FLEXIHEAT UK LTD
www.flexiheatuk.com
01202 822221

Installation Manual,
Use and maintenance
for the model

SF 14 EVOLUTION NOx

Sealed Chamber Water Heater

CE 0476

SF14EVOLUTIONNOx-RAD- ENG-Manual-2009.1_HDIMS13_firm.05_R9

SUMMARY

PREFACE

WARNING

Before starting any operation, it is mandatory to read this manual, in relation to the activities to be performed described in the relevant section. The guarantee of good operation and full performance compliance of the water heater depends on the correct application of all the instructions contained in this manual.

The installation, use and maintenance manual is an integral and essential part of the product and must always be supplied with the water heater.

RECIPIENTS OF THE MANUAL

The recipients of the manual are all those who will have to approach the water heater to carry out installation, use and maintenance operations.

It is a condition of use of the water heater that it is used and reachable only by competent operators who have read and fully understood the use and maintenance manual in all its parts, with particular attention to the warnings.

READING AND SYMBOLS OF THE MANUAL

To facilitate the understanding of this manual, recurring graphic styles have been used, in particular:

** In the outer margin of the page there is a address book that highlights the type of recipient to whom the instructions in that section are addressed.

** Titles are differentiated by thickness and dimension according to their hierarchy.

** Parts are shown in the illustrations important ones described in the text with a number or letter.

** (See chapter" chapter name "): this wording indicates another section of the Manual that it would be useful to consult in relation to the one you are reading.

** Appliance: This term was used to always mean the water heater.

DANGER

Identify information of danger generic which, if not strictly observed, can cause serious personal injury or death.

ATTENTION

Identifies information that, if not strictly observed may cause minor or medium personal injury, or serious damage to the water heater.

WARNING

Identify precautionary information which must be observed to avoid damaging the water heater or parts of it.

PRESERVATION OF THE MANUAL

The manual must be kept carefully and replaced in case of deterioration and / or poor legibility.

In case of loss of the use and maintenance manual, it can be requested from the Technical Assistance Center providing the model and serial number which can be found on the plate located on the right side of the water heater casing.

Alternatively, the use and maintenance manual can be downloaded for free online at www.radiant.it, by accessing the "download" section
and entering the model of the water heater.

WARRANTY AND LIABILITY
OF THE MANUFACTURER

The manufacturer's warranty is provided exclusively through its authorized Technical Assistance Centers, listed by Region and Province on the website www.radiant.it, and concerns any lack of conformity of the appliance at the time of sale.

The features techniques is fuctional of the appliance are ensured by its use in compliance with:

1. the instructions for use and maintenance contained in the manuals supplied with the product, the content of which the customer certifies having read;

2. the conditions and purposes for which goods of the same type are usually used.

For information regarding the validity of the guarantee, duration, obligations and exclusions, consult the Certificate of first ignition attached to this manual.

› The manufacturer reserves the right to make changes to instrumentation and related technical documentation without incurring any obligation towards third parties; we decline all responsibility for any inaccuracies contained in this brochure, if due to printing or transcription errors;

CONFORMITY OF THE PRODUCT

RADIANT BRUCIATORI spa with reference to art. 5 of Presidential Decree no. 447 of 06/12/1991, “Regulation implementing the law of 5 March 1990, n 46 "and in compliance with the law of 6 December 1971, n. 1083 “Regulations for the safety of the use of combustible gas”, declares that its gas appliances are built in a workmanlike manner.

All the water heaters have obtained there CE certification (Ministerial Decree 2 April 1998 implementing regulation Article 32 Law 10/91) and meet, for technical and functional characteristics, the requirements of the standards:

›UNI-CIG 7271

›UNI-CIG 9893

›EN 26: 2015

Gas water heaters also comply with the following directives:

›GAS DIRECTIVE 2016/426 / EU

›COMPATIBILITY DIRECTIVE ELECTROMAGNETIC 2004/108 CEE

›2006/95 EEC LOW VOLTAGE DIRECTIVE

The materials used such as copper, brass, stainless steel create a homogeneous and compact whole, but above all functional, easy to install and simple to run. In its simplicity, the water heater is equipped with all the accessories required by law to make it a true independent heating plant for the production of domestic hot water. All devices are subjected to testing and accompanied by a quality certificate signed by the tester.

1. INSTALLER SECTION

The installation operations described in this section must be carried out exclusively by qualified personnel with technical expertise in the sector for the installation and maintenance of the components of civil and industrial heating and domestic hot water production systems as required by 'art. 3 of Ministerial Decree No. 37 of 22.01.2008.

1.1. INSTALLATION

1.1.1. GENERAL INSTRUCTIONS FOR INSTALLATION

ATTENTION

This water heater will have to to be intended for the use for which it was expressly built: heating water to a temperature below boiling point at atmospheric pressure. Any other use is to be considered improper and therefore dangerous. Any contractual and extra-contractual liability of the manufacturer is excluded for damage caused to people, animals or things by errors in installation.

ATTENTION

The installation of this water heater must be carried out exclusively by qualified personnel with technical expertise in the sector for the installation and maintenance of the components of civil and industrial heating and domestic hot water production systems as required by art. 3 of Ministerial Decree No. 37 of 22.01.2008.

ATTENTION

After removing all packaging ensure the integrity of the content. If in doubt, do not use the appliance and contact the supplier.

BEFORE INSTALLING THE WATER HEATER THE INSTALLER MUST BE AWARE OF THE FOLLOWING CONDITIONS

›That the appliance is connected to a mains water compatible with its performance and power.

›The room must have regular ventilation through an air vent.

›The air intake must be positioned a unobstructed floor level e protected with a grid that does not reduce the useful passage section.

›Check using the data plate of the water heater (located inside the front casing) that the appliance is set up for operation with the type of gas available on the network.

›Make sure that the pipes and fittings are perfectly sealed and that there is no gas leak.

›Check that the appliance is effective grounding.

›Check that the electrical system is adequate to the maximum power absorbed by the appliance indicated on the data plate.

WARNING

Use only original RADIANT optional accessories or kits (including electrical ones).

1.1.2. WATER HEATER AND ENVIRONMENTAL REQUIREMENTS

Two appliances at the same time and at the same time local or in directly communicating rooms, for a total heat input greater than 35 kW, constitute a thermal power plant and are therefore subject to the provisions of the standard UNI 11528 .

Since the heat output of the appliance is less than 35kW, the room hosting the water heater must meet the requirements of the technical standard UNI 7129.

The potential of several appliances used for different purposes (e.g. hob and heating), installed inside a single unit

real estate used as a dwelling, does not have to be added together.

The presence of threaded joints on the gas supply line determines the need for the room where the appliance is installed to be ventilated (UNI
7129). It is therefore advisable to equip the room with ventilation openings in order to ensure a change of air, with an outlet grille in the area of natural accumulation of any gas leaks.

WARNING

Where the temperature of the room where the water heater is installed can drop over 4 ° C it is advisable to insert an electric heater kit (see chapter 'ANTIFREEZE PROTECTION').

WARNING

The firm assumes none liability for damage caused by installations in environments that do not comply with the above and are not adequately protected from frost.

1.1.3. REFERENCE STANDARD

The installation must be carried out according to the requirements of the UNI and CEI standards, the legislation in force and in compliance with the local technical regulations, according to the indications of good technique.

In particular, the UNI 7129 and 7131 standards and the CEI 64-8 and 64-9 standards must be respected.

1.1.4. UNPACKING

WARNING

It is advisable to unpack the water heater on delivery. The firm is not liable for damage caused to the appliance due to incorrect storage.

WARNING

The packaging elements (box of cardboard, wooden crate, nails, staples, plastic bags, expanded polystyrene, etc.) must not be left within the reach of children as they are potential sources of danger. They must therefore be disposed of by differentiating them appropriately according to current regulations.

To unpack the water heater, proceed as follows:

›Place the packed water heater on the floor (fig. 1-A) and remove the clamps by opening the four flaps of the box outwards.

›Turn the water heater 90 ° holding it underneath with the hand (fig. 1-B).

›Lift the box (fig. 1-C) and remove the protections (fig. 1-D).

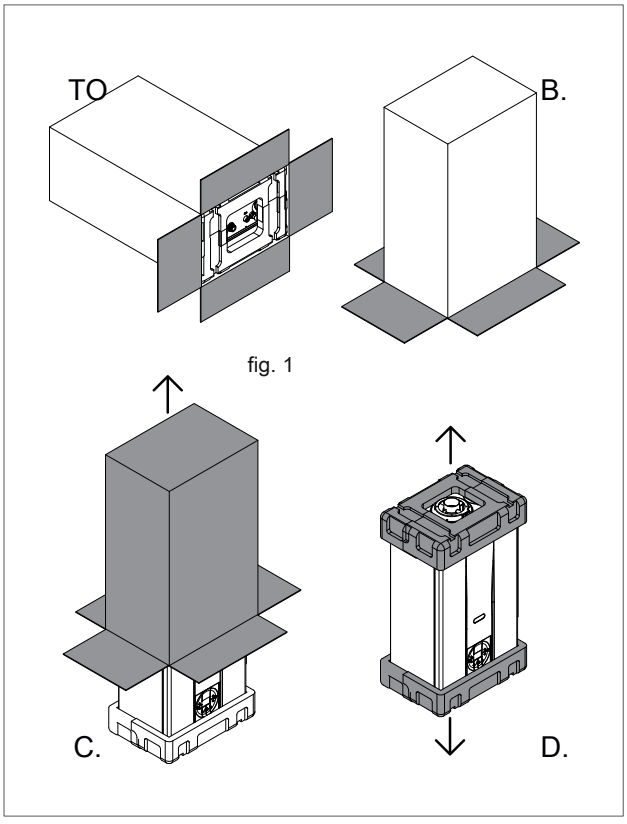
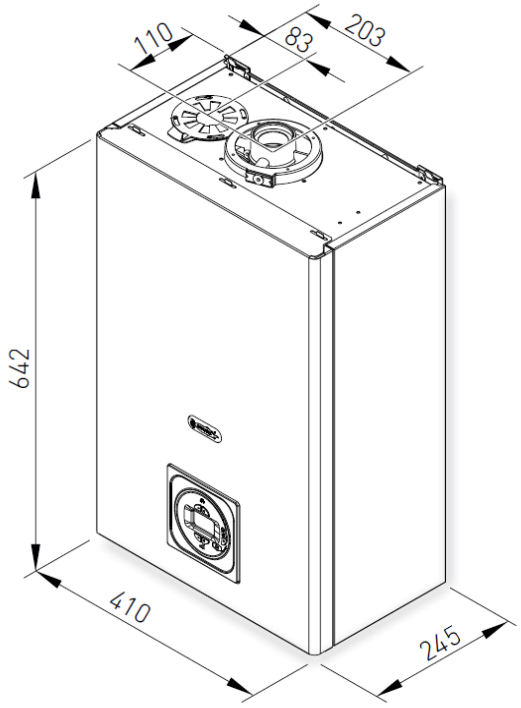
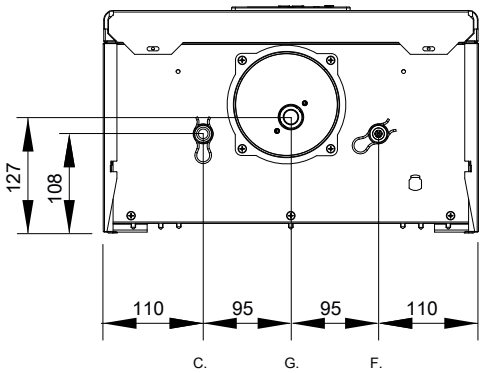


fig. 1

1.1.5. OVERALL DIMENSIONS



1.1.6. TEMPLATE



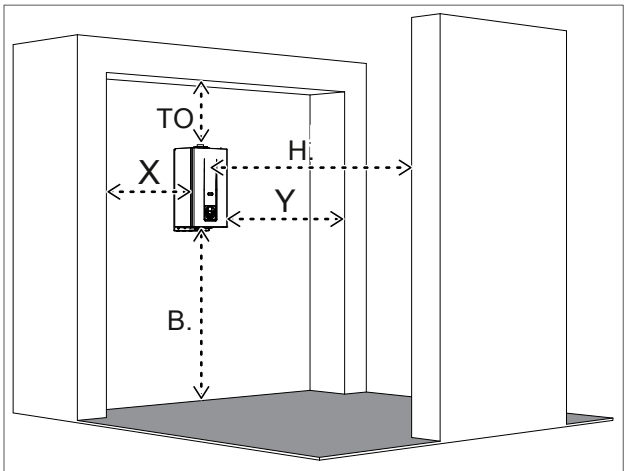
C-	HOT	Ø 1/2
G-	GAS	Ø 3/4
F-	COLD	Ø 1/2

1.1.7. MINIMUM TECHNICAL SPACES AND POSITIONING

The water heater needs to be installed exclusively on a vertical and solid wall that bears its weight.

In order to allow access to the inside of the water heater in order to carry out maintenance operations, it is necessary to respect the minimum technical spaces indicated in figure 1.

To facilitate installation, the water heater is equipped with a template that allows the connections to the pipes to be prepared in advance with the possibility of connecting the water heater to completed building works.



A - 200 mm
B - 300 mm
X - 60 mm
Y - 60 mm
H - 1000 mm

fig. 1

For positioning, proceed as follows (see fig. 2):

1. Using a spirit level, mark a line (min. Length 25 cm) on the wall chosen for installation.

2. position the upper part of the template along the line drawn with the level respecting the distances from the water connections; then mark the two points to insert the two dowel screws or the wall clamps, then mark the points for the flue connections;

3. remove the template and proceed with the holes in the wall;

4. hang the appliance on the wall plugs or bracket and make the connections.

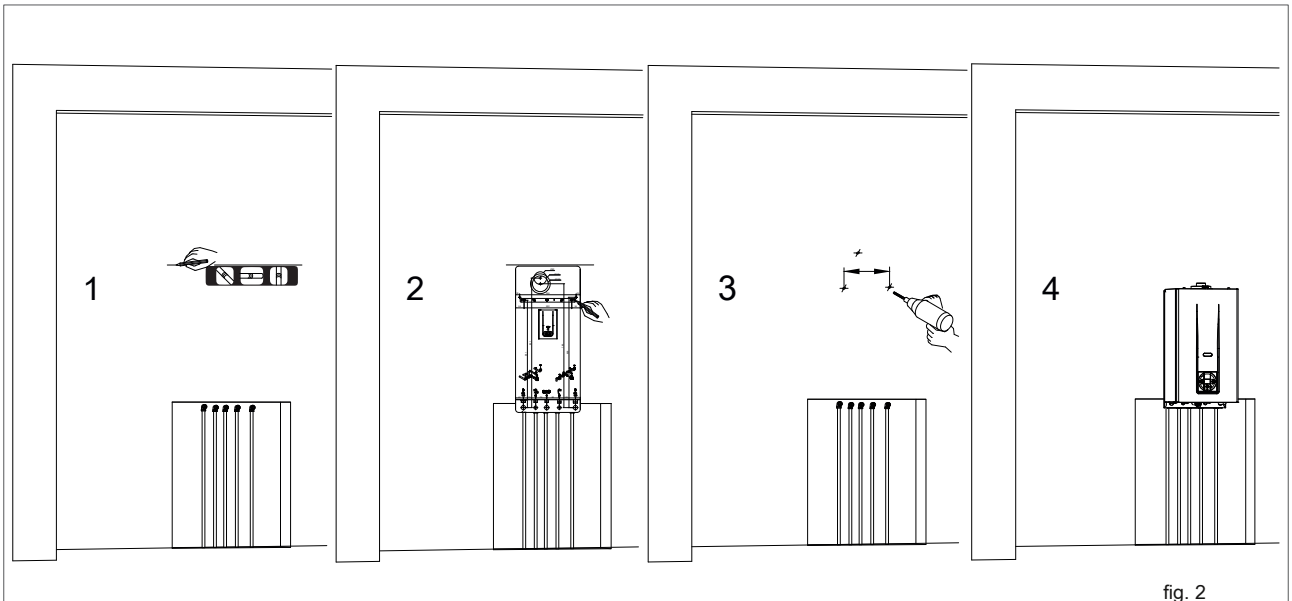


fig. 2

1.1.8. HYDRAULIC CONNECTION

DANGER

Make sure that the system piping water supply are not used as an earth connection for the electrical system. They are absolutely not suitable for this use.

WARNING

During connection operations of the appliance to the water connections avoid excessive twisting and in any case recovery operations from any off-axis that could damage the hydraulic fittings with consequent risk of leaks, malfunctioning or premature wear.

WARNING

To avoid vibrations and noise in the systems do not use pipes with reduced diameters or small radius elbows and significant reductions in the passage sections.

WARNING

Connect the safety drains of the water heater with a discharge funnel. The manufacturer is not responsible for any flooding due to the opening of the safety valve in the event of system overpressure.

WARNING

In order to prevent encrustations limestone and damage to the sanitary exchanger, the sanitary supply water must be treated in accordance with current legislation. According to the DPR 59/09 it is mandatory to treat water over 15 ° French for sanitary water, by means of chemical treatment (according to UNI 8065) of conditioning for power

< 100 kW or softening for powers> 100 kW. It is also necessary to install a safety filter to protect the system.

WARNING

The pressure of the incoming cold water must be between 0.5 and 6 bar. In the presence of higher pressures, it is essential to install a pressure reducer upstream of the water heater.

1.1.9. ANTIFREEZE PROTECTION

Thanks to the optional electric heater kit (code: 50-00106) it is possible to protect the water heater up to an external temperature of 0 ° C.

The electric heater kit is an anti-freeze system that comes into operation when the domestic hot water probe detects a temperature of 4 ° C, heating the exchanger pipes until reaching a temperature of 8 ° C.

ATTENTION

The system operates even if the display shows “OFF”, provided that the water heater is powered electrically.

Whenever there is a danger of freezing and an optional electric heater kit is not installed on the water heater, it is necessary to empty the sanitary system (see chapter 'EMPTYING THE SANITARY SYSTEM').

1.1.10. GAS CONNECTION

DANGER

To connect the gas connection of the appliance to the supply pipe, use a gasket of suitable size and material. The use of hemp, Teflon tape and the like is prohibited.

BEFORE CONNECTING THE GAS, CHECK THE FOLLOWING:

›The gas supply line must comply
the standards and regulations in force (UNI 7129);

›The piping must have an adequate section
according to the required capacity and its length;

›The piping must be equipped with all
safety and control devices prescribed by current regulations;

›Check the internal tightness and
external of the gas inlet system;

› check through the data plate of the appliance (located on the inside of the front casing) that the appliance is set up for operation with the type of gas available in the network. If they differ, it is necessary to intervene on the appliance to adapt to another type of gas (see chapter GAS TRANSFORMATION);

›Check that the supply pressure
of the gas is between the values shown on the data plate.

1.1.11. ELECTRICAL CONNECTION

DANGER

The electrical safety of the appliance is reached only when it is correctly connected to an effective grounding system, performed as required by current safety standards (CEI 64-8 and 64-9 Electrical Part). This fundamental safety requirement must be checked. If in doubt, request an accurate check of the electrical system by professionally qualified personnel, since the manufacturer is not responsible for any damage caused by the lack of earthing of the system.

›Check that the electrical system is adequate
to the maximum power absorbed by the appliance
indicated on the data plate.

›Make sure that the section of the system cables
is suitable for the maximum power absorbed by the appliance
and in any case not less than 1 mm^2.

›The appliance works with alternating current a
230 V and 50 Hz.

WARNING

Make sure the phase connection and neutral respect the wiring diagram (see chapter WIRING DIAGRAM).

WARNING

For the power supply general the appliance from the mains, the use of adapters, multiple sockets and / or extensions is not allowed.

1 Gas_electric_MIAB connection

1.1.12. ELECTRICAL CONNECTIONS OPTIONAL

EXCLUSION OF THE SANITARY THROUGH CONTACT 'CS'

In the presence of a connection (for example a boiler clock, a temperature thermostat or a solar control unit) on the contacts of the DHW consensus 'CS' (see chapter 'WIRING DIAGRAM'), it is possible to enable / disable the request to switch on the burner in sanitary.

Example 1: with the contact open of the DHW consent 'CS', upon request for domestic hot water, the flow switch is activated and the water heater switches on.

Example 2: with the contact closed of the DHW consent 'CS', when the request for domestic hot water is requested, the flow switch is activated but the water heater does not switch on.

1.1.13. SMOKE FITTINGS

WARNING

In order to ensure the perfect operation and efficiency of the appliance is it is essential to make the flue connection of the water heater to the flue using the specific flue accessories for water heaters traditional. It is recommended to fit the exhaust systems Radiant approved.

WARNING

Components cannot be used traditional flue systems for the exhaust ducts of condensing appliances, or vice versa.

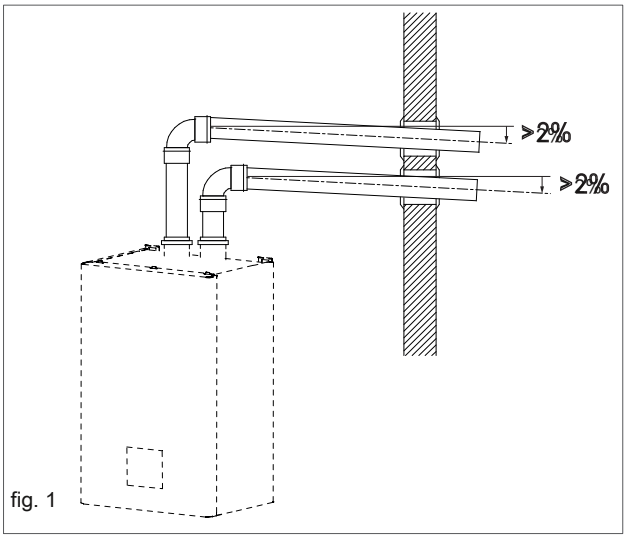


fig. 1

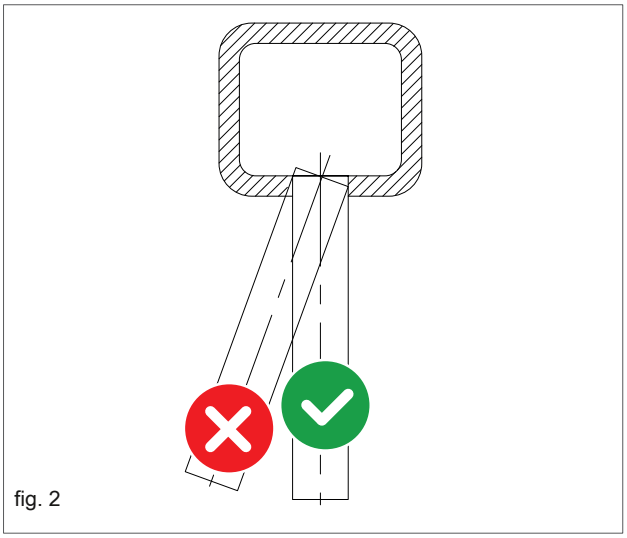


fig. 2

›For all horizontal sections of the exhaust ducts and air intake, it is advisable to provide an uphill slope (towards the water heater) of at least 2% (see fig.1) in order to avoid the entry of rainwater, dust or foreign objects into the duct.

›To carry out the flue gas discharge to one flue flue carefully follow the indications of the technical standards in force (for example UNI 7129-3: 2008, 7131/99, UNI 11071 and DPR 412/03 and subsequent amendments).

›The intake and exhaust systems, in relation the individual installations must be protected with accessories that prevent the penetration of foreign bodies and atmospheric agents.

›Do not protrude with the drain hose inside flue, but stop before it reaches the internal surface of the latter.

›The discharge duct must be perpendicular with the opposite internal wall of the chimney or flue (fig. 2).

1.1.14. TYPES OF INSTALLATION (ACCORDING TO UNI 10642)

For this type of water heater the following flue gas discharge configurations are available: B22, C12 and C32 (see Fig. 1).

›B22- Suction into the environment and discharge on the outside.

›C12- Concentric wall drain. The pipes they can also be split, but the exits must be concentric or close enough to be subjected to similar wind conditions (within 50 cm).

›C32- Concentric roof drain.

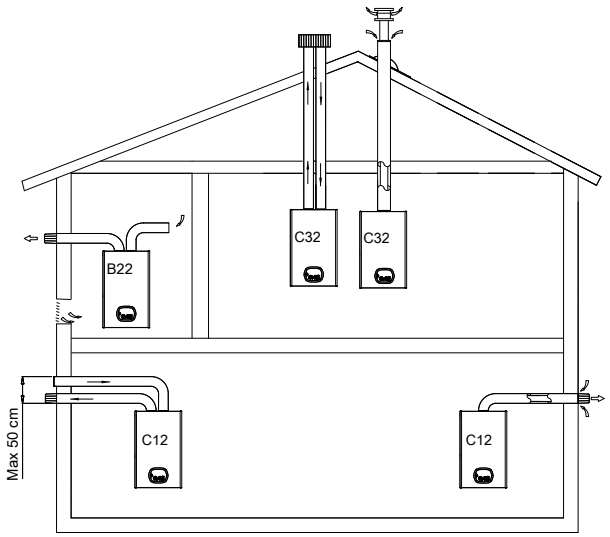


fig. 1

DISCHARGE OF COMBUSTION PRODUCTS FOR TYPE B APPLIANCES (ACCORDING TO UNI 7129)

The gas appliances, equipped with a connection for the flue gas discharge pipe, must have a direct connection to the chimneys or flues of certain efficiency: only in the absence of these is it allowed that they discharge the combustion products directly outside.

The connection to the chimney and / or flues must comply with the following requirements:

· Be sealed and made of materials suitable to withstand normal stress over time

mechanical, to the heat, the action of combustion products and their possible condensation;

· have no more than three changes in direction, including the inlet fitting to the chimney and / or flue, made with internal angles greater than 90 °. Direction changes must be made only by using curved elements;

· Have the axis of the terminal entry section perpendicular to the opposite internal wall of the chimney or flue;

· Have, along its entire length, a section no less than that of the appliance drain hose connection;

have no interception devices (shutters).

· For direct discharge to the outside there must be no more than two changes of direction.

VENTILATION OF ROOMS FOR TYPE B APPLIANCES (ACCORDING TO UNI 7129)

It is essential that in the rooms where the gas appliances are installed, at least as much air can flow as is required by the regular

gas combustion and room ventilation. The natural inflow of air must take place directly through:

· Permanent openings made on the walls of the room to be ventilated that give outwards;

· Ventilation ducts, single or collective, branched.

The openings on the external walls of the room to be ventilated must meet the following requirements:

· Have a total net free section of at least 6 cm when passing ^{2} for each kW of installed heat input with a minimum of 100 cm $^{2;}$

· Be made in such a way that the opening openings, both inside and outside the wall, cannot be obstructed;

Be protected for example with grids, metal meshes, etc. so as not to reduce the useful section indicated above;

· be located at a height close to the floor level and such as not to disturb the correct functioning of the combustion product discharge devices; where this position is not possible, the section of the ventilation openings must be increased by at least 50%.

1.1.15. TYPES OF SMOKE EXHAUST

KIT A - Ø60 / 100 HORIZONTAL COAXIAL SYSTEM, 360 ° ADJUSTABLE.

Allows the exhaust of fumes and the introduction of air from the external wall.

It is only suitable for traditional boilers.

It allows the combustion gases to be discharged and the air to be drawn in for combustion by means of two coaxial ducts, the external one for air intake and the internal one for fumes discharge.

WARNING! A fixed diaphragm Ø 40 mm is already pre-applied at the factory in the flue gas flange '1' in fig. See the table in the next paragraph for the type of fixed diaphragm to be installed, among those supplied with the boiler (Ø 40-42-44 mm), based on the maximum discharge length adopted.

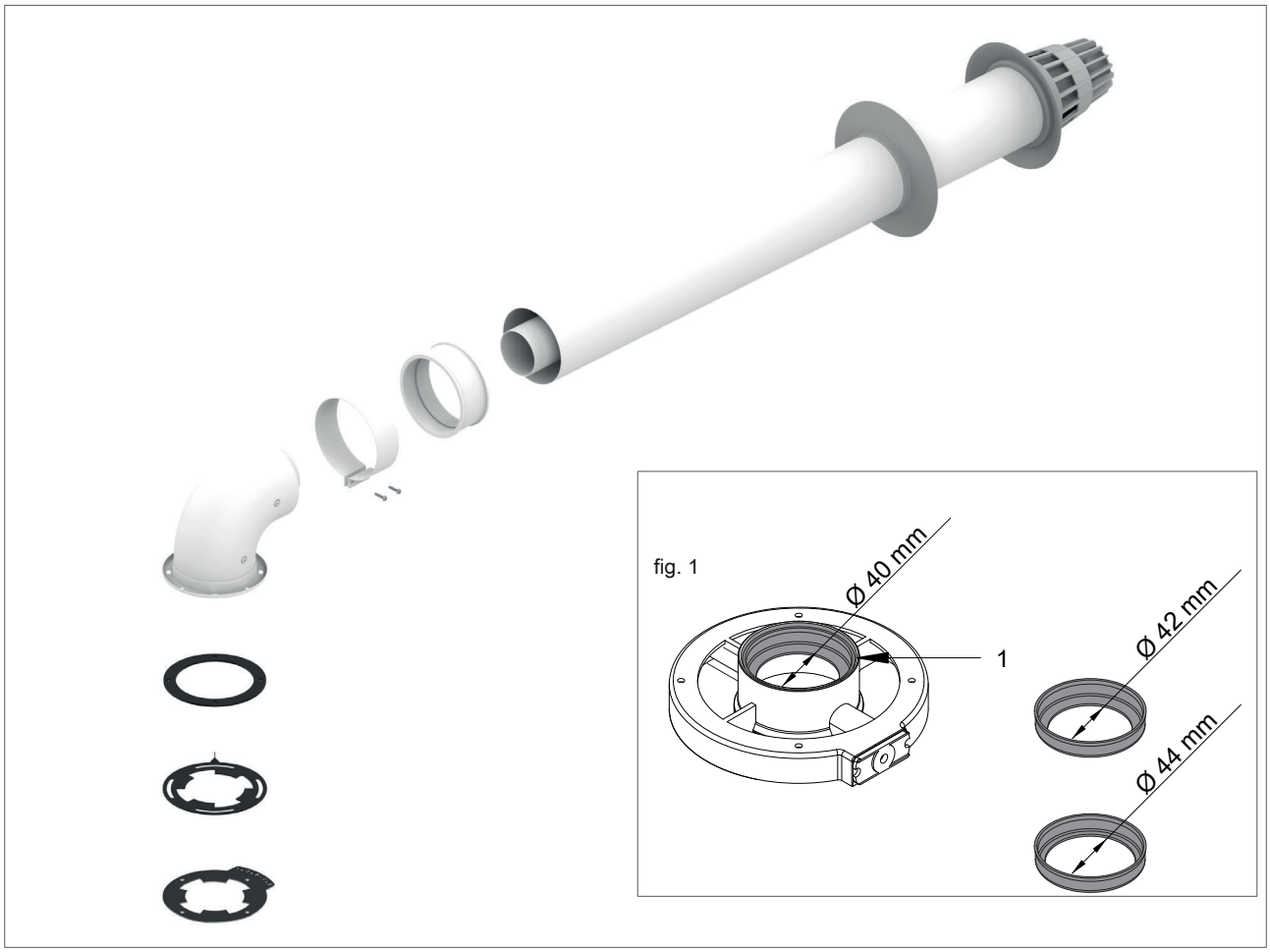
DO NOT INSTALL THE ADJUSTABLE DIAPHRAGM FOR THE COAXIAL SYSTEM.

SEE THE MAXIMUM DRAIN LENGTH IN THE TABLE OF THE “TECHNICAL DATA” CHAPTER.

The maximum discharge length (reference linear development) corresponds to the sum of the linear piping to the equivalent of each bend in addition to the first.

The further insertion of a curve is equivalent to the insertion of a linear length of pipe according to the following table:

coaxial bend Ø60 / 100 at 90 ° = 1 m
coaxial bend Ø60 / 100 at 45 ° = 0.6 m



ADJUSTING THE DIAPHRAGMS FOR THE Ø60 / 100 COAXIAL SYSTEM

Max discharge length - Ø60 / 100	m	4
from 0.5 to 1 m - Ø60 / 100	pos. df	FIXED DIAPHRAGM Ø 42 mm in flue gas exhaust - No adjustable diaphragm
from 1 to 2 m - Ø60 / 100	pos. df	FIXED DIAPHRAGM Ø 44 mm in flue gas exhaust - No adjustable diaphragm
from 2 to 3 m - Ø60 / 100 from 3	pos. df	No diaphragm
to 4 m - Ø60 / 100	pos. df	No diaphragm

KIT B - HORIZONTAL DOUBLE SYSTEM Ø80 / 80, 360 ° ADJUSTABLE.

The two-pipe system allows the fumes to be discharged into the flue and the air to be introduced from the outside.

It is only suitable for traditional boilers.

It allows the combustion gases to be discharged and the air to be sucked in for combustion by means of two separate ducts.

SEE THE MAXIMUM EXHAUST AND SUCTION LENGTH IN THE TABLE OF THE “TECHNICAL DATA” CHAPTER.

The maximum discharge and suction length (reference linear development) correspond to the sum of the linear piping to the equivalent of each bend in addition to the first.

The further insertion of a curve or terminal is equivalent to the insertion of a linear length of pipe according to the following table:

bend Ø80 at 90 ° = 1.5 m bend

Ø80 at 45 ° = 1.2 m

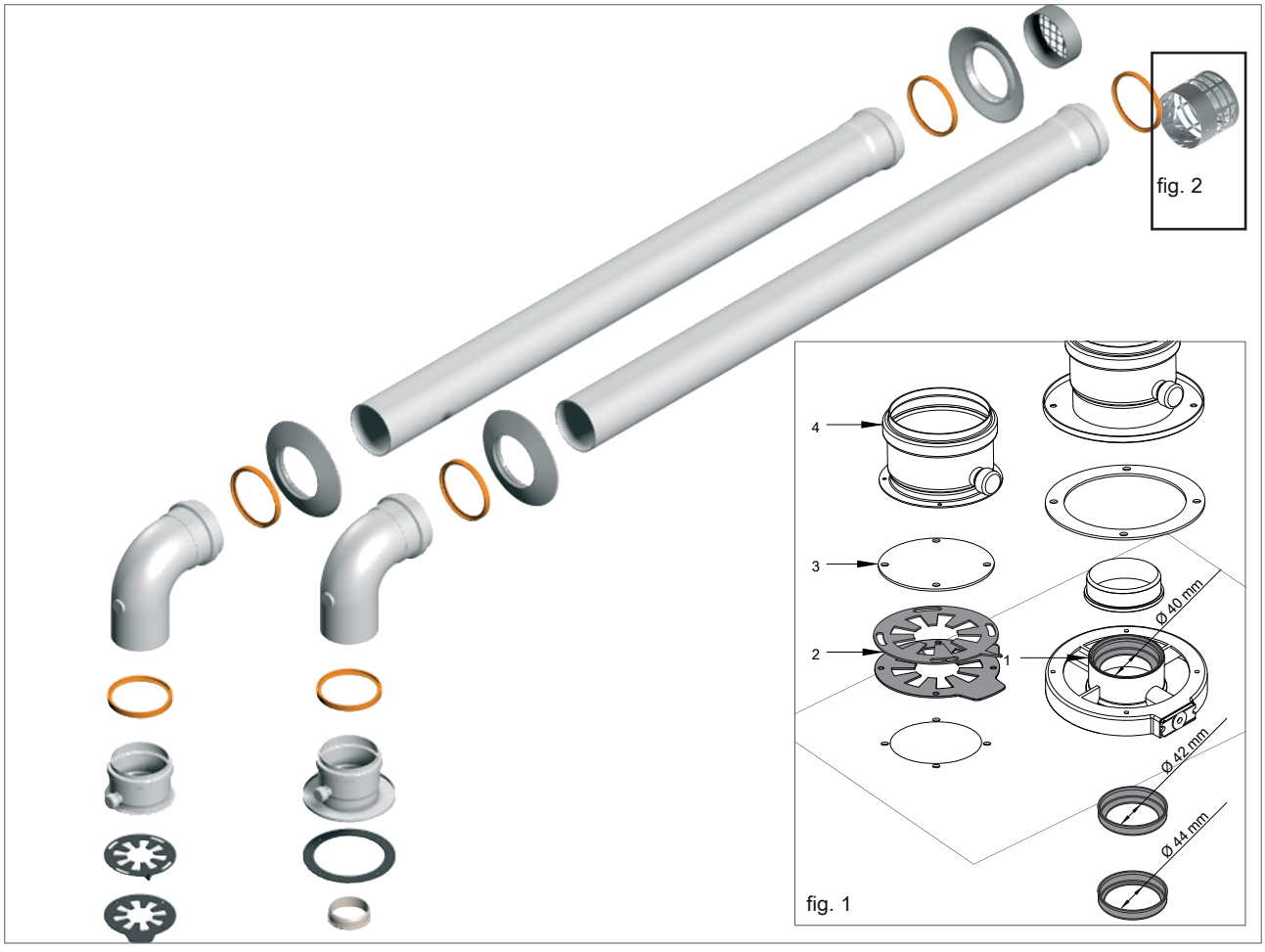
TERMINAL COD. 80009LA (fig.2) Ø80 = 3 m

WARNING! IN CASE OF INSTALLATION WITH WALL EXHAUST IT IS COMPULSORY TO INSERT THE TERMINAL COD. 80009LA (fig. 2) IN THE SMOKE EXHAUST DUCT.

WARNING! A fixed diaphragm Ø 40 mm is already pre-applied at the factory in the flue gas flange '1' in fig. See the table in the next paragraph for the type of fixed diaphragm to be installed, among those supplied with the boiler (Ø 40-42-44 mm), based on the maximum exhaust length adopted.

For the split system the adjustable diaphragms ('2'-fig. 1) are already mounted on the suction hole

air. Remove the cover plate of the air intake hole ('3' - fig. 1), insert the flanged connection ('4' - fig. 1) and tighten the fixing screws without tightening them completely. Proceed to adjust the diaphragms described in the next paragraph.



FOR THE SPLIT SYSTEM

To adjust the diaphragms on the split system, proceed as follows (see fig. 2):

›According to the maximum discharge length adopted see in the table below the corresponding adjustment of the diaphragms.

›Move the reference pointer (A-fig. 2) scrolling on the graduated index (B-fig.2) according to the adjustment to be made;

›Fully tighten the fixing screws of the diaphragms.

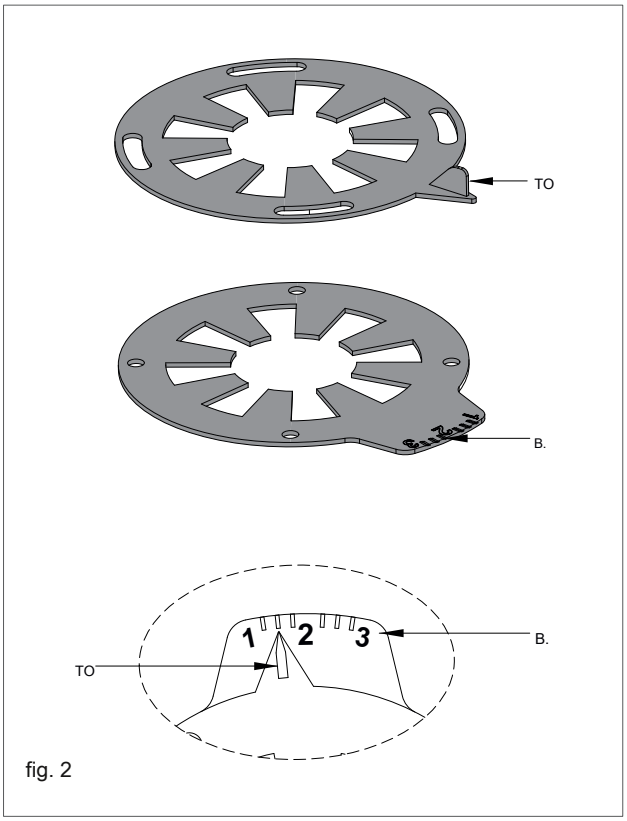


fig. 2

ADJUSTMENT OF THE DIAPHRAGMS FOR THE SPLIT SYSTEM Ø80 / 80

Max discharge length - Ø80 / 80	m	26
up to 0.5 + 0.5 m - Ø80 / 80	pos. df	FIXED DIAPHRAGM Ø 40 mm in the flue gas exhaust + Diaphragm Adjustable to 2 in the air intake
from 0.5 + 0.5 to 4 + 4 m - Ø80 / 80 pos. df		FIXED DIAPHRAGM Ø 40 mm in the flue gas exhaust + Adjustable diaphragm to 3 in the air intake
from 4 + 4 to 7 + 7 m - Ø80 / 80	pos. df	FIXED DIAPHRAGM Ø 42 mm in the flue gas exhaust + Adjustable diaphragm to 2.2 in the air intake
from 7 + 7 to 10 + 10 m - Ø80 / 80	pos. df	FIXED DIAPHRAGM Ø 42 mm in the flue gas exhaust + Adjustable diaphragm to 3 in the air intake
from 10 + 10 to 12 + 12 m - Ø80 / 80 pos. df		FIXED DIAPHRAGM Ø 44 mm in the flue gas exhaust + Adjustable diaphragm to 2.2 in the air intake
from 12 + 12 to 13 + 13 m - Ø80 / 80 pos. df		FIXED DIAPHRAGM Ø 44 mm in the flue gas exhaust + Adjustable diaphragm to 3 in the air intake

12 . ASSISTANCE CENTER SECTION

All the operations described below for initial start-up of the water heater,

maintenance and replacement must be carried out exclusively by

professionally qualified personnel pursuant to art. 3 of

DM n ° 37 of 22.01.2008 and authorized by RADIANT BRUCIATORI spa.

2.1. FIRST START-UP

2.1.1. PRELIMINARY OPERATIONS FOR FIRST START-UP

The operations of first switching on the appliance consist in the verification of the correct installation, adjustment and operation of the appliance. Proceed as follows:

›Check the correspondence of the gas used with the one for which the water heater is designed;

›Check that the gas flow rate and the relative pressures conform to those on the plate;

›Check the intervention of the safety device in case of lack of gas;

›Check that the power supply voltage of the appliance corresponds to that on the plate (230 V - 50 Hz) and that the electrical connection is correct;

›Make sure that the appliance has a good quality grounding;

›Check that the combustion air supply and the evacuation of fumes and condensate take place correctly in accordance with the provisions of current National and Local Regulations;

›Check that the smoke evacuation duct e its correct connection to the flue complies with the provisions of current National and Local Regulations;

›Check that there are no products introduced gases from combustion in the plant itself;

›Check that there are no flammable liquids or materials in the immediate vicinity of the appliance

›Open the gas cock serving the water heater and check that there are no gas leaks from the fittings upstream from the appliance (the burner gas

› in the event of a new installation of the gas supply network, the air present in the piping can cause the appliance to not start at the first attempt to start. It may be necessary to repeat several ignition attempts to purge the air contained in the pipeline.

2.1.2. START-UP OF THE WATER HEATER

Proceed with the commissioning of the water heater as follows:

›Power the water heater electrically.

›Open the gas tap.

›Switch on the water heater by pressing the button
'  '.

›The request for domestic hot water will start
ignition of the burner, operation is represented by the
appearance of the ' with intermittent signal on the display.

›In case of no flame the board repeats
once again the ignition operations after post-ventilation (20 seconds).

› It may be necessary to repeat the ignition operation several
times to eliminate any air in the gas pipe. Before repeating the
operation, wait about 5 seconds from the last attempt at
ignition and unlock the water heater from the error code "A01"
pressing the reset key 

2.1.3. CHECK AND CALIBRATION OF GAS PRESSURES

With this procedure it is possible to calibrate the minimum and maximum power values in a range of ± 12 units. To modify values beyond the range of ± 12 unit follow the instructions described in the chapter 'TOTAL CALIBRATION OF THE GAS VALVE'.

To check and calibrate the modulation values, proceed as follows:

›Remove the front cover of the water heater (see chapter 'ACCESS TO WATER HEATER');

›Insert a digital pressure gauge into the socket gas outlet pressure 'B' (fig. 1), after having completely unscrewed the screw inside.

(R) is , d

›If the flame does not ignite or is not detected, the flame symbol does not appear on the display and it is not possible to enter the parameter. You need to fix the problem and restart the procedure.

> Press the button ' 'until the display will display the parameter 'q02', which corresponds to maximum power value.

›Check that the gas pressure read on pressure gauge complies with the provisions of the chapter " THERMAL FLOW / GAS PRESSURE DIAGRAM ".

›To change the parameter value press the keys' ' is ' 'of the sanitary . For each change it is necessary to wait 10 seconds for a stable pressure. The change is saved automatically.

> Press the button ' (R)'to exit the parameter 'q02'.

›To go to the parameter 'q01', which corresponds to the minimum power value, Press the button ' '.

›Check that the gas pressure read on pressure gauge complies with the provisions of the chapter “THERMAL FLOW / GAS PRESSURE DIAGRAM”.

›To change the parameter value press the keys' ' is ' 'of the sanitary . For each change it is necessary to wait 10 seconds for a stable pressure. The change is saved automatically.

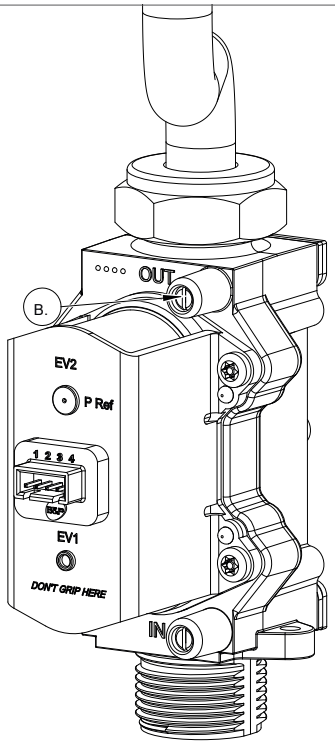


fig. 1

> Press the button ' (R)'to exit the mode to modify parameters 'q01' and 'q02', until you return to the chimney sweep function.

›To exit the function chimney sweep hold down the 'keys at the same time (R) is 'until the main screen.

›Remove the pressure gauge from the pressure point of the gas valve and tighten the screw;

2Check and calibrate the pressure of water heater_HDIMS13_firm.05

›Switch on the water heater and make sure it does not there is a gas leak.

2.1.4. TOTAL CALIBRATION OF THE GAS VALVE

In case of replacement of the gas valve or the electronic board, proceed with the total calibration of the gas valve as follows:

›Remove the front cover of the water heater (see chapter 'ACCESS TO WATER HEATER');

›Insert a digital pressure gauge into the socket gas outlet pressure 'B' (fig. 1), after having completely unscrewed the screw inside.

›Access parameter 'P20', following the procedure described in the chapter “ACCESS AND PROGRAMMING PARAMETERS”, and set the parameter value to '1'.

›Exit the parameters menu and activate the mode for automatic setting of modulation values by pressing simultaneously the keys' ⊕ 'of power is ' ', in the display will show “Au-to” (alternating).

›If the flame is lit, the display shows 'q02', which corresponds to the maximum power value.

›If the flame does not ignite or is not detected, the flame symbol does not appear on the display and it is not possible to enter the parameter. You need to fix the problem and restart the procedure.

›Check that the gas pressure read on pressure gauge complies with the provisions of the chapter “THERMAL FLOW / GAS PRESSURE DIAGRAM”.

›To change the parameter value press the keys' ⊕ ' is ' ⊖ 'of the sanitary . For each change it is necessary to wait 10 seconds for a stable pressure. Parameter 'q02' is stored automatically.

> Press the button 'Ⓡ' to exit the mode to modify the value of 'q02'.

›To go to the parameter 'q01', which corresponds at the minimum power value, press the 'key '.

›Check that the gas pressure read on pressure gauge complies with the provisions of the chapter " THERMAL FLOW / GAS PRESSURE DIAGRAM ".

›By pressing the ' ⊕ ' is ' ⊖ 'of the sanitary is It is possible to adjust the value of parameter 'q01'. For each change it is necessary to wait 10 seconds for a stable pressure. Parameter 'q01' is stored automatically.

> Press the button ' Ⓡ 'to exit the mode to change the value of 'q01'.

›Parameters 'q01' and 'q02' can be checked again pressing the 'key '. If it was necessary correct them, repeat the above procedure.

> Exit the setting mode automatic modulation values by pressing simultaneously the ⊕ " power buttons & '.

›Disconnect and restore power to the water heater, or alternatively access parameter 'P20', following the procedure described in the chapter “ACCESS AND PROGRAMMING PARAMETERS”, and set the parameter value to '0'.

›Close the gas tap, remove the pressure gauge from the gas valve pressure point and tighten the screw;

›Open the gas tap, turn it on water heater and make sure there is no gas leak.

2.1.5. VERIFICATION AND CALIBRATION OF THE CO2 VALUE

WARNING

The CO2 value verification operations must be done with closed casing.

To check and calibrate the CO value 2 at maximum and minimum power proceed as follows
way:

FOR MAXIMUM POWER

1. Activate the chimney sweep function by simultaneously pressing the 'keys (R) is ( ), a value will appear in the display. Press the 'button (+) 'of the sanitary to increase the parameter value until it reaches '100'.

2. Insert the probe of the flue gas analyzer in the appropriate flue outlet 'PF' (fig. 1), then check that the value of CO 2, of maximum power, complies with the provisions of chapter "Technical data", if it is not compliant, adjust the amount of inlet air through the diaphragms until the correct value is obtained I say 2.

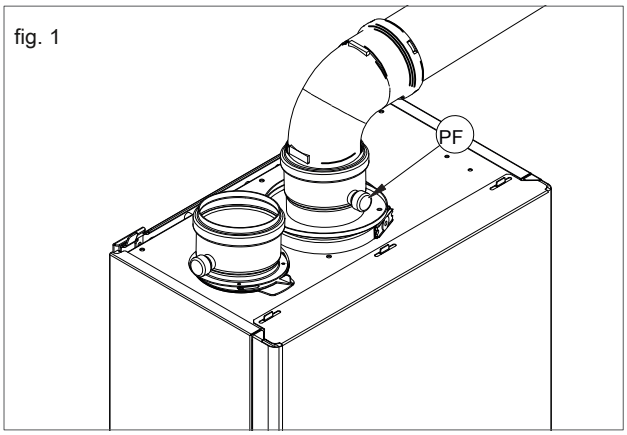
FOR THE MINIMUM POWER

3. To access the verification of the CO value 2 at minimum power, press the 'button (-) ' of the sanitary .

4. Verify that the value of CO 2, of the minimum power, complies with the provisions of chapter "Technical data", if it is not compliant, adjust the amount of inlet air through the diaphragms until the correct value is obtained I say 2.

5. Deactivate there function chimney sweep pressing the 'and keys simultaneously (R) ( ) 'until the display shows the main screen.

fig. 1

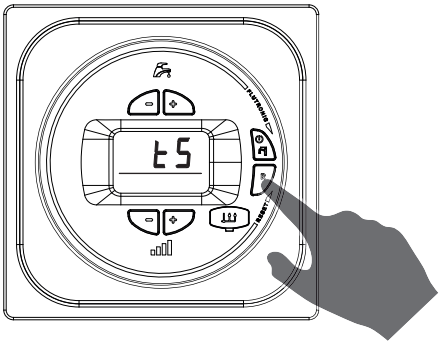


2Check the value of the C. i O2_water heater_HDIMS13_firm.05

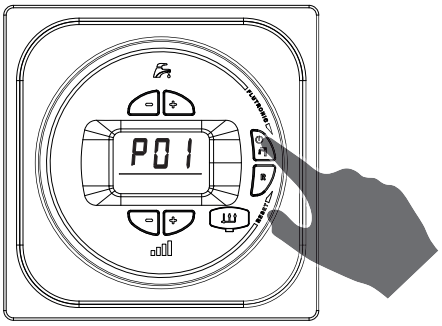
2.1.6. ACCESS AND PARAMETER PROGRAMMING

To access the parameters menu and adjust the parameter value, follow the procedure described below:

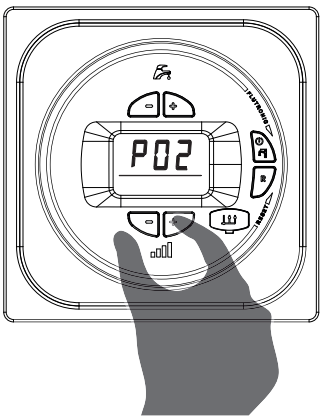
1. When the operating mode is different from OFF, keep the 'key pressed for 10 seconds.
'and wait for appears on the display
the writing “tS” flashing, and release the key. In this way you have entered the Installer menu.



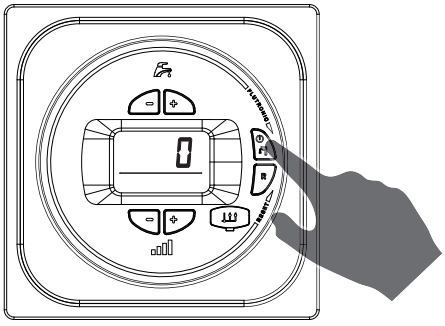
2. Press the ' 'to access the menu parameters. The display will show 'P01'.



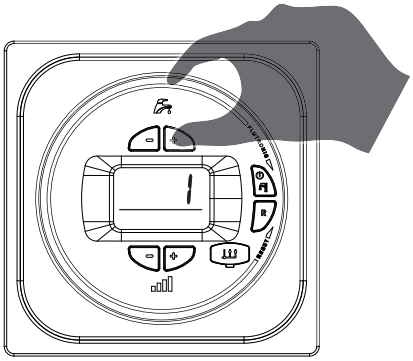
3. Using the ' ' is ' ' of power
select the parameter to modify.



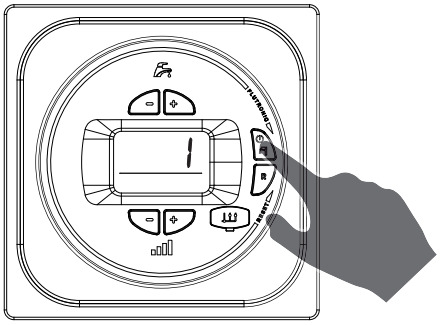
4. Press the 'parameter value' key '  ' to display the key.



5. Use the 'keys  ' is '  ' of the sanitary  for change the parameter value.



6. to activate the adjustment made, press the 'key  ', the value of the parameter will flash twice.



7. To exit the parameter, press the 'key once only. '.

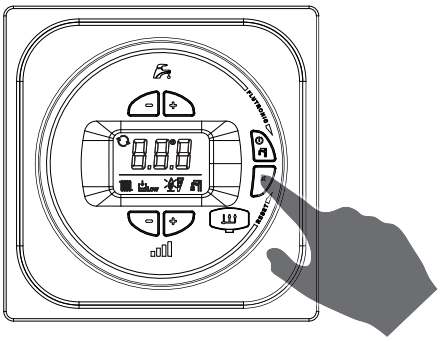
Ⓡ

8. To exit the parameters menu, press the 'key once only

Ⓡ', the message will appear "TS".

9. To exit the Installer menu, hold down the 'key for 10 seconds. '.

Ⓡ



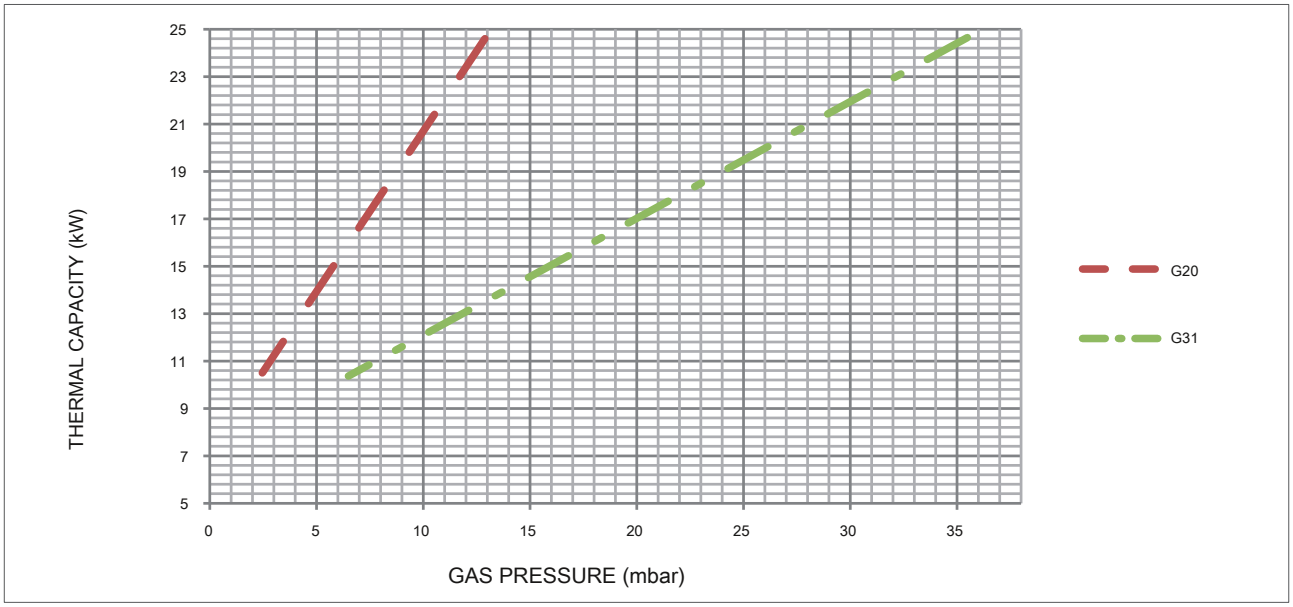
2.1.7. HDIMS13 PARAMETERS TABLE

PARAMETER	DESCRIPTION	RANGE	FUNCTION
P01	***OPERATION TYPE SELECTION***	2 - 5	2 = INSTANT MONOTHERMAL
			3 = HEATING ONLY
			4 = ACCUMULATION
			5 = WATER HEATER
P02	***GAS TYPE SELECTION***	0 - 1	0 = METHANE
	ATTENTION:		
	BEFORE CHANGING THE VALUE OF THE PARAMETER, READ THE INSTRUCTIONS DESCRIBED IN THE CHAPTER 'TRANSFORMATION OF THE GAS TYPE'.		1 = LPG
P03	NA		
P04	NA		
P05	***ANTI-SHOCK SELECTION***	0 - 20	0 = DISABLED
	BY ENABLING THIS FUNCTION, THE HEALTHCARE CONTACT IS DELAYED FOR A TIME EQUAL TO THE SET VALUE.		VALUE EXPRESSED IN SECONDS (PRESET AT 2 SECONDS)
P06	NA		
P07	NA		
P08	NA		
P09	***MINIMUM POWER ADJUSTMENT IN SANITARY SYSTEMS***	0 - 100	VALUE EXPRESSED AS A PERCENTAGE (PRESET AT 0)
	USING THIS PARAMETER IT IS POSSIBLE TO SET THE MINIMUM GAS PRESSURE OF THE BURNER DURING THE SANITARY PHASE.		
	[SEE CHAPTER 'THERMAL FLOW / GAS PRESSURE DIAGRAM'].		
P10	NA		
P11	NA		

PARAMETER	DESCRIPTION	RANGE	FUNCTION
P12	***MAXIMUM POWER ADJUSTMENT IN SANITARY SYSTEMS*** USING THIS PARAMETER IT IS POSSIBLE TO SET THE MAXIMUM GAS PRESSURE OF THE BURNER DURING THE SANITARY PHASE. [SEE CHAPTER 'THERMAL FLOW / GAS PRESSURE DIAGRAM'].	0 - 100	VALUE EXPRESSED IN PERCENTAGE (PRESET AT 100)
P13	NA		
P14	NA		
P15	NA		
P16	NA		
P17	***MAXIMUM SANITARY SETPOINT*** USING THIS PARAMETER IT IS POSSIBLE TO SET THE MAXIMUM TEMPERATURE OF THE SANITARY ADJUSTABLE BY THE USER.	45 - 60	VALUE EXPRESSED IN ° C
P18	NA		
P19	NA		
P20	***ENABLING PROCEDURE FOR TOTAL CALIBRATION OF THE GAS VALVE*** USING THIS PARAMETER IT IS POSSIBLE TO ENABLE THERE PROCEDURE DESCRIBED TO THE CHAPTER 'TOTAL CALIBRATION OF THE GAS VALVE', IN CASE OF REPLACING THE GAS VALVE OR THE ELECTRONIC BOARD.	0 - 1	0 = DISABLED (DEFAULT AS STANDARD) 1 = ENABLED
P21	NA		
P22	***ENABLING PARAMETERS P23 - P24 - P25***	0 - 1	0 = DISABLED (DEFAULT AS STANDARD) 1 = ENABLED
P23	***MAXIMUM FAN SPEED***	140 - 180	DO NOT MODIFY (PRESET AS SERIES A 170)
P24	***MINIMUM SPEED OF THE FAN***	100 - 140	DO NOT MODIFY (PRESET AS SERIES A 100 FOR METHANE)

PARAMETER	DESCRIPTION	RANGE	FUNCTION
P25	***STARTING STEP ADJUSTMENT***	110 - 140	DO NOT MODIFY (PRESET AS SERIES A 130 FOR METHANE)

2.1.8. THERMAL FLOW / GAS PRESSURE DIAGRAM



GAS TYPE		MINIMUM GAS PRESSURE	MAXIMUM GAS PRESSURE
G20	mbar	2.5	13
G31	mbar	6.5	35.5

2Diagrammapathermal-Gas pressure_SF14EVOLUTIONNOx

2.2. MAINTENANCE

2.2.9. GENERAL WARNINGS FOR MAINTENANCE

DANGER

Before each cleaning operation o replacement of components, ALWAYS cut off the ELECTRICITY, WATER and GAS supply of the water heater.

WARNING

To ensure a longer life and the correct operation of the appliance, use only original spare parts for maintenance work.

ATTENTION

To ensure efficiency and safety control and maintenance operations must be carried out annually. These operations, described below, are essential for the validity of the RADIANT conventional guarantee and must be carried out by professionally qualified personnel pursuant to art. 3 of Ministerial Decree No. 37 of 22.01.2008 and authorized by RADIANT.

Below is the list of inspection and maintenance operations:

›Check the tightness of the water part with possible replacements, if necessary of the gaskets;

›Check that the electrical connection is compliant with the instructions in the water heater instruction manual;

›Check the electrical connections inside the control panel;

›Disassemble and clean the burner from oxidation;

›Check that the chamber seal watertight is intact and correctly positioned;

›Check the exchanger, clean it if necessary;

› check the status and operation of the ignition and gas safety systems. If necessary, disassemble and clean from encrustations the electrode ignition and flame detection, taking care to correctly restore the distances from the burner (see chapter 'POSITIONING THE ELECTRODE');

›Check the tightness of the gas part, with possible replacement if necessary, of the gaskets;

›Visually check the flame and the state of the combustion chamber;

›If necessary, check that the combustion it is correctly adjusted and if necessary proceed as described in the section “CHECKING AND SETTING THE GAS PRESSURES”;

›Check the integrity, for safety purposes and the good functioning of the smoke evacuation system;

›Check that they are present, correctly dimensioned and functioning, the outlets for permanent aeration / ventilation according to the devices installed. Respect the provisions of national and local legislation;

›Check the water flow and temperature sanitary.

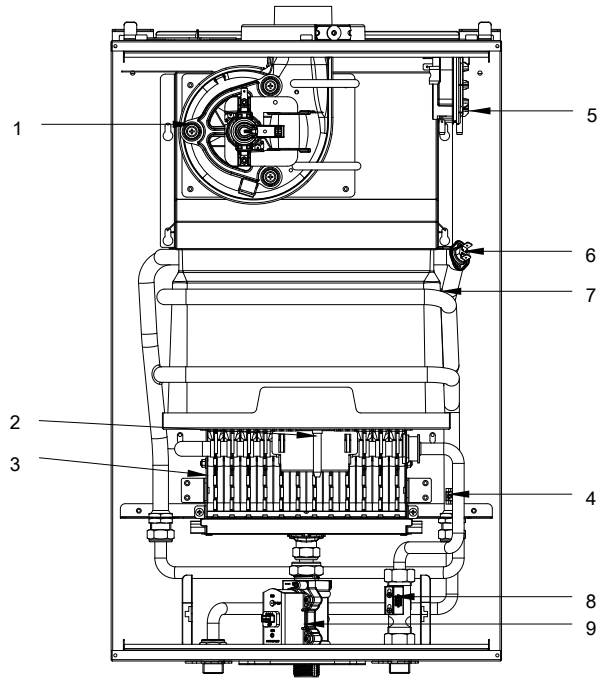
NB In addition to the annual maintenance, it is necessary to check the heating system and energy efficiency, with frequency and methods that comply with the provisions of current legislation.

2.2.10. TECHNICAL DATA

Template		SF 14 EVOLUTION NOx
Certification CE	n °	0476CU3685
Gas category	cat	II2E 3P
Type of discharge	guy	B22-C12-C32
Domestic maximum nominal heat output Domestic minimum	kW	24.5
nominal heat output Flue gas temperature at nominal heat	kW	10.5
input Flue gas temperature at minimum heat input CO2 at	° C	170.9
nominal heat input - G20 CO2 at minimum heat input - G20	° C	95.5
CO2 at nominal heat input - G31 CO2 at minimum heat input	%	6 - 6.7
- G31 Smoke mass at nominal heat input Smoke mass at	%	6 - 6.7
minimum heat input NOx class	%	7.2 - 7.9
	%	6.7 - 7.5
	g / s	14.45
	g / s	7.34
	class	-
Weighted NOx (0% O2) mg / KWh	mg / KWh	50
Sanitary circuit		
Sanitary adjustable temperature	° C	35-60
Max pressure DHW circuit Min. sanitary	Cafe	6
circuit	Cafe	0.5
Specific flow rate in continuous service - Δt 30 ° C	liters / min	10.6
Dimensional characteristics		
Width	mm	410
Depth	mm	245
Height	mm	642
Gross weight	Kg	22
Water connections		
Cold water	OR	1/2 "
Hot water	OR	1/2 "
Gas	OR	3/4 "
Smoke fittings		
Maximum pressure available for electric fan Minimum pressure	Pa	39
available for electric fan Max exhaust length - Ø60 / 100	Pa	2
	m	4
from 0.5 to 1 m - Ø60 / 100	pos. df	FIXED DIAPHRAGM Ø 42 mm in the smoke outlet - No diaphragm adjustable
from 1 to 2 m - Ø60 / 100	pos. df	FIXED DIAPHRAGM Ø 44 mm in the smoke outlet - No diaphragm adjustable
from 2 to 3 m - Ø60 / 100 from 3	pos. df	No diaphragm
to 4 m - Ø60 / 100	pos. df	No diaphragm
Max discharge length - Ø80 / 80	m	26

up to 0.5 + 0.5 m - Ø80 / 80	pos. df	FIXED DIAPHRAGM Ø 40 mm in smoke outlet + Adjustable Diaphragm a 2 in the air intake
from 0.5 + 0.5 to 4 + 4 m - Ø80 / 80	pos. df	FIXED DIAPHRAGM Ø 40 mm in smoke outlet + Adjustable Diaphragm a 3 in the air intake
from 4 + 4 to 7 + 7 m - Ø80 / 80	pos. df	FIXED DIAPHRAGM Ø 42 mm in flue gas exhaust + Adjustable Diaphragm a 2.2 in the air intake
from 7 + 7 to 10 + 10 m - Ø80 / 80	pos. df	FIXED DIAPHRAGM Ø 42 mm in flue gas exhaust + Adjustable Diaphragm a 3 in the air intake
from 10 + 10 to 12 + 12 m - Ø80 / 80	pos. df	FIXED DIAPHRAGM Ø 44 mm in flue gas exhaust + Adjustable Diaphragm a 2.2 in the air intake
from 12 + 12 to 13 + 13 m - Ø80 / 80	pos. df	FIXED DIAPHRAGM Ø 44 mm in flue gas exhaust + Adjustable Diaphragm a 3 in the air intake
Electrical characteristics		
Voltage-frequency	V / Hz	230 - 50
Max Absorbed Power	W	36
Degree of electrical insulation	IP	X4D
Gas supply		
Number of nozzles	n °	24
Nominal supply pressure - G20 Max burner setting	mbar	20
pressure - G20 Min burner setting pressure - G20	mbar	13
Nozzle diameter - G20	mbar	2.5
	OR	0.85
Fuel consumption - G20	m^3/h	2.59
Nominal supply pressure - G31 Minimum supply	mbar	37
pressure - G31 Maximum supply pressure - G31 Max	mbar	25
burner setting pressure - G31 Min burner setting	mbar	45
pressure - G31 Nozzle diameter - G31	mbar	35.5
	mbar	6.5
	OR	0.51
Fuel consumption - G31	Kg / h	1.90

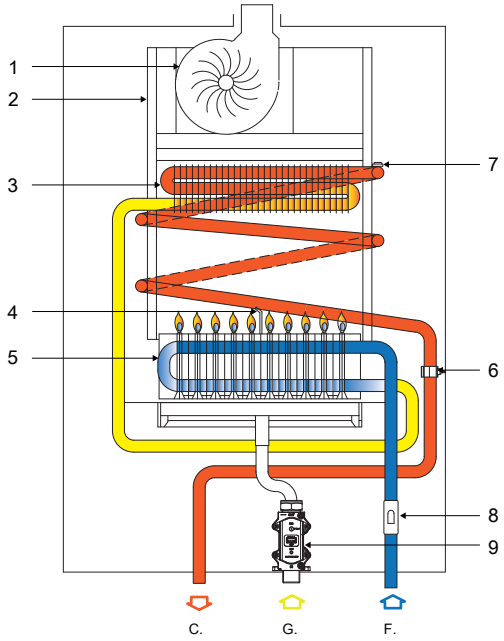
2.2.11. TECHNICAL OVERALL



LEGEND

1. ELECTRIC FAN
2. IGNITION / DETECTION ELECTRODE
3. LOW NOX BURNER
4. SANITARY PROBE
5. AIR RESSOSTAT
6. SAFETY THERMOSTAT
7. HEAT EXCHANGER
8. FLOW SWITCH
9. GAS VALVE

2.2.12. HYDRAULIC DIAGRAM



LEGEND

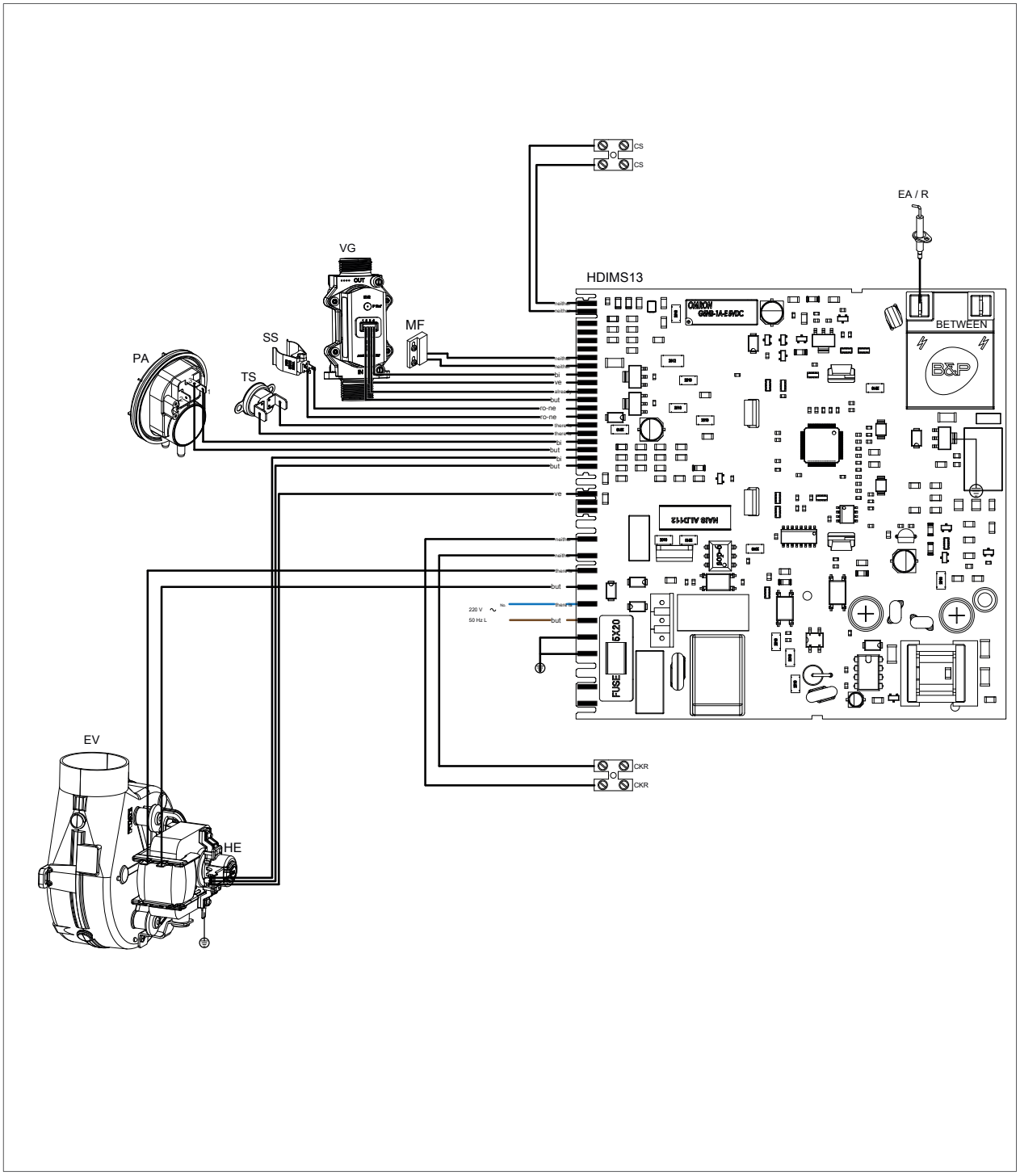
C. HOT WATER OUTLET

G. GAS INLET

F. COLD WATER INLET

1. ELECTRIC FAN
2. FUME HOOD
3. HEAT EXCHANGER
4. LOW NOX BURNER IGNITION / DETECTION
5. ELECTRODE
6. SANITARY PROBE
7. SAFETY THERMOSTAT
8. FLOW SWITCH
9. GAS VALVE

2.2.13. ELECTRICAL DIAGRAM



EA / R: IGNITION / DETECTION ELECTRODE BETWEEN: ACC. TRANSFORMER
MF: MICROFLOW SWITCH
CS: SANITARY CONSENT CONTACT VG: GAS VALVE
SS: SANITARY PROBE
TS: SAFETY THERMOSTAT
EV: ELECTRIC FAN
HE: HALL EFFECT SENSOR PA: AIR PRESSURE SWITCH
NE: BLACK
BI: WHITE
RO: RED
CE: CELESTE
BUT: BROWN
VE: GREEN
GI: YELLOW
AR: ORANGE
L: LINE
N: NEUTRAL
CKR: CONTACT FOR ANTI-FREEZE THROUGH - KIT ELECTRICAL RESISTANCE CH EOPTIONAL (COD .: 50-00106)

2.2.14. ACCESS TO WATER HEATER

For most of the inspection and maintenance operations it is necessary to remove one or more casing panels.

The side panels can only be removed after removing the front panel.

To intervene on the front side of the water heater, proceed as follows:

›Remove the fixing screws (1 - fig.1) placed in the bottom edge of the front panel;

›Grasp the front panel in the part and, pulling it towards you, extract it with an upward movement (see fig. 1).

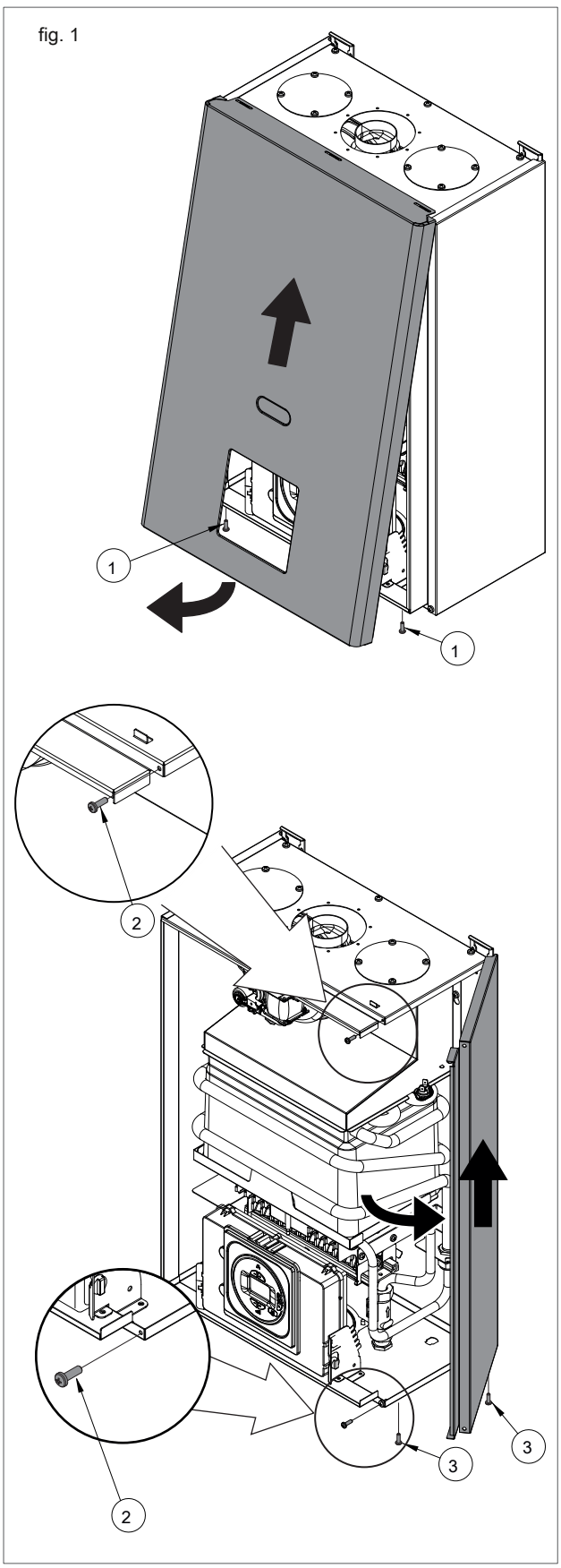
To intervene on the side panels of the water heater proceed as follows:

›Remove the fixing screws (2 - fig.1) placed in the front edge of the side panel;

›Remove the fixing screws (3 - fig.1) placed in the bottom edge of the side panel;

›Grasp the base of the panel and, after having it moved laterally, remove it by lifting it (see fig. 1).

fig. 1



2.2.15. ACCESS TO THE ELECTRONIC CARD

To intervene on the electrical connections of the control panel, proceed as follows:

DANGER

Remove voltage from the switch general.

›Grasp the brackets at the same time
to support the control panel (fig. 1) by widening them and turning the panel over, rotating it downwards;

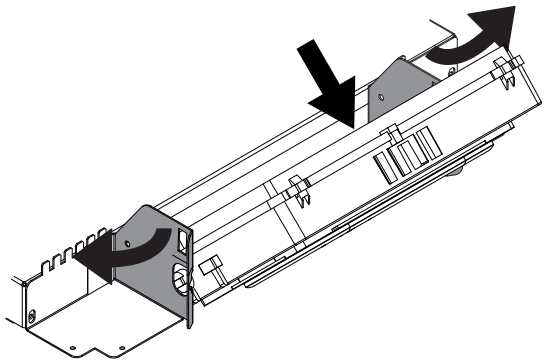
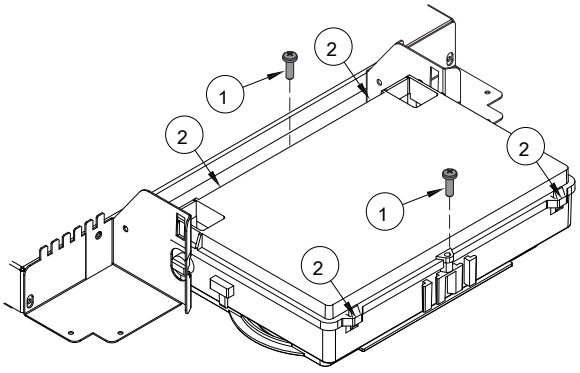


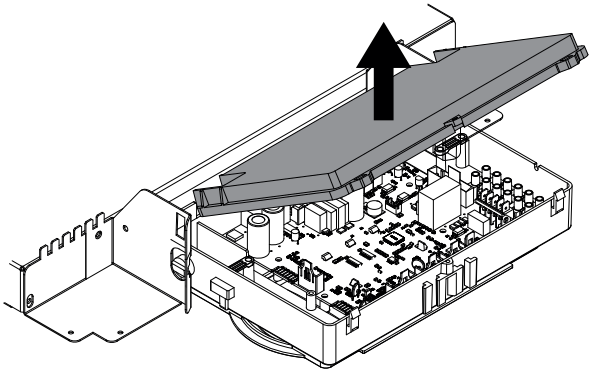
fig. 1

›Unscrew the two fixing screws '1' - fig. 1;

›Release the four hooks '2' - fig. 1;



›Remove the casing upwards.



2.2.16. EMPTYING OF THE SANITARY SYSTEM

Whenever there is a danger of freezing, the sanitary system must be emptied as follows:

›Close the general supply cock
from the water supply;

›Open all the hot and cold water taps;

›At the end of the operation, close the tap
drain and all previously opened dispensing taps.

2.2.17. ANOMALY REPORTING CODES

CODE	ANOMALY	POSSIBLE CAUSE	REMEDY	RESET
A01	***BLOCK FLAME***	**WITHOUT IGNITION OF FLAME**		PRESS THE RESET BUTTON ®
		LACK OF GAS;	CHECK THE ADDUCTION NETWORK;	
		IGNITION ELECTRODE BROKEN OR BULK;	REPLACE IT;	
		BROKEN GAS VALVE;	REPLACE IT;	
		TOO HIGH PRESSURE AT THE VALVE INLET GAS.	CHECK THE PRESSURE MAXIMUM ADJUSTMENT.	
		WITH FLAME IGNITION		
		ELECTRODE CABLE DISCONNECTED OR INTERRUPTED ;	CHECK THE CONNECTION ELECTRIC;	
		BROKEN ELECTRODE;	REPLACE IT;	
A02	***THERMOSTAT OF SAFETY (70 ° C)***	THERMOSTAT CABLE BROKEN OR DISCONNECTED;	CHECK THE CONNECTION ELECTRIC;	AUTOMATIC.
		THERMOSTAT BROKEN	REPLACE IT.	
		CONTACT OF THE FLOW SWITCH CLOSED WITHOUT PASSING WATER	CHECK THE CONNECTION OF THE MICROFLOW SWITCH OR IF THE PISTON INSIDE IS BLOCKED;	
A03	***AIR PRESSURE***	CABLE PRESSURE SWITCH AIR DISCONNECTED;	CHECK THE CONNECTION ELECTRIC;	RESET MANUAL (PRESS THE RESET BUTTON).
		EXHAUST OR INTAKE CLOSED;	CHECK THE SMOKE EXHAUST DUCTS;	
		AIR PRESSURE SWITCH BROKEN.	REPLACE IT.	

2Cod isegnalazionalanomalies_water heater_HDIMS13_firm.05

CODE	ANOMALY	POSSIBLE CAUSE	REMEDY	RESET
A06	***SANITARY PROBE***	PROBE BROKEN OR OFF (RESISTANCE VALUE 10 KOHM AT 25 ° C NTC);	REPLACE IT;	AUTOMATIC.
		PROBE CONNECTOR WET OR UNPLUGGED.	CHECK THE CONNECTION ELECTRIC.	
A16	***GAS VALVE***	AFTER THE BURNER GOES OUT, THE SYSTEM CHECK THE SIGNAL OF FLAME: IF THE FLAME IS STILL LIT FOR 5 SECONDS, THE SYSTEM GENERATES A LOCK-OUT CONDITION.	IF NOTHING HAPPENS AFTER THE RESET, IT IS NECESSARY TO REPLACE THE GAS VALVE AND FOLLOW THE PROCEDURE DESCRIBED IN THE 'TOTAL CALIBRATION OF THE GAS VALVE' CHAPTER.	PRESS THE RESET BUTTON ®.
A17	***MODULATOR***	GAS VALVE MODULATOR BROKEN	REPLACE IT;	AUTOMATIC.
A35	***PARASITE FLAME***	ELECTRODE MALFUNCTIONING;	CLEAN OR REPLACE IT;	PRESS THE RESET BUTTON ®.
		ELECTRODE CABLE MALFUNCTIONING;	REPLACE IT;	
		MODULATION BOARD MALFUNCTIONING.	REPLACE IT.	
A40	***VOLTAGE OF SUPPLY***	SUPPLY VOLTAGE OUT OF RANGE OF OPERATION (≤180 VOLTS).	CHECK THE POWER SUPPLY NETWORK (THE ERROR GOES OFF AUTOMATICALLY NOT JUST THE POWER SUPPLY RETURNS TO THE REQUIRED LIMITS).	AUTOMATIC.
A72	***PRESSURE SWITCH CONTACT AIR CLOSED OR ELECTRIC FAN BROKEN***	PRESSURE SWITCH CONTACT AIR CLOSED;	CHECK THE CONNECTION ELECTRIC;	AUTOMATIC.
		BROKEN ELECTRIC FAN	REPLACE IT.	

CODE	ANOMALY	POSSIBLE CAUSE	REMEDY	RESET
A80	***ELECTRIC FAN***	WRONG CONNECTION OF THE ELECTRIC FAN; ELECTRIC FAN BROKEN.	CHECK THE CONNECTION ELECTRIC; REPLACE IT.	AUTOMATIC.
		INCORRECT CONNECTION OF THE HALL EFFECT SENSOR; BROKEN SENSOR.	CHECK THE CONNECTION ELECTRIC; REPLACE IT.	
A81	***LOSS OF FLAME***	THE FLAME DISAPPEARED 6 TIMES IN 10 MINUTES.		PRESS THE RESET BUTTON Ⓡ.
A84	***GAS VALVE***	GAS VALVE CABLE DISCONNECTED OR BROKEN;	CHECK THE CONNECTION ELECTRIC;	PRESS THE RESET BUTTON Ⓡ.
		BROKEN GAS VALVE.	REPLACE THE GAS VALVE AND FOLLOW THE PROCEDURE DESCRIBED IN THE 'TOTAL CALIBRATION OF THE GAS VALVE' CHAPTER.	

TO DISPLAY THE LAST 11 ANOMALY REPORTING CODES, FROM THE MOST RECENT CHRONOLOGICAL ORDER, PROCEED IN THE FOLLOWING WAY:

›When the operating mode is different from OFF, press the 'button for 10 seconds ' is wait for the blinking “tS” message to appear on the display, and release the key. In this way you have entered the Installer menu.

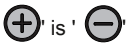
›To enter the anomaly history menu, press the ' 'of power until display the word "Hi", and confirm by pressing the 'key '.

›Scroll through the list of stored anomalies using the ' ' is ' 'of power . It will come the anomaly signaling code preceded by the chronological index is displayed (for example: '01' 'last anomaly'), in the absence of errors the message '- -' will be displayed.

›To exit the fault history menu and go back to the Installer menu, press the button ' '.

›To reset the anomaly history, press the ' 'of power until the written "rE", and confirm by holding down the 'key for 3 seconds '.

2.2.18. ACTIVE FUNCTIONS SIGNALING CODES

CODE	FUNCTION	DESCRIPTION
XX (NUMBER BETWEEN 00 AND 100)	***CHIMNEY SWEEP***	IT IS ACTIVATED BY HOLDING THE KEYS AT THE SAME TIME '  ', THE DISPLAY WILL SHOW THE VALUE OF THE MAXIMUM PERCENTAGE SET FOR THE SANITARY , A VALUE THAT CAN BE MODIFIED DIRECTLY USING THE KEYS '  ' OF POWER  . THE FUNCTION IS DEACTIVATED BY HOLDING THE KEYS AT THE SAME TIME '  'OR TURNING OFF THE WATER HEATER. THIS FUNCTION DOOR THE WATER HEATER AT MAXIMUM PRESSURE SANITARY FOR 15 MINUTES DEACTIVATING THE MODULATION FUNCTION. IT IS GENERALLY USED TO CARRY OUT COMBUSTION TESTS.
F09	***SANITARY ANTI-FREEZE***	IF THE OPTIONAL ELECTRIC RESISTANCE KIT (CODE: 50-00106) IS INSTALLED IN THE WATER HEATER, THE ANTIFREEZE SYSTEM WILL ACTIVATE WHEN THE SANITARY PROBE DETECTS A TEMPERATURE OF 4 ° C, HEATING THE EXCHANGER PIPES UP TO 8 ° C .

2.2.19. DELAY CODES

CODE	DELAY	DESCRIPTION
T3	***DELAY BETWEEN EACH IGNITION TEST***	IN THE EVENT OF LOSS OF FLAME DURING BURNER IGNITION, THE WAITING TIME “T3” (50 SECONDS) IS PERFORMED BEFORE STARTING A NEW IGNITION ATTEMPT.
T4	***DELAY AFTER BLOCK RESET (REMAINING TIME LESS THAN 30 SECONDS)***	WAIT FOR THE OPERATION TO BE REGULARLY COMPLETED. IT CAN BE RESET IMMEDIATELY BUT THE ACTUAL UNLOCK WILL TAKE PLACE ONCE 30 SECONDS AFTER THE APPEARANCE OF THE ERROR CODE.

2.2.20. DISPLAYS OF THE INFO MENU

To view the data of the water heater from the info menu proceed as follows:

›When the operating mode is different from OFF, press the 'button for 10 seconds  ' is
wait for the blinking “tS” message to appear on the display, and release the key. In this way you have entered the Installer menu.

›To enter the info menu, press the '  ' of power until “In” is displayed, and
confirm by pressing the 'key  '.

›The info code will be displayed alternating with the associated value. To scroll through the data list
displayable, use the '  ' is '  ' of power  .

›To exit the fault history menu and go back to the Installer menu, press the
button '  '.

›To exit the Installer menu, hold down the 'key for 10 seconds.  '.

LIST OF DISPLAYABLE DATA

INFO CODE	DESCRIPTION
01	SANITARY PROBE TEMPERATURE
02	NA
03	NA
04	CURRENT POWER OF THE BURNER (EXPRESSED IN PERCENTAGE)
05	CURRENT FLAME RESISTANCE (EXPRESSED IN OHM)
06	CURRENT FAN SPEED (0 = OFF; 1 = MINIMUM; 2 = MEDIUM; 3 = MAXIMUM)

2.2.21. POSITIONING
OF THE ELECTRODE

Check that the electrode is positioned at the right distance from the burner and with the correct inclination, see figure 1.

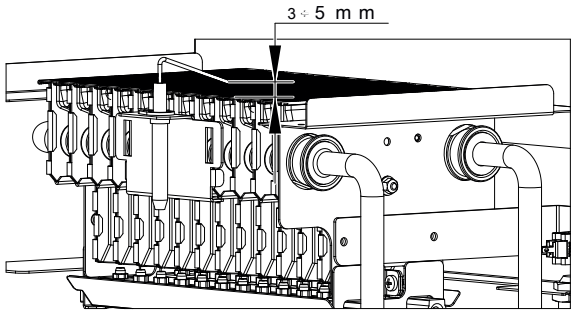
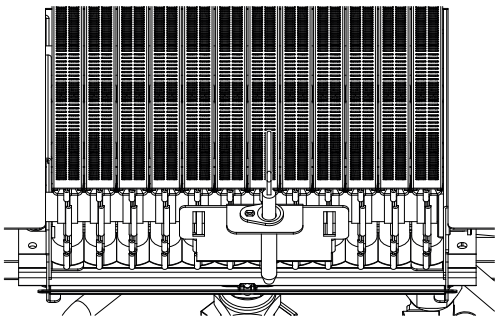


fig. 1



2 Electrode positioning_R1HRNOx_HDIMS13

2.2.22. GAS TYPE TRANSFORMATION

ATTENTION

Check that the supply piping gas is suitable for the new type of fuel with which it is fed the water heater .

ATTENTION

After the transformation, adjust again the water heater following what indicated in the specific paragraph and apply the new identification plate contained in the gas conversion kit.

ATTENTION

Please note that, pursuant to the UNI 7129-3: 2015, in case of use of LPG gas, the use of hemp in mechanical fittings is prohibited.

To carry out the transformation proceed as follows (see fig. 1):

1. disconnect the power supply of the water heater and close the gas cock;

2. remove the panel front of the water heater and rotate the control panel (see chapter ' ACCESS TO THE WATER HEATER ');

3. unscrew the gas fitting '1' using a size 24 spanner and separate the manifold '2' from the burner '3' unscrewing the screws '4';

4. replace the manifold '2' (fig. 1) with the new gas manifold (kit code 65-00921 for methane / kit code 65-00920 for LPG);

5. replace the air deflector 'B' (fig. 1) with the new gas deflector under the manifold '2' and screw the fitting (1) back on.

6. refit the manifold '2' on the burner and screw the fitting '1' back on. After each disassembly and reassembly of the gas connections, carefully check for any leaks using soapy water;

7. affix the two 'gas data' stickers present in the conversion kit, one on the inside of the control panel, overlapping it on the existing plate, and the other on the inside of the front panel of the water heater , near the data plate. On the latter it is necessary to erase the data relating to the old type of gas with an indelible marker;

8. set the parameter value for the new type of gas being used (see the instructions in the chapters 'HDIMS13 PARAMETER TABLE' and 'ACCESS AND PARAMETER PROGRAMMING');

9. adjust the minimum and maximum pressure see chapter 'CHECKING AND SETTING THE GAS PRESSURES'.

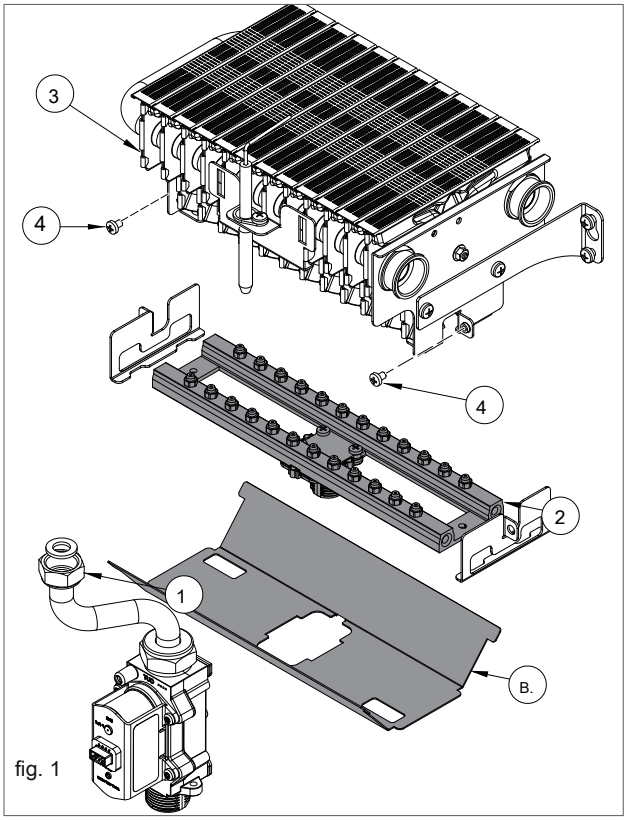


fig. 1

13. USER SECTION

The operations described in this section are aimed at all those who

they will have to approach the machine to carry out operations of use. IS

condition of use of the machine that it is used and reachable

only by competent operators who have read and fully understood the whole

User section, with particular attention to warnings.

To maintain the characteristics of safety, efficiency,

reliability and performance that distinguish the appliance

maintenance must be performed annually, according to

what is reported in the section “General maintenance warnings”.

Annual maintenance is essential for the warranty to be valid

conventional Radiant.

Radiant SpA informs the User that there is an obligation by regulations

in force National with various Local implementations of the efficiency control of

thermal efficiency and control of the polluting fumes of the appliance.

Radiant on its website www.radiant.it <assistance> puts a

available to the User, for the various national areas, the list of Companies

Professionally Qualified to illustrate the regulations in force in the area

as well as providing for what the current legislation requires.

3.1. USE

3.1.1. GENERAL WARNINGS FOR USE

WARNING

Before turning on the water heater the User must make sure that in the Certificate of first ignition there is the stamp of the Technical Assistance Center that certifies the testing and the first ignition of the water heater.

WARNING

For the validation of the guarantee the The water heater must be started up by an authorized RADIANT Technical Assistance Center no later than 30 days from the date of installation.

WARNING

The customer, in order to take advantage of the guarantee provided by the manufacturer, must strictly and exclusively observe the prescriptions indicated in the USER section of the manual.

ATTENTION

This water heater will have to to be intended for the use for which it was expressly built: to heat water to a temperature below boiling point at atmospheric pressure. Any other use is to be considered improper and therefore dangerous. Any contractual and extra-contractual liability of the manufacturer for damages caused to people, animals or things deriving from incorrect use is excluded.

DANGER

Do not allow the water heater to be used by persons (including children) whose physical, sensory or mental capacities are impaired, or with a lack of experience or knowledge, unless they have benefited, through the intermediary of a person responsible for their safety, from surveillance or instructions regarding the use of the appliance.

DANGER

DO NOT block the ventilation openings of the room where a gas appliance is installed to avoid the occurrence of toxic and explosive mixtures.

DANGER

If there is a smell of gas in the room where the water heater is installed, follow the procedures below:

›DO NOT operate electrical switches, the telephone and any other equipment that can generate electric discharges or sparks;

›Immediately open doors and windows for create a change of air that can quickly clean the room;

›Close the gas taps;

›Ask for the immediate intervention of personnel professionally qualified.

DANGER

The use of the energy water heater electricity requires the observance of some fundamental rules such as:

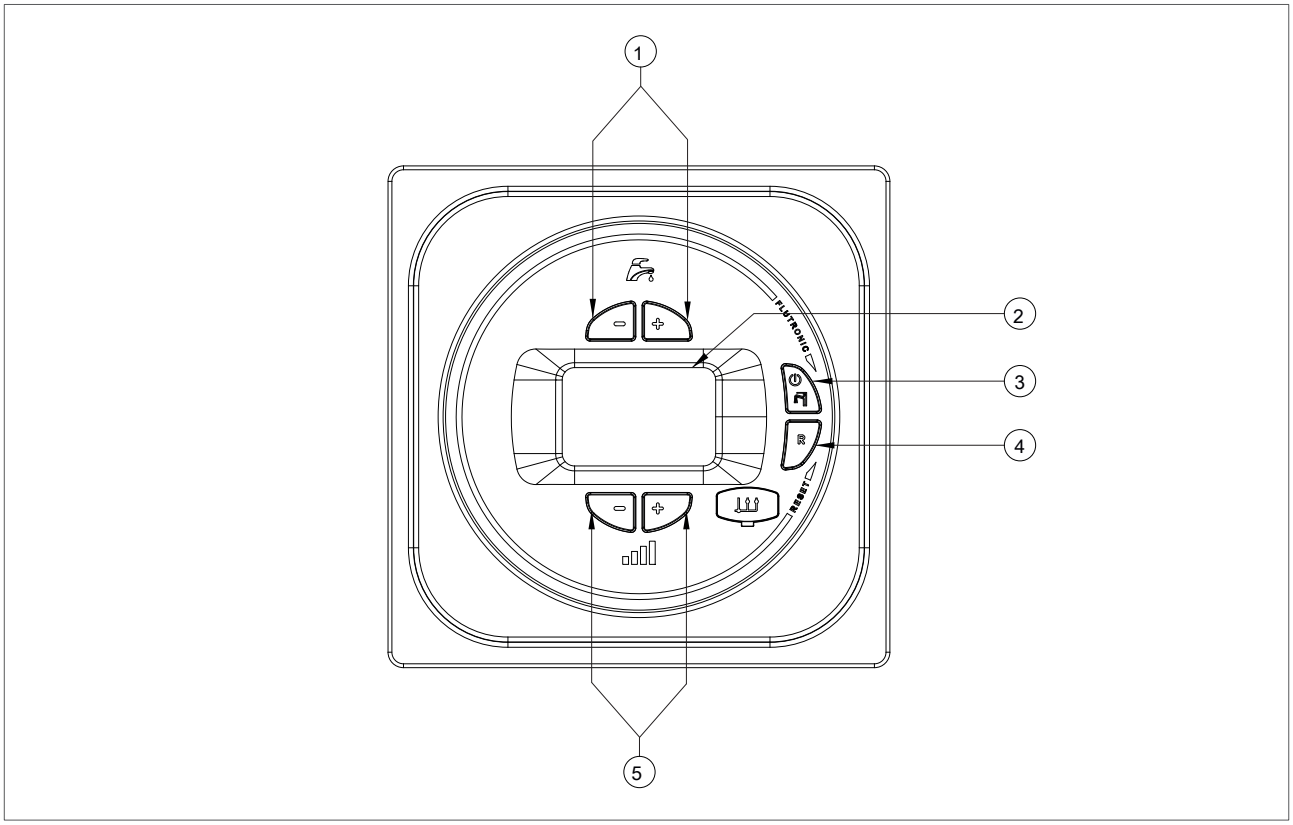
›DO NOT touch the appliance with wet parts and / or wet and / or barefoot;

›DO NOT pull the electric cables;

›DO NOT leave the appliance exposed to agents atmospheric (rain, sun, etc.) unless expressly provided for;

›If the cable is damaged, switch off the appliance and contact only professionally qualified personnel to replace it.

3.1.2. CONTROL PANEL



LEGEND

1. KEYS OF ADJUSTMENT WATER OF THE HOT
   TEMPERATURE SANITARY

2. DISPLAY

3. KEY OF SELECTION MODE
   OPERATION: ONLY SANITARY / OFF

4. RESET BUTTON: RESET ANOMALIES

5. BUTTONS TO ADJUST THE POWER

3.1.3. DISPLAY ICONS

LEGEND

1. INDICATION NUMBER PARAMETER,
   TEMPERATURE CODE DISPLAYED
   (THERE WRITTEN 'SA' WITH SIGNAL FLASHING ON THE DISPLAY ALTERNATED WITH THE VALUE OF THE DOMESTIC HOT WATER TEMPERATURE INDICATES THAT THE DHW REQUEST IS ACTIVE) ;

2. OPERATION IN SANITARY MODE ENABLED;

3. FLAME SIGNALING PRESENT / INDICATES
   ALSO, ON 3 PERCENTAGE LEVELS, THE DEGREE OF MODULATION POWER
   OF THE WATER HEATER (fig. 2). CROSSED FLAME (FLASHING) INDICATES ANOMALY A LOCK IS ACTIVE, REQUIRED THE RESET;

4. REPORTING PRESSURE WATER
   INSUFFICIENT SYSTEM.

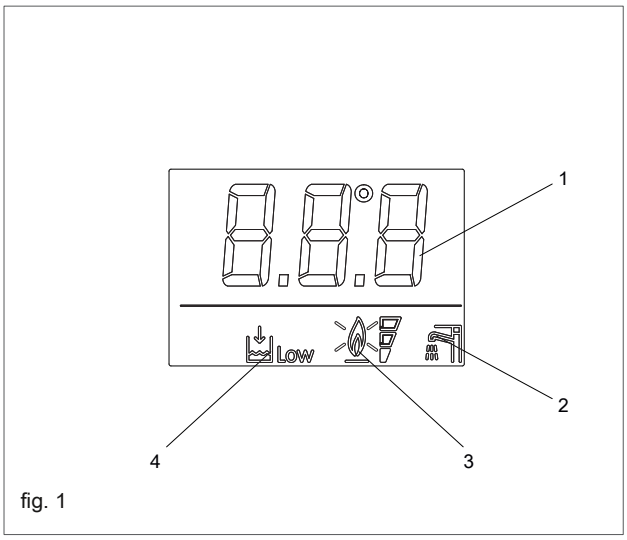


fig. 1

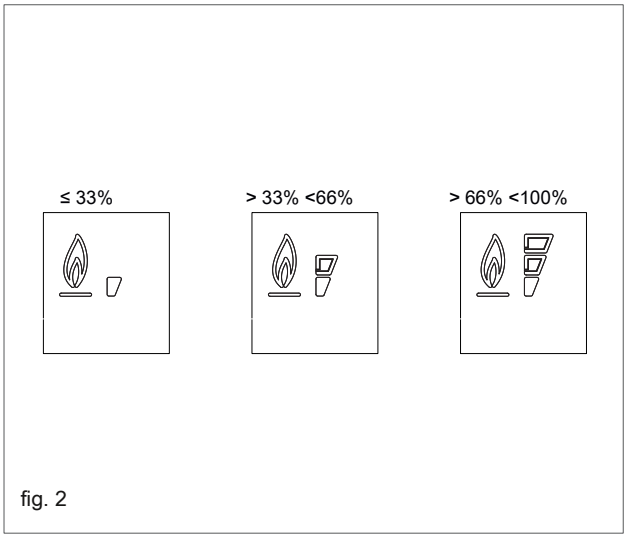


fig. 2

3.1.4. POWER ON

Before turning on the water heater make sure it is powered electrically and that the gas cock located below the water heater is open.

To turn on the water heater press the function key '
'and select the mode
operation ONLY SANITARY . The appearance of the symbol
with steady signal on the display indicates
activation of the function.

Whenever there is a request for domestic hot water, the automatic ignition system will ignite the burner; operation is represented by the lighting of the 'symbol
'with signal 'SA'
intermittent on the display alternating with the value of the domestic hot water temperature.

3.1.5. ADJUSTMENT OF HOT WATER TEMPERATURE

The temperature is adjusted using the '
' is ' 'of the sanitary :

By pressing the ' 'you get one
decrease in temperature.

· Pressing the temperature 'you get a raise
button.

The domestic hot water temperature adjustment range goes from a minimum of 40 ° C to a maximum of 60 ° C.

3.1.6. ADJUSTMENT OF POWER

Adjusting the power of the water heater guarantees well-being conditions by taking into account the flow rate and temperature of the incoming sanitary water.

The regulation of the power is done using the '
' is ' ' of power :

· By pressing the 'decrease of power 'you get one

· Pressing the 'key of power 'you get a raise

The power adjustment range is from a minimum of 10.5 kW to a maximum of 24.5 kW.

3.1.7. OFF MODE

In this mode the water heater no longer satisfies the requests for domestic hot water, however, the antifreeze system remains active.

To switch the water heater to OFF operating mode, press the function key '
', the appearance of' OF 'on the display indicates that the function is activated.

In case the water heater was previously
in operation, is switched off and the post-ventilation function is activated.

If you decide to deactivate the water heater
for a long time, secure it by doing the following:

›Call the Technical Assistance Center that
will provide for the emptying of the water system and the interception of the electricity, water and gas supplies.

›Or ask the Center for technical assistance
installing the optional electric heater kit (see chapter 'INFORMATION ON THE ANTIFREEZE FUNCTION').

3.1.8. INFORMATION ON THE ANTIFREEZE FUNCTION

Thanks to the optional electric heater kit (code: 50-00106) it is possible to protect the water heater from freezing.

When the optional electric heater kit is installed on the water heater, the sanitary antifreeze function of the electronic board heats the parts involved if the temperature drops below the minimum preset values.

WARNING

This function is operational only if:

›The electric heater kit is installed optional;

›The water heater it is electrically powered.

3.1.9. ANOMALY REPORTING CODES

The water heater can signal any anomalies by means of a code shown on the display. Listed below are the error codes that can be displayed and the operations the user can carry out to unblock the water heater.

CODE	ANOMALY	INTERVENTION
A01	***BLOCK FLAME***	CHECK THAT THE GAS TAPS OF THE WATER HEATER AND THE METER ARE OPEN. PRESS THE RESET BUTTON (R) OF THE CONTROL PANEL TO RESET THE ANOMALY, WHEN THE ANOMALY CODE GOES OFF IN THE DISPLAY, THE WATER HEATER WILL START AUTOMATICALLY. IF THE BLOCK SHOULD PERSIST, CALL THE TECHNICAL ASSISTANCE CENTER.
A02	***SAFETY THERMOSTAT (70 ° C)***	CALL THE TECHNICAL ASSISTANCE CENTER.
A03	***AIR PRESSURE***	CALL THE TECHNICAL ASSISTANCE CENTER.
A06	***SANITARY PROBE***	CALL THE TECHNICAL ASSISTANCE CENTER.
A16	***GAS VALVE***	CALL THE TECHNICAL ASSISTANCE CENTER.
A17	***MODULATOR***	CALL THE TECHNICAL ASSISTANCE CENTER.
A35	***PARASITE FLAME***	CALL THE TECHNICAL ASSISTANCE CENTER.
A40	***SUPPLY VOLTAGE***	CALL THE TECHNICAL ASSISTANCE CENTER.
A72	***AIR PRESSURE SWITCH CLOSED CONTACT OR ELECTRIC FAN BROKEN***	CALL THE TECHNICAL ASSISTANCE CENTER.
A80	***ELECTRIC FAN***	CALL THE TECHNICAL ASSISTANCE CENTER.
A81	***LOSS OF FLAME***	CALL THE TECHNICAL ASSISTANCE CENTER.
A84	***GAS VALVE***	CALL THE TECHNICAL ASSISTANCE CENTER.

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3.1.10. ACTIVE FUNCTIONS SIGNALING CODES

CODE	FUNCTION	INTERVENTION
F09	***FUNCTION***	WAIT FOR THE REGULAR
	ANTIFREEZE	COMPLETION OF THE OPERATION
	ACTIVE SANITARY	

3.1.11. CLEANING THE COVER

Clean the casing of the appliance with a damp cloth and a little neutral soap.

WARNING

DO NOT use abrasive or abrasive cleaners, as they can damage the coating or the plastic control elements.

3.1.12. DISPOSAL

The appliance and all its accessories must be disposed of by differentiating them appropriately according to the regulations in force.

Use of the symbol WEEE (Refusals of equipment electric and electronic) indicates that this product cannot be disposed of as household waste. Proper disposal of this product helps prevent potential negative consequences for the environment and human health.