Tetra Alcip® 1

Cleaning-in-place module

Application

An automatic cleaning-in place module for dairy, juice, beverage and food applications. The module is designed for cleaning of filling machines and process equipment, such as sanitary pipes, tanks, aseptic tanks and heat exchangers etc. requiring one or two detergents for cleaning.

Working Principle

Cleaning in place is done by means of circulation of water and detergent over the cleaning object. In Tetra Alcip 1 all heating of water and detergent is done in-line in the plate heat exchanger during circulation over the module. The flow rate is manually adjusted for each circuit and single use of hot water disinfection is a standard feature.

The detergent solution is circulated over the detergent tank. After cleaning, the solution is routed back to the tank for re-use. To reduce water consumption, a rinse water recovery function is available where the final-rinse is routed back to the recovery tank and used as pre-rinse in the next cleaning.
Preparation of detergent tanks is done with the dosing pumps. The dosing pumps are also used for additional dosing of concentrate during cleaning.
The control system automatically controls the cleaning program, time, temperature and a conductivity meter is used for concentration check of detergent strength and sorting of liquids. The module has up to five cleaning programs and supports 16 circuits with individual sets of pre-set cleaning parameters

Versions

Tetra Alcip 1 with flow capcity of 15 000 l/h

Basic Module

The Tetra Alcip 1 is a compact, pre-assembled frame mounted and water tested module. The module has one cleaning (pressure) line, but two modules can work individually with the same solution tanks, creating a multi-line installation.

Main Components

Pressure pump for water and detergent
Plate heat exchanger
Automatic and manual valves
Automatic steam control valve
Tank for water circulation
Stainless steel frame with adjustable feet
Manual flow control valve and flow indicator
Transmitters for conductivity, temperature
Level switch in circulation tank
Flow switch

Control system

Siemens C7-635 programmable controller with a 6" operator interface.

Communication

I/O communication, DI: external hold, DO: cleaning completed; run return pump, OK to flip

Technical Data

Consumption data

Electric power for pressure pump	5,5-7,5 kW, 400 V, 50 Hz
Water	15 000 l/h at 300 kPa (3 bar)
Steam	440 kg/h peak load at 300 kPa (3 bar)

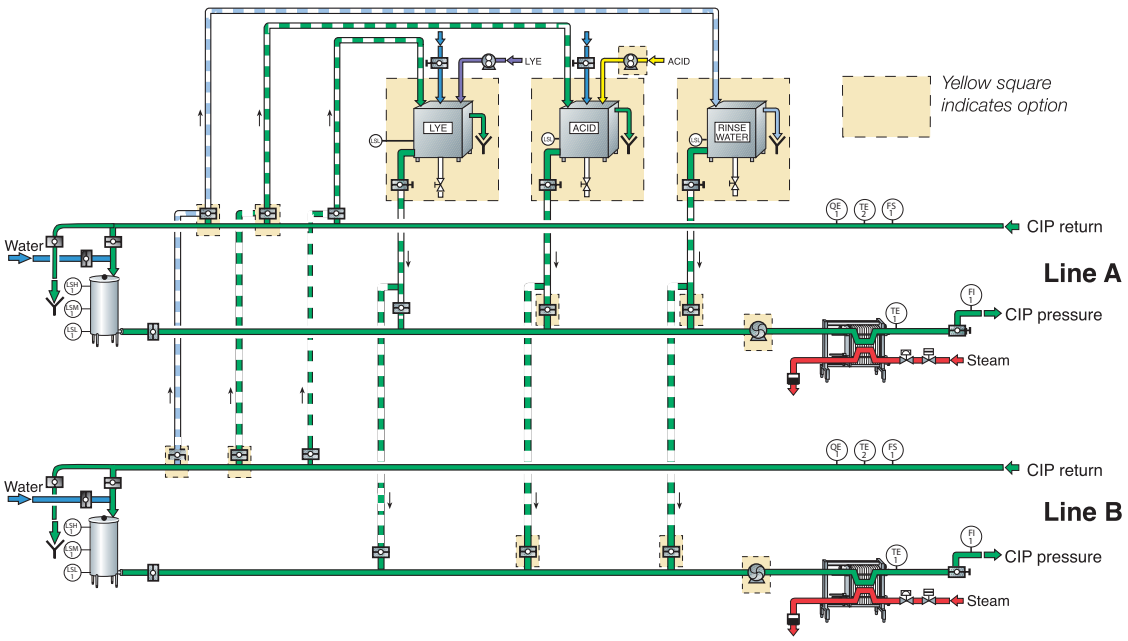
Dimensions

For installations without recovery tanks

Length, mm	1 900
Width, mm	1 050
Height, mm	2 100

Options

- Detergent recovery function. Including valves, level switch for the recovery tank and dosing pump. See option for recovery tank.
- Rinse water recovery function. Including valves and level switch for the water revocery tank. See option for recovery tank.
- Recovery tank 1 000 l, including internal piping and wiring, for recovery of alkaline/acid solution and rinse water.
- Pressure pump dimensioned for 4,0 bar outlet pressure.
- Air cooling module with compressor cooling in panel, recommended for surrounding temperatures above 35°C.
- I/O communication with "general cleaning objects" and Tetra Brik filling machines.
- Ditigal paperless recorder for return temperature and conductivity



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