration Testing Machine( mechanical and electromagnetic)

**KOMEQ Technology Industrial Co.,Ltd.**

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