

Introducing the Next Revolution in Food Processing

+ Spiral Immersion System™

- + cooking
- + pasteurizing
- + sous vide
- + chilling
- + freezing

- + efficiency
- + partnerships
- + service
- + innovation
- + quality
- + hygiene

WHO WE ARE

About FPS

FPS Food Process Solutions is a global leader in turn-key freezing and cooling equipment. FPS has a combined 450,000 sq. ft (41,800 sq. meters) of space, including its Canadian headquarters, 10 manufacturing and warehouse facilities as well as international sales offices across five continents.

OUR VISION

Revolutionize Hygienic Standards

We use the most leading edge technology & innovation to move our industry forward. Our focus on hygiene is the foundation for safe food production. Our purpose is to revolutionize food processing & ensure the cleanest & safest global food production for everyone.

OUR MISSION

To Set a New Standard

We invest in our people & partners & believe strong collaboration always leads to the best results. We aim to raise the bar in our culture, in client relationships, in the level of service offered & global hygienic standards. We believe that together, we will set a new standard.

Why Use Air When Heat is Transferred 25 Times Faster in Water?

The driving force behind the increase in efficiency of the Spiral Immersion System (SIS)[™] compared to processing in air, is that Conduction Heat Transfer (heat transfer by direct contact) is 25 times faster than Convection Heat Transfer (heat transfer by air).

REDUCE LABOR COSTS

- + Continuous processing
- + No need to shut down to defrost
- + Brine = naturally antipathogenic
= less cleaning time

LOWER ENERGY COSTS

- + Conduction vs Convection
- + Lower energy consumption = a Green Machine
- + Lower refrigeration tonnage

IMPROVE PRODUCT QUALITY

- + Better nutritional retention
- + Better color and texture
- + Gentle product handling, less product damage

SAFER FOOD AND LONGER SHELF LIFE

- + Faster through the danger zone
- + Bacterial kill step

Freezing + Chilling

With conduction heat transfer at temperatures as low as -50F, 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.

KEY BENEFITS:

20 to 70%

FASTER HEAT TRANSFER

FOR THE SAME THROUGHPUT

50%

SMALLER FOOTPRINT

FOR THE SAME THROUGHPUT

30%

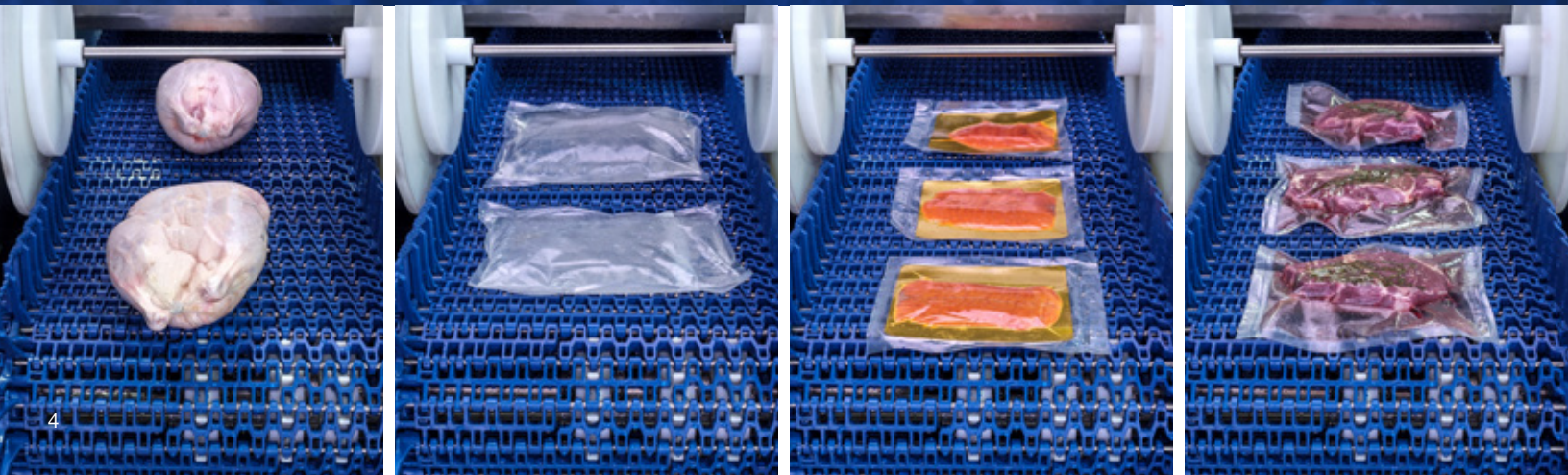
LESS REFRIGERATION TONNAGE

FOR THE SAME THROUGHPUT

80%

LESS ENERGY

FOR THE SAME THROUGHPUT



Faster Freezing = Better Quality Food

The faster the products freeze, the smaller the water crystals resulting in less cellular disruption and products retaining better color, texture, flavor and nutrition.

The SIS freezes the surface of the food 25 times faster than air and the core 20% - 70% faster resulting in significantly less cellular damage and a MUCH better product.

The danger zone for bacteria in food processing is between 40 and 140F where bacterial growth is exponentially higher. With the SIS, foods travel through the danger zone much faster resulting in less bacteria in the food.



Cooking + Pasteurizing + Sous Vide

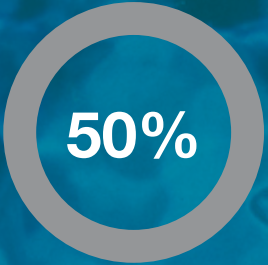
With gentle product handling and continuous flow processing in temperatures up to 210F, the SIS is the most cost efficient sous vide system available.

KEY BENEFITS:



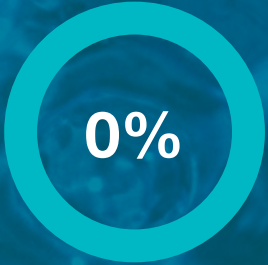
YIELD LOSS

WITH IN-PACKAGE PROCESSING



LONGER SHELF LIFE

WITH IN-PACKAGE PROCESSING



NUTRIENT LOSS

WITH IN-PACKAGE PROCESSING



LESS LABOUR

COMPARED TO BATCH PROCESSING

CONTINUOUS PROCESSING: THE SIS IS A CONTINUOUS CONVEYOR BELT-BASED PROCESS FROM START TO FINISH. FULLY AUTOMATIC. THE RESULT IS HUGE SAVINGS IN LABOUR COSTS.

Better quality food with more tender texture, more flavour and better nutrient retention because the moisture and nutrients stay in the bag and most are reabsorbed by the food when it cools.

Low to zero yield loss as all the moisture is trapped inside the bag with the food. Products also have a longer shelf life as the food reaches a bacterium kill step during heating in the bag.

The final products are consistent in flavour and quality, and can be reheated in the bag – making them perfect for commercial and institutional settings.





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 in temperatures ranging from -50°F to +210°F. 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.

+ 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 -50F to 210F.

+ 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.

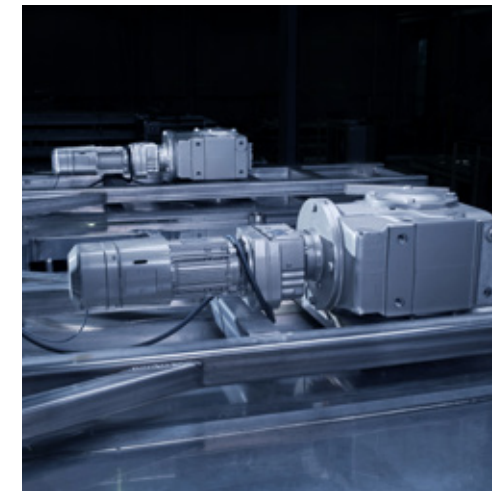
+ Zero Yield Loss

Moisture is trapped inside the package with the product.



Intralox Belting

The Intralox self stacking plastic acetal belt allows the SIS to pack over 1000 feet of belting into a space half the size of an air freezer with the same throughput.



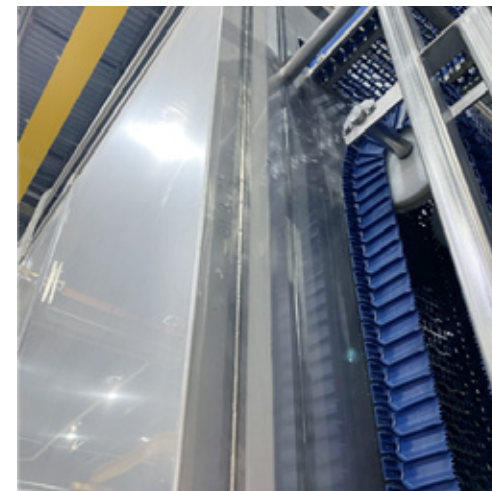
Top Drives

Encoder regulated direct drive Sew-Eurodrive motors and reducers with SS316 stainless steel shafts for precision control of twin belt stacks.



Control Panel

SS304 stainless steel NEMA4X enclosure with state of the art control system, Allen-Bradley CompactLogix PLC and Allen-Bradley PanelView 1000 color touch screen.



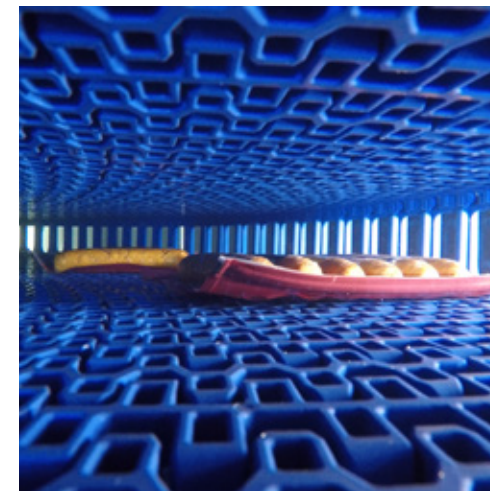
Stainless Steel

5" thick polyurethane insulation, fully TIG welded corrosion free enclosure with 16 gauge SS316 stainless steel walls and 14 gauge SS316 floor with the industry's best warranty to ensure maintenance free durability.



Compact Size

As heat is transferred in water 25 times faster than in air, the SIS is much more efficient than air chilling.



Product Stability

With the patented technology of the SIS and Intralox's self-stacking belt, even floating food products are secured within the belt stack. This ensures food products are treated gently with no product or packaging damage.

“ 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

DIRECTOR, SPIRAL IMMERSION SYSTEMS



- + quick response
- + large parts inventory
- + knowledgeable staff
- + payment options

FINANCING OPTIONS

In-house Expertise, Mutual Benefits

Given the high capital investment required, FPS provides customers the flexibility of preferred payment options such as Standard Progress Payment, Long-term Equipment Finance & Leasing and Irrevocable Letters of Credit. This unique “one stop” service provides customers ease of mind in navigating various payment options to best fit their financial needs – all to ensure the lowest total cost of ownership. That is the FPS promise.

24-HOUR SERVICE & SUPPORT HOTLINE

Whatever the Need, We Have You Covered

As a long-term partner with FPS, the importance of good service becomes clear when you really need it. Our 24-hour service and support hotline is provided for thousands of customers just like you. Contact us any time you need help with emergency services, product inquiry, spare parts support and more. From the moment we start the design and continuing beyond equipment start-up, if you need any assistance, we are here to help you.

See videos and more product information at www.fpscorp.ca

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