

SAFETY & CARE

EXI-DUST FREE

SANITATION SYSTEM ACTIVE 24/7



CONTACT US:

commerciale@eximag.it

T. +39 045 59511 | www.eximag.it

Our location:

Via Tevere, 22/A

37136 Verona, ITALY

SANITISING ACTION

against the bacterial load in the air

Pollution due to fine particulates, dust, pollen, fibres and spores can make life truly difficult for people suffering from allergies (damage to eye mucous, skin, respiratory system), also accelerating the deterioration of the equipment inside buildings.

The Exi-Dust Free modules, with **PCO™ technology** (Photocatalytic Oxidation), generate natural oxidising ions that, transported by the air flow, are able to **destroy** the **polluting agents** they meet in the channels as well as in the environment.

Bacteria, viruses and potentially **pathogenic fungi** are the cause of the **contamination of diseases**.

The PCO™ technology, better known as **photocatalytic oxidation**, was developed and **used by NASA** for the **sanitation of the environments** used for aerospace missions, where one of the main prerogatives is the quality and healthiness of the air.

It imitates and reproduces what takes place in nature by means of photocatalysis, generating **oxidising ions** able to **destroy** the majority of **polluting** and **toxic substances**, in particular **bacteria, viruses, mould**.

MAIN SECTORS OF OPERATION:

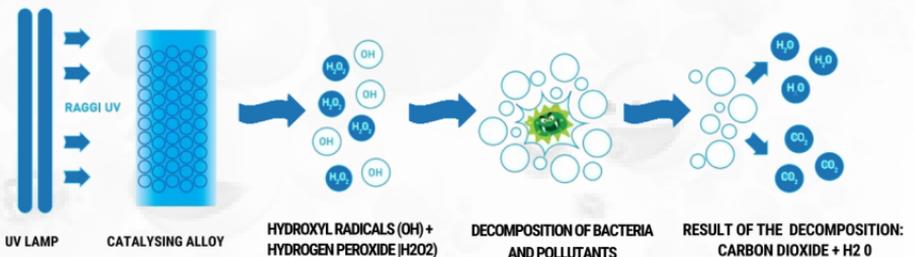
- + Industrial
- + Commercial
- + Offices/residential

ACTIVE SANITATION AND PCO™ TECHNOLOGY

Spread and dragged by the air flow, hydrogen peroxide has an effective sanitation action both on the surfaces of **ducts** as well as in the **ambient** air and when it falls, it also sanitises the **surfaces** of the treated rooms.

The **PCO™ technology** of the modules uses the combined action of the rays of a special UV lamp with a catalysing structure consisting of a metal alloy with a honeycomb matrix, comprised mainly of TiO₂ (titanium dioxide) and other noble metals to a lesser extent.

The air, charged with moisture (H₂O), crosses the module comprised of a quadro- or pentametallic alloy. Thanks to the high intensity UV lamp, a photochemical oxidation reaction is started that binds an extra molecule of oxygen to H₂O; the **hydrogen peroxide** (H₂O₂) diffused in the surrounding environment provides **safe, effective** and above all **complete sanitation**.



COMPARISON OF ACTIVE SYSTEMS

OZONE

FEATURE:

Ozone is formed by a molecule of oxygen (O₂) with the action of electrical discharges.

The supplementary ozone atom is known as a free radical that searches for organic compounds to which it can attach and then oxidise

PROS:

Ozone is an oxidising gas that propagates in the entire room, oxidising all organic compounds. It can neutralise odours and gas, destroy microorganisms and does not reduce the air flow. Ozone units can be installed centrally or locally.

CONS:

It does not purify particulates. Exposure to ozone can be very dangerous in the long term.

IONISATION

FEATURE:

UV generators have been used for years as a disinfectant in the medical industry. They can also sanitise the air that passes directly in its path with suitable exposure times.

PROS:

Ultraviolet light destroys bacteria, fungi, mould and eliminates any gas, while not reducing the flow rate.

CONS:

It does not have any effect on particulate, it requires direct contact and a well calculated exposure time. The rays must be shielded to prevent human exposure.

PCO with IPG

FEATURE:

Advanced photocatalytic oxidation technology.

The generated hydroperoxides systematically reduce the microbes and gas in the space to be conditioned.

PROS:

As it involves a wide scope of oxidants, this treatment is extremely effective on a greater number of microbes and gases. The H₂O₂ molecules and the oxidants created by this technology are much more stable than normal ionisation. This makes the sanitation effective also throughout long channel sections.

CONS:

It must be combined with a filter able to retain the average particulate.

A SUMMARY OF THE BENEFITS...

In brief, the benefits connected to installing modules with PCO™ technology can be summarised as follows:

- + **Elimination** of **germs, bacteria** and **viruses**, which, if they proliferate, spread diseases and allergies
- + **Elimination of odours**
- + **Reduction of harmful microparticles** present in the air, including ultra-fine particulate not generally retained by common filters
- + **Reduction in powder clusters**
- + **Improved general quality** of the indoor air
- + **Active treatment** of the channels, in environments and on surfaces
- + **Reduction in the periodic operations** (and the relative costs) related to cleaning, sanitation and decontamination of air ducts

...in conclusion

- ✓ ACTIVE 24 HOURS A DAY IN EVERY TREATED ENVIRONMENT
- ✓ THE ONLY SYSTEM ABLE TO ACT ALSO ON SURFACES
- ✓ ELIMINATES POLLUTING AGENTS WHEREVER THEY ARE
- ✓ SAFELY AND EFFECTIVELY REMOVES BACTERIA AND ODOURS