

# OPTICEPT®

## Next generation PEF-system for potato processing



The OPTICEPT® (Controlled Environment Pulsed Electric Field Treatment), 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 the potato sector.

PEF technology can improve quality and efficiency in the potato processing industry, in terms of products and processes. For example, PEF has shown significant advantages over conventional preheaters.

PEF treatment softens the potato tissue, minimizing breakage and feathering during cutting, resulting in more uniform fries and higher yield. The treatment requires less cutting force resulting in a smoother cut.

Benefits include:

- ✓ **Less cutting force**
- ✓ **Minimal breakage**
- ✓ **Less product loss**
- ✓ **Improved process efficiency**

## Optimized efficiency with PEF Technology

### Cost Savings

PEF technology is a game-changing process for the potato industry, bringing significant cost savings through:

- **Energy Efficiency**

PEF technology is energy efficient compared to traditional heating methods. It softens the potato tissue without the use of heat, using less water and energy to operate.

- **Smoother Surface Area**

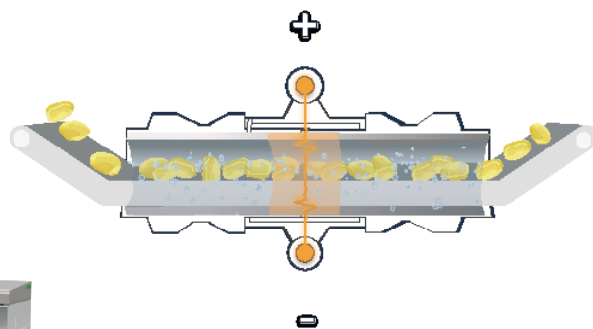
PEF-treated potatoes have a smoother surface, less feathering during cutting, reduced breakage and less wasted product. This results in uniform fries and higher yield.

- **Smaller Footprint**

The PEF generator is compact, significantly occupying less space as compared to conventional pre-heaters.

# OPTICEPT®

SOLIDS



## Product information

The OPTICEPT® system consists of a PEF generator and a conveyor belt system with a built-in PEF chamber.

### PEF Generator

Control panel and components for PEF application  
User-friendly control interface  
Sensors and safety indicators  
Built in short-circuit protection  
Stainless steel enclosure

### PEF Chamber

Patented chamber design for optimal treatment efficiency

### Conveyor belt system

Dual lift up conveyor belt system  
High liquid fill grade capacity  
Food grade compliant materials

The PEF generator is food grade compliant with the enclosure designed in stainless steel. All control and safety devices are included, as well as sensors for pressure, temperature, flow, and conductivity. The Dual Conveyor Belt System is hygienically designed focused on robust construction, cleanability, and high efficiency.

## What is Pulsed Electric Field (PEF technology)?

Pulsed electric field (PEF) technology is a non-thermal food processing method that uses high-voltage, low-energy electric pulses to perforate the cell walls of the treated commodity, also known as electroporation. This enables the movement of water and other compounds in/out of the cells.

*Note: PEF set points based on potato gravity, desired cut size, and seasonality.*

**When every potato counts,  
we will be with you every  
step of the way**

## Contact

sales@opticept.se  
+46 (0)46 152 300  
opticept.se  
fpscorp.ca

**FPS** FOOD  
PROCESS  
SOLUTIONS

 **OPTICEPT**  
TECHNOLOGIES