Research on popcorn machine

Popcorn is a traditional food favored by people, with the continuous improvement of living standards, the demand of popcorn is also increasing rapidly. For many years, popcorn was mainly made by heating popcorn machine. The sparkling chamber of industrial Caramel popcorn machine is usually sealed with lead. The produced popcorn is easy to carry lead, which is not conducive to health, and the output needs to be improved. To this end, it is necessary to develop a safe, hygienic and highly efficient microwave sterilization machinery.

Pneumatic popcorn machine is mainly composed of air pump, reversing valve, air filter, pneumatic relief valve, popcorn chamber and so on. Under the driving of the motor, the air pump continuously pressurized the explosion chamber.

The air relief valve acts as a safety valve and plays a role of safety protection in the system. When the system pressure exceeds the prescribed value, the safety valve opens and part of the gas in the system is discharged into the atmosphere, so that the system pressure does not exceed the allowable value, thus ensuring the safety of the system.

The quick discharge valve makes the gas in the poppet chamber expelled quickly, and its working principle is shown in Figure 2. P-port air pump, when P-port air intake, the diaphragm is pressed to seal the exhaust port T, the air flow through the small holes around the diaphragm, from A to the pop chamber; when switching the reversal valve, when the air flow is reversed, A-port air pressure will lift the diaphragm to seal P-port, A-port gas will be quickly discharged through T-port. The quick discharge valve needs to be specially designed to ensure that its flow meets the requirement of fast elimination.

The water pressure double cylinder synchronization system has broad prospects for development in medicine, food, wood processing and other industries. The master-slave hydraulic double-cylinder synchronization system controlled by PID is adopted in the pure water hydraulic test-bed. The following effect of the two cylinders is not ideal. In order to improve the high response and high precision of synchronization of the two hydraulic cylinders, the control effect can be obviously improved by using the fuzzy PID controller.

In the popping process, adding sugar, oil, spices and other condiments, you can get all kinds of flavors of cornflower, which has good color, fragrance, taste and shape, rich nutrition, easy digestion, suitable for all ages. Compared with the ordinary popcorn production process, the pneumatic popcorn machine has larger particle size and lower energy consumption. It is suitable for large-scale production to improve production.

Pneumatic popcorn machine uses high-pressure air to pressurize corn kernels, then makes the volume of corn kernels expand sharply, and pops corn kernels into corn flowers. This method does not need heat, low energy consumption, less pollution, nutritional hygiene and high production efficiency. It is a new technology worthy of promotion.