

# SANITARY HOT WATER GENERATOR WITH SEALED CHAMBER AND FORCED DRAFT ACCUMULATION (type C).



## SX080    SX120

### ENG - Installation manual, of use and maintenance.

Original instructions.

Read and follow the following instructions before installing the appliance.

Always keep this manual at hand during maintenance phases.

This manual is also available in electronic format and can be downloaded from the website. [www.atimariani.it](http://www.atimariani.it)

nov-23



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## 1. SYMBOLS IN THE MANUAL

In reading this book, particular attention should be given to the parts marked with symbols represented:



**DANGER!**

serious danger to the life and limb



**WARNING!**

Possible dangerous situation for the product  
and the environment



**NOTE!**

Tips for users

## 2. GENERAL WARNINGS



- this instruction booklet is an integral and essential part of the appliance and must be kept with care near the appliance for future reference. It contains important information about safety, installation, use and maintenance.
- any repair or replacement components shall be performed by personnel authorized by the manufacturer
- the apparatus has been built for the production of hot water: any other type of use is to be considered as dangerous and unsuitable.
- the appliance must not be installed in damp environments, to be protected from splashes, jets of water or other liquids, to avoid anomalies to electrical and thermal devices.
- installation must be performed by professionally qualified personnel responsible for complying with current safety standards. incorrect installation, without complying with the instructions given by the manufacturer, may cause damage to people, animals or things, for which the manufacturer assumes no responsibility.
- parts of the packaging (plastic bags, polystyrene, wood, staples, etc.) must not be left within reach of children as they are potential sources of danger.
- The device can be used by children aged under 8 years old and people with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, provided under surveillance or after the companies have received instructions to ' safe use of and understanding of the dangers inherent in it.
- children should not play with the appliance.
- cleaning and maintenance borne by the user should not be performed by unsupervised children.
- If the appliance should be sold or transferred to another owner, ensure that this booklet accompanies the same, so that they can be consulted by the new owner and / or installer.
- not to support any kind on the subject. to avoid risk of damage due to freezing, in the case it is planned to leave the unit unused for a long period in an environment not heated, it is advisable to empty it completely. The manufacturer is not liable for malfunctions or breakage of components due to frost and water leakage from the plant.
- to get the best result and the warranty terms, we recommend that you carefully follow the instructions below and use only original spare parts and kits supplied by the manufacturer.
- multiple devices in the same room for a greater overall thermal capacity 35 kW, constitute thermal power station and are subject to the provision of the circular n ° 68 VVFF.
- You are not tamper with any device calibrated and sealed at the factory by the manufacturer.
- the devices should be checked and verified regularly by a competent person according to the law of the country where the equipment is installed.

### 3. TRANSPORTATION, STORAGE AND DISPOSAL OR RECYCLING

- The appliance must be transported and stored dry and protected from frost.
- The appliance must be stored, transported and used at a temperature between + 10 ° C and + 40 ° C and at a humidity between 40% and 80%.
- The appliance must not be turned upside down during transport
- Remove the cardboard packaging and polystyrene protections being careful not to damage the appliance. The European Directive 2002/96 / EC imposes the selective disposal and recycling of electrical and electronic equipment. The selective disposal, which allows the recycling of the appliance at the end of life and its treatment in respect of the environment, helps to avoid any adverse effects on the environment and promotes the recycling of materials that make up the product. Read more about the collection centers of existing waste, please contact your waste collection service in your municipality of residence or the shop where you purchased the unit.

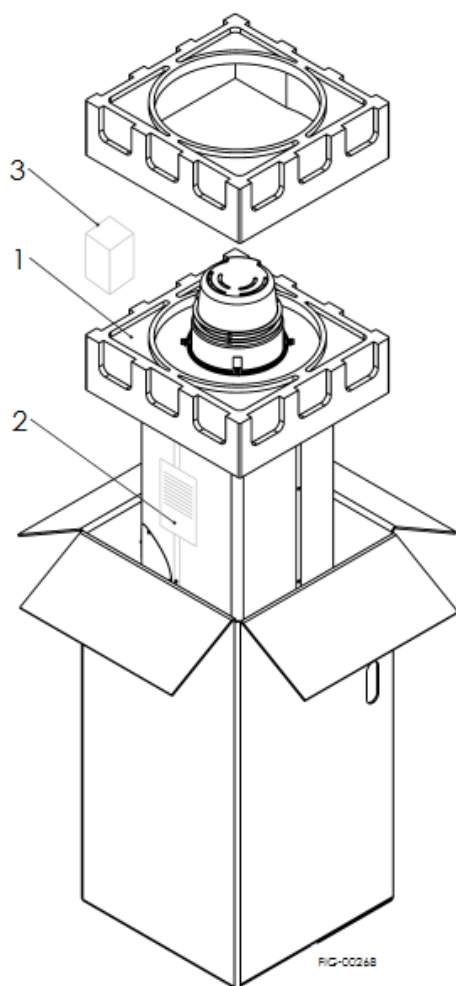
### 4. CONTENT, WEIGHT AND DIMENSIONS OF PACKAGE

The generator is delivered packed in cardboard with appropriate protection (1).

Among these it is placed (3) the hydraulic safety group

Inside, over the appliance, there is an envelope (2) containing

- this manual
- the standard warranty certificate
- the LPG conversion kit



Dimensions and Weights packed unit

		<b>SX080</b>	<b>SX120</b>
Width	cm	54	54
Depth	cm	54	54
Height	cm	110	147
Weight	kg	53	78

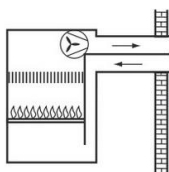
## 5. CATEGORY AND CLASSIFICATION DEVICE

The equipment class (according to EN 437) is: IT II2H3B / P G20 - 20 mbar; G30 / 31 - 30/37 mbar

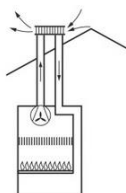
The appliance is classified as: "a hot water gas generator, such accumulation."

These possible exhaust configurations (according to EN 483):

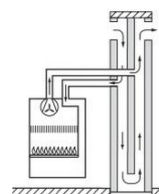
**C12** The air intake and evacuation of the combustion products takes place by means of a horizontal coaxial duct or with openings close enough so that they can be considered in the same wind conditions.



**C32** The air intake and evacuation of the combustion products takes place by means of a vertical conduit coaxial.



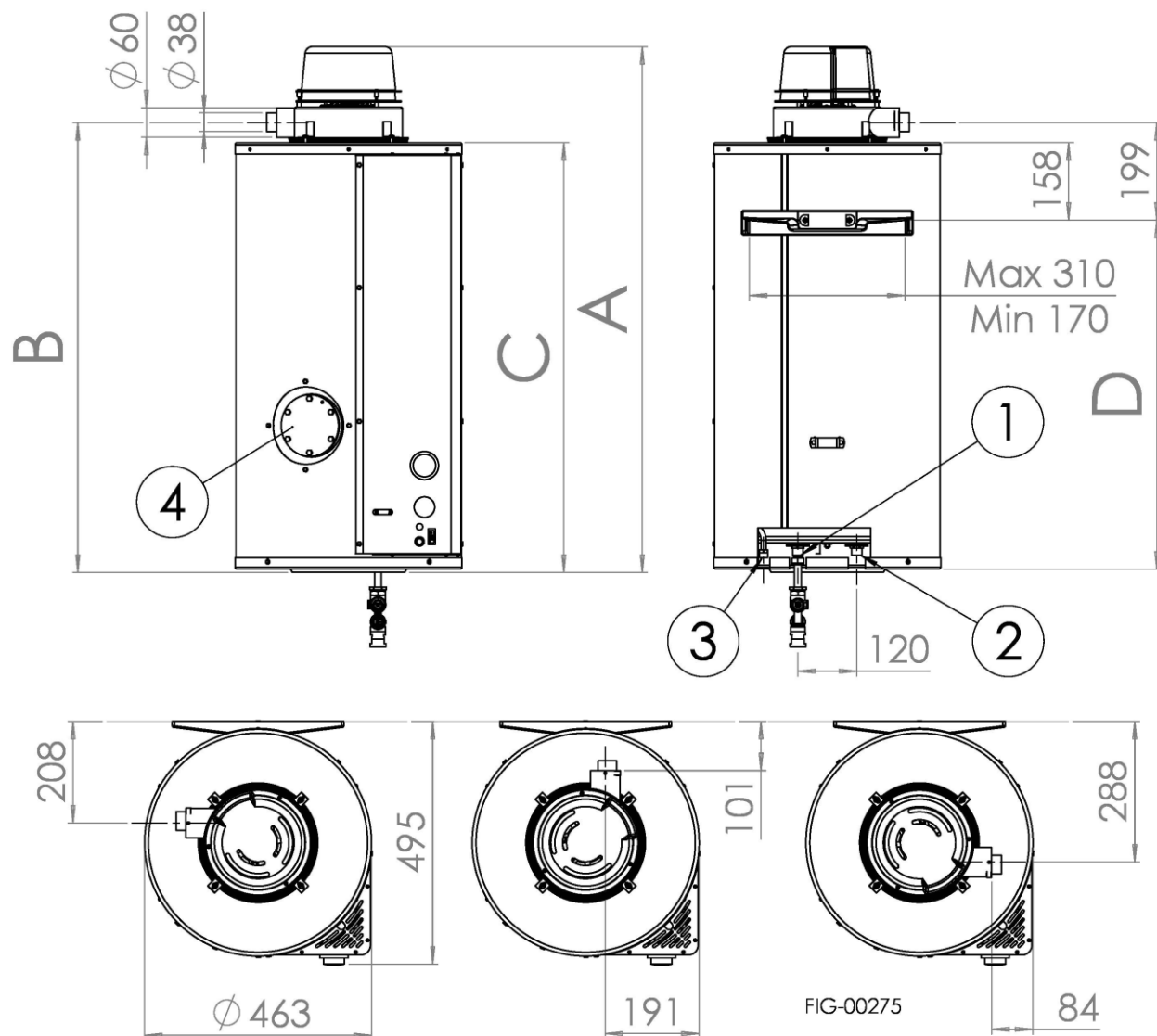
**C42** An apparatus connected to a collective duct system consists of a duct for combustion air supply and a conduit for evacuation of the combustion products. The orifices of this system are concentric or close enough to be exposed to wind conditions comparable.



## 6. TECHNICAL DATA

		<b>SX080</b>	<b>SX120</b>
<b>Healthcare efficiency class</b>		A	B
<b>Load Profile</b>		M	L
<b>Nominal tank capacity</b>	l	75	115
<b>nominal heating capacity Q</b>	kW	5.0	5.0
<b>rated thermal power P</b>	kW	4.3	4.3
<b>Gas consumption - natural gas G20</b>	m <sup>3</sup> /h	0.53	0.53
<b>Gas consumption - LPG G30 / 31</b>	kg/h	0.39	0.39
<b>CO<sub>2</sub> G20</b>	%	7±0.5	6±1
<b>CO<sub>2</sub> G25</b>	%	7±0.5	6.5±0.5
<b>CO<sub>2</sub> G30</b>	%	7±1	7.5±0.5
<b>CO<sub>2</sub> G31</b>	%	7±0.5	7±0.5
<b>NO<sub>x</sub> G20</b>	mg/kWh	26	25
<b>APS working pressure</b>	Pa	≥60	≥60
<b>APS opening</b>	Pa	<39	<39
<b>Max water pressure</b>	kPa (bar)	600 (6)	600 (6)
<b>Combustion efficiency</b>	%	95	95
<b>water efficiency</b>	%	89	86
<b>Continuous withdrawal Δ 25 ° c</b>	l/h	153	153
<b>Electrical protection</b>	IP	20	20
<b>Nominal electrical power</b>	W	26	26
<b>electrical characteristics</b>	V/Hz	230 Vac / 50 Hz	

## 7. DIMENSIONS



		SX080	SX120
A	cm	107	143
B	cm	ninety two	128
C	cm	88	124
D	cm	69	105

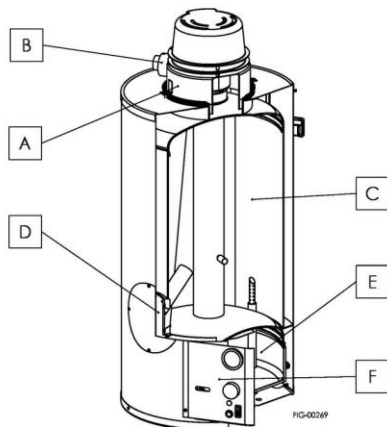
1	cold water inlet	1/2 "
2	hot water outlet	1/2 "
3	gas inlet	3/8 "
4	flange inspection and cleaning football	$\phi 85$

## 8. DESCRIPTION FUNCTIONAL AND CONSTRUCTION

The function of this device is to generate hot water through the heat exchange between the combustion products of the burner and the water present in the storage tank.

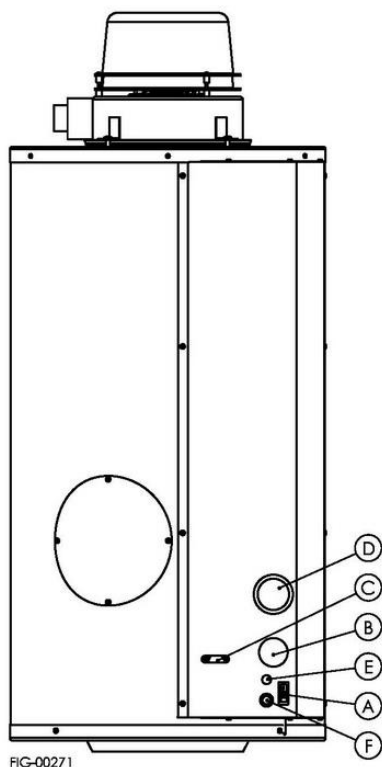
The combustion takes place in a completely sealed with respect to the device that contains, by withdrawing the air required for combustion from the outside and discharging the products of combustion itself always outside.

The sealed combustion chamber, is placed in the lower part of the appliance.



- A. Fume extraction hood: a fan located in the top cap provides for the air supply and evacuation of the combustion products. The cap can be rotated 360 °. In case of abnormal operation of the fan or obstruction of the ducts, a pressure cut off the gas flow to the burner.
- B. exhaust fumes and air intake
- C. boiler: constructed with sturdy sheet and ensures a remarkable resistance to pressure. It 'also internally subjected to a treatment of cryolite glass or porcelain enameling, i.e. a glassy coating with firing at over 850 ° C. This allows to obtain excellent chemical resistance (it is attacked by organic solvents and many other chemicals), excellent resistance to abrasion (low friction coefficient) and excellent thermal stability (porcelain enamel on steel resists up to 500 ° C and also the dry cold and frost do not cause any effect); more generally all that allows a long service life of the tank and a greater hygiene of the water.
- D. inspection and replacement flange anode: allows inspection of the interior of the tank and the calcium periodic cleaning. Size: Ø 85 mm
- E. Combustion chamber located in the lower part of the appliance and contains the atmospheric burner and the control of flame sensors. The chamber is completely sealed off from the environment in which the appliance is installed.
- F. instrument panel: it contains everything that serves to control and regulate the normal functioning: regulating thermostat, ignition switch, button unlock bright, bright operation indicator, thermometer

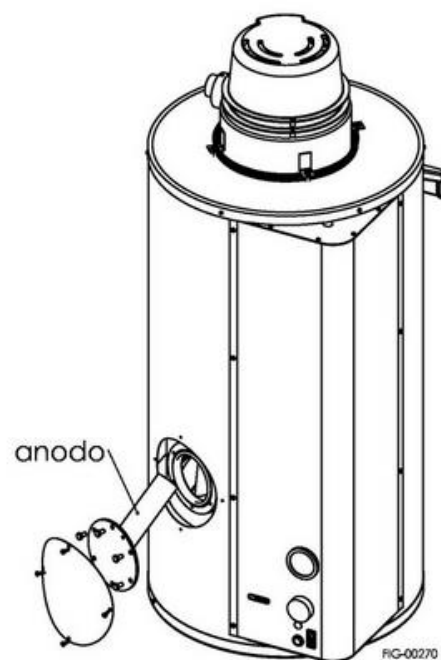
## 9. MAIN COMPONENTS



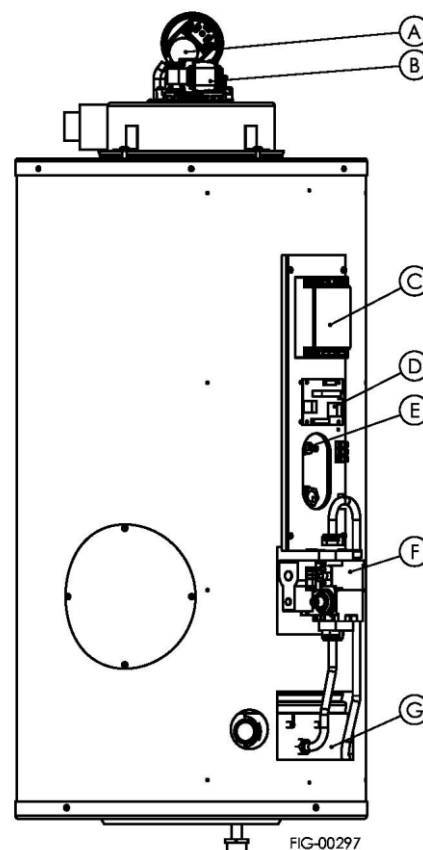
- A. SWITCH: to switch on and off;
- B. THERMOSTAT ADJUSTMENT: is used to adjust the internal temperature of the tank.
- C. FLAME INSPECTION HOLE
- D. THERMOMETER: Measure the domestic hot water temperature inside the tank.
- E. LIGHT GREEN POWER: note the correct burner ignition. It is activated when the burner is turned on
- F. RED LIGHT BLOCK: indicates a device lock, to unlock, hold down the button for 3 seconds.



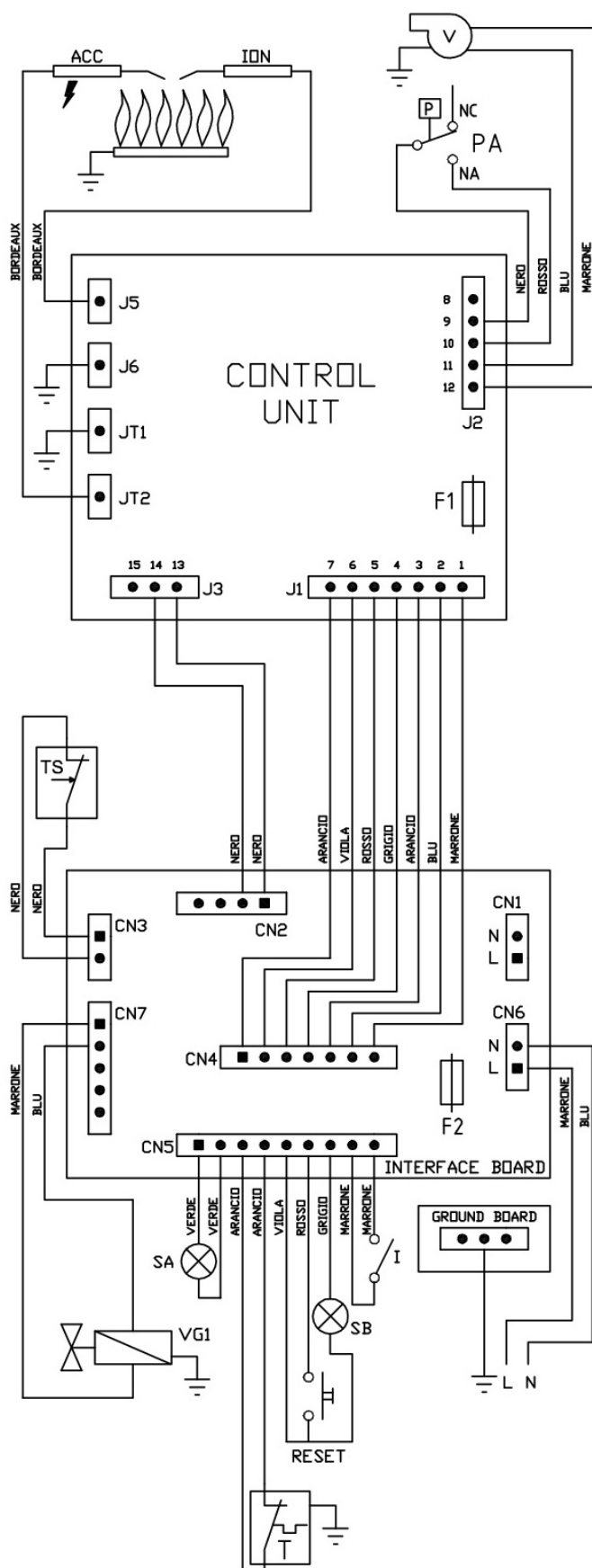
**Magnesium anode:** The device is protected against corrosion by galvanic currents from a magnesium anode. In order to prolong the life of the appliance, this is to be replaced every year. The anode is located in the inspection flange, placed in the front part of the tank



- A. AIR PRESSURE: it is used to verify and monitor the correct operation of the air blower, placed on top of the appliance.
- B. FAN MOTOR
- C. ELECTRONIC CONTROL UNIT: is designed to control, manage electrical devices and appliance gas.
- D. CONNECTION CARD: is used to centralize a user control devices with the controller interface.
- E. SAFETY THERMOSTAT: when the device temperature rises above the maximum threshold, the safety thermostat comes into operation by blocking the appliance.
- F. GAS VALVE: check the gas inlet to the combustion chamber
- G. BURNER GAS



## 10. WIRING



<b>THE:</b>	Line
<b>N:</b>	Neutral
<b>THE:</b>	Switch
<b>SB:</b>	red lock lamp
<b>RESET:</b>	reset button
<b>T:</b>	Thermostat for temperature adjusting DHW
<b>SA:</b>	Power indicator
<b>VG1:</b>	valve GAS
<b>TS:</b>	Water Safety thermostat
<b>ACC:</b>	Ignition electrode
<b>ION:</b>	Detection electrode
<b>V:</b>	Frequency Ventilator
<b>AP:</b>	Air pressure
<b>F1:</b>	Fuse 4 A fast type 250 V
<b>F2:</b>	Fuse 2 A quick type 250 V

## **11. LOCAL REGULATIONS, AND INSTALLATION OF SAFETY**

### **LOCAL REGULATIONS**

In the installation the local regulations must be observed regarding:

- Fire fighters
- Gas Company
- power Company
- Office hygiene and health



### **SAFETY RULES**

Do not perform any cleaning or maintenance work without turning off the water heater and interrupting power supply.

E 'absolutely forbidden to operate the water heater with protection of electrical parts or disassembled safety equipment excluded.

E 'absolutely forbidden to remove or tamper with safety devices.

In case of failure and / or malfunction switch off the appliance, close the gas valve and not groped to repair it but contact an authorized service center.

In case of fire should be used in powder extinguishants: not direct jets of water directly against the heaters as they may cause short circuits.

Apply tools and / or equipment manuals and / or electrical proper use, they are in good condition and used properly.

Make sure that ladders and / or any rolling ladders are positioned securely, that are appropriate and that the steps are intact and not slippery, that they are not moved when someone climbs them and ensure someone supervises.



### **INSTALLATION INSTRUCTIONS**

Make sure, for installation and maintenance work at height (generally with higher altitude to two meters), which are used in scaffolding standards and the space below is free during the eventual fall of tools and objects.

Make sure that, in case of installation and maintenance, the workplace has adequate hygienic conditions with regard to lighting, aeration and solidity.

Wear during installation and maintenance, clothing and adequate personal protective equipment.

Do not take any action without first ensuring that there are no gas leaks, by special detector.

The installer must be enabled in the installation of heating equipment according to DECREE MINISTGERIALE January 22, 2008, n. 37 and after work must issue the CONFORMITY 'DECLARATION to the customer.

The appliance must be connected to a hot water distribution network compatible with its performance and its power. Make sure the installation site and any systems to which it must connect the device comply with the current regulations.

Since the C-type unit, this unit can be installed in any type of local, without any limitation on aeration conditions and volume of the room.

Before each installation, maintenance or repair, remove the power supply. Protecting tubes and external connection cables in such a way as to prevent them from being damaged.

Do not take any action without a prior assessment of the absence of an open flame or ignition sources.

If you detect a smell of burning, see the smoke out exit from the apparatus, or is felt strong smell of gas, remove the power supply, close the gas valve, open the windows and notify the authorized service centers nearest

**IN ANY SITUATION AND 'WELL ALWAYS REMEMBER THAT COMMON SENSE**

**It IS THE BEST SECURITY AGAINST ANY AND / OR INJURY.**

## 12. INSTALLATION



### **TO AVOID DAMAGE THE TRANSACTION MUST BE CARRIED OUT BY A QUALIFIED**

Before installing the appliance, ensure that the nominal supply voltage is 230 V - 50 Hz.

- Make sure that the electrical system is adapted to deliver, in addition to the operating current required by the unit, also the necessary current for powering appliances and equipment already in use.
- Make the electrical connections in accordance with national laws and regulations.
- Upstream of the unit to provide a single-pole switch with a minimum distance of 3.5 mm contacts.

The installation of the device is divided into 6 distinct phases, listed below, to be followed with attention and respecting the order.

1. Positioning device
2. fume extraction hood Installation
3. Installing flue
4. Water connections
5. Connection gas circuit
6. Electrical connection

You should always make the grounding of the unit. Check that the power cord is in perfect condition. Under no circumstances must repair the cable, possibly damaged, with tape or clamps. If the power cord is damaged, it must be replaced by service agent or a similarly qualified person in order to avoid a hazard.

Incorrect installation can cause damage to people and things for which the manufacturer can not be held responsible.

## 13. POSITIONING APPARATUS

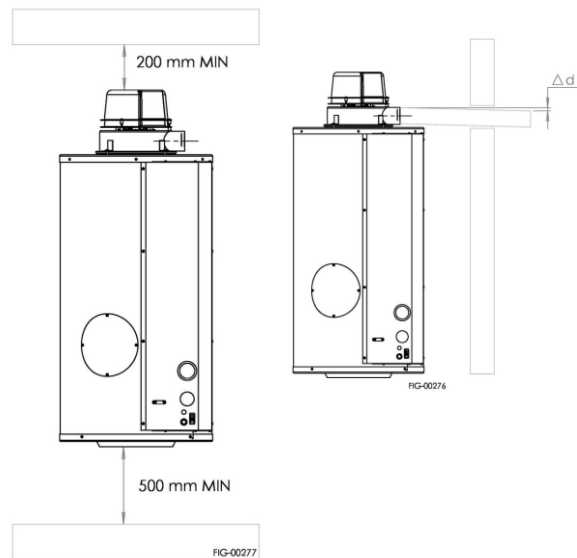
The location of the device must be chosen bearing in mind the maximum length allowed for each type of discharge, as well as the need to connect the same to the gas and electric network.

The appliance does not go outdoors installed in damp environments, to be protected from splashes, jets of water or other liquids, to avoid anomalies to electrical and thermal devices.

It is recommended to place the heater in such a way as to facilitate the installation and maintenance operations.

Since the C-type unit, this unit can be installed in any type of local, without any limitation on the conditions of ventilation and room volume.

Allow above the appliance one of not less than 20 cm space to allow any maintenance interventions to the cap of fumes and one below the device not less than 50 cm space extraction to allow any maintenance to the combustion chamber



To prevent possible infiltration of water during a thunderstorm, we recommend a slight downward slope of the drain pipe and air suction.



**IMPORTANT: FOLLOW THE EXTENT TO INSTALL NATIONAL STANDARDS.**

## 14. INSTALLATION COVER SMOKE EXTRACTION

The upper part of the mantle has four mounting holes for the cover, which allow installations oriented at 90 ° from one another. If it is necessary an intermediate position proceed as follows:

1. placing the cap on the hot water generator, with the flue outlet and the air inlet in the desired direction
2. pierce the upper mantle with a tip  $\varnothing$  4 mm, in correspondence with the cap 4 of the mounting brackets
3. screwing without tightening the screws for fastening to the cap.
4. insert the seal between the cap and the skirt, exerting a slight pressure on the side of the same if necessary
5. tighten the screws with moderate force.

## 15. EXHAUST FUMES

The appliance is to accumulation and sealed combustion chamber, with the combustion chamber downstream fan. The installation of the exhaust terminals must comply with current regulations, as well as any provisions from local regulations. You must not convey the flue gases of several devices within the same flue outlet: each device must have its own separate exhaust duct.

The apparatus is provided with no exhaust kit series. The following table presents the available kits. Use only original kits supplied by the manufacturer (purchased separately depending on the type of discharge you want to accomplish).

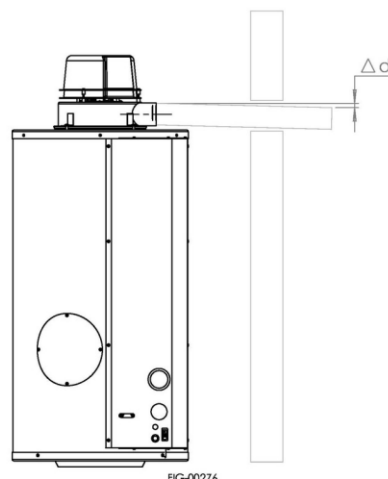


To prevent possible infiltration of water during a thunderstorm, we recommend a slight downward slope of the drain pipe and air intake

Make sure you have guaranteed the mechanical stability of the air / flue gas.

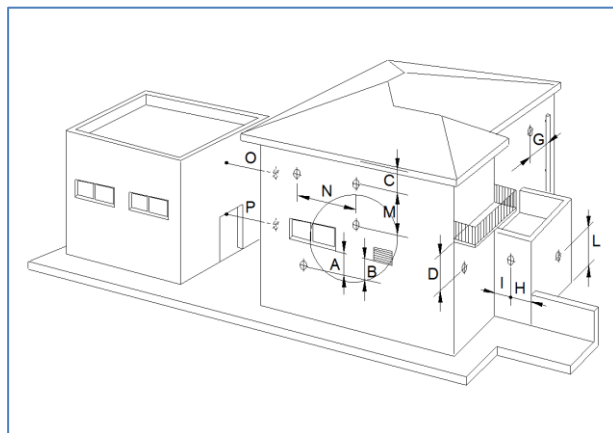


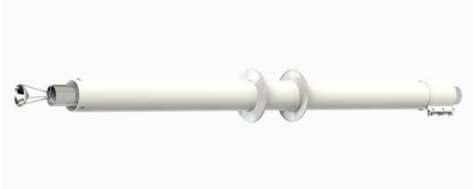




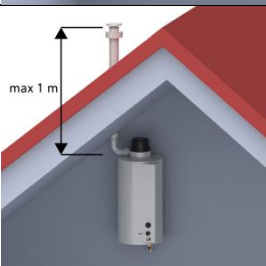
The hole for the passage through the wall of the exhaust pipe and air suction, should not be cemented: the flue gas must be free to slide through the hole in such a way that it can subsequently detach. For this purpose you can use the rosettes cover-wall supplied with the fumes exhaust kit to cover the empty space of the hole.



In the case of wall drain, you must observe the following minimum distances for the tailpipes:

- A. in box: 600 mm
- B. below ventilation opening: 600 mm
- C. under the eaves: 300 mm
- D. under the balcony: 300 mm
- E. from adjacent window: 400 mm
- F. from adjacent ventilation opening: 600 mm
- G. from pipes or drains: 300 mm
- H. from an angle: 300 mm
- I. by an indentation: 300 mm
- L. from the ground or every footfall area: 400 mm
- M. between terminals 2 vertical: 500 mm
- N. between terminals 2 horizontal: 500 mm
- O. from a front surface facing without openings or terminals within a radius of 3 m from the fumes outlet: mm 1500
- P. as above but with openings: mm 2500



EXHAUST FUMES KIT	COMPOSITION	LIMITS	APPLICATION
<b>ASKITSO</b> Horizontal coaxial drain Ø38 / 60 Material: White aluminum		<b>C1</b> Min 1m Max 3m	
<b>ASKITSS</b> Split horizontal exhaust Ø38 / 60 Material: White aluminum		<b>C1, C4</b> Min 1m Max 6m	
<b>ASKITSV</b> Vertical coaxial drain Ø38 / 60 Material: White aluminum		<b>C3</b> Max 1m	

To increase the drain length it is necessary to purchase the appropriate extensions proposed in the following table. The maximum supported extension is shown in the previous table. Each curve is equivalent to 1 meter of the total length. The choice of the type of drain must take into account local and national regulations.

EXHAUST FUMES KIT	DESCRIPTION	CODE
<b>ASKITSO</b> Coaxial horizontal exhaust Ø38 / 60	Coaxial extension Ø38 / 60 L = 0.5 m	ASPC50
	Coaxial extension Ø38 / 60 L = 1 m	ASPC100
	Coaxial bend Ø38 / 60 at 45 °	ASDC604
	Coaxial bend Ø38 / 60 at 90 °	ASDC609
<b>ASKITSS</b> Split horizontal exhaust Ø38 / 60	Curve Ø60 at 45 °	ASCV604
	90 ° bend Ø60	ASCV609
	Curve Ø38 at 45 °	ASCV384
	90 ° bend Ø38	ASCV389
	Extension Ø60 L = 0.5 m	ASPR605
	Extension Ø60 L = 1 m	ASPR60
	Extension Ø38 L = 0.5 m	ASPR385
	Extension Ø38 L = 1 m	ASPR38



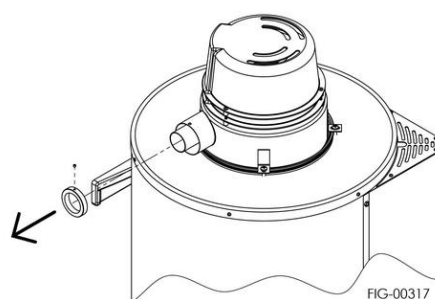
**CAUTION:** Depending on the length of the exhaust pipes must be removed the ring mounted on the flue gas connection

CODE ASKITSO - KIT EXHAUST HORIZONTAL  
for lengths exceeding

- 2 mt (for mod. 80)
- 1 mt (for mod. 120)

CODE CODE ASKITSS - KIT EXHAUST HORIZONTAL SPLIT  
for lengths exceeding

- 4 + 4 meters (for both models)

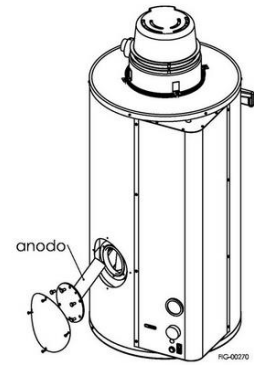


## 16. HYDRAULIC CONNECTIONS

The device is protected against corrosion by galvanic currents from a magnesium anode.



In order to prolong the life of the appliance, it is mandatory to replace at least once every 12 months. The anode is located in the inspection flange, placed in the front part of the tank



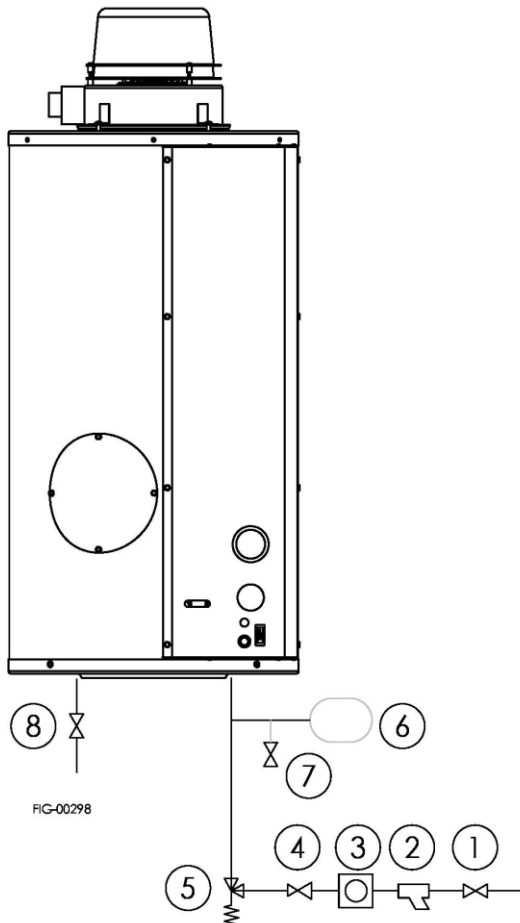
Furthermore, the appliance will last longer if they are met, as provided by D. LGS. February 2, 2001, 31 (implementation of Directive 98/83 / EC on the quality of water intended for human consumption), the following parameters:

1. Total hardness: between 10 ° F and 25 ° F.
  - in the presence of softening or desalination treatment: make sure that the hardness is not adjusted to a value of less than 10 ° F
  - in the presence of water with hardness greater than 25 ° F is advisable to install a water softener
2. PH: comprised between 6 and 8
3. Chloride: max 200 mg / l
4. Conductivity: max. 2500 mS / cm



In the presence of water with different parameters to the above, it should be given special care in the periodic maintenance of the tank. In particular it must be replaced several times a year the magnesium anode.

### HYDRAULIC COMPONENTS TO BE INSTALLED



1. cold water inlet (1/2 "): stopcock (recommended)
2. filter to remove any impurities, such as sand, gravel, mud, etc.. (optional)
3. softener (recommended)
4. Pressure reducer for water, if the pressure is too high (recommended)
5. boiler safety group EN 1487 supplied with the device (required)
6. expansion vessel suitable for food use, with a capacity of not less than 5% of the capacity of the device (required)
7. cold water inlet (1/2 "): drain cock (recommended)
8. hot water outlet (1/2 "): cock (recommended)

## 17. TRUNK GAS

Connect the gas supply line of the thread present on the generator by means of a removable rigid connector. The gas connection is 3/8 "

It is recommended to mount along the pipe, in the vicinity of the generator and in an easily accessible location, a faucet interception manual gas.



Check the tightness of the gas pipe and make sure that it has been performed in accordance with regulations on gas installations.

**GAS REGULATION:**the device has already been calibrated at the factory to the pressure of the feed gas for which it was prepared (shown in the label serial number and packaging).

### G20 gas (H-gas or methane)

- inlet pressure: mbar 20
- pressure regulation: insert
- all'inettore pressure: mbar 11.5
- N ° Ø injectors: 1 x Ø 2:00

### gas G30 / 31 (LPG or butane / propane)

- inlet pressure: 28-30 / 37 mbar
- pressure regulation: excluded
- N ° Ø injectors: 1 x Ø 1:15

CAUTION: the pressure of the gaseous phase must be reduced. This operation is achieved by using:

- a) a regulator stage I: provides for reducing the gas pressure from the present value inside the tanks to a value of about 1.5 bar.
- b) a controller stage II which provides the further gas pressure reduction from the value of 1.5 bar to the value of 30 mbar

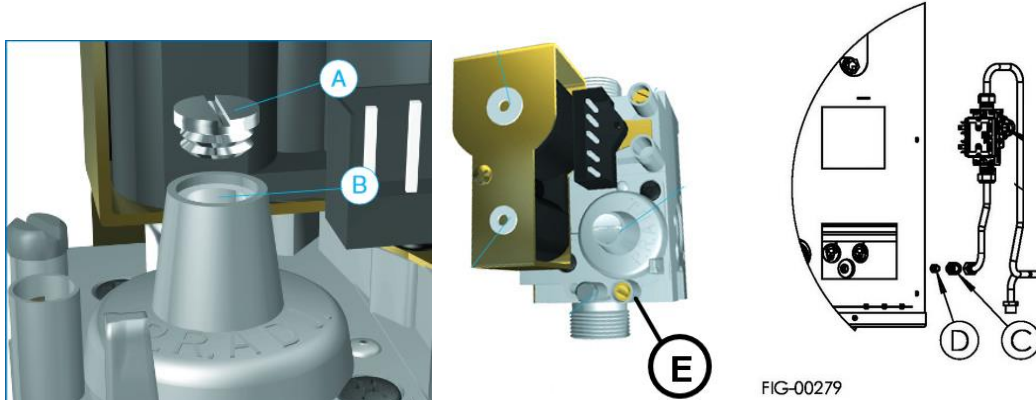


## 18. GAS POWER TRANSMISSION

To change the type of gas supply is necessary to exclusively use the special conversion kit supplied by the manufacturer:

code	Description
AKGPLC	methane G20 LPG G30 / 31
AKMETC	from LPG G30 / G20 31 to methane

The transformation of the gas type of power should only be done by qualified personnel.



### Gas Switching to natural gas LPG

1. Check that the diameter of the injector contained in the conversion kit is the one corresponding to the LPG gas (see table in paragraph 17)
2. Close the stopcock gas and remove the power supply
3. Unscrew the nozzle holder C
4. D Unscrew the injector and replace it with the one contained in the kit. Tighten in order to ensure the gas-tight
5. Unscrew the valve cap A and tighten the adjusting screw B placed beneath it and check that the pressure at the burner is about 28 mbar (use the outlet pressure and outlet of the valve, after having unscrewed a few turns the internal screw)
6. Screw the cap A and the inner screw of the pressure socket E
7. Attach the label contained in the kit on the appliance (over the one already present) to signal that has been adjusted for LPG gas G30 / 31
8. Check with appropriate spray the gas seal on the threads / junctions and on the pressure outlet

### Passing gas with natural gas LPG

1. Check that the diameter of the injector contained in the conversion kit is the one corresponding to the methane gas (see table in paragraph 18)
2. Close the stopcock gas and remove the power supply
3. Unscrew the nozzle holder C
4. D Unscrew the injector and replace it with the one contained in the kit. Tighten in order to ensure the gas-tight
5. Unscrew the valve cap A and B acting on the adjusting screw located under the cap itself, adjust the injector pressure is about 11.5 mbar (use the outlet pressure and outlet of the valve, after having unscrewed a few turns the internal screw).
6. Screw on the valve cap A and the inner screw of the pressure socket E
7. Attach the label contained in the kit on the appliance (over the one already present) to signal that has been adjusted for methane gas G20
8. Check with appropriate spray the gas seal on the threads / junctions and on the pressure outlet



For the gas operation LPG it is essential to follow the instructions of paragraph 18 (regulators I and II stage)



**IMPORTANT:** CHECK THE SEAL OF GAS PIPES, BOLTS AND JOINTS BEFORE TURNING THE APPLIANCE.  
WORN SEALS SHOULD NOT be re-used: E 'MUST REPLACE THEM WITH NEW PARTS

## 19. ELECTRICAL CONNECTIONS

The machine is sold without mains plug: CPU must be mounted to the first installation.



Connect electrically to a power network at 230V-50Hz, single phase, and to an effective grounding. E 'need to perform a polarized connection. The appliance cable is composed of three distinct colors cables (refer to the table below to identify the correct polarization).

Connect the power cord of the appliance, taking care to comply with the electrical standards of the country in which the appliance is installed. If the power cord is damaged, it must be replaced by a technical service center authorized by the manufacturer, or by a similarly qualified person in order to avoid a hazard.

For the eventual stopping of the appliance, in the feeding of the same network is necessary to provide a disconnect device (not supplied) with an opening distance of the contacts that allows complete disconnection in the conditions dictated by the overvoltage category III



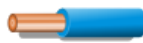
LINE AND NEUTRAL PLUG TO BE THE SAME AS LINE AND NEUTRAL THE ELECTRICAL OUTLET.

**Land**



green yellow

**Neutral**



blue

**Line**



Brown

Riding in the vicinity of the appliance a switch omnipolar general for the eventual stopping of the appliance. This disconnect device must be incorporated in the supply system in accordance with installation rules. Connect the power cord, making sure to comply with local electrical codes.



In case of replacement of the electric power cable, use only a cable with the same characteristics (cable H05 VV-F - 3x0.75).



Warning: The device has no protection against the effects caused by lightning.



Before accessing any electrical part of the appliance, remove the power supply using the bipolar switch.

## 20. PUT IN ACTION



Before turning on the appliance, check that:

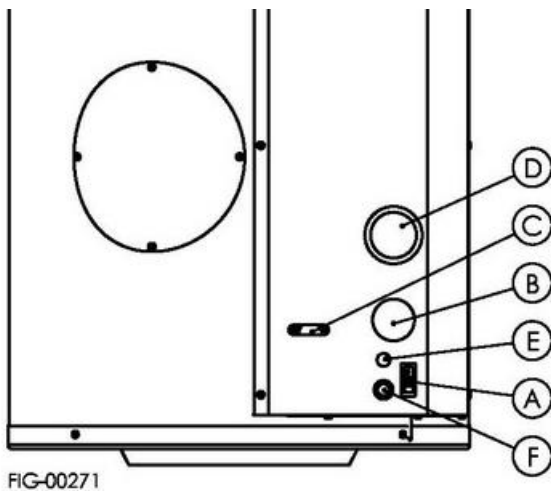
- the unit is arranged to work with the available gas
- the provisions and regulations in force on the installation of these appliances have been observed, especially with regard to the correct connection of the evacuation duct of the combustion and the gas supply piping products
- that the electricity supply is connected, taking into account the polarity of the same (phase and neutral) and which has been executed connection to an earthed socket in accordance with applicable provisions
- that the gas shut-off valves on the meter and in the vicinity of the generator are open
- that the water heater is full of water

## 21. RECOMMENDATIONS FOR YOU



- Keep this booklet for future reference. The booklet should be kept near the stove.
- For free verify the correct installation of the device, the end user can directly contact one of the closest authorized service centers.
- All the steps in the space reserved for the installation and maintenance must be performed by qualified and authorized according to existing regulations. An incorrect installation, caused by not observing the instructions provided by the manufacturer, may cause damage to people, animals or things, for which the manufacturer assumes no responsibility.
- The device has been built for the production of hot water: any other type of use is to be considered as dangerous and unsuitable.
- The appliance does not go outdoors installed in damp environments, to be protected from splashes, jets of water or other liquids, to avoid anomalies to electrical and thermal devices.
- The installation must be performed by professionally qualified personnel responsible for complying with current safety standards.
- Any packaging components (plastic bags, polystyrene, wood, staples, etc.) Must not be left within reach of children as they are potential sources of danger.
- Carefully read the instructions and warnings contained in this booklet as they provide important information about safety, use and maintenance.
- In case the appliance is sold or transferred to another owner, ensure that this booklet accompanies the same, so that they can be consulted by the new owner and / or installer.
- Do not place any kind on the subject.
- To get the best result and the warranty terms, we recommend that you follow the operating instructions below, to make regularly the unit checked by qualified personnel and only use original spare parts and kits supplied by the manufacturer.
- It 'not tamper with any device calibrated and sealed at the factory by the manufacturer.

## 22. IGNITION AND TEMPERATURE CONTROL



1.

1. Press the switch in position "I"
2. Turn the thermostat setting index B on the desired water temperature value
  - pos. 1 → about 37 ° C
  - pos. 2 → about 47 ° C
  - pos. 3 → about 57 ° C
  - pos. 4 → about 67 ° C
  - pos. 5 → about 77 ° C
3. If the set temperature is lower than the domestic hot water temperature inside of the appliance (detectable by the thermometer D) starts the generator ignition cycle. The depression exerted by the operation of the fume extraction fan (under proper conditions the state of the combustion circuit) ago closes the differential pressure switch contacts, and the flame control device starts the pre-ventilation of the combustion chamber (duration of the pre-ventilation : 30 sec.). At the end of the pre-ventilation phase they are controlled at the same time the opening of the gas valve and the action of the electrode for the spark ignition of the burner.
4. When the power of the burner the flame must be detected from the special ionization probe within the safety time (10 sec), otherwise the control equipment must be in lock state (bright red button F lit). This can easily happen in a new plant, where

it can still be present air in the gas pipe. In this case, wait about a minute, unlock the device by pressing the illuminated button to start a new ignition cycle. Repeat until the residual air in the gas pipe is not exhausted and the ignition is regular.



5. **IMPORTANT:** with the exception of the previous case, the ignition of the indicator light of the bright red button F block generally indicates a failure or a malfunction. We recommend in this case to contact an authorized Service Center.
6. However, if the ignition of the burner is regular turns on the green light And, it starts the step of heating water. The ignition can also be checked visually through the flame inspection window C
7. The burner will operate until the water temperature set on the thermostat.



**IMPORTANT:** the lighting of the red light F can be carried out even in the case both intervened limiter safety thermostat, ie a water overheating has occurred contained in the boiler. In this case it is essential to contact an authorized Service Center.

## **23.SHUTDOWN**



To turn off the generator for a short time

- rotate the control thermostat knob on the minimum value and press the switch to position "0".

To turn off the generator for a long time:

- turn the thermostat knob on the minimum value
- press the switch to position "0"
- disconnect the electrical supply to the appliance at the main switch
- close the gas shut-off valve.



- in the case is expected to leave the unit unused for a long period in an environment not heated and with the possibility of frost, it is advisable to empty it completely.

## **24.PERIODIC MAINTENANCE**



To ensure the safety and prolong its life, you should have it checked at least once a year by an authorized service center, which will act as follows:

- replacing the magnesium anode
- internal inspection of the boiler and possible calcium deposited on the bottom cleaning
- verification of the gas pipe sealing
- burner maintenance

## **25.POSSIBLE OPERATING FAULTS**



Possible replacements of components shall be performed by personnel authorized by the manufacturer

The control device will lock out without controlling the ignition.

- the control apparatus flame detection circuit is faulty and the control self-test does not allow the continuation of the cycle
- the flame detection electrode has a leakage to ground

At the end of the pre-ventilation phase, the ignition electrode does not spark and the control device will lock out.

- the ignition transformer is faulty
- the electrode connection of power to the terminal apparatus is interrupted

At the end of prepurge the ignition electrode gives spark, but the flame is not formed and the apparatus goes into block.

- It lacks the feed gas or air is present inside the pipe
- the gas valve does not open because the coils are malfunctioning or their electrical connection is interrupted

At the end of prepurge the ignition electrode gives spark, the flame is formed, but the device will lock.

- the flame does not stabilize properly for lack of gas pressure
- the detection electrode is not correctly positioned and is not in contact with the flame
- the detection electrode electric connection is interrupted

The device will lock during normal operation.

- the gas supply has been interrupted, even if at the moment: the equipment, not by detecting the presence of flame, has gone in block
- It has occurred, during an intermittent operation cycle, one of the cases of the previous point.

The generator runs for short intermittent periods, even if the thermostat is working properly and is in heat demand position.

- the regulating thermostat is defective and does not properly reveals the water temperature
- the pressure switch stops the burner because the flow rate of the fan is not correct, due to obstruction of the ducts or excessive length of the same.

The control apparatus is not blocking but the cycle remains in preventi lazione.

- the differential pressure does not give consent to continue the cycle because the fume extraction ducts or air intake are clogged
- the pressure switch does not give consent to continue the cycle because the fan does not operate and does not exert sufficient pressure
- the differential pressure does not give consent because it is faulty or its electrical connection is interrupted
- the differential pressure does not give consent because the tube of the pressure outlet is obstructed or the silicone hose is disconnected or broken.

The control apparatus is not blocking but the cycle does not start.

- during the initial part of the apparatus occurs by the pressure switch contacts have been found in the closed position (because glued or effect of incorrect calibration of the pressure switch itself) and consequently is not given the consent to the continuation of the cycle
- check if it jumped the printed circuit fuse

## **26.VALIDATION OF THE WARRANTY**

The warranty begins on the date of purchase proven by a document valid for tax purposes (invoice or receipt), considered essential for the enjoyment of the right to the guarantee.

For further details regarding the terms of the warranty, see the warranty card supplied with your machine. The guarantee certificate must be stored together with the purchase document (invoice or receipt) and must be performed at authorized service center staff, in case of a warranty claim. The possession of one device does not give the guarantee.



And 'Do not tamper with any device, set and sealed at the factory by the manufacturer.

## 27. CORRECT DISPOSAL OF THIS PRODUCT



PRODUCT IN COMPLIANCE WITH EU DIRECTIVE 2012/19 / EU-D.Lgs.49 / 2014 pursuant to art. 26 of Legislative Decree 14 March 2014, n. 49 "Implementation of Directive 2012/19 / EU Waste Electrical and Electronic Equipment (WEEE)" (Applicable in the European Union countries and countries with separate collection systems)

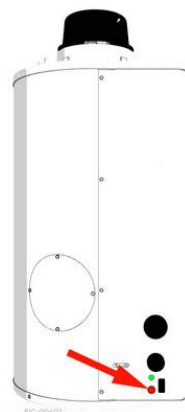
The marking on the product or its literature indicates that the product should NOT be disposed of with other household waste at the end of the life cycle. To prevent possible harm to the environment or human health from uncontrolled waste disposal, the user is encouraged to separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where you purchased the product or their local government office, for details on separate collection and recycling for this type of product. Business users should contact their supplier and check the terms and conditions of the purchase agreement.

## 28. FREQUENT QUESTIONS

- You can use a cleanser (addolcitore, water softener, etc.)?** The use of the purifier reduces the protective effect of magnesium anode and consequently the duration of life of the boiler. The manufacturer recommends not soften the water to a hardness of less than 10 ° F
- What is an anode and what is it?** The magnesium anode protects the appliance from corrosion due to electric currents present in the water. The anode, consumed, avoids that these consume electrical current, discharging to the tank, the material of which is composed of the inside of the tank (the enamel), ensuring a longer life of the tank itself. In order to extend the life of the latter, the anode is to be replaced every year.
- Inside the boiler feel the blows: What are they?** Excessive formation of limestone (calcium) in the tank can cause some shots audible outside the boiler itself. The amount of limestone that is formed inside the tank may depend on several factors: firstly, the quality of the water distributed in the network, which can have many high hardness values. In addition a high temperature of hot water storage (the temperature set on the thermostat) accelerates the formation of limestone. Since the formation of scale is an inevitable phenomenon, we recommend doing a proper maintenance check and clean the inside of the tank at least once a year by an authorized service center, using the special flange from the tank itself.

## 29. DIAGNOSTIC TOOL

The red light in the reset button is able to indicate the type of error. The light comes on intermittently according to the type of burner ignition impediment, with a series of pulses and a pause of 2s between one series and the next.



ERROR DIAGNOSTIC TABLE

Type of signal	Error
0 flashes	There are no errors
2 flashes ••	The ignition cycle does not occur due to failure to close the pressure switch
3 flashes •••	The ignition cycle does not take place due to a glued pressure switch (closed without fan)
Steady on	Water heater blocked due to burner ignition failure

To solve the problems related to intermittent signals, check the fan and pressure switch. To release the appliance from the fixed light, check the gas and / or burner circuit and press the reset button for 2 seconds to unlock the appliance and repeat the ignition cycle





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