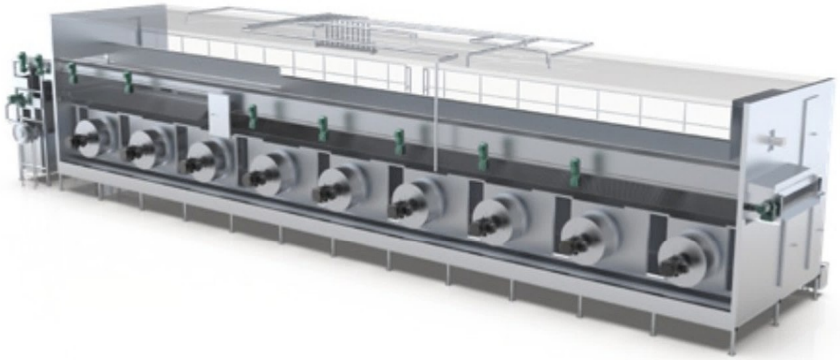
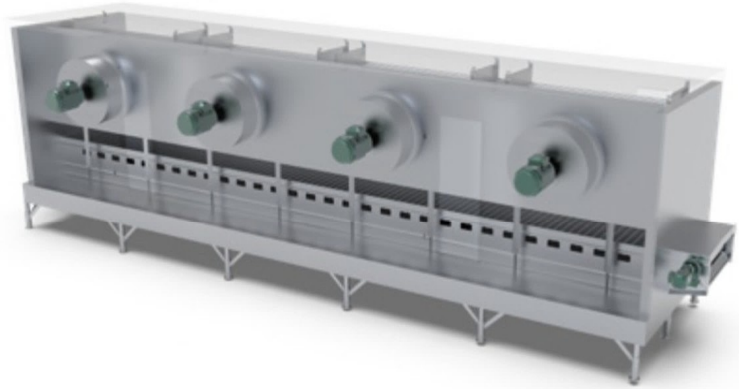
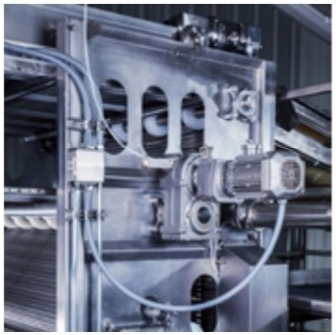






Integrated Infeed Station

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

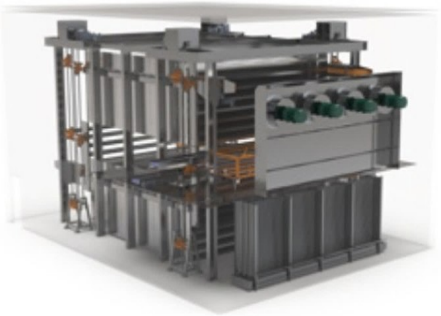
Our air slot design functions as an air knife, directing high velocity jets of cold air from above and below the product. The highspeed air breaks the boundary layer of air on the product surface allowing faster heat removal, resulting in a quick freezing process. This reduces ice crystal formation,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



+ 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

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.

+ 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

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.

MultiPass Air Flow Technologies

+ External Fans
+ Evaporators

+ 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

CIP System

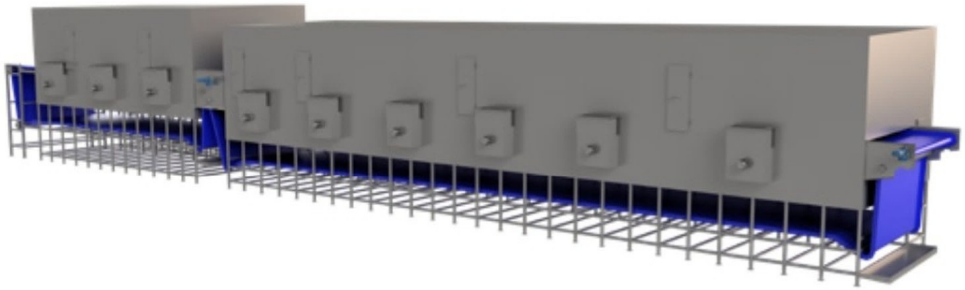
RECIRCULATING CIP SYSTEM WITH PASTEURIZATION

+ 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

Foaming System

Combined with FPS specially designed CIP piping and valves, the Foaming System provides a compact system option - ideal for medium sized spirals

+ Secured to freezer exterior, system uses minimal factory footprint
+ Offers multi zone cleaning and rinse cycles
+ CIP locations include belt, upper/lower mezzanine, coils and fan chambers



Hygienic Design

Hygienic fully welded stainless steel enclosure removes all potential harborage points. Externally mounted motors removes conduit, junction boxes and wiring from the enclosure, enabling energy savings, longevity and best in class food sanitation.

High Performance Air Flow

Precision control of air velocity with individually controlled centrifugal fans allows for even distribution across width of product bed.

Transferability

Sprocket-driven plastic belt does not require side chains leading to ease of transfer from one section to the next - greatly improving maintenance.

Conveyance + Product Handling

Increase throughput with high speed, high volume packaging line with a conveyor transfer system and merge/diverge sorting system with Intralox's Active Integrated Motion™ (AIM™) narrowing solution.

Tote Handling Systems

We offer a wide range of tote handling solutions of all sizes to load product, from single to multistage.

Fluid Removal Systems

Designed to remove water from the surface of the product before IQF infeed, our patented Fluid Removal System (FRS) technology reduces ice buildup.

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
- Custom hood lift mechanism and Clean-in-Place nozzles provide accessibility and cleanability

Blancher

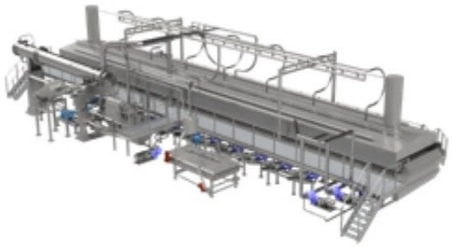
- GEM manufactured circular hump belt provides superior product quality and texture including minimal product breakage
- 12 foot wide belt blancher width - the widest in the industry
- Robust, built-to-last construction
- Capable of high production, low wear and tear
- Easy to clean and maintain

Fryer Features



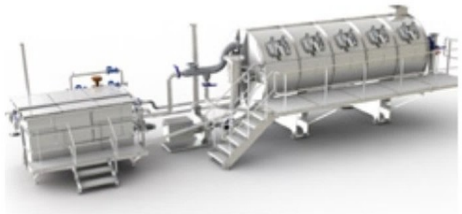

Blancher Features



Specialty (Co-Product) Fryer

- Low system oil volume
- Specially designed to handle various product shapes and textures
- Singulated layer of product to avoid overlap
- Robust, durable construction and materials for greater longevity
- Custom hood lift mechanism and Clean-in-Place nozzles provide accessibility and cleanability



Auger Blancher

- 304 SST fully welded design
- Two stage Blanching – 1st stage and 2nd stage designed to reduce mechanical strain associated with long shafts. Also provides additional flexibility, controlled temperature and retention time in 2nd stage
- Ferris wheel discharge is centered on the screw but independently driven
- Precise control of auger flight dimensions and clearance flow to reduce product breakage
- Water circulation follows axial principle, so that the water volume will stay at an equal temperature

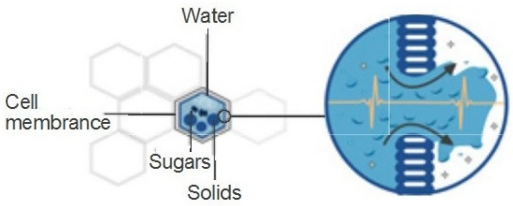
PEF Technology

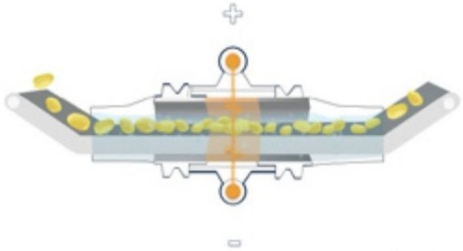
HOW PEF WORKS

Pulsed Electric Field (PEF) technology uses high-voltage, low-energy electric pulses to disrupt cell membranes in foods, opening pores in treated cells. PEF's low energy, non-thermal, and non-chemical nature means its deployment can lead to significant improvements in product quality, process efficiency, energy & water consumption, and ultimately, processors' bottom lines.

PEF EQUIPMENT

High-voltage pulses created by generator(s) are delivered to a treatment chamber where product is passed through sets of electrodes and treated. In solid systems, conveyor belts move products through the chamber, whereas liquid systems pump products through a pipe. FPS and OptiCept offer industry leading solid and liquid PEF systems that can handle any application.





APPLICATIONS

By adjusting treatment parameters, PEF technology's applications can range widely. Some applications include:

Drying

- Improve drying rates of fruits, vegetables, and herbs, decreasing drying times by 10-50%
- Improve product quality (color, nutrient retention, etc.)

Extraction

- Improve juice extraction yield by 5-40% for juices and 5-10% for olive oil
- Improve juice/oil quality (color, polyphenols, etc.)

Absorption

- Improve meat marination/brining
- Improve pickling of vegetables/fruits

Softening

- Reduce cut force by up to 50%

Thermal Transfer

- Reduce blanching time in vegetables by up to 50%
- Reduce freezing times by up to 30%

And More

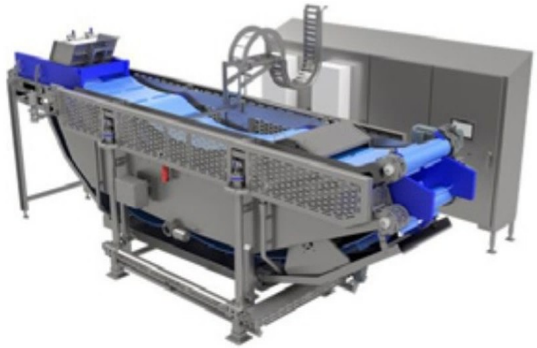
- Microbial reduction in liquids
- Peeling fruits/vegetables
- Improving seed germination
- And much more

FPS OptiCept PEF Solutions

Whether your application warrants a solid or liquid PEF solution, FPS and OptiCept have state-of-the-art PEF systems ready to solve your processing challenges.

FPS OPTICEPT® S-SERIES (SOLIDS)

Through our collaboration with OptiCept Technologies, we've combined cutting edge PEF technology with decades of experience in hygienic food processing equipment design. The next generation FPS OptiCept® S-Series is the most efficient and hygienic PEF system for solid foods in the market, all while minimizing total cost of ownership.



The Most Hygienic PEF System

Jack system fully separates and lifts conveyor assembly out of tank for unrivaled accessibility and ease of cleaning

The Most Efficient PEF System

OptiCept's pulse technology and patented CEPT® treatment chamber maximizes treatment efficiency, making the S7 up to 50% more efficient than other PEF systems

The Lowest Cost of Ownership

Built in generator redundancy, easy-change electrodes, externally placed motors, and externally returning belts minimize downtime risk and maximize ease of maintenance

OPTICEPT® L-SERIES (LIQUIDS)

OptiCept Technologies is the market leader in liquid PEF processing, with a strong foothold in the olive oil industry. The OptiCept® L-Series PEF system provides a versatile platform for treating liquids and other pumpable products, from olive paste, to juice, to small foods suspended in liquid.

Modular, Hygienic, and Efficient PEF System

Fully modular, stainless steel frame, all product-wetted components are designed to meet strict food-grade standards

Advanced PEF Generator and Booster Module

The CEPT v7 PEF generator, a high-powered, PLC-supervised unit that ensures precise treatment conditions

Built-In Safety and Monitoring Mechanisms

Safeguards ensure stable, safe, and high-performance operation, making the OPTICEPT® L7 a reliable and advanced solution for liquid PEF processing

r

olutions

Learn more at fpscorp.ca/industry-sector

h hygiene and safety in mind, we offer customers full End-to-End processing solutions. PS covers a wide variety of industry sectors, from beginning to end.

- Potato
- Dairy
- Meat
- Seafood
- Poultry
- Pet Food
- Fruit
- Liquid
- Vegetable
- Snacks
- Prepared Food
- Nutraceuticals
- Bakery
- Non-Consumables

We Solve Food Processing's Toughest Ch

End-to-End Processing Solutions

By providing best-in-class turn-key food freezing and chilling equipment and complemen ensure our customers' products are managed through every step of the production proce integrate and create full processing lines, from raw receiving to packaging, FPS are with y

If you are looking for a full complete line or to complement an existing line, FPS offers a " experienced engineers, designers and project managers work together with manufacturin project up and running.

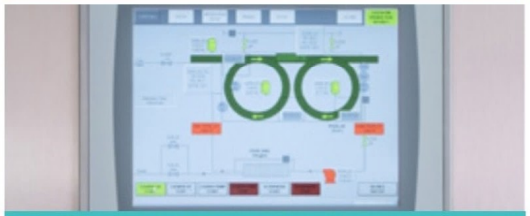
END 2 END

Retrofit Services

OEM Fully-Welded Freezer Enclosure

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

Belt Replacements & Retrofits



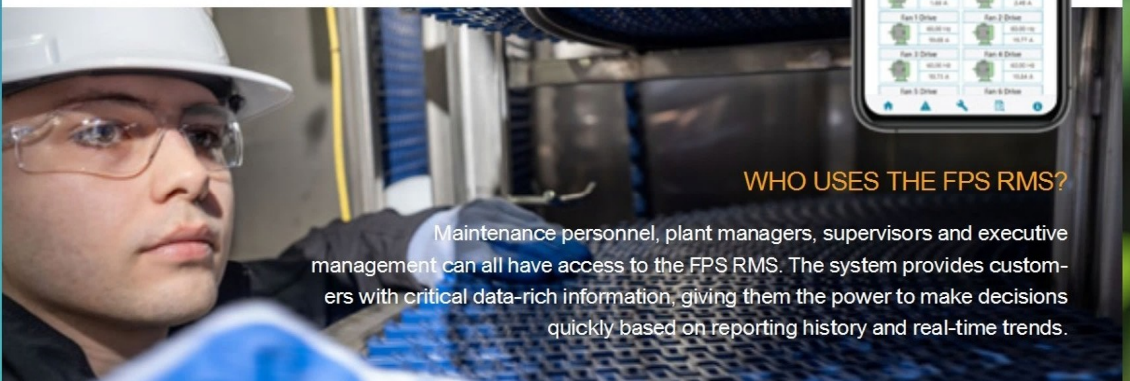
Control Panel/ PLC/ VFD Retrofits

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.

From food waste reduction to e
FPS is committed to peop
and