

COLD PLASMA GENERATOR

Air purification system.

Ideal for places where perfect hygiene is required.

Effective air sterilisation.

Destroys up to 90% of the pathogens in the air-conditioned room.



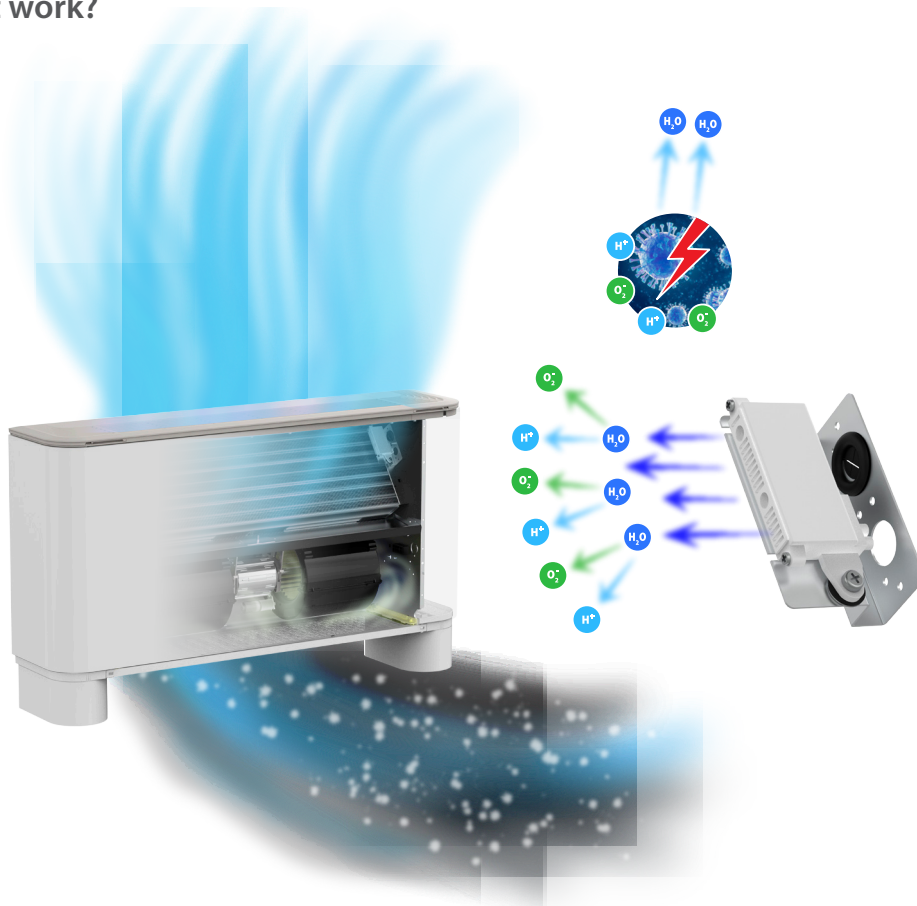
COLD PLASMA GENERATOR

We care about your health.

The air we breathe is our most important resource. Protecting it and improving it is crucial for our health and well-being.

Aermec reaches this goal with the aid of sophisticated filtering technologies that can guarantee clean, healthy air in all circumstances, using special devices like the Cold Plasma Generator in its air conditioning equipment.

How does it work?



The Cold Plasma Generator is a system which produces ions to break down the pathogens in the room - viruses, bacteria, mould and pollutants - by ionising the humidity in the air.

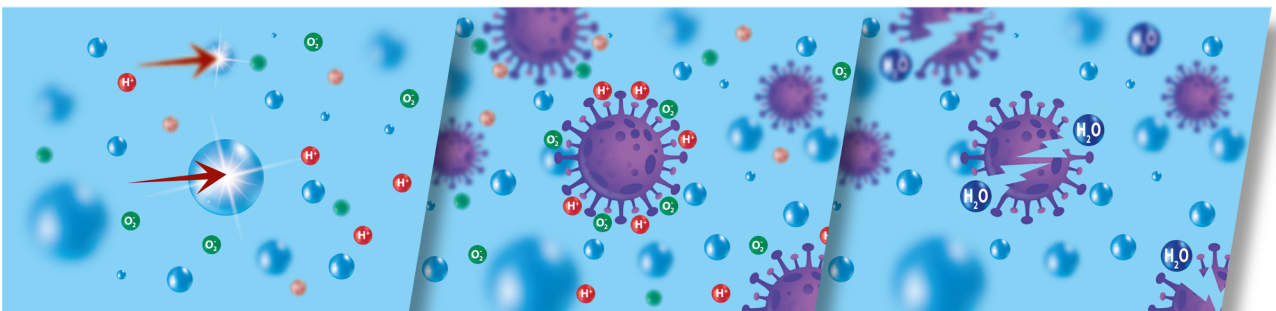
This device, in fact, generates an electric discharge that splits the H_2O water molecules in the air into positive H^+ ions and negative O_2^- ions. These ions neutralise the molecules of the pathogens, obtaining products that are normally present in clean air.

The Cold Plasma Generator can break down up to 90% of the pathogens: the result is an air conditioned room with clean air, free of any bad odours.

COLD PLASMA GENERATOR

Clean air, free of any bad odours.

The Cold Plasma Generator is an ioniser filter designed to clean indoor environments by inactivating the viruses and bacteria in the air. Unlike electrostatic filters, it has an air purification mechanism that breaks down some of the water molecules in the air (in the form of humidity) by means of an electrical discharge. The result is the creation of a stream of hydrogen and oxygen ions conveyed by the air flow to break down the pathogens.



Ionisation is a process carried out by applying a large quantity of energy (in the form of electric potential or radiation) to the atoms to generate molecules that are positively charged (positive ions) or negatively charged (negative ions). The ionised gas is called "plasma".

The H⁺ positive ions and O₂⁻ negative ions generated by the Cold Plasma Generator are injected into the room by the flow of treated air, and attract the water molecules in the atmosphere. The interaction between ions and water molecules generates clusters of molecules which form around the pathogens as the process develops.

At this point, the positive and negative ions join together to form the hydroxyl radical OH⁻ which takes away from the surrounded virus the element that allows it to survive - hydrogen. The acquisition of hydrogen by the hydroxyl radical OH⁻ generates water, which is put back into the atmosphere; at the same time the pathogen is broken down by this reaction. The purification process of the Cold Plasma Generator is now complete.

The Cold Plasma Generator technology simulates the natural process that has always purified the air in the earth's atmosphere. That's why the Cold Plasma Generator is entirely harmless for living beings.

The Cold Plasma Generator fights:

- VIRUSES (FLU)
- CERTAIN CIGARETTE SMOKE COMPOUNDS
- SPORES AND MOULD GERMS
- POLLEN
- DUST
- PET ODOURS
- EXHAUST GAS
- ESCHERICHIA COLI
- CLADOSPORIUM
- ASPERGILLUS

... many of which are a risk for people who suffer from asthma and other illnesses.

COLD PLASMA GENERATOR

All the advantages of the Cold Plasma Generator.

The Cold Plasma Generator can break down up to 90% of the pathogens in the atmosphere. Compared with electrostatic filters, Cold Plasma Generator technology offers 4 fundamental advantages:

1 LIMITED MAINTENANCE

As it's an ion generator that doesn't produce inert material deposits, the Cold Plasma Generator requires no special maintenance.

With electrostatic filters on the other hand, the air passes through a metal filter that produces electrostatic precipitation. The polluting particles are subjected to the action of powerful electric fields and hence drawn to the metal plates, which therefore get dirtier and dirtier: to avoid any drop in the electrostatic potential, the deposited inert material has to be removed often.

2 NO ADDITIONAL PRESSURE DROP

Mechanical filters are characterised by an increase in the pressure drops between one maintenance phase and the next, along with an increase in the filtering efficiency, unlike electrostatic filters whose filtering capacity diminishes over time.

The Cold Plasma Generator doesn't add any pressure drop to the mechanical filters of the air conditioning terminals.

3 LOW POWER SUPPLY VOLTAGE

The Cold Plasma Generator is powered at 230V - the same supply voltage as the compatible fan coils.

The supply voltage of electrostatic filters can reach 10 kV: some of them require regulation systems to stabilise the high voltage levels, and systems to protect against short-circuits on the high voltage of the filters themselves.

4 LIMITED DIMENSIONS

The Cold Plasma Generator is positioned on the air delivery of compatible fan coils, with no need for additional installation modules.

Traditional electrostatic filters are bulky, calling for a pre-filtering section to avoid overloading the filter and producing good results primarily when the operating conditions are constant.



COLD PLASMA GENERATOR

The Aermec range with the Cold Plasma Generator.

With its innovative solutions for air-conditioning, Aermec always aims to respect the environment, safeguard health and improve well-being.

With an eye to these essential values, the Aermec catalogue contains several ranges of fan coils and air-conditioners - in a number of installation versions - with the Cold Plasma Generator device.



Fan coils



The following Aermec fan coils are available with the Cold Plasma Generator:

- FCZ and FCZI
- Omnia HL
- Omnia UL and ULI
- FCL* and FCL I* (cassette installation)
- FCW* (wall installation)

* Available in a special version, after verification (contact your local Aermec dealer).

THE COLD PLASMA GENERATOR IS ALSO AVAILABLE AS A RETROFIT ACCESSORY FOR COMPATIBLE FAN COILS ALREADY INSTALLED.

Air-conditioners



The following Aermec air-conditioners (monosplit and multisplit range) are available with the Cold Plasma Generator:

- SMG, monosplit for wall installation with R32, with an elegant and streamlined design
- CKG, monosplit floor-mounting console with R32
- MLG, multisplit with R32 and a wide choice of indoor units

For more information about the compatibility of the Cold Plasma Generator with Aermec fan coils and air-conditioners, refer to the specific documentation. For any non-standard requests, contact your local Aermec dealer.



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