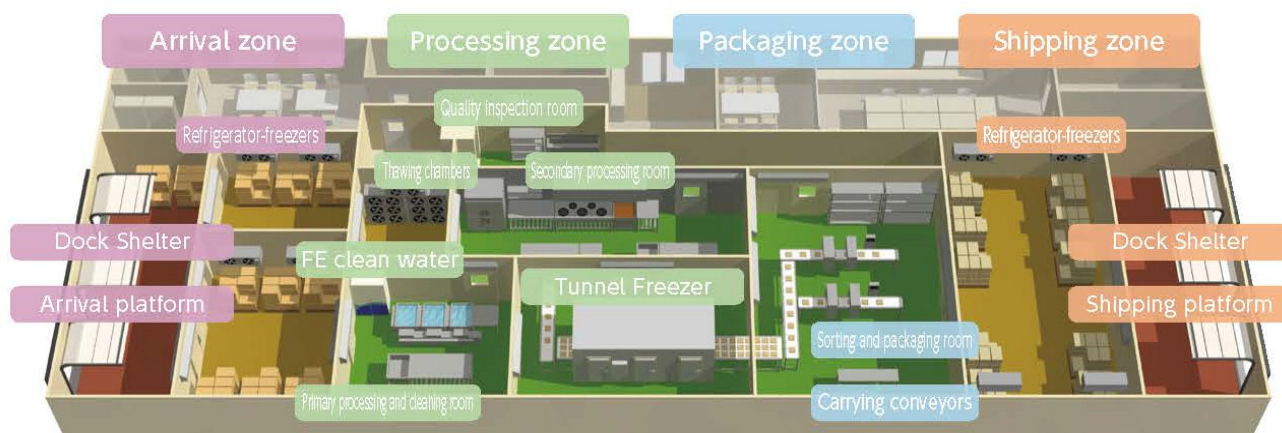


## Total support for food plants and distribution centers

Our support system uses the GALILEI GROUP network to offer design, construction, and maintenance services

We provide a wide range of support according to customer needs through the engineering capabilities of the GALILEI GROUP.



## FUKUSHIMA GALILEI CO.LTD.

We will listen to the future visions, current issues, and requests that our customers think, and we will create the optimal environment from the same perspective as our customers. These proposals have been cultivated through proposal activities for the showcase business and refrigerator business, which are our main businesses.

By applying and developing the know-how and technology of a wide variety of product groups, we will realize engineering links that are possible only from manufacturers.

FUKUSHIMA GALILEI'S engineering business aims to be an engineering link that is useful to our customers and contributes to society.

### The Galilei Series



With the breakthrough "The Galilei" series we try to achieve the SDGs.

**SUSTAINABLE DEVELOPMENT GOALS**



## TAKAHASHI GALILEI CO.LTD.

In 1961, we developed, designed and manufactured the world's first continuous quick-cooling, quick-freezing system. In this system, the tunnel's inlet and outlet can be kept open without cool air leaking. Over 60 years since then, the Tunnel Freezer® has been renovated and redesigned for marketing around the world. Challenging all the time for safety and security, the GALILEI people have been keeping customers close to our heart, with Tunnel Freezer® first in mind.

**Tank type WSJ series**



To the tank freezer that is well controllable for hygiene, the quick-cooling, quick-freezing SJ system is integrated for safety and security as well as energy saving feature. In this configuration, the tunnel freezer can handle many tasks chilled products such as paste seafood, cool-stored prepared dishes, and other frozen and chilled foodstuffs.

**Tank type WHN series**



The standard quick-cooling tunnel freezer is intended for general-purpose applications. CIP cleaning and steam pasteurization are also possible, and the large wing is designed to visually check the inside easily. The WHN series is more compact than the WSJ series. The 3-layer conveyor design is advantageous for saving space.

**Panel type OSJ series**



The OSJ series enjoys the number-one choice among the superjet products. In almost all fields, its freezing and cooling performance is valued. Its applications include broiler chicken, frozen noodles, general prepared dishes, seafood, Chinese foodstuffs, patisserie and many others.

**Panel type OKF series**

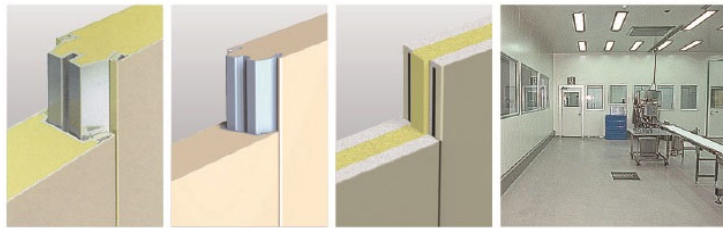


Cool air is evenly supplied from the high-pressure chamber. Products are well balanced in freezing from the entire surface. This piece-by-piece freezing style is widely popular, whether in small scale or in large scale, for mixed vegetables, spinach, minced meat, frozen rice pilaf and the like.

## GALILEI PANEL CREATE CO. LTD.

Due to the rise in awareness of the customer's environment, safety, and security, the needs required by sanitation management and temperature control are becoming more and more advanced.

Using the panel technologies and system engineering cultivated over many years, we contribute to society by meeting customer needs with "environmental creation" technologies that provide high-quality "freezer and refrigeration spaces" and "clean work spaces."



Thermal insulation panels

High thermal insulation and non-combustible panels (Refrigerators and freezers)

Defender panels

Window system



Sirius doors (single)

Sirius sliding doors

Clean fit doors

Resin cart guard  
Resin clean baseboard

## SHOKEN GALILEI CO. LTD.

Always since its foundation, SHOKEN GALILEI Co. Ltd. has been researching and developing production line machinery and equipment with labor and energy saving in mind. In today's whirlwind of changes, the SHOKEN GALILEI engineers have been coming up with unheard-of technology and creative ideas in response to production system innovations. For delivering superior products, they are doing tireless activities. The SHOKEN GALILEI people are committed to delivering factory automation systems to meet customers' needs today and tomorrow.



Modular belt conveyor

Belt conveyor

Choco Net conveyor

Multi-stage conveyor

Plastic-top conveyor

Plastic-top conveyor

Covered inclined conveyor

## Product Information

Electrolyzed Hypochlorite with high quality sterilization

### FE Clean Water



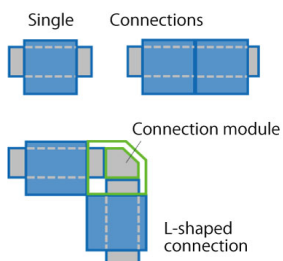
The FE Clean Water is a mildly alkaline aqueous solution that mainly consists of sodium hypochlorite evolved electrolytically from saline solution. It can be employed to sterilize foodstuff and kitchen utensils.

Easy installation type (generation capacity 8.0 ℓ/min · 40ppm~), optimal aquarizer for food factories Maximum production amount 258 tons/day (at 30ppm setting), etc.

We will design it according to the maximum amount of water required.

Tunnel freezer ® for small factories and central kitchens

### L-shaped Short Tunnel Freezer®



It has evolved into an ultra-compact with the rapid freezing/cooling system unchanged. It is a new tunnel freezer that allows you to freely layout multiple units.

It can be used not only as a single unit, but also in a variety of arrangements such as connecting multiple units and using a L-shaped connection module.

Alcohol type quick freezer

### Alcohol Brine Freezing LSHOCK



An alcohol freezer is recommended for customers related to meat and fisheries. Immerse in an alcohol brine at -35°C and freeze about 20 times faster than air blasting.

Minimize ice crystals, resulting in high quality freezing with high reconstitution during thawing.

It is a batch type and can handle a wide variety of small quantities, and can be installed with limited space even by customers.

Suitable for small lot production

### Batch type freezer TBR



The product is loaded into the freezer while it is still mounted on the trolley, and it is cooled and frozen. It is also possible to create a dedicated trolley or use a weight according to the front and rear process of the freezer.

The structure is assembled with a heat insulation panel in which urethane foam is sandwiched by steel plates. High-precision heat insulation panel required for Tunnel Freezer®.

Avoids food product deterioration, seals in the good taste.

## Blast Chiller / Shock Freezer



Blast chiller is a device for rough heat removal, rapid cooling, and quick freezing. As it can contain freshly heated food, it will hold the moisture, scent, and color that you missed along with the steam, making it juicy without losing the flavor of the ingredients.

The blast chiller with an automatic cleaning function can reduce the cleaning work time by automatically performing rinsing and drying.

Control indoor air cleanliness

## Clean room



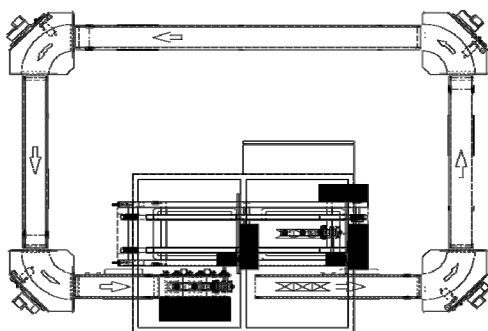
It manages room temperature, humidity, room pressure, air flow, etc. according to the required conditions.

For example, the pressure difference between the rooms is adjusted by the differential pressure sensor and the differential pressure damper so that the pressure of inside the room is always maintained at a constant positive pressure. By pressurizing the room, it prevents entering the dust from the outside. In addition, a HEPA filter is installed in the part that takes in the outside air, and invisible dust can be removed.

We ensure air cleanliness by observing the four principles; not bringing in, not generating, not accumulating, and eliminating foreign matter.

Automate your casing processes

## Casing Line System



This mechanical casing system integrates into production lines and features a suction system for automated casing processes.

The system is ideal for businesses looking to free themselves from manual casing work and those who are wary of adopting a robotic system.

Integrate this system into your processes and reduce labor in your casing facilities.

Sweet potatoes: proper curing improves quality, shelf life

## Sweet potatoes:Curing room



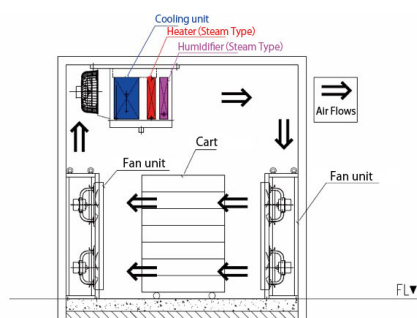
The curing process is to heal any abrasions or bruises of the sweet potatoes sustain during harvesting. As the sweet potatoes cures, a corky layer of cells develops just below the surface of the abrasions, which serves as a barrier against disease-carrying organisms.

Sweet potatoes stored in cool, constant conditions have a shelf life for a long term.



Thaw a large amount

## Prefabricated defroster



By uniformly applying a large amount of high-humidity air, even large volumes can be thawed without unevenness. Achieved high quality thawing with less drip by suppressing the drying and discoloration of food ingredients.

Since the temperature can be set in the range of  $-15^{\circ}\text{C}$  to  $30^{\circ}\text{C}$ , it is possible to set the optimum temperature according to the food. Compared to thawing in a refrigerator, it can be thawed in a shorter time and does not require draining after thawing with running water.

The program can be started from the frozen storage state, and after the crimping process, it will be refrigerated storage operation until it is taken out. It can also be used as a refrigerator because it can be operated independently in each process.

Freezing and refrigerating with one unit

## Wide temperature range commercial refrigerator



One unit can handle a wide range of temperatures. This is a commercial refrigerator/freezer that can be used according to the season and menu. It is possible to switch between freezing ( $-25^{\circ}\text{C}$  to  $-15^{\circ}\text{C}$ ) and refrigeration ( $-5^{\circ}\text{C}$  to  $10^{\circ}\text{C}$ ) with a single switch. Freezing and refrigeration can be switched in both the right and left chambers with independent control. It can be used in 4 patterns.

Unique panel structure with excellent heat insulation improves economic efficiency

## Non-Freon Insulation Panel econea



Since December 2019, all thermal insulation panels and non-combustible thermal insulation panels produced at the Hikone, Shiga plant have switched to "non-fluorocarbon panels" using a new "HFO (hydrofluoroolefin)". Foaming agent in anticipation of next-generation global environmental protections, we began researching products which do not use alternative fluorocarbon five years ago and realized the development of the high-performance "econea" series.

We will meet the needs of non-combustible products, from food processing rooms to freezers and refrigerators.

For product development that ensures safety and security

## Voluntary inspection of food



Food safety cannot be said without scientific verification. It is important to scientifically verify and record the quality of each process and feed back the results to the site in a timely manner.

Conventional bacteria testing is a difficult task. However, in recent years, kits that can easily test bacteria have evolved and are becoming easier to use. For daily monitoring, it is recommended that you conduct your own food microbiological inspection and regularly inspect at an external inspection agency. We will propose an inspection plan according to your request.

Shorter construction period due to simple process and construction

## Ceiling panel with line lighting for interior



The joint of the heat insulation panel has a T-bar structure, and LED line lighting is embedded and integrated with the panel ceiling.

There is a high degree of freedom in the layout of the ceiling surface, and flexible support is possible.

Since the process and construction are simple, the construction period can be shortened. Furthermore, the space above the ceiling can be walked for inspection and work. It is also safe in terms of maintenance.

## Innovative freshness control

"F's eye" management system for food plants and low temperature warehouses

### F's eye



F's eye provides start/stop control and status monitoring of all machinery within a facility to help achieve stable equipment operation. Moreover, it can significantly reduce the time and effort spent by equipment managers through centralized management of temperature and equipment data on a PC.

Secure food safety management with IoT

### HACCP ExAround



HACCP temperature management system that automatically monitors and records the temperature of the refrigerator for 24 hours.

The key to HACCP is to keep a record. However, it takes time and labor to check and manage the records.

In addition to temperature recording and monitoring, central monitoring, automatic recording, and automatic notification when an abnormality occurs, help HACCP management.

Refrigeration and freezer equipment operating status and error 24/7 remote monitoring maintenance contract

### Snet24



Advantages of implementing S Net 24 is signing a maintenance contract can limit the occurrence of sudden repair costs.

Verifies and optimizes the configuration, operating status, and energy usage of each piece of equipment. Enables the optimization of each store according to its environment and characteristics.

Support can also be provided for reduction plans corresponding to revised Energy Conservation Act together with maintenance.

Next-generation refrigerant that contributes to energy saving

## CO2 as a refrigerant



CO2 refrigerant is a next-generation, natural refrigerant with the highest level of safety.

CO2 refrigerant is an extremely environmentally friendly refrigerant that has almost no effect on global warming.

It has a high energy-saving effect and contributes to a 10-15% reduction in power consumption compared with conventional refrigerants.