

Healthy Indoor Air... The Way Nature Intended



Bi-Polar Ion Technology used to sanitize and improve the indoor air quality

AWIONS Technology

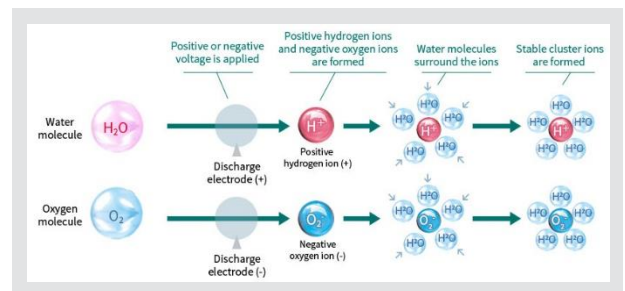
The quality of the air we breathe is fundamental to good health.

Alfawater has developed systems that NATURALLY purify indoor air, restoring its quality and freshness to the totally pure Crystalline air typical of the air we breathe when we hike in the mountains. The outdoor air in nature is healthy because it is constantly being purified of toxic and infectious pollutants, (toxic e.g. benzines, smoke and pathogens e.g. bacteria, viruses), thanks to the action of ions generated by solar rays, the wind and the wave-motion of the seas and the oceans. Typically, the ion concentration of the mountain air is 15.000 ions/cm³ and 50.000 ions/cm³ by the seashore, while in our dwellings the concentration is below 100 ions/cm³.

The Awions ion generator produces positively charged hydrogen ions from water molecules floating in the air, and negatively charged oxygen ions from atmospheric oxygen.

As a result, various types of superoxide ions are formed. These trigger chemical reactions similar to those that occur naturally in the environment, thus purifying the indoor air in the premises where we live and work.

Some of the oxidizing ions destroy the protein structure of the bacteria, viruses, and molds rendering them completely harmless. While other ions oxidize the volatile organic components (VOC) floating the air, making them harmless as well. Thanks to this combined ion effect; it is possible to control the quantity and harmful effects of microbes/pathogens, and VOC in the treated area using Nature's own methods. The AWIONS system helps maintain air ducts, heat exchangers and air-conditioning units clean while also providing pure, sanitized air to indoor premises.



AWIONS Duct Unit



The Duct Unit is designed for installing ionizing technology within air ducts and other enclosed areas with an air flow.

The unit is maintenance free with innovative patented self-cleaning emitters. In addition, the unit includes a Modbus communication port that can easily be connected to any building management system.

A pre-drilled flange and factory applied gasket make it is easy to install the unit in any duct.

When installed at appropriate points, the unit keeps the duct system clean and ensures that the supplied air is ionized.



AWIONS Ion Bar

The Ion Bar is designed for installing the ionizing technology into large air ducts and other air systems where the air flow comes from air-conditioning systems.

In order to treat air within a closed space, the Ion Bar must be located in front of an air outlet.

To keep the air duct or the heat exchanger in the air duct completely sanitized and germ free, the Ion Bar is installed at specific points.

For remote servicing, each Ion Bar is equipped with a Modbus interface that can be connected to the Ion Bar system software or to a building management system.



AWIONS Combi Rack

The Combi Rack is a modular mounting system for multiple ion generating units; designed for the placement of AWIONS in Air Handling Units (AHU's) and similar spaces with an air flow.

In order to keep heat exchangers and other equipment hygienic and germ free the units must be placed at specific points.

Using the modular profile, it's easy to build an individually tailored structure.



AWIONS Stand alone Units

The stand-alone ion generators can be applied for different uses. These units are designed as elegant and simple air-treatment solutions that can easily restore the healthy characteristics of the indoor air of the rooms, where they are placed., They are available in the following models (based on requirements):

Awions D5P – Pod



A small-scale device that can be connected to an USB port or externally powered. It can be placed directly on top of the user's desk and connected to the PC, attached to a mobile power charger, connected to a power socket at home, or attached to a power supply in a car. From the very moment the device is activated, the Pod produces negatively and positively charged ions that are diffused throughout the premises by a fan imbedded within the device's case. The system is suitable for treating a volume of approx. 30 m³.

Technical features:

Power supply: 5Vdc

Electrical protection: class II

Dimensions: 70mm x 70mm x 75mm

Power consumption: 5W

Material: ABS

Weight: 150gr



Awions D5T S/D5T– Tower

A device characterized by elegant design elements and made entirely in Stainless Steel. It can be placed on vertical surfaces in your home or office. The Tower generates up to 10^{10} positively and negatively charged ions and diffuses them throughout the room. The volume of the treated rooms can be for D5TS devices $40 \div 60$ cubic and D5T devices $60 \div 80$ cubic meters.

Technical features:

Device power supply: 12Vdc

Electrical protection: class II

Dimensions: 70mm x 70mm x 235mm

Power consumption: 3 W/5 W

Material: AISI 304

Weight: 1.2kg

Technical specifications voltage adapter:

Input voltage: $100 \div 240V$ 50 / 60Hz

Output voltage: 24 Vdc

Max current: 1A



Awions D6C – Cube

This device can be used in large premises. It can be installed on the wall, ceiling or placed on a shelving/furniture. The model generates up to 10^{12} ions/sec. The AWIONS Cube model has various installation accessories and a mobile cart system that permits the device to be moved around easily. This device has two modes: silent (speed 1) which allows to treat $200 \div 300$ cubic meters and turbo (speed 2) of $300 \div 400$ cubic meters.



Technical features:

Power supply: $220 \div 240V$

Power consumption: 80W

Material: Aisi 304

Weight: 4.5 kg

Line frequency: 50 / 60Hz

Electrical protection: class I

Dimensions: 230mm x 235mm x 235mm

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