



Beijing Zhongxingweiye Instrument Co.,LTD.

Operation Manual of Vacuum Drying Oven



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I . Scope of application

It is suitable for drying and heating articles in vacuum conditions in the laboratories of industrial and mining enterprises, colleges and universities and R&D institutions etc. Make vacuum heating for articles in vacuum dry box. The vacuum dry box has following advantages:①Could reduce the drying temperature, shorten the drying time.②Avoid some articles heated oxide, dust particle damage and the heating air kills the biological cells.

II . Structure characteristics

The shape of vacuum dry box is horizontal type. The box body is made of high-quality steel plate with pressing and welding processing. The surface of box adopts plastic spraying treatment. Thermalprotective coating filled by alumina silica wool. The box door is made of double toughened glass, which could regulate the open and close, degree of tightness of box door. The formed high-temperature resistance silicon rubber sealing washer used between work room and glass door for ensuring sealing between the box door and work room, which improved the vacuum degree greatly. DZF type has square workroom..

III. Installation and debugging

1.Installation: Put the vacuum dry box at the place in the room with good air conditions and without succession. There should no inflammable, explosive and corrosive air in the surroundings of instrument.

2.Debugging

Close the box door and screw the handle. Close the return-air valve and open vacuum valve, connect the airway at side of box body with vacuum pump by vacuum rubber pipe, switch on the power of vacuum pump, begin to exhaust air. When the indicating value of vacuum meter reaches to required value, close the vacuum valve and switch of vacuum pump. At this time, it has vacuum condition in the box. If there is no heating function, the debugging of vacuum dry box is end..



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Model	Voltage (V)	Power (KW)	Temperature Range (°C)	Wave motion degree of temperature	Vacuum degree	Dimensions of workroom (mm)	Capacity (L)
DZF-602 0AB	AC 110/220V 50/60Hz	0.3	RT+10~ 200	±1%	< 133Pa	300×300×275	20
DZF-605 0AB		1.4		±1%	< 133Pa	415×345×370	50

V. Usage

1. Put the articles need to be dried in the box, close the box door and screw the handle, close the return-air valve and open the vacuum valve, connect the airway at side of box body with vacuum pump through vacuum rubber, switch on the power of vacuum pump, it begins to exhaust air. When the indicating value of vacuum meter reaches to the required vacuum degree, close the vacuum valve, and then close the vacuum pump, at this time, it is in vacuum condition in the box.

2. Switch on the power, turn it on, the indicating light is on, which means it works in normal. The meter will display the temperature of workroom, then regulate the control meter to the setting temperature, poen the heating switch, the workroom begins to heat, the green light on the control meter is on, which means it is power on and temperature is rising. After 60 minutes, constant temperature of instrument, the display temperature should be in conformity with the setting temperature.

3. If you required lower temperature, for emample 60°C, you could adopt second setting style, set 50°C at the first time, when the overshoot temperature fall after rise, set 60°C at the second time, in this way, you could reduce or stop the overshoot temperature.

4. Different articles with diferent humidity required different drying time. If longer drying time required and the vacuum degree reduced, exhaust air and make vacuum circumstances again and vacuum pump and then open the vacuum valve.

5. After finish drying, close the power firstly, open the return-air valve, make the air in the box not in vacuum condition, open the box door and take the articles out. (In vacuum conditions, the rubber ring and glass door absorbed tightly, not easy to open the box door, after some time, open it easily).

6. In vacuum condition, the control temperature could not lower than 50°C. If it



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is lower than 50°C, the value measured by standard thermometer is different with the display value of meter, that is normal. It could not affect the temperature control and precision when the temperature is higher than 50°C.

VI. Points for attention

1. The vacuum dry box must be grounding effectively for ensuring safety.
2. when the vacuum dry box don't need to connect with air exhausting, close the vacuum valve firstly, then close the power of vacuum pump, at the same time, open air pressure valve of vacuum pump, otherwise the pump oil will flow backward to the box.
3. When withdraw the treated articles, if it is inflammable, must put it in the air when the temperature cooling the lower than ignition point for avoiding the combustion from reaction.
4. There is no explosion protection equipment in the vacuum dry box. Don't put the inflammable articles into it.
5. If the filter could be installed in the space between the vacuum box and vacuum pump, avoid the damp air enter into the vacuum pump.

VII. Maintenance

1. Keep the vacuum box clean often, wipe the glass of box door by soft cotton cloth. Don't use the solution with chemical reaction for avoiding damage of glass.
2. If the vacuum box don't use for long time, coat corrosion resistant oil on electroplate parts and cover the plastic protective cover, put it in a dry room for avoiding the damage of parts and affecting the use result.



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VIII. Fault handing

Phenomenon	Reassons	Treatment
No power supply	The socket has no power supply	Check the line and change the socket
	The socket isn' t plug well or the wire is broken	Change the plug and connect the wire well
	Fuse is open cirvuit	Change the fuse
	The power is not switch on	Switch on the power
The temperature in the box isn' t rising	The setting temperature is low	Adjust the setting temperature
	The electric heater is wrong	Change heater
	The temperature controller is wrong	Change the temperature controller
	The temperature sensor loosened	Screw the connecting nut
The error between the setting temper ature and temperature in the box is big	Damage of sensor	Change the temperature controller
Temperature is out of control	Change the temperature controller	Fix the sensor well
	The temperature controller is wrong	Change the temperature controller

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