



# HIGH TECHNOLOGY AIR STERILIZATION DEVICES (UVION SERIES)



## What's X-RETON P UVION?

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

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 (O3)\* with its high technology.

To create negative ions in the device, there is a mechanical system produced with an advanced technology that includes HV and UV short wave light source. Oxygen (O2) atoms gain electrons with the high technology of the device and become negative ions\*\*.

Negative ion molecules with extra electrons have positive effects on their environment. They contribute to clean air by neutralizing ethylene agents and odour in the environment. 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.





\* No ozone generator in the device and external ozone is given to the environment. Oxygen atoms 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 an oxygen atom close to it to form ozone ( $O_3$ ) and oxidized oxygen. (The  $O_3$  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, 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.



## 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 from the floor at a height of 2.20 m for effective performance.



## 24/7 Hours

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.

# KEY DIFFERENCES



## Functional

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



## 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 on all kinds of microorganisms and ethylene agents in the first few hours with HEPA Filter.



## Particulate Decontamination\*

Provides  $96\% \leq$  particle decontamination at the level of  $0.3\mu$  in the first few hours.

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

# X RETON-P UVION

## Pathogen Ionizer

### Specifications

#### **M** H13/ H14 Filter **—**

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

#### **M** Plug & Play **—**

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

#### **M** Pathogen Ionizer **D**

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

#### **M** Pre-Filter G14/ EU4 **—**

- Cartridge Type Carbon Filter

#### **M** Mobility **—**

- Lockable Wheel
- Easy Carrying Feature



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



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



# X RETON-P UVION

## Pathogen Ionizer Specifications



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



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

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

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

### **M** **Odour Elimination** **D**

- Elimination of Ambient Odours

### **M** **High Effectiveness Area** **D**

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

### **M** **Long-Lasting Use** **D**

- 304 Stainless Steel Body
- Ergonomic and Durable Design

### **M** **Service and Maintenance** **D**

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

### **M** **User Friendly** **D**

- Remote Control Comfort

# MODEL COMPARISON CHART

| SPECIFITACIONES               | X - RETON P UVION MOBILE   | X - RETON P UVION Wall Type  |
|-------------------------------|--|--|
| Atmospheric Plasma Technology | HV (5000 V Plasma) Supply  |  |
| Negative Ion Module           | TiO2, AgL, CuS coated cylindrical borosilicate glass tube ion generator          |  |
| UV Lamp                       | 2 Adet 15W UVC 254 nm Germicidal Lamps<br>2 Adet 18 W Catalytic 400-700 nm Lamps | 1 Adet 15W UVC 254 nm Germicidal Lamps<br>1 Adet 18 W Catalytic 400-700 nm Lamps |
| HEPA Filter                   | H14 Filter Retention %99,995 ( $\geq 0.3$ )                                      | -  |
| Pre - Filter                  | G4 Carbon Filter Retention %90   | -  |
| Fan                           | 410 m3/h<br>250 Pa<br>400 W  | 220 m3/h<br>100 Pa<br>30 W   |
| Air - Cycle Speed             | Min 390 m3/h   | Min 200 m3/h   |
| Protection Class              | IP20   |  |
| Electrical Information        | 220-230V AC 50-60 Hz,<br>0,8 kW  | 220-230V AC 50-60 Hz,<br>0,15 kW   |

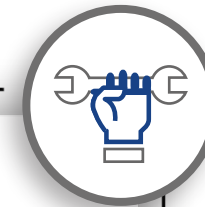


# USAGE AREAS



## **Living Space Business & Office Solutions**

Houses, Offices, Shopping Mall, Cafe, Restaurant, Cafeteria, Nursing Homes, Theatre, Cinema and Concert Halls, Military Installation, Hotels and Motels, Shops, Bank Branches, Finance Centers, Markets, Business Centers, etc. in areas;



## **Industrial Solutions**

In All Industrial Area Like; Food Industry, Food Processing, Food Production, Packaging and Storage Areas, etc.



## **Solutions for the Education Sector**

In Schools, Classes, Nursery, Kindergartens etc.



## **Healthcare Organizations**

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

# UVION AIR ASEPTIZER

It's a high-level microbiological protection, particle & contamination reduction device. Controls stand-alone the pressure, humidity, heat, and particle level of the environment in which is located. The same device has the ability to provide POSITIVE and NEGATIVE pressure with a single button, and provides bio and particulate decontamination.

Has 4 different models (CW1350, CW1000, CW650, CW650 IO) and its fresh air intake, blowing, climate and humidification features vary according to the models and optional options.

Uvion Air is used in all hospital units such as the operating room, intensive care unit, isolation room, patient rooms and also used in clean rooms, production facilities and warehouses to purify and sterilize the air environment from particles.

By using Uvion system in operating rooms, intensive care and reanimation units, hospital infections(MRSA, VRSA) caused by contamination are prevented as well as shortening the hospitalization period.

Unlike central systems, application areas can be controlled independently of each other. Thus, the risk of possible inter-unit contamination is minimized with the use of aseptizers.

Devices can be installed quickly, without the need for construction and duct systems. They can be easily moved and installed in another unit during architectural changes within the institution. Thus, they offer an advantageous and economical solution, especially for hospitals. Uvion Air Series can be used easily in areas with low ceiling height.





## WORKING PRINCIPLE

The air taken from the indoor and outdoor environment is first passed through the pre-filters. By making the air-conditioning at the desired value; After being sterilized with UV-C, atmospheric plasma generator, and pathogen ionizer (Uvion Module), it is passed through high-efficiency HEPA/ULPA filters by keeping particles and given to the environment by providing air humidity balance.

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



## UVION MODULE & ATMOSPHERIC PLASMA



Atmospheric Plasma Generator

The module contains an atmospheric plasma generator that can operate as a stand-alone complete environment sterilization system, thus creating Atmospheric Plasma. Atmospheric Plasma generator consists of titanium dioxide (TiO<sub>2</sub>), silver iodide (AgI), copper sulphate (CuS) coated borosilicate, cylindrical knotted glass tube and HV unit (5Kv).

This mechanism breaks down bacteria, viruses, fungi, molds, spores, and ethylene-based gases and particles in the environment into –OHs (hydroxyl attachments) thanks to its catalytic inverter; enabling the decomposition of narcotics and other gases, deactivating micro-organisms by disrupting their DNA structures, and the destructing of particles with negative (-) ions. It neutralizes airborne pathogens and gases by creating a photocatalytic reaction.

Ethylene agents in the environment are destroyed by the mixture of negative ions, ultraviolet (UV 254nm) light and bio-active hydroxyl radicals. This module which sterilizes the air, ensures that unwanted radicals are ionized with the other light source inside (efficacy 400-700nm). The system passes the recirculated air and the fresh air taken from outside through the UVION module and gives it to the environment. Decontaminates the area it is in.



## NEGATIVE ION

The negative ions created by the device are made of oxidized oxygen atoms. This is an event that happens in nature. In nature, ions are formed due to sunlight, radiation and air movements. Negative ion molecules with extra electrons have positive effects on the environment.

They contribute to clean air by neutralizing ethylene agents and odour in the environment. At the same time, they provide a sterile atmosphere by cleaning the air from all kinds of microbiological bacteria, viruses, molds, fungi, pollen and especially ethylene agents that have a rotting effect in the environment. They eliminate ambient, hospital and operating room odours. The more negative ions there are in the environment, the less the number of particles circulating in the air, that is, the less pollution will be.

High efficacy in the destruction of microorganisms and pathogenic agents in the air with the formation of Negative Ion and Atmospheric Plasma.



## HEAT CONTROL

Heating – cooling spec that can be adjusted between 16-30 °C



## MOISTURE CONTROL

Relative humidity control between 30% - 90% Rh with external ultrasonic nebulizer (Optional)



## AIRSPED FLOW CONTROL

The device is air volume flow controlled. And airspeed flow can be adjusted gradually with frequency control according to the ambient capacity and user request.

The device has a speed compensation system that adjusts the air-flow rate according to the filter clogging level. In order to maintain the flow rate determined in the system with its programs and sensors, automatically increases or decreases the engine speed during operation without the need for user intervention.

Values vary according to models.



## VISUAL CONTROL AND SCREEN

Values can be set by the user on the colored, graphic touch screen, and the environment variables can be observed. (environment function type (positive/negative), airspeed, heat and humidity values, etc.)

Allows seeing the heat(°C), humidity(%Rh), air-flow speed(m/s), flow rate (m<sup>3</sup>/h), Uvion module efficacy, filters condition, UV lamps life, alarms, error codes and set values on the screen (with real-time values) while the device is running.

Gives an audible, and visual warning in case of any alarm.

# SPECIFICATIONS





## NEGATIVE & POSITIVE PRESSURE CONTROL

Uvion Air Aseptizer can transform the environment from positive pressure to negative, from negative pressure to positive instantly with a single button, without the need for module replacement or additions.

## PARTICULATE & BIO DECONTAMINATION



### BIO DECONTAMINATION

UVION module technology;  $96\% \leq$  biodecontamination within the first hour with negative ion and atmospheric plasma effect (non-filterable resistant long ethylene agents, all kinds of microorganisms, viruses, influenza, RSV pathogens, mold, fungus, etc.)



### PARTICULATE DECONTAMINATION (PARTICLE CONTROL)

The feature of cleaning the air taken and expelled from the outside environment with pre-filter and waste filter application

- Fresh air-suction filter EU4/EU7/EU9
  - Carbon filter & Ambient air-suction filter G4 Carbon Filter
- HEPA H14 filter, (99.998% retention at 0.3-0.5 micrometer particle size) suitable for DOP, leak-proof, filter safety with HEPA Plenum Box,  $96\% \leq$  particulate decontamination at the level of  $0.3 \mu\text{m}$  within the first hour with 2 pieces 15W UVC 254 nm germicidal lamps.

CONTROLS HEAT, HUMIDITY,  
PRESSURE AND PARTICLE  
LEVEL IN ITS ENVIRONMENT!

# USAGE FEATURES

The system can operate in 5 different modes;



## Positive Pressure Mode (P):

(Depending on the models, 900 m<sup>3</sup>/h & 3500 m<sup>3</sup>/h at 3 different levels)

The air is taken from the indoor and outdoor environment is cleaned in the Uvion Air Aseptizer with different modes and given to the environment as positive pressure (10-30Pa) particle-free and conditioned sterile air. Positive pressure application areas: where sterile environment is required such as operating rooms, reanimation units, intensive care units, warehouses, patient rooms with low immune system, clean rooms etc.



## Negative Pressure Mode (N):

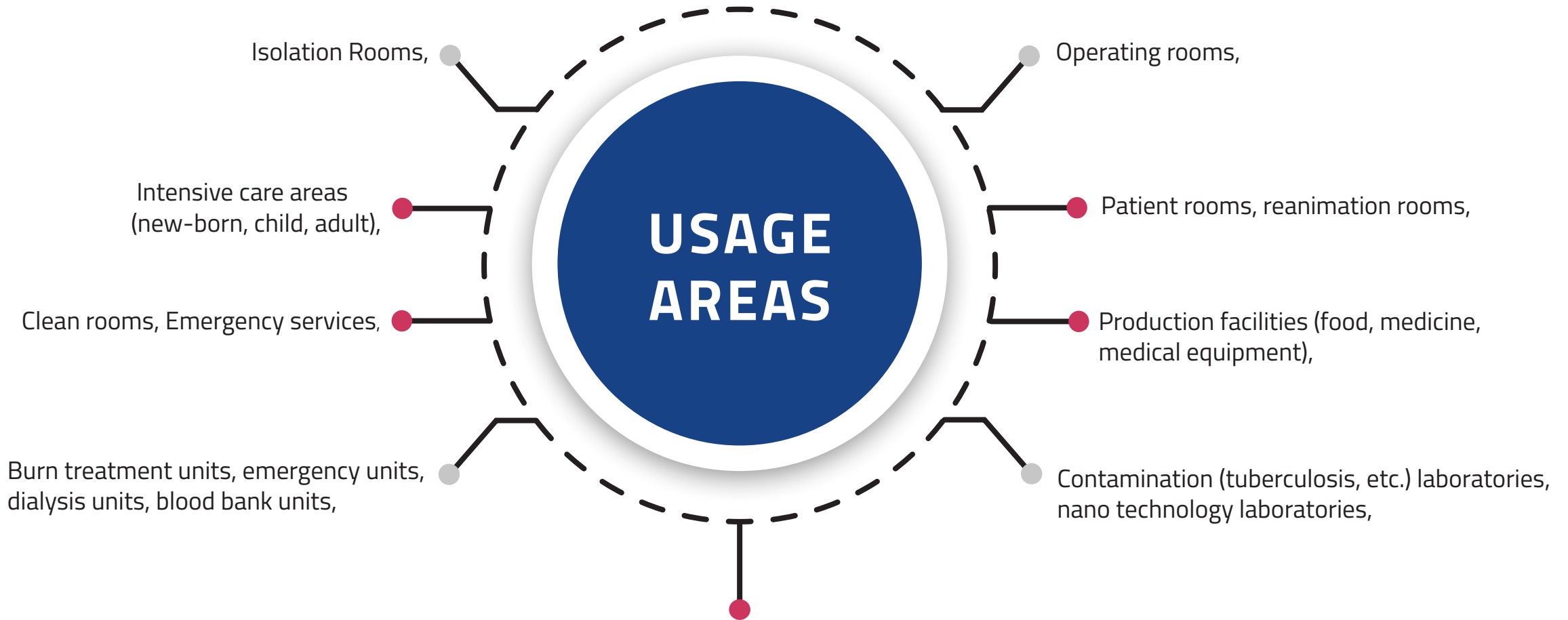
While the polluted air, all of which is taken from the indoor environment, is processed in Uvion Air, fresh air is given to the environment, the processed fresh air is also given to the outside environment and the environment is kept under negative pressure (-10, -20Pa). In units with a risk of contamination and contagious disease, the device empties the contaminated air in the environment very quickly, prevents possible spread, and provides clean air entry to the area. Negative pressure application areas: Operating rooms, all care units, all laboratories where infectious diseases are studied (tuberculosis, SARS, Covid-19, etc.), isolation rooms, etc.

## **AUTO** Auto Mode:

Makes the environment clean and sterile area without the need for user intervention at the set value when in the positive pressure mode. This mode is suitable for all environments that require sterile field.

| MODELS                                  | CW1350  | CW1000         | CW650                                     | CW650 IO                                  |
|---|---|----------------|---|---|
| EXTERIOR DIMENSIONS (W D H) (mm)        | 1390x560x2250                                 | 1085x560x2250  | 780x560x2250                              |   |
| WORKING MODE                            | NEGATIVE/ POSITIVE                            |                | POSITIVE                                  | NEGATIVE                                  |
| PROGRAMS                                | 3 Positive,<br>1 Negative<br>Total 5 Programs |                | 3 Positive,<br>1 Auto<br>Total 4 Programs | 3 Negative,<br>1 Auto<br>Total 4 Programs |
| HEATING AND COOLING CAPACITY (Btu)      | 24000   |                | 10000                                     |   |
| EXTERNAL HEATING CAPACITY (kW)          | 2.2   |                | 1.3                                       |   |
| AIR CONDITIONING POWER CONSUMPTION (Kw) | 5.2   |                | 2.7                                       |   |
| FILTRATION POWER CONSUMPTION (Kw)       | 0.5   |                |   |   |
| H14 MAIN FILTER SIZE (mm)               | 1220 x 610 x 78                               | 915 x 610 x 78 | 610 x 610 78                              |   |
| DIFFUSER SIZE (W-H) (cm)                | 54 x 54 2 UNIT                                |                | 54 x 54 1 UNIT                            |   |
| FRESH AIR INTRODUCTION CAPACITY (m³/ h) | 700   | 600            | 400                                       | (-) 600                                   |
| INTERNAL AIR CAPACITY                   | 1900  | 1500           | 1100                                      | 1000                                      |
| TOTAL AIR CHANGE CAPACITY (m³ / h)      | 2500  | 2000           | 1200                                      | 1200                                      |
| ACTIVITY AREA At CLASS 10,000 (m³)      | 130   | 110            | 80  | 80  |
| ACTIVITY AREA At CLASS 100.000 (m³)     | 170   | 150            | 110                                       | 110                                       |
| SOUND VOLUME (at 1m)                    | 55 dB   |                |   |   |

| MAINTENANCE PERIOD AND KIT             |                    |
|--|--------------------|
| MAIN FILTER HEPA 14 (1 PIECE)          | 1 Time In 6 Months |
| AMBIENT AIR G4 CARBON FILTER (2 PIECE) | 1 Time In 6 Months |
| FRESH AIR CARBON FILTER (1 PIECE)      | 1 Time In 6 Months |
| UV LAMP (2 PIECE)                      | 1 Time In 6 Months |
| UVION PATHOGEN IONIZER UNIT (1 SET)    | 1 Time In 1 Year   |
| SOFTWARE VALIDATION                    | 1 Time In 1 Year   |



Produced as an alternative to the central system wherever high hygiene and air conditioning are required. Due to its compact structure, it does not require construction. No project, construction, or renovation requirement. The system is established without stopping the services of the intensive care unit.

The air-conditioning, humidity and filtration tests of our aseptizer device were carried out by the Republic of Turkey Ministry of Health Turkish Public Health Institution Microbiology Reference Laboratories Presidency, in order to create an area in Class 10.000 standard, and it was APPROVED with the number 80962070.

# BİZİMLE İLETİŞİME GEÇİN



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