鑫盛科技
XINSHENG SCIENCE

Explosion proof type cooling circulator

XINSHENG Pharmaceutical Instrument Co.,Ltd

TEL:0517-82606678 Email: service@xs-xinsheng.com.cn

Address:No, 10#11, Economic Development Zone, Lian'shui, Huai'an, Jiangsu Province, China.

Web:www.xs-xinsheng.com **Email:service@xs-xinsheng.com.cn**

Explosion proof type cooling circulator

Explosion proof type cooling circulator is the latest product developed by our company, it is a combination of vacuum pump and cryogenic cooling pump. It can not only vacuum, but also provide low temperature cooling water. It is a good auxiliary equipment for decompression distillation and concentration. It is especially suitable to be equipped with rotary evaporator, which not only reduces the use space, but also reduces the vacuum degree and saves water resources. It is widely used in modern laboratories.

Attention

Precautions for Startup：

The water level shall not be higher than 2 cm above the edge of the container before startup.

Power Supply Warning：

The power supply must meet the requirements of this equipment and have a reliable ground.

Precautions for water pump：

It is forbidden to use when there is no water in the container or when the water surface is too low and frozen.

In addition, when installing the circulating pump, the pipelines of the two pumps must not be connected in series. When closing the circulating valve, the circulating switch cannot be opened to avoid equipment damage.

Environmental considerations：

There must be enough space around the equipment, and the distance from the isolated items shall not be less than 400mm.

The machine should be placed in a ventilated, dry and pollution-free place.

Maintain：

Please disconnect the power supply before opening the case of the machine.

There is high-pressure gas in the refrigeration system, which must not be opened by non professionals.

1) Purpose

EXLT-0530 series Explosion proof type cooling circulator, is a low-temperature liquid circulation equipment with mechanical refrigeration, which has the function of providing low-temperature liquid and low-temperature water bath, combined with rotary evaporator, vacuum freeze-drying chamber, circulating water multi-purpose vacuum pump, magnetic stirrer and other instruments. To carry out multi-functional low temperature chemical reaction operations and drug storage. Used to effectively protect large precision instruments and equipment.

2) Characteristic

EXLT-0530 series Explosion proof type cooling circulator, on the basis of similar products in Germany and Japan, it is the latest product developed by our company in cooperation with institutions of higher learning on the basis of similar products in Germany and Japan, combined with China's national conditions. It can reach the international advanced technological level in the 1990s.

2.1 It adopts imported original fully enclosed compressor unit of international famous manufacturer, with advanced performance and stable quality.

2.2 The refrigeration unit professional relay, protector, capacitance, etc. are imported original high-quality equipment to ensure reliability and service life.

2.3 Digital explicit temperature control, simple operation, eye-catching.

2.4 A variety of functions, can provide low temperature high quality cooling water, low temperature non-freezing liquid, small low temperature water bath. And can be combined with circulating water multi-purpose vacuum pump, vacuum freezing drying oven, rotary evaporator, magnetic stirrer and other

instruments, multi-functional low-temperature chemical reaction operations, drug storage. Can be matched with a variety of large precision equipment, to overcome the difficulties of use.

2.5 The 220V50Hz mains power supply is designed professionally to avoid faults and difficulties caused by the design and use of 110V60Hz.

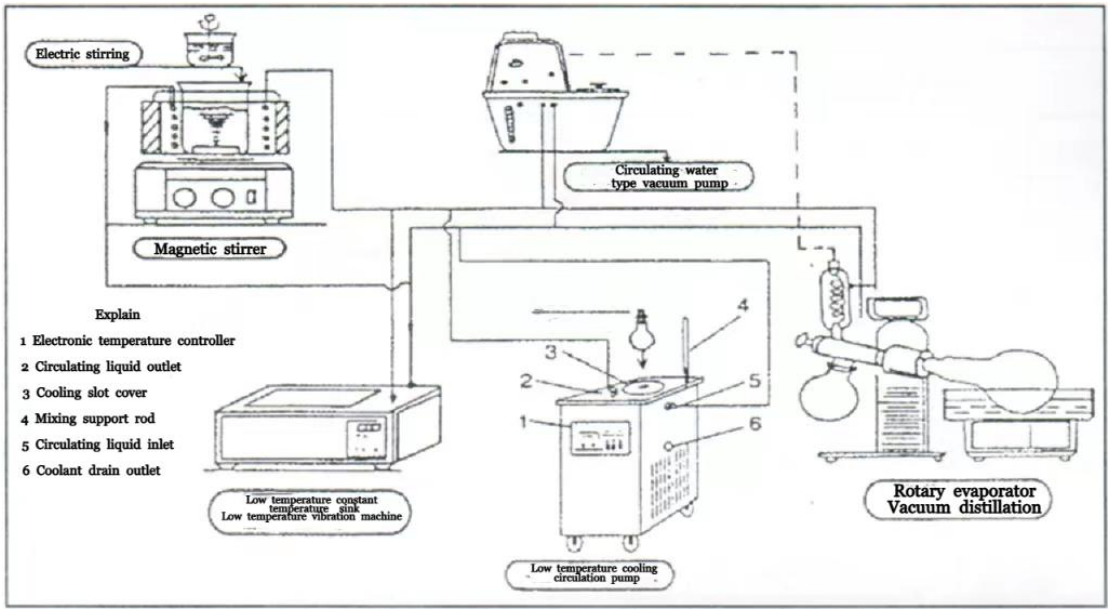
2.6 The circulating system is made of stainless steel, with anti-corrosion, rust, anti-low temperature liquid pollution function.

2.7 For high purity metals, rare substance purification, environmental laboratories and magnetic control measuring, vacuum coating equipment and other large valuable experimental equipment, can provide cooling water that meets temperature and water quality, it has the characteristics of saving energy, saving water, preventing pollution and scaling, and can effectively protect large precision instruments and equipment.

2.8 The machine integrates circulating cooling water with small volume and reasonable power, which fully shows the characteristic of saving space.

2.9 Meet various conditions of use.

Explosion proof type cooling circulator various functions diagram



3) Instructions for use

3.1 Open the lid of the water tank and pour in the appropriate amount of medium (2 cm below the edge of the bath) according to the required constant temperature.

3.2 Connect the cooling circulating pump to the system used in the experiment according to the general method shown in Figure 1, and connect the liquid inlet and outlet of the equipment with the liquid outlet and inlet of the experimental instrument with thermal insulation hose. If only the cooling circulating pump is used for cold bath operation, connect the

liquid inlet and outlet of the circulating pump.

3.3 Properly insert the power plug into a separate dedicated socket.

3.4 After power on, turn on the safety switch and power switch, the instrument displays the actual temperature.

3.5 Turn on the refrigeration switch, and after a three-minute delay, the compressor starts to work, (The double machine is that the high temperature machine works first. When it reaches the - 30 ℃ set by the high temperature machine, the low temperature machine works after a delay of three minutes, and the refrigeration indicator light is on).

3.6 At the same time of refrigeration, if there is internal circulation, the pump can be opened and the internal circulation valve can be opened at the same time to ensure the bath temperature (which can be opened intermittently). Otherwise, it is necessary to open the circulating pump.

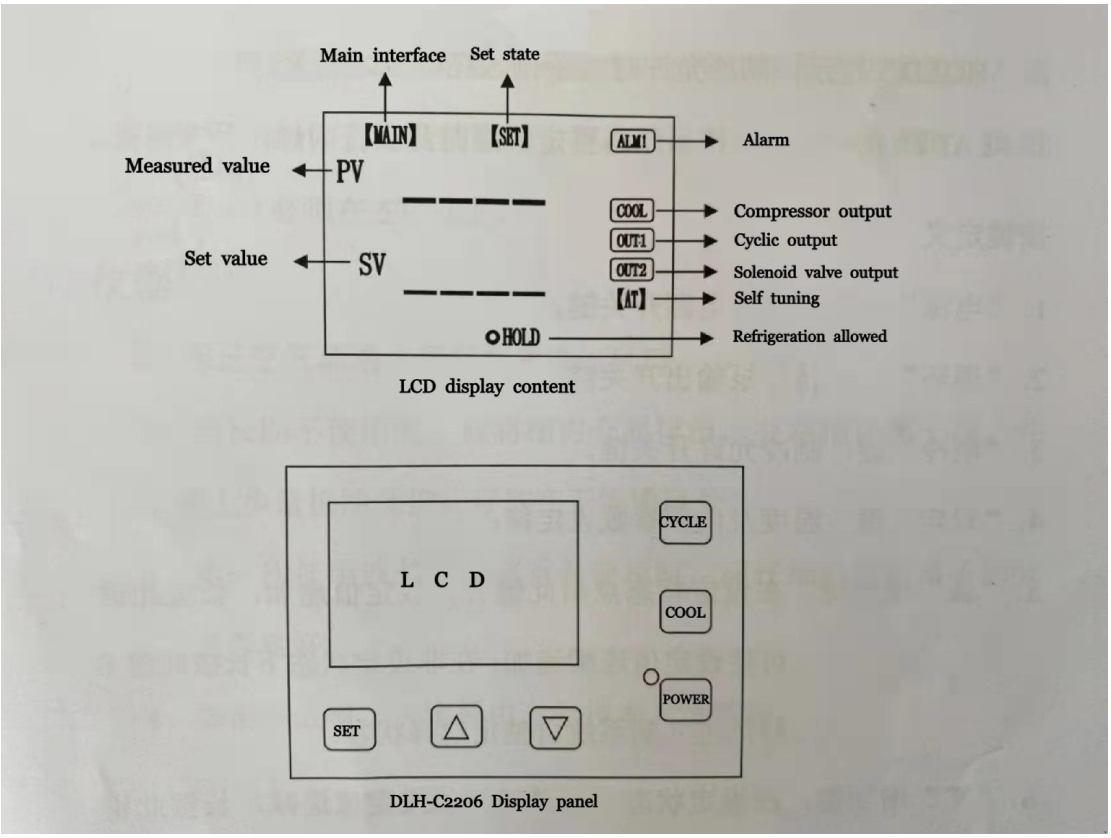
3.7 After the temperature reaches the set temperature, open the circulation switch and valve to cool the cooling instrument and start the test.

3.8 To the end of the experiment, first need to cool the instrument, in turn off the circulation pump switch, refrigeration switch, power switch, and finally pull down the safety switch,

unplug the power.

3.9 If it is not used for a long time, please drain the coolant. Rinse with clean water.

4) Set temperature control method



4.1 Indicator definition

4.1.1 "Power" indicator: this light is always on after the controller is powered.

4.2 LCD display character indication definition

4.2.1 "[MAIN]" indicates: under normal working state (not set state) this character is lit, conversely put out.

4.2.2 "[SET]" indicates: this character is lit in the setting state, conversely put out.

4.2.3 "ALM!" Indication: this character is lit up when there is abnormal alarm, conversely put out.

4.2.4 "COOL" indicates: the character flashes when the compressor is ready for output due to delay, and lights up when there is output, conversely put out.

4.2.5 "OUT1" indicates: this character lights up when the circulating pump has output, conversely put out.

4.2.6 "OUT2" indicates: this character lights up when the solenoid valve has output, conversely put out.

4.2.7 "HOLD" indicates: this character lights up when refrigeration is allowed, conversely put out.

4.2.8 "[AT]" indicates: this character blinks when running the system self tuning program, conversely put out.

4.3 Key definition

4.3.1 "POWER" key: controller power key.

4.3.2 "CYCLE" key: circulation pump output switch key.

4.3.3 "COOL" key: allowable opening key of refrigeration.

4.3.4 "SET"key: key for setting temperature and internal parameters.

4.3.5 "▲" add key: click this key in the set state can make the set value increment, long press this key can make the set value increment continuously; Hold down this key for 6 seconds in the non-setting state to enter the system self-setting selection state.

4.3.6 "▼" add key: click this key in the setting state to decrease the set value, long press this key to continuously decrease the set value.

5) Appendix

5.1 Operating temperature: the circulating liquid temperature should not be lower than the lowest no-load temperature of the machine. If water is used as circulating liquid, the liquid temperature at the liquid inlet should not be higher than 40℃, and if ethanol solution is used, it should not be higher than 10 ℃.

5.2 The low-temperature unfreezing liquid shall be proportioned as follows:

A Glycol aqueous solution: glycol/water 55/45 (-- 20℃)

B Glycerol aqueous solution: glycerol/water 70/30 (-- 20℃)

5.3 During use, the density of low-temperature non freezing liquid shall be checked frequently to make it meet the following requirements:

A Glycol solution: P20 = 1079kg/m³ (-- 20 ℃)

B glycerol aqueous solution: P20 = 1183.6kg/m³ (-- 20℃)

C If the viscosity of ethylene glycol aqueous solution is found to increase or the experiment is conducted at a low temperature below - 20 ℃, please use alcohol with a purity of more than 95% as unfrozen solution. When the unfrozen solution is replaced by water, its minimum temperature must be above 5 ℃.

6) Instrument maintenance

6.1 Guarantee the air dredging, it is strictly forbidden to block the air outlet.

6.2 When not in use for a long time, the groove medium should be discharged, and the groove is wiped cleaned, and the small amount of oil protection is wiped, and stored in a dry and

ventilated.

6.3 When used for the first time or reused after long-term storage, carefully check whether all parts of the machine are in good condition.

6.4 If there is a failure, it must be repaired by professional and technical personnel.

7) Special attention:

7.1 When the power supply is connected, the wiring shall be in strict accordance with the line mark (l-live line, n-naught wire, d-Earth) and ensure correct wiring.

7.2 Corrosive media are strictly prohibited.

7.3 It is forbidden to heat when there is no liquid or less liquid.

7.4 Start the refrigeration system. Once the refrigeration system is stopped and restarted, the interval must be more than 5 minutes.

7.5 It is strictly forbidden to operate with faults, otherwise more components will be damaged, or even personal safety will be endangered.

7.6 When using alcohol as the medium, the temperature shall not exceed 10 ℃.

Possible faults and troubleshooting methods: Fault symptom

Fault phenomenon	Fault cause	Exclusion method
1) Turn on the power switch, the machine does not work	A : The power plug is not inserted B : There is no power in the power socket C: Power grid blackout D: Fuse burning	A: Plug in the power plug B: Check the socket C: Wait for power supply D: Replace the fuse
2) Turn on the stirring knob, Stirrer does not turn	A: Opening size B: The mixer is stuck C: The mixing motor is broken D: When the temperature exceeds 80℃, the magnet will lose its magnetism	A: Increase the motor rotation speed B: Put the mixer in the appropriate position again C: Replace the motor D: Control the temperature below 40℃
3) The instrument display is abnormal	A:The cable is loose B: Platinum resistance circuit breaker or short circuit C: Instrument barriers	A: Check the connection B: Replace the platinum resistance C: Overhaul the instrument
4) Instrument digital random flash	A: Large interference from power supply B: Instrument failure	A: Remove interference and use A stabilized voltage source B: Overhaul the instrument
5) No heating	A: Setting is too low B: the contactor is broken C: The heater is broken D: Instrument failure E: Cables are loose	A: Set to the required value B: Change the contactor C: Replace the heater D: Repair the instrument E: Check the connection
6) Keep heating, no temperature control	A: Set it too high B:Instrument failure	A: Set to the required value B: Overhaul the instrument
7) Case electric leakage	A: Bad protection grounding B: Other lines fall off C: The insulation performance of the heater is uncertain	A: Connect the protection grounding wire B: Check the line C: Replace the heater
8) No refrigeration	A: Refrigeration switch is not turned on B: The condensing fan does not work C: The compressor is not started D: Freon leakage	A: Turn on the refrigeration switch B: Replace the fan C: Check the circuit and compressor D: After leak detection, repair welding, flush fluorine and try the machine again
9) Refrigeration, but slow cooling	A: Fluorine leakage B: Condensing fan not running C: Magnetic stirring not running D: Capillary or pipeline blockage	A: See 8) B: See 8) C: See 2) D: Remove the high-pressure nitrogen, vacuum again after inspection, and test the machine with fluorine filling
10） Mechanical Stirring does not work	A: Transformer rectifier system is damaged B: Motor damage	A: Check and replace damaged components B: Replace the motor

Letter of commitment for after-sales service

Quality assurance

Ensure that the goods sold are brand-new products that meet the provisions of the contract and pass the factory inspection, the quality performance, technical indicators and configuration shall comply with the provisions of the contract and the manufacturer's technical documents.

Installation and debugging

After arrival, if door-to-door installation and commissioning is required, our company shall be responsible for the installation and commissioning of the instrument, and the specific installation cost shall be negotiated by both parties.

Acceptance

After installation and commissioning, the customer accepts the goods as new products in accordance with the contract, quality performance, technical indicators and configuration in accordance with the contract and the manufacturer's technical documents, and confirms acceptance of the full set of technical documents, then signs on the installation acceptance report to confirm acceptance.

Service

From the date of acceptance, provide 12-month quality warranty, during the warranty period, all maintenance fees and spare parts fees are free (the cost price of spare parts shall be charged for instrument failure caused by human factors), after the warranty period, the equipment is responsible for lifelong maintenance, charge appropriately according to the actual maintenance cost.

Service commitment

After receiving the written repair report from the customer, respond within 24 hours and send the parts that need to be replaced from the manufacturer through logistics in time.

Email Contact:

service@xs-xinsheng.com.cn(China Office)

sales@nanasiam.com(Thailand Office)