

CIP (Cleaning in Place)



CIP/SIP Systems

Assuring Sterility, Enabling Performance

At **SPM**, we understand that hygiene and sterility are non-negotiable in clean-critical industries. That's why our Special Purpose Machines are engineered with fully integrated **CIP (Cleaning-in-Place)** and **SIP (Sterilization-in-Place)** systems—ensuring every process is safe, compliant, and contamination-free.

Why CIP/SIP?

CIP/SIP systems eliminate the need for manual cleaning, significantly reducing downtime and human error while ensuring validated, repeatable cleaning performance.

- Ensures Product Safety & Process Integrity
- Minimizes Downtime & Operational Costs
- Complies with Global Regulatory Standards (cGMP, FDA, etc.)

Built for Hygiene-First Industries

SPM's CIP/SIP solutions are designed for industries where sterility is critical:

- **Pharmaceuticals & Biotechnology**
- **Food & Beverage**
- **Nutraceuticals & Dairy**
- **Cosmetics & Personal Care**

Our machines are built to handle cleaning and sterilization of contact surfaces thoroughly and automatically—offering total peace of mind in every batch.

Intelligent Engineering, Reliable Operation

Hygiene-Focused Machine Design

Our systems are developed using a clean design approach that eliminates contamination risks and optimizes cleanability:

- No dead zones or fluid traps
- Smooth, crevice-free surfaces
- Reduced use of fasteners and seals
- Easy-to-clean, polished contact surfaces

This design philosophy leads to **low maintenance**, **faster cleaning cycles**, and **enhanced machine longevity**.

Automated Cleaning & Sterilization Sequences

Every SPM system is equipped with programmable cleaning and sterilization cycles to ensure maximum efficiency and compliance:

Typical CIP/SIP Sequence:

1. Hot RO Water Rinse & Drain
2. Hot RO Water Recirculation
3. Hot Alkali Recirculation
4. Intermediate Purified Water Rinse
5. Acid Recirculation
6. Final Purified Water Rinse
7. WFI (Water for Injection) Rinse

Each step is validated for consistency, and cycles are tailored to meet customer-specific cleaning requirements.