



H&S

HANDLING & STERILIZING

IMMERSAFLOW™

BUILDING A BETTER RETORT PROCESS

Since the beginnings of using retort processing to provide shelf stable food and beverage products, food scientists have struggled with the problem of load resistance, understanding fluid dynamics, and the differential temperature between the geometric center and perimeter of the product load.

Load resistance is where the process media takes the path of least resistance around the product load and commonly referred to as the "umbrella effect." Retort designers have traditionally tried to solve this problem by increasing flow, adding more spray nozzles, or putting in more heat. Unfortunately, these solutions are incapable of providing any significant effect if the process media cannot reach the load's geometric center or the retort's cold spot.

So how can we go about solving this age-old problem?

STOCK now offers our patented ImmersaFlow™ retort technology, one of the most promising technologies to be introduced to the in-container food industry in many years. ImmersaFlow™ is a new batch retort process providing precise control of process media fluid dynamics and path of least resistance, resolving the load resistance problem. No more waiting for gravity to work, or the need for increased process utilities to achieve homogenous temperature profiles.

This innovative technology utilizes a closed loop column of process water, channeled through a plenum and closed wall baskets. In essence, ImmersaFlow™ creates an immersion process within the basket.



Outside of the basket, the retort shell is primarily empty, minimizing water usage and reducing the amount of heat required for the process.

Efficiency is the key to successful thermal processing and ImmersaFlow™ delivers the solution. By having control of the process media, ImmersaFlow™ has realized 4-6 minute Come Up Times (CUT), with as little as a 2°F spread between the geometric center and perimeter of the load. Faster, tighter Come Up Time (CUT) to process temperature allows for more throughput, a more consistent product heating profile, and an overall reduction in energy consumption.