

M2DCON

GDS - SEDS

Service Equipment Decontamination System

The M2DCON ruggedized Gaseous Decontamination System for Service Equipment Decontamination (GDS - SEDS) is a decontamination system suitable for decontaminating sensitive and non-sensitive equipment using VHP and mVHP to inactivate biological and chemical agents. The system is designed for use on a decontamination line. The GDS-SEDS chamber has a volume of 230 cubic feet with a total shelf area of 200 square feet.

The decontaminant used in the GDS-SEDS is modified Vaporized Hydrogen Peroxide (mVHP). This decontamination process was developed in conjunction with the extensive research, expertise and collaboration of members of the M2DCON team with ECBC during execution of the CRADA.

Description

The GDS - SEDS integrates the most advanced hydrogen peroxide based decontamination technology into a ruggedized decontamination chamber designed for ease of use in a field forward environment.

The GDS generator delivers a mixture of hydrogen peroxide vapor and ammonia. This mixture is then blown into the enclosure/chamber holding the equipment to be decontaminated. Hydrogen peroxide vapor (VHP) rapidly inactivates biological agents (VHP is widely used in healthcare and pharmaceutical applications to sterilize equipment and facilities). The addition of ammonia activates the hydrogen peroxide vapor and causes the mVHP mixture to inactivate chemical agents.

The chemical decon the GDS generation system has an automated control system that ensures the correct concentrations of hydrogen peroxide vapor and ammonia are used, the enclosure is maintained at the correct temperature (operating temperatures can be set from ambient up to 50°C) and the process runs for the programmed cycle time.

The interior of the existing GDS-SEDS system has shelving installed for holding the equipment being decontaminated. If needed, the shelving configuration can be easily adjusted by the operator to accommodate oversized equipment.

The GDS-SEDS has two sets of doors (one set at each end of the chamber) allowing contaminated equipment to be loaded from the “dirty side” and unloaded post-decontamination from the “clean side”. Providing this through flow configuration minimizes the risks of cross-contamination.

The proposed GDS-SEDS system uses a standard ISU-90 enclosure to take advantage of the enclosures certification for transportation modes. If larger throughput is needed the GDS-SEDS can be integrated into larger shipping containers, or if necessary larger custom designed enclosures.



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System Set Up and Operation

The system can be operational within minutes. Once the unit is placed on the decontamination line, it can be operated by one person. The system is preprogrammed with the decontamination cycle.

Once set up is complete, one-button operation is initiated by selecting the desired cycle. From that point on, the cycle is entirely automated based on feedback from the sensor positioned within the space.

A separate consumables kit contains the necessary hydrogen peroxide solution, ammonia and filters.



Preventative Maintenance

Our gaseous decontamination systems are designed to limit the preventative maintenance. It is recommended to calibrate sensor bundles every 12 months; typical sensor life is 5 years. Sensor bundles may shipped to our facility for calibration services or user can calibrate using simple to follow instructions. Peristaltic pump tubing should be replaced every 6 months; user can follow the simple instructions to easy replace the tubing assemblies.

M2DCON has a long history of designing, developing and deploying gaseous decontamination systems. The proven GDS-SEDS technology can be scaled to meet the unique needs of the mission. The M2DCON Team has provided gaseous systems that decontaminated volumes from benchtop (one cubic foot) to building and aircraft hangers.

| Model Number | Description |
|-------------------|---|
| GD-SEDS-VPHP-SYS1 | GDS-SEDS (Service Equipment Decontamination System against Chem-Bio Agents) |

M2DCON, Inc.

6519 Eastland Road, Ste. 106
Brook Park. OH 44142 USA

Tel: +1 216 306 0925
sales@m2dcon.com

About our family of decontamination companies - Our core team brings greater than 35 years of experience to formulate the solution to meet the needs of our Customers. We focus on decontamination and other aseptic technologies in the form of consumable products and capital equipment. With greater than 25 patents and extensive collaborative research with Government laboratories (US Army ECBC, US Air Force AFRL, Dugway Proving Grounds, etc.), our team has proven experience developing and manufacturing state of the art decontamination equipment and solutions to meet the most challenging requirements of our Customers.