



+ Global Product Portfolio

Turn-key Food Processing Solutions





FPS Global Family

Joining the global FPS family are Charlottetown Metal Products (CMP), Total Solutions Ltd (TSL) and GEM Equipment of Oregon (GEM) as subsidiaries and OptiCept Technologies as a strategic partner in PEF technology, further diversifying the company's product offering with a "one stop shop" to meet customers' needs.

Through Partnership and Collaboration, We Build Success

"We believe that through collaboration, we create value. When you enter into a partnership with us, you join our family. Together, we promise to set new standards."

**Jeffrey Chang, President
FPS Food Process Solutions**

WHO WE ARE

About FPS

FPS Food Process Solutions is a global leader in turn-key food processing solutions. We provide innovative systems to ensure the highest efficiencies and to meet the most stringent sanitary demands. These factors transform into superior food quality, lowered total cost of ownership, and maximized profits.



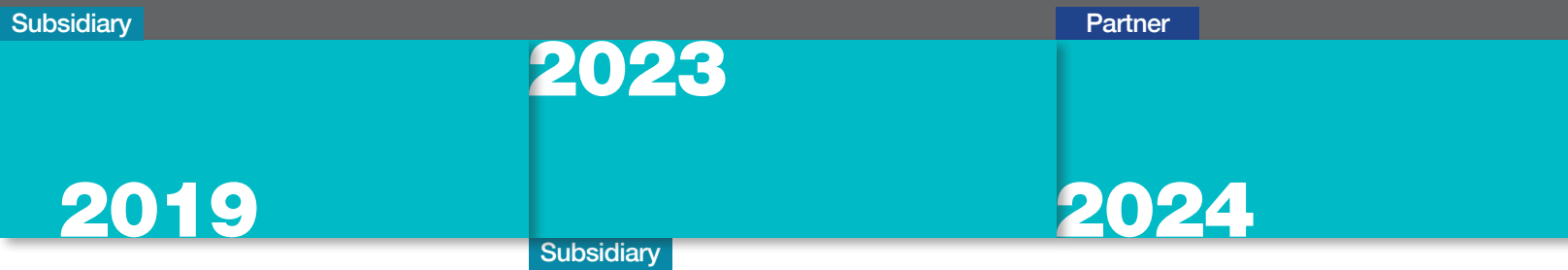
20+
Global Facilities



1000+
Employees



20+
Global Suppliers



Charlottetown Metal Products Ltd. (CMP) provides innovative, hygienic food processing solutions for our global customers. Based in PEI, Canada, we offer complete process lines, managing our customers' products through every step of the production process.



Gem Equipment of Oregon, Inc. designs, builds, and installs custom food processing equipment including Specialty Potato/French Fry Fryers, blanchers, batter applicators, and more.



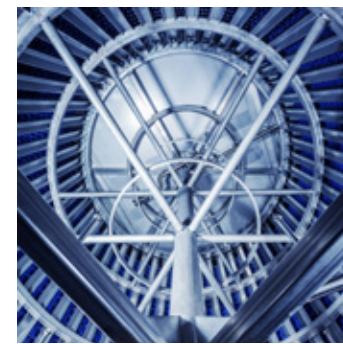
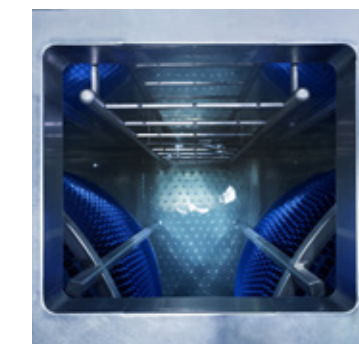
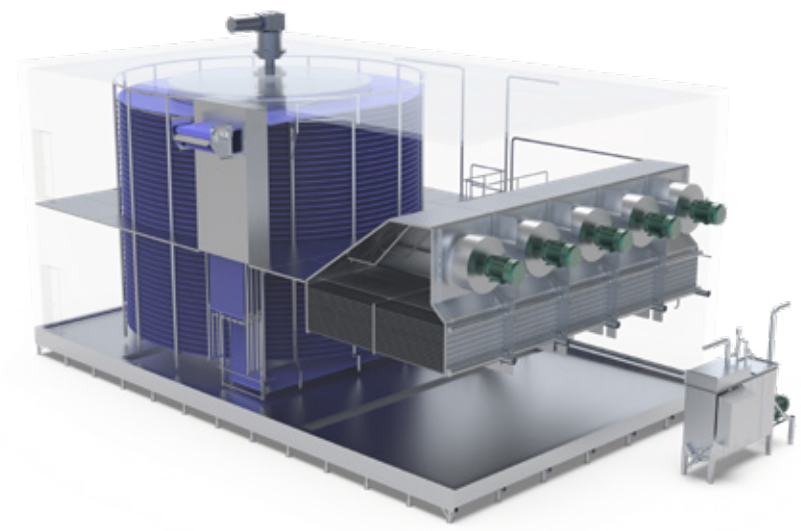
OptiCept Technologies AB provides the food industry with technological solutions that contribute to a more sustainable world. The CEPT® (Controlled Environment Pulsed Electric Field), is a state-of-the-art PEF-system specially designed for solid and liquid food industries.



Total Solutions Ltd (TSL) offers end-to-end solutions in food freezing and cooling equipment. Based in New Zealand, TSL also provides support and service in the Australasia region.

Spiral Freezers

FPS spiral freezers are custom designed to meet your specific requirements. Aiming to build long-term partnerships with customers, we listen to each of your unique needs and concerns and incorporate these into our designs. Our focus on details ensures the spirals are optimized for all applications, from raw to ready-to-eat foods. We offer a range of innovative technologies to maximize performance and ensure the highest hygienic standards, all integral to lowering total cost of ownership.



Stainless Steel Spiral Drum
Specially designed engagement bar provides better direct drive. External top drive motor is directly attached to the drum, eliminating the need for intermediary components like belts or chains. This design ensures high efficiency, precise control, and reduced maintenance.



Welded Stainless Steel Floor
Our bathtub design floor is insulated with polyurethane and shaped with compound slopes for effective drainage and to prevent water pooling. A non-slip surface provides safe access inside the unit. The floor structure integrates solid studs for welding to internal support structure.



High Performance Airflow
Our horizontal airflow is designed with both performance and hygiene in mind. With minimized air baffles, an effective horizontal airflow is achieved with minimal pressure drop and efficient product cooling. With the latest software in 3D airflow modeling, the airflow designs are carefully fine-tuned.

Game-Changing Technology

The FPS Spiral Immersion System (SIS)[™] brings together the small footprint of spiral belting, the energy savings of conduction heat transfer and the labour savings of continuous processing. The SIS is basically a spiral conveyor in a tank of liquid, usually water or brine, that is designed to prevent the displacement of the product from the belt during processing.

The SIS's robust fully welded SS316 stainless steel enclosure contains over 1000 ft of Intralox's self-stacking modular plastic belt in 2 spiral stacks. 95% of the spiral belting is submerged in a sterile saline and SS316 stainless steel environment ranging from as low as -40°F to higher temperatures. The unique design of the SIS provides control over the product and achieves a better quality, safer product in less space, in less time and while consuming less energy.

“ The SIS delivers energy savings, labor savings, higher yields, longer shelf life, safer and better quality food products. The FPS Spiral Immersion System[™] is a Game Changer, and it will forever change how we process food. ”

*Steve Kelley
Inventor
Spiral Immersion System (SIS)[™]*

Freezing + Chilling

With conduction heat transfer at temperatures as low as -40°F, the SIS is an energy saving green machine. Using naturally anti-pathogenic brine, the SIS maximizes your processing time because it never needs defrosting and rarely needs to be shut down for cleaning.

Cooking + Pasteurizing + Sous Vide

With gentle product handling and continuous flow processing, the SIS is the most cost efficient sous vide system available.

Spiral Immersion System (SIS)[™]

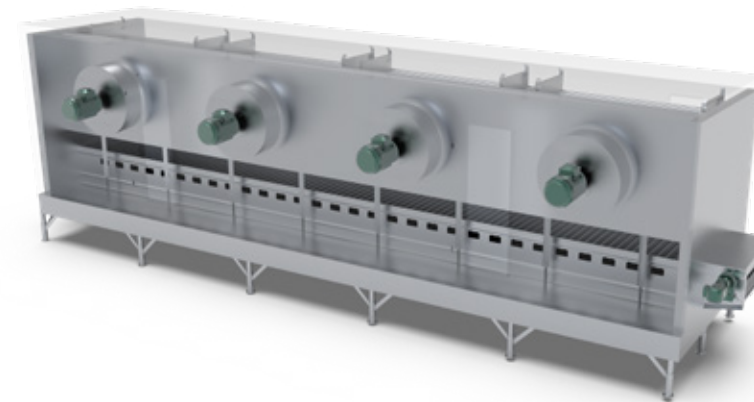
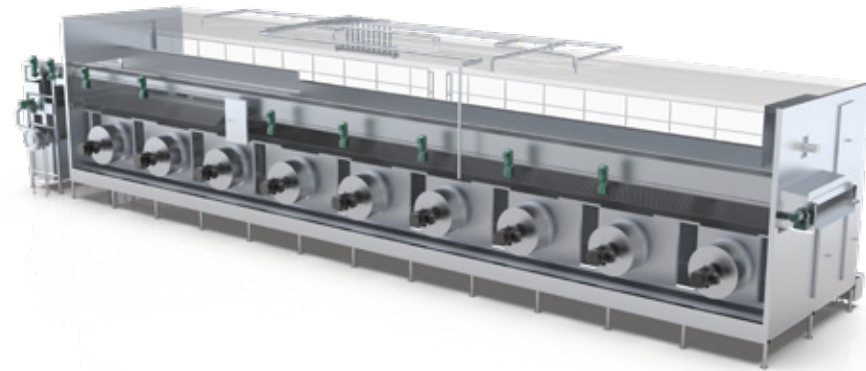
- + Continuous Processing**
Achieves a dramatic reduction in labor costs.
- + Gentle Handling**
Patented technology contains the product and ensures no product or packaging damage.
- + Longer Shelf Life**
The SIS delivers a continuous pasteurization and rapid chill process to minimize post packaging bacterial growth and extend shelf life.
- + Zero Yield Loss**
Moisture is trapped inside the package with the product.
- + Durability**
Weightlessness of the drum, belt and product in water means less friction, less wear and tear, and lower maintenance costs.
- + Higher Throughput**
Over 1000 ft of belt under water to offer longer processing times and higher throughput.
- + Flexibility**
The corrosion free SS316 stainless steel SIS can be filled with water, chemical treatments, nutrient treatment or brine.
- + Functionality**
Processing in temperatures from as low as -40°F to higher temperatures.

IQF Tunnels

Our range of Individual Quick Freeze (IQF) tunnel freezers implement a combination of air and mechanical fluidization techniques to ensure products like fruits and vegetables are efficiently and individually quick frozen with high quality.

Our Air Flow IQF technology ensures gentle handling by continuously lifting and separating products as they move through the tunnel. Using stainless-steel or perforated Intralox acetal belts, FPS brings years of in-depth experience according to each product type.

The combination of our IQF technologies with our hygienic design fundamentals results in a high-performance tunnel freezer satisfying the most stringent food safety requirements.



Impingement Freezers

FPS impingement tunnels have been developed for a range of cooling and freezing requirements, including pre-cooling and crust freezing for further processing as well as complete freezing.

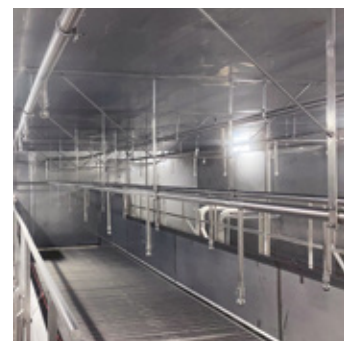
Our impingement freezers incorporate a hygienic pressure duct system to deliver high velocity air that quickly cools or freezes products. The proprietary air duct design ensures efficiency and maximizes yield, even with products of varying geometries.

Our impingement freezers are available with multiple belt pass and lane arrangements and varying belt widths and belt types to match your production needs.



Integrated Infeed Station

Incorporates a steam and water spray box and high-pressure drying system to remove ice and water from the belt during production. A CMP Fluid Removal System (FRS) can be integrated to increase product dewatering.



Internal Support Structure

With SS304 stainless steel construction, internal structure is designed to reduce horizontal flat surfaces and utilizes round non-hollow structures to prevent water pooling. CIP piping is integrated as part of the support structure reducing surfaces requiring cleaning and energy to cool excess material.



High Performance Evaporators

Our custom designed evaporators are offered in a range of fin materials including aluminum, stainless steel or anti-microbial Cupronickel. We match stainless steel tube to chosen refrigerant whether NH4, Freon or CO2. Variable fin spacing and heavy duty fins allow for frost accumulation and durability.



Optimized Impingement Design

Our air slot design functions as an air knife, directing high velocity jets of cold air from above and below the product. The highspeed air breaks the boundary layer of air on the product surface allowing faster heat removal, resulting in a quick freezing process. This reduces ice crystal formation, dehydration, and drip loss during thawing.



Fully Welded Stainless Steel Floor

Our bathtub design floor is insulated with polyurethane and shaped with compound slopes for effective drainage and to prevent water pooling. A non-slip surface provides safe access inside the unit. The floor structure integrates solid studs for welding to internal support structure.

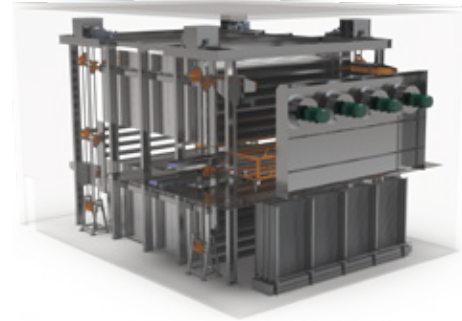


Hygienic Design

Achieved through focus on details. Smooth TIG welding, sloped surfaces, minimal lap joints and bolting, with spacers used when required. Hollow structures are completely eliminated with our innovatively designed frame. Unnecessary surfaces and components are eliminated from inside the equipment.

Carton Continuous Flow (CF)

Designed utilizing the latest technology and highest quality materials, the Carton Continuous Flow (CF) is low maintenance yet user friendly delivering maximum uptime and low operation and maintenance costs.



- + Up to 480,000lb or 220,000kg of production per day when applying a 24-hour retention
- + Single retention time, first in / first out
- + Product transported by “bookcase” style carriers

Variable Retention MultiPass (VRM)

Utilizing Single and Double-Shelf designs to suit each client’s needs and space limitations, the VRM can chill and/or freeze multiple products with single or multiple retention times.



- + Up to 1,300,000lb or 590,000kg of production per day when applying a 24-hour retention
- + Single or multiple retention times
- + Product transported by shelves to allocated levels within the system to suit production requirements



Carrier - First In / First Out

The carriers and shelves are designed specifically for each application. Transfer points are specially designed to ensure seamless transition from the structure to the primary and transfer elevators. This eliminates harmful shock loading on the elevator chains and drive system while minimizing movement of products on the carrier shelves.



Shelves / Platforms

Product is loaded on to shelves that are similar to “platforms” that move through the system. Shelf construction is wider and able to accommodate more products.

The FPS CIP System

FPS RECIRCULATING CIP SYSTEM WITH PASTEURIZATION

- + Dishwasher cleaning concept
- + Recirculation with filtering and automatic water heating
- + Multiple cleaning zones with individual scrubbing and soaking times
- + Compact skid with filter, heating and high volume pump
- + Balancing trough with rough filter and return pump
- + Full freezer pasteurization option

ADVANTAGES OF THE FPS CIP SYSTEM

- + Ability to clean with higher temperatures and more aggressive chemicals than manual cleaning
- + Maximum water impact with minimal consumption and time
- + Cleaning can start when production ends without defrosting saving valuable time
- + Efficient use of energy and chemicals reduces costs
- + Consistent and repeatable results with minimal labor improving safety
- + Full freezer cleaning and pasteurization ensures no bacterial contamination of food

Common Features

- + Structural and Mechanical Engineering
- + Remote Monitoring Service
- + Maintenance Access
- + Operation and Maintenance
- + External Fans
- + Evaporators

MultiPass Air Flow Technologies

- + Provides true counter-flow heat transfer
- + Ensures each carton exits at the same temperature irrespective of its shelf position
- + Offers energy savings and reduces carbon footprint
- + Focuses on freezing consistency and energy usage

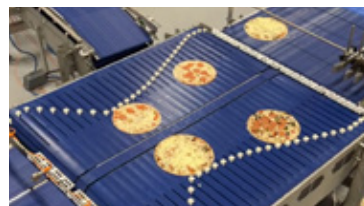
Hygienic Conveyors

With multiple design styles and belting options available, our conveyance systems are custom designed to meet your processing needs, optimize efficiency and improve product yield.

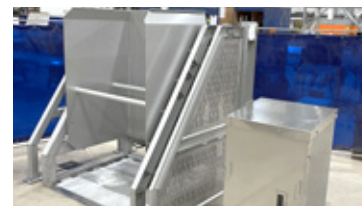
At our state-of-the-art Innovation Center, we test loop numerous product types to deliver a custom product handling solution.



- Incline and Decline Applications
- Radius Conveyors, Custom Curves
- Trough Conveyors
- Fluid Removal Systems (FRS)
- Dewatering Conveyors
- Vibratory Conveyors
- Tote handling Conveyors
- Ozone Wash Conveyors
- Merge, Divert, and Sorting Applications
- Heavy Duty Cut Conveyors
- Case Handling Conveyors
- Stacked Trim Table and Pack-off Conveyors



- Single Stage
- Barrel Dumper-Tower Style Lift
- Captive Style
- Floor Load
- Tote Washing System
- Tote Stacker
- Tote Destacker
- Pan Flippers
- Tote Storage
- Add Back System



Tote Handling Systems

We customize the size, capacity, and automation of each tote handling solution based on our client's specific needs and container design.

Sanitary Spirals

CMP designs and manufactures Direct Drive Spirals and Side Drive Technology Spirals. Application solutions include hygienic elevators and lowerators transferring to and from spiral systems, freezers, long running conveyors and non-traditional spiral configurations.

- Hygienic Elevators and Lowerators
- Direct Drive Spirals
- Side Drive Spirals
- Transfer Belts
- Up / Down
- Ambient Coolers
- Hydrochiller Solutions
- Non-traditional Spiral Configurations



- Steam Cookers
- Brine Coolers and Freezers
- Water Bath Chillers
- Batch and Continuous Sous Vide Cooking Systems
- Brine Chillers and Freezers
- Packaged Meat Product Chillers



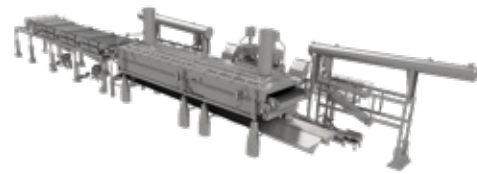
Thermal Solutions

CMP offers a wide range of cooking, heating, cooling, and freezing solutions.

GEM Fryers

Custom designed fryers and fryer systems are based on customer requirements - there are no two alike. Demonstrating engineering ingenuity with safety and maintenance in mind, GEM designs, builds and installs single and two-stage fryers based on small to large throughput capacity.

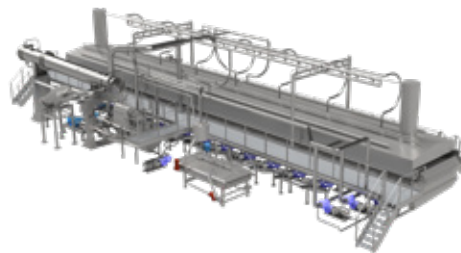
Utilizing Computational Fluid Dynamics (CFD) modeling, each fryer is optimized to ensure product quality, cooking oil usage, and durability.



French Fry Fryer

- + Robust, durable construction and materials for greater longevity
- + Specially designed kettles to eliminate dead spots, reduce fire hazards and increase oil shelf life
- + Wide range of throughput capacities
- + Clean-In-Place (CIP) System for effective and thorough cleaning

Fryer Features



Specialty Fryer

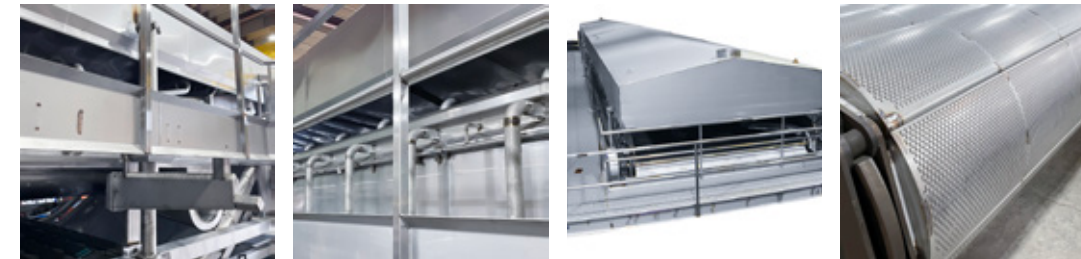
- + Low system oil volume
- + Specially designed to handle various product shapes and textures
- + Singulated layer of product to avoid overlap
- + Robust, durable construction for longer cook time
- + Clean-in-Place (CIP) System for effective and thorough cleaning



Blancher

- + GEM manufactured circular hump belt provides superior product quality and texture including minimal product breakage
- + 12 foot wide belt blancher width - the widest in the industry
- + Robust, built-to-last construction
- + Capable of high production, low wear and tear
- + Easy to clean and maintain

Blancher Features



Batter Applicator

- + Robust and wider batter applicator belts to withstand increased production and operating conditions
- + Batter systems with up to 10-foot-wide belts
- + Heavy duty batter belts with redesigned side chain links to withstand pull and breakage
- + Clean-in-Place Hood construction for efficient sanitation and quicker turnover times between products

GEM Blanchers

Our robust blancher construction combines both hot and cold water options – the most consistent in the industry. From 2 Zone Belt Blanchers to Multi-Zone Belt Blanchers, our custom designed blanchers are sized based on required output.

GEM belt blanchers are built to last - from circular hump belt panels made of perforated stainless steel to custom Stellite pins and bushing for maximum life.

Optimized Food Processing with Pulsed Electric Field Technology

Pulsed Electric Field (PEF) technology offers enhanced benefits in solid food processing, impacting overall quality and efficiency of processing methods.

OPTICEPT S-SERIES (SOLIDS)



Unleash New Dimensions of Food Innovation

Explore the versatility of Pulsed Electric Field Technology

The OPTICEPT® (Controlled Environment Pulsed Electric Field), is a state-of-the-art PEF-system developed by FPS Food Process Solutions in collaboration with PEF-specialists OptiCept Technologies. **It is specifically designed for the solid food processing industry and brings distinct advantages to this sector.**

Improved process efficiency

- ✓ Reduction of thermal impact
- ✓ Less cutting force
- ✓ Reduced blanching time
- ✓ Reduced processing time

Improved Sustainability

- ✓ Less product loss
- ✓ Energy savings
- ✓ Reduced water usage
- ✓ Reduced reliance on additives

Enhanced Raw Material Properties

- ✓ Improved mass transfer
- ✓ Better colour retention
- ✓ Preserves sensory and nutritional qualities
- ✓ Improved thawing of frozen products
- ✓ Texture impact (softening or preservation)



OPTICEPT L-SERIES (LIQUIDS)



Optimizing Juice Extraction with Game Changing Technology

PEF technology not only improves the end product but also increases production efficiency.

Equally important is consumer preferences. Consumers are increasingly concerned about health and wellness and are seeking out products that are natural, organic, and free from artificial ingredients.

In addition, PEF uses minimal heat, boosting the cellular release of minerals, vitamins, color compounds, and other micro-nutrients to enhance quality, taste, and shelf life.

Improved Yield

Significantly increases extraction yield with the same amount of raw material.

Better Efficiency

Reduced operational cost and improved productivity. Increased production volume during the same time.

Improved Quality

Boosts cellular release of minerals, vitamins, color compounds, and other micro-nutrients to substantially enhance quality.



Ground-breaking Technology for Juice Production



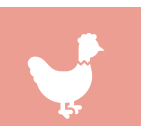


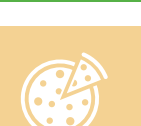
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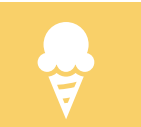
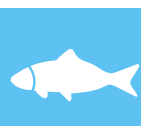



Industry Sector

End-to-End Processing Solutions

Ensuring food is processed with hygiene and safety in mind, we offer customers full End-to-End processing solutions. From raw to prepared foods, FPS covers a wide variety of industry sectors, from beginning to end.

Learn more at fpsc corp.ca/industry-sector

	Potato
	Meat
	Poultry
	Fruit
	Vegetable
	Prepared Food

	Bakery
	Dairy
	Seafood
	Pet Food
	Liquid
	Non-consumables

We Solve Food Processing's Toughest Challenges

End-to-End Processing Solutions

By providing best-in-class turn-key food freezing and chilling equipment and complementary end-to-end solutions, we ensure our customers' products are managed through every step of the production process. Designed to seamlessly integrate and create full processing lines, from raw receiving to packaging, FPS are with you every step of the way.

If you are looking for a full complete line or to complement an existing line, FPS offers a "one stop shop" solution. Our experienced engineers, designers and project managers work together with manufacturing and installation to get your project up and running.

END 2 END



Service and Retrofit

Improved Performance with Less Downtime and Lower Costs than Replacement

Our retrofit specialists are not only experts with our equipment, but also equipment from other suppliers. We offer comprehensive retrofit packages from systems evaluations to complete structure and enclosure rebuilds. With recent global attention on environmentally friendly practices and food safety concerns, your existing equipment can be evaluated and upgraded to energy efficient operation and meet current hygienic demands.

With constant changes in the market, we understand the importance of keeping up in terms of processing technologies, products and recipes. To ensure your existing equipment can match these new needs with major re-investment, we offer retrofit services to ensure the equipment is optimized for your demands.

-  Extend Your Run Time
-  Extend the Life of Your Equipment
-  Improve Hygiene & Meet Sanitary Design Principles
-  Increase Energy Efficiency & Cost Effective Production

Retrofit Services



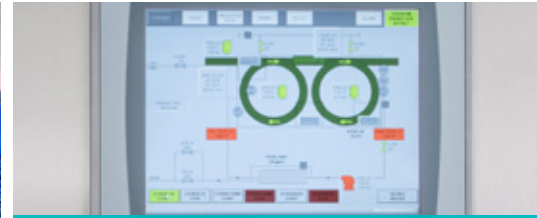
OEM Fully-Welded Freezer Enclosure



Clean-in-Place (CIP) Upgrade for Existing Freezers



Belt Replacements & Retrofits



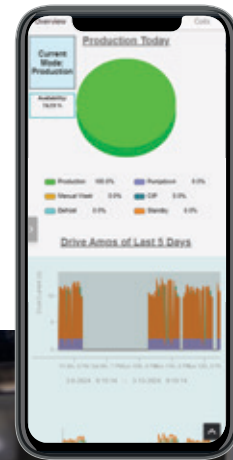
Control Panel/ PLC/ VFD Retrofits

FPS Remote Monitoring System (RMS)

The FPS Remote Monitoring System (RMS) is a web-based, universal platform that helps customers to track, analyze and report on their freezer's performance. Powered by Ignition by Inductive Automation®, the software is licensed by FPS, allowing clients unlimited tags, users and connections, without compromising confidential data.

Key Benefits

- + Improved OEE/ capacity/ throughput due to less downtime
- + Improved customer independence helps reduce operational expenses
- + Improved training/ maintenance features to support end customers
- + Reduced number of service calls by providing more data insights for end customers
- + 24/7 access to support technicians trained in freezer operations and controls



WHO USES THE FPS RMS?

Maintenance personnel, plant managers, supervisors and executive management can all have access to the FPS RMS. The system provides customers with critical data-rich information, giving them the power to make decisions quickly based on reporting history and real-time trends.



We are a strong advocate of food safety - incorporating hygienic design in our equipment to ensure safe food production, thereby reducing the potential for food waste.



Energy efficiency in food processing can be achieved through robust construction, consistent temperature, less maintenance required, even cleanability.

From food waste reduction to energy efficiency, FPS is committed to people, communities and the environment.

CORPORATE HEADQUARTERS

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SCAN FOR
MORE INFORMATION

