

JONIX steel

USE AND MAINTENANCE MANUAL



**AIR PURIFICATION DEVICE
WITH ADVANCED COLD PLASMA TECHNOLOGY**

These instructions are translated from Italian (the original language).

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Thank you purchasing the JONIX steel device.

This manual contains information and what is deemed necessary for transporting, installing, using and maintaining the JONIX steel sanitation module.

Improper installation of the device and/or failure to comply with the instructions in this manual, may invalidate the warranty that the Manufacturer issues for its products.

The Manufacturer is not liable for any direct and/or indirect damage caused by incorrect installation or damage caused by the units installed by inexperienced and/or unauthorised staff. At the time of purchase, check that the device is intact and complete.

The Manufacturer declines any liability in case of personal injury or property damage resulting from any improper use of the device or from the failure to observe the use and safety instructions specified in this manual. In any such case, any warranty claim will be void.

Any complaints must be submitted in writing within **8 days** of receiving the goods.

For more information, download of the manual or video tutorial, we invite you to visit www.jonixair.com.

1 - GENERAL INFORMATION

1.1 SERIAL NUMBER PLATE

The equipment described in this manual is provided with a plate containing the equipment and Manufacturer data:

Fabbricante	 JONIX S.R.L. Viale Spagna, 31/33 35020 Tribano (PD)
Nome del prodotto	JONIX steel
Descrizione del prodotto	Dispositivo per la sanificazione attiva e purificazione dell'aria
Codice prodotto	REF 70MICFxx
Numero di serie	SN xxxxxxxxxxxx
Allimentazione	230V / ~1 / 50Hz
Max Corrente assorbita	xx A
    	

The ionisation module for professional environments JONIX steel is in compliance with Directives 2006/42/CE, 2011/65/UE, 2014/30/UE, 2014/35/UE and subsequent amendments.

IMPORTANT WARNING

The JONIX steel device is designed and made to sanitise the air in residential environments that are incompatible with toxic and flammable gases. It is therefore strictly forbidden to use the device in environments where the air is mixed with and/or altered by other gaseous compounds and/or solid particles. Using the device for purposes other than those intended and that do not comply with those described in this manual, will immediately relieve the manufacturer and its distributors from any direct and/or indirect liability.

1.2 LIABILITY

Failure to comply with the instructions contained in this Use and maintenance manual relieves the Manufacturer from any liability. For any information not included or that cannot be deduced from the Manual, consult the Manufacturer directly.

JONIX srl
Viale Spagna 31/33
35020 Tribano - PD - Italy
<http://www.jonixair.com>

In particular, if equipment maintenance is carried out in a way that is not in compliance with the instructions supplied, or in a way to jeopardise integrity or modify features, JONIX srl is relieved from any liability inherent to safety of persons and faulty operation of the equipments.

1.3 SYMBOLS

Please pay utmost attention to the following symbols and their meaning. They emphasise specific information, such as:



WARNING: It refers to integrations or suggestions concerning the proper use of the device.



HAZARD: It refers to dangerous situations that may result from the use of the device, in order to ensure personal safety.



FORBIDDEN: This symbol refers to operations that must be avoided under any circumstances, and hence forbidden.



HIGH VOLTAGE HAZARD!

Do not open or remove any doors or protections before disconnecting the voltage supply.



WARNING!

It is mandatory to use protective gloves.



WASTE FROM ELECTRICAL AND ELECTRONIC EQUIPMENT.

The crossed-out wheelie bin symbol on the equipment label indicates that the equipment is compliant with the Waste Electrical and Electronic Equipment (WEEE) Directive. Disposing of the equipment freely in the environment or illegally disposing of the equipment are punishable by law.

2 - WARNINGS AND GENERAL PROHIBITIONS



This instruction manual is an integral part of the device and therefore must be kept carefully and must ALWAYS accompany the device, even in the event that it is sold to another owner or user or transferred to another facility. In the event that it is damaged or lost contact JONIX srl for another copy or download the document from www.jonixair.com.



Repairs and maintenance work must be carried out by JONIX srl authorised staff or by qualified staff according to the provisions set out by this manual. Do not alter or tamper with the device as it can lead to hazards and the manufacturer of the device shall not be liable for any damage caused.



After removing the packaging check that the contents are intact and complete. In the event of a noncompliance please contact the Company that sold you the device.



When installing, commissioning and operating this product, it is mandatory to observe the requirements and instructions specified in this manual.



JONIX srl disclaims any liability for damage caused to people, animals or property due to installation, adjustment and maintenance errors or by improper use.

Please note that the use of products that require electricity, involves the observance of some crucial safety rules such as:



This device is not intended for use by people (including children) with reduced physical, mental or sensory capabilities or without experience and knowledge, unless they are supervised or are given instructions to use the appliance by a person responsible for their safety. Take suitable precautions to prevent children from playing with the device.



Do not touch the device if you are barefoot and with parts of the body that are wet or damp.



Do not carry out any maintenance or cleaning operations without having first disconnected the device from the mains, by turning the main system switch to “OFF”.



Do not alter the safety or adjustment devices without prior authorisation and instructions from the manufacturer of the device.



Do not pull, detach or twist the electrical wires coming out of the device, even when it is disconnected from the mains.



Do not stand, sit and/or rest any type of object on the device.



Do not spray or throw water or other liquids directly onto the device.



Do not open the panels for accessing the internal parts of the device without having first turned the system switch to “OFF”.

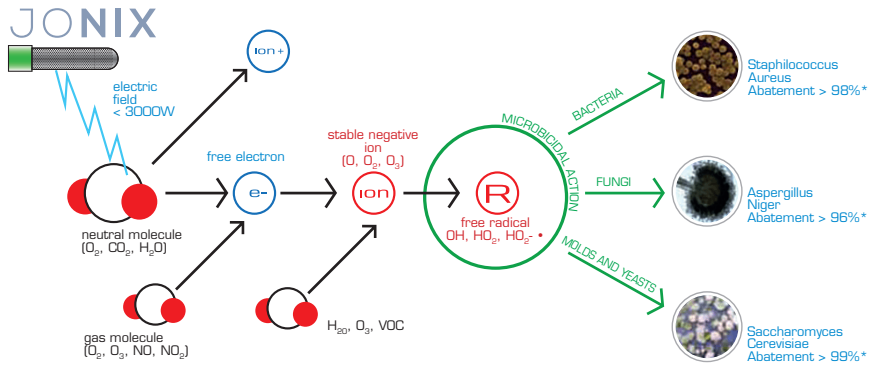


Do not dispose of or leave the packaging materials within reach of children because it can be potentially dangerous.

3 - THE OPERATING SYSTEM

This sanitization device, by exploiting the physical process of ionisation, promotes the controlled formation of particular ionic species (electrically charged species) in the air, through an electrostatic field that simulates the natural process that normally occurs through solar radiation, mechanically or by means of other physical phenomena.

The particular ionic species produced have proved to be particularly effective as sanitizing agents in the air and on surfaces, moreover are historically and scientifically proven to be beneficial in people, especially those with a negative electrical charge (arising from individual or small groups of molecules that receive an electron).



JONIX steel device:

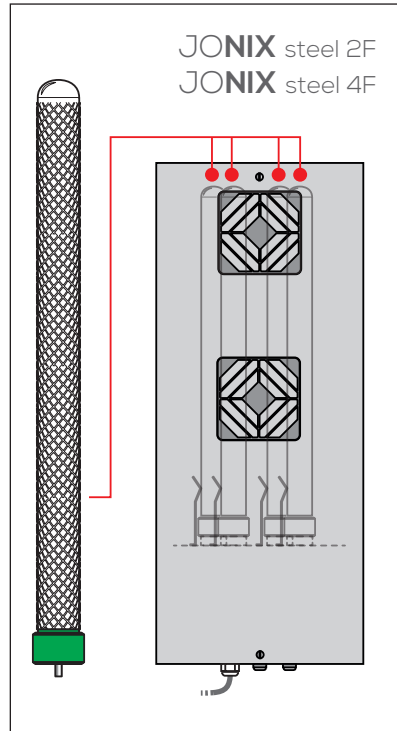
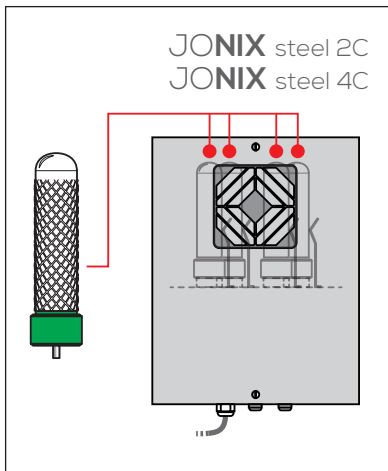
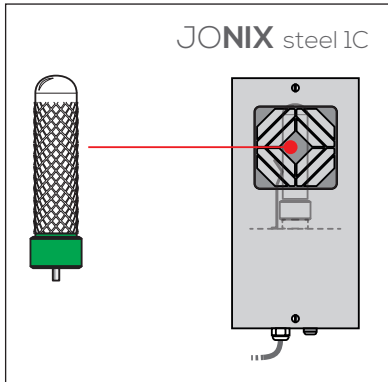
- **reduces and eliminates continuously the bacterial load in a given ambient air and on the surfaces of indoor areas;**
- **constantly decomposes Volatile Organic Compounds (VOC);**
- **eliminates odours;**
- **is compatible with environments that require on-going monitoring of air contamination.**

Use:

- **veterinary sector: waiting rooms, patients' rooms, infectious diseases ward, surgical rooms.**
- **food sector: cold storage cells, working areas, packaging areas, blast chilling cells.**

The device has a safety switch, positioned in such a way that when the protection cover (also accidental) is opened, the power supply to the ionizing units and the fan is removed.

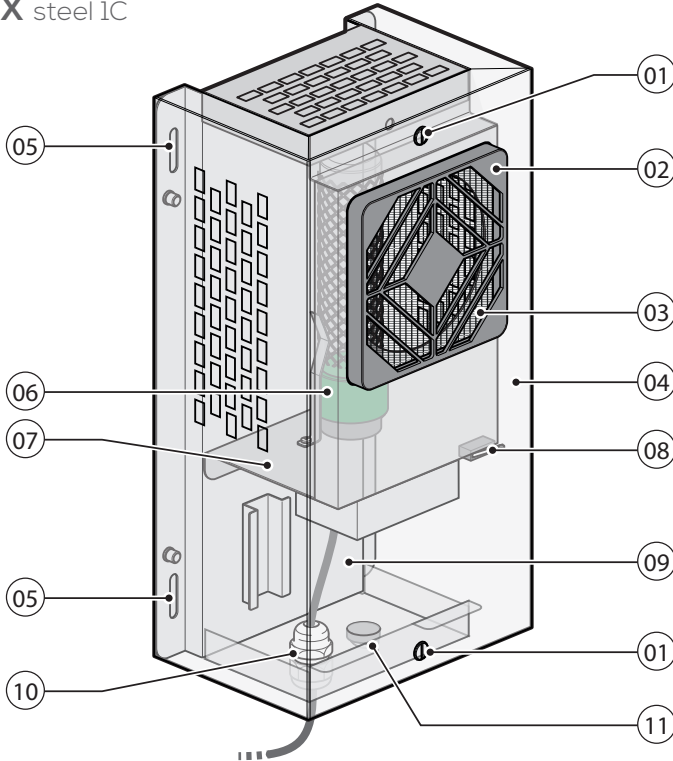
JONIX steel sanitizing activity is compatible with human presence.



Airborne and surfaces contamination reduction can be verified through environmental analysis: air sampling with SAS method, surfaces and equipment sampling through contact plates method. In order to obtain a comparative analysis it is suggested to carry out three cycles of sampling in three different days of the week before the devices are started. They should be selected on the basis of productive and representative characteristics of the risks of increasing microbial contaminations. The same cycle has to be repeated under the same conditions, with the same sampling methods and in the same points, starting from the 24 hours after the installation.

4 - TECHNICAL DATA

JONIX steel IC



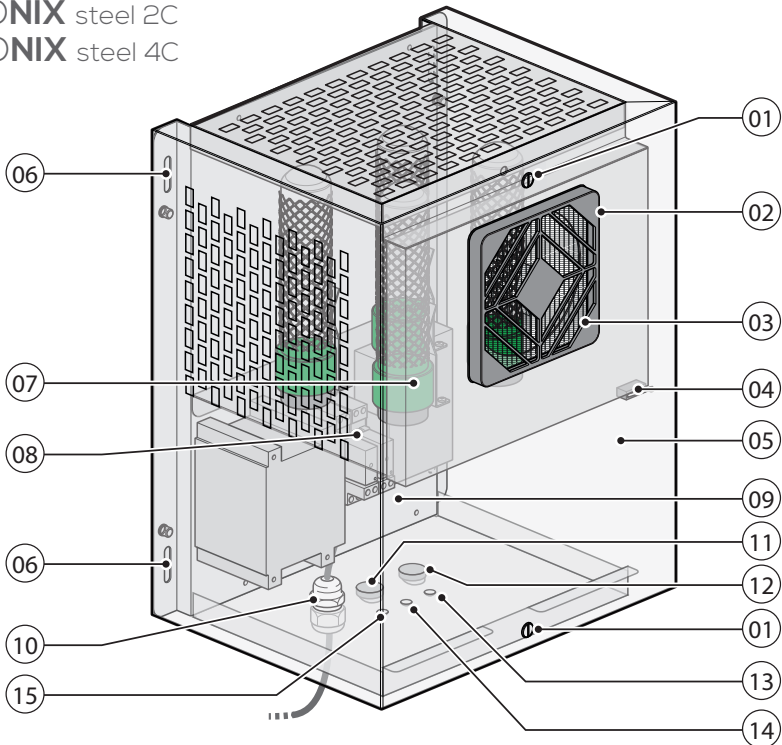
4.1 COMPONENT DESCRIPTION JONIX steel IC

01 Cover fixing screw	07 Plate in AISI 304 stainless steel
02 Filter cover	08 Switch button
03 AISI 304 stainless steel filter	09 Electrical compartment
04 Cover in AISI 304 stainless steel	10 Power cable exit
05 Pre-punched slots wall plate	11 ON/OFF luminous switch
06 Ionising tube and earthing bracket	

4.1.1 Technical features JONIX steel IC

Model	Dimensions (WxDxH) [mm]	Power Supply	Max power absorption [W]	Air flow rate [m³/h]	Weight [Kg]
JONIX steel IC	190 x 150 x 375	230 V / ~1 / 50Hz	0,14	160	5

JONIX steel 2C JONIX steel 4C



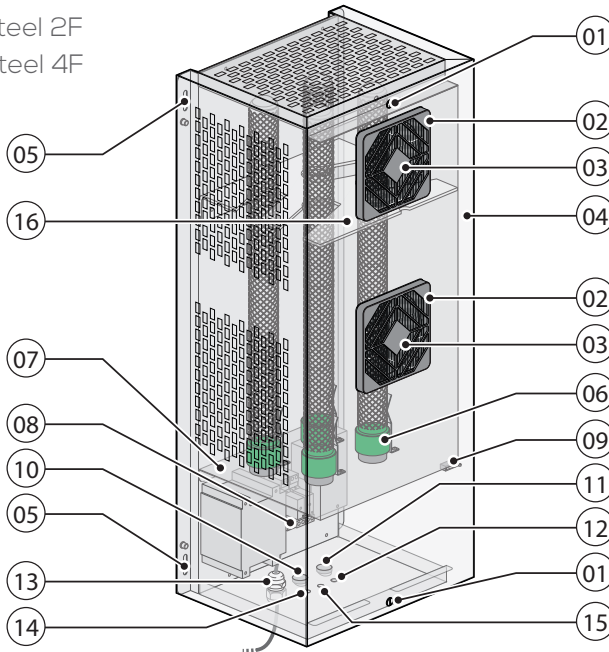
4.2 COMPONENT DESCRIPTION JONIX steel 2C / 4C

01 Cover fixing screw	08 Plate in AISI 304 stainless steel
02 Filter cover	09 Electrical compartment
03 AISI 304 stainless steel filter	10 Power cable exit
04 Switch button	11 ON/OFF luminous switch
05 Cover in AISI 304 stainless steel	12 Alarm reset button
06 Pre-punched slots wall plate	13 Led signal for malfunction
07 Ionising tube and earthing bracket JONIX steel 2C: n°2 - JONIX steel 4C: n°4	14 Led signal for maintenance need
	15 Led signal for correct functioning

4.2.1 Technical features tecniche JONIX steel 2C / 4C

Model	Dimensions (WxDxH) [mm]	Power Supply	Max power absorption [W]	Air flow rate [m³/h]	Weight [Kg]
JONIX steel 2C	310 x 260 x 400	230 V / ~1 / 50Hz	0,15	160	9
JONIX steel 4C			0,15	160	9

JONIX steel 2F
 JONIX steel 4F



4.3 COMPONENT DESCRIPTION JONIX steel 2F / 4F

01 Cover fixing screw	09 Switch button
02 Filter cover	10 ON/OFF luminous switch
03 AISI 304 stainless steel filter	11 Alarm reset button
04 Cover in AISI 304 stainless steel	12 Led signal for malfunction
05 Pre-punched slots wall plate	13 Power cable exit
06 Ionising tube and earthing bracket	14 Led signal for correct functioning
JONIX steel 2F: n°2 - JONIX steel 4F: n°4	15 Led signal for maintenance need
07 Plate in AISI 304 stainless steel	16 Condenser support plate
08 Electrical compartment	

4.3.1 Technical features tecniche JONIX steel 2F / 4F

Model	Dimensions (WxDxH) [mm]	Power Supply	Max power absorption [W]	Air flow rate [m³/h]	Weight [Kg]
JONIX steel 2F	310 x 260 x 750	230 V / ~1 / 50Hz	0,29	320	14
JONIX steel 4F			0,29	320	15

4.4 SPARE PARTS AVAILABLE ON ORDER

Code	Description	Notes
71KT000002	GENERATORS 175 SPARE PART KIT	N° 2 Ionising tubes (short)
71KT000002	N° 2 GENERATORS 520 SPARE PART KIT	N° 2 Ionising tubes (long)
JX40000002	PROTECTION FUSE	1 quick blow glass fuse 5x20 1A 'F'

5 - RECEPTION, TRANSPORT AND STORAGE

5.1 PACKAGING

The JONIX steel device, together with the accessories, is shipped in special protective packaging. The materials that were not installed for technical requirements are supplied packed with suitable packaging secured to the inside or outside of the device itself. The packaging contains:

- JONIX steel *.
- Operating and maintenance manual (with dimensional diagrams, wiring diagrams, Declaration of Conformity).

*) in JONIX steel 2C / 4C / 2F / 4F versions the ionised tubes equipped are disassembled and packed in their boxes.

5.2 HANDLING AND TRANSPORT



To handle the device use appropriate means, depending on the weight, as required by Directive 89/391/EEC and subsequent amendments.



Please take great care while unloading and positioning the devices, to prevent damaging the casing or components. Avoid uncontrolled rotations.

The weight of every single device is given in this manual.

5.3 INSPECTION UPON RECEPTION

When you receive the device please check all its parts, in order to make sure that it has not been damaged during transport.

Any damage must be reported to the carrier, by filling in the relevant section on the delivery note and specifying the type of damage.



Any type of complaint must be sent in writing within eight days from receiving the goods.

5.4 STORAGE

In the event of extended storage keep the devices away from dust and sources of vibration and heat.



The Manufacturer disclaims any liability for damage due to incorrect unloading failure to protect the device from the elements.

5.5 HANDLING DEVICE IN OPERATING CONDITIONS

iJONIX steel device is easy movable in various environments, because it is provided with reduced dimensions (see Chapter 4 "Technical Data").

6 - INSTALLATION AND COMMISSIONING



ATTENTION! Before carrying out any operation on the devices read **ALL** the instructions in this manual carefully.

Definitions:		
<p>USER: Person, organisation or company who or which has purchased or rented the device and is going to use it for the intended purposes.</p>	<p>USER/OPERATOR: Individual who has been authorised by the user to operate the device.</p>	<p>QUALIFIED STAFF: Individuals who have completed a specific course and are therefore able to recognise the hazards arising from the use of this device and are able to prevent them.</p>

6.1 SAFETY STANDARDS



The Manufacturer disclaims any liability for failure to comply with the safety and prevention standards as described below.

The Manufacturer also disclaims any liability for damage caused by improper use of sanitisers and/or alterations carried out without prior authorisation.

- The device must be installed in strict accordance with the instructions contained in this manual.
- Wear suitable accident prevention clothing when installing the device, such as: goggles, gloves, etc. as instructed in standard 686/89/EEC and subsequent amendments.
- While performing installation, operate in full safety, in a clean environment clear of obstructions.
- Comply with the laws in force in the country in which the device is installed, regarding the use and disposal of the packaging and products used for cleaning and servicing the device; you should also observe the recommendations given by the manufacturer of such products.
- **Before switching the device on check the integrity of the various components and of the electrical mains to which it is connected, making sure that it is fitted with a circuit breaker upstream of the power line as shown in this manual.**
- Never insert objects of any kind into the device, as coming into contact with live parts or electrical terminals may cause fires or electric shocks.



WARNING!

Mechanical machinery in motion and dangerous points of voltage inside the device. Risk of dragging and entrapment or electric shock.

- Do not service or clean the device without first unplugging it from the mains.

- Worn or damaged parts must only be repaired or replaced by qualified staff and by following the instructions given in this manual.
- The spare parts must be approved by the Manufacturer.
- In the event of decommissioning or disposing of the device, follow the anti-pollution regulations set out by the country in which the device is installed.
- In doing puncture in ceilings or walls be sure of not interfere with electric ropes, plumbing and whatever can be damaged.
- Do not pour water or any kind of liquids on the device.
- Place the device so that the power cable cannot be stepped on.
- Do not connect the device to power lines connected to any other electric utilities or devices.
- **Use the type of power supply shown on the label. If you are not sure about the type of power supply available, ask your local retailer or electricity provider for assistance.**
- Do not touch the inside of the device, unless specified otherwise in the instructions contained in this manual.
- Never force the components when assembling: although it is made with high strength materials, the parts of the device can be damaged if handled incorrectly.
- Do not try to perform maintenance work on the device, except where specified in this manual. Opening or removing the outer casing may expose you to dangerous live parts or may involve other risks. All maintenance work must be carried out by authorised staff, except where specified in this manual.
- Unplug the device from the mains and contact qualified staff for assistance in one of the following cases:
 - The device has come into contact with water or liquids of any kind.
 - The device has been exposed to the elements.
 - A malfunction persists despite all the installation and/or maintenance procedures have been performed properly.
- The device comes with slots and openings for ventilation; do not block or cover these slots.
- Make sure that you always leave enough space for adequate ventilation around the side slots of the device.



IMPORTANT The installer and the user, when using the JONIX steel device, must take into account and solve all the other types of risk associated with the system. For example, risks arising from foreign bodies getting into the device or risks due to dangerous flammable or toxic gases at high temperature.

6.2 GETTING STARTED



- Check that the various components of the device are fully intact.
- Check that the documentation and any accessories for installation are contained in the package.



- Carry the device in its packaging as close as possible to the installation site.
- Do not rest weights or tools on the device, or place it on an unstable surface.

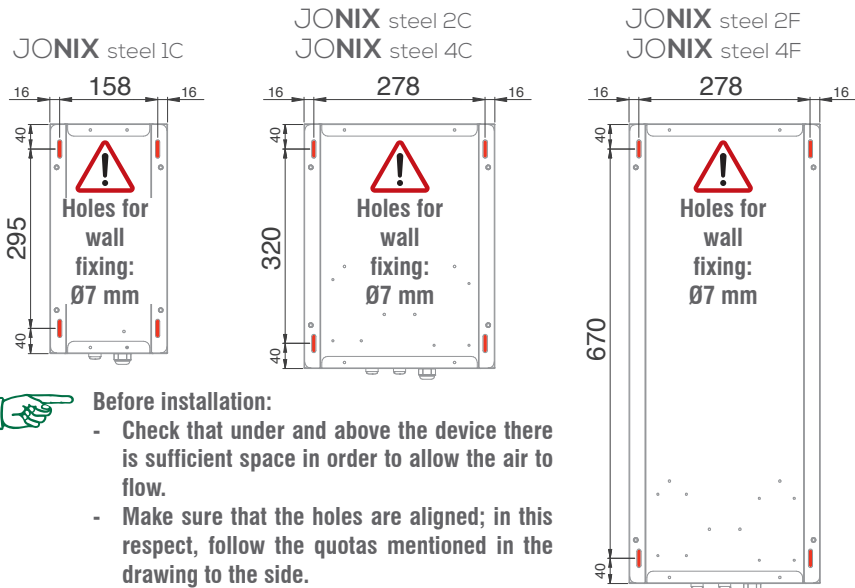
6.3 CHOOSING THE INSTALLATION SITE



- Do not put the device in places where there are flammable gases, acidic, aggressive and corrosive substances that can damage the various components beyond repair.
- Provide a minimum clearance, in order to install the device and carry out routine and special maintenance.

6.4 INSTALLATION OF THE DEVICE

JONIX steel device is designed to be directly installed on the wall through the pre-punched slots placed on the device plate (see image in chapter 4 of this manual).



Before installation:

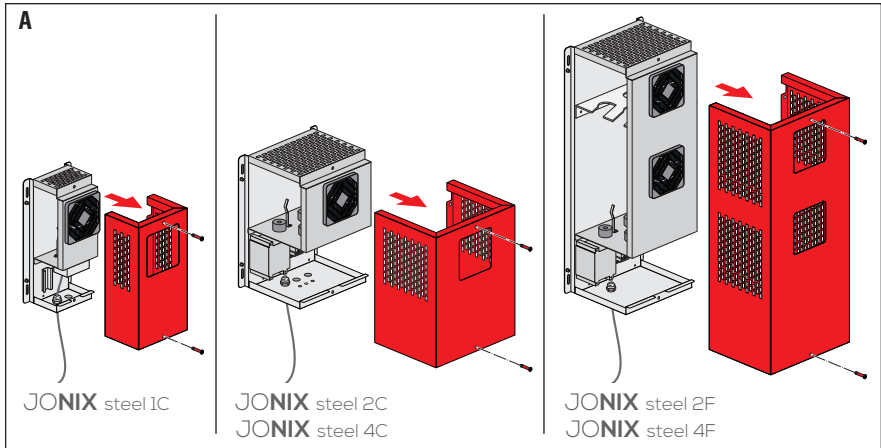
- Check that under and above the device there is sufficient space in order to allow the air to flow.
- Make sure that the holes are aligned; in this respect, follow the quotas mentioned in the drawing to the side.

Drill holes in the wall and insert the screw anchors into them. Screw the screws allowing them to project 8-10 mm from the wall. **Check that the device is stable before using it.**



The right plugs for installation must be chosen based on the weight of the appliance, shown in chap. " Technical data", and the type of wall it is installed on.

Fig. A: Unscrew the fixing screw and remove the frontal cover from the device.



In JONIX steel 2C / 4C / 2F / 4F versions it is necessary to unpack the ionised tubes from their boxes and to screw them in their allocated seat according to the following procedure:

Gently screw the ionising tube holding on to the base (**green part**). If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.

ATTENTION: do not overtighten the screw after reaching its end stop.



Check that the earthing spring is in contact with the outer mesh once the ionising tubes have been screwed back into place. Otherwise contact the manufacturer.

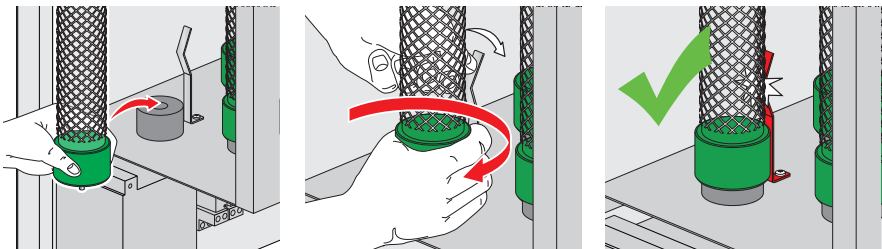
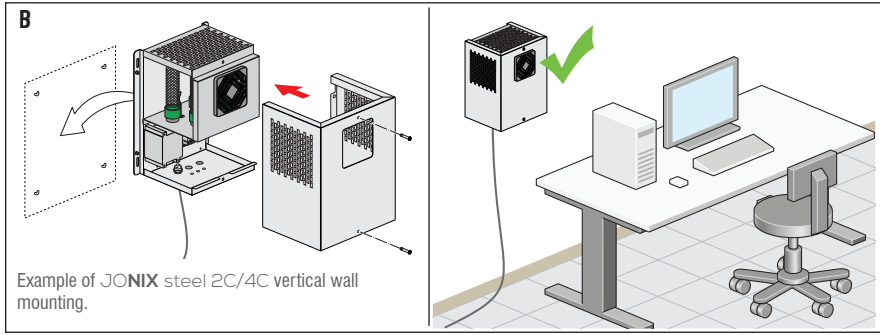


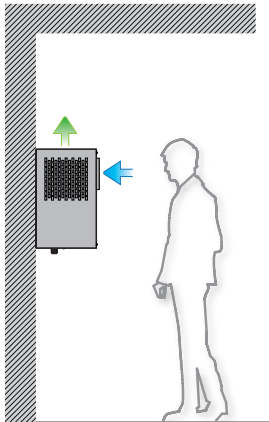
Fig. B: Lift up the device and fix it to the wall with the support of the slots placed on the posterior plate. Finally proceed remounting the anterior panel fixing it with the appropriate locking screws.



6.4.1 Type of fixing

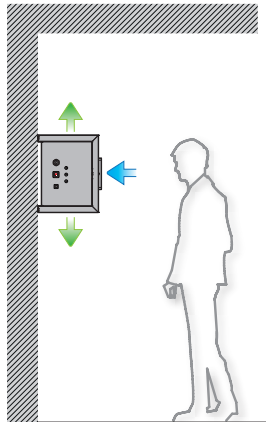
There are different types of mounting of JONIX steel devices, in particular:

➡ : ambient air. - ➡ : ionised air flow.



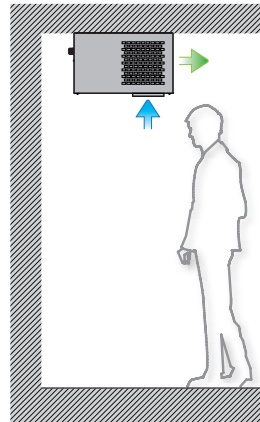
VERTICAL WALL FIXING

It is the most used fastening system, ideal for every kind of environment.



HORIZONTAL WALL FIXING

It can be used as an alternative to the vertical fixing, optimizing the space available.



CEILING FIXING

It can be used in rooms where there is no space in the walls and the ceiling can be easily reached (for example inside cold storage cells).

6.5 ELECTRICAL CONNECTIONS



ATTENTION! BEFORE STARTING ANY OPERATION, MAKE SURE THAT THE MAIN POWER SUPPLY IS DISCONNECTED!

- The electrical connections must be carried out following the instructions provided in this manual.
- **Make sure that voltage and frequency of the electric line correspond to those provided on the name plate.**



WARNING!

Using power supply that does not meet the requirements requested by the device could resolve in damaging the device or part of it.

- The electrical mains of the JONIX steel device must be used for the device only, there must be no other devices powered by the same power line. Do not use adapters, power strips and/or extension cords.
- Make the connection with cables with a suitable cross-section and in compliance with local standards.
- **The installer must see to it to assemble the device as close to the power disconnector as possible, according to standards in force and as far as necessary to protect the electrical parts.**



Any deficiency or non-conformity with the parameters of the power supply to which the device is connected might cause damage to the device itself.

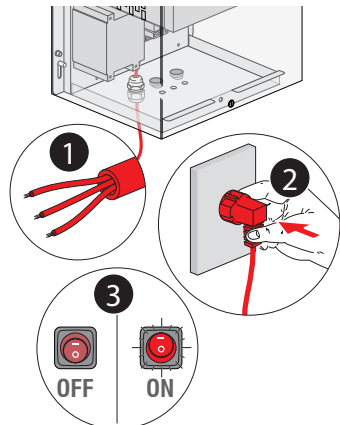
6.6 ELECTRICAL CONNECTIONS

JONIX steel device is delivered from the factory equipped with a two-phase wire + earthing of adequate section (the cable is 2 m long but it is not provided with the plug). The type of power supply suitable for the module is **230V/ ~1/ 50Hz**.



Before making any connections, make sure the mains voltage complies with what is shown on the label.

- 1) Use the most suitable connector for the sockets in the installation site.
- 2) After wiring, connect the device to the power mains.
- 3) The voltage in the device is indicated by an ON/OFF luminous switch that will illuminate once turned ON.

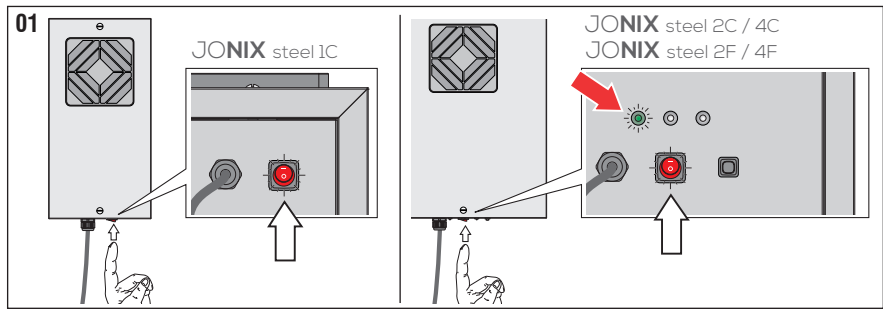


6.7 USING THE DEVICE

Fig. 01: In order to turn on the device act on the switch 0/I, turning it to I. The button will illuminate, a slight noise coming from the ionising tube will be heard and the air flow generated by the fan will be perceived.



In JONIX steel 2C/4C/2F/4F versions under normal operating conditions, the green LED will be turned on.



The table below offers a generic overview of the times needed to reach and maintain the maximum sanitisation level, depending on the size of the relevant room.

Model	Floor area (m ³)	Time needed for sanitation	Recommended daily operating time *
70MICF1C	15	30 min	3 h
70MICF1C	30	1 h	3 h
70MICF1C	45	2 h	4 h
70MICF1C	60	6 h	8 h
70MICF1C	75	12 h	12 h
70MICF1C	90	24 h	24 h
70MICF1C	105	24 h	24 h
70MICF2C	200	24 h	24 h
70MICF4C	500	24 h	24 h
70MICF2F	1000	24 h	24 h
70MICF4F	2000	24 h	24 h

* The recommended daily operating times may be changed in case of specific needs. We recommend avoiding extending the operating hours beyond the values indicated in this table.

7 - MAINTENANCE

7.1 WARNINGS



BEFORE CARRYING OUT ANY MAINTENANCE OPERATION MAKE SURE THAT THE DEVICE IS NOT AND CANNOT ACCIDENTALLY BE POWERED ELECTRICALLY. YOU MUST THEREFORE UNPLUG THE DEVICE BEFORE CARRYING OUT ANY MAINTENANCE.

- It is the duty of the user to perform all the maintenance operations on the device listed below.
- If you experience a malfunction, unplug the device from the mains and contact qualified staff (retailer, the Manufacturer).
- Only trained and qualified personnel can perform maintenance operations.



Use work gloves to protect your hands when performing maintenance.

The frequency of the operations to be performed to ensure proper maintenance of the device JONIX steel depends mainly on the quality of the treated air.

Air can be especially harmful for condensers when it contains polluting or aggressive substances such as:

- Industrial flue gas
- Salt
- Chemical smoke
- Heavy powders



By coming into contact with the inside or outer surfaces of the device by means of the air flow or by direct exposure, these substances can lead to a structural and functional failure of the device and of its performance as time passes and without proper, systematic maintenance.

7.2 ROUTINE MAINTENANCE

The JONIX steel device requires a small amount of maintenance consisting in regularly cleaning of cold plasma generators and of the retina filter to protect the fan.

The JONIX steel device signals the need for maintenance of the generators, by means of the indicator light placed near the power supply cable, every 1000 hours of operation.



In JONIX steel 2C/4C/2F/4F versions, clean the ionising tubes every time the specific LED lights up (yellow blinking light).

7.2.1 Cleaning the Ionising Tubes JONIX steel 1C

Fig. 02: Switch the device off by turning the luminous On/Off switch to **0**.



Remove the plug connected to the mains.

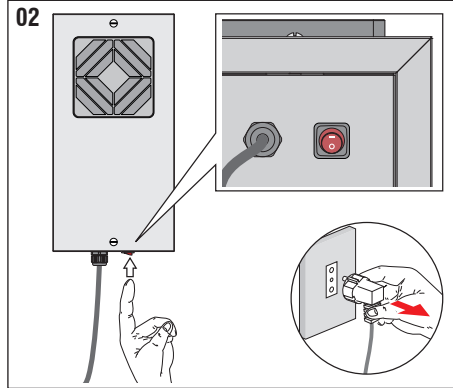


Fig. 03: Unscrew the fixing screw and remove the frontal cover from the device.

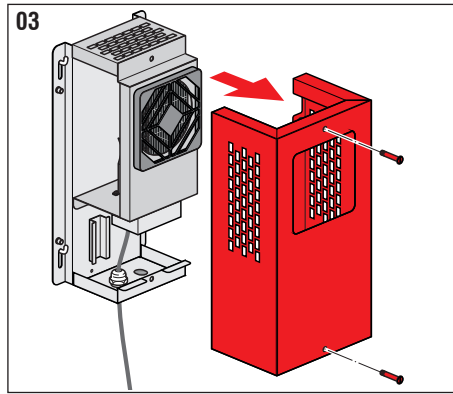


Fig. 04: Gently unscrew the ionising tubes, using the green plastic base.



If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.

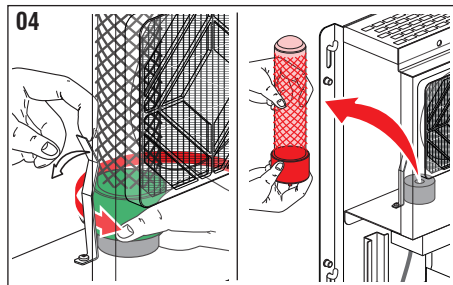
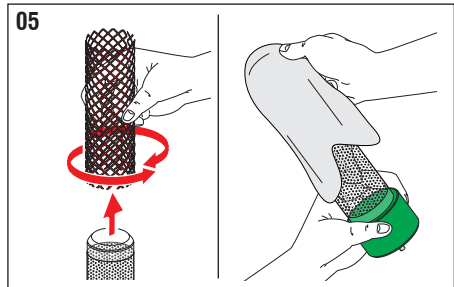


Fig. 05: Pull off the outer mesh from the tube if you have not already done so in the previous point. If this is difficult to do, turn the mesh around the glass while pulling to remove it.

Clean the glass using a damp cloth.



Do not use liquid cleaners or sprays, soap or the like.



Check that the tube is in good conditions: there must not be any cracks or other damage; otherwise it must be replaced. As soon as you notice a whitish layer on the perforated metal plate inside the glass it means that the ionising tube needs replacing.

The tubes must usually be replaced within 18 months of use.

Fig. 06: Wash the mesh under running hot water and dry it thoroughly with a cloth.



Do not put back the mesh on the ionising tube if it is even partially wet.

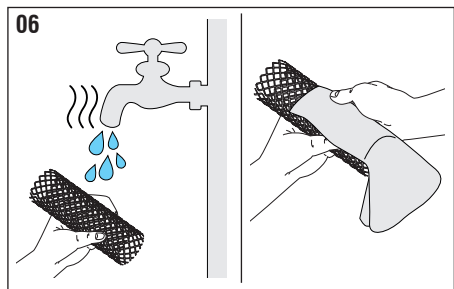


Fig. 07: Put the outer metal mesh back on the glass tube so that it fully overlaps the internal plate.



In any case ensure a minimum distance of at least 3 mm from the base of the tube.

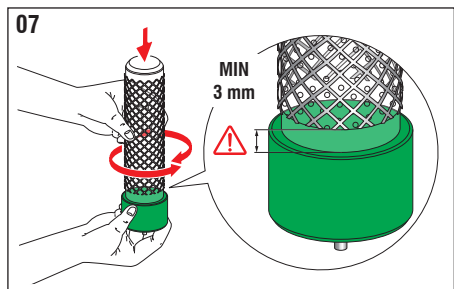


Fig. 08: Gently screw the ionising tube holding on to the base (green part).
If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.

ATTENTION: do not overtighten the screw after reaching its end stop.



Check that the earthing spring is in contact with the outer mesh once the ionising tubes have been screwed back into place. Otherwise contact the manufacturer.

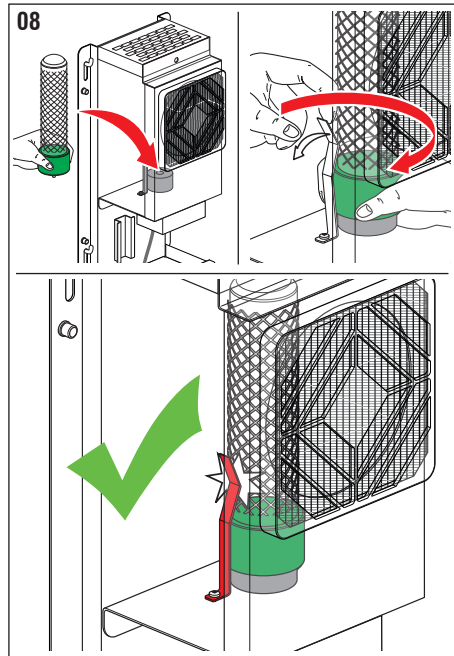


Fig. 09: Replace the cover and rescrew with the appropriate screws.

Clean the outside of the device with a damp cloth, using specific products for the cleaning of stainless steel.



Do not use liquid cleaners or sprays, soap or the like.

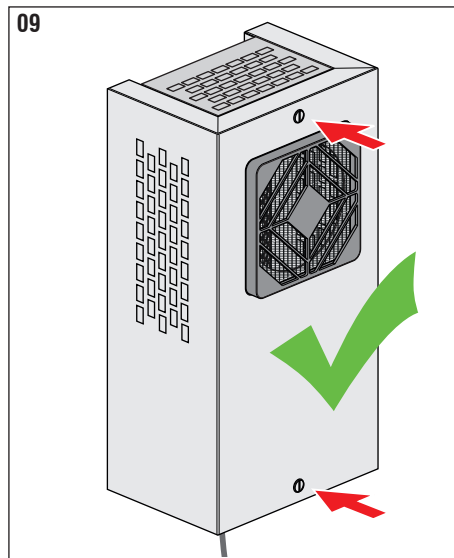
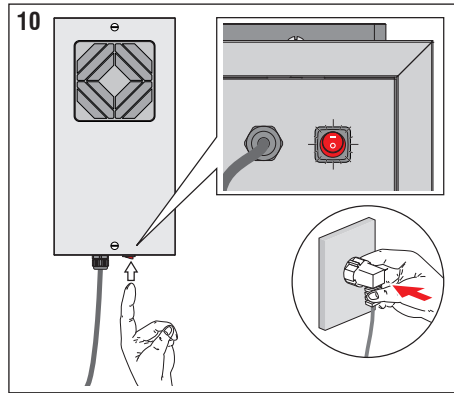


Fig. 10: Reconnect the power plug. In order to turn on the device act on the switch **O/I**, turning it to **I**. The button will illuminate, a slight noise coming from the ionising tube will be heard and the air flow generated by the fan will be perceived.



It should be remembered that failure to clean the ionising tubes when indicated by the device leads to a drop in system performance.

7.2.2 Cleaning the Ionising Tubes JONIX steel 2C / 4C



In JONIX steel 2C/4C versions, clean the ionising tubes every time the specific LED lights up (yellow blinking light).

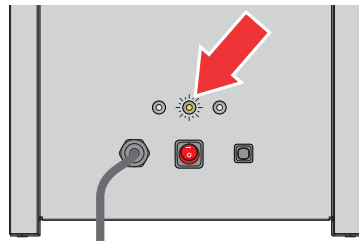


Fig. 11: Switch the device off by turning the luminous On/Off switch to **O**.



Remove the plug connected to the mains.

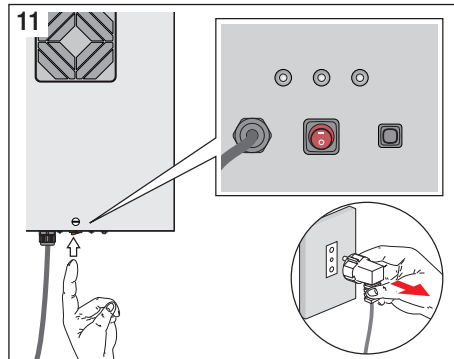


Fig. 12: Unscrew the fixing screw and remove the frontal cover from the device.

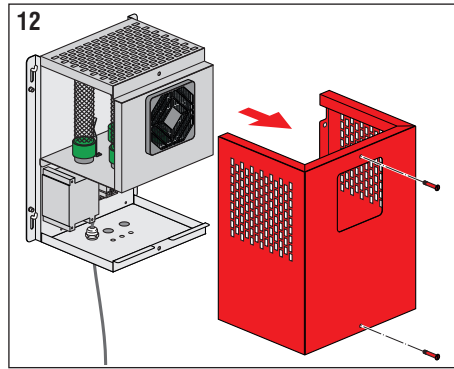
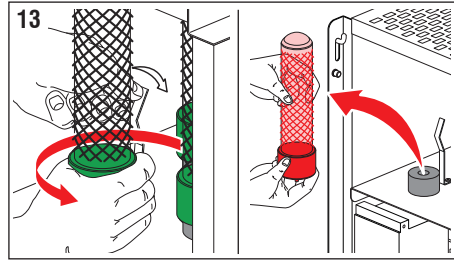


Fig. 13: Gently unscrew the ionising tubes, using the green plastic base.



If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.



To clean the tube follow the operations described from figure 5 to figure 7.

Fig. 14: Gently screw the ionising tube holding on to the base (green part). If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.

ATTENTION: do not overtighten the screw after reaching its end stop.



Check that the earthing spring is in contact with the outer mesh once the ionising tubes have been screwed back into place. Otherwise contact the manufacturer.

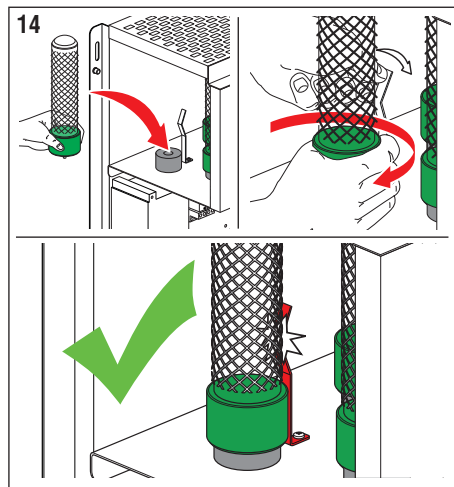


Fig. 15: Replace the cover and rescrew with the appropriate screws.

Clean the outside of the device with a damp cloth, using specific products for the cleaning of stainless steel.



Do not use liquid cleaners or sprays, soap or the like.

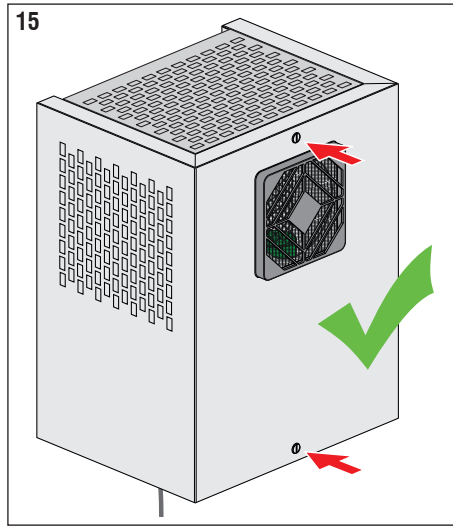


Fig. 16: Reconnect the power plug. In order to turn on the device act on the switch **0/I**, turning it to **I**.

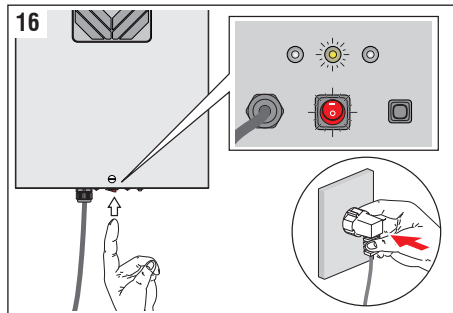
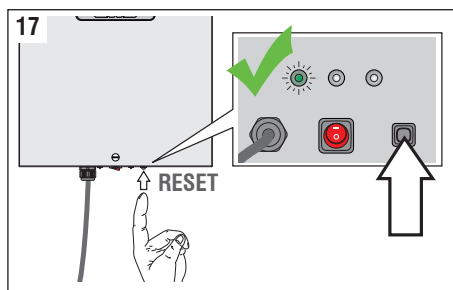


Fig. 17: Hold down the reset button until the LED that signals the need for maintenance (**yellow indicator**) turns off and the LED that signals the proper functioning turns on (**green indicator**).

Monitor the functioning of the device, a slight noise coming from the ionising tube has to be heard and the air flow generated by the fan will be perceived.



It should be remembered that failure to clean the ionising tubes when indicated by the device leads to a drop in system performance.

7.2.3 Cleaning the Ionising Tubes JONIX steel 2F / 4F



In JONIX steel 2F/4F versions, clean the ionising tubes every time the specific LED lights up (yellow blinking light).

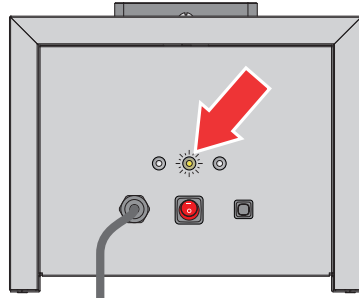


Fig. 18: Switch the device off by turning the luminous On/Off switch to 0.



Remove the plug connected to the mains.

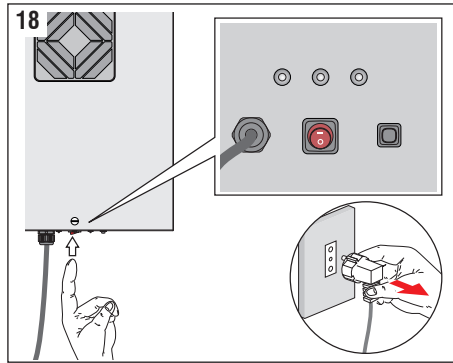


Fig. 19: Unscrew the fixing screw and remove the frontal cover from the device.

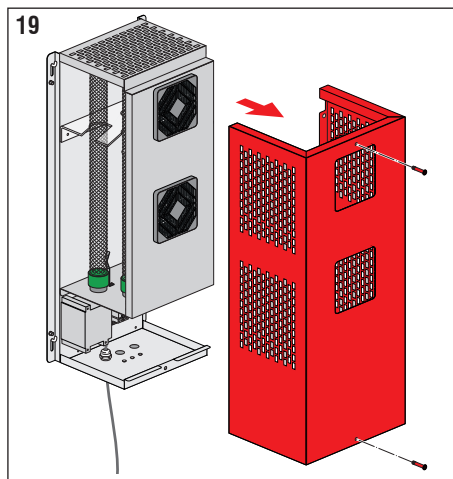


Fig. 20: Gently unscrew the ionising tubes, using the green plastic base.



It is recommended to hold on to the tube (at about half its height) with the other hand in order to facilitate the operation.

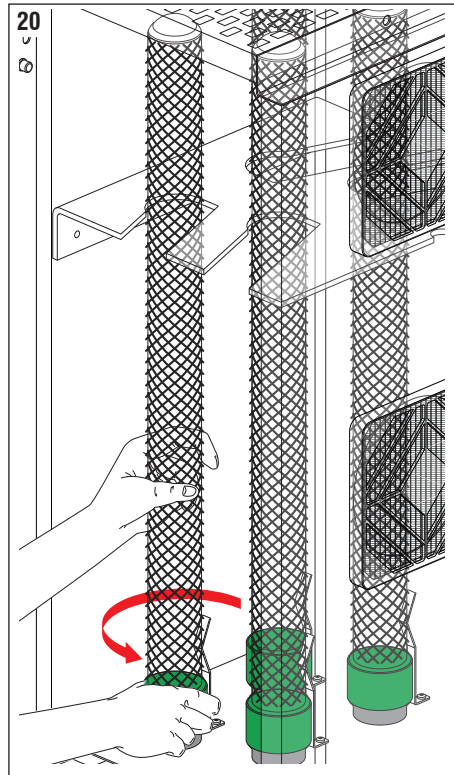
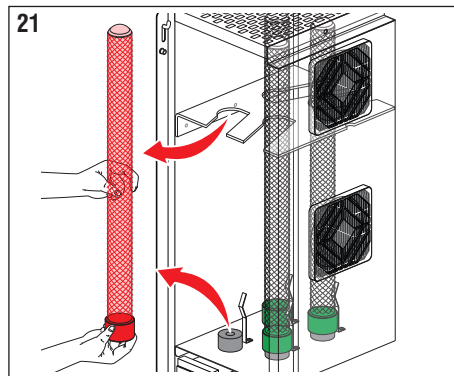


Fig. 21: Remove the tube following the profile in the condenser support plate.



If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.



To clean the tube follow the operations described from figure 5 to figure 7.

Fig. 22: Gently screw the ionising tube holding on to the base (green part), holding it in vertical position with the other hand and inserting it in the shaped profile of the condenser support plate.

If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.

ATTENTION: do not overtighten the screw after reaching its end stop.



Check that the earthing spring is in contact with the outer mesh once the ionising tubes have been screwed back into place. Otherwise contact the manufacturer.

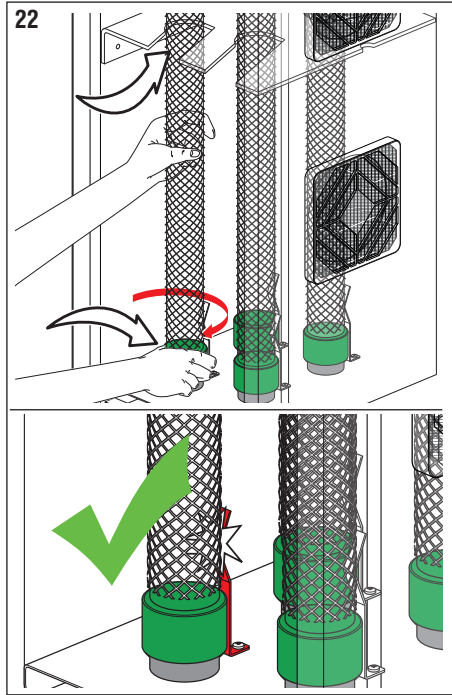


Fig. 23: Replace the cover and rescrew with the appropriate screws.

Clean the outside of the device with a damp cloth, using specific products for the cleaning of stainless steel.



Do not use liquid cleaners or sprays, soap or the like.

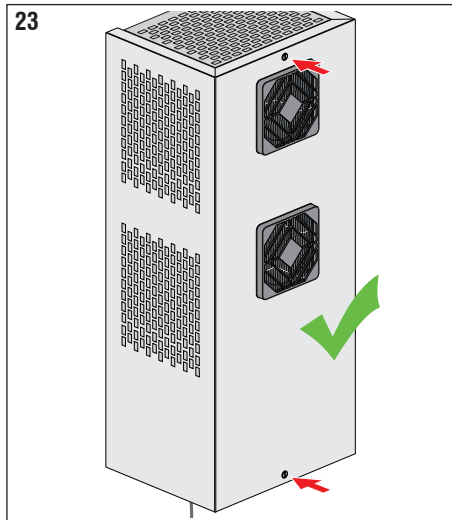


Fig. 24: Reconnect the power plug.
In order to turn on the device act on the switch **O/I**, turning it to **I**.

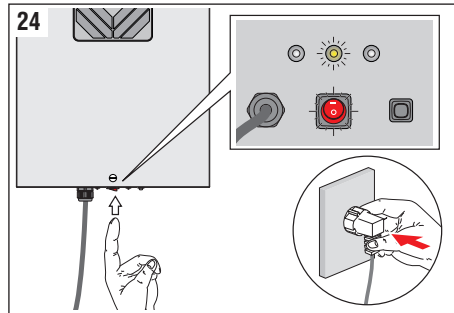
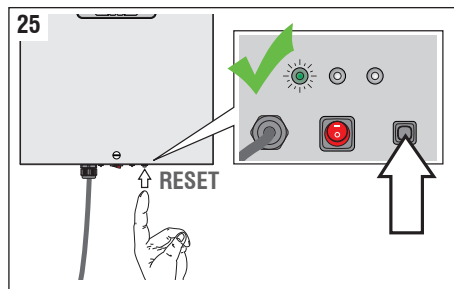


Fig. 25: Hold down the reset button until the LED that signals the need for maintenance (**yellow indicator**) turns off and the LED that signals the proper functioning turns on (**green indicator**).
Monitor the functioning of the device, a slight noise coming from the ionising tube has to be heard and the air flow generated by the fan will be perceived.



It should be remembered that failure to clean the ionising tubes when indicated by the device leads to a drop in system performance.

7.2.4 Cleaning the filter

Clean the filter, located in the anterior part of the device, during every tube maintenance operation.
However, we suggest checking periodically the filter status and quickly removing any dust residues and any other residues that may block the air flow.

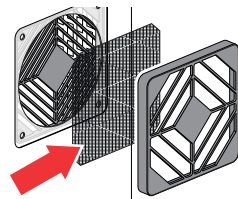


Fig. 26: Remove the filter cover by pressing the sides and pulling towards you.

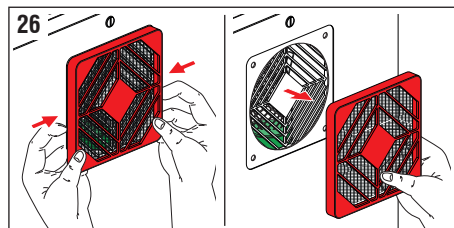


Fig. 27: Wash the mesh filter under running water and dry it with a cloth.

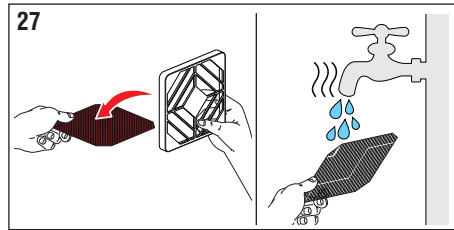


Fig. 28: Using a damp cloth, wipe the plastic filter cover and the finger guard grille fitted at the bottom of the device.

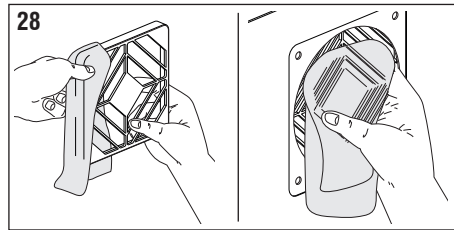


Fig. 29: Put the filter back into the filter cover.

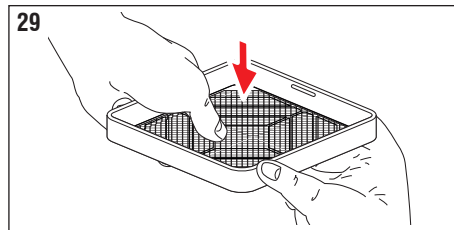
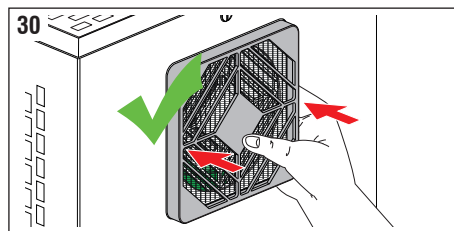


Fig. 30: Reassemble the filter cover with the snap fastening. Press it onto the bottom of the device until the parts are locked in place.



7.2.5 External cleaning of the equipment

Clean the outside of the device with a damp cloth.



Do not use liquid cleaners or sprays, soap or the like.

7.3 SPECIAL MAINTENANCE

The only part that is subject to wear is the ionising tube, whose performance drops over time. Components must be replaced when signs of wear appear, indicated by oxide on the internal mesh of the ionising tube, which will make it turn white, and by the glass looking dull. The JONIX steel 2C/4C/2F/4F devices, are designed to indicate, through a special LED, the need to replace the ionising tubes approximately every 14000 hours of operation.



In JONIX steel 2C/4C/2F/4F versions substitute the ionising tubes every time the specific LED lights up (permanent yellow light). Generally the substitution of the tubes should take place within 18 months of using.

7.3.1 Replacing the ionising tubes JONIX steel 1C

Fig. 31: Switch the device off by turning the luminous On/Off switch to **O**.



Remove the plug connected to the mains.

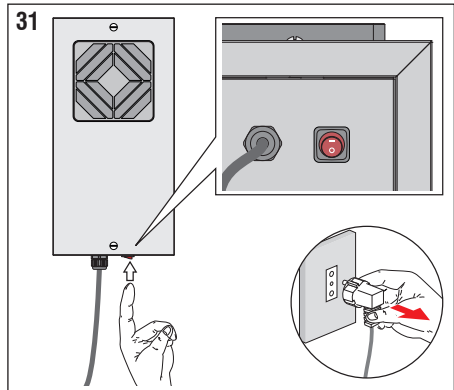


Fig. 32: Unscrew the fixing screw and remove the frontal cover from the device.

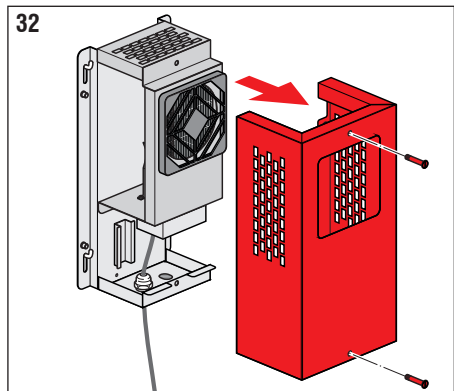


Fig. 33: Gently unscrew the ionising tubes, using the green plastic base.



If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.

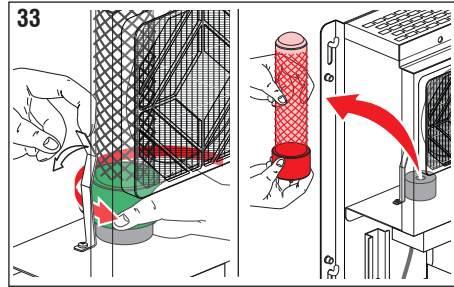


Fig. 34: Screw delicately the ionising tube holding on to the base (green part). If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.

ATTENTION: do not overtighten the screw after reaching its end stop.



Check that the earthing spring is in contact with the outer mesh once the ionising tubes have been screwed back into place. Otherwise contact the manufacturer.

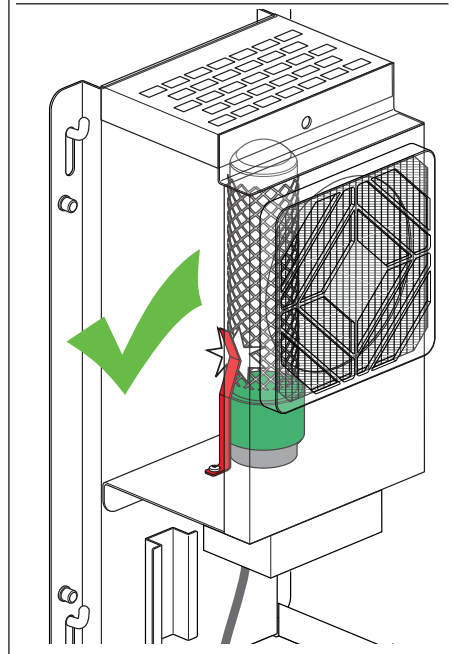
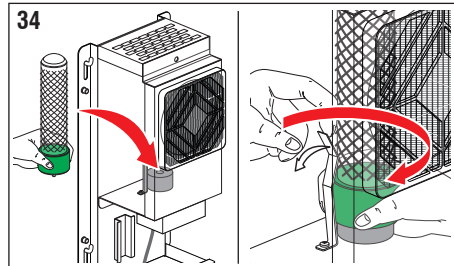


Fig. 35: Replace the cover and rescrew with the appropriate screws.

Clean the outside of the device with a damp cloth, using specific products for the cleaning of stainless steel.



Do not use liquid cleaners or sprays, soap or the like.

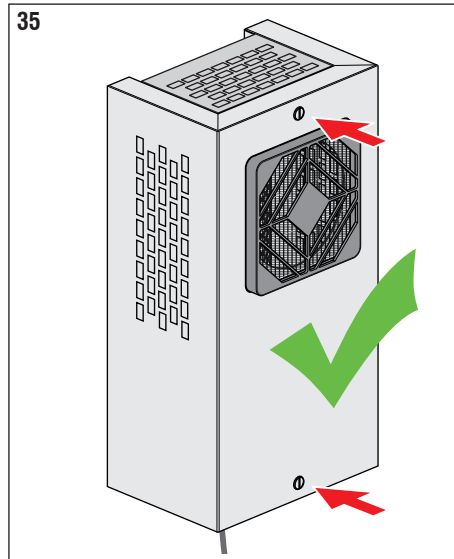
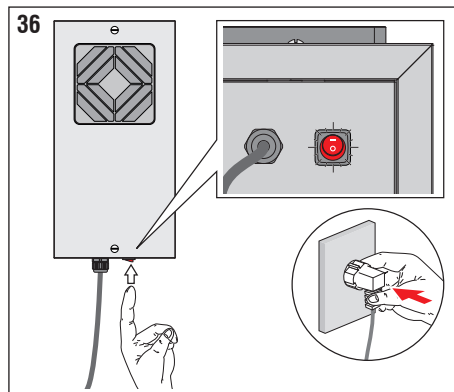


Fig. 36: Reconnect the power plug. In order to turn on the device act on the switch **O/I**, turning it to **I**. The button will illuminate, a slight noise coming from the ionising tube will be heard and the air flow generated by the fan will be perceived.



It should be remembered that failure to replace the ionising tubes when indicated by the device leads to a drop in system performance.

7.3.2 Replacing the ionising tubes JONIX steel 2C / 4C



In JONIX steel 2C/4C versions, clean the ionising tubes every time the specific LED lights up (permanent yellow light).

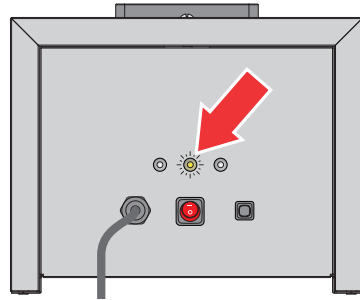


Fig. 37: Switch the device off by turning the luminous On/Off switch to **0**.



Remove the plug connected to the mains.

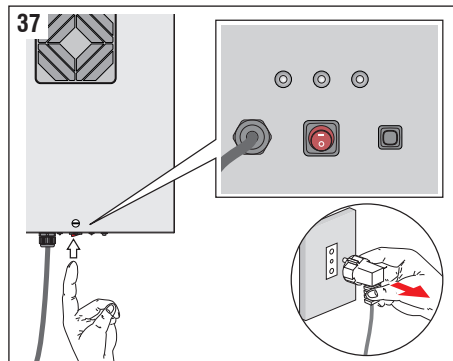


Fig. 38: Unscrew the fixing screw and remove the frontal cover from the device.

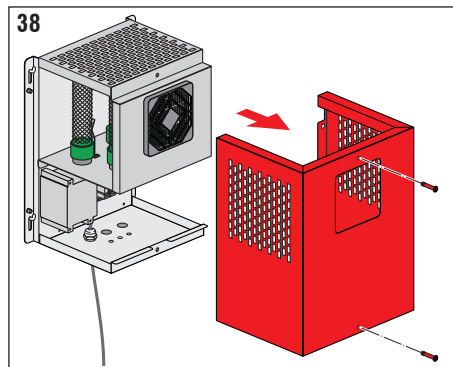


Fig. 39: Gently unscrew the ionising tubes, using the green plastic base.



If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.

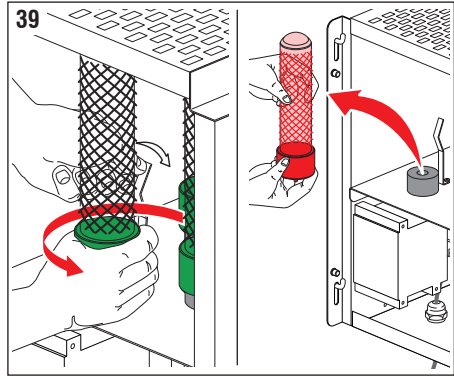


Fig. 40: Screw delicately the ionising tube holding on to the base (green part). If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.

ATTENTION: do not overtighten the screw after reaching its end stop.



Check that the earthing spring is in contact with the outer mesh once the ionising tubes have been screwed back into place. Otherwise contact the manufacturer.

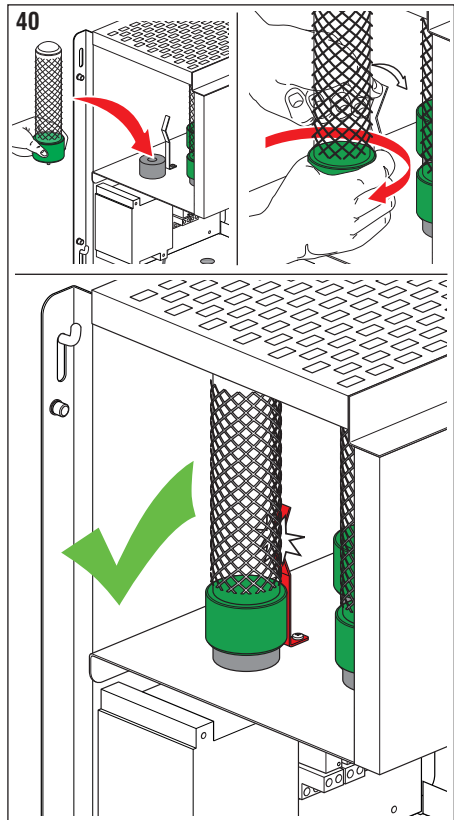


Fig. 41: Replace the cover and rescrew with the appropriate screws.

Clean the outside of the device with a damp cloth, using specific products for the cleaning of stainless steel.



Do not use liquid cleaners or sprays, soap or the like.

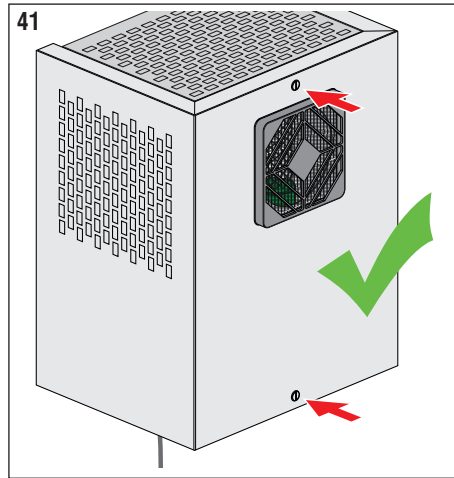


Fig. 42: Reconnect the power plug. In order to turn on the device act on the switch 0/I, turning it to I.

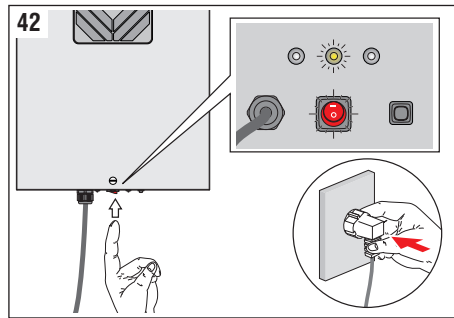
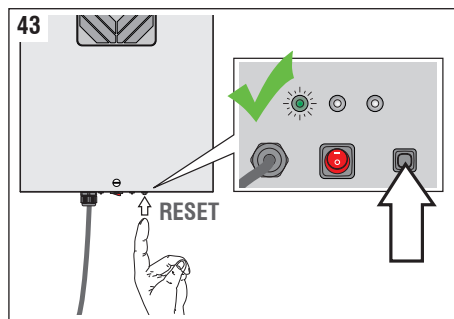


Fig. 43: Hold down the reset button until the LED that signals the need for maintenance (**yellow indicator**) turns off and the LED that signals the proper functioning turns on (**green indicator**). Monitor the functioning of the device, a slight noise coming from the ionising tube has to be heard and the air flow generated by the fan will be perceived.



It should be remembered that failure to replace the ionising tubes when indicated by the device leads to a drop in system performance.

7.3.3 Replacing the ionising tubes JONIX steel 2F / 4F



In JONIX steel 2F/4F versions, clean the ionising tubes every time the specific LED lights up (permanent yellow light).

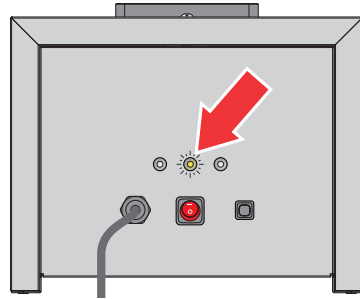


Fig. 44: Switch the device off by turning the luminous On/Off switch to **0**.



Remove the plug connected to the mains.

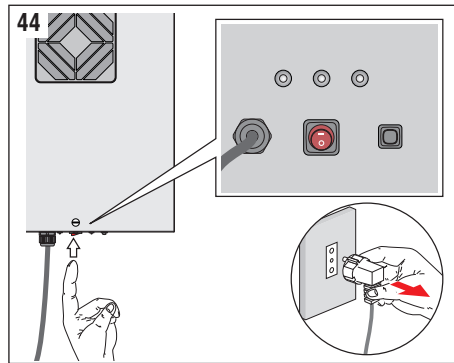


Fig. 45: Unscrew the fixing screw and remove the frontal cover from the device.

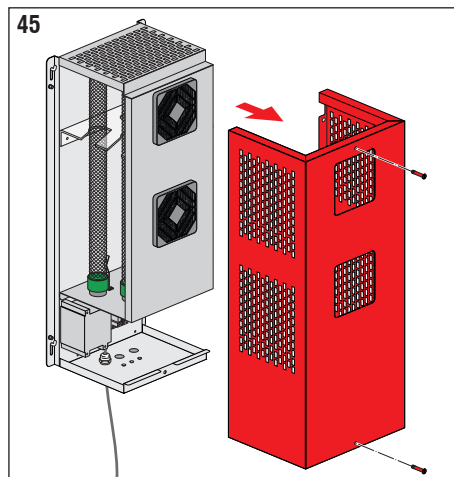


Fig. 46: Gently unscrew the ionising tubes, using the green plastic base.



It is recommended to hold on to the tube (at about half its height) with the other hand in order to facilitate the operation.

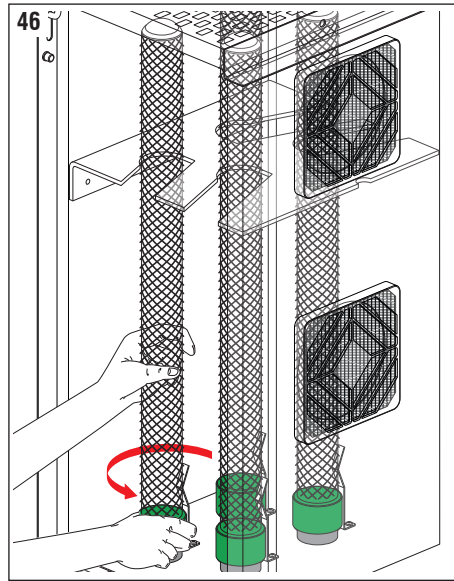


Fig. 47: Remove the tube following the profile in the condenser support plate.



If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.

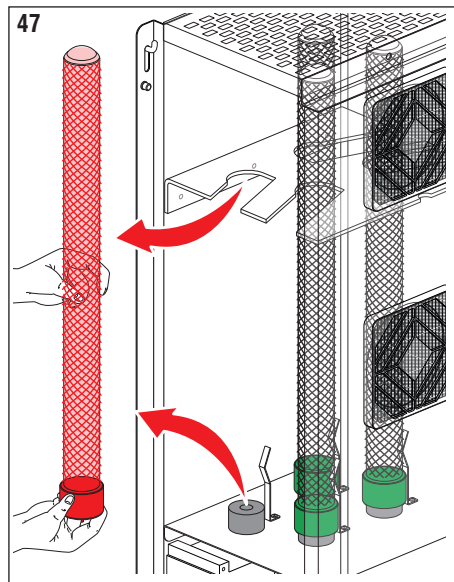


Fig. 48: Gently screw the ionising tube holding on to the base (green part), holding it in vertical position with the other hand and inserting it in the shaped profile of the condenser support plate.

If the operation is difficult to perform, pull slightly the earthing bracket so that it does not make contact with the surface of the tube.

ATTENTION: do not overtighten the screw after reaching its end stop.



Check that the earthing spring is in contact with the outer mesh once the ionising tubes have been screwed back into place. Otherwise contact the manufacturer.

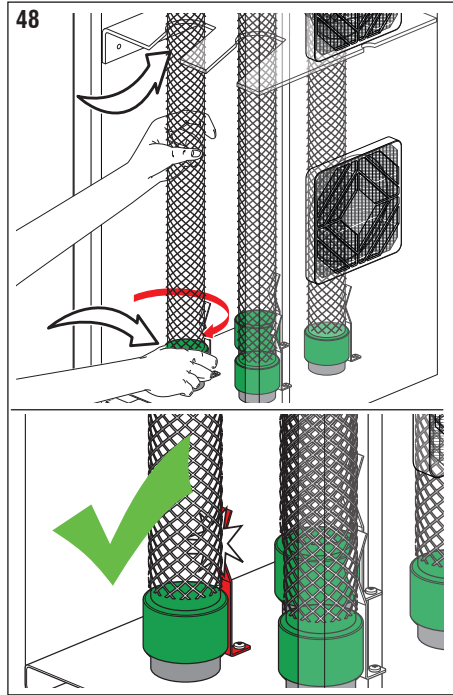


Fig. 49: Replace the cover and rescrew with the appropriate screws.

Clean the outside of the device with a damp cloth, using specific products for the cleaning of stainless steel.



Do not use liquid cleaners or sprays, soap or the like.

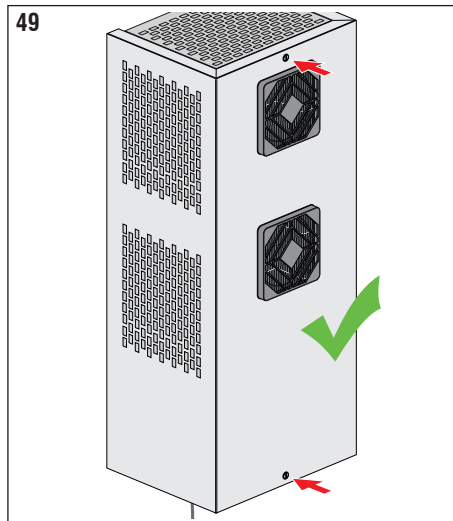


Fig. 50: Reconnect the power plug.
In order to turn on the device act on the switch **0/I**, turning it to **I**.

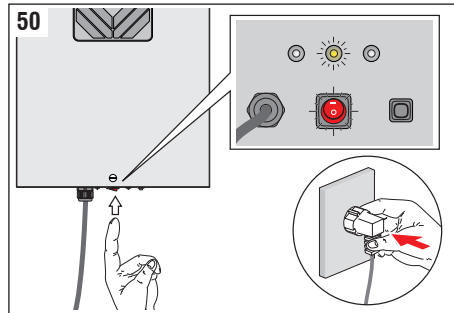
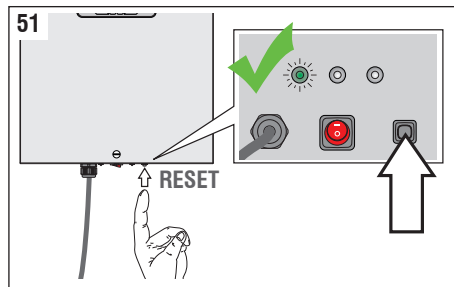


Fig. 51: Hold down the reset button until the LED that signals the need for maintenance (**yellow indicator**) turns off and the LED that signals the proper functioning turns on (**green indicator**).
Monitor the functioning of the device, a slight noise coming from the ionising tube has to be heard and the air flow generated by the fan will be perceived.



It should be remembered that failure to replace the ionising tubes when indicated by the device leads to a drop in system performance.

8 - OPERATIONAL CHECK AND TROUBLESHOOTING

This section summarises the most common problems that may arise when using the unit. Before contacting customer services, carry out the checks listed below.

PROBLEM	POSSIBLE CAUSE	SOLUTION
The green LED indicating device operation is switched off.	The unit is not powered.	Check that the switch is in position "I".
		Check that the plug is connected to the mains power socket.
		Verify the presence of electricity in the distribution network.
		Check that the power socket to which the device is connected works.
		Verify the status of the fuse inside the device (described in chap. 4 of this manual). In case it is burnt contact the manufacturer.
No sizzling noise comes from inside the module.	The ionising tubes are faulty.	Follow the instructions in section "7.3 - Extraordinary Maintenance".
	The ionising tubes and fan mesh filter need cleaning.	Follow the instructions in section "7.3 - Extraordinary Maintenance".
JONIX steel 2C/4C/2F/4F: it is not heard any noise coming from inside the module and the LED indicating the need for maintenance of the device is turned on with blinking light (yellow indicator).	The ionising tubes and fan mesh filter need cleaning.	Follow the instructions in section "7.2 - Routine Maintenance".
JONIX steel 2C/4C/2F/4F: it is not heard any noise coming from inside the module and the LED indicating the need for maintenance of the device is turned on with permanent light (yellow indicator).	The ionising tubes need replacing.	Follow the instructions in section "7.3 - Extraordinary Maintenance".
It is not heard any noise coming from inside the module and the LED indicating damage is turned on with permanent light (red indicator).	The ionising tubes are faulty.	Follow the instructions in section "7.3 - Extraordinary Maintenance".
	The tube has to be replaced before time.	
	Malfunction of an electric component.	Consult specialized personnel.

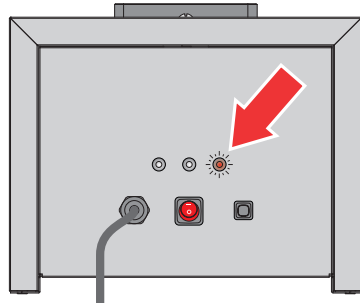
8.1 LED SIGNAL FOR MALFUNCTION (JONIX steel 2C/2F/4C/4F)



In the event that a device malfunction persists, unplug it from the mains and contact qualified staff.



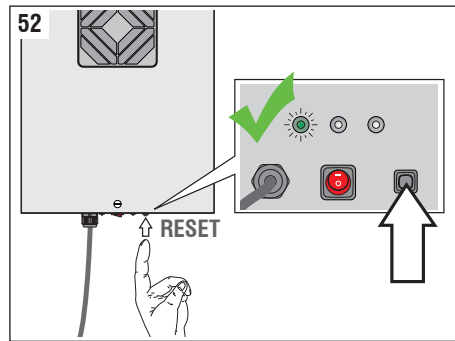
JONIX steel 2C/2F/4C/4F versions are equipped with an indicator of malfunctioning in case of malfunctioning (**red indicator**).



Before contacting customer services, carry out the checks listed in the previous page.

Fig. 52: After the problem is solved, turn on the device, hold down the reset button until the LED that signals the malfunction turns off (**red indicator**) and the LED indicating the proper functioning of the device turns on (**green indicator**).

Monitor the functioning of the device, a slight noise coming from the ionising tube has to be heard and the air flow generated by the fan will be perceived.



In the event that you experience a malfunction other than those described above contact qualified staff (retailer, Manufacturer).

Unplug the device from the mains and contact qualified staff for assistance even in the event of one or several of the cases below:

- The power cable is damaged or worn.
- The plug is damaged or worn.
- Water or liquid has been poured onto the device.
- In the event that there is a malfunction despite all the installation procedures have been carried out properly.

9 - DISPOSAL

When JONIX steel devices are no longer used they must be disposed of in compliance with the regulations in force in the country of installation. The unit consists of the following materials:

- Stainless steel.
- Aluminium.
- Glass.
- Nylon.
- Plastic.
- Paper and Cardboard.
- Wood.



WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT MANAGEMENT

This product falls within the application scope of the Directive 2012/19/EU concerning the management of waste electrical and electronic equipment (WEEE). Equipment must not be disposed of with household waste as it is made of different materials that can be recycled at special facilities. Please inquire through your municipal authorities as to the location of the eco-friendly waste management sites where waste can be received for disposal and its subsequent recycling as recommended. Furthermore, please note that, when an equivalent appliance is purchased, the seller is expected to collect free of charge the old product to be disposed of. The product is not potentially dangerous for human health and the environment, as it does not contain any harmful substances according to the Directive 2011/65/EU (RoHS), but if disposed of freely in the environment, it might adversely affect the ecosystem.

Read the instructions carefully before using the equipment for the first time. It is strongly recommended not to use the product for any purpose other than that for which it was designed, to prevent the risk electric shock if the product is used incorrectly.

NOTES

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WARRANTY CONDITIONS

The Manufacturer guarantees the repairs of the systems that you have purchased and that are distributed throughout the country, in the event that the system shows signs of faulty materials or incorrect manufacture, subject to the following conditions:

1. The warranty starts from the date of purchase and lasts for 12 months.
2. No warranty is provided for the breakage of the ionising tube.
3. Failure to comply with operating and maintenance instructions contained in the manual attached to the device voids the warranty.
4. The purchaser has the right to benefit from the 12 month warranty only if the warranty certificate is filled in correctly in all parts and sent within 10 days of purchase to:

JONIX S.r.l., Viale Spagna, 31/33 – 35020 Tribano (PD) Italy

5. The warranty is only valid if the system is purchased from an authorised retailer.
6. The warranty includes free repair or replacement of the components which are faulty due to incorrect manufacture and does not include the replacement of the device under any circumstances.
7. Warranty repairs are carried out solely by the retailer or the manufacturer.
8. The warranty does not cover systems that are damaged or faulty due to: replacement of components or accessories with others of a type that is not explicitly approved by the manufacturer, interventions carried out by unauthorised or unqualified staff, non-compliance with the environmental conditions, neglect, lightning, floods, fire, acts of war, riots. Malfunctions due to incorrect installation are not covered.
9. The warranty does not cover systems with illegible, missing or altered serial numbers or labels.
10. To benefit from the warranty, the purchaser must contact the supplier, delivering the device at a later stage, accompanied by a document proving the purchase.
11. All transport costs and the relative risks are under the purchaser's responsibility.
12. Carrying out one or several repairs during the warranty period does not change the warranty expiry date.
13. The manufacturer disclaims any liability for any direct or indirect damage caused to people or property due to defects resulting from the product being used incorrectly.

The user authorises the manufacturer and related customer support services to store and use personal data in accordance with Italian Legislative Decree No. 196 dated 30/06/2003. In accordance with Art. 7 of Italian Legislative Decree No. 196/2003 you may exercise your rights at any time with regard to the data controller (JONIX S.r.l.).

EC DECLARATION OF CONFORMITY

JONIX S.R.L.

LEGAL SITE Viale Spagna, 31/33 – 35020 Tribano (PD)
 SCIENTIFIC SITE Via Tegulaia 10/b - 56121 Pisa
 OPERATIVE SITE Via Romagnoli, 12/A - 40010 Bentivoglio (BO)

**declares that
 the following products**

<i>DESCRIPTION</i>	Devices for active sanitation and air purification	
<i>MODELS</i>	<ul style="list-style-type: none"> ○ Cube ○ Mate - mini Mate ● Steel 	<i>Select the model to which the declaration refers to</i>
<i>PRODUCT TYPE</i>	<ul style="list-style-type: none"> ○ JONIX cube ○ JONIX mate ○ JONIX minimate ● JONIX steel 	<i>Select the model to which the declaration refers to</i>
<i>product code</i>	xxx	
<i>serial n°</i>	xxx	

/ F U L F I L S

to the requirements of the Machinery Directive 2006/42/EC

reference standard

EN 12100:2010
 EN 60204-1:2016

OTHER APPLICABLE DIRECTIVES

2011/65/EU ROHS Directive
 2014/30/EU EMC Directive (ex 2004/108/EC)
 2014/35/EU LVD Directive (ex 2006/95/EC)

reference standard

EN 60335-2-65:2003/A11:2012

Household and similar electrical appliances. Safety. Particular requirements for air-cleaning appliances

This declaration of conformity is issued under the total sole responsibility of the manufacturer

General manager **Mauro Mantovan**

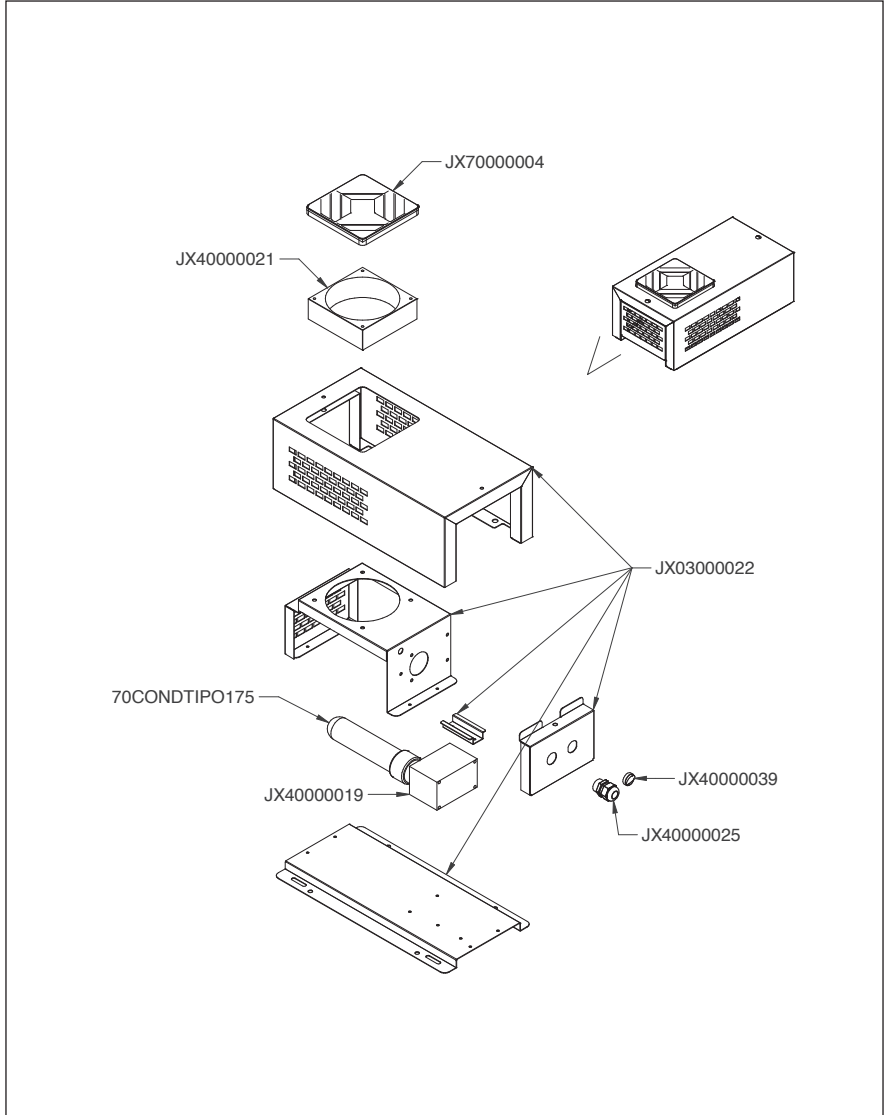
function



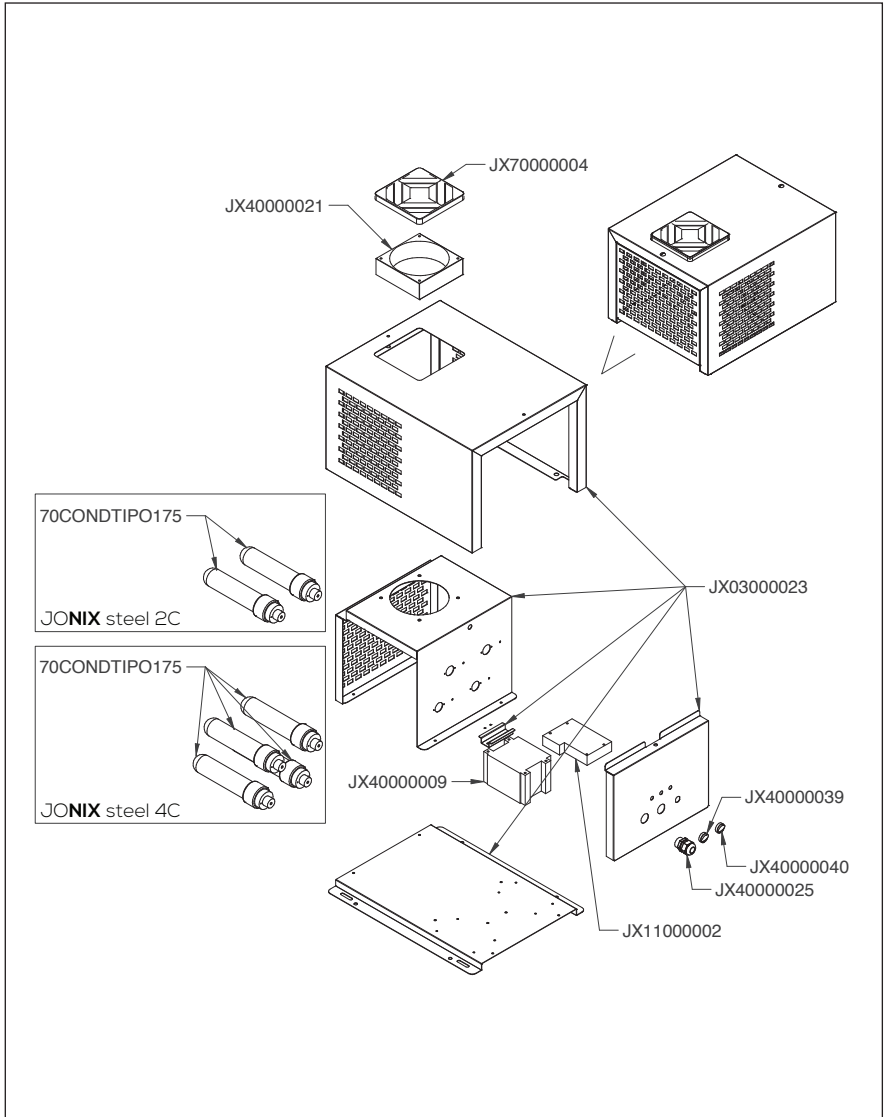
signature

ATTACHMENTS

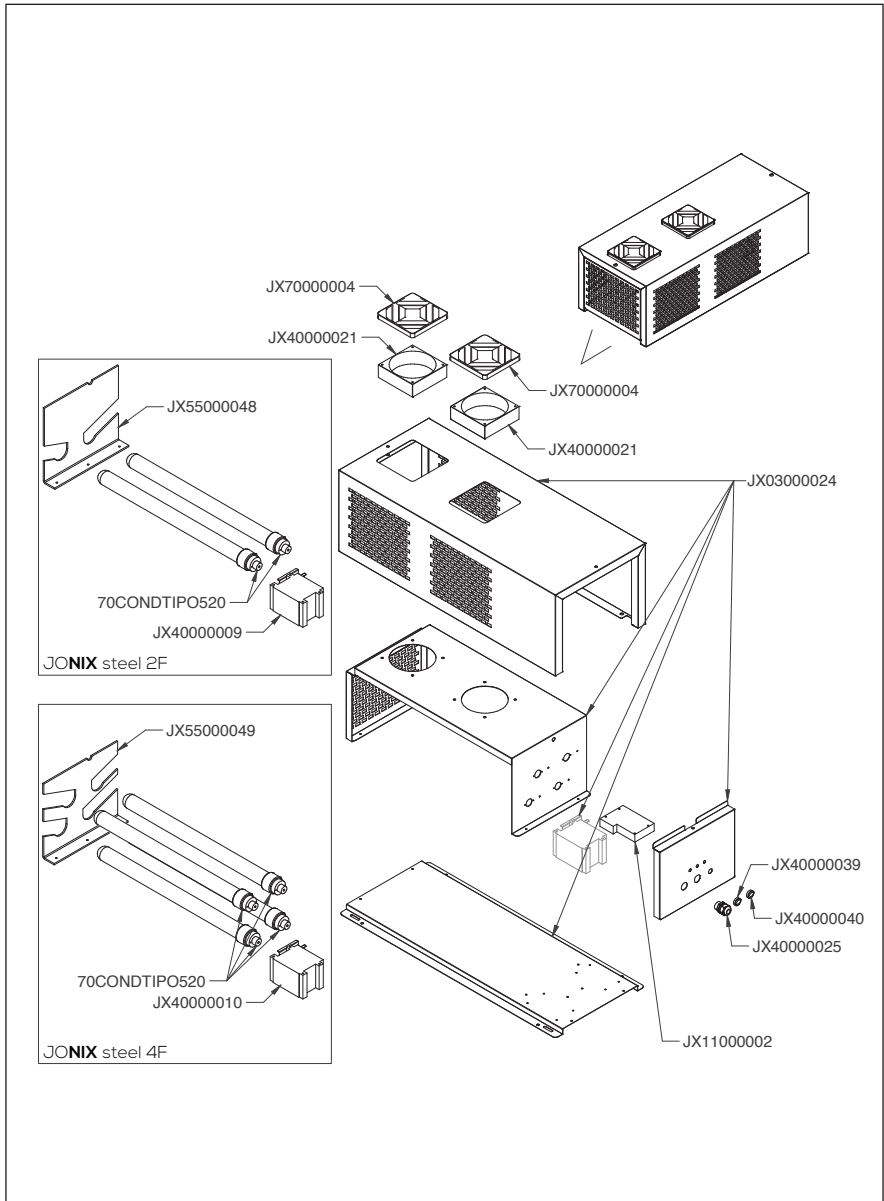
EXPLODED JONIX steel 1C



EXPLODED JONIX steel 2C/4C

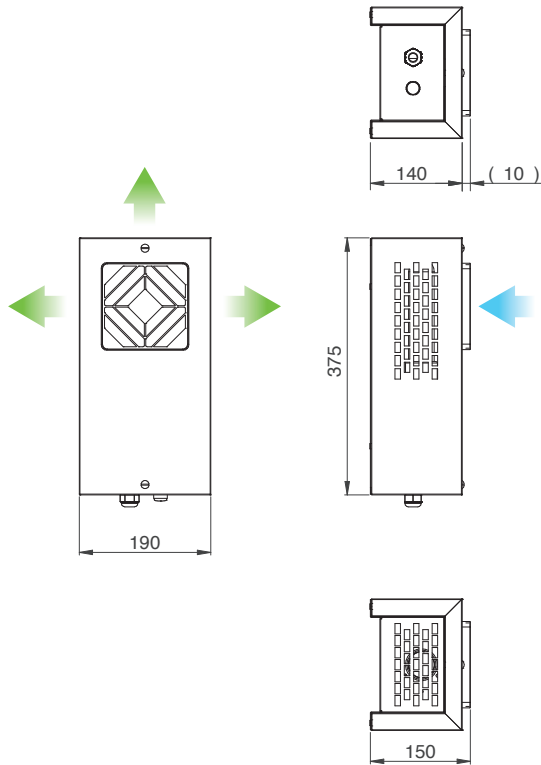


EXPLODED JONIX steel 2F/4F

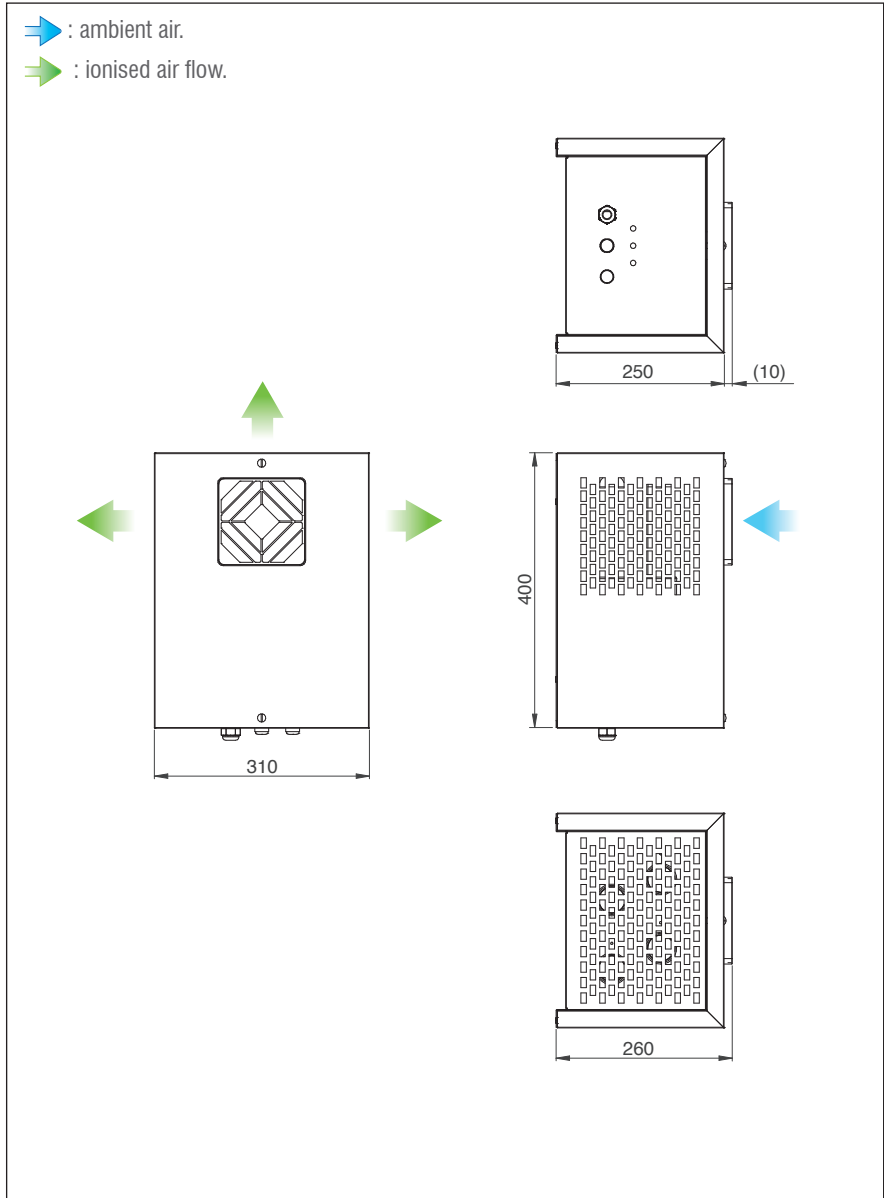


OVERALL DIMENSIONS JONIX steel IC

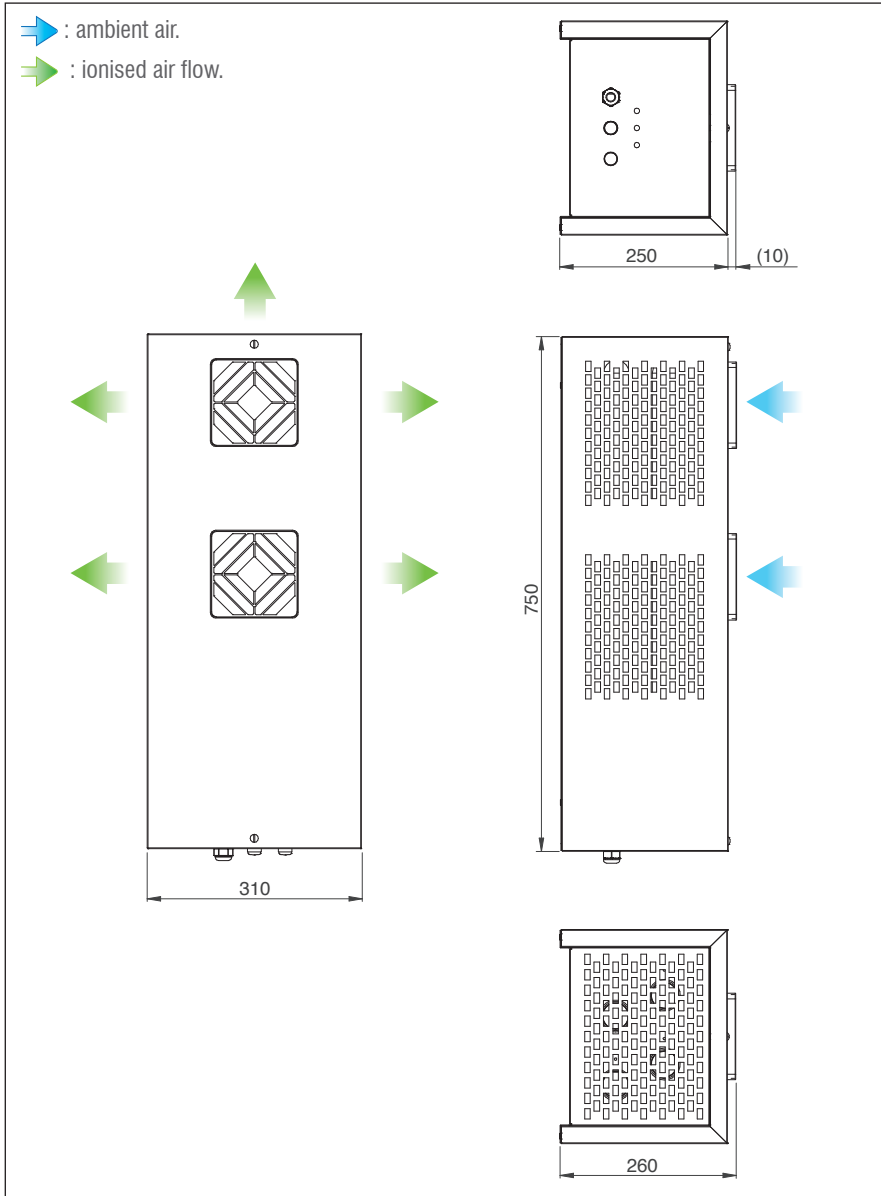
⇒ : ambient air.
 ⇒ : ionised air flow.



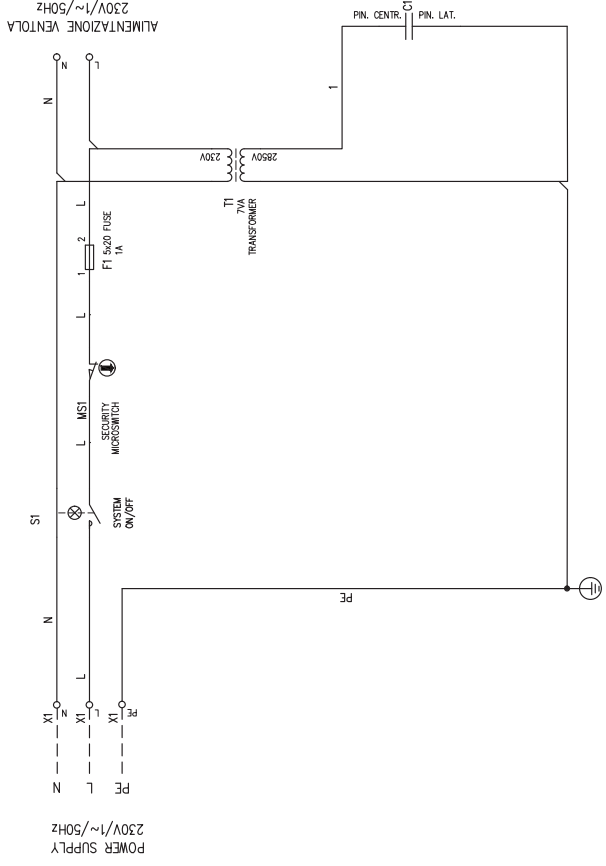
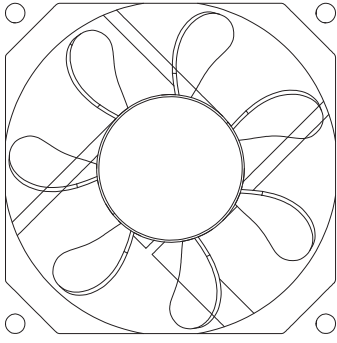
OVERALL DIMENSIONS JONIX steel 2C/4C



OVERALL DIMENSIONS JONIX steel 2F/4F



UNIT CONNECTIONS



REVISION	DATE	13/05/2017
LAST	DATE	01/12/2017
BY	BY	FF1
DRAWN	BY	FF1
CHECKED	BY	
APPROVED	BY	

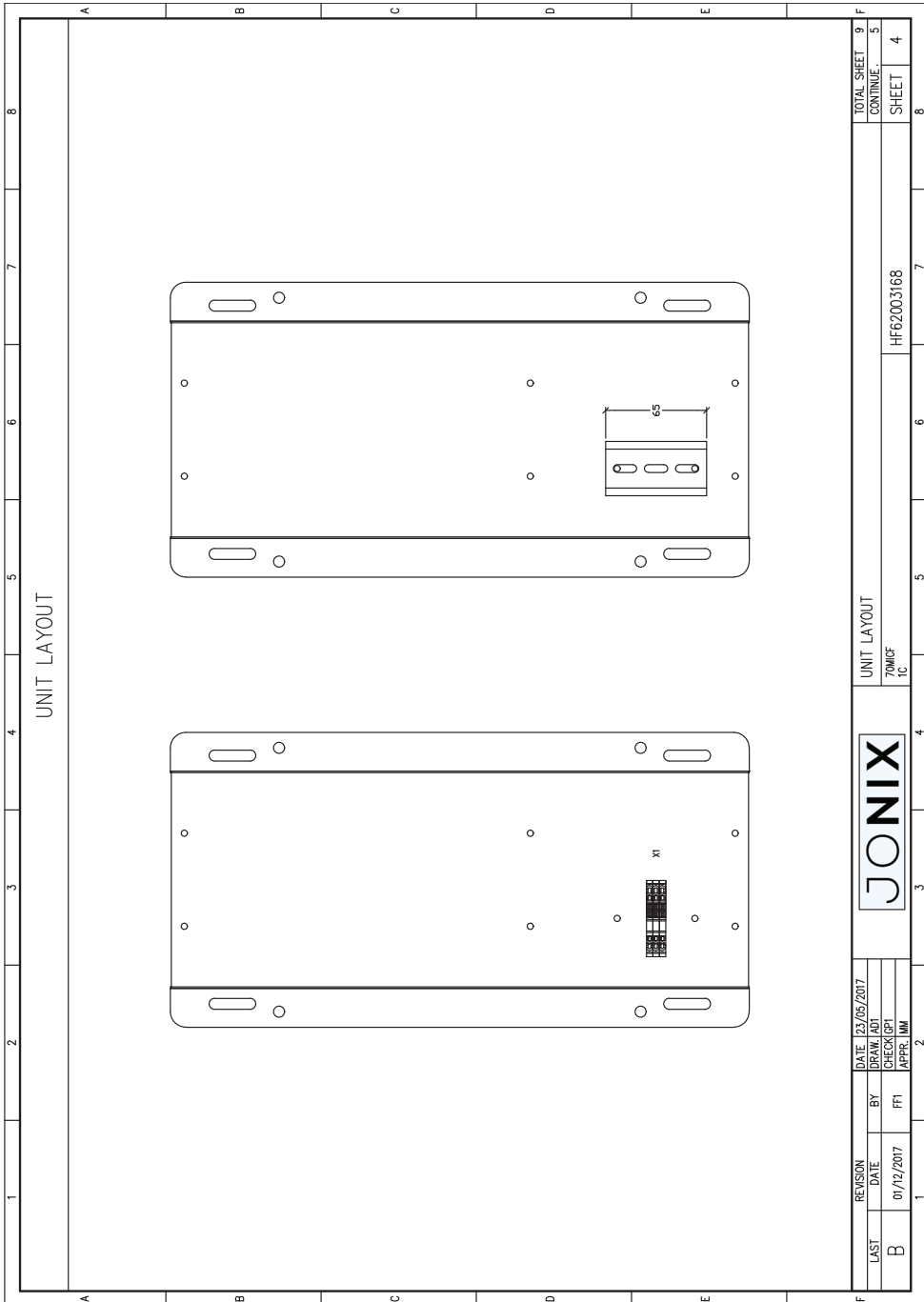


UNIT CONNECTIONS

7RM/UF
1C

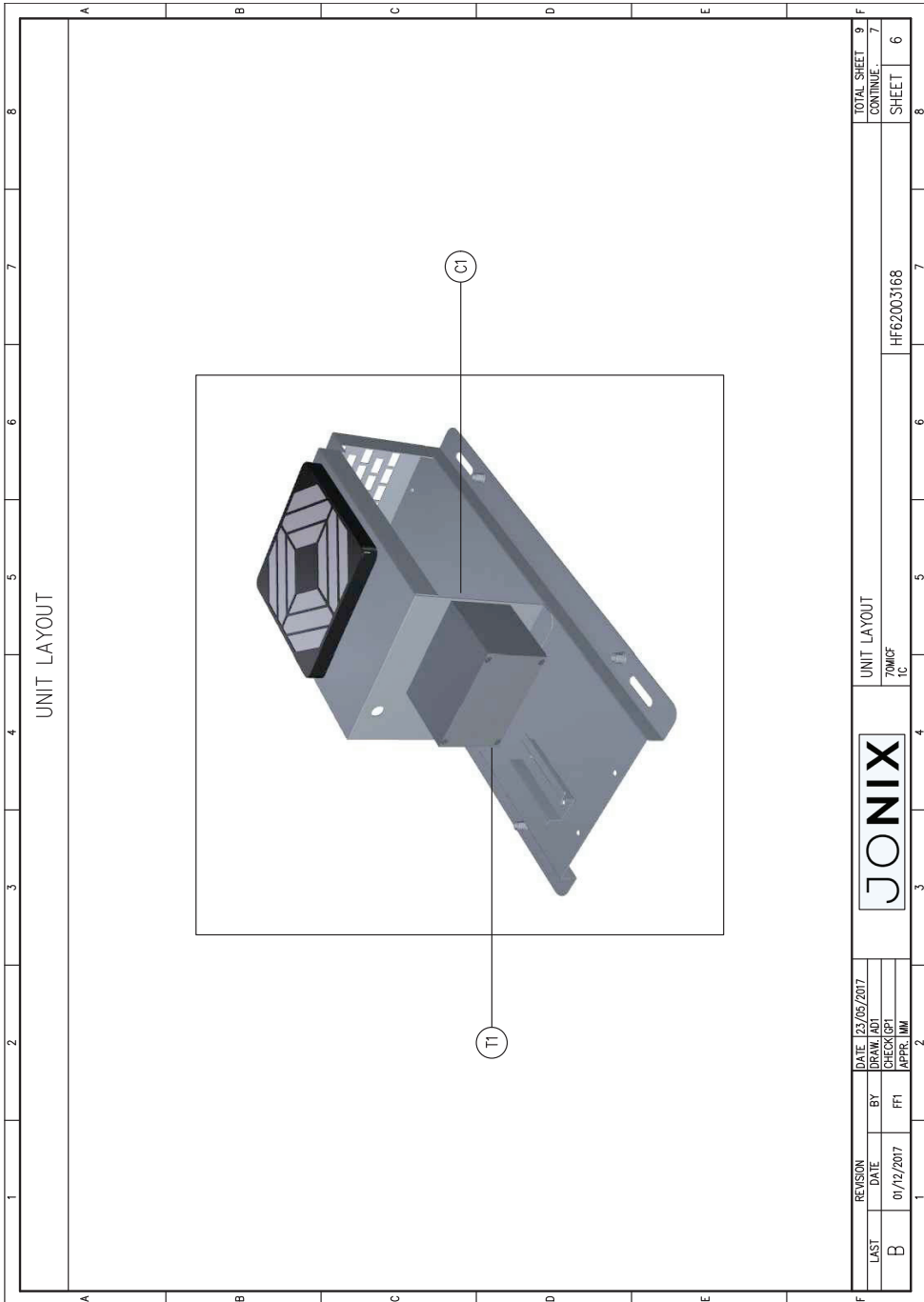
HF62003168

TOTAL SHEET	9
CONTINUE	4
SHEET	3



UNIT LAYOUT

REVISION		DATE	23/05/2017	UNIT LAYOUT		TOTAL SHEET	9
LAST	BY	DRAW.	AD1	700/CF		CONTINUE	5
B	FF1	DATE	01/12/2017	1C		SHEET	4
		CHECK	GP1	HF62003168			
		APPR.	MM				



UNIT LAYOUT

REVISION		DATE	12/05/2017	UNIT LAYOUT		TOTAL SHEET	9
LAST	BY	DRAW.	JAD1	70M0F		CONTINUE	7
B	01/12/2017	CHECK	GPI	1C		SHEET	6
		APPR.	MM	HF62003168			8

CABLES KIT

TRASFORMATORE T1
JX40000019

VENTILATORE QE VI
HF40001521

DOPPIO PUNTALE

L - 200 mm - sez. 1.5mm - Black

FASTON ROSSO RF -F36P (HF4000658)

DOPPIO PUNTALE

N - 200 mm - sez. 1.5mm - Blue

FASTON ROSSO RF -F36P (HF4000658)

OCCHIELLO M4

PE - 200 mm - sez. 1.5mm

OCCHIELLO M4

REVISION	DATE	BY
B	01/12/2017	FF1
DATE	13/05/2017	
DRAWN	FF1	
CHECKED	FF1	
APPROV.	MM	



CABLES KIT

7000P
1C

HF62003168

TOTAL SHEET	9
CONTINUE	8
SHEET	7

ELECTRICAL CONNECTION MATERIALS

A		B		C		D		E	
SYMBOL	FUNCTION	BRAND	CODE	DESCRIPTION	QUANTITY	M.U.	HF CODE		
FT	CIRCUIT PROTECTION	ITALMEBER	0101001	FUSE IN GLASS 5 X 20 I _n = 1A	1	PCE	HF4000777		
FT	FUSE BOX	SONEPAR	ITAHK52091	PORTA FUSIBILE VOLANTE	1	PCE	HF40000643		
X1	TERMINAL STRIP	PHOENIX	3031241	MORSETTO A MOLLA ST2.5 TWIN	2	PCE	HF40000781		
X1	TERMINAL STRIP	PHOENIX	3031267	MORSETTO ST2.5 TWIN PE	1	PCE	HF40000944		
T1	TRANSFORMER	JONIX	JX40000019	TRANSFORMER VN=230V VOLT=2850V P=7VA	1	PCE	JX40000019		
S1	SWITCH	JONIX	JX40000020	INTERRUTTORE CIRCOLARE LUMINOSO	1	PCE			
C1	CAPACITOR	JONIX	70CONDIP0175	CAPACITOR	1	PCE			
MS1	MICROSWITCH	OMRON	SS-100LT	MICRO INTERRUTTORE DI SICUREZZA	1	PCE			



REVISION	DATE	13/05/2017
LAST	DATE	01/12/2017
B	BY	FF1
	CHECK	GP1
	APPR.	MM

MATERIALS		70MCF 1C	HF62003168	TOTAL SHEET CONTINUE .	9
				SHEET	8

JONIX

Manufactured by HiRef S.p.a.
 Viale Spagna, 31/33
 35020 Tribano (Padova) Italy
 tel: ++39 049 9588511
 fax: ++39 049 9588522
 web: www.hiref.it
 e@mail: info@hiref.it

Serie Model
 70MCF 2C

Drawing code
 HF620R3567

Power supply
 Auxiliary supply
 230V/1~/50Hz+N
 24VAC

Created by
 Date
 FBI 11/07/2017

Max power (kW)
 FLA (A)
 LRA (A)

Main protection

Controller
 CPT07616

Revision by
 On
 FF1 01/12/2017

Index
 A

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 SEE TABLE ON PAGE 2

SEE TABLE ON PAGE 2

REVISION	DATE	11/07/2017
LAST	BY	DRAM, FBI
A	CHECKED BY	FF1
	APPR. I/M	

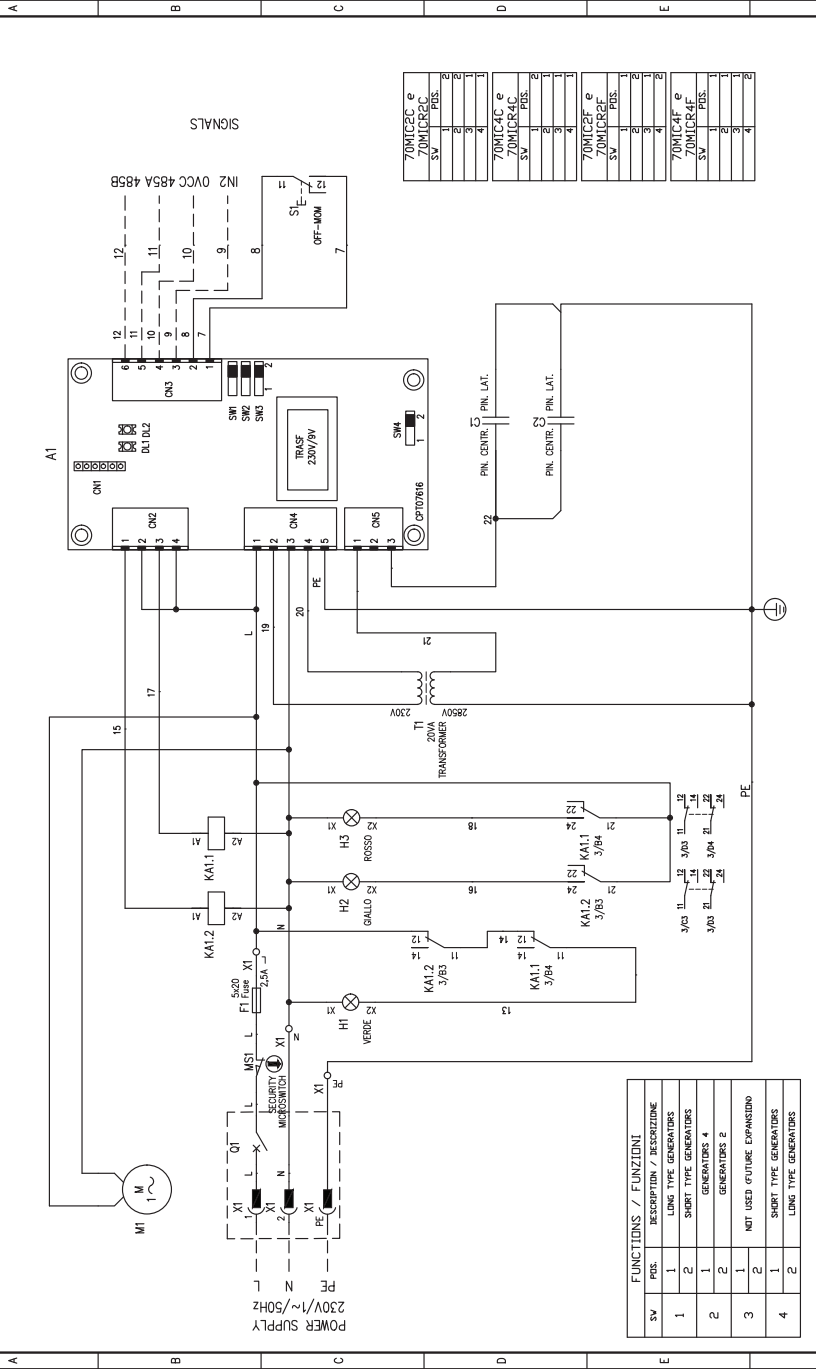


SUMMARY
 70MCF 2C

TOTAL SHEET	8
CONTINUE	2
SHEET	1

A																B
B																C
C																D
D																E
E																F
F																8
																3
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																2
																2
																2
																2

UNIT CONNECTIONS



FUNCTIONS / FUNZIONI	
SV	DESCRIZIONE / DESCRIZIONE
1	LONG TYPE GENERATORS
2	SHORT TYPE GENERATORS
1	GENERATORS 4
2	GENERATORS 2
3	NOT USED (FUTURE EXPANSION)
2	SHORT TYPE GENERATORS
4	LONG TYPE GENERATORS

70MIC2C e	1	1
70MIC2C	2	2
SV	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
	11	11
	12	12
70MIC4C e	1	1
70MIC4C	2	2
SV	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
	11	11
	12	12
70MIC2F e	1	1
70MIC2F	2	2
SV	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
	11	11
	12	12
70MIC4F e	1	1
70MIC4F	2	2
SV	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
	11	11
	12	12

REVISION		DATE	BY
LAST	DATE	01/12/2017	FFI
A	DATE	11/07/2017	FFI
	BY		
	CHECK		
	APPR.		

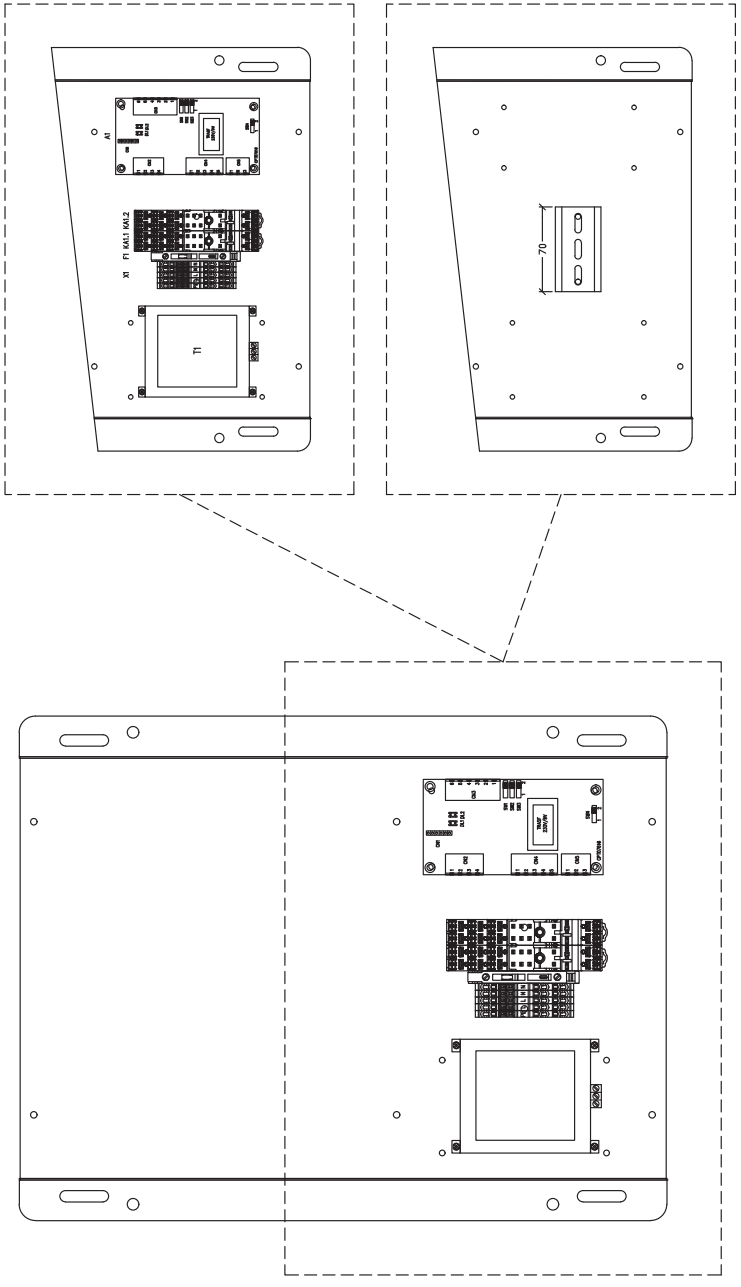


UNIT CONNECTIONS
70MIC
2C

HF62DR3567

TOTAL SHEET 8
CONTINUE 4
SHEET 3

UNIT LAYOUT



REVISION	DATE	BY	DATE	11/07/2017
LAST	DATE	BY	DATE	01/12/2017
A	01/12/2017	FF1	DATE	
		PPRCS, IIM	DATE	

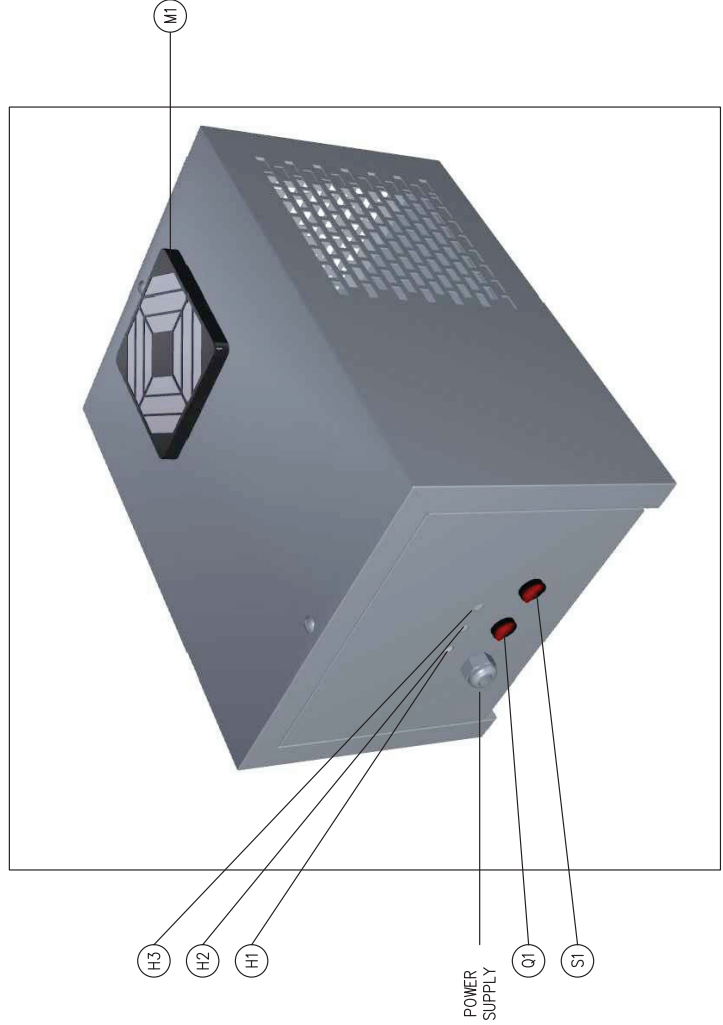


UNIT LAYOUT
 7010/CF
 ZC

HF62OR3567

TOTAL SHEET	8
CONTINUE	5
SHEET	4

UNIT LAYOUT



REVISION	DATE	BY	DATE
A	01/12/2017	FF1	
		CHECK/GP1	
		APPR. IMM	

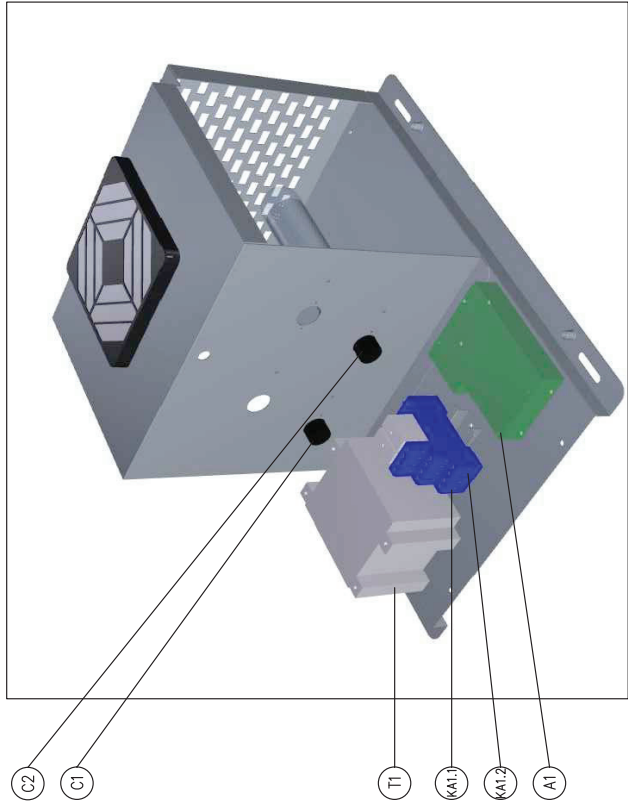


UNIT LAYOUT
70M0CF
2C

HF62DR3567

TOTAL SHEET	8
CONTINUE	6
SHEET	5

UNIT LAYOUT



REVISION	DATE	BY
A	01/12/2017	FF1
DATE	11/07/2017	
DRAWN	FF1	
CHECKED	FF1	
APPROVED	IMM	



UNIT LAYOUT

300/UF
2C
HF62OR3567

TOTAL SHEET	8
CONTINUE	7
SHEET	6

ELECTRICAL CONNECTION MATERIALS

A		SYMBOL	FUNCTION	BRAND	CODE	DESCRIPTION	QUANTITY	M.U.	HF CODE
C/L	A1		SENSING BOARD	JONIX	OPTD7616	SENSING BOARD	1	PCE	HF11000814
C/L	C1/C2		CAPACITOR	JONIX	70COND1P00	CAPACITOR	2	PCE	70COND1P00
C/L	F1		FUSE	-	-	FUSE 2.5A 5x20	1	PCE	HF40000778
C/L	T1		TRANSFORMER	P.M.A.	JX40000009	TRANSFORMER VN=230V VOLT=2850V P=20VA	1	PCE	EC400001002
C	KA1.1 / KA1.2		SOCKET RELAY	FINDER	F1NSPSSMA	SOCKET FOR RELAYS SERIES 40	2	PCE	EC400001075
C	KA1.1 / KA1.2		RELAY	FINDER	F1NA6582300000	RELAY 230Vac/8A WITH 2 CONTACTS	2	PCE	EC400007034
	H1		GREEN LED LAMP	ARTELETA	50082312	GREEN LED LAMP 230V	1	PCE	JX400000037
	H2		YELLOW LED LAMP	ARTELETA	50082313	YELLOW LED LAMP 230V	1	PCE	JX400000038
D	H3		RED LED LAMP	ARTELETA	50082311	RED LED LAMP 230V	1	PCE	JX400000036
	Q1		RED BRIGHT SWITCH	OMEGA FUSIBILI	KB 135 48 B2BR	RED BRIGHT SWITCH	1	PCE	JX400000039
	S1		BLACK SQUARE BUTTON	OMEGA FUSIBILI	KP 511 28 A0BB	BLACK SQUARE BUTTON	1	PCE	JX400000040
E	X1		TERMINAL STRIP	PHOENIX	3031128	TERMINAL TYPE ST 1.5-TWIN	4	PCE	EC400000515
	X1		TERMINAL STRIP	PHOENIX	3031144	TERMINAL TYPE ST 1.5-TWIN-PE	1	PCE	EC400000524
	MS1		MICROSWITCH	OMRON	SS-100LT	MICRO INTERRUITTORE DI SICUREZZA	1	PCE	



MATERIALS

70M0CF
2C

HF62OR3567

TOTAL SHEET 8
CONTINUE 8
SHEET 7

REVISION	DATE	11/07/2017
LAST	DATE	01/12/2017
A	BY	FF1
	CHECK	GP1
	APPR.	MM

JONIX

Manufactured by HiRef S.p.a.
 Viale Spagna, 31/33
 35020 Tribano (Padova) Italy
 tel: ++39 049 9588511
 fax: ++39 049 9588522
 web: www.hiref.it
 e@mail: info@hiref.it

Serie Model
 70MCF 4C

Drawing code Controller
 HF620R3568 CPT07616

Power supply Auxiliary supply
 230V/1~/50Hz+N
 24VAC -

Created by Date
 FBI 12/07/2017

Revision by Index
 FF1 01/12/2017 A

Max power (kW)
 FLA (A)
 LRA (A)

SEE TABLE ON PAGE 2
 SEE TABLE ON PAGE 2
 SEE TABLE ON PAGE 2

Main protection
 SEE TABLE ON PAGE 2

REVISION	DATE	BY	DATE
LAST	-	-	-
		CHECK/PT	
		APPR. I/M	

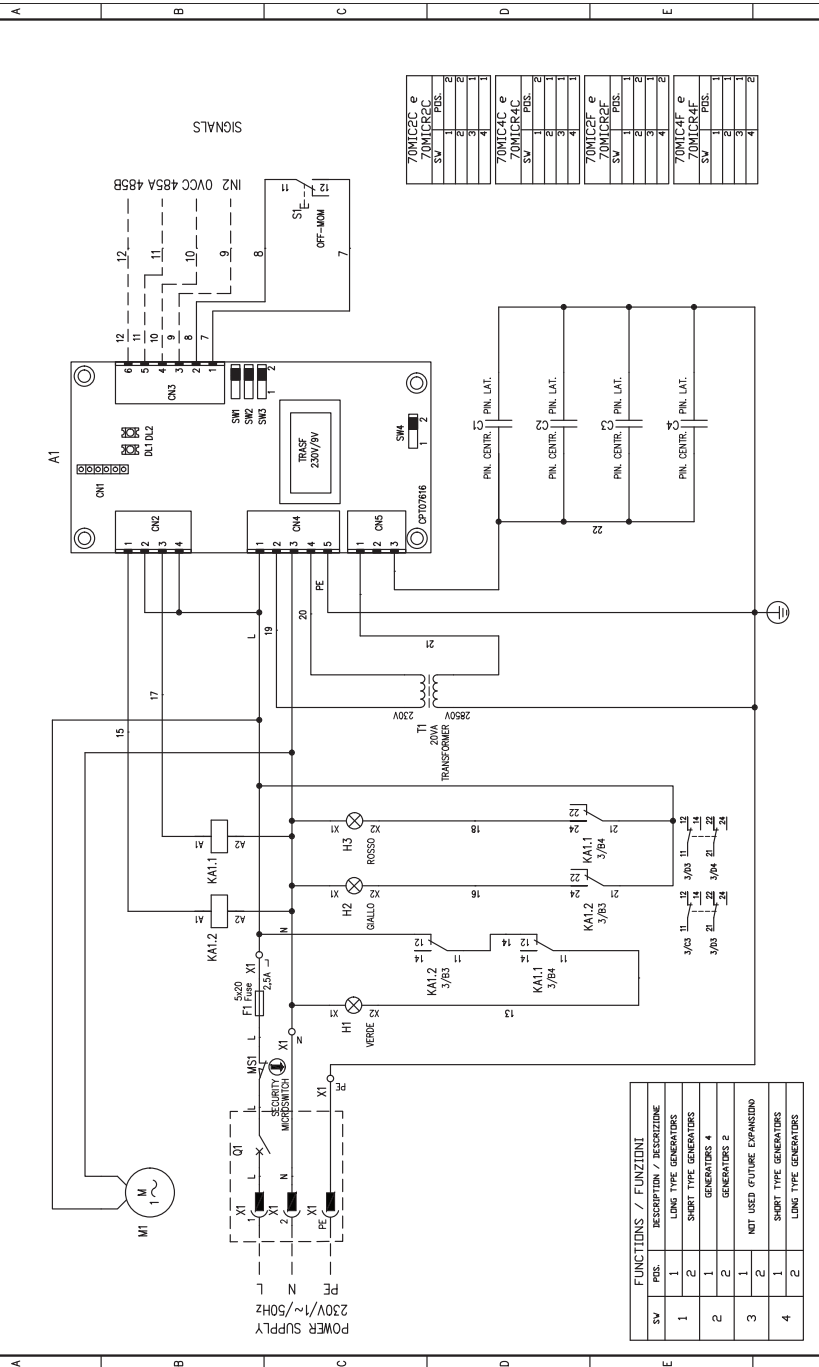
JONIX

SUMMARY
 70MCF 4C

HF620R3568

TOTAL SHEET	8
CONTINUE	2
SHEET	1

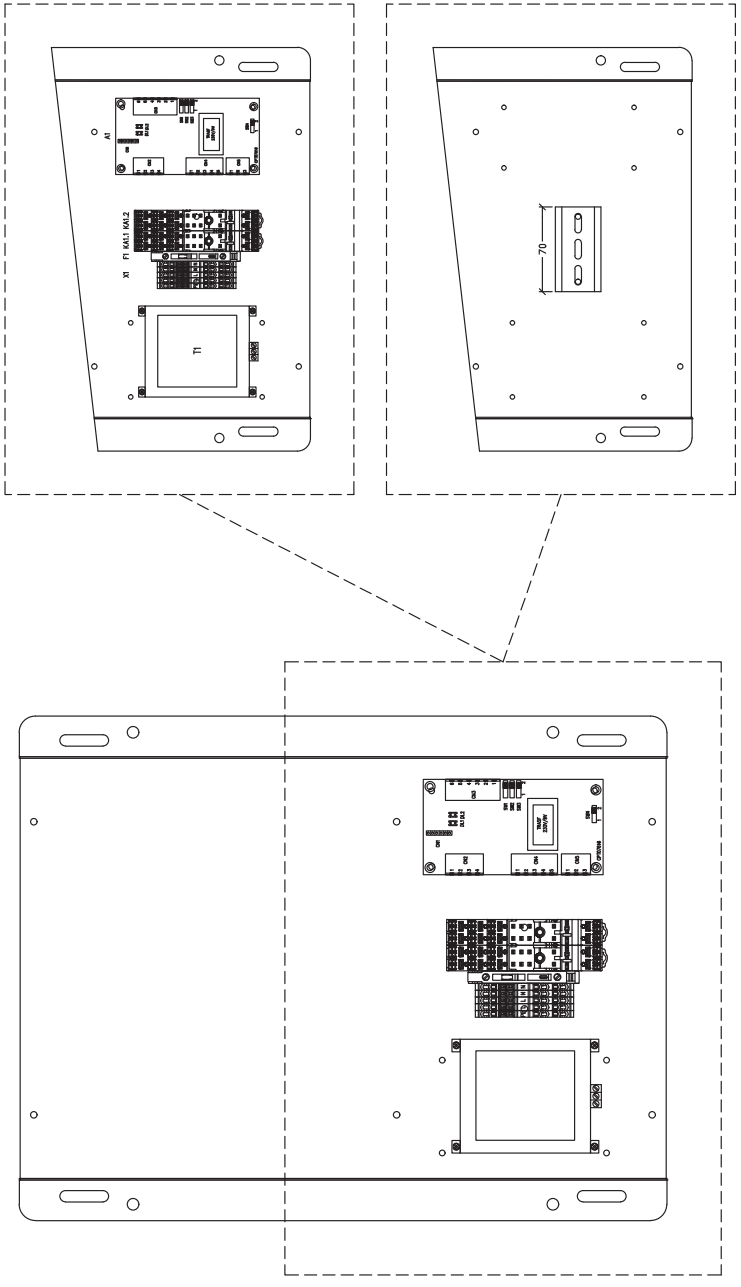
UNIT CONNECTIONS



FUNCTIONS / FUNZIONI	
SV	DESCRIZIONE / DESCRIZIONE
1	LONG TYPE GENERATORS
2	SHORT TYPE GENERATORS
1	GENERATORS 4
2	GENERATORS 2
3	NOT USED (FUTURE EXPANSION)
2	SHORT TYPE GENERATORS
4	LONG TYPE GENERATORS

REVISION		DATE 12/07/2017	UNIT CONNECTIONS		TOTAL SHEET 8
LAST	DATE	BY	DRAW. FBI	CONTINUE 4	
A	01/12/2017	FFI	CHECK GFI		
			APPR. IMI		
			70MICF 4C	HF62DR3568	SHEET 3
					8

UNIT LAYOUT



REVISION	DATE	DATE	BY
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		CHKD	FF1
		APPD	IMM

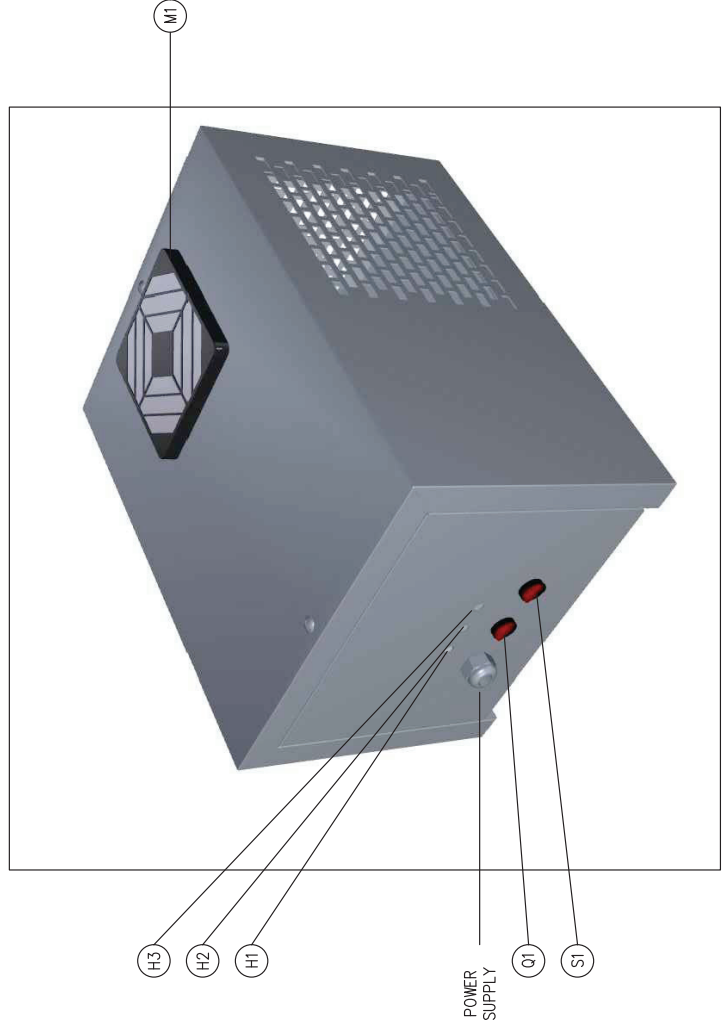


UNIT LAYOUT
 7010UF
 4C

HF62OR3568

TOTAL SHEET	8
CONTINUE	5
SHEET	4

UNIT LAYOUT



LAST	REVISION	DATE	BY
A	DATE	12/07/2017	DRAW. FBI
		01/12/2017	CHECK/GPI
			APPR. IMI

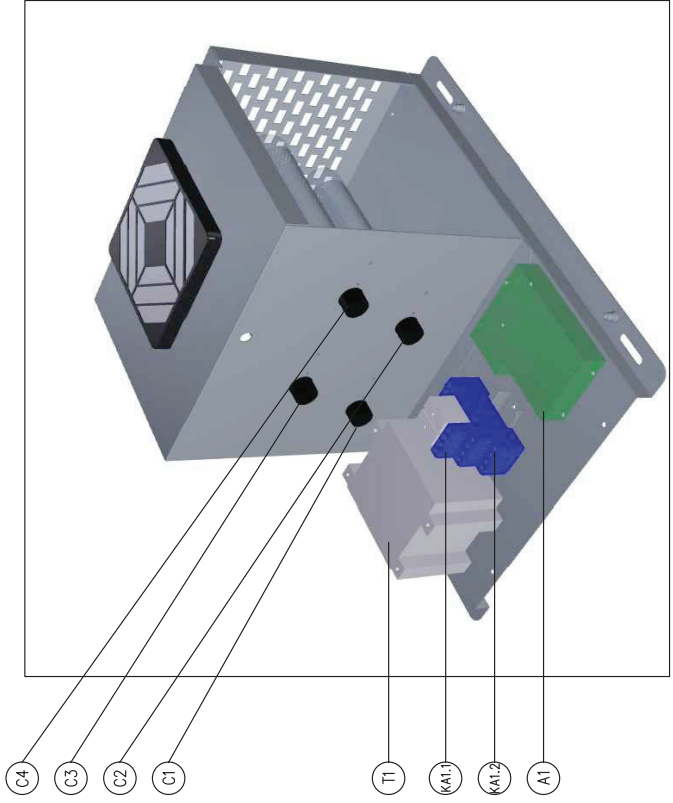


UNIT LAYOUT
70MDF
4C

HF62DR3568

TOTAL SHEET	8
CONTINUE	6
SHEET	5

UNIT LAYOUT



REVISION		DATE	12/07/2017	DATE		12/07/2017	DATE		12/07/2017	DATE		12/07/2017	
LAST	DATE	BY	FF1	CHECKED	FF1	APPROVED	FF1	DATE	12/07/2017	DATE	12/07/2017	DATE	12/07/2017
A	01/12/2017	FF1											
JONIX				UNIT LAYOUT				TOTAL SHEET 8					
				TRNOUF				CONTINUE 7					
				4C				SHEET 6					
				HF62OR3568				SHEET 6					
								8					

ELECTRICAL CONNECTION MATERIALS

A		SYMBOL	FUNCTION	BRAND	CODE	DESCRIPTION	QUANTITY	M.U.	HF CODE
C/L	A1		SENSING BOARD	JONIX	OPTD7616	SENSING BOARD	1	PCE	HF11000814
C/L	C1 / C2 / C3 / C4		CAPACITOR	JONIX	70COND1P00	CAPACITOR	4	PCE	70COND1P00
C/L	F1		FUSE	-	-	FUSE 2.5A 5x20	1	PCE	HF40000778
C/L	T1		TRANSFORMER	P.M.A.	JX40000009	TRANSFORMER VN=230V VOLT=2850V P=20VA	1	PCE	EC400001002
C	KA1.1 / KA1.2		SOCKET RELAY	FINDER	F1NSPSSMA	SOCKET FOR RELAYS SERIES 40	2	PCE	EC400001075
C	KA1.1 / KA1.2		RELAY	FINDER	F1M6582300000	RELAY 230V6c/8A WITH 2 CONTACTS	2	PCE	EC400007034
	H1		GREEN LED LAMP	ARTELETA	50082312	GREEN LED LAMP 230V	1	PCE	JX40000037
	H2		YELLOW LED LAMP	ARTELETA	50082313	YELLOW LED LAMP 230V	1	PCE	JX40000038
D	H3		RED LED LAMP	ARTELETA	50082311	RED LED LAMP 230V	1	PCE	JX40000036
	Q1		RED BRIGHT SWITCH	OMEGA FUSIBILI	KB 135 48 B2BR	RED BRIGHT SWITCH	1	PCE	JX40000039
	S1		BLACK SQUARE BUTTON	OMEGA FUSIBILI	KP 511 28 A0BB	BLACK SQUARE BUTTON	1	PCE	JX40000040
E	X1		TERMINAL STRIP	PHOENIX	3031128	TERMINAL TYPE ST 1.5-TWIN	4	PCE	EC400000515
	X1		TERMINAL STRIP	PHOENIX	3031144	TERMINAL TYPE ST 1.5-TWIN-PE	1	PCE	EC400006247
	MS1		MICROSWITCH	OMRON	SS-100LT	MICRO INTERRUITTORE DI SICUREZZA	1	PCE	



MATERIALS

HF62OR3568

TOTAL SHEET 8
CONTINUE 8
SHEET 7

REVISION	DATE	12/07/2017
LAST	DATE	01/12/2017
A	BY	FF1
	CHECK	GP1
	APPR.	MM

JONIX

Manufactured by HiRef S.p.a.
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 fax: ++39 049 9588522
 web: www.hiref.it
 e@mail: info@hiref.it

Serie Model
 70MICF 2F

Drawing code
 HF620R3535 Controller CPT07616

Power supply
 Auxiliary supply
 230V/1~/50Hz+N
 24VAC - -

Created by
 Date
 FBI 13/06/2017
 Revision by
 On
 FF1 01/12/2017
 Index
 B

Max power (kW)
 FLA (A)
 LRA (A)
 SEE TABLE ON PAGE 2
 SEE TABLE ON PAGE 2
 SEE TABLE ON PAGE 2

Main protection
 SEE TABLE ON PAGE 2

JONIX

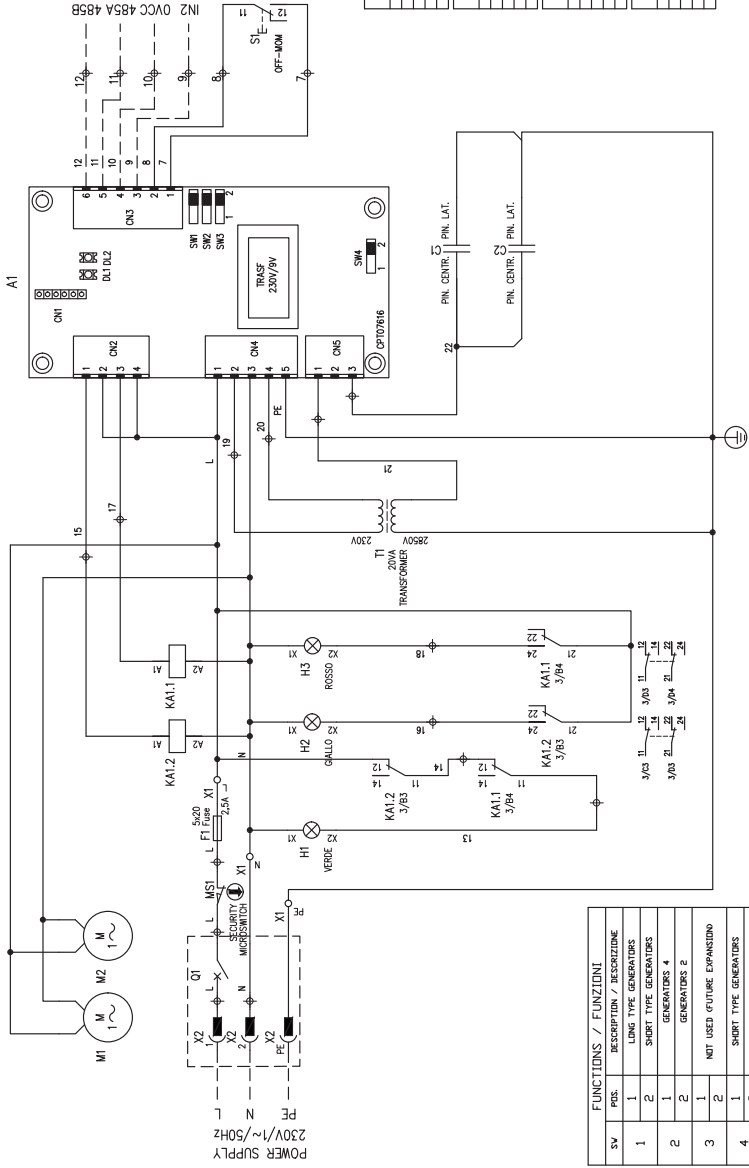
REVISION	DATE	BY	DATE	DATE
A	29/06/2017	DPI	13/06/2017	13/06/2017
		CHECK/DPI		
		APPR./IMM		

SUMMARY
 70MICF 2F

TOTAL SHEET	8
CONTINUE	2
SHEET	1

HF620R3535

UNIT CONNECTIONS



FUNCTIONS / FUNZIONI	
SV	DESCRIZIONE / DESCRIZIONE
1	LONG TYPE GENERATORS
2	SHORT TYPE GENERATORS
1	GENERATORS 4
2	GENERATORS 2
3	NOT USED (FUTURE EXPANSION)
2	SHORT TYPE GENERATORS
4	LONG TYPE GENERATORS

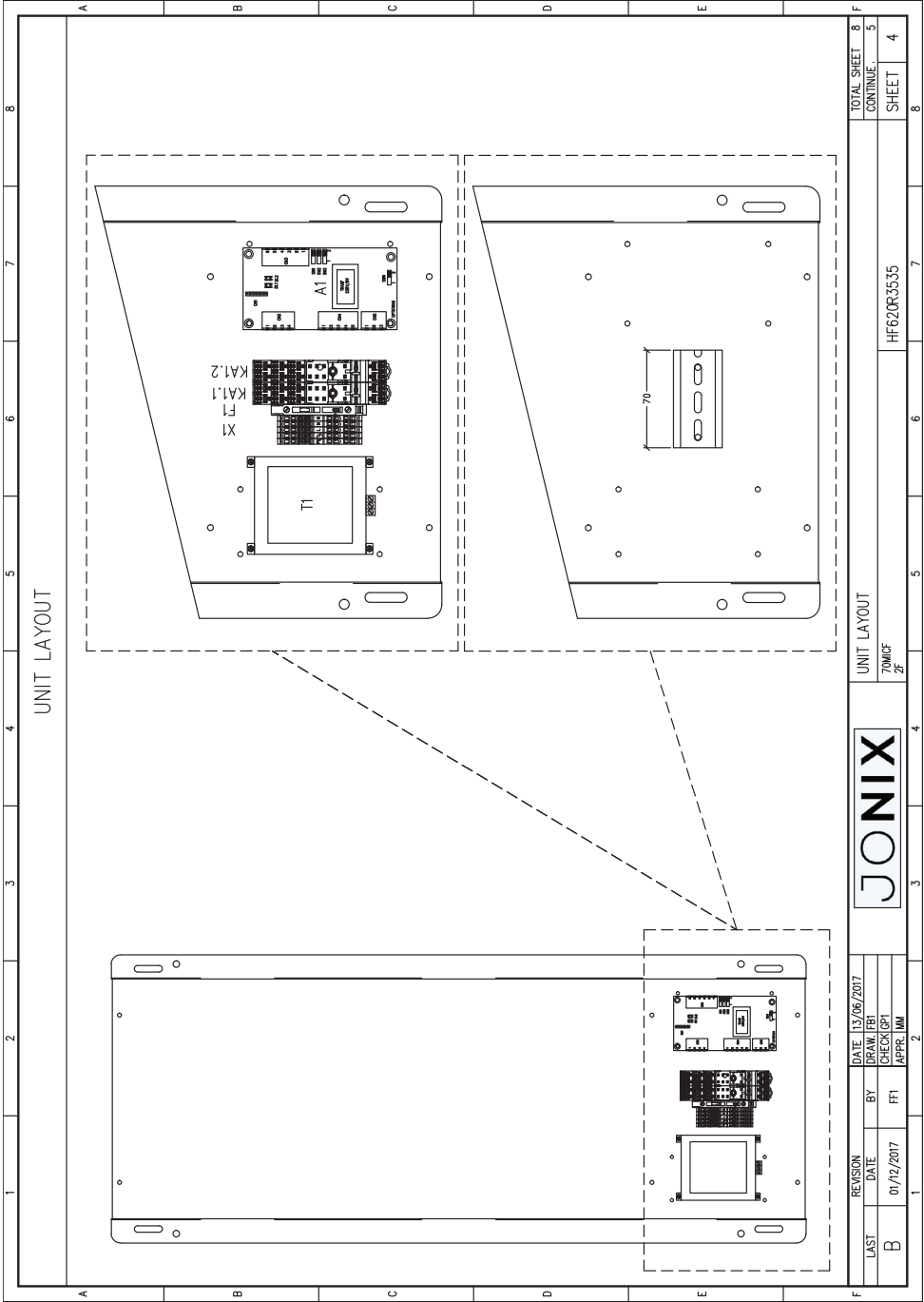
70MIC2C	e	70MIC4C	e
70MIC2C	SV	70MIC4C	SV
1	POS.	1	POS.
2	1	2	1
3	2	3	2
4	3	4	3
5	4	5	4
6	5	6	5
7	6	7	6
8	7	8	7
9	8	9	8
10	9	10	9
11	10	11	10
12	11	12	11
13	12	13	12
14	13	14	13
15	14	15	14
16	15	16	15
17	16	17	16
18	17	18	17
19	18	19	18
20	19	20	19
21	20	21	20
22	21	22	21
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25	24	25	24
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89	88	89	88
90	89	90	89
91	90	91	90
92	91	92	91
93	92	93	92
94	93	94	93
95	94	95	94
96	95	96	95
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98	97	98	97
99	98	99	98
100	99	100	99



UNIT CONNECTIONS
70MICF
2F

HF62DR3535

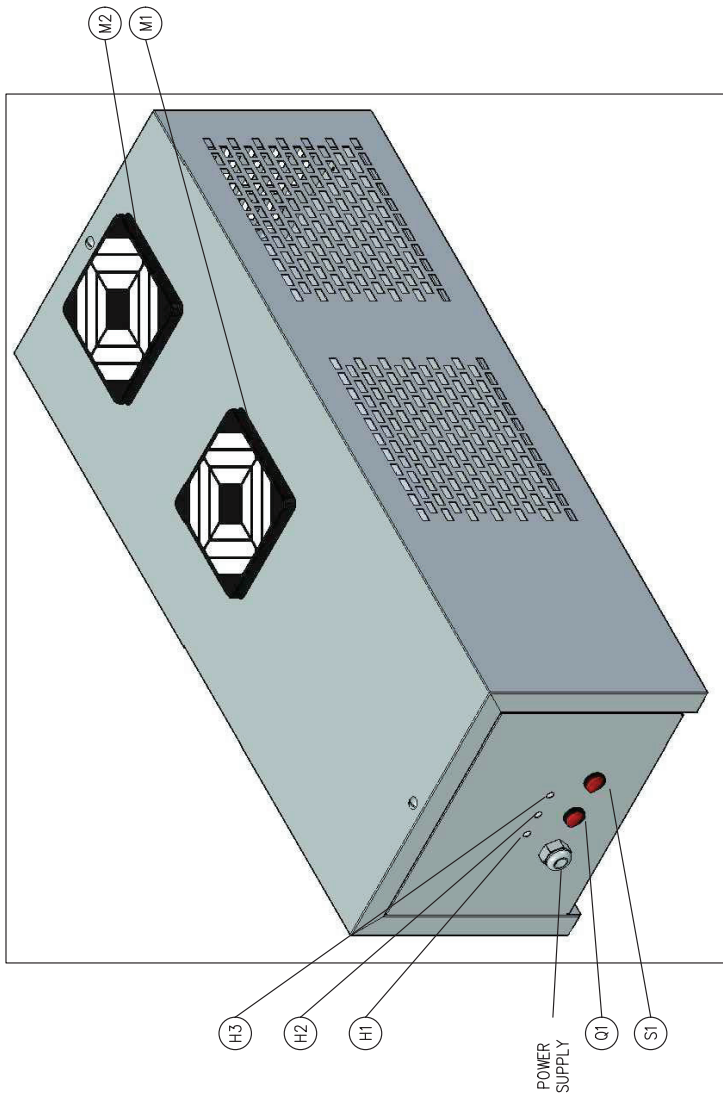
REVISION		DATE	13/06/2017
LAST	DATE	BY	DRAW. FBI
B	01/12/2017	FFI	CHECK GFI
			APPR. IMI
		TOTAL SHEET	8
		CONTINUE	4
		SHEET	3



UNIT LAYOUT

REVISION		DATE	BY	DATE	13/06/2017	UNIT LAYOUT		TOTAL SHEET	8
LAST	B	01/12/2017	FF1	FF1		70MMCF		CONTINUE	5
						2"		SHEET	4
						HF62QR-35.35		SHEET	8

UNIT LAYOUT



REVISION	DATE	13/06/2017
LAST	BY	DRAW: FB1
B	DATE	01/12/2017
	CHECK	GP1
	APPR.	MM

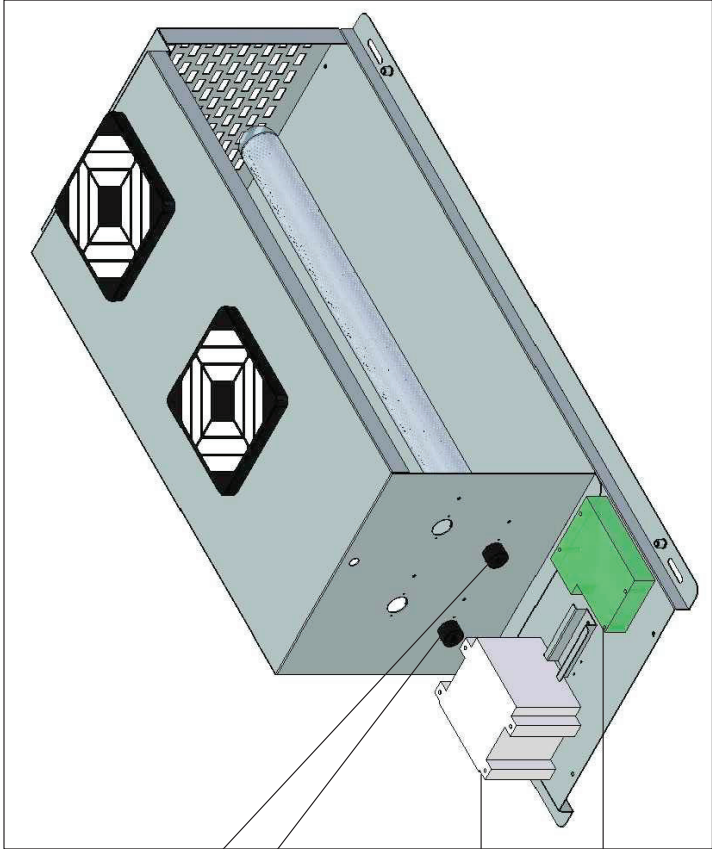


UNIT LAYOUT
70MCF
2F

HFG2OR3535

TOTAL SHEET	8
CONTINUE	6
SHEET	5

UNIT LAYOUT



REVISION	DATE	BY
B	01/12/2017	FF1

DATE	13/06/2017
CHECKED BY	FF1
APPROVED BY	IMM



UNIT LAYOUT

7090CF
2F

HF62OR35.35

TOTAL SHEET	8
CONTINUE	7
SHEET	6

ELECTRICAL CONNECTION MATERIALS

A		SYMBOL	FUNCTION	BRAND	CODE	DESCRIPTION	QUANTITY	M.U.	HF CODE
C/L	A1		SENSING BOARD	JONIX	OPTD7616	SENSING BOARD	1	PCE	HF11000814
C/L	C1/C2		CAPACITOR	JONIX	70COND1P00	CAPACITOR	2	PCE	70COND1P00
C/L	F1		FUSE	-	-	FUSE 2.5A 5x20	1	PCE	HF40000778
C/L	T1		TRANSFORMER	BOTTER	TM1417257	TRANSFORMER VN=230V VOLT=2850V P=20VA	1	PCE	HF40001525
C	KA1.1 / KA1.2		SOCKET RELAY	FINDER	F1NSPFSMA	SOCKET FOR RELAYS SERIES 40	2	PCE	EC400010175
C	KA1.1 / KA1.2		RELAY	FINDER	F1NA6582300000	RELAY 230V6c/8A WITH 2 CONTACTS	2	PCE	EC400007034
	H1		GREEN LED LAMP	ARTELETA	50082312	GREEN LED LAMP 230V	1	PCE	JX40000037
	H2		YELLOW LED LAMP	ARTELETA	50082313	YELLOW LED LAMP 230V	1	PCE	JX40000038
D	H3		RED LED LAMP	ARTELETA	50082311	RED LED LAMP 230V	1	PCE	JX40000036
	Q1		RED BRIGHT SWITCH	OMEGA FUSIBILI	KB 135 48 B2BR	RED BRIGHT SWITCH	1	PCE	JX40000039
	S1		BLACK SQUARE BUTTON	OMEGA FUSIBILI	KP 511 28 A0BB	BLACK SQUARE BUTTON	1	PCE	JX40000040
E	X1		TERMINAL STRIP	PHOENIX	3031128	TERMINAL TYPE ST 1.5-TWIN	4	PCE	EC400000515
	X1		TERMINAL STRIP	PHOENIX	3031144	TERMINAL TYPE ST 1.5-TWIN-PE	1	PCE	EC400006247
	MS1		MICROSWITCH	OMRON	SS-100LT	MICRO INTERRUTORE DI SICUREZZA	1	PCE	

F		REVISION		DATE		13/06/2017		MATERIALS		TOTAL SHEET	
LAST		DATE		BY		DRAW. FB1		70MCF		8	
B		01/12/2017		FF1		CHECK GP1		HF62OR3535		CONTINUE .	
						APPR. IM1				SHEET	
										7	
										8	

JONIX

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 fax: ++39 049 9588522
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 e@mail: info@hiref.it

Serie Model
 70MICF 4F

Drawing code
 HF620R3569 Controller CPT07616

Power supply
 Auxiliary supply
 230V/1~/50Hz+N
 24VAC - -

Created by
 Date
 FBI 12/07/2017
 Revision by
 On
 FF1 01/12/2017
 Index
 A

Max power (kW)
 FLA (A)
 LRA (A)
 SEE TABLE ON PAGE 2
 SEE TABLE ON PAGE 2
 SEE TABLE ON PAGE 2

Main protection
 SEE TABLE ON PAGE 2

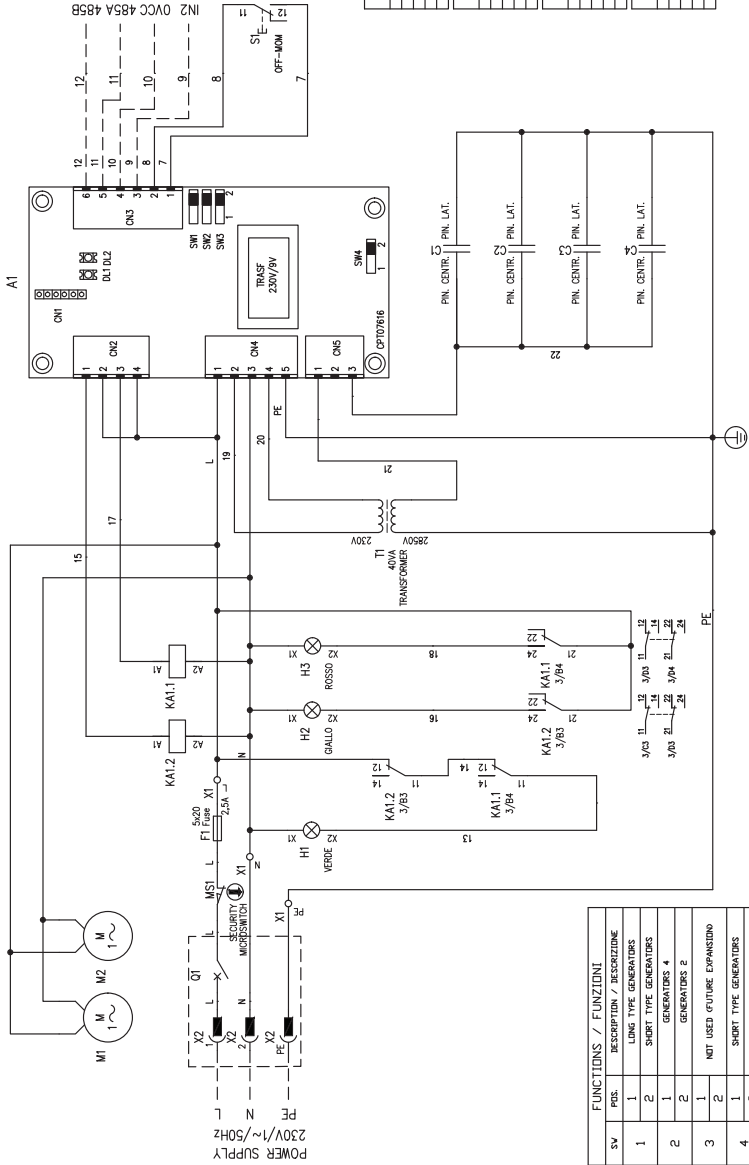
JONIX

REVISION	DATE	BY	DATE
LAST	-	-	-
		CHECK/CFI	
		APPR. I/M	

SUMMARY
 70MICF 4F

TOTAL SHEET	8
CONTINUE	2
SHEET	1

UNIT CONNECTIONS



FUNCTIONS / FUNZIONI	
SV	DESCRIZIONE / DESCRIZIONE
1	LONG TYPE GENERATORS
2	SHORT TYPE GENERATORS
1	GENERATORS 4
2	GENERATORS 2
3	NOT USED (FUTURE EXPANSION)
2	SHORT TYPE GENERATORS
4	LONG TYPE GENERATORS

70MICEC e	1	1	1
70MICRCC	2	2	2
SV	3	3	3
70MICR4C e	4	4	4
70MICR4C	5	5	5
SV	6	6	6
70MICR2F e	7	7	7
70MICR2F	8	8	8
SV	9	9	9
70MIC4F e	10	10	10
70MICR4F	11	11	11
SV	12	12	12

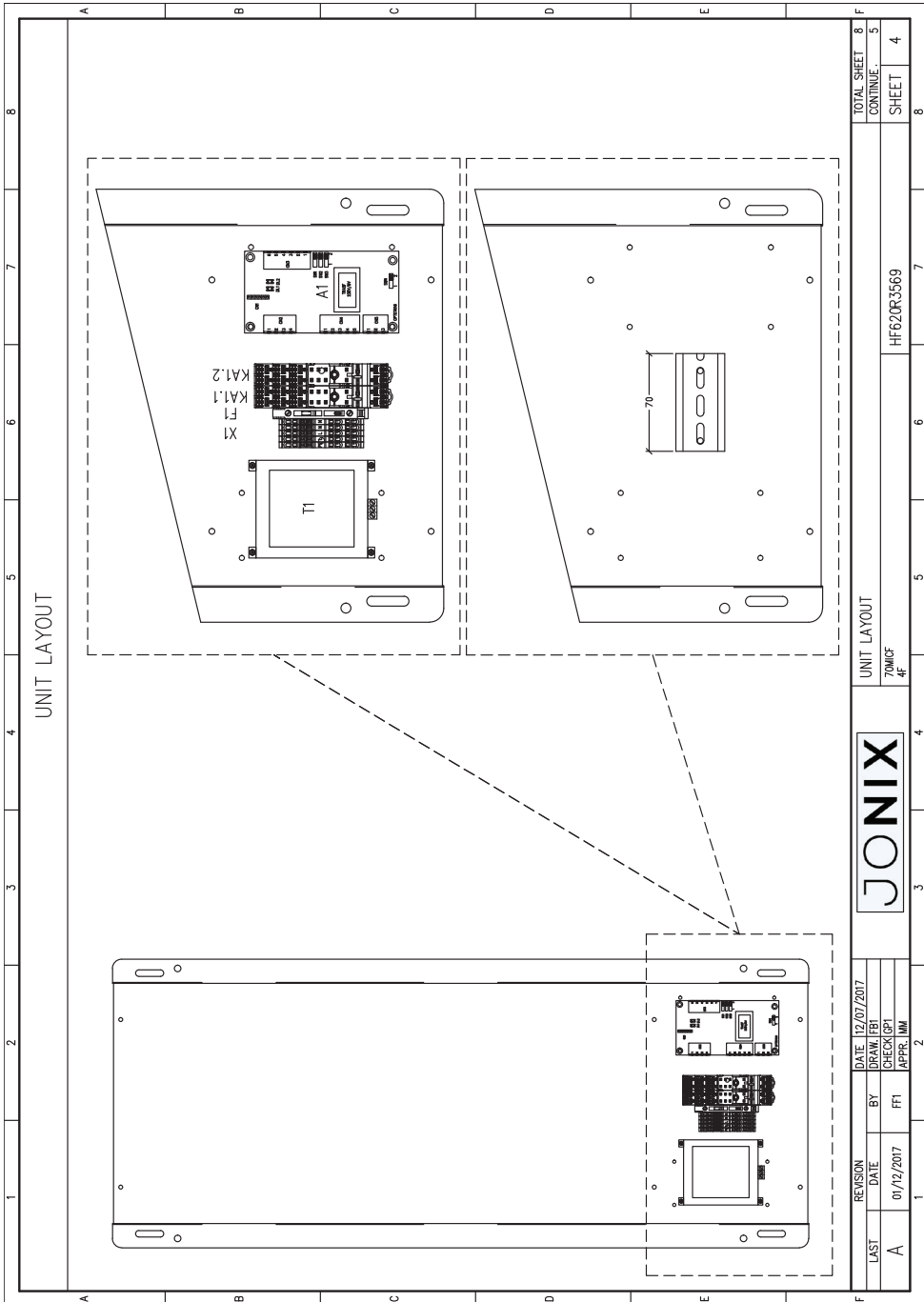


REVISION		DATE		BY	
LAST	DATE	01/12/2017	FF1	CHECK	GP1
A	01/12/2017	FF1	APPR.	MM	

UNIT CONNECTIONS
70MICF
4F

HF62DR3569

TOTAL SHEET	8
CONTINUE	4
SHEET	3



UNIT LAYOUT

REVISION		DATE	BY	DATE	12/07/2017	UNIT LAYOUT		TOTAL SHEET	8
LAST	A	01/12/2017	FF1	DATE	01/12/2017	30MMDF 4"		CONTINUE	5
				CHECKED		HF62QR-3569		SHEET	4
				APPROV.	IMM				8

UNIT LAYOUT



REVISION	DATE	12/07/2017
LAST	BY	DRAW: FB1
A	DATE	01/12/2017
	CHECK	GP1
	APPR.	MM

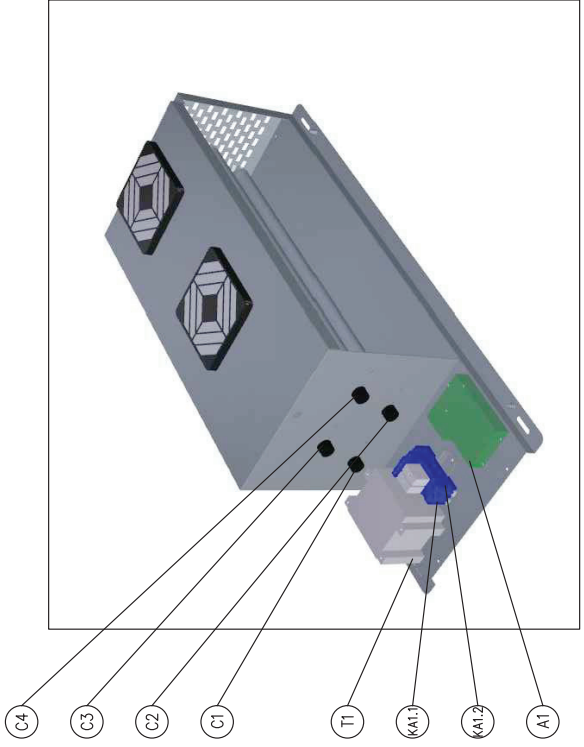


UNIT LAYOUT
70MCF
4F

HF62OR3569

TOTAL SHEET	8
CONTINUE	6
SHEET	5

UNIT LAYOUT




REVISION	DATE	BY
A	01/12/2017	FF1
	DATE	BY
	12/07/2017	FF1
	CHECKED	FF1
	APPROVED	FF1



UNIT LAYOUT
 3/16/16
 4"

HF62QR3569

TOTAL SHEET	8
CONTINUE	7
SHEET	6

REVISIONS LIST														
MODIFICATIONS														
REVISION	DATE											BY	A	
/	12/07/2017	FIRST EMISSION										FB1		
A	01/12/2017	ON/OFF SWITCH REVISION AND MICROSWITCH ADDED										FF1		
LAST	REVISION	DATE	DATE	BY	CHECKED	DATE	PAPER	DATE	BY	DATE	DATE	DATE	DATE	DATE
A	A	01/12/2017	12/07/2017	FF1	FF1	12/07/2017	IMM		FF1					
														
REVISIONS LIST														
FORM OF 4"														
HF62OR3569														
												TOTAL SHEET	8	
												CONTINUE		
												SHEET	8	

JONIX

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