Introducing JONIX

Jonix designs devices for air purification, depuration and decontamination with cold plasma technology.

Air pollution in closed spaces represents a serious public health problem, with significant social and economic implications.

The European commissions have defined guide values for the main indoor pollutants. Germany, France, the Netherlands, Finland, Belgium, and Italy have initiated the monitoring and sampling of the main indoor pollutants.

Non-Thermal Plasma (NTP) technology

The ionization of air is a natural phenomenon that occurs spontaneously whenever a molecule is subject to the action of an energy process in which the total amount of energy is greater than that of the molecule itself. In practice when we add energy to a molecule, an electron is “removed” from the molecule’s outermost orbit, and the resulting electric imbalance causes the molecule (atom) to assume a positive electric charge.

The electron “freed” from the outer orbit immediately attaches to another atom, which then assumes a negative electric charge. Each atom has a well-established probability of becoming a negative and positive atom depending on the saturation of its outer shell. In nature ions are produced by solar radiation; by the friction of the wind on the earth’s surface; by storms, rain, and other weather events; by the absorption of cosmic rays; and by the collisions of particles possessing kinetic energy. NTP technology artificially ionizes the air by means of what is known as “Cold Plasma”.

All JONIX devices use NTP (Non Thermal Plasma or Cold Plasma) technology which produces oxidizing, and therefore sanitizing, species through the "JONIX generators" (or "actuators"), consisting of cylindrical tubes with metal foils.

The NTP produces various reactive species collectively known as ROS (Reactive Oxygen Species) and these provide the sanitizing power of the JONIX systems.

Based on what is known about cold plasma, it is possible to posit that sanitization processes can take place by direct interaction between the plasma(actuator surface) and the contaminant, and by the interaction with the species produced by the passage of air into the plasma, which are removed in the gas stream.

JONIX air sanitization systems with NTP technology are especially suitable for inclusion in ventilation systems for domestic use and in the service sector, for offices, exhibition halls and meeting rooms, and shopping centres, systems installed in hospitals and for the food sector. They are recommended for the microbial decontamination of the internal surfaces of air handling units (and rooftop units) and all the internal components, such as: filters, coils, and fans.

They are recommended for preventing the growth of virus such as COVID-19 and bacteria such as *Legionella* in the condensate drip trays and water humidification systems. They are also recommended for the sanitization of the internal surfaces of air distribution ducts, which are otherwise difficult to inspect and clean even once during the system’s entire life.

The indoor environments that most benefit from the use of JONIX devices are:

- Hotels and elevators
- Food processing and preservation facilities
- Veterinarians
- Healthcare: clinics, inpatient rooms
- Nursing homes
- Hairdressers and beauty centres
- Houses and offices.
- Public transport

JONIX offers a range of products from the basic line CUBE (above) for medical clinics, hotel rooms, offices and for homes, it has antiviral and anti bacterial decontaminating capacity up to approximately seventy-five square metres.

In partnership with AGlobalite Australia & New Zealand, ReThink Sustainability Pty Ltd is able to offer JONIX for suitable projects. Please contact us for more information:

ReThink Sustainability Pty Ltd
ACN: 622 347 273
Level 10, 530 Collins Street, Melbourne. VIC. 3000
www.rethinksustainability.com.au
Rob Gell AM. m: 0412 327 185
e: rob@rethinksustainability.com.au
Justin McFarlane. m: 0410 325 111
e: justin@rethinksustainability.com.au