Food Technology

Effective

against Covid-19 alive virus

Test of Padua University - ITALY

JONIX™
pure living

JONIX™ MATE NON THERMAL PLASMA TECHNOLOGY

MOBILE MEDICAL DEVICE FOR INDOOR AIR PURIFICATION AND DECONTAMINATION

MADE IN ITALY

TECHNOLOGY

JONIX™ uses the advanced oxidation process to decontaminate air induced by a NON-THERMIC PLASMA
JONIX™ **MATE** air sanitization devices with NTP (Non-Thermal Plasma) are used to sanitize and decontaminate both air and surfaces.

NTP TECHNOLOGY (NON THERMAL-PLASMA)

With the word plasma we mean a blend of ionized gases composed by a large quantity of energized particles, such as ions and electrons, free radicals, ROS, molecules as well as neutral atoms. The ionization of an atom occurs when an electron acquires enough energy to overcome the attractive forces of the atom nucleus. When this result is obtained with processes generating a plasma in which the temperature of the ions and neutral atoms is significantly lower than the temperature of electrons, we are talking about cold plasma and Non-Thermal Plasma (NTP).
The cold plasma is emitting light with wavelengths in both the visible part and the spectrum ultraviolet part. Beside the emission of UV radiations, an important feature of the low-temperature plasma is the presence of strongly reactive high-energy electrons, that generate a number of chemical and physical processes such as oxidation, over-energizing of atoms and molecules, the production of free radicals and other reactive particles. A plasma can be artificially generated supplying a gas with a sufficiently high energy, that means giving a gas energy so as to reorganize the electronic structure of the species (atoms, molecules) and produce over-energized species and ions. One of the most common ways of artificially creating and maintaining a plasma is through a gas electric discharge. **NTP JONIX**™ technology makes use of the so called non-thermic discharges with a dielectric barrier method. The potentialities of ionization and the density of charged species generated from the plasma with electrical barrier discharge (DBD) are higher compared to the ones present in the non-thermic plasma generated by other systems.

JONIX™ MATE

JONIX™ MATE is a unit of mobile filtration and sanitization, with a cold plasma technology for purifying and decontaminating the air.
Ideal for environments for producing, packaging, preserving where it is necessary to constantly eliminate microbial contamination of air and surfaces. It is immediately operational after installation, requiring no further operations. The control system adjusts ventilation and generating cold plasma necessary to completely purify and filtrate the air.
The sanitizing cabinet can be equipped with a system of sliding grids that enables to connect an external air intake for the installation in environments requiring overpressure.
Compact, agile and quiet, the **JONIX™ MATE** quickly and effectively meets the requirements of reducing bacterial and particulate load.

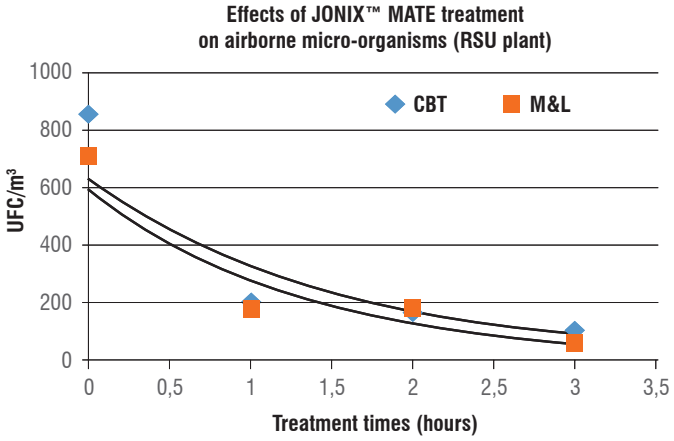
ECOLOGICAL AND COMPATIBLE IN CASE OF PEOPLE'S PRESENCE

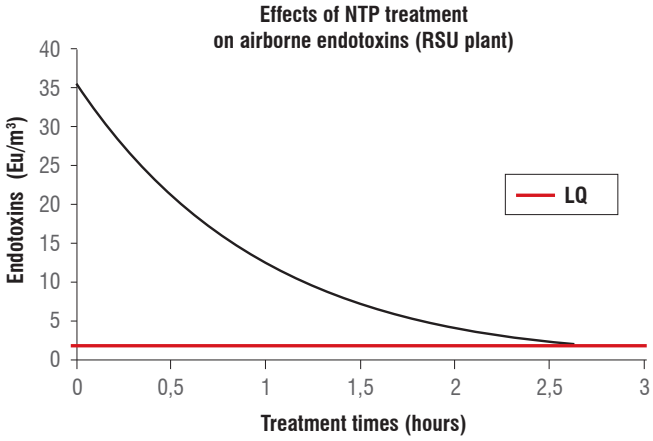
JONIX™ MATE
No chemical products and zero environmental impact. It makes it possible to reduce volumes of air treated by central plants reducing energy costs of conditioning.

EFFICIENCY

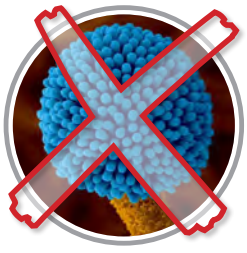
The bio acid and neutralization activity of polluting substances occurs in a maximum of 60 minutes since switching on. The continuous functioning of the device blocks the spreading of bio hazardous agents generated on a continuous basis during production. The oxidation of microorganisms occurs for the oxidation process of the membrane cell.Reactive particles carrying electric charges, among which the most important ones are the oxygen reactive species (for example atomic oxygen and ozone), which concentrate on the membrane surface causing its destruction.
The device is efficient on: gram + and – bacteria, yeast and mould, virus, bacterial endotoxines, VOC (volatile organic compound), odours.

JONIX™ MATE removes chemical and organic odors , reactive particles break chemical bonds of odorous substances which then decompose.






Legionella


Aspergillus


E. coli

APPLICATION SECTORS AND OPERATING CYCLES

This device can be used in food processing, packaging and preservation environments. The device functioning can be operated on a continuous basis or in cycles based on specific needs.
Contaminated environment decontamination cycle vol. 800 mc 120 minutes.
Contaminated environment decontamination cycle vol. 150 mc 60 minutes.
Contaminated environment decontamination cycle vol. 50 mc 30 minutes.
Sanitization continuous cycle set the air flow 20 times higher to the environment volume.

ECOLOGICAL PLANNING

Ecological=no chemical products
JONIX™ MATE uses no chemical products and produces no residual substances.

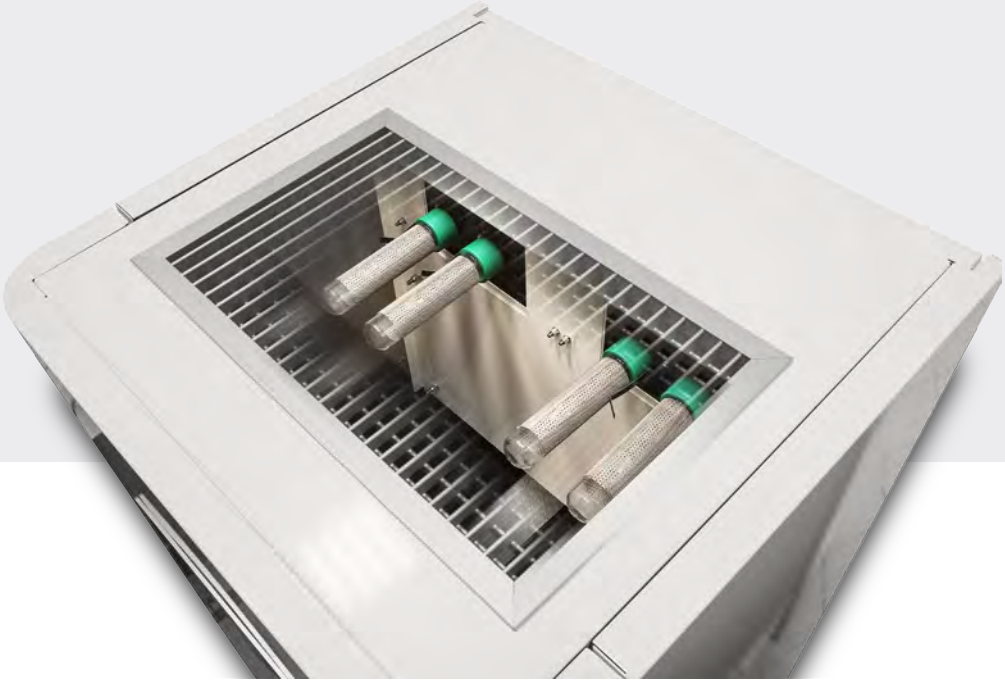
It can be used during production.
Its continuous activity, besides purifying the air, generates a correct air ionization that ensures an environmental comfort for the reduction of stress from work, it encourages proper breathing. In order to protect and promote health in working environments.

LOGICAL = INTUITIVE

JONIX™ MATE Mate is simple and intuitive, from the touch screen it is possible to set and control functions, check on the use of perishable components. With the aim of an integrated management of plants control system and functions can be remotely managed.

TECHNICAL FEATURES JONIX™ MATE

Ionising modules	2 individually supervised
Ionisers replacement	Every 9000 hours
Ionisers maintenance	Every 700 hours
Pre filter	G4 – Coarse dust filter EN 779: 2012
Secondary filter	F7 – Fine dust filter EN 779: 2012
Main filter	H13 – HEPA filter EN 1822:2009
Fan	Low-pressure EC brushless centrifugal plug fan with backward-curved blades.
Min Air flow (m^3/h)	500
Max Air flow (m^3/h)	3000
Air circulation	Upflow
DP sensors	3: one for each filter
Fresh air connection	Up to 7% of total air flow. Placed on the bottom of the machine.
Display	7” or 13” touch screen
Dimensions (mm)	678 x 700 x 2035
Weight (kg)	175
Power supply	230 V / ~1 / 50 Hz
Max power absorption (W)	800
Full load ampere (A)	3,5
Noise (dBA)	48,1 (1000 m^3/h) 61,3 (3000 m^3/h)



CERTIFICATIONS

The Jonix Mate is a class I medical device
European Directives 93/42/EEC, 2006/42/EEC,
2006/95/EEC, 2007/108/EEC
CND Z12159099 Registration number 1329272

CE Class Medical Device I
Directive 93/42/EEC 2006/42/EEC 2006/95/EEC
2007/108/EEC
CND Z12159099

MADE IN ITALY

Designed and created by expert technicians specialized on air purification in healthcare environment.
The device has been designed to be solid yet easy to handle.

JONIX™
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