

Read the instruction carefully before use!

GCMD industrial

Adsorption type for shallow regeneration

Compressed air dryer

INSTRUCTIONS

July 10, 2018

CATALOG

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1) The OOBA OUT OF BOX AUDIT

1.1 Take care when unpacking equipment to avoid damage to equipment.

Carefully open the packaging of the equipment. Check the equipment carefully against the equipment packing list. Check the equipment for damage.

1.2 If equipment is damaged during unpacking, please contact the carrier and supplier on time.

2) Foreseeable potential risks and precautions

2.1 Improper configuration or use of compressed air system equipment can cause damage to the equipment or shorten its life. If you have some questions before installation, please contact our professional and technical staff.

2.2 Compressed air can cause harm to the human body and its installation, operation and the maintenance of the equipment must be carried out by professional staff.

2.3 Professional personnel are responsible for installation, wiring and maintenance of electrical devices in the equipment.

2.4 The equipment will produce a certain amount of noise during the process of work. If the noise has an impact on the working environment or personnel, soundproofing should be considered before installation;

3) Technical parameters

Drying Machine No.: GCMD Series			
Nominal volume flow:	Refer to the nameplate	regeneration gas consumption:	Reference ex works inspection
Nominal pressure dew point:	-20	Pressure drop:	0.03MPa

Nominal working pressure: 0.7MPa		Labor force delivery:	Refer to the nameplate
Maximum working pressure:	1.3 MPa	Degree of protection:	IP65
Minimal work Busy:	0.4 MPa	Noise: * *	80 dB(A)
Nominal inlet temperature: 35 °C		Width height depth (mm)	Refer to the nameplate
Maximum intake temperature:	50	Interface Size:	G1/2"
Working environment temperature:	2~50°C	Net Weight:	Refer to the nameplate

4.2 Installation of the equipment

4.1 There must be adequate space around the equipment to ensure safety and equipment maintenance.

4.2 Make sure the fixed point of the equipment can support the weight of the equipment and is securely installed.

4.3 Make sure that the connecting pipe between the equipment complies with the relevant requirements.

4.4 Ensure proper power supply.

4.5 Make sure the coupling mode of adsorption dry machine and air compressor is correctly selected and installed: air compressor provides clutch installation mode without contact or air compressor does not provide: coupling installation mode of dry contact (without energy saving requirement, clutch installation is also optional)

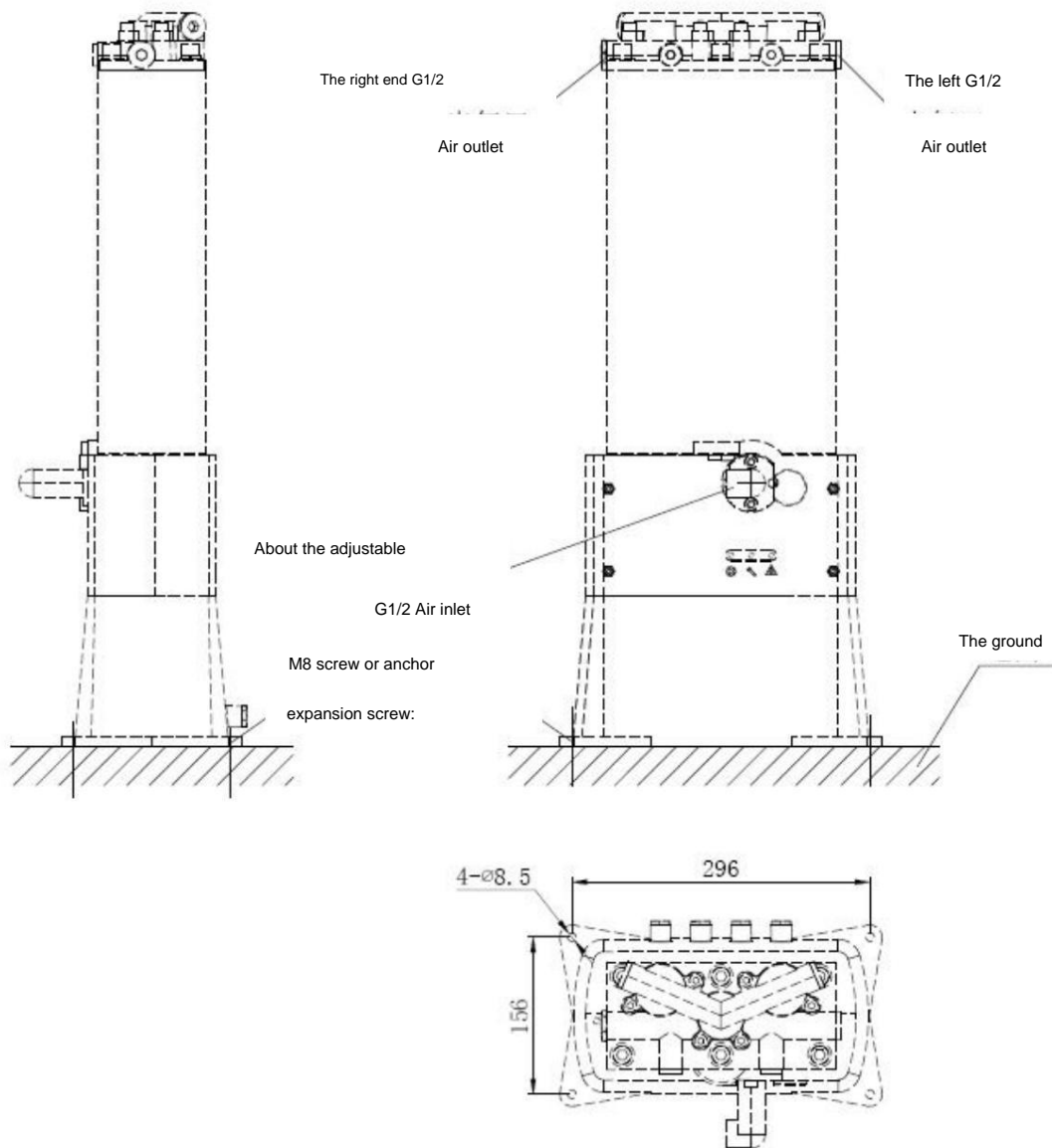


Figure 1ý installation and placement diagram of MD dryer

**4.5 Very important! Make sure the air source entering the dryer complies with:
the following requirements. If in doubt, consult the equipment
supplier.**

ý Water Content: Relative Humidity ý 100%, no liquid water.

ýoil content: ý 0.6 mg/m³. ýsolid particles: ý 5 µm.

4.6 recommended process flow

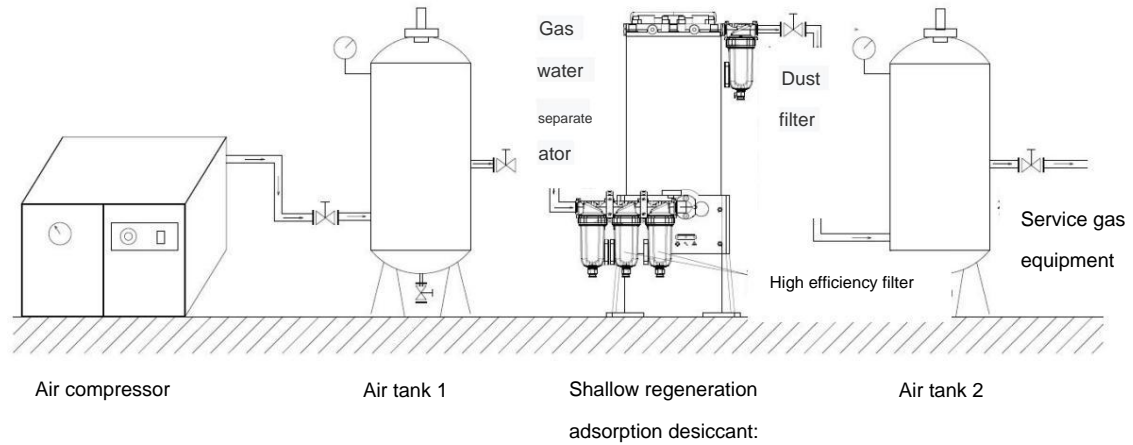


Figure 2 Schematic diagram of the system

5 Startup procedure

5.1 Close the inlet and outlet valves of the dryer and the outlet valves of the dryer gas storage tank 2;

5.2 Start the air compressor;

5.3 When the pressure of tank 1 reaches the nominal pressure, open the inlet dryer valve slowly;

5.4 Open dry mechanical and electrical source;

5.5 Slowly open the air outlet valve of the dryer. Special attention at the moment: must be paid not to fully open the air outlet valve, otherwise it may lead to: overload the dryer and affect the performance of the dryer.

5.6 When the pressure of gas storage tank 2 reaches the nominal pressure, slowly open the valve at the air outlet end of gas storage tank 2 to supply air to the gas installation.

6. Schematic diagram of the main structure of the dryer:

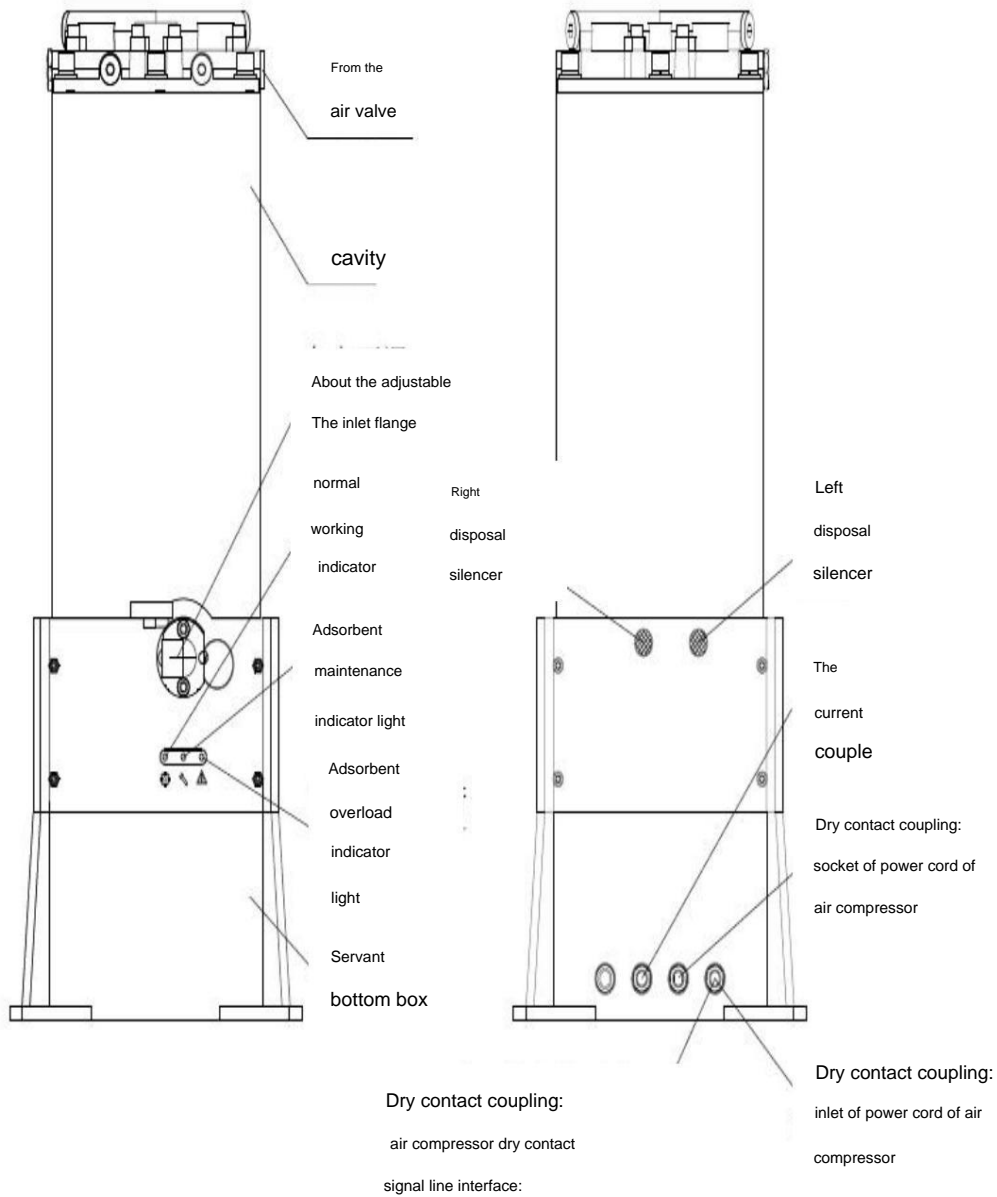


Figure 3: Main structure diagram of GCMD-type desiccator without heat regeneration

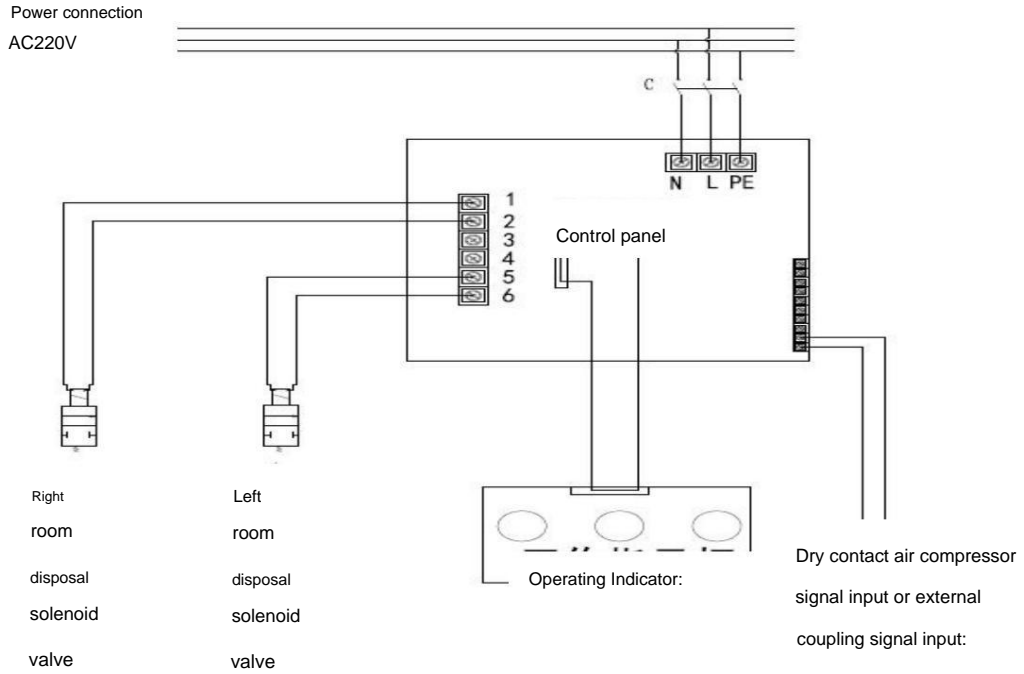


Fig. 5y electrical, mechanical and air wiring diagram of the dryer

7y Working Principle of Dryer:

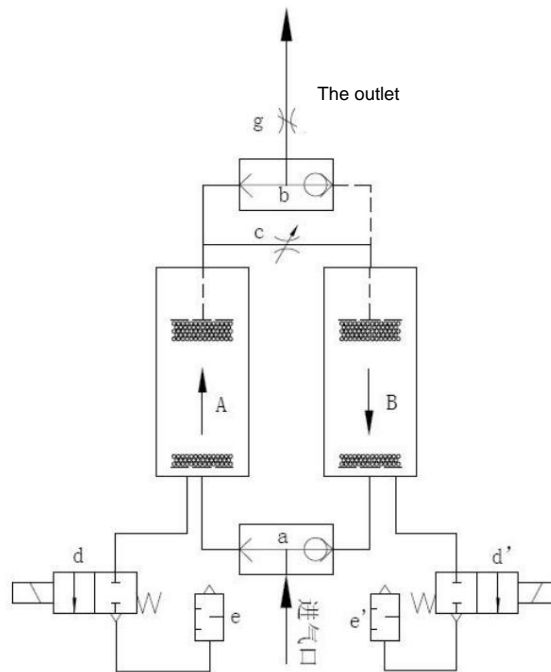


Figure 6. Principle of operation of the GCMD type desiccant dryer

(the picture shows that A cavity is dry and B cavity is regenerative)

Working principle of dryer:

Drying process: The compressed air enters the left chamber of the dryer through the inlet diverter valve a. The moisture in the compressed air is absorbed by the adsorbent. This allows the compressed air to dry. Most of the dry air is discharged through the outlet diverting valve b in the downstream equipment. A small amount of dry air enters the right ventricle through the regenerative throttle valve c to regenerate the adsorbent.

Regeneration process: a small amount of dry compressed air enters the right ventricle through the regenerative throttle valve c to regenerate the adsorbent. Moisture-carrying air through the right exhaust solenoid valve d. Right discharge damper e 'discharge. In the above process, the left discharge solenoid valve d is in the closed state and the right discharge solenoid valve; d' is in the open state.

Loading process: After the regeneration of the right cavity is completed, close the right one discharge solenoid valve d', a small amount of dry compressed air enters the right ventricle through c. Press the left and right cavity gradually balance, prepare the right room for drying.

Cycle: The above process of drying, regeneration and charging is performed alternating between left and right cavities, so that the compressed air enters the dryer can be dried continuously.

In the whole working process, the movement of the left and right discharge: solenoid valve is controlled by the control box program signal output, the movement of the intake shuttle valve and the exhaust shuttle valve is controlled by: the pressure change in the cavity.

8.2 Maintenance Precautions

8.1 All safety issues must be understood when servicing the equipment.

8.2 Close the inlet and outlet valves, check that the equipment is isolated from the air source, purge the remaining air in the equipment and confirm: that there is no pressure in the equipment.

8.3 Confirm that the power is off.

8.4 The surface of the solenoid valve can cause high temperatures in the process of operation, which should be paid attention during maintenance.

8.5 Maintenance of the equipment is recorded and kept.

8.6 The frequency of maintenance of the equipment must be determined according to the operating environment of the equipment.

9. Equipment maintenance

9.1 every day: Check whether the three status indicators of "working normally", "adsorbent maintenance" and "adsorbent overload" on the indicator light base window are normal or not; At the same time, check the left one drain solenoid valve, right drain solenoid valve state: whether it is normal or not.

9.2 annually: Adjust and replace the muffler every six months exhaust muffler every year.

9.3 every two years: Replace the discharge solenoid valve.

9.4 every three years: Replace adsorbent, filter, sealing requirements, relevant O-rings and other seals.

10 Troubleshooting

The serial number	The fault phenomenon	Possible reasons for:	Troubleshooting method:
1	After powering up for the first time or power off, after restarting, exhaust valve appears continuous exhaust.	Not according to boot operation procedures.	Disconnect the power supply from the dryer and restart the dryer.
2	Discharge Magnet: Continuously exhaust valve.	<ul style="list-style-type: none"> • Solenoid valve defective. • Controller malfunction. 	<ul style="list-style-type: none"> • replace the solenoid valve. • replace the controller.
3	The drying effect of dryer is bad.	<ul style="list-style-type: none"> • low inlet pressure. • high inlet temperature. • The air inlet flow exceeds the face value. • improper handling of gas source, liquid water or excess oil in the dryer. (The adsorbent failed) 	<ul style="list-style-type: none"> • check the air source pressure, temperature, flow, quality meet the requirements. • replace the adsorbent. • Consult the manufacturer.
4	The green operation indicator is not on	<ul style="list-style-type: none"> • the yellow lamp adsorbent maintenance light is on, the life of the adsorbent about to reach the design deadline. • red lamp adsorbent overload indicator light, the service life of the adsorbent has exceeded the design requirements for service life. • malfunction of the controller. 	<ul style="list-style-type: none"> • replace adsorbent. • replace the adsorbent. • replace the controller