



I Application

Hygiene is an essential part of the processes of the food processing, cosmetics, pharmaceutical industries as a correct cleaning of all the elements is required (tanks, pipes, pumps, etc.). In addition, the last sterilization stage is commonly required in the pharmaceutical industry. We offer automated CIP/SIP units correctly selected and customized to guarantee a controlled cleaning and/or sterilization and an optimum efficiency without having to disassemble the process plants. The parameters of temperature, speed/pressure, chemical concentration and exposure time are accurately controlled by a system that can be configured with multiple options in order to provide the cleaning and sterilization parameters and to do it in a reliable, repetitive and verifiable manner.

The sterilization in place of the process plants is usually carried out with steam supplied by a clean steam generator though a chemical sterilization is also possible. A complete SIP as well as CIP circle is monitored by a PLC unit that controls every stage of the process.

I Disign and features

PORTABLE CIP DESIGN

It consists of the following elements:

- Two AISI 316 tanks, jacketed, of 250L for the prepration of cleaning solutions. Conical bottoms.
- Electric heaters inside the tank.
- Peristaltic, piston or membrane pumps for dosing of concentrates.
- 4kW Hyginox SE impulsion pump.
- AISI 316 collectors with pneumatic butterfly valves with C-TOP.
- AISI 304 frame with wheels.
- Return filter.
- Temperature control inside the tanks and conductivity control in the return line.
- Level control in the tanks.
- Flow control in the return line.
- Pressure gauge at the pump impulsion.
- 6" touch screen control.
- PLC Siemens system control.
- 5 programmes: preparation, short tank cleaning, short line cleaning, tank long cleaning and long line cleaning. Manual valve activation. Plant state displaying. Change of parameters.
- Tested and verified in our test house.



I Design and features

ONE LINE STATIC CIP UNIT DESIGN

It consists of the following elements:

- Two AISI 316 tanks, jacketed, of 1000L for the preparation of cleaning solutions. Conical bottoms.
- One AISI 304 tank, not jacketed, of 1500L for recovered water. Conical bottoms.
- Heating by a steam heat exchanger, with a graduated acting steam valve, drains...
- Peristaltic, piston and membrane pumps for concentrates dosing.
- 5.5kW Hyginox SE impulsion pump.
- AISI 316 collectors with pneumatic butterfly valves with C-TOP.
- AISI 304 base frame with adjustable legs.
- Filter in return line.
- Temperature control inside the tanks and conductivity control in the return line.
- Level control in the tanks.
- Flow control in the return line.
- Pressure gauge at the pump impulsion.
- 10" display allows touch screen control.
- PLC Siemens system control.
- 5 programmes: preparation, short tank cleaning, short line cleaning, tank long cleaning and long line cleaning. Manual valve activation. Plant state displaying. Change of parameters.
- Tested and verified in our test house.



SIP SYSTEM

The SIP units sterilize all the process system as one unit thus reducing the number of connections necessary for its performance. The sterilization system is controlled by a PLC and can be provided optionally either separately as a portable skid or it can be incorporated into a CIP unit as the last stage of the cleaning process.

I Options

- Recirculation inside the tanks by means of a pump.
- Additional tank for disinfectant or inline dosing.
- Handshakes between the CIP control panel and other control systems of the plant.
- Valves without feed back.
- Use of double seat or single seat valves instead of the butterfly valves.
- Tubular heat exchanger.
- Other tank configurations (2 simultaneous lines, bigger volumes...).
- Flow control.
- Logging of the operating data.
- Fixed plants due to size.

I Materials

Parts in contact with the media	AISI 316L
Other parts	AISI 304
Insulation	rock wool
Gaskets (valves, pumps, connections)	EPDM according to FDA



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