



# CIP STATIONS

Cleaning in place system



**Pharmabios®**

**E:** [info@pharmabios.com](mailto:info@pharmabios.com)

**W:** [www.pharmabios.com](http://www.pharmabios.com)

## COMPANY PRESENTATION

**Pharmabios®** is a company focused on the design and manufacturing of high technology equipment for the pharmaceutical and biotech branch. It is also supplier for engineering services on these fields.

The CIP stations of **Pharmabios®** are specially designed for the cleaning of tanks, piping, lines and equipment for the pharmaceutical and biotechnology industries. Its optimised design allows the configuration of various cleaning recipes for several applications. The detailed design of the CIP stations allows the adaptation to all cleaning purposes, optimizing the needed water and detergent volumes and as well as the overall cleaning time.



## WORKING PRINCIPLE:

**First rinse:** The water used for the first rinse fills the storage tank until the set point volume is reached, and then the pump sucks at the flow rate and pressure required by the process.

**Detergent washing:** The water used for the detergent washing fills the storage tank and then is mixed with the detergent by the use of a dosing pump. Afterwards, the cleaning solution can optionally be heated. Finally, the cleaning solution is pumped to the user equipment at the required flow rate and pressure.

**Final rinse:** The storage tank is filled with the water used for the final rinse, once the tank is full the water is pumped to the equipment user at the required pressure and temperature.



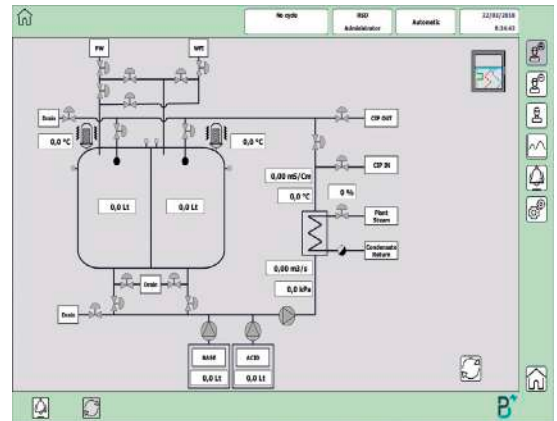
## PHARMABIOS® EQUIPMENT:

**General features:** Finish of the product-contact parts  $Ra \leq 0.5 \mu m.$ , mechanically polished. Valves in product-contact are diaphragm valves with diaphragm in EPDM. The design minimises the use of connections and welds. Components in product-contact suitable for the pharmaceutical industry.

**Supporting frame:** All the components with the exception of the storage tank are supported in a stainless steel 304L frame.

**Control system:** The equipment is controlled by means of an electrical cabinet which contains all the necessary components for its performance. The control system is composed of a touch screen HMI type, and a Siemens PLC.

**Included documentation:** User and maintenance manuals, quality certificates of the components, welding certificates, manuals/data sheets of the components, CE marking, DS/DQ/FAT protocols to be executed in our facilities.



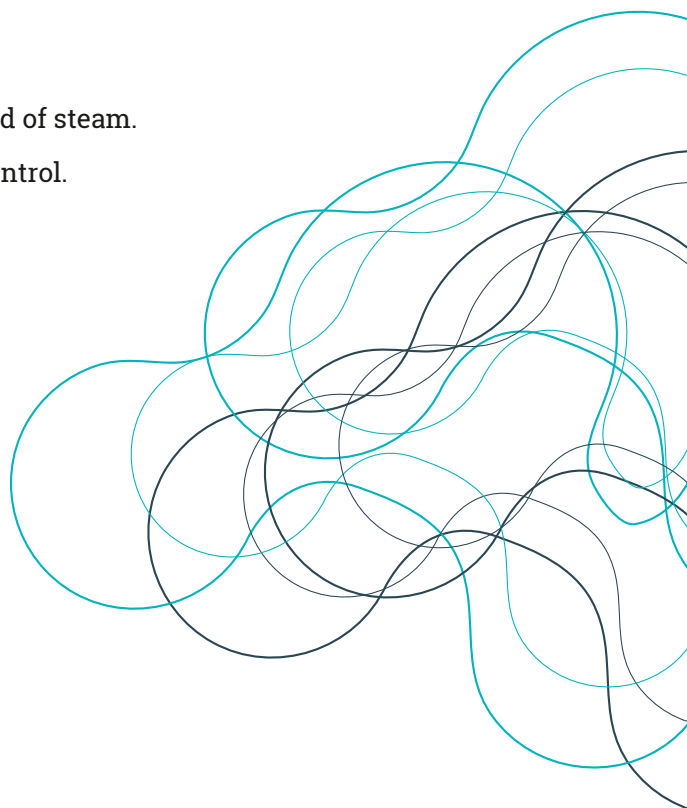
In PHARMABIOS® we adapt ourselves to the customer needs, offering custom-made solutions.

## THE ADVANTAGES OF THE PHARMABIOS® DESIGN:

- » A complete quality documentation, including FDS protocols, DQ & FAT (IQ/OQ) as option.
- » A control system with a pre-charged recipe list, user levels, synoptic and alarms.
- » A high quality equipment, with GMP design and compliant with all the current international normatives (21 CFR Part 11, GAMP 5, ASME BPE and ISPE recommendations).
- » A high output, optimising energy consumption and cycle times.
- » Customised technical advices.
- » High range components, with recognised brands.
- » Sanitary connections, ASME BPE.

## AVAILABLE OPTIONS:

- » Heating of the CIP solutions with heating resistances instead of steam.
- » CIP return line with flow rate and final rinse conductivity control.
- » Control system upgrade: 10.4" touch screen and a SCADA
- » Additional pumps for CIP solution return
- » Redaction and execution of IQ/OQ protocols
- » Extra copies for documentation
- » Electrical cabinet in stainless steel
- » Supply of spray balls
- » 6-channel graphic register
- » Supplementary instruments.



## TECHNICAL SPECIFICATIONS:

MODEL	CIP-500-5	CIP-1000-10	CIP 2500-15	CIP 5000-20	CIP 10000-30
Volume of each tank compartment	500	1.000	2.500	5.000	10.000
Feeding pump, flow rate (m3/h)	5	10	15	20	30
Feeding pump, pressure (barg)	3	4	5	6	6
Quantity of dosing pumps and feeding tanks	1	1	2	2	2
Dimensions (length x height x width )	1.500 x 1.500 x 2.000	2.000 x 2.000 x 2.500	2.500 x 2.500 x 2.500	3.000 x 2.500 x 3.000	3.500 x 3.000 x 3.500
<b>PLC/Touch screen</b>	Siemens S7-1200, Siemens, con Tia-portal				
Utilities required					
Electrical consumption (kW)	2	3	4	6	11
Plant steam flow rate (kg/h) (1)	360	720	1.080	1.440	2.160
Plant steam pressure (barg)	3-8	3-8	3-8	3-8	3-8
Purified water consumption per cycle (l)	1.000	2.000	5.000	10.000	20.000
Purified water pressure (barg)(2)	2	2	2	2	2

(1) For instant heating of the cleaning solution

(2) Depending on the selected parameters

*Do you have some special requirements to fulfil?*

*We adapt ourselves to your process in order to provide you the tailor-made solution which suits best to your needs.*