

DryD - DryDisinfect

Dry fog disinfection is a smart and effective solution



Ultrasonic unit DryD



Disinfection and sterilization are considered one of the cornerstones of modern medicine. Therefore, high standards of hygiene must be obtained not only for hospitals, but also for residential areas, hotels, public places, gyms, theatres, cinemas, schools, shopping centres, churches and all means of transport. The disinfection of premises and surfaces is particularly important during pandemics.

There are many devices that distribute disinfection in the form of "dry fog". However, hydraulic spraying using high pressure nozzles creates solution particles with a size of more than 10 microns and makes surfaces become wet (condensation), which in turn could cause corrosion on equipment. Additionally, there is a high level of consumption of disinfectant.

By using ultrasonic based spray systems, it is possible to achieve a particle size of less than 1 micron of the disinfectant. Larger particles remain inside the tank of the ultrasonic unit and are again reduced to the desired size by ultrasonic generator. This guarantees an optimal use of the disinfectant without any loss and the surfaces treated remain dry.

DryDisinfect offers a cost effective, compact and highly efficient solution for ultrasonic disinfection of premises wherever it is needed.

The system consists of a high-performance ultrasonic unit called DryD and a special disinfectant DryD15 based on hydrogen peroxide (with or without silver) with a concentration of H₂O₂ up to 7,5%.

Disinfection
and destruction
of viruses

Principle

System DryD

DryD – dry fog ultrasonic nebulizer

DryD units are available in versions with different performance: DryD 4G - with four and DryD 8G - with eight ultrasonic generators

Body material:	stainless steel
Scope of supply:	dosing pump level sensor temperature sensor
Performance:	up to 400 m ³ /h
Control:	4 " touch screen (multilingual) app. on mobile phone
Power supply:	110 - 250 V, 50/60 Hz, 300 W.
Consumption of disinfectant:	
DryD 8G	2 000 ml / hour
Dimensions:	400 x 600 mm, height 800 mm
Weight:	approx. 25 kg, excluding 10 l canister
Adapter:	adapter for connecting a 100 mm diameter hose

Technical specification



Front view of the unit with electronic inside / Back view with disinfectant / Global view

The DryDisinfect disinfection system is not only used to kill viruses.

DryDisinfect is a multifunctional system

- removes the smell of smoke in smoking areas
- mold and odor in old houses
- pest infestation, cockroaches, and another insect

Recommended amounts of disinfectant depending on the type and the facility of the rooms. For example:

Hotel rooms, apartments, busses, trains:	2 ml/m ³
Surgical rooms, hospital rooms:	more than 3 ml/m ³

View

Multifunctional system
Other applications

DryD – operation and configuration

DryD unit can be easily controlled by using a 4-inch touch screen located on the top panel of the device or by making use of the free smartphone app.

The user can choose the desired operation language. Current language options for operating DryD are English, German, Slovak and Russian. More languages will be added gradually.

The DryD 8G model reliably sprays 2000 ml of disinfectant solution per hour. The time required for disinfection is calculated based on both the volume and type of room. After the selected disinfection time has elapsed, the device automatically turns off.

With disinfectants based on hydrogen peroxide being in use, any person present in the disinfected room is required to wear a full-face mask with a protective filter. Therefore, right after switching on the device, the disinfecting "dry fog" is produced only after 1 minute, so that the operator can safely leave the disinfected area.

Example:

Disinfection of a room of about 100 m³ (for example, an office or a room with dimensions of 8x4x3 m) with the necessary 2 ml of disinfection / m³ will take time:

1. Preparing and programming	2 min
2. Start of disinfection and exit of the operator	1 min
3. Time of disinfection at 2000 ml/h	12 min
4. Pause after disinfection	10 min
5. Airing the room	5 min
Total	30 min

This is just an example of the calculation. The recommended method of dosing is described in detail in the Operating manual.

The devices can also be equipped with filter and circulation fan (optional) for cleaning the air after disinfection in the room, where ventilation is either problematic or not available at all. As additional equipment (accessories) was developed also swinging air gun- Blaster - for disinfection of cable car cabins.

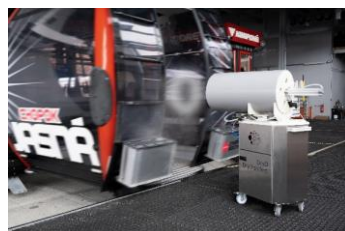
Operation

Options

Accessories



Measuring EMC



Disinfection - Cable car cabin



VOLVO showroom

DryD – modular and multifunctional system

You can use it not only as a disinfection unit, but also as a regular humidifier in any dry environment.

The dimensions of the unit and the presence of swivel wheels make it easy to move it around inside an apartment or house. For instance, you can install the device in a kitchen cabinet (like build – in kitchen appliances) with the possibility of easily removing or moving them to another room where disinfection is necessary.

DryD Mega Board

It is possible to improve the system performance by using more standard units equipped with special accessories - fan module. This is necessary, when disinfecting large space, such as restaurants, shopping centres, airline terminals, railway and bus stations, gyms, warehouses, or churches. In this case, the disinfection performance increases up to 2500 m³/h per unit.



Transport

The DryD system also enables efficient disinfection in public transport, trains or aircraft with its flexibility and performance. As a rule, the time required for the disinfection of a conventional wagon or bus does not exceed 30 minutes, and only 300-400 ml of the DryD15 disinfectant solution is consumed.



Trains and Bus disinfection

Municipal sector

For schools, sport clubs and for senior residences is disinfection with dry fog based on H₂O₂ /Ag the ideal solution. Textile materials remain dry, document's, books or electronic devices can stay in the disinfected room. Operation of unit is easy; specialists are not required. After short training everybody can operate the disinfection unit easy.

Modular system

Large space

Public transport

Sport

Schools

Senior residences

DryD – effective use in healthcare

Medical facilities such as hospitals, clinics, surgical theatres, dental clinics, as well as patient transportation require the highest possible level of disinfection. Many patients pass through them, a significant part of whom may be infected with infections or viruses.

Nosocomial infections are also a serious health problem. In Germany, their number is estimated at 1 million cases of infection per year, with an average of 37,000 people dying per year. (Source: Jena centre for control and treatment of sepsis).

Therefore, care must be taken in this environment to ensure a high level of cleanliness, which is guaranteed by reliable and effective disinfection. All these requirements are met by disinfection based on hydrogen peroxide H_2O_2 using a "dry fog" production system with ultrasonic generators.

HealthCare



Dental / Surgical / Neurologic ambulances

Patients and healthcare staff are at high risk of infection, especially when transported to the hospital. This is especially true during the Covid-19 pandemic when transporting patients affected by this virus.

It is almost impossible to disinfect ambulances using the standard contact method by wiping them manually. Even with the most thorough manual processing, there may be an area or space that will be inadvertently forgotten or where the orderly simply cannot perform the processing.

When using a disinfectant spray, the entire interior remains wet, and over time, the metal parts of the interior or appliances are corroded or destroyed.

The time factor is also important - disinfection works take quite a long time.

Ambulance

Patient Transport

A highly effective solution for ambulances is to use a dry fog disinfection with the DryD system.

The average volume of ambulances (such as Mercedes Benz Sprinter or similar) is less than 20 m³.

If the specific consumption of the disinfectant solution is up to 4 ml/m³, less than 100 ml of the disinfectant solution is used for disinfection of one ambulance. In this case the net disinfection time should be about 5 minutes in the patient transport area.

DryD aircraft trolley

Another area of specialization is the disinfection of passenger cabin in an aircraft. The DryD system is integrated into the frame of the steward's on-board aircraft trolley.

The power of the device allows the disinfection of the aircraft's board in a few minutes immediately after landing and disembarking of passengers. Thus, the new passengers can enter a clean, freshly sanitized aircraft cabin.

Air circulation in the cabin during disinfection can be provided by the aircraft's own climate control system in the internal recirculation mode. After the disinfection is completed, this system will replace the air in the cabin, switching to the air flow mode outside the aircraft.

Air transport