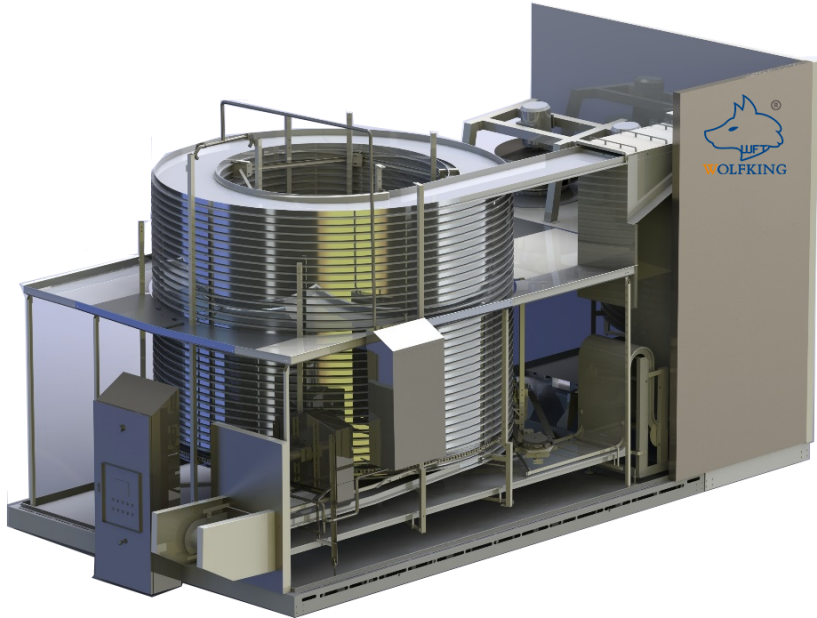


产品名称：

Self-stacking spiral freezer

产品主图（多维度展现）：



产品详情总叙述（可以从产品的主要特点入手编写）：

The self-stacking spiral freezer is a compact and hygienic freezer design. Compared to the traditional low tension spiral freezer, the self-stacking spiral freezer eliminates the rails supporting the belt, that means up to 50% more freezing output with the same foot print. The conveyors are almost 100% accessible to cleaning thanks the elimination of the belt rail and drum. The freezer has combined the state-of-the-art clean-in-place (CIP) system. An open, easily cleanable and accessible design optimizes sanitation standards and decreases system downtime for cleaning and maintenance. This feature reduces contamination and extends the life of the equipment by preventing waste buildup and simplifying the cleaning process.

产品型号细节展示：

产品详情细节展示：

Structure features

a) Hygiene

There is only belt inside the freezing zone, but no any other structure, which ensures the freezer hygiene requirement.

b) Smaller floor space

Smaller floor space but larger freezing capacity, compared with traditional spiral freezers.

c) Optional Air defrosting system

Compressed air is sprayed to evaporator at interval time. The air flue will suck away

the frost on the fins. The interval time between two defrosting will be extended.

d) CIP-Cleaning system

The CIP cleaning system will spray hot water to evaporator, fans, inside and outside of the spiral tower, working surface of the belt and the decking, after the whole processing is completed. Foam cleansing agent and water will also be sprayed for the cleaning. After disinfecting process, the whole system will be flushed again by water. There will be several modes for your choice, once one choice is made, the whole cleaning process will be carried out and completed automatically.

e) Proprietary drive system

Proprietary type belt organizes [countercurrent](#) air flue with the products to be frozen. Good wind pressure balancing device, excellent design and [manufacturing technology](#), ensures exquisite structure and fine products.

f) PLC integrated control

There are several control modes set in the PLC system, as well as the cleaning mode. The customer can choose according to different conditions.

With all the features described as above, like small floor space, larger capacity and good hygiene condition etc., the self-stacking spiral freezer is accepted by most customers

Main structure of the freezer

1) Foundation (Concrete foundation offered by customer)

Electrical heating equipped with the foundation. There are 2 heating cables which can be changed. All the switch box and terminals of the cables are set at the outfeed end, except the cable outlet end. Under voltage of 380-460V, the temperature can be kept at 70 °C. The power is 35W/m, shielding ground layer covered with an erosion resistant coating to prevent the foundation from being frozen.

2) Insulating enclosure

150mm thick high-density polyurethane foamed enclosure covered with stainless steel sheet. All of the stainless-steel joints are continuously sealed against bacterial growth and moisture penetration.

The PU foam density is over 42 kg/m³. The panels are connected by concave-convex mode.

All of the stainless-steel joints are continuously double sealed against bacterial growth and moisture penetration.

There is door heater between door and door frame; it can start automatically when the inside temperature of the door is lower than 7 °C.

There is a safety switch at the service door. The freezer will be stopped and alarm when the door is open. There is a safety door inside the service door at the infeed end. The freezer can keep going when the service door is opened. The operator can check the running condition inside the freezer. But if the safety door is opened, the freezer will be stopped and alarm.

3) Water trough at base panel inside the cabinet

The water trough at base panel includes 4 parts, which are all made by Stainless Steel.

There are water troughs at both sides. The drainage is at the lowest position, the height difference is about 80mm. The drainage is fluent. All the inside structural parts are installed within the trough, which ensures the integrity of the freezer and the water of cleaning and defrosting will not leak into the base panel.

4) Main drive

The main drive is designed according to concept from European advanced drive technology. The driving system is running steadily and reliably. The belt is driven to 2 chains after it enters the freezer from the infeed end. The driven belt is loaded on the base of chain and stacker, and forms a spiral. The approach switches are installed at both sides of the belt baffling plates. When the belt is running out of its way or deformed, the alarm is started. The stacker is loaded on the driving chain. Each chain is connected to separate driving motor and gear box, which offered a driving power to the whole stacker. There is a lifting device to lift the belt up and out to the outfeed end of the spiral freezer.

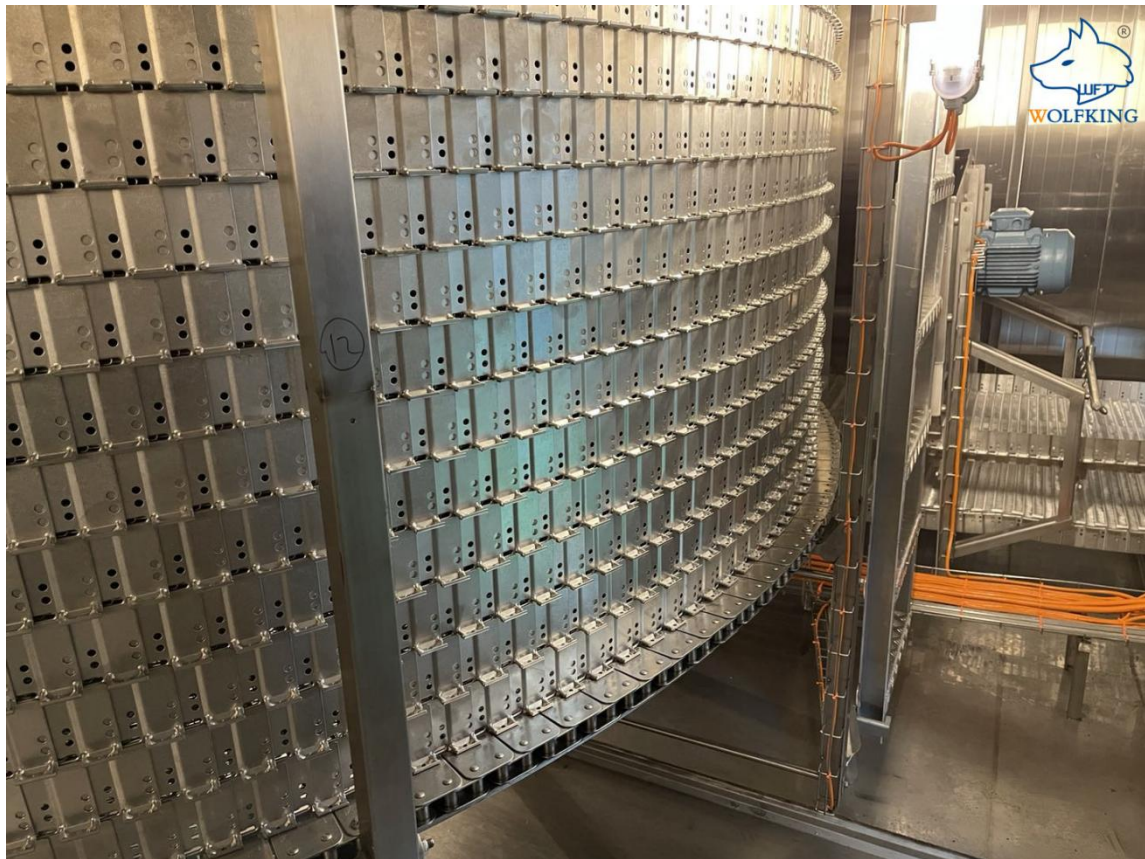
5) Evaporator

The evaporator and evaporating tube can be made by stainless steel or Aluminum-alloy. The fins are all made by Aluminum-alloy. The size of the evaporating SS tube is $\phi 20 \times 0.8$, 0.5mm thick aluminum fins allows 10mm high flange, which gives sufficient contact surface between fins and tubes. It has passed the pressure test of 24kg/cm². We are using high pressure axial fans, with aluminum-alloy fan blades. The frame is made by Stainless Steel. The fans are of high efficiency and energy-saving, running steadily with low noise. The air flue is fluent and ensures a good freezing effect.



6) Conveying belt

The material is SUS304 Stainless steel, which can meet the hygiene requirement of the product processing.



7) Infeed and Outfeed Device

The infeed device is combined of infeed rail and roller. The sliding strip is installed on the rail, which offered a surface of low friction for the belt running. There is a product height limit rod and an approach switch at the infeed device. When the height of the product is higher than the limit, the belt will stop automatically and alarm. There is a separate driving device at the outfeed device, which is synchronized running with the main drive. It can remove the remaining products stick to the mesh belt, together with the outfeed scratching plate. The driving motor is driving the outfeed roller by chain driving components.

8) Second floor

The second floor is for easy service and maintenance, and dividing the whole air flow into a high pressure and low-pressure zone.

9) Air balancing system

The freezer is equipped with an air balancing system, working according to the loading pressure change on the belt inside the freezer. The air is flowed through air deflector, belt and air penetration plate, controlled by the adjusting ventilation door components. The components are creating air pressure by changing the opening angle of the ventilation door. Air curtain is formed to prevent the cold air from leaking at the outfeed end. Under this air balancing system, hardly there is cold air loss at the infeed and outfeed ends in this kind of system.

10) Lubricating system

The unique lubricating system is continuously lubricating the ball, ball rail and plastic sliding strip. The pump is controlled by the PLC, and delivers the oil to each lubricating

point. The pumps are from SKF, imported from Sweden.

11) Belt tension device

There is changing in the total length of the mesh belt when it is running under hot expensing and normal wearing. The belt tension is used to make up for this kind of change. The belt is loaded to the tension device by outfeed roller shaft though the bearing strips of the belt, allowing the belt tightening or loosening when it is necessary. If the belt is too tightened or loosen, the limit switch will send a signal to the control circuit, and stops the freezer accordingly.

12) Electrical control part

All the operations are controlled and monitored by the control panel. There are voltage gauge, Ampere meter, Touch screen and lighting switch on the panel. Anti-dust cover is equipped at the side of the control box. The inner heating is always on to dry possible moisture inside the box, and prevent it from unnecessary fault and service cost. Ventilation inside the control box is by sucking the air through a fan with filter. The air is flowed by passing the filtrating grids on the control box. When you push on the power switch, the fans will be running then.



13) Service handle

The service handle is set for servicing and maintaining the freezer when the freezer is running. Please use the side access door switch when you operate on the service handle.

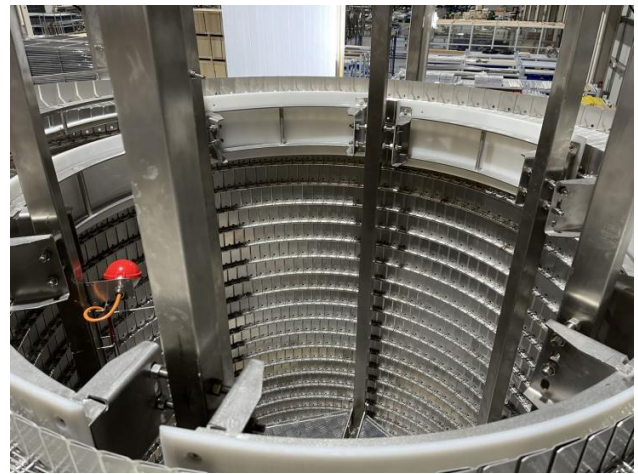
14) Emergency stops

There are 2 emergency stops at infeed and outfeed ends (Totally 4 stops). When there is any emergency condition, you can stop the freezer by the buttons.

15) ADF/Air Defrosting system

The ADF system can blow away the frost on the evaporator in short time by strong air flue. The system is continuously running according to set mode to cover the whole evaporator. This system can utilize the evaporator more efficiently and extend the shaft time for production. The air drier dries the compressed air from the air compressor by the filter. The Highest temperature can be $+30^{\circ}\text{C}$. The air is dried to a pressure dew point of -40°C . The dried air will enter the air storage tank via a filter. By opening and closing the right-angle solenoid valve, the air enters to the spraying nozzles. When the ADF system is moving to a direction, the spraying nozzles will spray air accordingly to the direction. There is a limit switch at the end which makes the motor rotating to the reversal direction, the nozzle spraying direction will also be reversal. When the temperature of freezer is under icing temperature, the ADF system will be started.

Product Applications





产品优势展示:

产品应用范围展示:

产品如何使用:

关于产品的其他信息等想要展示的关于产品的内容: