

What are the use methods and advantages of rotary evaporators?

[Rotary evaporator](#) is mainly used for concentration, crystallization, drying and separation in chemical and pharmaceutical industries. As a common laboratory instrument, its function is to continuously distill a large number of volatile solvents under negative pressure conditions, especially for the concentration and chromatography of extracts. The distillation of the receiving liquid during separation can separate and purify the reaction product, and is an indispensable experimental instrument and equipment in the scientific research and production process of medicine, chemical industry, biological products and other industries. Its working principle is to use constant temperature heating film evaporation under the condition of vacuum negative pressure. The rotary evaporator uses stepless speed regulation to make the glass rotating bottle rotate at a constant speed, and the material forms a large-area uniform film on the glass bottle wall. High-speed evaporation, the solvent vapor is cooled by a high-efficiency glass condenser and then recovered in a glass collection bottle, so that the entire experimental process is completed. The rotating body of the rotary evaporator is composed of a group of stable and reliable three-phase asynchronous motors and frequency converter control devices.

How to use a rotary evaporator:

Generally speaking, the process of using a rotary evaporator can be divided into five steps: vacuuming, discharging, heating and rotating, connecting the cooling water and recovering the solvent. At the end, it is divided into three steps: turn off the vacuum pump, turn on the opening switch to release air, and take out the solvent in the collection bottle. The detailed process is as follows:

1. Connect the hose to the condensate faucet, and connect the vacuum hose to the vacuum pump for vacuuming.
2. Fill the heating tank with water, preferably pure water or filtered water. If tap water is used, it needs to be placed for a day or two before use.
3. Adjust the angle and height of the main machine, loosen the connecting screws of the main machine and the column, the main machine can be tilted freely between 0-45 degrees, adjust the angle according to the bath, and adjust the height manually or electrically.
4. Connect the condensing pipe and the main engine to the evaporating bottle. Don't let go at this time, wait until the vacuum pump is

turned on to make it reach a certain degree of vacuum, and then let go.

5. Turn on the speed control switch, adjust the speed knob, and the evaporating flask starts to rotate. Turn on the temperature adjustment switch green, adjust the temperature adjustment knob, the heating tank starts to automatically temperature control heating, and the rotary steamer enters the trial operation stage. Once the temperature and vacuum are within the required range, the solvent can be distilled.

6. After the evaporation is completed, first turn off the speed control switch and the temperature control switch, and press the lower lever to make the host rise. Then turn off the vacuum pump and open the vent valve above the condenser to make it communicate with the outside world, and the evaporation process is finished by removing the evaporating bottle.



Advantages of rotary evaporator:

The advantages of the rotary evaporator are low noise, reliable sealing, large contact area, high evaporation efficiency, easy to use, can handle easily foaming materials, complete specifications, etc. Our company has 2L, 3L, 5L, 10L, 20L, 30L, 50L, 100L and other specifications of the rotary evaporator, of which the maximum capacity 100L rotary evaporator is a large-scale rotary evaporator developed exclusively by our company to meet the needs of customers in actual large-scale production.

Specifically, the advantages of the rotary evaporator mainly include the following aspects:

1. The main structure adopts a large number of stainless steel and aluminum alloy parts, which is firm and beautiful.
2. The rotary evaporator adopts the manual lifting and lowering of the pot body, and the lifting stroke is 180mm.
3. The condenser adopts the main and auxiliary high-efficiency double condensers to ensure high recovery rate, which is used for evaporating organic solvents and saves space by using vertical condensers.
4. The rotating shaft is made of high borosilicate glass, and the connection part is made of fluororubber skeleton oil seal, which has a high degree of sealing and good effect.
5. The rotary evaporator is equipped with a lifting heating tank, a closed resistance wire heater, and the temperature of water or oil heating is from room temperature to 99° C or 400° C. The water tank is made of barrel-shaped high-quality stainless steel. It has strong corrosion resistance and long service life. . The heating tank can be lifted up and down, the intelligent temperature control of the bath, digital display, and temperature control are realized by the K-type sensor. When the water temperature reaches the preselected temperature, the controller automatically cuts off the heater power supply, and when the water temperature is lower than the water temperature, the controller automatically turns on the heater power supply, so as to achieve a constant water temperature in the tank.
6. The rotation speed of the rotary evaporator is controlled by the inverter, and the digital display speed is stable. We can use the speed control knob to set the required rotation speed.
7. The rotary evaporator has a vacuum display function.

Other Models



RE-2000B



RE-5299



RE-201D



RE-301



RE-501



RE-1002



RE-2002



RE-5002

Package product:

1. [SHZ circulating water vacuum pump.](#)
2. [DLSB-50 series low temperature coolant circulation pump.](#)

The above is the use method and advantages of the rotary evaporator we introduced this time. If you have any needs, you can contact Zhengzhou Keda Machinery Equipment Co., Ltd. For decades, Zhengzhou Keda Machinery Equipment Co., Ltd. has been committed to the production and manufacture of laboratory instruments and pipe fittings. If you want to know about our products, or are interested in purchasing our instruments, please contact us, we will be happy to help you.