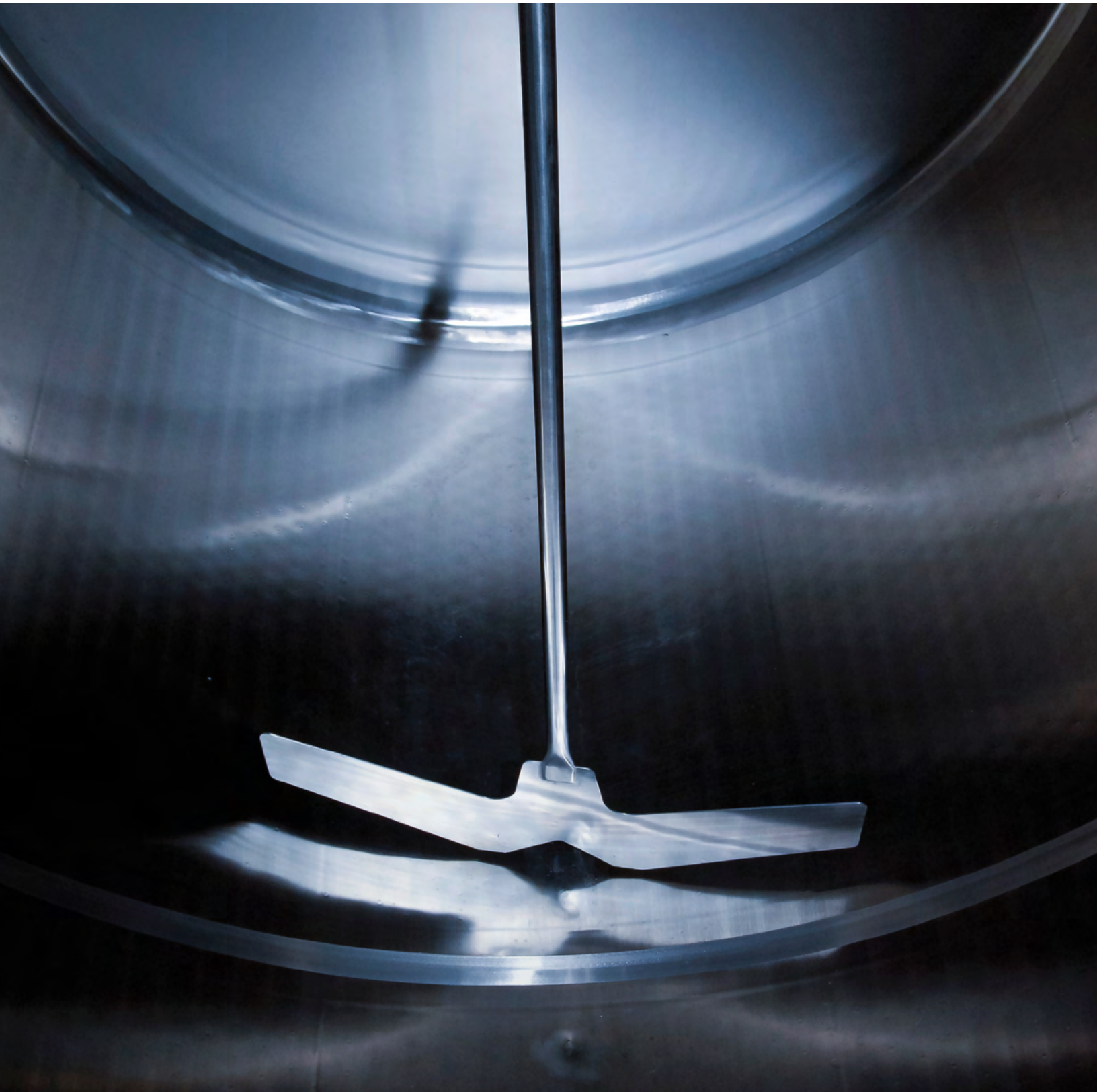
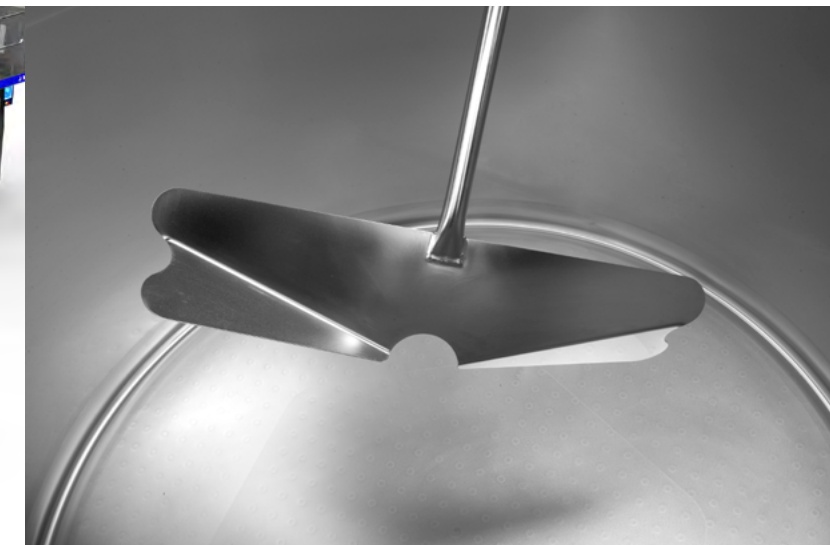


DeLaval One Step Acid

Eliminate chlorine in your cleaning





Innovations in Sanitation

One Step Acid is designed to improve the efficiencies of your cleaning systems by combining the detergent and acid cycles into one step

A unique cleaner, One-Step Acid is a proprietary blend of acids and high performance wetting agents designed to both clean and de-scale cold process equipment.

As part of DeLaval Cleaning Solutions' product line of cycle time reduction cleaners, One-Step Acid is designed to replace traditional chlorinated cleaners by offering the convenience of single cycle cleaning thereby increasing the production capacity in your facilities. Incorporating the use of One-Step Acid may also result in the ability to eliminate the necessity of maintaining or installing a separate acid wash tank.

One-Step Acid takes the guess work out of over dosing chlorinated cleaners to compensate for chlorine loss. Results show that One-Step Acid performed equal to or better than conventional chlorine cleaners under similar use conditions

By eliminating an additional wash step, your food processing plant's time, water, and chemical use are minimized, and cleaning capacity is maximized in a new and totally different fashion.

Traditional Cleaning Programs include four key cycles:

- Pre-rinse
- Alkaline wash
- Acid wash
- Sanitize cycle

How One-Step Acid Works

One-Step Acid is a new approach to cleaning that utilizes a new, acid-based detergent. DeLaval chemists have combined the detergent cycle and the acid cycle into one, saving time in the cleaning process that can lead to a multitude of benefits for you.

The purpose of any detergent is to adhere, break up, lift and remove soils. One-Step Acid is no different in theory, however, it uses a patent pending combination of chemical components in a unique way to combine and speed up the cleaning process.

One-Step Acid is proven effective – utilizing organic acids and surfactants. This low-foam detergent lifts and removes organic soils while preventing and removing hard water scale.

One-Step Acid characteristics include

- Wetting – the ability to reduce surface tension, thereby maximizing detergent contact with all components
- Emulsification / dispersion – holding liquids and solids in suspension for removal.
- Solubilization – holding insoluble liquids in solution for removal.

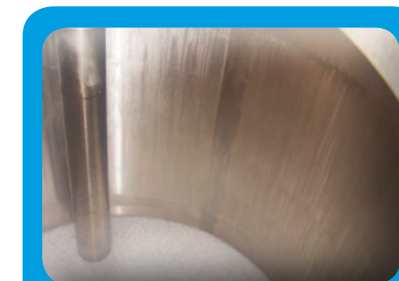
Sustainability Program

One-Step Acid is one component of DeLaval Cleaning Solutions' Sustainability Program. This program is designed to increase efficiency and improve your cleaning and sanitation programs.

We tailor sanitation programs and products to meet your plant's specific requirements.



Before OSA



After OSA

| Summary | Current | Proposed | Savings |
|---------------------------|-----------------|-----------------|-----------------|
| Product costs (\$/yr) | \$6,104 | \$13,688 | \$(7,584) |
| Heating costs (\$/yr) | \$56,216 | \$29,982 | \$26,234 |
| Water costs (\$/yr) | \$1,456 | \$1,144 | \$312 |
| Labor costs | \$12,424.53 | \$7,432.53 | \$4992 |
| Total | \$76,200 | \$52,246 | \$23,954 |
| Cleaning hours per year | 776.5 | 464.5 | 312 |
| Cost per system/yr | \$76,200 | \$52,246 | \$23,954 |

Greater than 30% Savings!*

*These are hypothetical examples intended only to demonstrate potential savings from using One Step Acid Cleaner instead of traditional chlorine-based, two-cycle cleaners. Your results and actual savings may differ. Savings will depend on a variety of factors, including product costs; heating, water and labor costs; training of personnel; and cleaning protocols. Nothing herein is intended as a guarantee of savings or warranty of performance.



Four Pillars of Sustainability

- ✓ Innovative Technologies leading to greater production efficiencies
- ✓ Helping to secure & maintain profitable business now, and into the future
- ✓ Provide products that have minimal environmental impact on the ecosystem
- ✓ Sanitation programs to ensure production of quality food products that meet consumer demands

