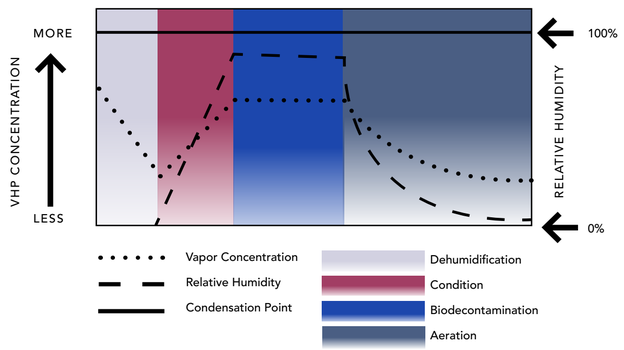
ABOUT THE VHP® 150DC BIODECONTAMINATION CYCLE



FULLY AUTOMATED VHP® DECONTAMINATION

Four Steps to Biodecontamination in just 45-90 minutes on average.

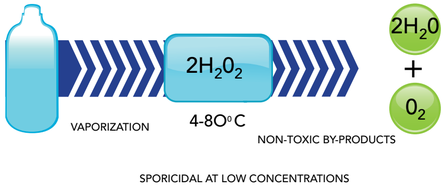
>Step 1 *Dehumidification*–Reduce relative humidity to pre-determined level

>Step 2 *Condition*–Rapid increase to desired VHP concentration

>Step 3 *Biodecontamination*–Retain vapor phase by maintaining VHP concentration and humidity

>Step 4 *Aeration*-Quick reduction of hydrogen peroxide vapor

HOW VHP® BIODECONTAMINATION WORKS



SPORICIDAL AT LOW CONCENTRATIONS

With water vapor and oxygen as the only by-products, the VHP 150DC Biodecontamination System offers your best formaldehyde replacement option.

UNPARALLELED, ON-DEMAND STERIS SUPPORT

Not only does STERIS deliver comprehensive decontamination systems, STERIS provides complete, committed customer support. We strive to be a partner in your project, adapting our VHP technology to meet your unique decontamination needs. The following professionals are on your STERIS team of experts:

- **Training Professionals** – Provide full operator training for the VHP system
- **Application Engineers** – Develop and optimize custom cycles, guide validation and verification
- **VHP Validation Specialists** – Ensure compliance through precision documentation, 15+ years CGMP experience
- **Field Service Engineers** – Assist with IQ/OQ calibration, start-up, and preventative maintenance
- **Technical Support Specialists** – Lead onsite training, hands-on demonstrations

ACHIEVE COMPLIANCE THROUGH EXPERT VALIDATION AND VERIFICATION

As the inventor of VHP technology, STERIS has also mastered the VHP validation and verification process. A full suite of reports meticulously document IQ and OQ results. These in-depth details allow for optimization, troubleshooting, and repeatability and reliability. STERIS Specialists take a fine-tuned approach to documentation: beginning with factory production and tracing equipment through its life cycle. Sensors and software automate documentation whenever possible – creating precision records.

ABOUT STERIS

STERIS is a leading provider of infection and contamination prevention, microbial reduction and surgical support systems, products, services, and technologies to healthcare, life sciences, research, food, and industrial customers throughout the world.

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STERIS®

ABOUT SBB, INC.

SBB is a leading innovator in cleanroom design, product engineering, HVAC systems, aseptic design, and process systems. From strategy and design, to prototype and production, and through final documentation and quality control, SBB handles it all, ensuring excellence at every step.

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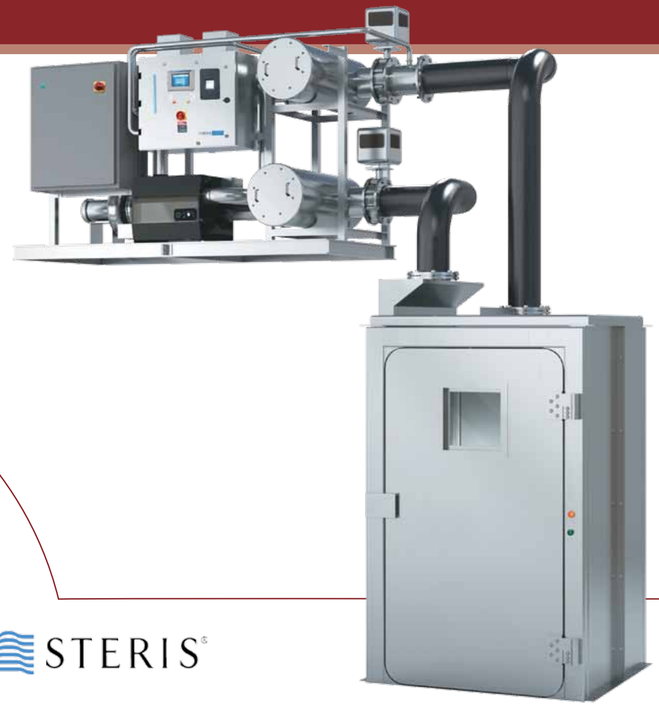
SBB Sullivan, Bazinet, Bongio Inc.

COMPLETE BIODECONTAMINATION SOLUTION

VHP® 150DC BIODECONTAMINATION SYSTEM

From STERIS, the pioneer, patent-holder, and proven leader of VHP (vaporized hydrogen peroxide) technology, comes a complete decontamination solution: *The VHP 150DC Biodecontamination System*

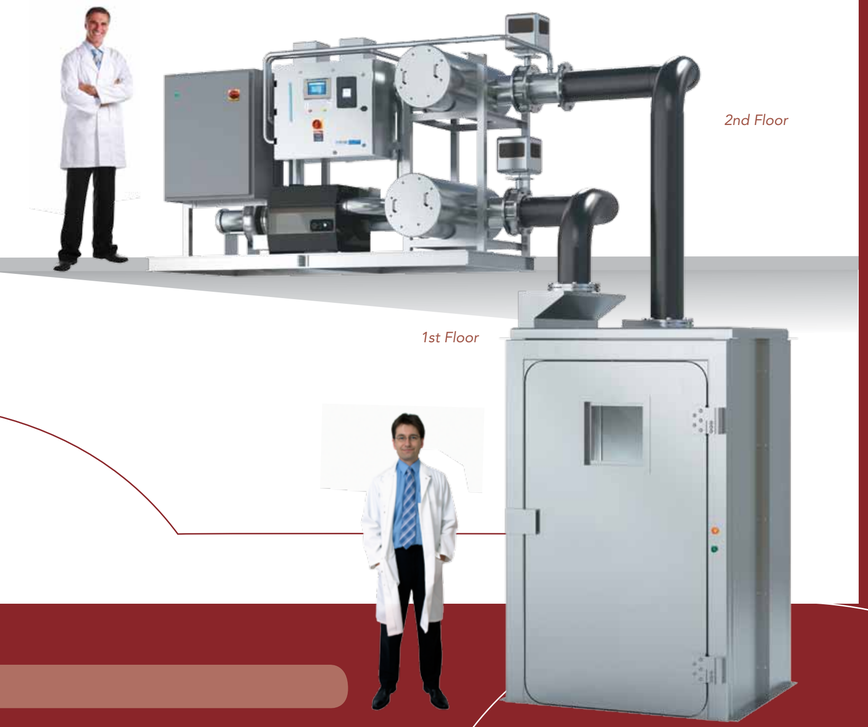


STERIS®

CHAMBER + VHP® SYSTEM IN ONE UNIT

The VHP 150DC Biodecontamination System is seamlessly engineered into a gas-tight, stainless steel chamber – ready for flawless integration with your specified end use.

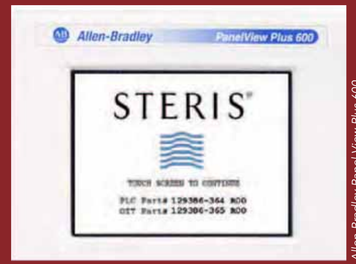
Providing a turnkey solution to your decontamination challenges, this revolutionary "plug and play" VHP 150DC unit delivers thorough, provable decontamination at rapid cycles (average of 45-90 minutes). Accompanying documentation and the fact that STERIS developed VHP for FDA-regulated applications ensures streamlined validation and prompt compliance with regulatory entities.



INTUITIVE, USER-FRIENDLY PLC INTERFACE

Choose from either the Allen-Bradley Panel View Plus 600 or Siemens TP277 and you can:

- Customize biodecontamination cycles and cycle parameters plus alarms
- Set security access codes for greater user control
- Get straightforward help and troubleshooting from a simple screen
- Protect cycle memory with a battery backup
- Achieve GAMP, through available software documentation packages



Allen-Bradley Panel View Plus 600

Siemens TP277

STERIS VHP® 150DC BIODECONTAMINATION SYSTEM ADVANTAGES

PRECISION BIODECONTAMINATION

The integration of the STERIS VHP delivery system into a pneumatically sealed chamber gives you unprecedented opportunities for user control, process optimization, and documentation.

- As opposed to liquid-based decontamination, operators can precision-control VHP levels by monitoring and manipulating vapor flow patterns within the sealed chamber
- Ultra-sensitive, in-chamber sensors automate and perfect documentation and process
- Molecular gas diffusion ensures every in-chamber area and object is decontaminated

EXPEDITED, EFFICIENT CYCLES

- The VHP 150DC System achieves astoundingly short D-Values: A 6-log reduction in microbial population, validated with biological indicators, is possible in a 45 minute cycle
- A start-button activates the fully automated decontamination process, saving time and labor
- In contrast to liquid processes, the VHP process is a non-condensing, dry system. Because there's no residue to clean up, sequential cycles can be activated instantaneously
- As opposed to chlorine dioxide and formaldehyde applications, the VHP process requires 10x less product (400-700 PPM) to achieve optimal decontamination levels

INCREASED DECONTAMINATION POWER, REDUCED SAFETY RISKS

STERIS first developed VHP technology to be gentler on personnel, materials, and the environment - without sacrificing decontaminating power. Today, VHP is preferred over formaldehyde and chlorine dioxide decontamination methods as it's a "greener" solution.

- VHP is an EPA-registered sterilant with non-toxic by-products of water vapor and oxygen
- Non-condensing VHP quickly kills a wide range of microorganism without altering or corroding materials; VHP is compatible with metals, plastics, elastomers, and more
- Innovative chamber design ensures 100% self-contained decontamination: no personnel contact with VHP, it's introduced via Vaprox 1 L cartridges (bulk supply is standard)

STANDARD CHAMBER SIZES*	
FRAME 1	1000W X 1000H X 1000D (39.3") X (39.3") X (39.3")
FRAME 2	1200W X 2000H X 1200D (47.3") X (78.7") X (43.7")
FRAME 3	1200W X 2000H X 2000D (47.3") X (78.7") X (78.7")
FRAME 4	2000W X 2000H X 2000D (78.7") X (78.7") X (78.7")
FRAME 5	2000W X 2000H X 3000D (78.7") X (78.7") X (118")

*Custom manufacturing to any size is available

All dimensions are in mm, and are clear dimensions internally (the largest object that can be placed into the chamber)

ULTIMATE RELIABILITY ENGINEERED INTO EACH CHAMBER

Teaming with a leading cleanroom engineer and manufacturer, SBB; STERIS developed the ideal decontamination chamber, addressing all facets of a fully functioning unit:

- No special nozzles or additional ductwork is needed; VHP is distributed through injection ports and controlled by integrated HVAC, catalyst, or converter
- Equipment (generator, humidifier) resides outside the chamber for simplified maintenance, reduced cross contamination, and increased space for decontamination
- Reliable construction is the STERIS/SBB difference: Chambers sealed with polished, super-tight welds, door/s seal with magnetic interlocking (even in power loss)