



九盛泽精工制造（青岛）有限公司

Jiushengze Precision Manufacturing(Qingdao)Co.,LTD

Customer:PT. Mersifarma Tirmaku Mercusana

Fm: Qingdao/Mr. Qian

Attn:Marco

Date: 2026-01-29

Quotation List

No	Description	Model No.	Unit Price (USD)	Q'ty (set)	Total Price (USD)	NOTE
1	Ventilation system	80000m ³ /h	20,100.00	1	20,100.00	➤ Required the food/baseplate and body dimension for preparing the space area. ➤ Required the Horizontal airflow in the conditioner unit (due to the space room availability) ➤ Primary fan for delivering 80.000. m³/h is it include ? (5" Static pressure) ➤ What's the PLC control tipe/brand ? ➤ Required the conditioner chilled water two way valve type should be pneumatic control valve with 30 psi supply and 3-15 psi pilot control ➤ Required the regenerator steam two way valve type should be pneumatic control valve with 30 psi supply and 3-15 psi pilot ➤ Required to install double (series installation) of interchanger for transferring LiCl solution between conditioner and regenerator unit
2	Recycling fan container	21000m ³ /h	4,350.00	1	4,350.00	
3	Lithium Chloride Solution	36%,optional	10.50	3000kg	31,500.00	
4	dehumidifier	JSZ-6000V	66,400.00	1	66,400.00	
5	Recycling system	JSZ-6000V	52,700.00	1	52,700.00	
6	Controlling system	JSZ-6000V	22,200.00	1	22,200.00	
	Totally	FOB in Qingdao				



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Price in Remarks:	
Delivery terms: FOB Qingdao. And not including the sea freight	

- 1、 All weak current signal cables including the self-control system, excluding all power cables outside the cabinet (excluding power incoming lines and power cables from the distribution cabinet to each motor).
- 2、 Excluding all steam, cold water pipelines, ventilation ducts, and connecting air ducts between equipment; Excluding roof openings and waterproof sealing for recycled exhaust air
- 3、 Excluding installation fees, our company will dispatch a technician to provide on-site guidance for installation. Party A will provide travel, accommodation, and meals, and pay an additional technical service fee of 800 yuan per person per day
- 4、 power voltage: 380V
- 5、 ventilation system,recycling fan container, lithium Chloride solution can be optional
- 6、 delivery time: 3 month

Dehumidifier System

Summary

According to the requirements of your company's air volume of 80000m³/h and dehumidification capacity of 600 kg/h, our JSZ-6000V lithium chloride solution dehumidification system is selected. The designed air supply volume is 80000m³/h, and the dehumidification and regeneration



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capacity is $\leq 600\text{kg/h}$. The air supply temperature and relative humidity can be set according to the production process. The precision of air supply temperature control is $\pm 0.1\text{ }^{\circ}\text{C}$, and the precision of relative humidity control is $\pm 1\%$.

II. Design

A set of lithium chloride solution dehumidification air conditioning system consists of four main components: one air supply unit, one dehumidification system, one regeneration system, and one intelligent control system.

1. Air supply unit:

The design air volume is $80000\text{m}^3/\text{h}$; The unit consists of a primary efficiency filtration section, a fan section, a flow equalization section, a medium efficiency filtration section, and an air outlet section, and the fan of the unit is variable frequency regulated.

2. Dehumidification system:

The dehumidification system consists of a spray dehumidification box, a pump box, two spray pumps (one in use and one backup), a cold water plate heat exchanger, lithium chloride pipes, a return air static pressure box, and a supply air static pressure box.

The material of the spray dehumidification box is made of PPH board, which has strong corrosion resistance and beautiful appearance. It contains a grille, corrugated packing, spray nozzle, anti fog net, lithium chloride solution, etc. The moisture absorption process of the lithium chloride solution is completed inside the spray dehumidification box.

The material of the pump box is made of PPH board, which has strong corrosion resistance and adopts a dual pump design.

The spray pump is a vertical submerged pump in a titanium tank. The selection of a submerged pump is to prevent lithium chloride solution from leaking outside the box and causing corrosion to other equipment in the event of pump failure. The dual pump can achieve non-stop repair during subsequent fault maintenance, minimizing losses.

The dehumidification side cold water plate heat exchanger is composed of corrosion-resistant imported titanium plates and E-material gaskets, with high heat transfer efficiency, detachable cleaning, and circulating media of lithium chloride solution and chilled water. The lithium chloride solution and chilled water undergo sensible heat exchange in the heat exchanger.

The lithium chloride pipeline is made of industrial grade titanium pipes, and temperature sensors are installed in the pipeline. The data is remotely transmitted to the programmable controller system, and the diaphragm pressure gauge detects the liquid pressure. The pipeline filter filters impurities in the liquid, and the manual butterfly valve adjusts the liquid flow rate.

The return air static pressure box is made of polyurethane material, which is fire-resistant and sturdy. Install maintenance doors on the static pressure box for easy maintenance.



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The air supply static pressure box is made of polyurethane material, which has good insulation effect. The static pressure box is equipped with an inspection door for easy maintenance.

3. Regeneration system:

The regeneration system consists of a regeneration box, 2 regeneration pumps (one in use and one backup), steam plate heat exchanger, energy-saving plate heat exchanger, lithium chloride pipeline, regeneration fan, and regeneration heat recovery energy-saving device.

The regeneration box is made of pure titanium material sheet, with sandblasting treatment for beautiful appearance, high temperature resistance, and corrosion resistance. It contains a grille, multi-faceted hollow ball packing, anti fog mesh, corrugated packing, lithium chloride solution, regeneration exhaust cap, regeneration exhaust pipe, etc. The regeneration process of lithium chloride solution is completed inside the regeneration box.

The regeneration pump is a vertical submerged pump in a titanium tank. The selection of a submerged pump is to prevent lithium chloride solution from leaking outside the box and causing corrosion to other equipment in the event of pump failure. The dual pump can achieve non-stop repair during subsequent fault maintenance, minimizing losses.

The steam plate heat exchanger is composed of corrosion-resistant imported titanium plates and GE gaskets. It has high heat transfer efficiency, can be disassembled and cleaned, and the circulating medium is lithium chloride solution and steam. The lithium chloride solution and steam undergo sensible heat exchange in the heat exchanger.

The energy-saving plate heat exchanger is composed of corrosion-resistant imported titanium plates and GE material gaskets, with high heat transfer efficiency, detachable cleaning, and lithium chloride solution as the circulating medium on both sides, achieving sensible heat exchange of the solution medium.

The lithium chloride pipeline is made of industrial grade titanium pipes, and temperature sensors are installed in the pipeline. The data is remotely transmitted to the programmable controller system, and the diaphragm pressure gauge detects the liquid pressure. The pipeline filter filters impurities in the liquid, and the manual butterfly valve adjusts the liquid flow rate.

The design air volume of the regeneration fan is 21000m³/h, using a centrifugal ceiling unit with a primary filter installed at the inlet; Fan frequency conversion control.

4. Intelligent control system: The frequency converter and programmable controller communicate through Modbus RTU.

This system has two control modes, namely humidity and liquid level control. The two control modes can be switched freely without disturbance. The intelligent control system consists of an automatic control cabinet, an electrical control cabinet, temperature and humidity sensors, temperature



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sensors, liquid level sensors, wind pressure sensors, and automatic control valves; It has complete functions such as data statistics, reports, historical records, curves, etc.

Programmable controllers, human-machine interfaces, air switches, etc. are installed inside the self-control cabinet to monitor the collected temperature and humidity data in real time. Temperature and humidity data can be set on the human-machine interface to achieve constant temperature and humidity.

Install frequency converters, AC contactors, air switches, etc. inside the electrical control cabinet.

The temperature and humidity sensor is installed on the air duct to monitor and measure the supply and return air in real time.

The temperature sensor is installed on the lithium chloride pipeline to monitor the temperature of the lithium chloride solution.

The liquid level sensor is installed inside the pump box to detect the height of lithium chloride solution. Stable liquid level detection, strong corrosion resistance, and not affected by water droplets in the solution.

The wind pressure sensor is connected to the PLC, and the pressure difference value is displayed on the human-machine interface with a pressure difference alarm function.

The switch of the self-control valve is based on the comparison between the actual value and the set value, and outputs the control of the opening of cold water and steam to achieve stable temperature and humidity control.

Energy saving plate heat exchangers and intelligent control systems are used in the system for energy conservation.

III. Controlling procedure :

- 1、 The return air between the main units is mixed through the return air duct and flows into the return air static pressure box. After mixing with fresh air in the return air static pressure box, it enters the spray dehumidification box. The wind and lithium chloride solution are fully exchanged to complete dehumidification, meeting the dehumidification requirements required for drying capsules during production.
2. The high-temperature and high humidity air in the workshop is transformed into low-temperature dry air after passing through a spray dehumidification box. The temperature and humidity of the low-temperature dry air are controlled by cold and hot plate heat exchangers, respectively. A cold water automatic control valve is installed on the cold plate side, and a steam automatic control valve is installed on the hot plate side.
3. The low-temperature dry air after spray dehumidification passes through the air supply static pressure box and is supplied to the mixing unit of each capsule production line by an 80000m³/h air supply unit.



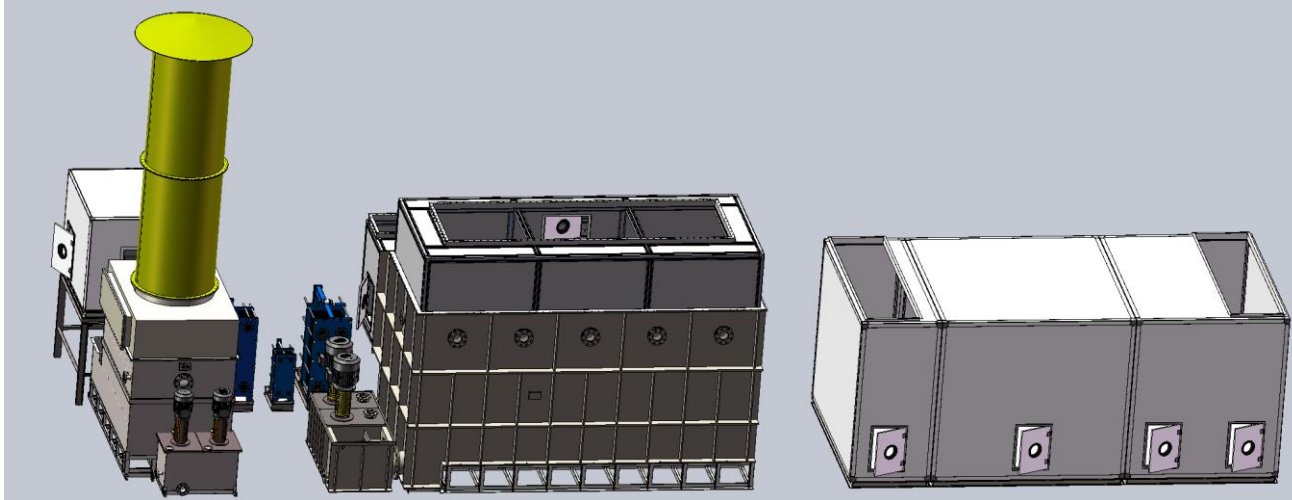
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Remark:

1. All weak current signal cables including the self-control system, excluding all power cables.
2. Excluding steam, cold water pipelines, and connecting air ducts between equipment.
3. If there are changes in the configuration, the plan and price will be adjusted accordingly.