

Honey-wax separator

The wax-honey separator is a tank made of food-grade stainless steel with two different temperature zones. The bottom of the tank is heated with a self-adhesive heating mat, and in the upper part of the tank, there is a water-heated radiator. The wax removed during uncapping, which still contains honey, falls from the uncapping machine onto the hot radiator and heats up. The wax melts and, due to its lower density, floats on top of the honey. The heat from the radiator and the heating mat ensures that the wax and honey remain in a molten state, continuously separating and draining.

During the melting process, the honey is not exposed to high temperatures because the bottom of the tank is only heated to a maximum of 34-37°C. The honey only comes into contact with the higher-temperature radiator for a very short time, and afterward, the floating layer of wax protects it from the radiant heat of the radiator, preventing damage to the honey. The tank bottom heating is set to 34-37°C. The radiator heating is set to 74-78°C. The pre-set temperatures of the tank and radiator heating can be adjusted.

The separator has two different drain pipes at different heights, one for wax and one for honey. The height of the drain pipes can be adjusted.

With this method, honey and wax can be separated with 100% efficiency with minimal heat exposure, and the wax can be immediately molded into blocks.

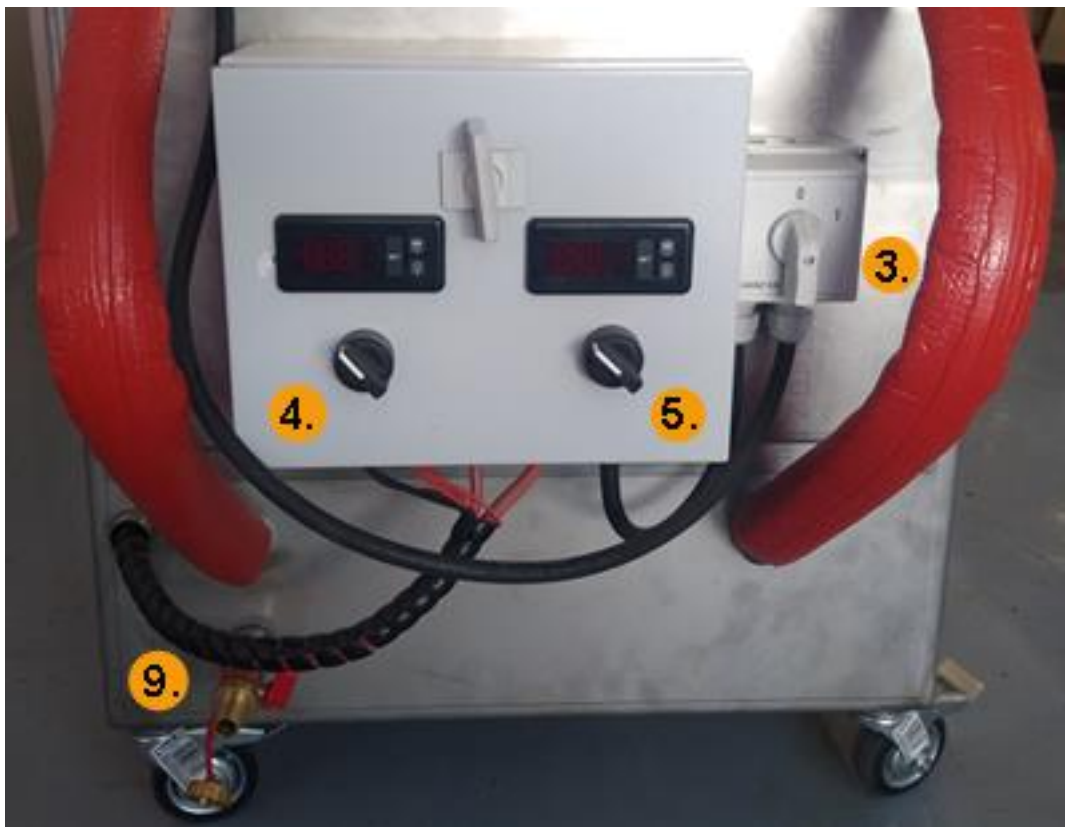
Main Components of the Device

1. Tank
2. Radiator
3. Main Switch
4. Tank Temperature Controller
5. Radiator Temperature Controller
6. Honey Drain Pipe
7. Wax Drain Pipe
8. Expansion Tank
9. Main Valve



Setup

Before the first use, clean the melter thoroughly. Rinse it with plenty of hot water and dry it with a clean cloth.



Fill the radiator with water through the main valve until the water reaches the middle of the sight glass on the expansion tank. During the first startup, the pump will distribute water into the radiator as well, causing the water level to drop. At this point, top up the water in the tank until it again reaches the middle of the sight glass.

Subsequently, periodically check the water level, and if it falls below the middle of the sight glass, add more water as needed. The tank also features a safety valve to protect against overpressure. The equipment has been tested at 6 bar water pressure.

Place the melter under the uncapping machine and connect it to the electrical network. Turn on the main switch, located on the right side of the melter's front. Then, activate the heating switch for the radiator, which is the one on the right when viewed from the front. Once the radiator reaches the set temperature, it will only maintain the temperature.

The tank heating switch, which is on the left when viewed from the front, should only be turned on when the honey level in the tank is at least 10 cm high. If the tank heating is turned on while the tank is empty, it may overheat, potentially damaging the honey. Once the tank heating reaches the set temperature, it will only maintain the temperature.

(Warning! Operating the machine without water or honey in it may cause damage to the equipment or the honey! Such cases are not covered by the warranty!)



Both heating elements are pre-set to specific temperatures. The tank bottom is set to 34-37°C, and the radiator is set to 74-78°C. The temperature controllers maintain the temperatures of the tank and the radiator within these specified ranges. The heating mat's temperature controller activates if the tank temperature drops below 30°C and deactivates when it rises to around 32°C. The heating indicator

light on the temperature display will turn off, but the displayed temperature may continue to rise for a short time due to residual heating. This is a normal phenomenon and is a result of heating lag.

It is important to note that the right display shows the temperature of the circulating water in the upper radiator, while the left display shows the air temperature in the bottom of the double-walled tank. If working in a warm environment during the summer, the display may show temperatures exceeding 50°C. This does not indicate that the honey is heated to this temperature; it shows the air temperature in the tank's lower cavity. In such cases, the tank heating does not turn on.

The tank bottom is insulated, so the air temperature measured there has minimal impact on the honey's temperature. An increase in the air temperature in the tank bottom above 50°C is due to the upper heating radiator's heat-producing motor being located in this cavity, which generates heat during operation. The water circulating in the radiator at temperatures above 70°C also contributes to the warming of the entire metal housing, and high external ambient temperatures do not aid in its cooling.

The LED displays will show when the tank and radiator temperatures reach the desired levels, indicating that you can begin the uncapping process.

Wax Melting

Wax containing honey from the uncapping machine falls onto the radiator and melts in the tank. The honey settles at the bottom, and the wax floats on top. Honey exits through the lower drain pipe, while wax exits through the higher drain pipe. Both drain pipe heights are adjustable.

Allow the honey level to rise until the wax level reaches the radiator, which will keep the wax in a melted state.

If the honey level in the tank drops below 10 cm, turn off the tank heating.

After completing the uncapping process, the levels of honey and wax will decrease, so the heights of the drains will need to be adjusted accordingly.

Cleaning and Maintenance

After two days of operation, it is advisable to flush the equipment with plenty of hot water and dry it thoroughly, as accumulated dirt can impair the machine's efficiency.

If the equipment will not be used for several days, it is also recommended to flush it with hot water and dry it thoroughly.

At the end of the season, before winter sets in, the water in the radiator should be drained.

Technical Specifications

Power Supply/Power Rating 1:	230 V / 3 kW
Power Supply/Power Rating 2:	380 V / 7.5 kW
Total External Length:	1800 mm
Tank Width:	550 mm
Tank Top Edge Height:	800 mm
Storage:	Minimum +2°C when filled with water; can be stored below freezing when drained
Water Volume:	14 liters
Weight:	80 kg