

## Mini low temperature coolant circulator

The JH series Mini low temperature coolant circulator, whose design and manufacture can provide industry-leading technical indicators and reliability, is a high-precision and high-stability cooling equipment. It provides models with different cooling output, which are used in various laboratories and production fields to meet different cooling and constant temperature requirements. JH series adopts non-start-stop refrigeration technology, combined with PID temperature control, fast cooling, stable temperature, very suitable for some equipment requiring precise constant temperature cooling.

### 1. Mini low temperature coolant circulator Introduction

The Mini low temperature coolant circulator is a kind of water cooling equipment, which can provide constant temperature, constant current and constant pressure cooling water equipment. Its working principle is to first inject a certain amount of water into the water tank in the machine, cool the water through the refrigeration system, and then send the low-temperature chilled water to the equipment that needs to be cooled by the water pump. The chilled water takes away the heat of the equipment that needs to be cooled and the temperature rises. The high is sealed and returned to the water tank to achieve the cooling effect. The cooling water temperature can be automatically adjusted according to requirements, and long-term use can save water. Therefore, the chiller is also a standard energy saving and environmental protection equipment. The operation of the chiller system is through three interrelated systems: the refrigerant circulation system, the water circulation system, and the electrical automatic control system.

### 2. Mini low temperature coolant circulator Parameter

	project	parameter	Remarks
1	Cooling capacity	$\geq 1000W$	Water temperature 20 °C , ambient temperature 25°C
2	Temperature transmission output	no	
3	Working temperature	5~35°C	
4	Flow alarm	Have	Flow alarm signal output
5	Water shortage alarm	Have	
6	Water pressure alarm	no	
7	temperature control	Digital Display	Microcomputer PID controller, software operation

8	Temperature control range	5~35℃				Environment temperature 5~40℃				
9	display resolution	0.1℃								
10	Constant temperature fluctuation	±0.1℃				≤±0.5℃, with self-learning function				
11	Temperature Sensor	PT100				Detect water outlet temperature				
12	Heating function	Have				Bypass heating				
13	Water inlet and outlet	1/2"				316 stainless steel interface				
14	Circulating pump	pressure	bar	3.6	3.4	3.2	2.8	2.6	2.3	1.7
		flow	L/min	8.3	13	17	20	23	25	28
15	Cooling capacity	Water temperature °C		5	10	15	20	25	30	35
		Cooling capacity W		580	770	850	1080	1150	1200	1800
15	Liquid display level	Have				Window display on the front side of the instrument				
16	Effective volume of water tank	8 L				304 stainless steel material				
17	Filling port size	Φ 25 mm				Used to add water to the instrument				
18	Water tank cleaning function	Have				Open the lid of the built-in water tank for manual cleaning				
19	Disinfection function	no								
20	Drain	Have				Inner diameter of drain pipe Φ 10 mm				
21	Temperature pressure	Temperature: water tank				The parts in contact with water do not produce rust and oil stains				
22	check Point	Pressure: water outlet								
23	Backwater pressure	≤1 bar				When there is water shortage, the external switch signal is disconnected				
24	Deionization filter tank	no				External closed loop system				
25	Water tank and waterway materials	Use 304 stainless steel or non-metallic materials				User-supplied				
26	Maximum power consumption of the whole machine	1400W				One meter from the instrument				
27	Fault signal output	Water shortage fault signal				Silent casters with universal brake				
28	Water tank sealing	Relatively closed								
29	Circulating	pure water								

	medium		
30	Machine noise	≤55 dB	Width×depth×height (mm)
31	Fixed installation	Have	The parts in contact with water do not produce rust and oil stains
32	Power requirements	AC220V, 50Hz, 10A	
33	Working current	10A	When there is water shortage, the external switch signal is disconnected
34	Machine dimensions	345×620×600	External closed loop system

### 3. Features of Mini low temperature coolant circulator

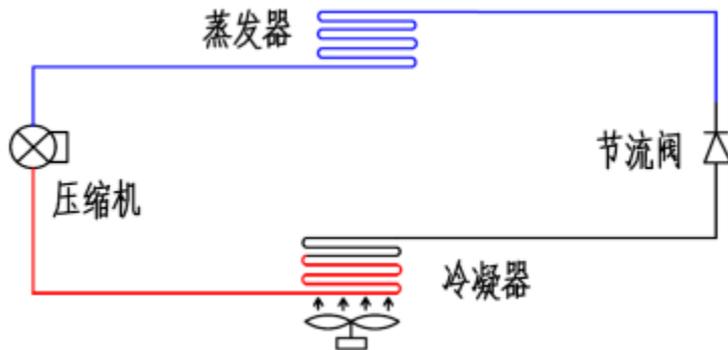
Temperature, pressure and water level can be displayed, professionally designed dynamic temperature control system, high temperature control accuracy, low temperature fluctuation; simple and convenient man-machine operation interface, automatic memory of control parameters; various refrigeration power and circulating pump pressure can meet Cooling and constant temperature of various instruments; the key components of the refrigeration system adopt imported brand-name products, which are stable and reliable; a variety of circulating pumps, optional ultra -quiet, high pressure or large flow; adjustable circulating pressure, equipped with stainless steel pressure indicator; standard stainless steel The interface can be equipped with various types of joints and hoses, and it can be connected to a closed circuit; the power failure recovery function can be selected, and the flow alarm can be selected; casters are provided under the casters for easy movement.

### 4. Mini low temperature coolant circulator Detail

#### Refrigerant circulation system:

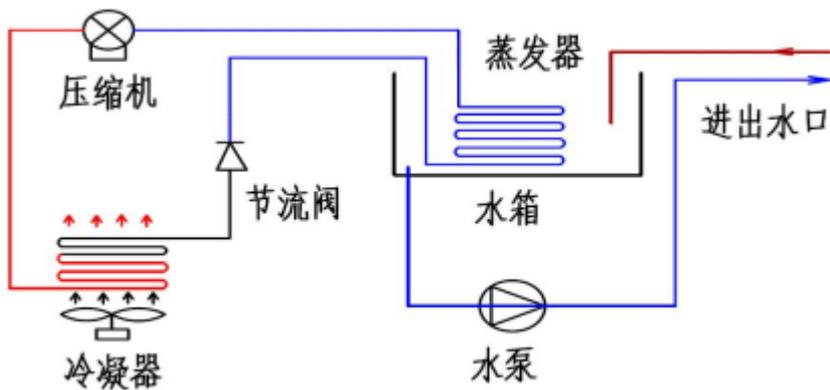
The liquid refrigerant in the evaporator absorbs the heat in the water and starts to evaporate. Eventually, a certain temperature difference is formed between the refrigerant and the water. The liquid refrigerant is also completely evaporated and becomes gaseous, then sucked by the compressor and compressed (pressure and temperature increase) , The gaseous refrigerant absorbs heat through the condenser (air-cooled/water-cooled), condenses into a liquid, throttling through the thermal expansion valve (or capillary), and turns into a low-temperature and low-pressure refrigerant to enter the evaporator, completing the refrigerant cycle process.

#### Schematic diagram of the four basic pieces:



**water circulatory system:**

The water circulation system is a water pump that pumps water from the water tank to the user's equipment that needs to be cooled. The chilled water takes away the heat and the temperature rises, and then returns to the chilled water tank. The working principle diagram of the chiller is as follows:



**5. Supporting equipment**



## 6. Mini low temperature coolant circulator Main application

- 1: Analytical instruments: spectrometer, mass spectrometer, viscometer, polarimeter, fermentation equipment, rotary evaporator;
- 2: Medical treatment: molecular pump, cooling device, X-ray machine, nuclear magnetic resonance, accelerator;
- 3: Industrial equipment and others: laser equipment, vacuum coating equipment, biopharmaceuticals, molds, machine tools, vacuum furnaces, welding machines, reactors.

## 7. Product Qualification

Jiahang Product has obtained CE certification, TART certification, ISO quality management system certification, more than 10 software copyrights and multiple patents to ensure that each instrument has stable performance and excellent quality.

## 8. Deliver, Shipping And Serving

We have a top R&D team returned from Europe and America, cooperate with our superb manufacturing team, professional sales team and dedicated service team, working together to provide customers with high-tech, high-quality products and efficient, convenient, Comprehensive pre-sales and after-sales professional services.

## 9. FAQ

**How many years have your company made Mini low temperature coolant circulator ?**

22 years of scientific instrument manufacturer, laboratory solution provider!

**Which certificate do you have for your products?**

Jiahang has obtained CE certification, TART certification, ISO quality management system certification, more than 10 software copyrights and multiple patents to ensure that each instrument has stable performance and excellent quality.

**Will you will attend the fair to show your products?**

Yes, Every year we will participate in some internationally renowned exhibitions to launch our new products, such as Arablab, PICCTON, Analytica Russia, Lab Africa, Analytica Germany, Analytica Latin America and so on,we are looking forward to your visit.

**How about your company's R&D strength**

Possess strong R&D technical capabilities (a R&D team of more than 20 people, with an average degree of doctorate degree, graduated from well-known universities at home and abroad, with an average work experience of 8 years), able to deal with and solve product-related technical problems

**If OEM is acceptable?**

Provide OEM customization service, product built-in software has autonomy, can customize development settings

**Are you a trading company or a manufacturer?**

100% manufacturer, no middlemen and distributors make the price difference, the price of the source factory is very advantageous; Jiahang is headquartered in Shanghai, China, has 15 service outlets and 2 production plants in China, and has sales in more than 10 countries overseas proxy.

**How about your delivery time?**

"Generally, it will take 7 to 15 working days after receiving your advance payment. Depend on the quantity."

**Which payment can be acceptable ?**

We could accept the payment by L/C, TF, Paypal , Western Union,etc.

**Service**

We could provide Online instruction ; Real-time support by video-ca or voice-chat.



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