Imagine saving a million litres of water or up to 70% of your annual water consumption by making minor adjustments to your dairy installation. That is what a major European dairy did by reprogramming their valve Cleaning-in-Place (CIP) program.

Using Alfa Laval Unique Mixproof valves (Image 1) lets you select between two cleaning operations:
1. **External cleaning**, which connects an external CIP line directly to the leakage chamber.
2. **Seat lift** and **seat push** (Image 2 and Image 3) cleaning, where the independent movement of the upper and lower plugs enables simultaneous cleaning of the leakage chamber, seal, and seat.

Alfa Laval recommends the seat lift and seat push method because it saves significant amounts of water and cleaning agent while providing superior cleaning results compared to the external cleaning method. Most residues, whether milk or quark, generally require between one and five seat lifts with each lift lasting about two to five seconds. By following the recommendations in the Alfa Laval Unique Mixproof valve manual, dairies are able to select the most efficient CIP program to remove various product residues.

### Requirements for improved CIP efficiency
Can you save more water during every cleaning cycle at your dairy? You can start saving immediately by making a few adjustments on the CIP program for your double-seat mixproof valves if your installation:
- **Uses double-seat mixproof valves**
- **Has a fixed kV value for the seat lift and seat push function that is known.** If the kV value is not known, ask your valve supplier. This value indicates the flow of water per second through the seat opening. Double-seat mixproof valves with fixed kV values and a defined metal-to-metal stop, such as Alfa Laval Unique Mixproof valves, make it possible to inspect only one valve after a given number of seat lifts to validate the cleaning program for the entire installation. Validating the cleaning program when the seat lift is adjustable, on the other hand, is a labour-intensive and time-consuming process because every valve requires adjustment and subsequent inspection.
- **Has a very fast-acting actuator** that requires a small air volume to perform seat lift and seat push cleaning operations and locally situated solenoid valves to optimize the cleaning process.

### Improved seat lift and seat push cleaning method
Now there is a better way to clean double-seat mixproof valves and reduce water and CIP liquid consumption even further. This involves quick and repetitive opening and closing of the seat, rather than exposing valve surfaces to CIP liquid flow for a given duration of time. This discovery was made at one of Alfa Laval’s process facilities. Alfa Laval engineers observed that, during the first fractions of a second of a cleaning cycle, the flow of CIP liquid created a high level of shear stress on the valve surfaces used less water than traditional seat lift and seat push cleaning, and increased overall cleaning efficiency.

To substantiate this hypothesis, Alfa Laval worked with a major European dairy to verify whether the same would hold true under actual operating conditions in its raw milk reception. The results confirmed higher cleaning efficiency and a potential annual savings of one million litres of water. The dairy has therefore implemented this new seat lift and seat push cleaning method in its milk reception.

### Reprogram your PLC today
If your installation meets these requirements, then consider the savings that can be realized on a dairy installation with hundreds of valves that require frequent seat lift and seat push cleaning. Simply adjust the PLC cleaning program of your dairy’s double-seat valves to lift and push the valve seats as quickly as possible. Why wait? Optimize today and start saving now.

### About Alfa Laval
Alfa Laval is a leading global provider of specialized products and engineering solutions based on its key technologies of heat transfer, separation and fluid handling.

The company’s equipment, systems and services are dedicated to assisting...
customers in optimizing the performance of their processes. The solutions help them to heat, cool, separate and transport products in industries that produce food and beverages, chemicals and petrochemicals, pharmaceuticals, starch, sugar and ethanol.

Alfa Laval’s products are also used in power plants, aboard ships, in the mechanical engineering industry, in the mining industry and for wastewater treatment, as well as for comfort climate and refrigeration applications. Alfa Laval’s worldwide organization works closely with customers in nearly 100 countries to help them stay ahead in the global arena. Alfa Laval is listed on Nasdaq OMX, and in 2013, posted annual sales of about SEK 29.8 billion (approx. 3.5 billion Euros). The company has today about 16,300 employees.

Image 2: Seat lift: The upper valve plug is raised off the seat thus cleaning plug seal, seat and leakage chamber through CIP flow.

Image 3: Seat push: The lower plug is pushed downwards thus cleaning the plug seal, seat and leakage chamber through CIP flow.

Packaging that whets your appetite

Take a look at this perfect pot for margarine. It is just one of many sleek plastic packaging solutions developed and produced by RPC Superfos. Reap the benefits of plastic for warehousing, production, filling, after treatment, on the road and at your customers’ home. Through our know-how about design and production, your dairy and food products will get distinctive shelf presence.
There are great opportunities in the fast-growing markets for cultured products such as yoghurt and cultured milk drinks. This competitive category demands innovation, flexibility, high efficiency and hygiene in continuous batch production.

Alfa Laval offers a complete range of valves, centrifugal and positive displacement pumps, heat exchangers, mixing & blending equipment and tank equipment to optimize and control processes such as in formulation and fermentation. From valves and automation for improved flow, to efficient mixing & blending and tank cleaning equipment for shorter turnaround times.

Our components increase productivity while reducing product loss and water consumption. The result is lower costs and more freedom to capture opportunities.

► Discover more at www.alfalaval.com/dairy