

Bottled Water Companies Use Hollow Fiber Technology to Reduce Operating Costs

Overview

For any size bottled water company, the cost to produce its brand requires continuous scrutiny at all levels. Large chain retailers continue to grow in strength, pressuring suppliers to improve quality, reduce costs, and increase output. Gaining even marginal savings on operating costs can dictate success or failure for a bottler.

Pall Corporation is revolutionizing the production of higher quality bottled water, while reducing operating costs. The Pall Aria™ system utilizes 0.1 micron hollow fiber membrane technology in conjunction with a highly efficient air scrub regeneration, potentially eliminating the use of all disposable filters.

If a bottler encounters short filter life, either once or several times a year, or if they are still operating costly conventional treatment systems, the Pall Aria system could be the solution for reducing operating costs.

The Challenge

Two prominent bottling plants faced similar issues in lowering their operating costs. Both produce spring water, but each one faced a unique challenge. Pall provided the solutions.

A well-known spring water company, with over 100 years of industry experience, encountered elevated levels of iron and manganese on one line. Initially, this was addressed by incorporating a conventional treatment process utilizing diatomaceous earth (DE).



DE is a consumable requiring constant expenditure, manpower and maintenance and may present possible OH&S and disposal issues. While addressing these concerns, the impact of accruing operational costs surfaced. These types of operating costs for water companies are of critical importance to profitability.

Another example of high operational costs was witnessed by a different bottled water plant faced with suspended matter variations in the spring water. To keep the source water clean and free of suspended solids, frequent change-outs of disposable filters were necessary. The plant had been using prefilters and 0.2 micron final filters. Operating multiple bottling lines, variations in suspended matter resulted in unexpected filter costs due to rapid blockage. This was a significant cost to the large operation.

In both cases, producing bottled spring water from various sources and by conventional methods resulted in costly, unexpected downtime and product loss.



The Solution

The Pall Aria system had a lot to prove, but were the bottlers believers? In fact, they were. The Pall Aria system was the best and most economical choice to reduce their operating costs and has significantly changed how their bottled water is produced.

To displace another treatment technology took great consideration from the first bottler. It meant disrupting current production and realizing an expense to replace and upgrade. After a short demonstration period, their Pall Aria system produced excellent results. The QA requirements were naturally extensive, blind taste test challenges were mandatory, as were water quality profiles. The results showed no change in taste and complete removal of the desired constituents. A true success.

In addition to replacing a costly DE process, the bottler has been able to reliably produce higher quality water and can perform an automatic integrity test. Now, the QA manager can validate the integrity of the filter system each day. The result: current cost of operations decreased by 90%.

The second bottler with variations in spring water also purchased the Pall Aria system. The system eliminated incoming water variability so that the bottler was not required to change out filters unexpectedly, which can result from increased solids. Compared to their standard disposable cartridges, the system yielded a 10-fold increase in downstream filter life.

The Benefits

Bottled water producers can realize the benefits of the Pall Aria system on all water sources, from spring to purified. Switching to Pall Aria systems has provided both bottlers in the previous examples with exceptional benefits. No matter the water source, or its variability because of frequent turbidity spikes, the hollow fiber technology is up to the task. These exceptional features translate into cost-saving benefits for the producers.

Pall Aria systems:

- eliminate feed water variability
- minimize cost
- maximize uptime

About Pall Corporation

Pall Corporation is the largest and most diverse filtration, separation, and purification company in the world. Pall serves the food and beverage industries with advanced membrane filtration technology and systems engineered for reliability and cost effectiveness. Membrane processes can concentrate products without heat, purify and clarify, selectively remove constituents, and minimize effluent. Our space-saving membrane filtration systems are easy to install, simple to use, and satisfy a wide range of filtration requirements—from removing particulates and spoilage microorganisms to providing high-quality air and gases.

Visit us at www.pall.com today.

Pall Food and Beverage

New York – USA
2200 Northern Boulevard
East Hills, NY 11548
001 516 484 5400 telephone

and offices throughout the world

foodandbeverage@pall.com

www.pall.com