

# JONIX

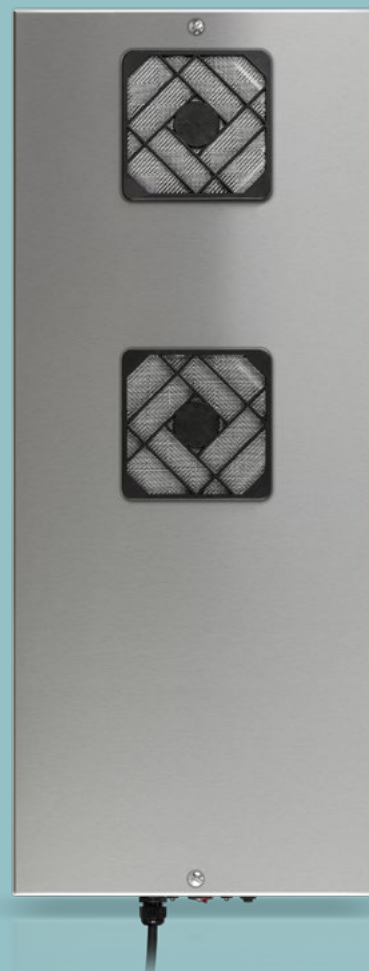
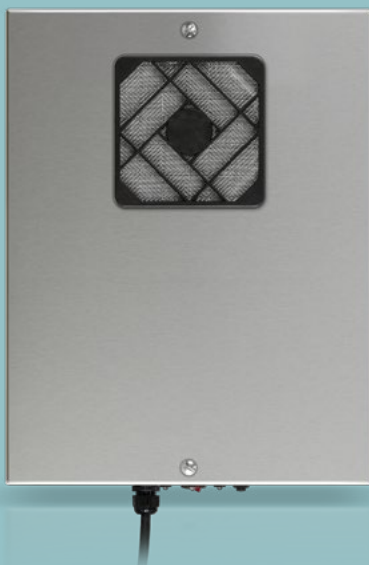
pure living

JONIX steel NON THERMAL PLASMA TECHNOLOGY  
DEVICES FOR INDOOR AIR PURIFICATION AND DECONTAMINATION

## JONIX

Effective against Covid-19  
Test of the University of Padua

**-99,9%**  
Bacteria, Moulds,  
VOC and Virus



Effectiveness tested on:



covid-19



V.O.C.



odours



bacteria



mould



virus



covid-19



V.O.C.



odours



bacteria



mould

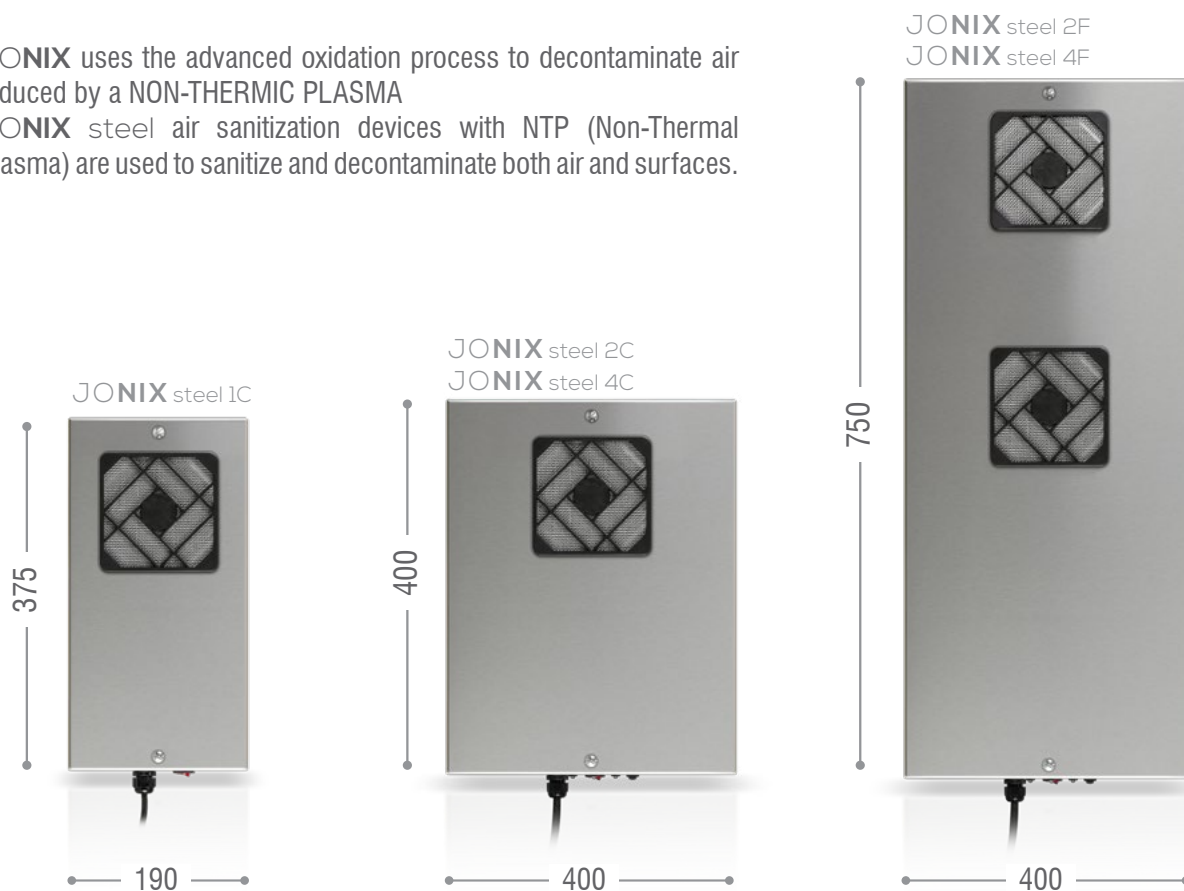


virus

## TECHNOLOGY

JONIX uses the advanced oxidation process to decontaminate air induced by a NON-THERMIC PLASMA

JONIX steel air sanitization devices with NTP (Non-Thermal Plasma) are used to sanitize and decontaminate both air and surfaces.



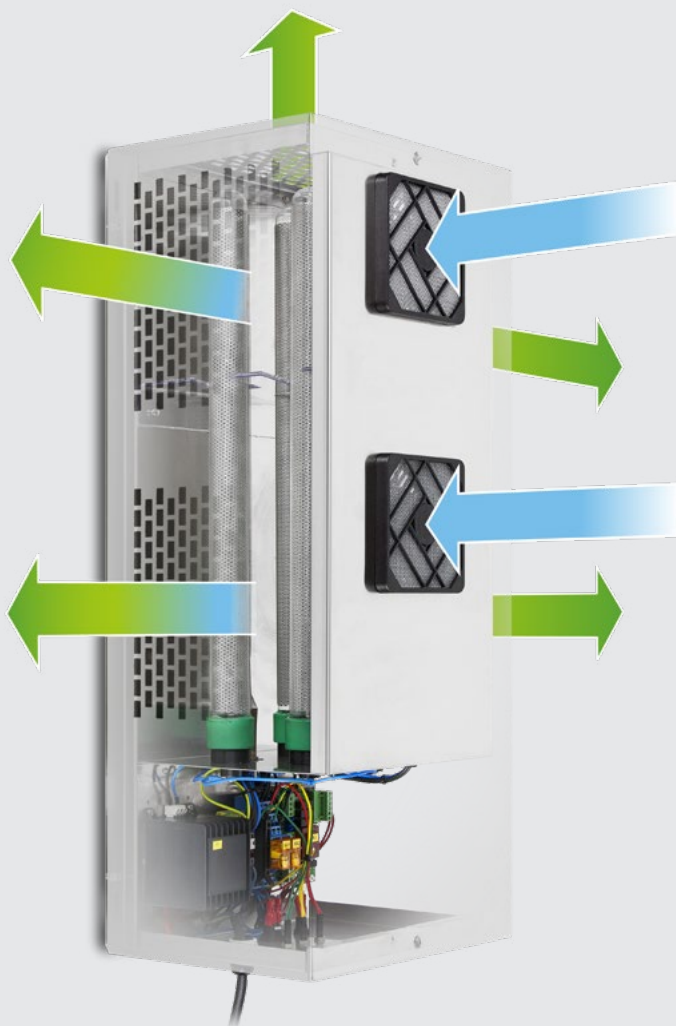
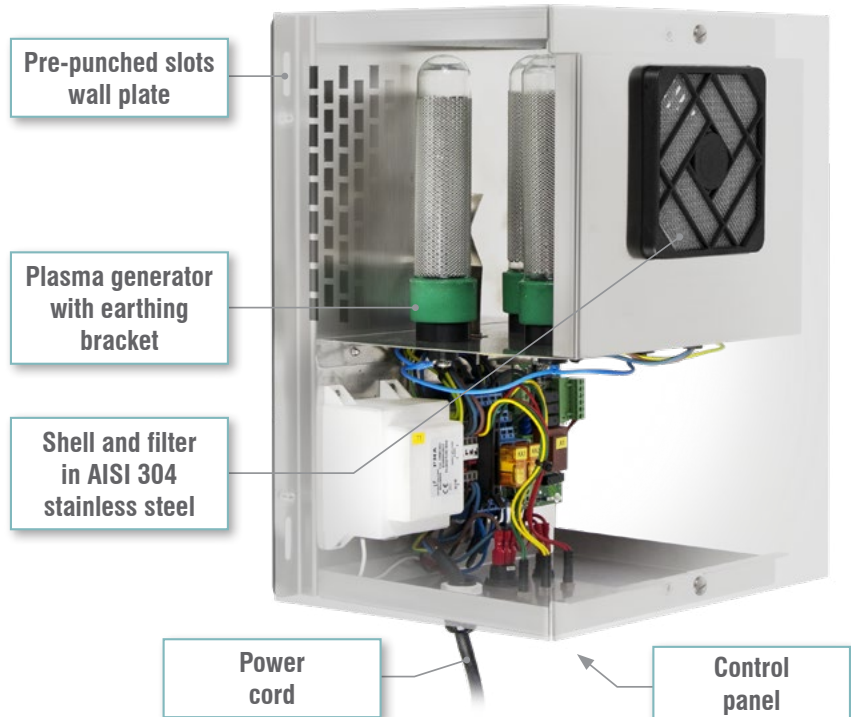
## NTP TECHNOLOGY (NON THERMAL-PLASMA)

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 steel device:

- eliminates constantly the bacterial load in a given ambient air and on the surfaces of indoor areas;
- constantly decomposes Volatile Organic Compounds (VOC);
- eliminates odours;
- compatible with environments that require on-going monitoring of the contamination of air and surfaces.



#### JONIX steel

JONIX steel is a unit of sanitization, with a cold plasma technology for purifying and decontaminating the air.

Ideal for waiting rooms, clinics, quarantines, surgical rooms and where it is necessary to constantly prevent and reduce airborne bacterial contamination. It can be easily installed on a wall or placed on a horizontal plane. The device is designed to allow uniform propagation of the purified air thanks to the front ventilation system of intake and to the openings to the sides. They guarantee the optimal air outlet. Compact and silent, the JONIX steel unit eliminates quickly all kinds of bacteria and chemical contaminants.

JONIX steel is simple and essential. Consistent with an integrated management of the facilities, control and functions of the device can be managed remotely.

#### ENVIRONMENTALLY FRIENDLY AND COMPATIBLE WITH HUMAN PRESENCE

No chemical product is used and it has zero environmental impact. It continuously sanitizes both the air and the surfaces. It eliminates the odours thereby improving indoor comfort. It guarantees the good quality of the air to the operators, in accordance with the regulations relating the safety of the workers.



covid-19



V.O.C.



odours



bacteria



mould



virus

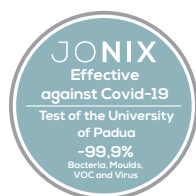
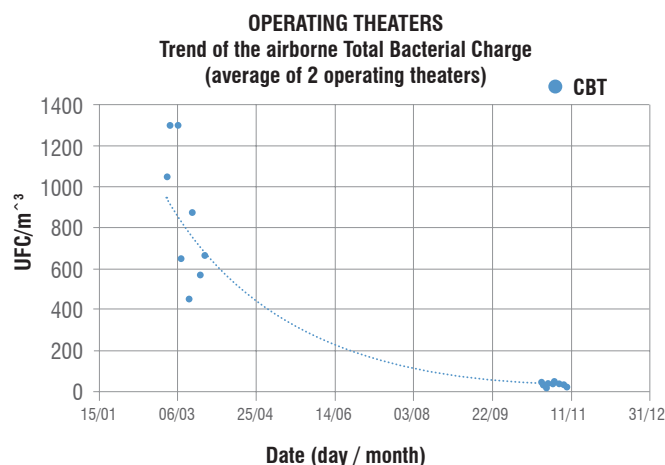
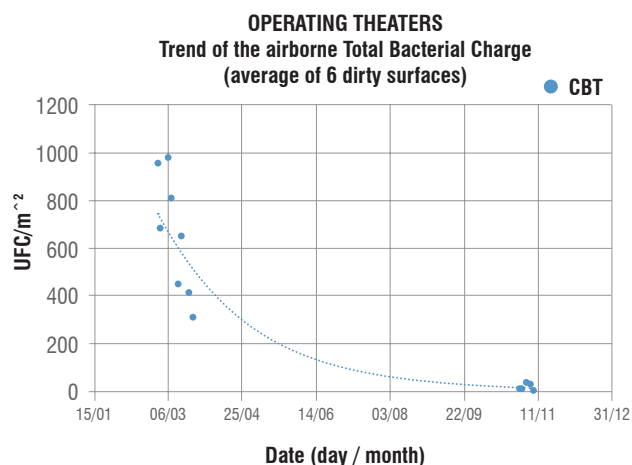
## EFFICIENCY

The bio acid and neutralization activity of polluting substances can be measured after few hours from the activation of the device. The continuous functioning of the device blocks the spreading of bacterial contamination generated on a continuous basis by the presence of infected animals and also due to the normal composition of the air.

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** steel removes chemical and organic odors , reactive particles break chemical bonds of odorous substances which then decompose.



Listeria  
monocytogenes



Staphylococcus  
aureus



Escherichia  
coli



Pseudomonas



Aspergillus  
brasiliensis



Salmonella



Legionella

## APPLICATION SECTORS AND OPERATING CYCLES

This device can be used in waiting rooms, hospital stays, quarantines, surgical rooms.

The device functioning can be operated on a continuous basis or in cycles based on specific needs.

## ECOLOGICAL PLANNING

### Ecological=no chemical products

JONIX steel uses no chemical products and produces no residual substances.

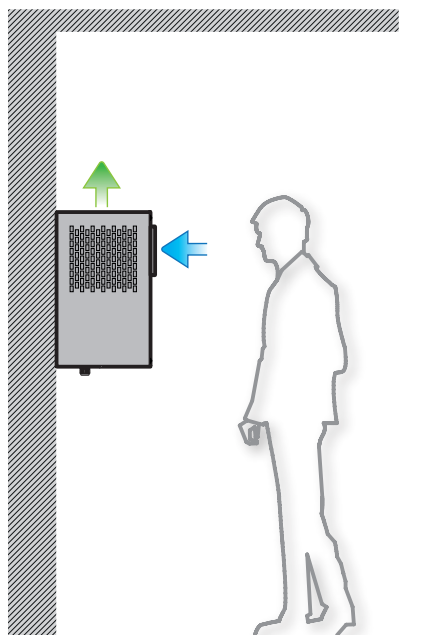
### It can be used during healthcare activities.

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.

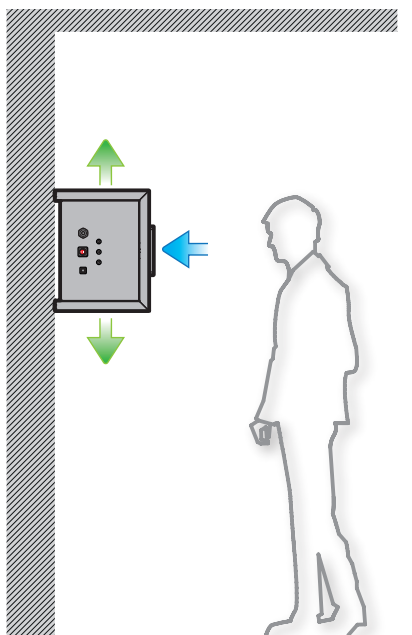
## GREAT ADAPTABILITY AND DIFFERENT INSTALLATION SOLUTIONS

JONIX steel devices – thanks to their adaptability and to their space-saving designs - can be easily fixed on a **wall** (horizontally or vertically) or on a **ceiling**.

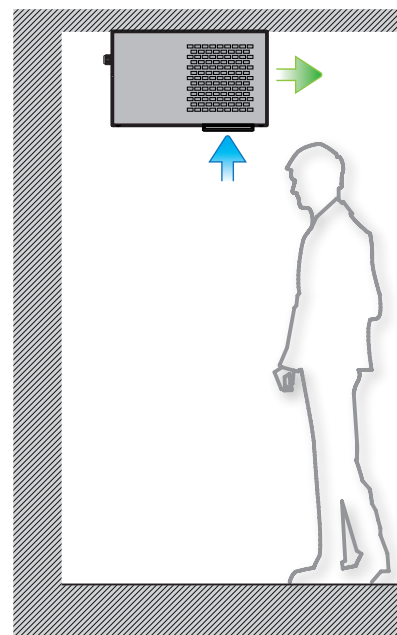
VERTICAL WALL FIXING



HORIZONTAL WALL FIXING



CEILING FIXING



→ : ambient air. - → : ionised air flow.

## FAST INSTALLATION AND USER FRIENDLY DEVICE

JONIX steel is designed to be directly fixed on the wall through the specific prepunched slots located in the plate of the device.

To turn on the device press the on/off switch. The button will illuminate, a slight noise coming from the ionizing tube will be heard and the air flow generated by the fan will be perceived.

JONIX steel 2C JONIX steel 4C  
JONIX steel 2F JONIX steel 4F

JONIX steel 1C







covid-19



V.O.C.



odours



bacteria



mould



virus

## TECHNICAL FEATURES

Model	JONIX steel 1C	JONIX steel 2C	JONIX steel 4C	JONIX steel 2F	JONIX steel 4F
Plasma generators	1 x type 175	2 x type 175	4 x type 175	2 x type 520	4 x type 520
Generators replacement	Every 14000 hours				
Generators maintenance	Every 1000 hours				
Filter	Anti-dust in AISI 304 stainless steel				
Fan	1x AC Axial fixed flow rate			2x AC Axial fixed flow rate	
Air flow (m³/h)	160	160	160	320	320
Direction of air flow	Front-to-side (through side openings)				
Dimensions (mm)	190 x 375 x 150	310 x 400 x 260	310 x 400 x 260	310 x 700 x 260	310 x 700 x 260
Weight (kg)	5	9	9	14	15
Power supply	230 V / ~1 / 50 Hz				
Max power absorption (W)	32,2	35	35	20	67
Full load ampere (A)	0,14	0,15	0,15	0,29	0,29
Suitable for rooms up to (m³)	105	200	500	1000	2000



### MADE IN ITALY

Designed and created by expert technicians specialized on air purification.



Hallmark for health and living comfort  
in confined spaces  
(UNI EN 16000- UNI EN14 412).



## Reference standards

### NATIONAL LAWS AND STANDARDS

#### Valid for the following categories: Civil, Industrial, and Healthcare sectors

Italian Legislative Decree 81/2008 Consolidated Law on Health and Safety in the Workplace of 10th April 2008 (published in the Ordinary Supplement No. 108 of the Official Gazette No. 101 of 30th April 2008; Legislative Decree No. 81 was published on 9th April 2008) • Guidelines issued by the Italian Presidency of the Council of Ministers (Permanent Conference for relations between the State and the Regions), Center for disease control and prevention, General Directorate of Health prevention, Dept. II entitled: "Outline of guidelines for the prevention of indoor risk factors for allergies and asthma in schools" of 18th November 2010 • Guidelines issued by the Italian Presidency of the Council of Ministers (Permanent Conference for relations between the State and the Regions), entitled (Outline of Guidelines for the definition of technical protocols for predictive maintenance on air conditioning systems" of 5th October 2006. • Guidelines issued by the Italian Presidency of the Council of Ministers (Permanent Conference for relations between the State and the Regions), "Operating procedure for the appraisal and management of risks connected to the sanitation of air treatment systems" of 7th February 2013 • Guidelines for preventing and controlling legionellosis O. G. No. 103, of 5th May 2000 (Ministry of Health - Permanent Conference for relations between the State, the Regions and the Independent Provinces of Trento and Bolzano) • Guidelines indicating recommendations on legionellosis for managers of tourist and spa facilities of 13th January 2005 (Permanent Conference for relations between the State, the Regions and the independent provinces of Trento and Bolzano) • Guidelines for preventing and controlling legionellosis of 7th May 2015 (Ministry of Health - Permanent Conference for relations between the State, the Regions and the independent Provinces of Trento and Bolzano) • Guidelines issued by the Italian Presidency of the Council of Ministers (Permanent Conference for Relations between the State and the Regions) entitled "Guidelines for the protection and the promotion of health in confined environments and for the prevention and control of legionellosis" of 27th September 2001.

### REGIONAL LAWS AND STANDARDS

#### Valid for the following categories: Civil, Industrial, and Healthcare sectors

Region: Liguria, Law No. 24 of 2nd July 2002 • Region: Puglia, Law No. 45 of 23rd December 2008 "Health provisions." • Region: Emilia Romagna -resolution of the Regional Council No. 1115 of 21st July 2008 "Regional guidelines for monitoring and controlling legionellosis". • Region: Molise – Law No. 15 of 13th July 2011 "Regulations for the prevention of the spreading of infectious diseases". • Guidelines for the prevention and control of legionellosis in Lombardy of 28/02/2005, Directorate-General for Health Decree No. 2907.

#### Valid for the following categories: Healthcare sector

Regional law of Lombardy No. 33 of 30th December 2009 - New Regional Consolidated laws on health and Implementing Decree No. 1751 dated 24/02/2009 of the Directorate-General for Health of Lombardy.





covid-19



V.O.C.



odours



bacteria



mould



virus

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pure living

**JONIX** S.p.A.

Società Benefit

info@jonixair.com

Certified mail: jonixsrl@legalmail.it

web: www.jonixair.com



Registered Office:

Viale Spagna 31/33

35020 Tribano (PD) - Italy

tel +39 049 9588511

fax +39 049 9588522

Operational Headquarters:

Via dell'Artigianato, 1

35020 San Pietro Viminario

(PD) – Italy

Tel +39 0429 760311

Research and Development

Headquarters:

Via Tegulaia 10/b

56121 Pisa - Italy

tel +39 050 985165