

AEB CLEANING PROCEDURES

**MORE
PERFORMANCE**

**MAXIMUM
SAVINGS**

**LESS
CONSUMPTION**



Discover a new way to save money with AEB's innovative single-phase CIP cleaning procedures

Your virtuous choice for maximum productivity with less energy, product and water consumption.

**AEB**[®]

AEB washing protocols THE SOLUTION AGAINST RISING ENERGY AND RAW MATERIAL COSTS

CLASSICAL PROCEDURES

For almost a century, the food industry has been using **recirculating cleaning** practices through increasingly sophisticated systems that allow the **automation of processes** and the **recovery of cleaning solutions at the end of recirculations**. The most common procedures are:

- 1 INITIAL PRE-WASH
- 2 Recirculation alkaline solution (soda ash 1-1.5% as NaOH)
- 3 INTERMEDIATE RINSE
- 4 Acid solution recirculation (nitric acid 1-1.5% as HNO₃)

- 5 FINAL RINSE

For the preparation of alkaline and acidic solutions, raw materials such as caustic soda and nitric acid are used, or formulations containing surfactants and sequestrants that increase the performance of washing cycles.

SINGLE-PHASE PROCEDURES AEB

The increasingly popular **single-phase washing procedures** are a **sustainable alternative** for the manufacturer and the environment. **Based on the use of acid or alkaline chelating products**, they reduce the steps required for washing to the following:

- 1 INITIAL PRE-WASH
- 2 Single-phase solution recirculation (product 1,5-2%)

- 3 FINAL RINSE

The elimination of two steps from the washing procedure (the intermediate rinse and the second circulation of detergent solution) results in **savings in terms of time and water**, as well as a **considerable** reduction in **energy costs** for heating the washing solution and for recirculation pumps.

AEB innovation THE ADVANTAGES OF CIP PROCEDURES IN CAUSTIC OR ACID MONOPHASE

In order to keep total wash costs low, we offer **SPECIFIC CAUSTIC OR ACID SINGLE-PHASE PROTOCOLS**, that are time-tested and extremely cost-effective compared to traditional washes and other single-phase cleaning proposals.



LOWER PRODUCT CONSUMPTION



Single-phase washing solutions with AEB formulations do not produce foam, have a very high recovery rate compared to conventional solutions and require **lower product concentrations**.

WATER SAVING



The rinsing of surfaces in contact with less concentrated solutions, especially if less caustic, requires less water than those in contact with more concentrated solutions. During testing, with the simple use of pH-indicator maps, the necessary rinsing times for each washing line can be set.

ENERGY SAVING



Single-phase AEB procedures allow efficient **operations at temperatures between 65 and 75°C**, whereas with conventional solutions, one is obliged to operate at a minimum of 75°C. In addition, the increased consumption of solution due to foam formation results in wasted thermal energy to heat the part of the solution to be replenished.

INCREASED PLANT PRODUCTIVITY



The shorter amount of time required by AEB single-phase procedures compared to conventional washing not only translates into energy savings, but also results in **higher utilization of the equipment in production phases compared to washing phases**.

AEB FORMULATIONS FOR SINGLE-PHASE WASHING

DISCOVER
OUR
PROPOSAL



DAIRY MPV

Alkaline detergent with sequestering action for single-phase washing.

It is suitable for **water with medium to high hardness** for recovery cleaning of closed lines subject to heat exchange in the food and dairy industry.



SECURTEN EP

Alkaline detergent with sequestering action for single-phase washing.

It is suitable for **medium to low hardness water** for recovery cleaning of closed lines subject to heat exchange in the food and dairy industry. **SECURTEN EP** is the ideal solution for foam control in highly turbulent CIP.



CELON MPB

Acid detergent for single-phase CIP and single-product tunnel washing.

Based on nitric acid and lactic acid, CELON MPB has a high cleaning and suspending power of organic residues. It can be used for a wide range of applications in the food and beverage bottling industry.

CONTACT OUR TECHNICAL SALES DEPARTMENT: together we will study the most suitable washing procedures to optimize costs and consumption.

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