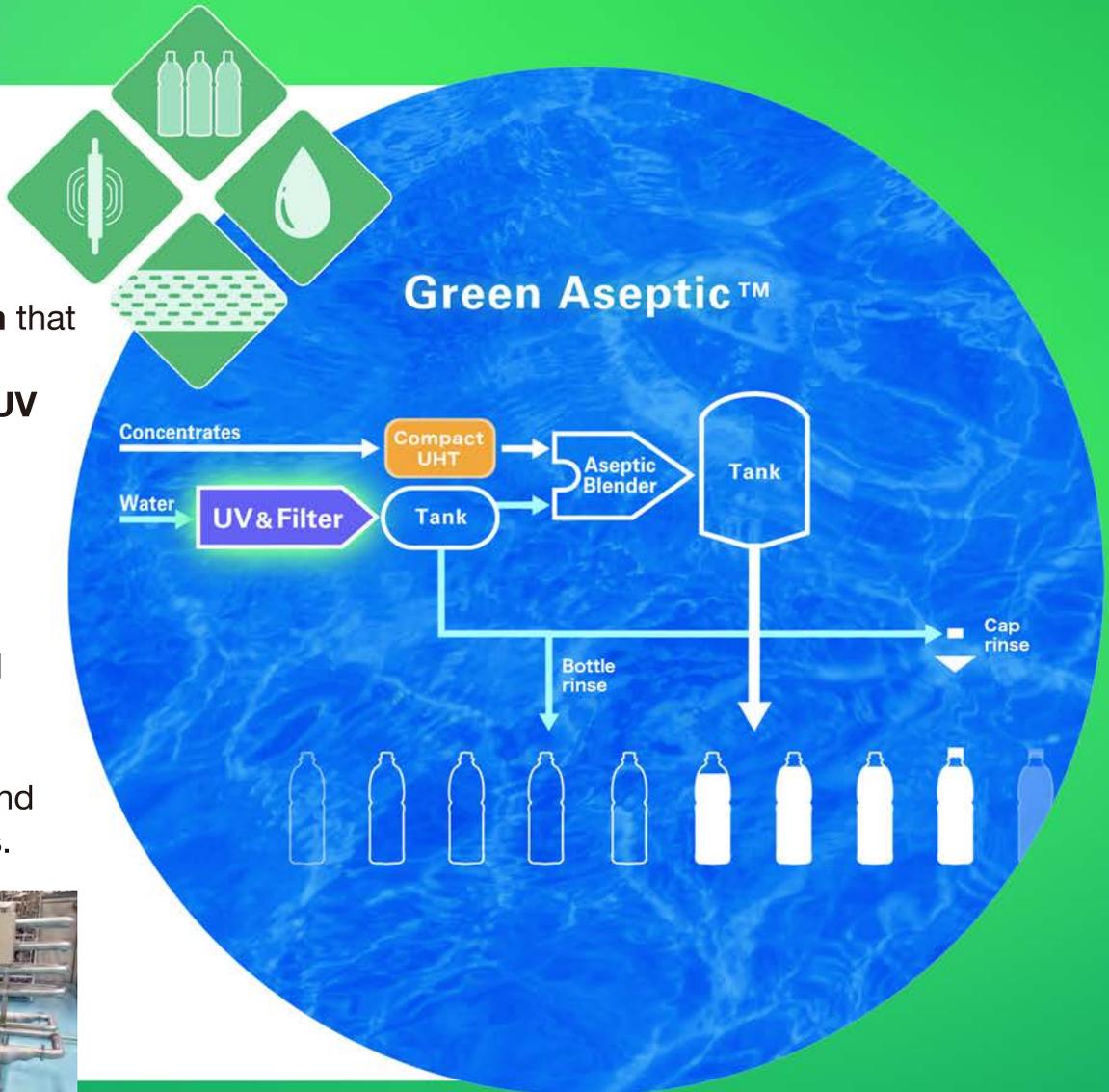


Green Aseptic™

Non-heated Water Sterilization - Up to 80% CO₂e & Energy Savings

Overview

Green Aseptic™ is a **new non-thermal sterilization system** that combines **medium-pressure UV lamps with sterilization filters**. This patented technology has enabled significant decarbonization and energy savings in liquid processing equipment for low and high-acid beverages.

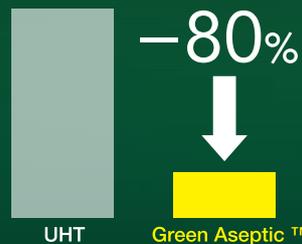


Performance Statistics

CO₂ emissions



Energy consumption



Sterility level



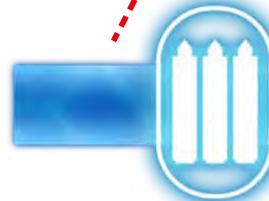
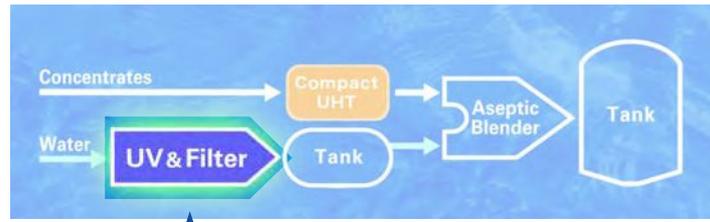
equivalent to conventional heat sterilization

※Based on a 5x dilution ratio

Operational Benefits

- Lower running costs for steam, cooling water and power
- Less steam, water, detergent and wastewater for UHT CIP
- Sterilizing the concentrate requires less blending
- Compact UHT module cuts initial and maintenance costs

Core Elements - UV lamps and Filters



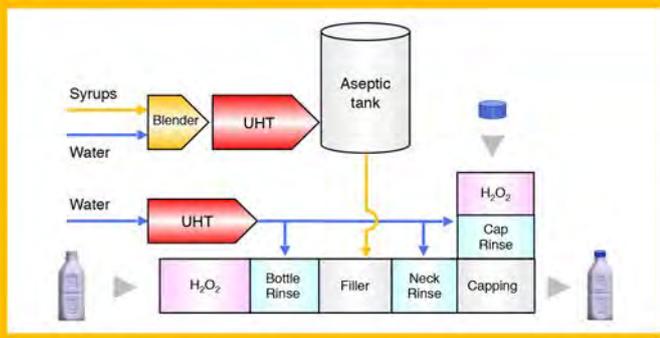
The water flows through pipes lined with special quartz glass. Powerful UV rays are reflected multiple times via the quartz glass, sterilizing water from all directions.

The perforation size of the filter is equivalent to that used in medical applications, providing the same sterilization grade. These filters are automatically checked on a regular basis to ensure they have not been damaged and remain sterile.

Configuration Comparison with Conventional UHT-Based System

Conventional Aseptic System

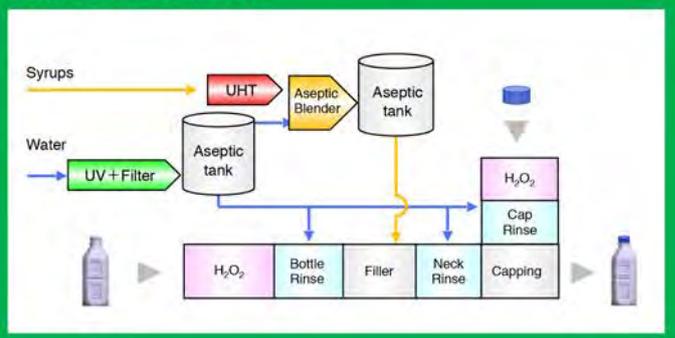
All blended product solutions are sterilized by heat. All sterile water for the chamber is also sterilized by heat.



GREEN ASEPTIC™

Produces sterile water without heating (MP-UVs & sterilization filters).

Used for dilution of product solution and sterile water for chamber.



Field Case Study – Shizuoka Soft Drink Plant (Japan)

Location : Shizuoka Pref., Japan (new factory, Mar 2024)

Start-up : April 2024

Product : Green tea, oolong tea, etc.

Line speed : 36,000 bph (500ml PET)

Aseptic validation : 3x media-fill runs, >10,000 bottles each → 0 spoilage

Technology scope : Green Aseptic™ non-thermal water sterilization + Compact UHT sterilizer for the product concentrate + Aseptic blender

