

## Microwave Defrosting Equipment for Lunch Meat

Canned luncheon meat is one of the most widely consumed canned meats in the world. It is processed in a complex way. The raw material used in mass production is frozen pork carcass. Thawing is a very important process.

The thawing effect of raw materials will not only directly affect the water holding capacity, color, elasticity and safety of canned luncheon meat products, but also have a significant impact on the production cycle, site demand and production cost.



It is very important to improve the thawing process and technology of canned luncheon meat. The microwave defrosting equipment for lunch meat was developed.

### **Competitive advantages of Microwave thawing equipment for lunch meat:**

1. The Microwave defrosting machine for lunch meat defrosts the meat quickly and eliminates the pickling process, so it only takes 1 hour from the defrosting to the sealing. The whole processing process only needs about 3 hours, which shortens the production cycle. The traditional process lasts 80 hours. This is undoubtedly a new leap in spam production technology.

2. Lunch meat microwave defrosting equipment defrosting raw materials of good quality, less bacteria, low temperature. This provides a favorable condition for the development of canned lunch meat without sodium nitrite.

3. Compared with the traditional thawing method, Microwave lunch meat defroster can

greatly improve the water holding capacity of raw meat after thawing.

4.The microwave defrosting process reduces the time of contact between raw materials and air.Microwave defrosting equipment for luncheon meat can prevent the dark color of lean meat due to oxidation and the odor of fat oxidation.

5.Since the temperature of the materials is kept below  $-2^{\circ}\text{C}$  during the whole thawing process, the growth and reproduction of attached microorganisms are not only inhibited, but also killed by microwave. Microwave thawing equipment can effectively extend the shelf life of luncheon meat.

6.Microwave defrosting equipment for lunch meat in packaging can not only avoid secondary pollution, but also eliminate the harmful effects of meat fat oxidation.In particular, the appearance of a new production process without adding sodium nitrite based on microwave thawing technology has greatly increased people's sense of security when consuming canned lunch meat.

7.The microwave lunch meat defrosting facility is thawed in packaging, greatly reducing site requirements.

8.The noise of the microwave thawing equipment for lunch meat is below 70 db.

9.The microwave continuous defrosting device is easy to operate through a programmable touch screen, which can automatically adjust and control the defrosting process. The automatic control menu can be selected by the user according to the computer instructions installed inside, or directly input for programming.



#### **Traditional methods of defrosting meat:**

1.The rock-hard meat ingredients are cut into pieces, then ground and stirred.

This is expensive and has a negative impact on the quality of frozen meat and crushing.

2.Heat the frozen meat to a mincemeat state.

Warming times are difficult to predict, melting is uneven, weightlessness, fat oxidation and bacterial contamination are difficult to control.

Basic components of microwave defrosting equipment for lunch meat produced by Leader Microwave Equipment Company

The microwave defrosting equipment for lunch meat ingredients consists of microwave transmitter, defrosting chamber with cooling tunnel and conveyor belt, control box with touch control panel and microwave conduction device.



### **Microwave thawing principle:**

The idea behind the microwave defrosting device for lunch meat is that when microwaves penetrate the food, they cause polar molecules, such as water, to oscillate and cause friction between molecules.

This friction occurs simultaneously in the hundreds of millions of molecules inside the food, generating heat that heats the material. Because microwaves can penetrate into a large number of frozen materials, the ice crystals in various parts of the pig meat cubes melt at almost the same time during the microwave thawing process.

During this time, there is little difference in temperature throughout the thawed material, and little difference in water pressure inside and outside the muscle fiber cells, so there is no significant loss of juice due to water movement.

### **Canned lunch meat production line:**

Frozen pork thawing equipment -- strip cutter -- agitator -- chopping and mixing equipment -- vacuum mixing equipment -- loading equipment -- vacuum sealing

equipment -- cooling equipment

**What precautions are taken by microwave dewatering equipment for lunch meat and microwave degrease equipment to avoid possible leakage of microwave energy?**

1.Strengthen the control of thawing chamber door and tunnel gate.

Detectors are installed at the entrances and exits of the defrosting chambers.Any failure to interlock will cause the conveyor belt and microwave to be switched off.Due to the security interlock system, if the gate is not in the proper position, the system cannot operate.

2.Each time the microwave defrosting equipment for lunch meat is turned on, it should be checked for microwave leakage.Operators must undergo strict pre-service training, requiring them to not start the operation when the door of the equipment is found to be askew or the door seam and the surface of the door seam is damaged.

3.The water spray system is set up inside the microwave defrosting equipment. During the operation of the equipment, all possible microwave leakage gaps are sealed with water mist. The scattered microwave is fully absorbed in the water mist.

The one-time investment in microwave thawing equipment for lunch meat is large, which is unacceptable for small factories with low production and no export capacity.It requires enterprises to have good raw material supply sources, even if the use of microwave defrosting of poor raw materials is impossible to improve product quality.Microwave thawing technology was introduced into the production of canned luncheon meat in China, and a new production process without adding sodium nitrite was produced, which was a great progress in the canning industry in China.