



Clean-in-Place (CIP) system & Sterilize-in-Place (SIP) system

BIOJENIK ENGINEERING

Your Trusted Partner in Bioprocess Engineering

**Biojenik Engineering has been providing innovation
and reliable bioprocess engineering solution for
over 15 years**



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CIP/SIP SYSTEMS

Biojenik Engineering designs and manufactures Clean-in-Place (CIP) and Sterilize-in-Place (SIP) systems for cleaning and sterilization of process equipment. Our CIP/SIP systems automate essential cleaning and sterilization processes, eliminating the need for time-consuming disassembly and reassembly. They ensure consistent, validated, and efficient cleaning of equipment, reducing downtime and contamination risks.

Application Areas

Pharmaceutical | Food & Beverage | Biotechnology | Cosmetic & Personal Care

Key Advantages

- **Reduced Cleaning Cycle Times:** Faster cleaning ensures higher equipment availability.
- **Optimized Resource Use:** Minimized detergent, water, and energy consumption.
- **Enhanced Safety:** Eliminates manual cleaning and reduces contamination risks.
- **Configurable Recipes:** Includes water rinses, chemical washes, blow-down and air-drying, as well as heat or chemical sanitation with flow, pressure, and temperature controls.

General Features

Versatile Cleaning Solutions

Designed for process vessels, bioreactors, fermenters, and other equipment.

Suitable for laboratory, pilot, and industrial-scale applications.

Flexible Configurations

Integrated or stand-alone skid-mounted systems.

Available as semi-automated or fully automated units.

Continuous Operations

Automation transforms batch processes into a continuous cycle of production and cleaning.

Advanced Monitoring & Control

Continuous monitoring of flow rate, detergent concentration, temperature, and wash time for full process validation.

Handles filtering, preheating, mixing, and pumping of water, detergents, and demineralized water.

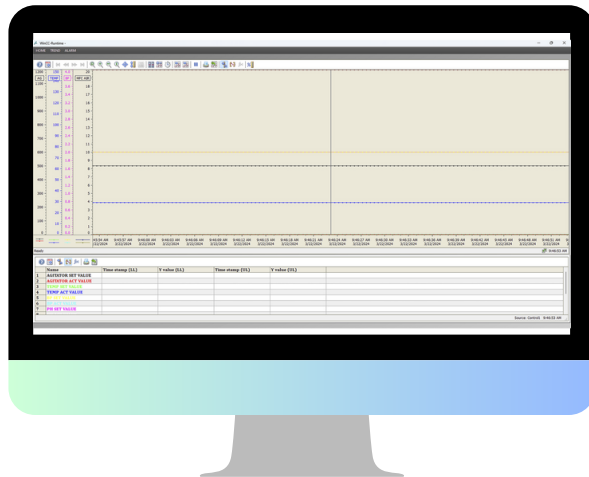
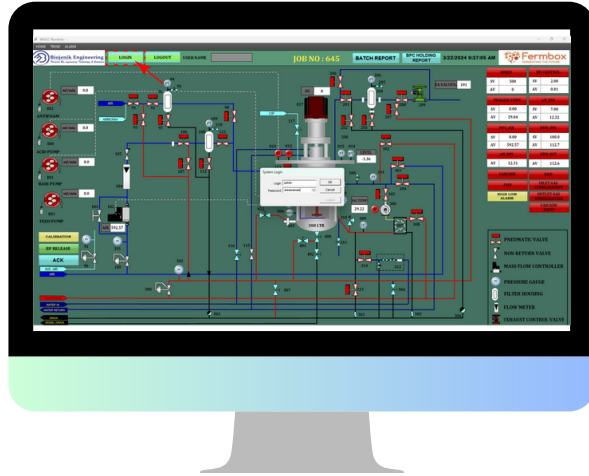
Customizable Design

Options for single-use recovery of cleaning media and single or multi-stream cleaning routes.

Support for online and offline cleaning and sanitation.

Biojenik Engineering SCADA Software

Biojenik Engineering's **SCADA software** is designed for real-time monitoring and control, offering a range of features to improve efficiency and ensure compliance.



- **Software:** Siemens WinCC.
- **Simulation and Auto-Tuning:** Generates random process values for simulation and auto-tuning.
- **Third-Party Integration:** Free OPC server for third-party device integration.
- **Remote Operation:** Webex-based remote operation/control of setpoints.
- **Customized Interface:** Personalize display to show Process, Profiles, Set Points, and Cascade.
- **Batch Management:** Manage batches and track them using tags.
- **Access Control:** Different access levels for enhanced security.
- **Dosage Tracking:** Monitor and record material consumption during production.
- **Real-Time Data Recording:** Automatic recording and trending of setpoints and measurement values.
- **Data Export:** Export data to Excel for analysis and reporting.
- **Data Comparison:** Compare and analyze data for improved decision-making.
- **Event Alarms & History:** Alerts for issues, historical data access, and ANSI-18.2 compliant alarm management.
- **Audit Trail:** Record-keeping compliant with 21 CFR Part 11 standards.
- **Lifetime Support:** One-time license with lifelong updates and support.

Benefits:

- Simplifies process monitoring and control.
- Increases efficiency by automating tasks and tracking.
- Ensures compliance with regulatory standards.
- Provides actionable insights with data comparison and analysis.

Technical Specification

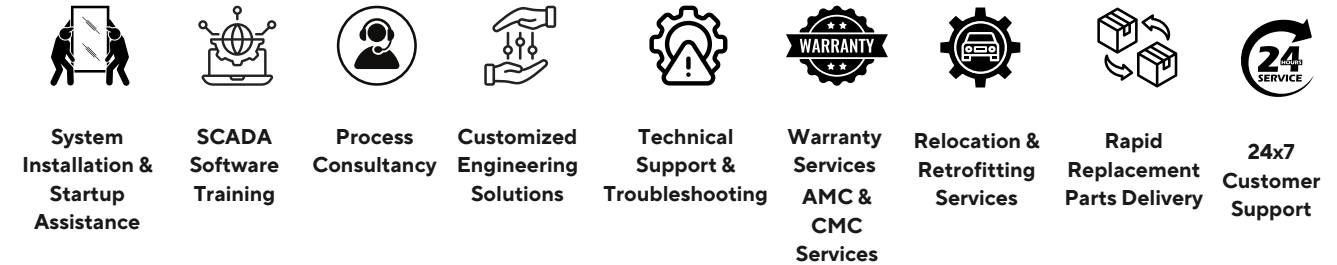
S.No	Specifications	Details
1	Material	Stainless steel (SS316L/SS304), with customizable options.
2	Capacity	1 liter to 50,000 liters.
3	Cleaning Routes	Single or multi-stream options.
4	Automation	Semi-automated or fully automated.
5	Cleaning Media	Supports water, detergents, demineralized water, and sanitizers.
6	Temperature Control	Up to 95°C for heat sanitation.
7	Pressure Control	Adjustable from 0.2 to 6 bar.
8	Flow Rate	Configurable between 50-500 L/hour.
9	Integration	Inline with production or stand-alone skid-mounted.
10	Validation	Supports full validation for flow, concentration, and cycle time.

Our Valuable Clients



Biojenik Engineering Services

We offer a comprehensive range of services to ensure the smooth operation and longevity of your systems:



Our Certifications



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