

 **PROMACH**[®]
GLOBAL STERILIZATION GROUP



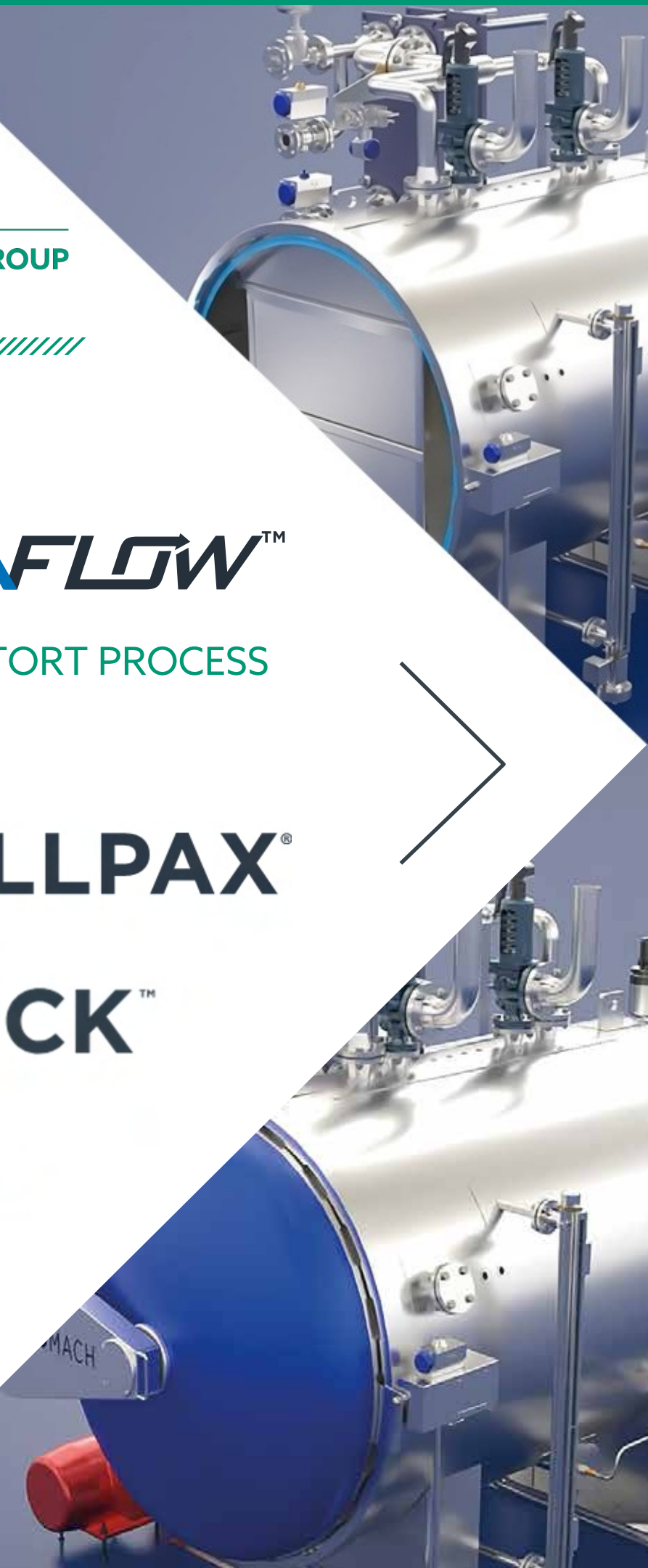
IMMERSA*FLOW*[™]

BUILDING A BETTER RETORT PROCESS

 **ALLPAX**[®]

 **STOCK**[™]

 **FERLO**[®]



IMMERSAFLW™ OVERVIEW

The most innovative technology.

ProMach's Global Sterilization Group introduces an innovative static batch-type commercial sterilization technology to the food processing industry. Our Immersaflow process provides unprecedented control of the fluid dynamics throughout the product load.



Innovative • Precise • Efficient
High Efficiency • Safety • Cost Reduction • Capacity Increase

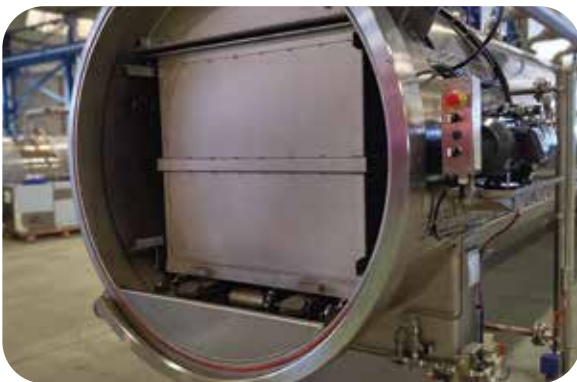


The ImmersaFlow™ system is a closed-loop and contained immersion process consisting of a pumped fluid circuit through a distribution plenum.

The process fluid flowing past the product is under positive pressure, and flow is regulated by pump speed.

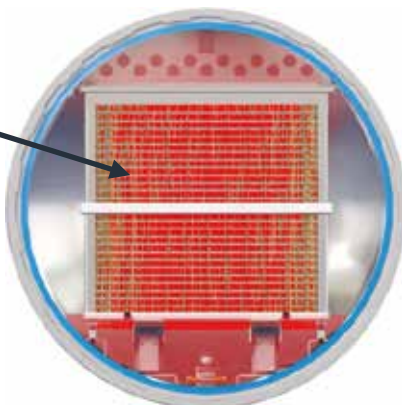
This is the only retort application to selectively direct the process fluid through the static product load under positive hydraulic water pressure, thus precisely controlling the rate of heat transfer within the captive volume.

In essence, ImmersaFlow™ is the exclusive immersion process that occurs within the basket only providing superior product uniformity + reduced cycle times.



Cold Spot Elimination

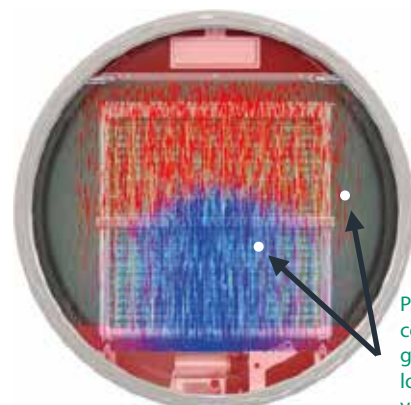
Process heating and cooling water is channeled under pressure through the product only



Immersaflow Retort

Avoid "Umbrella Effect"

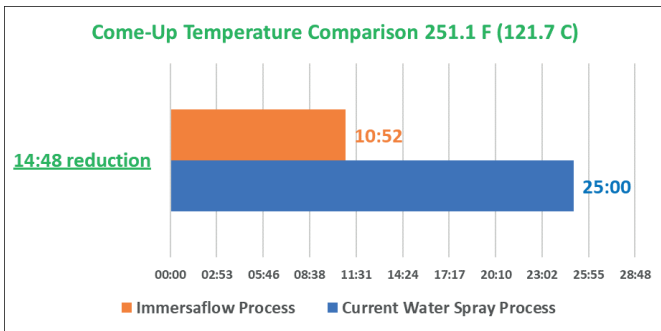
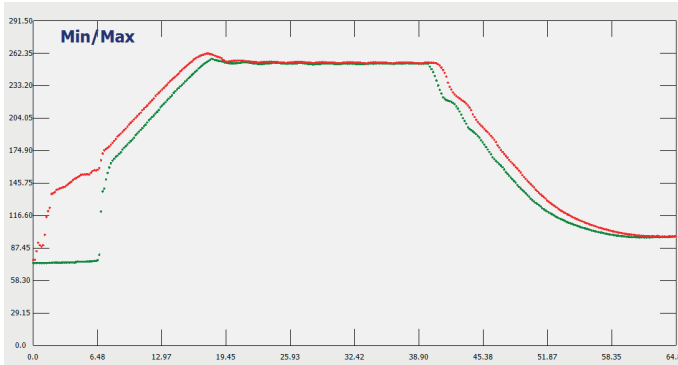
Process heating and cooling water is gravity fed through load and the entire vessel shell.



Cascade/Spray Retort

Reduced Total Process Time

Batch Time Reduction and Temperature Uniformity Due to Process Efficiency



- Shorter Come Up and Cooling Times
- More cycles per day
- The problem of lagging leads is eliminated
- No need to over-process the load perimeter to reach the geometric center

Improved Quality Products

ImmersaFlowTM Product Quality Benefits

- Homogeneous product consistency
- Product heat degradation minimized
- Renders the highest sensory value
- Uniformity in cooking and cooling
- Improved color, texture and taste of products

Traditional Immersaflow



Traditional

Immersaflow

Utility Consumption/ Energy Savings

Immersaflow™ Provides Enhanced Sustainability Benefits

- > Faster time to process temperature
- > Homogenous cooling profiles substantially reduces energy consumption footprint
- > Fast process = reduced utility consumption
- > ImmersaFlow's inherent process efficiency reduces greenhouse gas emissions.



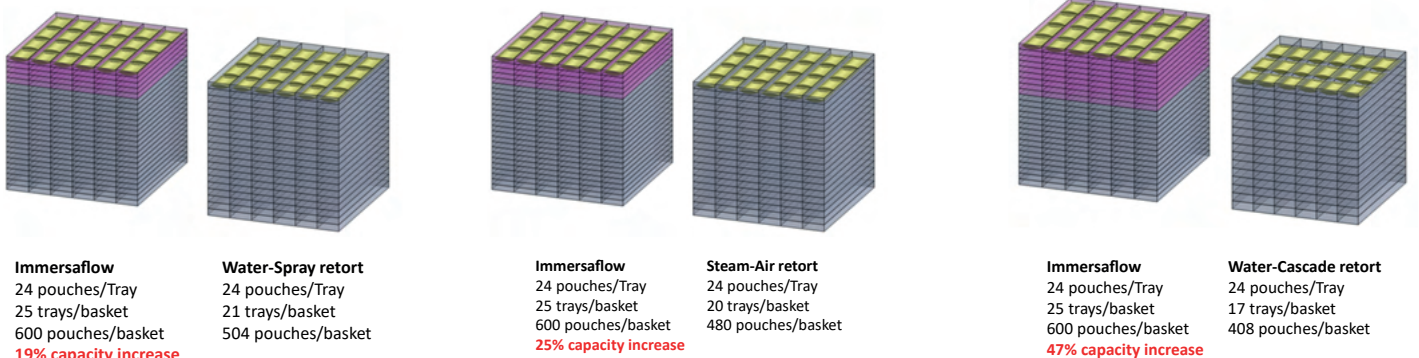
Increase Capacity

Increased Flexible Container Batch Yield



- > Immersaflow™ Tray Density is significantly higher than traditional static processes for flexibles. (spacing between trays reduced)
- > Up to 47% more load capacity
- > More product per batch = fewer retorts required.

Ø1400 Retort - 11oz. Pouch (140mm X 210mm X 25mm) Tray Capacity Comparison





ProMach's Global Sterilization Group manufactures a wide range of retorts for in-container sterilization and pasteurization. In addition, the group builds Automated Material Handling solutions for loading & unloading the retorts. Our turn-key shelf stable solutions, are tailored to meet the container and line speeds requirements.

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