

Technical Specification for Industrial Drying Oven



Model: KOV-2000B

Manufacturer: KOMEG Technology Ind Co., Limited

I .Product Overview

Able to accurately simulate a wide range of complicated natural environments, and is suitable for reliability test in industrial products. Meet GB5170.2.3.5.6-95 standard requirements of environmental testing equipment and test methods for the basic parameters of electric and electronic products under the condition of humidity, low temperature, high temperature, and constant heat.

II .Application

Applicable to environmental adaptability and reliability test in such industrial units as electronics, electrical appliance, battery, plastics, food, paper product, vehicle, metal, chemistry, building material, research institution, inspection and quarantine bureau, university etc..

III.Features

- GB-2423. 2-89(IEC68-2-2)Test B: High Temperature Test
- GJB360. 8-87(MIL-STD. 202F) High Temperature Life Test
- GBJ150. 3(MIL-STD-810D) High Temperature Test

1.Easy Operation	※Japan Fuji PXR9 of temperature controller ※Flexible approach for data collection and recording ※A variety of control functions ※Front panel IP66 waterproof structure, three-key menu operation; ※Standard screw connection without socket; ※The longitudinal size is shorter than PXW; ※UL/CSA/CE certification; ※Measured value big red LED display; ※A variety of control functions: simple ON/OFF control, PID automatic adjustment control, fuzzy and PID with the dynamic adjusting control, PID adaptive control adjustment;
2.High reliability	※Key parts are imported, ensuring the service life and high reliability

IV.Main Technical Parameters

1. Chamber

1.1 Workspace volume	W 2000 × H 1000 × D1000 mm
1.2 Exterior size	W2360 × H 1760 × D1260 mm
2.Temperature:	
2.1 Temp range	+50°C ~ 250°C
2.3Temp fluctuation	±1°C

2.4 Temp Uniformity	±2.0°C(50~100°C) ±3.0°C(101~250°C)
2.5 Control precision	±0.5%(full range)
2.6 Heat up rate	1.0~5.0°C/min(adjustable)

V. Chamber Structure

Overall structure and chamber was composed of three parts as below.

Insulation box, separate refrigeration units, and electrical control cabinet.

1.Insulation box	<ul style="list-style-type: none"> ※ wall material: high-quality carbon steel with static color spray ※ inner wall material: SUS304 # matte stainless steel plate ※ Insulation materials: Rigid polyurethane foam insulation layer + glass fiber.
2.Door	Heating wire was installed at the door frames to prevent condensation at low temperatures.
3.Sample holder	Two layers of stainless steel sample holder,bearing (uniform) 50 kg/layer.
4.Mobile Casters	Mobile Casters *4 (with foot cups)
5.Electric control box	Total power circuit breaker, over-temperature protection.

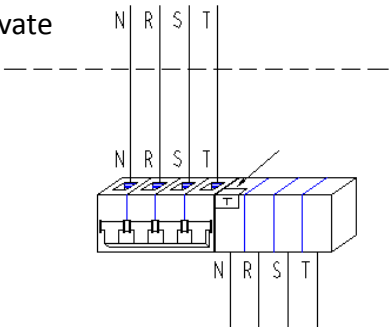
VI. Air-conditioning system

1. Control mode	Forced ventilation loops design, balance temperature & humidity control system (BTHC).
2.Air supply mode	Forced air circulation

VII、 Control System

1.Controller	<ul style="list-style-type: none"> ※Imported microcomputer automatic calculus controller ※4 digit LED display ※AUTO TURNING controller ※Input selection ※ALARM or TIMER selection ※Slope control available ※°C or °F available ※SWITCHING POWER 85-265V AC
2.Control mode	PID+SSR output
3.Timer	Control appliance timer function
4.Electric Control box	<ul style="list-style-type: none"> ※Cooling fan ※switch panel ※Sample test terminal ※The power Leak detector

	Parts	Brand	Remarks	
<p>5.Parts and its Brand</p>	Controller	FUJI	FUJI temperature controller PXR9	
	Wire protection switch	Schneider		
	AC contactor	Fuji, Schneider		
	Thermal relay	Schneider		
	phase sequence relay	Fuji ,CROUZET		
	Time Relay	Panasonic		
	AC contactor	Schneider		
	Solid State Relays	Carlo Gavazzi		
	Temperature fuse	EMERSON brand MICROTEMP		
	<p>Note: Two options listed is for alternate choice and backup purpose</p>			
	<p>6.Protection System</p>	<p>3.1 Lab.</p> <ul style="list-style-type: none"> ✘Adjustable over temperature protection - 1 over temperature protection way1; ✘Test room temperature fuse - over temperature protection way 2; ✘Air conditioning channel - over temperature limit over temperature protection way 3; ✘Controller set over temperature shutdown alarm - over temperature protection way 4; ✘Fan motor overheating; ✘Motor overload protector; ✘buzzer; ✘fault indicating lamp; ✘no-fuse switch. <p>3.2 Others</p>		

	<ul style="list-style-type: none"> ※The total power phase sequence and the lack of protection; ※earth leakage protection; ※Load short circuit protection.
<p>IX、 Installation</p>	
<p>1.Power</p>	<ul style="list-style-type: none"> ※AC380V±10%, 50Hz±1Hz,3 phase 4 wires +Ground Wires ※Power cable is connected to the air switch in control box ※Total Power ~8 kW, 10A; ※Voltage permitted: AC (1±10%) 380V ※Frequency permitted: (1±1%) 50Hz ※Resistance of ground wire less than 4Ω <p style="margin-left: 40px;">TN-S mode or TT mode for power supply</p> <ul style="list-style-type: none"> ※Must be equipped with an independent and private air or power switch used by this device only. <div style="text-align: right; margin-top: 20px;">  </div>
<p>2.Surrounding environment</p>	<p>5 ~ 35°C, humidity≤85%R.H</p>
<p>3.Air quality</p>	<p>No high concentrations of dust or corrosive gases</p>
<p>4.Installation environment</p>	<ul style="list-style-type: none"> ※distance from the wall to both sides and rear of chamber more than 800mm, to the front more than 1500mm. Provide independent power distribution switchgear and humidification condensate drains, and external power connector device is necessary ※ground level, well-ventilated , non- flammable, explosive, corrosive gases and

	<p>dust</p> <ul style="list-style-type: none"> ※No strong electromagnetic radiation nearby ※With floor drain (less than 2 meters from the refrigeration unit) ※venue floor load capacity : not less than800kg/m² ※leave adequate space for maintenance
5. Ground wire	Grounding resistance less than 4Ω, grounding bolts located at the base of the cabinet.
6. Drainage	Drain hole installed at the base of the housing
7. Cable port	φ50, φ80, φ100, φ120mm cable port, location and number can be customized according to user requirements if chamber body structure allows.
8. Equipment storage	<ul style="list-style-type: none"> ※When the device does not work, the ambient temperature should be maintained within 0 ~ 45 °C ※When the ambient temperature is below 0°C, the water remaining in the device should be drained to avoid water pipes freezing and broken
X. Technical Documentation	
1. Technical Documentation	<ul style="list-style-type: none"> ※Operation Manual*1 ※Maintenance Manual*1 (Refrigeration & electric schematic diagram)