



# S400 AIR DISINFECTANT DEVICE

CLEANER, SAFER AIR FOR ALL



# PROVIDE A SAFE, VIRUS-FREE, ENVIRONMENT FOR EVERYONE.

We all know the importance of keeping surfaces clean and tidy, but often we forget to focus on the air.

Poor indoor air quality is one of the leading causes of the transmission of viruses and other airborne pathogens.

In packed and busy communal areas, airborne viruses and other pathogens can pose a serious threat to your colleagues and patients. The S400 Air Disinfectant Device disinfects the air, creating a safe and comfortable environment for everyone.

Unlike other air purifiers, our machine combines HEPA filtration, UV-C technology and carbon filtration with fast-moving air to **kill 99.9995% of all airborne viruses and germs** in your environment.

Powerful air disinfectant 24/7 in occupied spaces like emergency rooms, intensive care units, operating rooms, patient rooms, compounding pharmacies laboratories, food-service, waiting areas, and more.

#### Proven to work in facilities like:

- NYU Medical Centre
- University of Rochester
- Federal VA Hospitals
- NY Health+Hospitals
- Baptist Health Systems





# DISINFECT THE AIR AND KILL 99.9995% OF VIRUSES IN MINUTES.

The S400 is a compact, cost-effective and efficient solution for the sterilisation of air within enclosed spaces. Its compact size, yet high air sterilising capacity and quiet operation makes it perfectly suited to medical environments.

#### **No Airflow Disruption**

The S400's 360-degree airflow system produces uniform, low-pressure air movement. This creates continuous, large-scale air-scrubbing throughout the room.

#### **Rapid And Safe Whole Room Clean**

Whole-room air exchange within minutes, without harmful ozone production UV exposure.

#### **Safe And Fast Acting**

At rates of 400 cubic feet per minute, S400 cleans air faster for its size than any other air disinfection system. Performing HEPA filtration, UV-C pathogen elimination, and carbon cleansing simultaneously, the S400 makes the environment safer, faster.

#### **Plug In And Go**

No requirement for specialist installation or commissioning.

#### **Lab Tested Pathogen Elimination**

Tested in well-known laboratories, with a kill rate of up to 99.9995% against one of the most difficult viruses to kill - norovirus surrogate.

#### **Portable, Efficient And Durable**

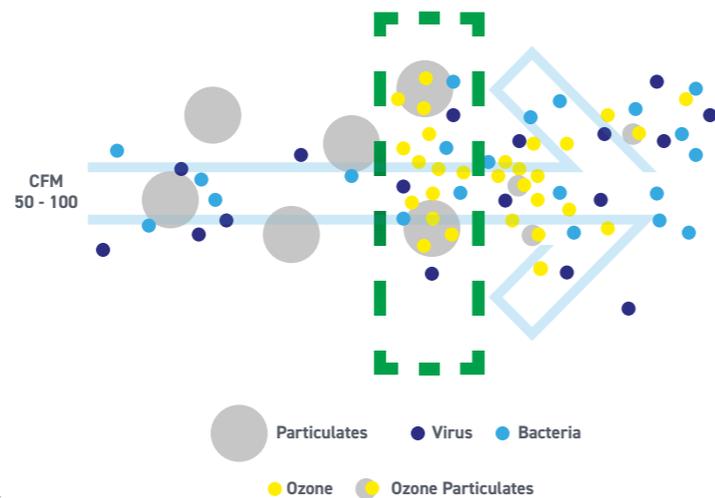
The S400's size and materials make it easy to move, easy to set up, and long-lasting. The unit itself is low-maintenance and consumes about as much power as an average ceiling fan.

# 24/7 UV-C AIR DISINFECTION

Safe for patients and staff in occupied areas.

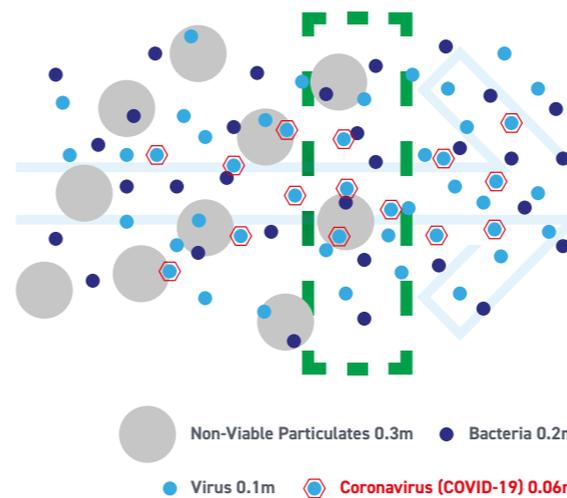
The S400 goes beyond filtration - capturing airborne pathogens with a UV-C dosage close and long enough for up to a 99.9995% virus kill rate, eliminating bacteria, mould, odour, and Volatile Organic Compound's.

Using patented technology, the S400 captures and eliminates more pathogens than HEPA filtration or Hydroxyls, Ozone and Ionisation.



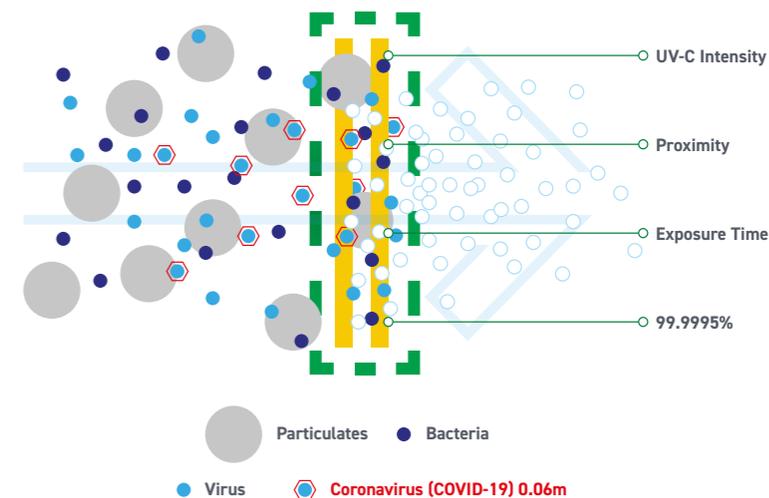
## Hydroxyls, Ozone, and Ionisation

Ozone has no known useful medical application. For ozone to be effective as a germicide, it must be present in a concentration far greater than that which can be safely tolerated by man and animals.



## HEPA Filtration

HEPA filtration alone is good for longer, heavier particulates like dust and debris, but HEPA can only stop particulates down to zero-point three-micron size. Smaller and lighter germs like virus, bacteria and mould spores pass through HEPA filtration effortlessly.



## S400 combines HEPA filtration with UV-C light and fast-moving air for air sterilisation.

Airborne pathogens are constantly in motion. Airborne germs must be held close enough and long enough for true efficacy. Our high-volume 400 CFM fan performs complete air change in minutes, with HEPA and UC-V light to eliminate viruses and disinfect the air.

# LAB-TESTED, COMPLETE AIR DISINFECTION.

Two independent, nationally recognised lab facilities (Environmental Diagnostics Laboratory and MicroChem Laboratory) performed efficacy testing of an airborne virus in bio-aerosol guideline aerosolised chambers.

We lab-tested a kill rate of up to 99.9995% of airborne norovirus surrogate (one of the most difficult viruses to kill) and 99.9999% of bacterial surrogate, including TB and C-diff representative pathogens.

Test Device	Microorganism	Inoculum Concentration (CFU/ml)	Treatment Time Point	Recovery	Percent Reduction Vs. Time Zone	Log Reduction vs Time Zero
EU400	MS2 Bacteriophage ATCC 15597-B1	1/00E+07	Time Zero	1.00E+06		N/A
			5 Minutes	1.00E+04	99.0%	2.00
			15 Minutes	1.00E+02	99.990%	4.00
			30 Minutes	5.00E+00	99.9995%	5.00

CFU/m<sup>3</sup>



## KILLS 99.9995% AIRBORNE NOROVIRUS SURROGATE

- Small non-enveloped RNA strain
- Aerosolized Pathogen Species
- Bio-Aerosol Test Chambers
- Test Room Size 800 Cubic Feet C
- Contact time 30-60 minutes

## KILLS 99.9999% BACTERIA AIRBORNE SURROGATE

- C diff – Clostridioides difficile
- TB Tuberculosis
- Enterococcus faecalis
- Streptococcus Species
- Pseudomonas aeruginosa
- Methicillin Resistant Staphylococcus aureus (MRSA)

## KILLS 99.99% MOLD

- Cladosporium Cladosporioides

# HELPFUL INFORMATION

## Can the S400 kill COVID-19?

When it comes to eliminating bacteria, viruses and other harmful microorganisms that pose a risk to human health, UV-C light (Ultraviolet) is proven technology. UV-C expels a short wavelength that disrupts the DNA of germs, therefore killing or inactivating them.

If a product which uses UV-C light is effective against harder-to-kill viruses, such as Norovirus, it is likely to kill SARS-CoV-2. The S400's 99.9995% Norovirus kill rate validates the conclusion that S400 will have the same efficiency against the easier to kill SARS-CoV-2 virus.

## Is the S400 an air purifier?

More than a standard air purifier, the S400 is powerful, fast, whole room air disinfection. It uses UV technology to disinfect large volumes of fast-moving air in our patented 'UV-Kill' chamber, capturing all microorganisms and holds them long enough to destroy germs completely.

## How does it work?

We combine air particulate filtration and UV-C germ eradication to eliminate airborne pathogens. UV germ-killing technology only works if pathogens are close to the UV-C light source long enough to be destroyed. S400's patented technology does exactly that with large volumes of fast-moving air, achieving a pathogen killing solution of 99.9995% efficacy rating.

## Will it disrupt the airflow?

No. The S400's quiet operation goes virtually unnoticed, even while the room is occupied. Studies show our air-processing to remain constant regardless of existing HVAC systems.

## Calculate Air Change per hour

Calculating the number of Air Changes per hour is easy. The S400 disinfects 400 cubic ft. per minute at the highest speed, which equates to 24,000 cubic ft. per hour. This then needs to be divided by the cubic ft. of the room.

## An example

Based on a room size  
15ft (Length) x 12 ft (Width) x 10 ft (Height)

$$\text{ACH} = \frac{\text{SAM } 400 \text{ cfm} \times 60 \text{ minutes}}{\text{Cubic Feet of Room}}$$

$$\text{ACH} = \frac{400 \text{ cfm} \times 60 \text{ minutes}}{15\text{ft} \times 12\text{ft} \times 10\text{ft}}$$

$$\text{ACH} = \frac{24,000 \text{ cfh}}{1800 \text{ cubic feet of room}}$$

$$\text{ACH} = 400 \text{ cfm} \times 60 \text{ minutes}$$

You can also use Scientific Air's online calculator here: <https://scientificairmanagement.com/calculator/>



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