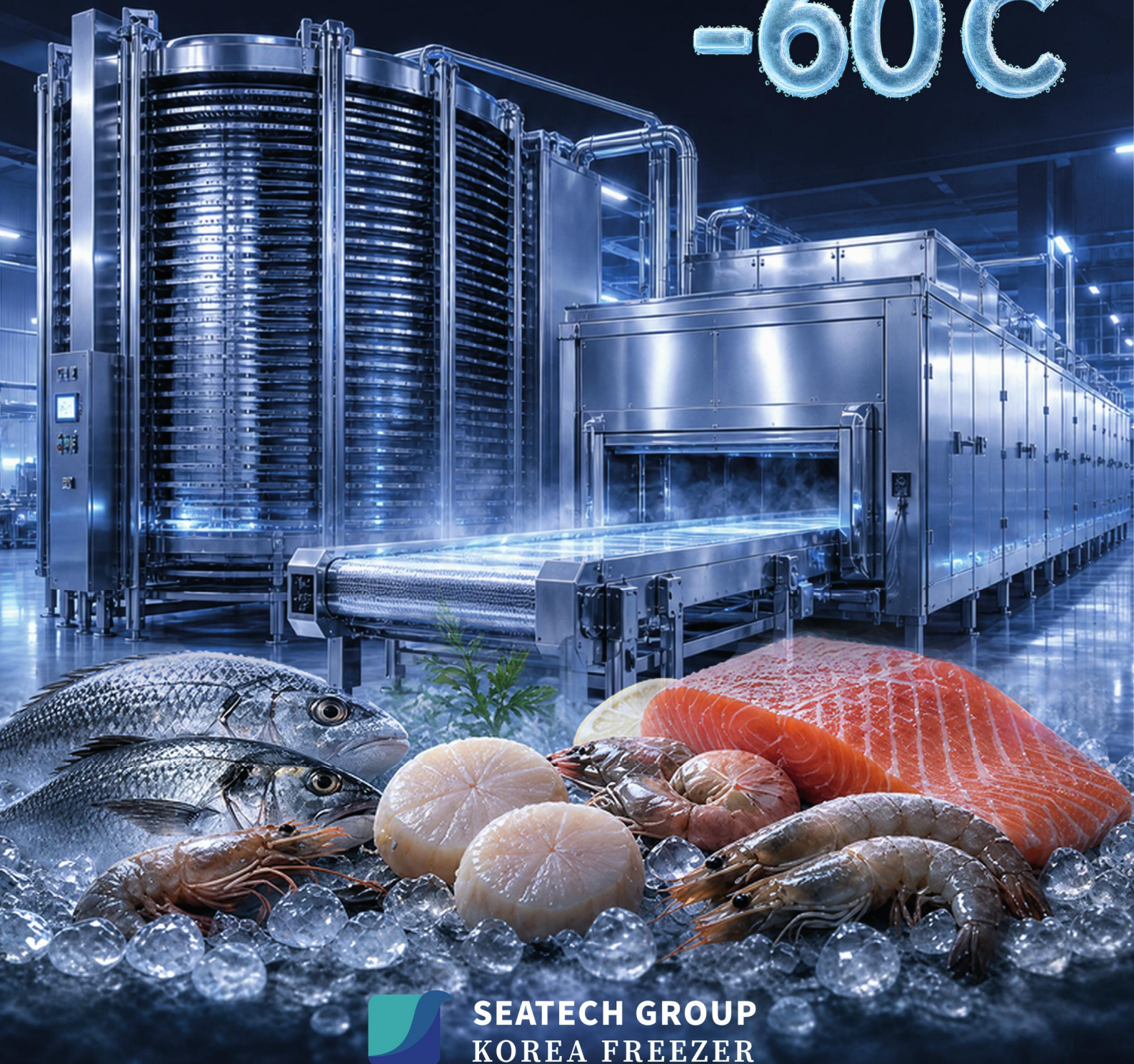


IQF FREEZING SOLUTION ULTRA-LOW TEMPERATURE TECHNOLOGY

ENGINEERING EXCELLENCE | SMART FREEZING SOLUTION

-60°C



SEATECH GROUP
KOREA FREEZER

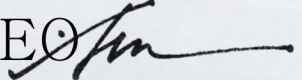


Based on our accumulated expertise and continuous R&D in ultra-low temperature flash freezing systems, we hold numerous relevant patents. In particular, we were the first in the industry to develop the Multi Tunnel Freezer, achieving both production efficiency and quality stability and have earned the deep trust of our customers.

Our technical team manages the entire process—from designing and manufacturing to installation, commissioning, and after-sales service—without outsourcing, thereby maximizing process consistency and quality excellence. This reflects our core philosophy of pursuing long-term partnerships rather than simply supplying equipment.

We will continue to advance our technologies in stable ultra-low temperature structural design and energy optimization, evolving into a global freezing solution provider that enhances our customers' production competitiveness.

Thank you.

Sangdon Lee / CEO 

TOTAL ENGINEERING CAPABILITIES

FREEZING SYSTEM

ULTRA-LOW TEMPERATURE ENGINEERING WITH INTEGRATED HYGIENIC, CLEANING, AND SAFETY DESIGN

Integrated solutions for cold storage and conveyor systems, based on HACCP-compliant structures and supported by in-house design, fabrication, installation, and testing.

IQF
FREEZING
SYSTEM

● CORE ENGINEERING CAPABILITIES



Control Panel & PLC Programming

In-House Development

Custom PLC design
Process-tailored control systems



Freezer & Conveyor

Engineering

Ultra-low-temp structural design
Production-line optimization



R&D Center

(Daejeon Branch)

Continuous patent development
Specialized cryogenic R&D infrastructure



In-House Installation & Service Team

No outsourced installation
Rapid-response service



Factory Testing & Trial Operation Facility

Pre-shipment performance verification
Customer-witnessed testing

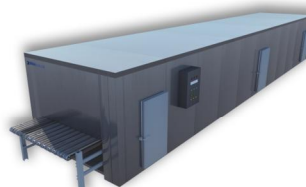
PRODUCT LINEUP



IQF BT Freezer



IQF Spiral Freezer



IQF Tunnel Freezer



IQF UTF Chamber

● HYGIENIC · CLEANING · SAFETY DESIGN

Hygiene & Materials

- SUS 304/316 Stainless Steel
Corrosion-proof, food-grade durability
- Sloped Floor Design
Sloped floor for complete drainage
- Seamless Welding
No contamination traps

Cleaning System (CIP)

- Dual-Nozzle Cleaning Line
For thorough belt cleaning
- Open Frame Structure
Full access for high-pressure washing
- Sloped Floor Design
Sloped floor & open frame for maximum cleaning efficiency

Safety & Protection

- Safety Interlocks
Instant stop when the door is opened
- Emergency Stop
Emergency stop buttons throughout the workspace
- Torque Limiter
Torque limiter prevents damage from mechanical overload

Compliance Standards

- HACCP
 - GMP
 - Eco-Friendly
 - OSHA
 - Food Grade
- Designed to comply with food sanitation and HACCP standards

CORE COMPETENCIES

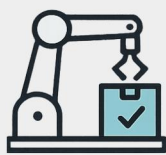
Why Choose SEATECH Group?

SEATECH Group (KOREA FREEZER) provides integrated solutions—from engineering and manufacturing to global project execution—helping customers ensure reliable and efficient operations.



Engineering

Design and installation of stable ultra-low temperature freezing systems down to -60°C



Manufacturing

Direct production and quality management at our domestic factory



Operation Design

Optimized for 24/7 continuous operation



Global Project Experience

Proven track record across numerous international project sites

특허증

CERTIFICATE OF PATENT

Patent Number 10-2930445

Application Number 10-2024-0062660

Filing Date 2024-05-13

Registration Date 2026-02-19

Title of the Invention

APPARATUS FOR PRODUCING TWO STAGE CASCADE REFRIGERATING MACHINE

CERTIFICATE OF PATENT

Patent Number 10-2930445

Application Number 10-2024-0062660

Filing Date 2024. 05. 13.

Registration 2026. 02. 19.

Title of the Invention

APPARATUS FOR PRODUCING TWO STAGE CASCADE REFRIGERATING MACHINE

Patentee

LEE, Sangdon

Inventor

LEE, Sangdon

This is to certify that, in accordance with the Patent Act, a patent for the invention has been registered at the Ministry of Intellectual Property.



지식재산처
Ministry of
Intellectual Property

2026. 04. 24.

MINISTER,
MINISTRY OF INTELLECTUAL PROPERTY

김용선



Check your current
registration with QR code



CERTIFICATION

Certified Integrated Management System

An ISO-based integrated management system ensures systematic quality, environmental, and safety management while complying with international standards throughout engineering, manufacturing, and installation.



ISO Integrated Management System

ISO STANDARD CERTIFICATION



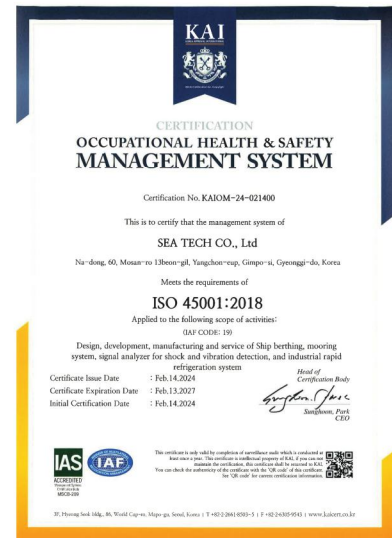
ISO 9001:2015

Quality Management System



ISO 14001:2015

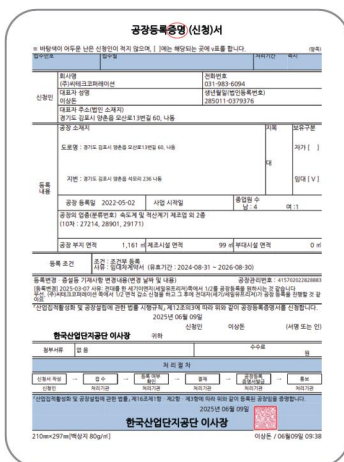
Environmental Management System



ISO 45001:2015

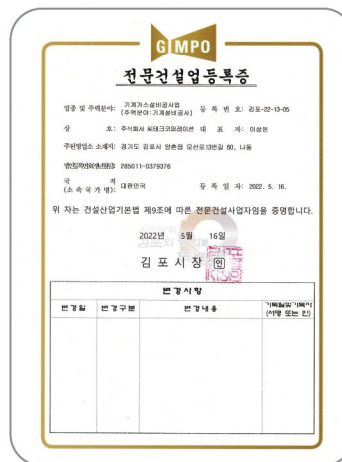
Occupational Health & Safety Management System

COMPANY LICENSE



Factory Registration

Registered Manufacturing Facility for Refrigeration & HVAC System Design, Manufacturing, and Installation



Mechanical Construction License

Licensed Mechanical Equipment Contractor with Professional Engineering and Installation Capabilities
Core Business: Mechanical Equipment Construction

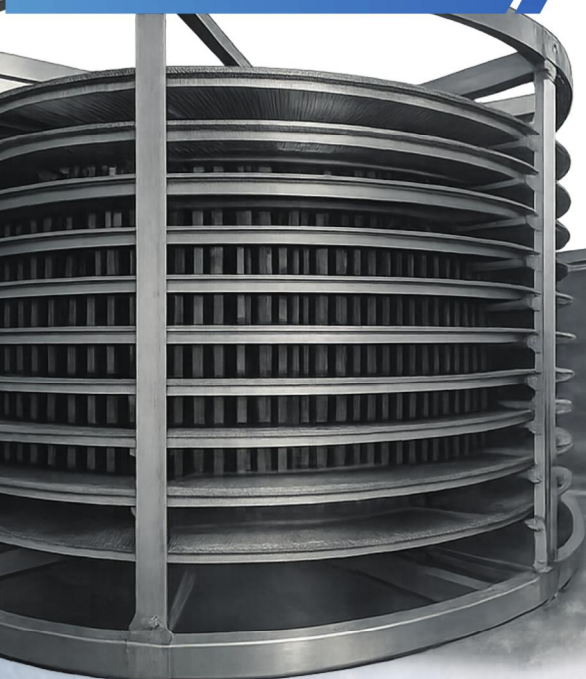


We provide trust and value to our customers with top priority on quality, environment and safety.

INDUSTRIAL FREEZING SOLUTION LINEUP

* Customized for Your Production Process *

SPIRAL FREEZER



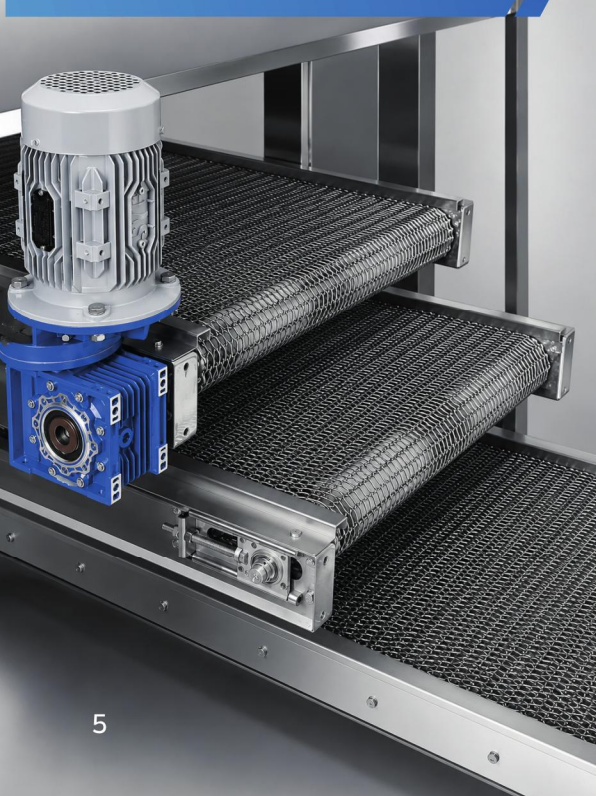
Compact Type

Model	Specifications	Freezing System	Unit Cooler	Capacity(kg/h)
S200	500mm x 6Tiers	2-Cycle(20+20) 1EA	30HP 1EA	~200
S300	500mm x 8Tiers	2-Cycle(15+15) 2EA	20HP 2EA	~300

Standard Type

Model	Specifications	Freezing System	Unit Cooler	Capacity(kg/h)
S400	660mm x 11Tiers	2-Cycle(20+20) 2EA	25HP 2EA	~400
S600	660mm x 11Tiers	2-Cycle(30+30) 2EA	40HP 2EA	~600
S800	660mm x 15Tiers	2-Cycle(25+25) 3EA	30HP 3EA	~800
S1000	660mm x 15Tiers	2-Cycle(30+30) 2EA	40HP 3EA	~1000

TUNNEL FREEZER



Multi Tunnel Freezer(1-Line)

※ mmL = Total Length (mm)

Model	Specifications	Freezing System	Unit Cooler	Capacity(kg/h)
MT400	660mm x 5Tiers(6500mmL)	2-Cycle(15+15) 2EA	20HP 2EA	~400
MT500	660mm x 5Tiers(6500mmL)	2-Cycle(20+20) 2EA	25HP 2EA	~500
MT600	660mm x 5Tiers(10000mmL)	2-Cycle(30+30) 2EA	40HP 2EA	~600
MT800	660mm x 5Tiers(10000mmL)	2-Cycle(20+20) 4EA	25HP4EA	~800
MT1000	660mm x 5Tiers(10000mmL)	2-Cycle(30+30) 4EA	40HP 4EA	~1000



Custom Design

Tailor-made designs optimized for your production process and product characteristics.



High-Efficiency

Advanced freezing technology for energy efficiency and reliable performance.

TUNNEL FREEZER

2-Way Multi Tunnel Freezer(1-Line)

※ mmL = Total Length (mm)

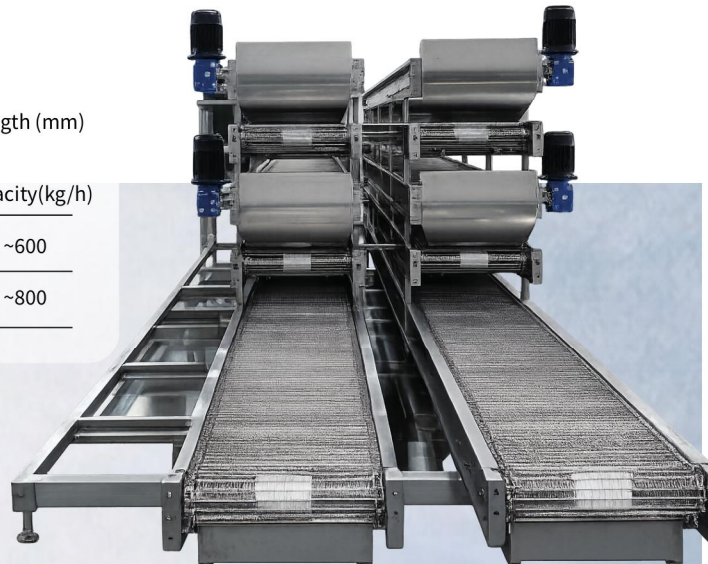
Model	Specifications	Freezing System	Unit Cooler	Capacity(kg/h)
2WMT400	660mm x 5Tiers(6500mmL)	Freezing(-60°C)	2-Cycle(15+15) 2EA	20HP 2EA
		Cooling(0°C)	20HP 1-Cycle 2EA	25HP K-Type 2EA
2WMT500	660mm x 5Tiers(6500mmL)	Freezing(-60°C)	2-Cycle(20+20) 2EA	25HP 2EA
		Cooling(0°C)	25HP 1-Cycle 2EA	30HP K-Type 2EA
2WMT600	660mm x 5Tiers(10000mmL)	Freezing(-60°C)	2-Cycle(30+30) 2EA	40HP 2EA
		Cooling(0°C)	30HP 1-Cycle 2EA	40HP K-Type 2EA
2WMT800	660mm x 5Tiers(10000mmL)	Freezing(-60°C)	2-Cycle(20+20) 4EA	25HP 4EA
		Cooling(0°C)	25HP 1-Cycle 4EA	30HP K-Type 4EA
2WMT1000	660mm x 5Tiers(10000mmL)	Freezing(-60°C)	2-Cycle(30+30) 4EA	40HP 4EA
		Cooling(0°C)	30HP 1-Cycle 4EA	40HP K-Type 4EA



Multi Tunnel Freezer(2-Line)

※ mmL = Total Length (mm)

Model	Specifications	Freezing System	Unit Cooler	Capacity(kg/h)
MT600-2L	660mm x 5Tiers(13000mmL)	2-Cycle(20+20) 4EA	25HP 4EA	~600
MT800-2L	660mm x 5Tiers (13000mmL)	2-Cycle(30+30) 4EA	40HP 4EA	~800



2-Way Multi Tunnel Freezer(2-Line)

※ mmL = Total Length (mm)

Model	Specifications	Freezing System	Unit Cooler	Capacity(kg/h)
2WMT600-2L	660mm x 5Tiers(13000mmL)	Freezing(-60°C)	2-Cycle(20+20) 4EA	25HP 4EA
		Cooling(0°C)	25HP 1-Cycle 4EA	30HP K-Type 4EA
2WMT800-2L	660mm x 5Tiers(13000mmL)	Freezing(-60°C)	2-Cycle(30+30) 4EA	40HP 4EA
		Cooling(0°C)	30HP 1-Cycle 4EA	40HP K-Type 4EA



Hygienic & Durable Design

Stainless steel construction for superior hygiene and long-lasting durability.



After-Sales Service

Professional installation by experienced engineers and responsive after-sales support.

INDUSTRIAL FREEZING SOLUTIONS

Optimized Freezing Solutions
for Preserving Food Freshness and Quality



IQF BT FREEZER (BLAST TYPE)

- Rapidly freezes large quantities of products using a high-velocity air blast system.
- Ensures uniform freezing through powerful cold-air circulation.
- Space-efficient compact footprint
- Ideal for seafood, meat, pre-packaged products, and more.



IQF SPIRAL FREEZER

MINI / IQF-S400 / IQF-S600 / IQF-S800 / IQF-S1000

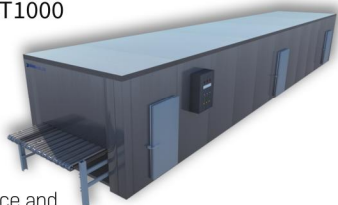
- Space-efficient design optimized for continuous freezing operations.
- Minimizes product dehydration and surface damage.
- Suitable for processed meat, seafood, bakery products, ready-to-eat (RTE) meals, and more.
- Available in single-drum or double-drum types.



IQF TUNNEL FREEZER

IQF-T400 / IQF-T600 / IQF-T800 / IQF-T1000

- Designed for high-speed freezing of both individual and bulk products.
- Achieves rapid and uniform freezing with a horizontal airflow system.
- Ideal for fruits, vegetables, seafood, meat, and more.
- Modular design ensures easy maintenance and servicing.



IQF UTF CHAMBER

- A specialized freezing chamber capable of operating at ultra-low temperature down to -125°C .
- Specifically engineered for small-batch freezing and R&D testing.
- Allows precise control of freezing conditions.
- Ideal for R&D, high-value products, and product quality testing.



IQF BT FREEZER (BLAST TYPE)

Smart Twin System

A New Concept in Ultra-Low-Temperature Freezing

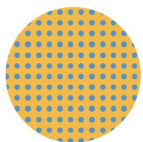
Capacity	Customizable
Temp.	-60°C to -40°C
Defrost	Automatic
Energy Saving	Up to 25%



Conventional Freezing System vs. IQF BT Freezing System

Conventional Freezing

Before Freezing



Freezing Process



Slow freezing
-30°C to -20°C
Surface ice formation

Frozen State



Large ice crystals
Cell damage
Moisture migration

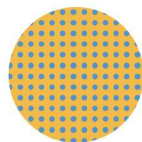
After Thawing



Drip loss
Loss of texture & flavor

IQF BT Freezing

Before Freezing

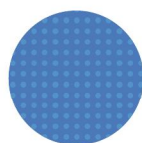


Freezing Process



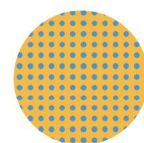
Rapid freezing
-60°C to -50°C
Minimal moisture migration

Frozen State



Fine ice crystals
Intact Cell structure
No cell membrane damage

After Thawing



Fresh texture retained
Minimal drip loss
Maintains freshness

IQF SPIRAL FREEZER

MINI / IQF-S400 / IQF-S600 / IQF-S800 / IQF-S1000 / IQF-S1500

KEY ADVANTAGES IQF SPIRAL FREEZER



AUTOMATION

Fully integrated
PLC control



SPEED CONTROL

Product-specific belt
speed adjustment



HYGIENIC DESIGN

304 Stainless Steel
Construction



FLEXIBLE LAYOUT

Optimized space utilization



SPECIFICATIONS

MODEL	Operating Temp.	Freezing Capacity
MINI	-60°C	Up to 300kg/h
IQF-S400	-60°C	Up to 400kg/h
IQF-S600	-60°C	Up to 600kg/h
IQF-S800	-50°C to -60°C	Up to 800kg/h
IQF-S1000	-50°C to -60°C	Up to 1000kg/h
IQF-S1500	-50°C to -60°C	Up to 1500kg/h

- Conveyor specifications - including belt width, total length, and mesh type - are custom-designed according to the product and freezing requirements.
- Hygienic internal structure for easy cleaning, with stainless steel used for the main frame and external panels.
- Optional CIP system with net belt cleaning available.
- Freezing capacity may vary depending on product type, moisture content, and processing conditions.

IQF TUNNEL FREEZER

IQF-T300 / IQF-T600 / IQF-T900 / IQF-T1200 / IQF-T1500 / IQF-T2000

Key Advantages: IQF TUNNEL FREEZER



HIGH PRODUCTIVITY

Continuous and stable operation



HYGIENIC DESIGN

304 stainless steel construction



ENERGY EFFICIENCY

High-efficiency cooling system



VERSATILE APPLICATIONS

Suitable for a wide range of food products



SPECIFICATION

MODEL	IQF-T300	IQF-T600	IQF-T900
Operating Temp.	-60°C	-60°C	-60°C
Freezing Capacity	Up to 300kg/h	Up to 600kg/h	Up to 900kg/h
MODEL	IQF-T1200	IQF-T1500	IQF-T2000
Operating Temp.	-60°C	-60°C	-60°C
Freezing Capacity	Up to 1200kg/h	Up to 1500kg/h	Up to 2000kg/h

- Conveyor specifications - including belt width, total length, and mesh type - are custom-designed according to the product and freezing requirements.
- Hygienic structure with stainless steel base frame and optional stainless steel panels for walls and ceiling.
- Conveyor speed controlled by an inverter system.
- Optional CIP system with net belt cleaning available.
- Freezing capacity may vary depending on product thickness, moisture content, and processing conditions.

2-LINE TUNNEL FREEZER

Beyond a Single Line — A Smarter 2-Line Tunnel Freezer

When cooling is required, operate in **Cooling Mode**.

When freezing is required, switch to **Freezing Mode**.

The smart **2-Line System** provides the flexibility to process different products according to your production schedule.



Higher Productivity

A 2-line configuration increases processing capacity within the same footprint.



Space Efficiency

Compact design reduces the required footprint while maximizing productivity.



Rapid Freezing

-60°C IQF technology preserves product quality and sensory characteristics.



Energy Savings

High-efficiency freezing system reduces energy consumption and operating costs.



2-WAY MULTI-STAGE SYSTEM

SWITCH BETWEEN COOLING AND FREEZING MODES TO MATCH YOUR PRODUCTION SCHEDULE

+80°C
INLET PRODUCT TEMP.



+30°C
PRE-COOLING ZONE



-18°C
IQF FREEZING ZONE



01 PRE-COOLING ZONE

- Removes surface heat from hot products
- Reduces freezing load



02 IQF FREEZING ZONE

- Achieves the target core temperature
- Preserves product texture and freshness



-60°C IQF FREEZING

Rapid freezing technology for superior quality and freshness.



2-LINE SYSTEM

Twice the processing capacity within the same installation footprint.



HIGH PRODUCTIVITY

Designed for continuous operation and maximum productivity.

WHY CHOOSE A 2-LINE SYSTEM?

01

Increased Productivity

Up to 2× higher processing capacity within the same footprint.

02

Space Optimization

Compact 2-line design maximizes space utilization.

03

Consistent Freezing Performance

Independent control of each line ensures stable freezing quality.

04

Reduced Operating Costs

Energy-efficient operation lowers power consumption and operating costs.

TWO OPERATING MODES (FOR FLEXIBLE PRODUCTION)



COOLING MODE

FOR PRODUCTS
REQUIRING COOLING



FREEZING MODE

FOR PRODUCTS
REQUIRING FREEZING

A SMART SYSTEM THAT ALLOWS DIFFERENT PRODUCTS
TO BE PROCESSED ON THE SAME DAY.

SPECIFICATIONS

MODEL	2-LINE TUNNEL FREEZER
Number of Lines	2 Lines
Belt Width (mm)	600 to 1,200 mm
Residence Time (min)	15 - 45 min (Adjustable)
Freezing Temperature	-60°C
Processing Capacity (kg/h)	500 - 2,000kg/h
Demensions (W x L x H)	Custom-designed
Features	2-Way Multi-Stage System for Pre-Cooling & IQF Freezing

PROJECT CASES



MEATBALLS (PROCESSED MEAT)

CAPACITY 800 kg/h
Freezing Temp. -60°C



ABALONE (SEAFOOD)

CAPACITY 1,000 kg/h
Freezing Temp. -60°C

IDEAL FOR



MEAT



SEAFOOD



READY MEALS



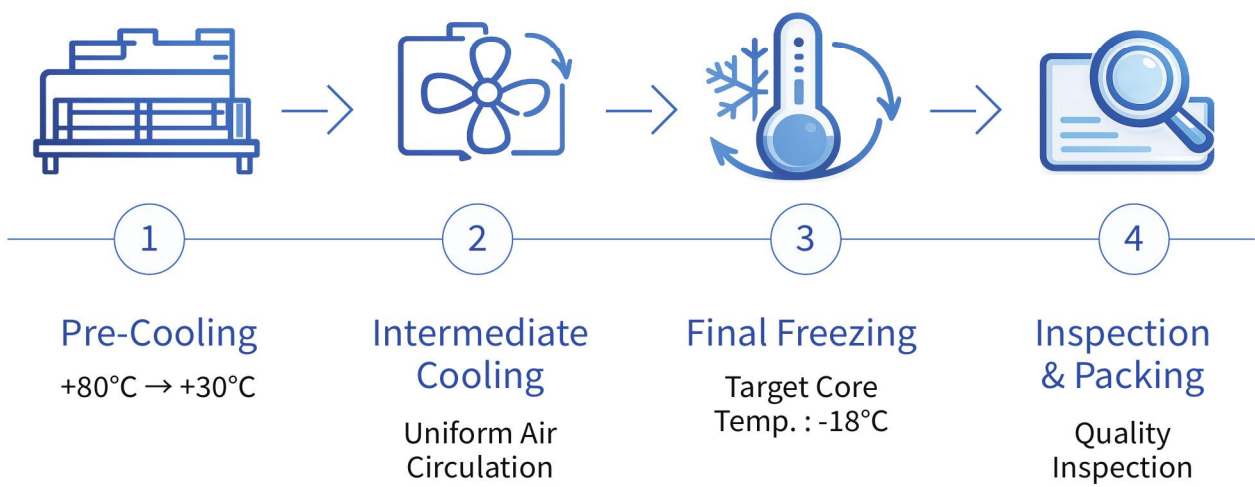
BAKERY



MORE

2-Way Multi Tunnel Freezer

Pro-Cooling & Freezing Process Overview



IQF UTF CHAMBER

An IQF UTF chamber is a specialized ultra-low temperature freezing chamber suitable for a wide range of industries. From food preservation to advanced semiconductor applications, it can be customized to meet specific customers' requirements. It is the culmination of SEATECH GROUP (KOREA FREEZER)'s advanced technology and expertise.

- ✓ Optimized for high-capacity production
- ✓ Ultra-low temperature: -125°C to -70°C
- ✓ Reduces labor costs with Automated Systems



SPECIFICATIONS

Design Pressure	20 kg/cm ²
Design Temperature	-125°C to -70°C
Pneumatic Test Pressure	5 kg/cm ²
Insulation Material	High-Density Urethane
Surface Material	STS304
Overall Dimensions	2,200 x 3,000 x 2,150 mm
Net Weight	2,000 kg

Key Technical Features



Ultra-Low Temperature
Achieves temperatures down to -125°C



Automated Control
Stable operation with precise control



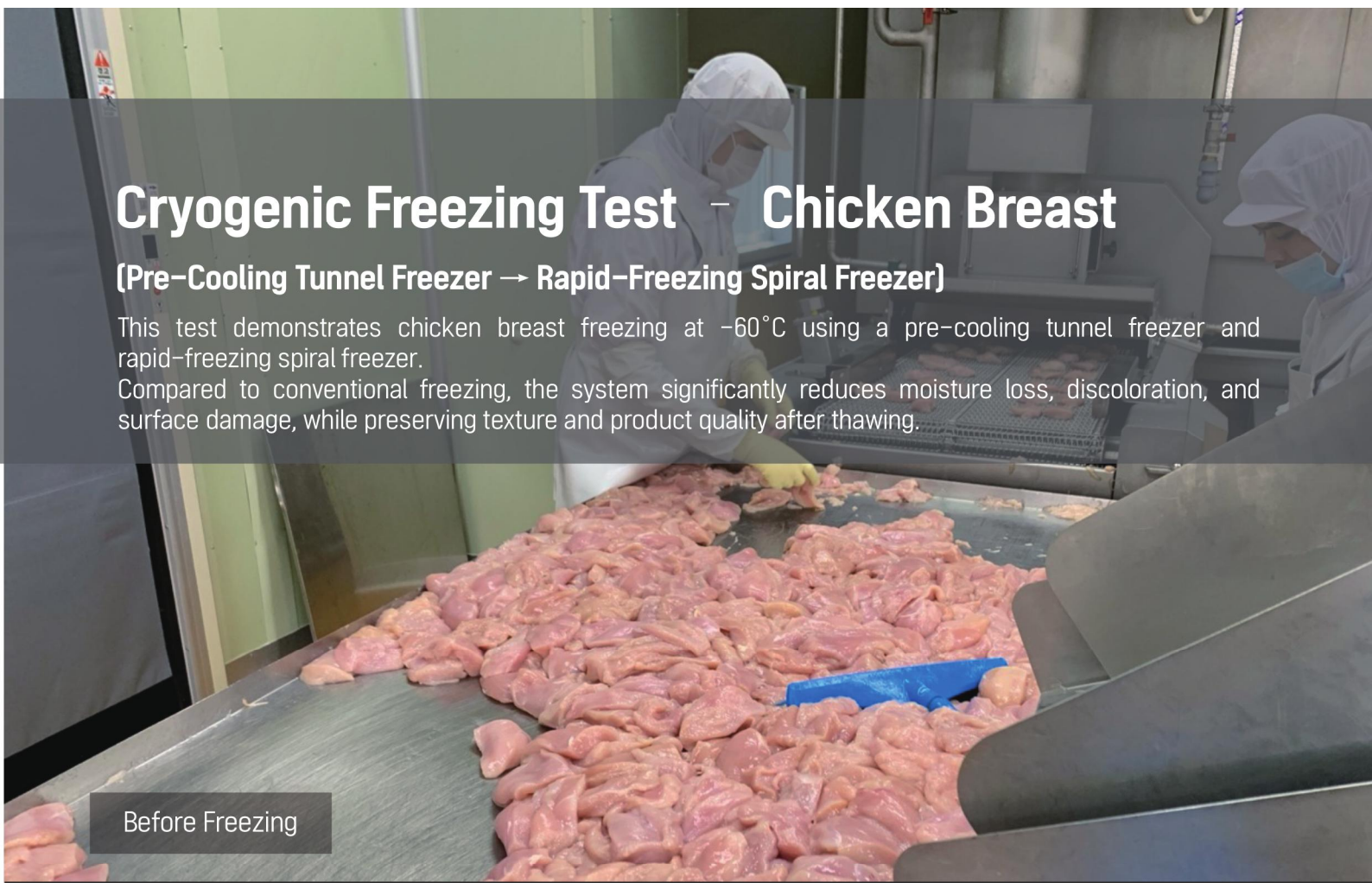
High Durability
Robust stainless steel construction

Cryogenic Freezing Test – Chicken Breast

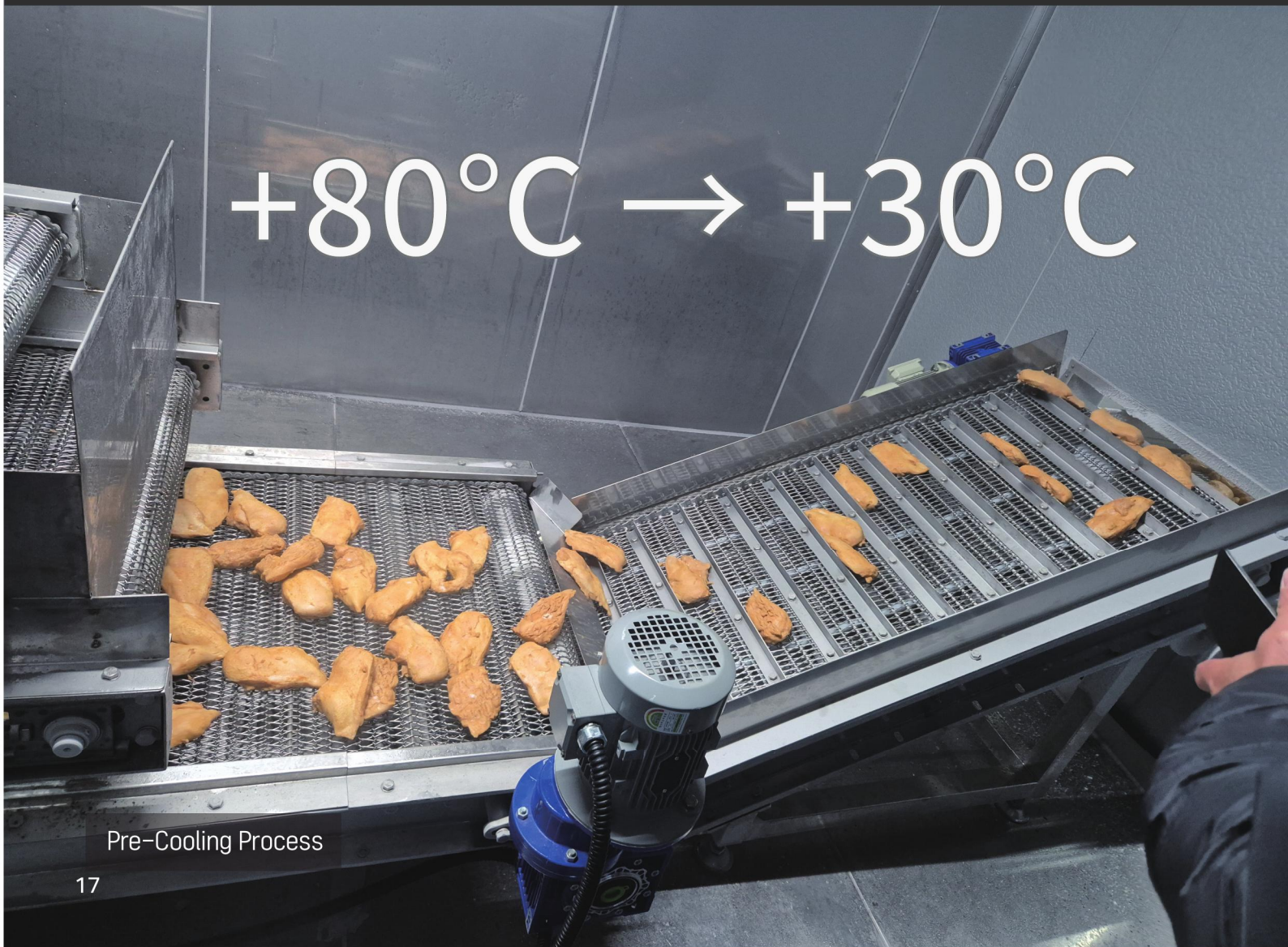
(Pre-Cooling Tunnel Freezer → Rapid-Freezing Spiral Freezer)

This test demonstrates chicken breast freezing at -60°C using a pre-cooling tunnel freezer and rapid-freezing spiral freezer.

Compared to conventional freezing, the system significantly reduces moisture loss, discoloration, and surface damage, while preserving texture and product quality after thawing.



Before Freezing



$+80^{\circ}\text{C} \rightarrow +30^{\circ}\text{C}$

Pre-Cooling Process

Cryogenic freezing minimizes tissue damage and preserves product quality.

+30°C → -18°C

Maintains a stable ultra-low temperature of -60°C throughout the spiral freezing process.

COMPLETELY FROZEN
-18°C

→ Frozen Product [Chicken Breast]



Website

OUR LOCATIONS

Closer to You, Faster Support through Our Nationwide Network



Headquarters (Gimpo)

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Republic of Korea
Tel. +82-70-8211-1281 Fax. +82-70-7585-1284



Bucheon Factory I

Address: Room 809, Gwangyang Frontier Valley 7-cha, 247 Yangji-ro, Sosa-gu,
Bucheon-si, Gyeonggi-do, Republic of Korea
Tel. +82-70-8657-0437 Fax. +82-70-4833-0445



Geumsan Factory II

Address: 571 Seodae-ri, Chubu-myeon, Geumsan-gun, Chungcheongnam-do,
Republic of Korea
Tel. +82-41-751-1535 Fax. +82-70-4141-2520



INTEGRATED CRYOGENIC FREEZING SOLUTION

FROM PRE-COOLING TO RAPID IQF FREEZING

Fully Automated Continuous Production System



One-Line Continuous Freezing System

- ✓ Continuous pre-cooling and rapid IQF freezing of unpackaged food products.
- ✓ Minimized labor / Maximized productivity
- ✓ Customized design for each installation site

Why SEATECH Group?

- ✓ Proven experience and technical expertise
- ✓ In-house design, manufacturing, and service
- ✓ Integrated automation system engineering

Contact

- ✓ Tel. +82 31-983-6095
- ✓ E-mail: kfreezer@st-group1.com
- ✓ Website: kfreezer.st-group1.com





Global Industrial Freezing Solutions

ISO 9001 | ISO 14001 | ISO45001 | IAS

ENGINEERING EXCELLENCE | SMART FREEZING SOLUTION

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WEBSITE

