



CIPs

CLEANING IN PLACE SYSTEMS

THE COMPANY

***Bionet is a specialist
in bioprocesses engineering.
We provide equipment (Bioreactors,
Cross-Flow Filtration Systems and
Cleaning In Place Systems) and
advanced technical services.***

Bionet CIP (Cleaning In Place) systems are engineered to guarantee an effective and efficient cleaning of your lines, vessels, reactors and process units. They are designed based on proven engineering solutions (process, equipment and control SW) and we adapt them to specific project and client needs.



ROSA+ SOFTWARE

ROSA+ is the advanced SW solution created by Bionet to automate bioprocesses equipment and complete bioprocesses lines.

The core module is designed for fermentation and cell culture process control, and it is installed in all Bionet F Series. However, ROSA+ also offers filtration and CIP automation modules, guaranteeing an optimal integration of all processes under single software.

It is a powerful tool that incorporates all the necessary functions for integrated process control, process

qualification and validation, and allows an easy programming of complex recipes with numerous steps and control loops.

ROSA has been designed to easily accept and integrate in the process control new instrumentation in the process control. The application works in a PC environment and allows LAN & VPN connection via Ethernet port.

All software modules are available in 21CFR Part11 compliant version.



CIPs SERIES

Our CIP units are designed to work integrated with both Bionet equipment or other manufacturer equipment and processes.

With this equipment you will have the security and tranquility of a complete and traceable cleaning of all your systems and you will be able to easily configure its operation against process changes or new requirements.

- ▶ Models to clean process vessels from 30 to 50,000 L of volume, plus piping and ancillary equipment
- ▶ Portable or stationary design
- ▶ One-tank (Wash & Rinse) or Multi-tank version for shorter process cycle. Single tank versions imply reduced capital costs, limited footprint and are easy to transport. Multi-tank

versions save water and chemicals, reducing operating costs, environmental impact and cleaning cycle time.

- ▶ All systems performance can be qualified through a Riboflavin test.
- ▶ In addition to supplying equipment, Bionet specialized staff can support you to design and optimize your cleaning recipes.
- ▶ All models may be fully automated with process and control instrumentation through ROSA+ SW. Software implemented in 12" Touch Panel PCs.
- ▶ cGMP versions of all CIP models and manufacturing under ASME-BPE standards available on demand. It includes CFR 21.11 version of ROSA+ SW.

TECHNICAL SPECIFICATIONS

MODEL	C-50	C-500	C-3000	C-10000
Process				
Volume of equipment to be cleaned (L)	10-100	200-1.000	2.000-5.000	10.000-50.000
Flow	4m ³ /h (3,7 barg)	4-8,0 m ³ /h (3,7 barg)	4-8,0 m ³ /h (3,7 barg)	4-8,0 m ³ /h (3,7 barg)
Drive power (kW)	3 kW	3 – 6 kW	3 – 6 kW	3 – 6 kW
Return pump	No	Optional (1,5 kW)	Yes (1,5 kW)	Yes (1,5 kW)
Tank(s) volume (L)	30-50	300-400	700-800	1500-5000
Type	Mobile	Mobile/Fixed	Fixed	Fixed
No. Optional tanks	1	1 or 2	1 or 2	1 or 2
Recommended No. of Sprayball	1	1 or 2 (additional sprayballs available on demand)	1 or 2 (additional sprayballs available on demand)	1 or 2 (additional sprayballs available on demand)
Heating power	7,2 kW	15-20 kW	40-60 kW	500 kW
Heat source	Electric resistance	Steam	Steam	Steam
No. of dosing pumps	2	2 or 3	2 or 3	2 or 3
Type of dosing pumps	Diaphragm pumps (0,15-15/60 L/h)			
Control and Instrumentation				
Options	Manual or Automatic modes			
Automation	PLC Industrial (Siemens) + Modules E/S. Touch 12" PC panel, SVGA 800 x 600, industrial			
SW de control	R.O.S.A. +. CFR 21.11 version available			
Communication	2 x Ethernet ports for LAN y VPN communication for remote control. USB port for data downloads. 2 x External configurable analog inputs (additional probes) 2 x External configurable analog outputs (additional probes) 1 x RS485 for communication with external elements.			
Standard sensors	Temperature, tank level, pressure (pressure transmitter and switch)			
Optional sensors	Conductivity, pump variable speed and chemical totalizer.			
Requirements				
Compressed air supply	6-7 barg / 2VVM	6-7 barg / 2VVM	6-7 barg / 2VVM	6-7 barg / 2VVM
Utility cost	10,2 kW	7,5 kW	7,5 kW	7,5 kW
Steam supply	N/A	2,5 barg/ 25 Kg/h	2,5 barg/ 75 Kg/h	2,5 barg/ 600 Kg/h
Dimensions (W x H x D) mm (single-tank units)	122x1650x890	1550 x 2447 x 1223	1775 x 2700 x 1500	2600 x 3128 x 2240 3278 x 2000 x 2240

Bionet Engineering

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