

# Disinfection Service



MV GROUP



# **Executive Summary**

We disinfect equipment and decontaminate closed spaces using a CE and NATO approved solution that vaporizes concentrated hydrogen peroxide

We deliver managed services, provide readiness contract and we resell the system in Northern Europe and for defence applications worldwide. We are effective for biological and chemical substances, harmless for the environment and electronics.

Superior decontamination device and services for combating viruses, bacterias and harmful contaminants.



The system is suitable for defense applications for homeland use and for deployments, as well

Our managed service is tailored to our clients' needs. Our specially trained operators and project managers set up operation and take the full responsibility for the process, on or off the client's site. We offer logistical services and container solutions upon request. Our readiness service is offered as insurance with a standard 48-hour response time from call to project start.

We also offer our clients to purchase the system with full training and support. The training program is one day, and it is arranged at our client's sites. Training is part of the support program and includes annual refresher training.



## **Benefits**

Robust and compact design, fast generation of the active  $H_2O_2$  agent and a unique control process, ensure correct contact times for > 6-log microbial reduction. The advanced sensors controlled by the system software enable an effective process without generation of condensation.

- High penetration ratio into hard-toreach locations, such as ventilation systems and narrow spaces.
- A fast process without harming electronics or textiles
- Proved to destroy all biological and many chemical contaminants.
- Works in low temperature processes and by that it can be used in a variety of environments.
- The processes can be validated by using biological indicators.
- An environmentally friendly process.
- Highly mobile, a unit only weight 9,5 kg (21 lbs) and measures only 557 x 420 x 220 (mm).

# Capacity

- A very capable system with high efficiency.
- Brings a 150 m3 room to 400 ppm in 35 minutes
- Brings a 150 m3 room to 800 ppm/H exposure in 70 minutes
- 20 ft container in 30 mir (Covid-19 disinfection)
- Vehicle, in side disinfection in 30 minutes
- Hospital operating room, disinfection in 120 minutes



## The System

The Cleamix VCS-100-CR is developed and built in Finland by Cleamix OY, invented to support the Finnish Air Force. Real time sensor suite controls output level and ensures that the concentration rate is kept on a constant level, avoiding condensation throughout the process.

250 units can be networked together thus enabling simultaneous treatment of large spaces or simultaneous treatment of multiple separate spaces such as hospital rooms.

Maximum output 1725 ppm / minute, automatically adjusted and maintained as per desired ppm level and time.

Advanced micro pumps, dryers, heaters and catalytic converters are used for adjusting environmental parameters and removing VHP after the process

## **Technical Specifications**

- Size mm: 557 x 420 x 220 (~0,05 M3)
- Weight 13.8 Kg (21 lbs.)
- Consumption 3 ml per minute
- Capacity per unit 150m<sub>2</sub> room to 400 ppm in 35 minutes, 800 ppm in 1 hour
- CE approved
- NCAFG code A960G



# Deployed to a Stockholm field hospital

We deployed at a Swedish field hospital for the Region Stockholm to support the fight against Covid-19, disinfecting 2000 visors per hour.

Within 72 hours from order of disinfection of protective gear (visors and respiratory protection), we were operational incl. two heated containers, processes and routines for handling dirty and clean transports as well as the packing of clean equipment.

The deployed managed solution was scaled for disinfection of +2000 visor per hour, and additional 90 minutes for packing and unpacking of the disinfected items.

During set up of the operation, extensive tests were made by Karolinska Institutet to ensure that the respiratory protection gear was disinfected without losing its functionality. No changes in functionality on the protection gear could be noted while full penetration of the protection was achieved.



# Finnish Defence Forces

Operational for decontamination of returning deployed materials, R&D laboratories and placed in readiness for fighting Covid-19 out-breaks within the garrisons.

The Cleamix system was developed in close collaboration with the Finnish Air Force due to the need of decontaminating airplanes with a guarantee that electrical equipment remained functional. Thanks to Cleamix, planes were quickly returned into service.

The Finnish Defence Forces also uses Cleamix for various applications during their operation.

They use Cleamix for decontamination of equipment before long time storage, treatment of decontaminated equipment for quickly returning the crisis management materials and for decontamination of general facilities when needed.

Furthermore, five garrisons have units stored for readiness purposes - in case there is a need for decontamination of Covid-infested or other areas. It's also stored as CBRN-readiness equipment and is currently used in labs and research.



## Disinfection of ambulances

The Finnish Ambulance service has successfully been decontaminating ambulances and disinfecting their interiors.

With only 20 minutes of exposure to vaporized hydrogen peroxide and a total process of 30 minutes, the Cleamix VCS-100-CR has created efficiency in the use of ambulances in a safe way.

Due to the systems use of vaporized hydrogen peroxide, instead of aerosols, all electronic devises can be left inside the ambulance. During the process, all electronic appliances with cooling fans can, and should be, turned on.

With the Cleamix solutions, the patients and the medical personnel can be sure that they are working in a clean environment where also the narrowest parts of the ambulance are free of viruses, and that the process is as safe as it is efficient.



# Suggested applications

Our systems and services are suitable for many applications, here are some of them:

#### Defence



- · Field Hospitals
- Vehicles
- Aircraft & Helicopters
- Ships & Submarines
- Containers
- Buildings

### **Public**



- Hospitals
- Ambulances
- Trains
- Buses
- Aircraft & Helicopters
- Buildings
- · Ships

### Commercial



- Containers
- Transportation systems
- Mold sanitation
- Airports, offices, conference halls, stores, warehous
- Ships, Aircraft& Helicopters



# About us

We are your Nordic trusted partner group to enhance readiness, enable technology access and filling capability gaps.



Our mission

Serve a Stronger Society

#### CONTACT:

E: info@mw.group P: +46 10 - 172 61 00 W: mw.group

Head Office Gustav III's Boulevard 32 169 73 Solna (Stockholm) Sweden

