

# **Circulating water Vacuum Pump Instructions**

**SHZ-95B**

## **Function**

This product is a new type of multi-purpose vacuum pump designed with circulating water as the working fluid and using the jet to generate the negative pressure principle, which provides vacuum conditions for the chemical laboratory and can be used for the reaction device. It provides circulating cooling water for a wide range of applications such as evaporation, distillation, crystallization, filtration, sublimation, etc. It is an ideal equipment for laboratories in universities, pharmaceuticals, food processing and other fields.

## **Features**

1. The water saving effect is obvious. Due to the water circulation operation, the water added to the water tank can be recycled and reciprocated to overcome the phenomenon that a large amount of water is wasted when the vacuum is directly extracted by tapping the tap water method, and the same vacuum degree is obtained after continuous measurement in a working day. Under the use of this product can save more than 8 tons of water. Moreover, water can be used for a long time at a time, which is especially suitable in laboratories where water resources are scarce or water pressure is insufficient.
2. Multi-functional comprehensive application. In addition to providing vacuum conditions, the machine can also perform automatic external circulation of water to provide circulating cooling water to the reaction device. The machine is connected with the tap water source.

When the water source can be replenished for a long time, the circulating water temperature can be kept constant, so that the vacuum can be ensured and the supply of circulating cooling water can be realized.

3. Novel style, easy to use. The pump head of the machine is directly immersed in water, small in size, light in weight and convenient to move, for easy operation and observation.
4. This machine is equipped with five suction nozzles, which can be pumped separately or simultaneously. observation of vacuum. A check valve is installed on the suction passage to prevent circulating water from flowing back into the vacuumed equipment when the vacuum operation is stopped.
5. Corrosion resistance, no pollution. The pump parts of the machine are made of stainless steel, water tank water ABS plastic, once formed, not affected by corrosive substances such as acid and alkali, and there is no pollution laboratory such as oil.
6. The machine works stably and reliably with low noise.

## Technical Parameters

Vacuum degree	-0.098Mpa (circulating water temperature 0-25°C)
Pump displacement	90L
Single port pumping rate	10L/min

Motor power	370W
Operating voltage	~220V±10%50HZ
Noise	<50DB
Weight	35KG

## The method of use

1. Prepare for work. When using for the first time, open the top cover of the water tank to inject clean cold water (you can also add water through the waterproof hose).

When the water surface is about to rise to the height of the water level buoy to stop adding water. repeated boot can no longer add water. But change the water once a week for the longest time,

2. Vacuuming work. Connect the suction sleeve of the equipment requiring vacuum to the suction nozzle of the machine, and check that the circulating water shape switch should be closed. When the power switch is connected, vacuuming can be started, and the vacuum can be observed through the vacuum gauge corresponding to the suction nozzle.
3. When the machine needs to work continuously for a long time, the water temperature in the water tank will rise, affecting the degree of vacuum. At this time, the water discharge pipe and the water source (tap water) can be connected, and the overflow nozzle serves as a drainage outlet, and the tap water flow rate can be appropriately

controlled, so that the water temperature in the water tank is not raised, and the vacuum degree is stabilized.

4. When it is necessary to provide cooling water for the reaction device, the water inlet and outlet pipes of the device to be cooled are respectively connected to the circulating water overflow nozzle at the back of the machine, on the water inlet, and on the basis of the third operation. The circulating cooling water supply can be realized by circulating water switch.

## **Common faults and troubleshooting methods**

### **Low vacuum**

- 1) There are foreign objects in the vacuum bottle to clean up the foreign objects.
- 2) The thread of the two sections of the vacuum bottle is loose and tightened.
- 3) There is a foreign object in the check valve, and the cleaning is removed.
- 4) The water inlet below the pump head is blocked and can be cleaned.

### **The vacuum gauge does not move or beat**

- 1) The vacuum gauge does not move. It may be caused by the blockage of the air hole at the back of the vacuum gauge. Remove the vacuum gauge to clean it.

- 2) The needle jumps, indicating that the check valve or vacuum bottle is leaking. The check valve should be cleaned and tightened at the two sections of the vacuum bottle.

### **Motor start abnormality**

- 1) The motor does not start. It may be caused by the power failure or the fuse being blown.
- 2) After the motor is turned on, the motor will beep without starting. The power should be cut off immediately, then turn the wind wheel inside the motor cover by hand and turn it a few times.

### **Attention**

Do not allow the pump head to idling away from the water for a long time to avoid wear and tear on the mechanical seal. The motor should be well grounded and the circulating water should be kept clean to prevent the vacuum pump from being blocked.

## **Warranty and service**

Within one year after the product is sold, users according to the provisions of the use of the fault, the factory will be responsible for free maintenance. If the warranty exceeds the warranty period, only the cost of the accessory will be charged.

Before using this product, please read the product manual carefully and operate it in strict accordance with the specifications. Please contact our factory in time for quality problems.