

# X-RETON P UVION

PATHOGEN IONIZER

AIR STERILIZATION DEVICES

**Sterile Air, Healthy Breathe**



**TEKNOMAR<sup>®</sup>**  
Since 1993 **GROUP**

# What's X-RETON P UVION?

X-RETON P UVION Pathogen Ionizer has been developed for use in all kinds of environments where there is a risk of contamination and sterilization & hygiene are needed.

It is a device that is used to destroy all kinds of microorganisms, pathogens, viruses, bacteria, fungi, mould and spores in the air with its **advanced atmospheric plasma negative ion generator and sterilization system**. The device produces atmospheric plasma, negative ions, oxidized oxygen and ozone (O<sub>3</sub>)\* with its high technology.

To create negative ions; there is a mechanical system produced with advanced technology that includes HV and UV short wave light source in the device. Oxygen (O<sub>2</sub>) atoms gain electrons with the high technology of the device and become negative ions\*\*. Negative ion molecules with extra electrons have positive effects on the environment; they contribute to clean air by neutralizing ethylene agents and odour. At the same time, they provide a sterile atmosphere by cleaning the air from all kinds of microbiological bacteria, viruses, mould, fungi, pollen and especially ethylene agents that have a rotting effect in the environment. They also eliminate ambient odours, hospital and operating room odours.

Pathogen Ionizer; prevents the spread of Avian Flu, Swine Flu, SARS, Ebola, Covid-19 and all other airborne pathogens with altered genomes.



\*There is no ozone generator in the device and no external ozone is given to the environment. Oxygen atoms which present in the environment are excited by a mechanism containing atmospheric plasma and a high-energy UV short-wave light source and split into atoms, and the separated oxygen atom combines with a nearby oxygen atom to form ozone (O<sub>3</sub>) and oxidized oxygen.  
(The O<sub>3</sub> rate in the environment is 0.21%. This rate is beneficial for human health.)

\*\*Negative ions created by the device are made of an oxidized oxygen atom. This is an event that takes place in nature, and ions in nature are formed because of sunlight, radiation and air movements. The more negative ions there are in the environment, the less the number of particles circulating in the air, and the less pollution will be.

# Key Differences



## Atmospheric Plasma

It is the 4th state of matter and its ionic state. It is effective in all kinds of inactivation of microorganisms. The device absorbs the pathogens and harmful gases emitted into the air, ensures the decomposition of the gases thanks to its catalytic inverter, and creates a photocatalytic reaction, neutralizing the airborne pathogens, ethylene agents and harmful gases, and decontaminates the area.



## Functional

Includes atmospheric plasma & negative ion generator that can work as a stand-alone system and a complete air sterilization system.



24/7

Provides a safe, clean and sterile environment in all kinds of environments, laboratories and hospitals. Suitable to use as a support to the central system. No harm to human health, it can be operated 24 hours a day.

## Minimalist Design\*\*



There are 2 models, mobile and wall-mounted.

**Mobile;** not require space with its small, unique and portable design and you can place the device almost anywhere.

**Wall type;** attached to the mounting bracket with only 2 screws. With its small and simple design, it takes up very little space.\*

\*\*Wall type UVION should be installed at least 2.20 m above the ground for effective performance.

## Active Protection



X-RETON P UVION is an excellent destroyer of pathogens in the environment. By charging negative ions to the particles in the environment, ensures that the particles are kept by structural stainless steel electrostatic filtration.



## Bio-Decontamination

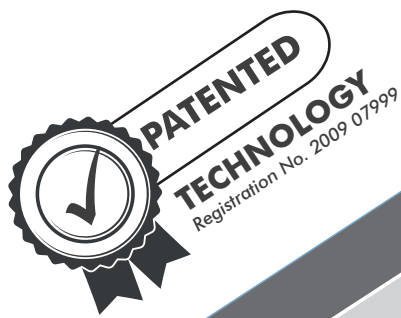
Provides  $\leq 96\%$  bio-decontamination within the first hour on all kinds of microorganisms and ethylene agents which cannot be retained by HEPA Filter.

## Particulate Decontamination\*



Provides  $96\% \leq$  particulate decontamination at the level of  $0.3\mu$  with in the first hour.

\*Applicable for X-RETON P UVION Mobile Pathogen Ionizer.



# XRETON-P UVION

## **M H13/ H14 Filter**

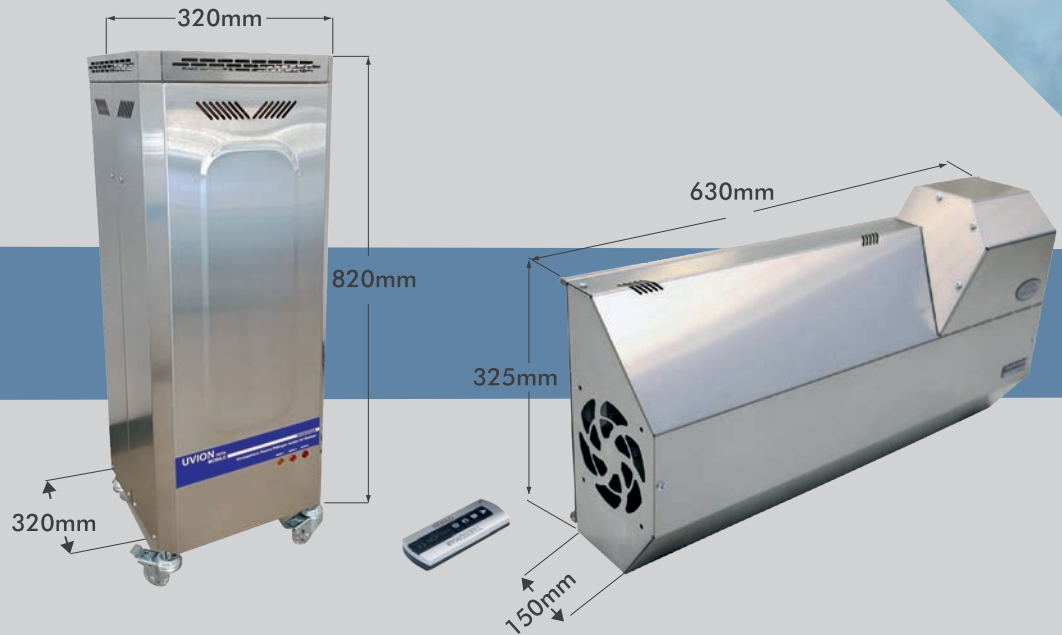
- HEPA Filter That Has Particle Filtering Effect Up To 99.995% .
- Protection Against Asthma and Respiratory Tract Infections.

## **M Pre-Filter G14/ EU4**

- Cartridge Type Carbon Filter

## **M Portability**

- Lockable Wheel
- Easy Carrying Feature



## **M UV-C Germicidal Lamp**

- Microorganism Killing Ability with 254 nm Beam Effect
- Approx. 9000 Hours Working Life For All Lamps
- 400-700 nm Catalytic Lamp

## **M High Effectiveness Area**

- Healthy Breath up to 60m<sup>2</sup>
- 30-40 m<sup>2</sup> In Areas with High Microorganism Load (Intensive Care Unit etc.)
- 50-60 m<sup>2</sup> In Normal Areas

## **M Long-Lasting Use**

- 304 Stainless Steel Chassis
- Ergonomic and Durable Design

## **M Odour Elimination**

- Elimination of All Kinds of Ambient Odours

\* **M**: X-RETON P UVION Mobile Pathogen Ionizer

\* **D**: X-RETON P UVION Wall Type Pathogen Ionizer

# Pathogen Ionizer Specifications

FIRST IN THE WORLD!



## M **Pathogen Ionizer** D

- Advanced atmospheric plasma technology which includes cold plasma
- Titanium dioxide (TiO<sub>2</sub>), Silver iodide (AgI), Copper Sulphate (CuS) Borosilicate tube ion generator technology
- High effectiveness in destroying microorganisms and pathogen agents in the air with negative ion and plasma production
- Mobile air sterilizer reduces virus, bacteria and mould level to almost 0% in a 100m<sup>3</sup> area within 24 hours



Atmospheric Plasma Generator

## Model Comparison Chart

SPECIFICATIONS	X-RETON P UVION MOBILE	X-RETON P UVION Wall Type
Atmospheric Plasma Technology	HV (5000 V plasma) source	
Negative Ion Module	TiO <sub>2</sub> , AgI, CuS coated cylindrical borosilicate glass tube ion generator	
UV Lamp	2 x 15W UVC 254 nm germicidal lamps 2 x 18 W catalytic 400-700 nm lamps	1 x 15W UVC 254 nm germicidal lamp 1 x 18 W catalytic 400-700 nm lamp
HEPA Filter	H14 Filter Retention 99.995% ( ≥ 0.3μ )	-
Pre Filter	G4 Carbon Filter Retention 90%	-
Fan	410 m <sup>3</sup> /h 250 Pa 400 W	220 m <sup>3</sup> /h 100 Pa 30 W
Air- Cycle Speed	Min 390 m <sup>3</sup> /h	Min 200 m <sup>3</sup> /h
Protection Class	IP20	
Electrical Information	220-230V AC 50-60 Hz, 0,8 kW	220-230V AC 50-60 Hz, 0,15 kW

## M **Plug & Play** D

- Ready to Use, Plug in and Run it!
- Wall Type: Only Needs Mounting Bracket with Rail System

## M **User Friendly** D

- Remote Control Comfort

## M **Service and Maintenance** D

- All Parts are Interchangeable
- Design that Makes Filter Change Easy



# Safe Protection in Every Area

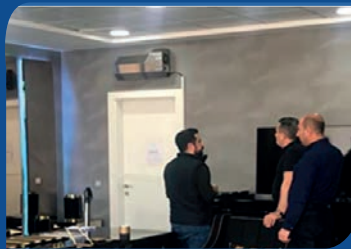
**NO ROOM FOR GERMS IN THE AIR YOU BREATHE**

Effective Solution To Destroy All Kinds Of Viruses, Bacteria & Microorganisms



## Living Space Business & Office Solutions

Houses, Offices, Shopping Malls, Cafes, Restaurants, Cafeterias, Nursing Homes, Theatres, Cinemas and Concert Halls, Military Installations, Hotels and Motels, Shops, Bank Branches, Finance Centers, Markets, Business Centers, etc.



## Healthcare Organizations

Hospitals, Intensive Care Units, Isolation Rooms, Clinics, Veterinary Clinics, Dentist Clinics, Pharmacies, Pharmacy Warehouses, Laboratories, Criminology Laboratories, Reanimation Areas, Autopsy Rooms etc. Fields and Health Institutions



## Solutions for the Education Sector

Schools, Classes, Kindergartens etc.



## Industrial Solutions

Food Industry, Food Processing, Food Production, Packaging and Storage Areas etc. Fields and Industrial Areas.



# XRETON-P UVION Pathogen Ionizer Efficacy

## X-RETON P UVION (Wall Type)

### NUMERICAL REDUCTION RATES

THE HOUR THE SAMPLE'S WAS TAKEN	BACTERIA (NUMBER OF COLONIES)	FUNGI MOULD (NUMBER OF COLONIES)
Before the device is installed	960	228
2 hours later the device was installed	690	48
4 hours later the device was installed	436	8
6 hours later the device was installed	291	2
8 hours later the device was installed	211	0
24 hours later the device was installed	87	0

### PERCENT (%) REDUCTION RATES

THE HOUR THE SAMPLE'S WAS TAKEN	BACTERIA (NUMBER OF COLONIES)	FUNGI MOULD (NUMBER OF COLONIES)
Before the device is installed	0%	0%
2 hours later the device was installed	28,1%	79%
4 hours later the device was installed	55,6%	96,5%
6 hours later the device was installed	69,7%	99,1%
8 hours later the device was installed	77,4%	100%
24 hours later the device was installed	90,9%	100%

*Cerrahpaşa Faculty of Medicine Microbiology and Clinical Microbiology*

Test Procedure: Samples have been taken before and after the devices have been switched on at 2nd, 4th, 6th, 8th and 24th hours. After 72 hours of incubation, the samples were calculated and evaluated about 1 m<sup>3</sup> volume bacteria in the air amendment rates of microorganism number.

## X-RETON P UVION MOBILE

THE HOUR THE SAMPLE'S WAS TAKEN	BACTERIA (NUMBER OF COLONIES)	FUNGI MOULD (NUMBER OF COLONIES)
Before the device is installed	71	12
2 hours later the device was installed	40	9
4 hours later the device was installed	18	5
6 hours later the device was installed	9	5
8 hours later the device was installed	0	0
24 hours later the device was installed	0	0

THE HOUR THE SAMPLE'S WAS TAKEN	BACTERIA (NUMBER OF COLONIES)	FUNGI MOULD (NUMBER OF COLONIES)
Before the device is installed	0	0
2 hours later the device was installed	43,7%	25%
4 hours later the device was installed	74,7%	58,4%
6 hours later the device was installed	87,4%	58,4%
8 hours later the device was installed	100%	100%
24 hours later the device was installed	100%	100%

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