HELP TO STOP COVID-19

INTERNATIONAL IUVA ULTRAVIOLET ASSOCIATION

SOLUTIONS FOR
AIR DISINFECTION, CLEANING AND PURIFICATION

- DISINFECTION IN AIR CONDITIONING AND VENTILATION INSTALLATIONS
- DISINFECTION AND CLEANING OF OUTDOOR SPACES
- AIR PURIFICATION INDOORS

SODECA®

CG

WE BET ON UVc TECHNOLOGY TO BEAT THE VIRUS

SAFE ELIMINATION OF VIRUSES AND BACTERIA

SOLUTIONS FOR

DISINFECTION AND CLEANING IN EXISTING AIR CONDITIONING AND VENTILATION INSTALLATIONS

With time and years of use, air conditioning and ventilation installations become possible sources of bacteria, fungi and other microorganisms that could be harmful to health.

To guard against this risk, we recommend that, in-duct germicidal chambers, with ultraviolet UVc light are installed. The use of properly maintained filters is also recommended where possible if the existing system pressure losses permit.

INDOOR AIR QUALITY

Microorganisms that may have built up in ducting, filters or on other surfaces can become airborne. These types of pathogens can cause disease, allergies or other health problems. To prevent this and to ensure good indoor air quality, the installation of germicidal chambers is essential.

SUITABLE HYGIENE CONDITIONS

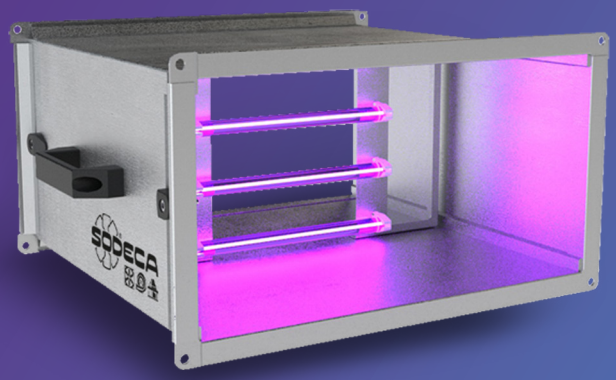
There are many cases where high standards of hygiene need to be maintained, for example in healthcare facilities, commercial kitchens and food preparation and sales areas. Airborne microbes may contaminate products, equipment and surfaces in these areas and could cause serious health problems.

Dangerous microorganisms that contaminate food or surfaces are not only harmful to health, they can also cause financial damage to businesses.

GERMICIDAL CHAMBERS WITH ULTRAVIOLET LIGHT ENDORSED BY ASHRAE AND BY IUVA

Germicidal chambers inactivate pathogens using UVc, ultraviolet light technology. Along with other measures, they are effective against microbes that have not been captured by other methods such as filtration.

According to ASHRAE, germicidal radiation uses UVc short wave ultraviolet energy to inactivate viral organisms, bacteria and fungi and prevents them from replicating and causing disease. UVc energy disrupts the deoxyribonucleic acid (DNA) of a wide range of microorganisms, making them harmless. Standard UVc lamps in commercial systems are low pressure mercury vapour lamps. They radiate light in the air passing through the germicidal chamber at a virtually optimum UVc level of 256 nm.



The use of UVc is becoming **increasingly more frequent as the concern for the quality of the air indoors grows.** UVc is used to disrupt the transmission of pathogenic microorganisms such as *mycobacterium tuberculosis* (TB), influenza viruses or mildew. By applying UVc, the indoor air quality (IAQ) is improved and consequently, so is the health, comfort and productivity of the occupants.

The International Ultraviolet Association (IUVA) endorses the fact that **UVc disinfection technologies play an important role, along with other processes used, in reducing the transmission of the virus that** causes COVID-19, based on disinfection data and empirical evidence. UVc is a known disinfectant of air, water and surfaces and can help reduce the risk of COVID-19 contagion when properly applied.

UVc DOSE

Some examples of effective dosage for virus and bacteria inactivation

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For further information please go to:
www.iuva.org

TYPE	NAME	INACTIVATION DOSE (mJ/cm²)		REFERENCE
		1st (90%)	2nd (99%)	
BACTERIA	*Legionella pneumophila*	3.1	5.0	Wilson et al. 1992
	Salmonella enteritidis	5.0	7.0	Tosa and Hirata 1998
	Salmonella typhimurium	3.0	11.5	Maya et al. 2003
	Shigella dysenteriae	0.5	2.0	Wilson et al. 1992
	Shigella sonnei	3.2	4.9	Chang et al. 1985
	Vibrio cholerae	0.8	1.4	Wilson et al. 1992
	Citrobacter diversus	5.0	7.0	Giese and Darby 2000
	Mycobacterium tuberculosis	2.2	4.3	Collins 1971
	Listeria monocytogenes	2.2	3.0	Collins 1971
PROTOZOA	*Cryptosporidium parvum*	<2	<2	Clancy et al. 2004
	Giardia lamblia	<10	~10	Campbell et al. 2002
	Giardia muris	<2	<2	Mofidi et al. 2002
	Encephalitozoom intestinalis, microsporidia	3.0	5.0	Marshall et al. 2003
VIRUS	Adenovirus 40	55.0	105.0	Thurston-Enriquez et al. 2003
	Echovirus II	7.0	14.0	Gerba et al. 2002
	Hepatitis A	5.1	13.7	Wilson et al. 1992
	Poliovirus Type 1	5.7	11.0	Wilson et al. 1992
	Rotavirus SA11	8.0	15.0	Sommer et al. 1989

** Table according to IUVA (International UltraViolet Association)*

UVc light has been used for 40 years to remove bacteria and viruses, including coronaviruses, from wastewater and pharmaceutical products. Some viruses and bacteria may be more susceptible to UVc disinfection than others, but they can all be inactivated with appropriate doses.

UVc light is used in medical and scientific settings and makes specific reference to the Germicidal UVc range of 200-280 nm. Under controlled laboratory conditions, it has been scientifically demonstrated that it inactivates two coronaviruses similar to SARS-CoV-2 such as SARS-CoV-1 and MERS-CoV.

BENEFITS OF **DISINFECTING USING UVc ULTRAVIOLET LIGHT AND FILTERS**

— **System supported** by international organisations and by scientific tests

— **System frequently used as a disinfectant** in healthcare settings for many years

— **Destruction of viruses, bacteria, mildew, fungi and other pathogens** that could cause disease and allergies

— **Retention of harmful micro-particles**, dust reduction and elimination of odours

— **Improves indoor air quality** increasing the productivity

— **Cleaning air 24 hours a day**, lowering the maintenance and cleaning costs of ventilation and air conditioning installations

IMPORTANT ADVANTAGES DEPENDING ON THE APPLICATION

HEALTHCARE SECTOR

Elimination of viruses and bacteria, reducing the exposure and expansion of possible diseases.

FOOD SECTOR

Elimination of fungi, mildew and bacteria, increasing the conservation of food and reducing the possibilities of producing allergies and intoxications.

HOSPITALITY SECTOR

Elimination of viruses and bacteria, reducing possible exposure and spread of disease.

INDUSTRIAL AND COMMERCIAL SECTORS

Elimination of viruses and bacteria, reducing possible exposure and spread of disease.

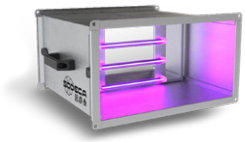
SOLUTIONS FOR
DISINFECTION AND CLEANING

DISINFECTION EQUIPMENT AND CLEANING OF AIR CONDITIONING AND VENTILATION INSTALLATIONS

WITHOUT A FAN

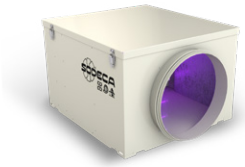
CGR-UVc

Germicidal chamber without a fan for rectangular ducts



CG/LP-UVc

Germicidal chamber without a fan for circular ducts



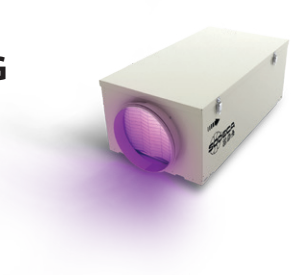
CG/FILTER/UVc

Air purification units for circular ducts

WITH FAN

SV/FILTER-CG

Air purification units with UVc germicidal chamber



CJK/FILTER/EC

Air purification units for circular ducts

OUTDOOR DISINFECTION AND CLEANING EQUIPMENT

DISINFECT-500

Industrial disinfection machine with misting system

DISINFECT-500-R

Industrial disinfection machine with misting system equipped with a trailer

SOLUTIONS FOR
AIR PURIFICATION INDOORS

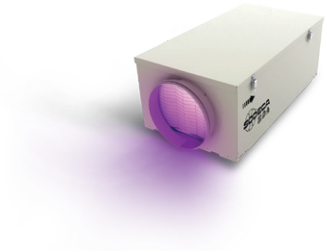
AIR PURIFIERS

PURI-50

Portable air purifier

SV/FILTER-CG

Air purification units with UVc germicidal chamber, in line for ducts



CJK/FILTER/EC

Air purification units for circular ducts

UPH-EC

Mobile air purification units

UPM-EC

Mobile air purification units

UPA

Units specifically designed for cleaning and purifying indoor air

Pure air throughout your entire life

AIR PURIFIERS

Schools and training centres
Universities

Pharmacies
Medical and dental centres
Nursing homes

Offices
Shops

Bars and cafes
Restaurants
Hotels
Gyms

Waiting rooms
Spas

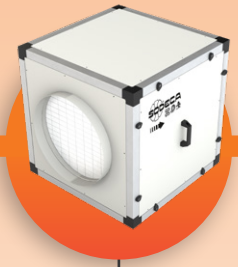
PURI-50

Model	m²*
50	45-50

SV/FILTER-CG

F7 + F9

Model	m²*
200	20-50
250	50-100
315	50-140
350	100-140



CJK/FILTER/EC

F7 + F9

Model	m²*
220	50-100
250	100-140
310	140-200
400	200-250
500	250-300

F7 + HEPA H14

Model	m²*
310	50-100
400	100-140
500	140-350

* Recommended effective working area for a space 3 metres high.

Hotels

Manufacturing industry

General warehouses
Logistic warehouses
Airport waiting rooms
Hospital waiting rooms

4.0 technology industry

Medical industry
Pharmaceutical industry
Laboratories
Food industry
Data centres

Automotive industry

UPH/EC

F7 + F9

Model	m²*
220	50-100
250	100-140
310	140-200
400	200-250

F7 + HEPA H14

Model	m²*
310	50-100
400	100-140

UPM/EC

F7 + F9

Model	m²*
310	100-200
400	140-250
500	250-350

F7 + HEPA H14

Model	m²*
310	50-100
400	100-200
500	200-350

UPA

F7 + F9

Model	m²*
1500	200-350
3000	300-450
4500	450-900

F7 + HEPA H14

Model	m²*
1500	200-350
3000	300-450
4500	450-900

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