



Water and Steam Matter!

Water and steam play a crucial role in the cleaning, disinfection, and sterilization of medical devices. Without proper treatment, impurities in the water and steam can adversely affect cleaning, disinfection, and sterilization processes leading to serious problems including:

- Wet packs and staining
- Instrument corrosion
- Mineral scale deposits
- Reduced detergent performance
- Increased microbial and endotoxin load

These issues can negatively affect the performance of sterile processing equipment leading to increased risk, decreased instrument life, premature equipment replacement, and/or SPD downtime.

AAMI ST108:2023 A New Water Standard

AAMI Standard ST108:Water for the Processing of Reusable Medical Devices was adopted to provide sterile processing professionals with more specific direction for obtaining the water and steam quality necessary for effective medical device reprocessing.

Although the water quality targets are similar to AAMI TIR34:2014, ST108 adds significant new guidance for UV disinfection, endotoxin filters, distribution loops, testing, and documentation. Recognizing the challenges that steam can present in sterile processing, ST108 also adds new requirements for steam purity.

Chem-Aqua: Your SPD Water Partner

As a leading provider of water treatment solutions to the healthcare industry, Chem-Aqua can help you in the journey to follow ST108 standards.

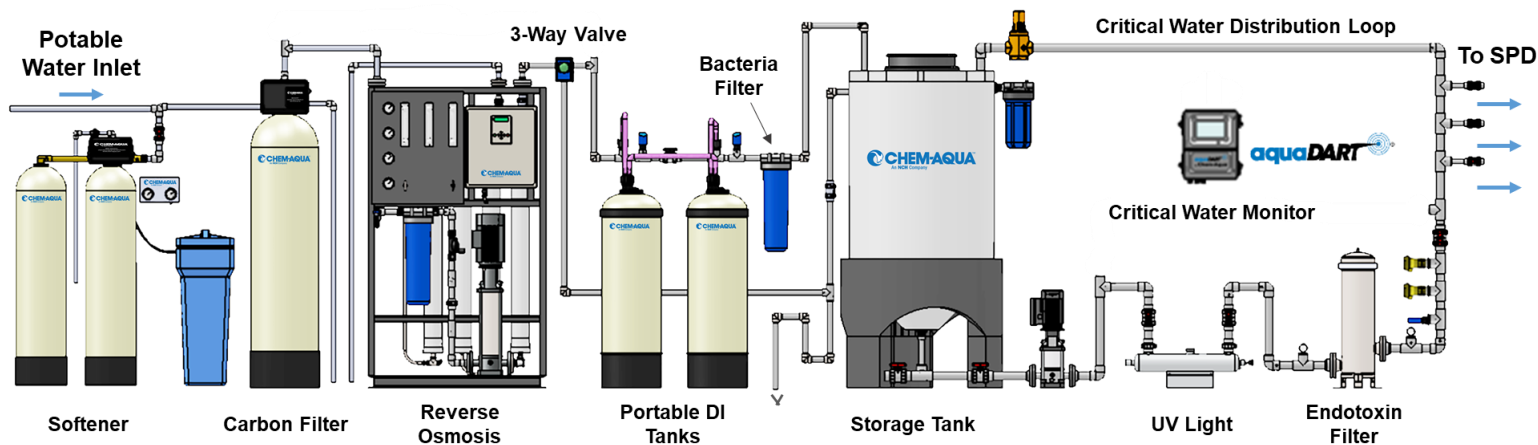
Our aquaDART® SPD Water Systems are engineered to provide an integrated water purification, distribution, and monitoring solution that meets ST108 specifications. To provide maximum performance with flexibility for tight spaces, they are designed from standard system modules that can be matched to site specific needs. An optional online monitoring package is also available to provide continuous oversight of key operating parameters and alerts for upset conditions.

Most importantly, Chem-Aqua SPD systems are supported by regular site service visits to monitor the water and steam systems and ensure reliable operation.

Chem-Aqua SPD Advantage

Chem-Aqua has the expertise, equipment, and monitoring capabilities required to help facilities develop and implement SPD water quality programs that achieve key ST108 objectives:

- ST108 compliant critical water systems
- Real-time critical water and steam purity monitoring
- Monthly testing and equipment maintenance programs
- ST108 inorganic water quality test panel
- Bacteria, endotoxin, and TOC testing
- Staining and wet pack investigations
- SPD water and steam system audits



Standard SPD Water Systems

Standard Design Configuration	Reverse Osmosis with DI Polisher
RO Flow Rate	1, 2, 4, and 6 GPM
Critical Water Output	1440, 2880, 5760, and 8,640 GPD
Critical Water Storage Tank	40, 100, 200, and 350 Gallons
Distribution Loop Flow Rate	10 to 40 GPM

Larger and/or custom systems available where needed

General Specifications

Generation System	Compact 4-Stage Reverse Osmosis
Pretreatment	Softener and Carbon Filter
RO Prefilter	5 µm Pleated Filter
Storage Tank	Polyethylene, conical bottom on stand
Ultraviolet Light	254 nm UV with light intensity monitor
Final Filtration	Bacteria and Endotoxin
Control System	Remote monitoring, reporting, and alerts

aquaDART® SPD Water Systems

- RO instrumentation includes flow rates, pressure, conductivity, and alarms
- Sealed, conical bottom, critical water storage tanks with filtered air vent and ports to facilitate disinfection and draining
- Distribution loops designed to provide min 3-5 ft/sec flow rate with UV light disinfection and endotoxin filter
- Online aquaDART Critical Water Monitor for key RO, DI, & loop parameters with automated reporting and alerts
- Optional online Steam Purity Monitor for plant steam
- Preassembled equipment components to simplify installation and maintenance
- Equipment service and testing agreements



aquaDART Circulation Skid

Contact Chem-Aqua to evaluate your critical water and steam systems with recommendations to meet the new AAMI ST108 standard