



Tetra Alcip®

Smart CIP safety



Application

Tetra Alcip is an advanced automatic cleaning-in-place system used for cleaning process equipment such as filling machines, pasteurisers, sanitary pipes, tanks, aseptic tanks, plate heat exchangers etc.

The cleaning is fully adjustable to meet the demands of the cleaning object, i.e. times, concentration, temperature and flow. The capacity alternatives are 6 000-25 000 l/h and 10 000-50 000 l/h, which is normally enough for cleaning \varnothing 76 and \varnothing 101 mm sanitary pipes.

Tetra Alcip is a platform-based unit that provides a wide range of flexible solutions with capacities and options for every customer/market. Key benefits are food safety, production economy and flexibility. All units are prepared for easy integration with Tetra Plant Master or other supervisory systems.

All units are pre-tested and prepared for easy installation.

Tetra Alcip is suitable for cleaning of equipment for all food applications (dairy, beverage, carbonated soft drink, cheese, prepared food, brewery etc).

Working principle

The Tetra Alcip unit consists of 1-4 pressure lines, all individually pre-assembled and frame-mounted. Each pressure line includes a pressure pump, circulation tank, tubular heat exchanger, process valves, sensors and all necessary internal piping and wiring. It can be connected to up to 32 CIP circuits, for which individual parameters (circuit volume etc.) can be set.

The Tetra Alcip is delivered with 14 pre-set CIP recipes. It is also possible to create customized CIP recipes which are, for customer safety, validated before use.

By applying the individual parameters of a CIP circuit to a certain CIP recipe, an optimized cleaning can be performed for that circuit. The Tetra Alcip unit automatically controls the cleaning time, detergent temperature, flow and concentration.

The control of detergent concentration and sorting of liquids in the Tetra Alcip is done using a conductivity meter.

Preparation of detergent

Preparation is started manually or automatically at a specific time or after a pre-set number of cleaning cycles.

Basic Unit

The Tetra Alcip is compact, pre-assembled and frame-mounted. All modules are factory tested with water before delivery.

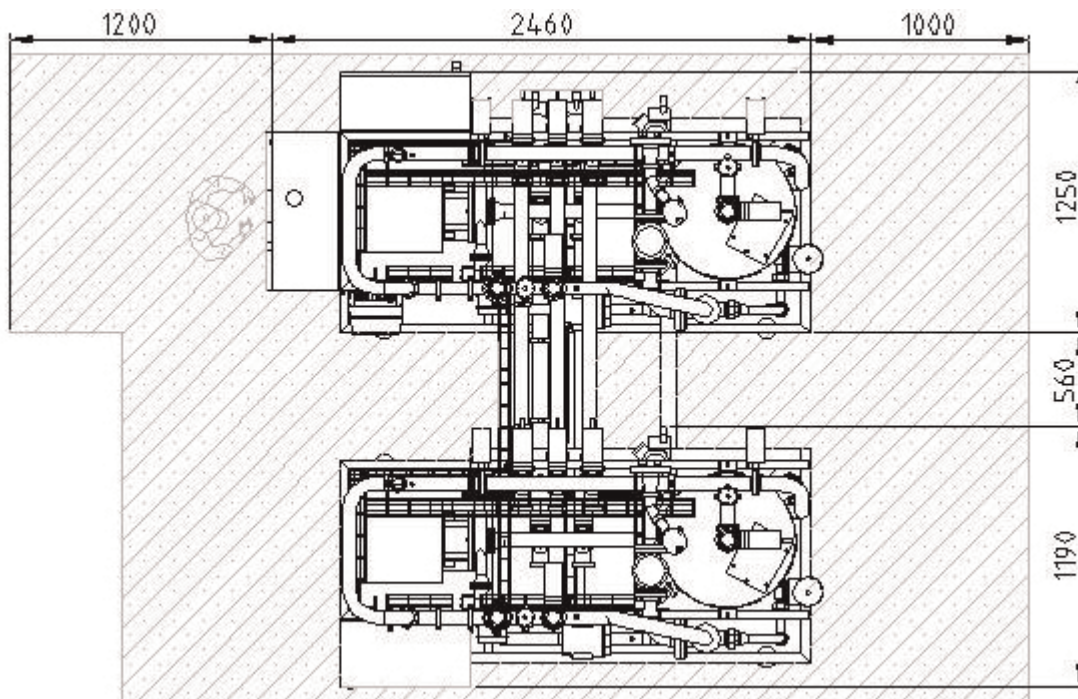
Main components

- Frequency-controlled centrifugal pump
- Flow transmitter and flow switch
- Circulation tank with level transmitters
- Tubular heat exchanger
- Conductivity transmitters
- Temperature transmitters
- Automatic control and shut-off valve for steam
- Automatic shut-off valve for water
- Automatic sanitary valves for diversion and shut-off

Control panels

Tetra Alcip is controlled by an Allen Bradley ControlLogix or Siemens PLC. This is fitted in a cabinet located on pressure line A.

Layout



LC module: 25 000 l/h, 3 000*

HC module: 50 000 l/h, 3 225*

*Height of the equipment. Additional free space required for service and maintenance above the equipment: 1 000 mm.

A motor control cabinet is also situated on pressure line A but can easily be moved away from the module. Remaining pressure lines are equipped with one line panel each.

Technical data

Capacity:

6 000 - 25 000 l/h

10 000 - 50 000 l/h

Outlet pressure, max 300 kPa (3 bar)

Consumption data per cleaning line

Electric power

6-17 kW depending on selection 400 V, 50 Hz

Required water supply at 300 kPa (3 bar)

6 000 - 25 000 l/h 25 000 l/h

10 000 - 50 000 l/h 50 000 l/h

Steam at 300 kPa (3 bar)

25 000 l/h

50 000 l/h

max 970 kg/h, 240 kg/h nominal load

max 1 940 kg/h, 490 kg/h nominal load

Compressed air

Steam regulating valve

150 NI/h at 600 kPa (6 bar)

Control panel

180 NI/h at 600 kPa (6 bar)