

## OZONIZATION

Ozone generated in situ by converting Oxygen through electric discharges is an active ingredient with "biocidal" action, disinfectant for surfaces and for drinking water. Although the evaluation was not completed, a large amount of available data confirms the microbicidal efficacy also on viruses. The main characteristics of Ozone are:

- It has a high oxidizing power, being a highly unstable molecule;
- It has the ability to degrade non-biodegradable complex organic compounds;
- Powerful disinfectant action of action broad spectrum;
- Can be used for sanitizing water, air and environments;
- Unlike other disinfectants (such as Chlorine), leaves no residue;
- After 20 minutes, O<sub>3</sub> is transformed into Oxygen and not requires elimination treatments.

Ozone is widely used in the food sector as it significantly limits the contamination of air, water and surfaces.

O<sub>3</sub>

**In Italy, the Ministry of Health with the D.L. 24482/96 recognized the use of Ozone as a natural safeguard for the sterilization of contaminated environments from bacteria, viruses, molds, spores and mites.**



Respiro



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## RESPIRO

**RESPIRO** is a device for the healthiness of the air, the environments and the surrounding surfaces.

The device is removable but is also provided with specific fixings that allow it to be affixed to the wall, minimizing the overall dimensions and obtaining a minimal aesthetic impact. The shapes are tapered and linear which are well suited to all indoor styles.

RESPIRO is equipped with a **Photocatalytic** oxidation technology, capable of destroying the pollutants present in the air and on surfaces. Catalyst structure composed of TiO<sub>2</sub> (Titanium dioxide) UV-C disinfection system able to intervene on the DNA and RNA of viruses, bacteria and spores, present in the air and on surfaces.

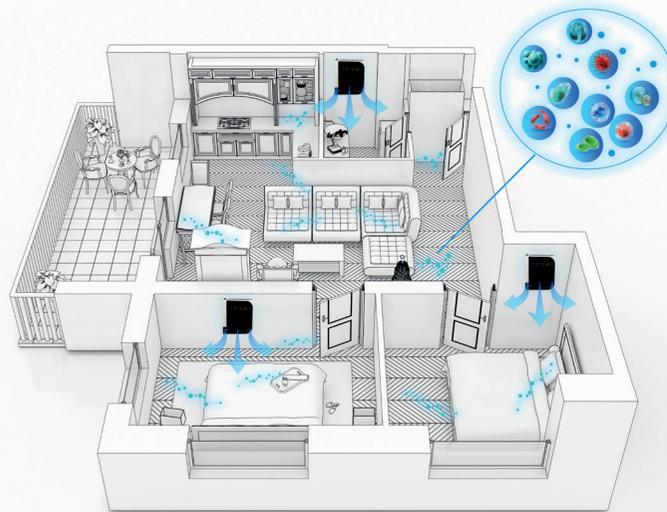
Air Ionization System, concentration 200ML / cc.  
Disinfection system with Ozone technology  
Air filtration and purification system in Active Carbon, able to adsorb contaminants and allergens present in the air.



## PHOTOCATALYSIS

The **Photocatalytic** process reproduces what happens in nature that is a photochemical reaction, which allows to destroy pollutants, in particular, bacteria, viruses, molds, allergens and odors with an active natural principle.

**Photocatalysis** is a process, that thanks to the combined action with the UV rays of the sun and the humidity present in the air and the other noble metals present in nature, generates oxidizing ions capable of destroying most of the polluting and toxic substances. To such a combined multi-factor action comes further added the disinfectant and desinfectant action of Ozone. The control chamber is coated with Titanium dioxide (TiO<sub>2</sub>), capable of reacting with ultraviolet radiation, triggering the photocatalysis process. The air flow conveyed by the tangential fan enters inside the chamber coated with Titanium dioxide and irradiated by the UV lamp.



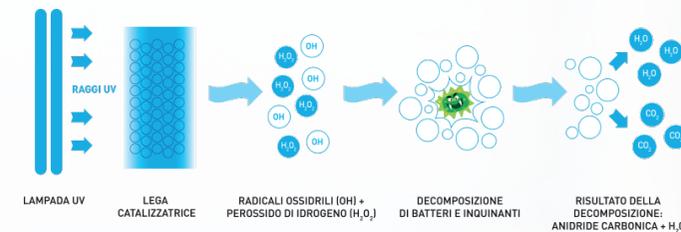
### ACTIVE HEALTHINESS H24 EVEN IN THE PRESENCE OF PEOPLE

- UVC Ultraviolet light irradiation (100-280nm)
- Oxidizing Ions generated  $\geq$  at 200ML / cm<sup>3</sup>
- Ionizing Service- Life  $\approx$  30000 / h
- Relative humidity in the environment equal to  $\approx$  at least 40%

## IONIZATIO

The operating principle of an air ionizer is based on charging gas atoms with a high current. The negative ions emitted by the device prevent the dispersion of the particles contained in the air that charge electrostatically. The corona discharge, the basic principle of ionization, occurs in the presence of natural phenomena like thunderstorms or lightning.

The discharge reproduced, given by the corona effect, is an effective way to generate negative ions by applying a high negative voltage to a conductor. In fact, the sanitized air, by falling, acts on the surfaces of the treated rooms and any fabrics present.



## COLD PLASMA IONIZATION

Cold plasma technology is based on the process of ionization by impact of the air that we normally breathe and consists of the collision between particles of high speed, which are energized by an oscillating electric field. The kinetic energy given at molecules, allows the formation of ions, which are atoms or molecules that have lost or acquired electrons.

In other words, cold plasma is able to electrically charge the air particles at room temperature by transforming them into an ionized gas, which acts on volatile organic compounds, breaking them down, in addition to reduce the viral load of any pathogens present in the air. Furthermore, cold plasma technology is a system resulting from a natural process, without, therefore, the contribution of disinfectant or sanitizing substances, which are harmful also for the environment.