

**EXCLUSIVE
GREEN
C.S.I. - R.S.I.**

EN INSTALLER AND USER MANUAL

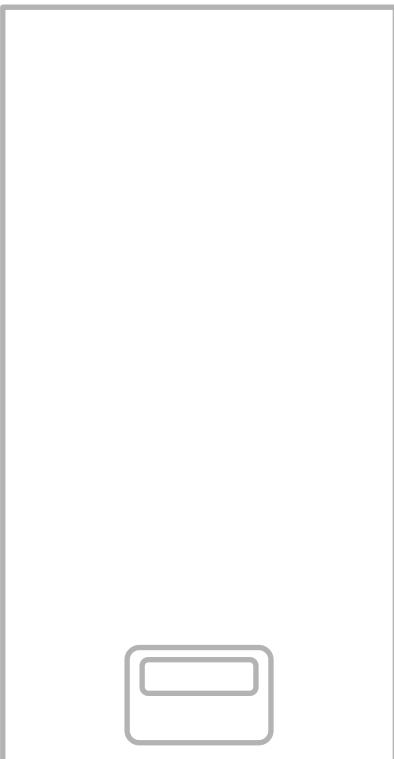
ES MANUAL DE INSTALACIÓN Y USO

PT MANUAL PARA INSTALAÇÃO E USO

HU TELEPÍTŐI ÉS FELHASZNÁLÓI KÉZIKÖNYV

RO MANUAL DE INSTALARE SI UTILIZARE

DK INSTALLATIONS- OG BRUGERVEJLEDNING



 **Beretta**

EN

EXCLUSIVE GREEN boiler complies with basic requirements of the following Directives: Gas directive 90/396/EEC; Yield directive 92/42/EEC; Electromagnetic compatibility directive 89/336/EEC; Low-voltage directive 73/23/EEC; Regulation 677 for condensation boilers. Thus, it is EC-marked.

ES

La caldera **EXCLUSIVE GREEN** es conforme a los requisitos esenciales de las siguientes Directivas: Directiva gas 90/396/CEE; Directiva rendimientos 92/42/CEE; Directiva compatibilidad electromagnética 89/336/CEE; Directiva baja tensión 73/23/CEE; Normativa calderas de condensación 677. Y por lo tanto es titular de la marca CE.

PT

A caldeira **EXCLUSIVE GREEN** está conforme com os requisitos essenciais das seguintes Directivas: Directiva gás 90/396/CEE; Directiva rendimentos 92/42/CEE; Directiva compatibilidade electromagnética 89/336/CEE; Directiva baixa tensão 73/23/CEE; Normativa s de condensação 677. É portanto titular de marcação CE.

HU

Az **EXCLUSIVE GREEN** kazán teljesíti az alábbi irányelvek lényegi követelményeit: 90/396/EGK sz. gáz irányelv; 92/42/EGK sz. irányelv a vízmelegítő kazánokról; 89/336/EGK sz. irányelv az elektromágneses összeférhetőségről; 73/23/EGK sz. irányelv a kifeszültségű berendezésekkel; Kondenzációs kazánokra vonatkozó 677 sz. szabvány. Így jogosan viseli a CE-jelét.

RO

Centrala **EXCLUSIVE GREEN** este fabricata in conformitate cu cerintele urmatoarelor Directive: Directiva gaz 90/396/EEC; Directiva eficiență 92/42/EEC; Directiva compatibilitatea electromagnetică 89/336/EEC; Directiva voltaj redus 73/23/EEC; Regulamentul 677 referitor la boilele cu condensare. Prin urmare, este marcat cu simbolul CE.

DK

EXCLUSIVE GREEN kedlen opfylder kravene i følgende direktiver: Gas direktiv 90/396/EEC; Yield direktiv 92/42/EEC; El direktiv 89/336/EEC; Lav-volt direktiv 73/23/EEC; Regulation 677 af kondenserende kedler. Kedlen er EC-mærket.



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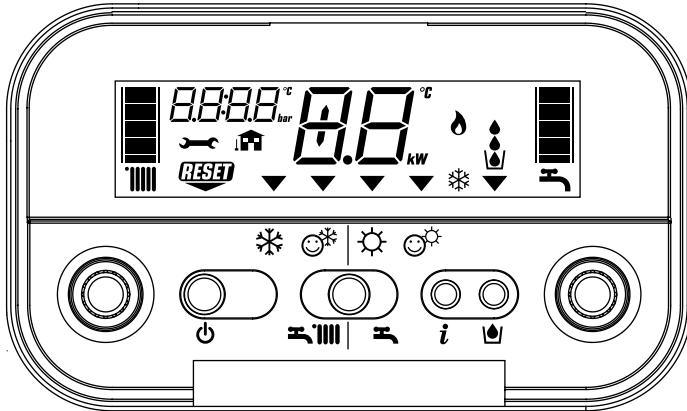
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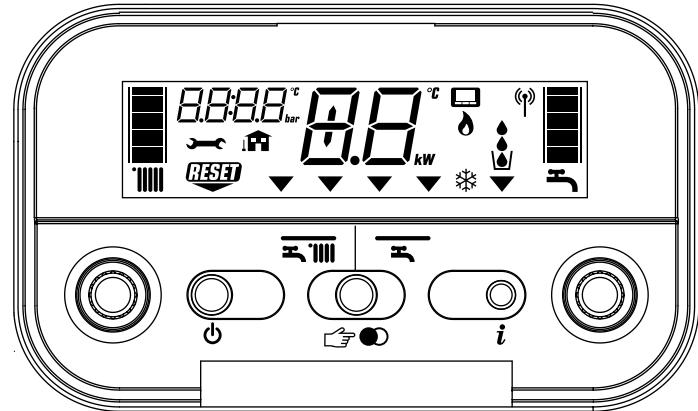
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EXCLUSIVE GREEN C.S.I.



EXCLUSIVE GREEN R.S.I.



EN

⚠ This handbook contains data and information for both users and installers. In detail:

- The chapters entitled "Installing the boiler, Water connections, Gas connection, Electrical connection, Filling and draining, Evacuating products of combustion, Technical data, Programming parameters, Gas regulation and conversion" are intended for installers;
- The chapters entitled "Warnings and safety devices, Switching on and using" are for both users and installers.

The control panel is different between GREEN C.S.I. and GREEN R.S.I. (see detail). Please read, in the booklet, the instructions referring to your boiler model.

ES

⚠ Este manual contiene datos e informaciones destinados tanto al usuario como al instalador. En especial:

- Los capítulos "Instalación de la caldera, Conexiones hidráulicas, Conexión gas, Conexión eléctrica, Llenado y vaciado, Evacuación productos de la combustión, Datos técnicos, Programación parámetros, Regulación y Transformación gas" son los que se refieren al instalador;
- Los capítulos "Advertencias y seguridades, y Encendido y funcionamiento" son los que se refieren tanto al usuario como al instalador.

El panel de mando es diferente entre los modelos GREEN C.S.I. y GREEN R.S.I. (ver dibujo). Rogamos consulten el manual para encontrar las instrucciones relativas a su modelo de caldera.

PT

⚠ Este livre inclui dados e informações destinados quer ao usuário quer ao instalador. Especificadamente:

- Os capítulos "Instalação da caldeira, Conexões hidráulicas, Conexão gás, Ligação eléctrica, Enchimento e esvaziamento, Evacuação dos produtos da combustão, Dados técnicos, Programação parâmetros, Regulação e Transformação gás" são aqueles referidos ao instalador;
- Os capítulos "Advertências e seguranças e Ignição e Funcionamento" são aqueles referidos quer ao usuário quer ao instalador.

Os modelos GREEN C.S.I. e GREEN R.S.I. têm os painéis de comando diferentes (veja-se o desenho). Sugerimos consultar o manual para as instruções relativas ao seu modelo de caldeira.

HU

⚠ Jelen kézikönyv minden felhasználónak és telepítő számára tartalmaz információkat. Pontosabban:

- A telepítő részére szánt fejezetek "A kazán telepítése, Vízbekötések, Gázbekötés, Elektromos bekötés, Feltöltés és a berendezés víztelenítése, Égéstermék elvezetés, Műszaki adatok, Paraméterek programozása, Gázbeállítások és gáztípusváltás";
- A telepítő és a felhasználó részére egyaránt szánt fejezetek az "Általános tudnivalók és biztonsági előírások, Begyújtás és működés".

A GREEN C.S.I. és GREEN R.S.I. (lásd rajzon) modellek vezérlőpaneljei különböznek. Kérjük, olvassa el az Ön kazánjára vonatkozó kezelési utasítást.

RO

⚠ Acest manual contine date si informatii atat pentru utilizator cat si pentru instalator. Si anume:

- Capitolele intitulate "Instalarea cazarului, Conectare la retea de apa, Conectare la retea de gaz, Conexiuni electrice, Umplerea si golirea instalatiei, Evacuarea produselor de ardere, Date tehnice, Programarea parametrilor, Reglare si conversie gaz" sunt dedicate instalatorilor;
- Capitolele intitulate "Avertizari si masuri de siguranta, Pornire si utilizare" sunt dedicate atat instalatorilor cat si utilizatorilor.

Panoul de comanda difera intre modelele GREEN C.S.I. si GREEN R.S.I. (vezi detalii). Va rugam sa cititi din manual instructiunile specifice modelului dumneavoastra.

DK

⚠ Denne vejledning indeholder oplysninger til både installatør og bruger.

- Afsnit: „Installation af kedlen, Rør-forbindelser, Gas tilslutning, El-forbindelser, Påfyldning og aftapning, Aftræk, Tekniske data, Indstilling af parametre, Omstilling mellem gasarter“ henvender sig til installatører og servicefirmaer;
- Afsnit: „Sikkerhed, opstart og funktion“ henvender sig til både bruger og installatør.

Kontrolpanelet på GREEN R.S.I. er forskellige. Gennemlæs vejledningen til den valgte model.

ENGLISH

1 - GENERAL SAFETY DEVICES

- The boilers produced in our factory are built with care down to the last component to protect both the user and installer from eventual accidents. We therefore recommend qualified personnel that after working on the product they should pay particular attention to the wiring, especially the bare wires, that must not be exposed outside the terminal board for any reason to prevent any contact with the live parts of the wiring.
- This instructions manual is integral parts of the product. Make sure they remain with the boiler, even if it is transferred to another owner or user or moved to another heating system. In case of loss or damage, please contact your local Technical Assistance Service for a new copy.
- This boiler may only be installed and serviced by qualified fitters who satisfy the requirements of local rules. Work must be done in compliance with regulations in force and subsequent updates.
- The boiler must be serviced at least once a year. This should be booked in advance with the Technical Assistance Service.
- The installer shall instruct the user in the operation of the boiler and the safety devices.
- This boiler may only be used for what it was expressly built to do. The manufacturer declines all contractual and non-contractual liability for injury to persons or animals or damage to property deriving from errors made during installation, adjustment and servicing and from improper use.
- This appliance is used to produce hot water and must therefore be connected to a heating and/or a domestic hot water system, according to its performance and power.
- After removing the packaging, make sure the contents are undamaged and complete. If this is not the case, contact your dealer.
- The safety valve outlet must be connected to a suitable collection and venting system. The manufacturer declines all liability for any damage caused by the safety valve.
- The safety and automatic adjustment devices on the appliance must never be modified during its lifetime, except by the maker or dealer.
- If the appliance develops a fault and/or works badly, switch it off and do not attempt to repair it yourself.
- Immediately after installation, inform the user that:
- in the event of leaks, he/she must shut off the water supply and promptly inform the Technical Assistance Service
 - **GREEN C.S.I.:** he/she must check from time to time to make sure the symbol is not lit on the control panel. This symbol means that the pressure in the water system is incorrect. If necessary, fill the system as described in the paragraph "Boiler functions"
 - **GREEN R.S.I.:** must periodically check, on the display, that the pressure value is between 1 and 1,5 bar; if not fill the system as described in the paragraph "Boiler functions"
 - if the boiler is not planned to be used for a long period, he/she should call in the Technical Assistance Service to perform the following operations:
 - turn off the main boiler and general system switches
 - close the gas and water taps on both the heating (GREEN C.S.I.-GREEN R.S.I.) and domestic hot water circuits (GREEN C.S.I. only)
 - drain the heating (GREEN C.S.I.-GREEN R.S.I.) and domestic hot water (GREEN C.S.I. only) circuits to prevent freezing.

Connect the outlet collector to a suitable outlet system (refer to chapter 5).

Safety measures:

- the boiler should not be used by children or unassisted disabled people
- electrical devices or equipment, such as switches, appliances, etc., should not be used if there is a smell of gas or fumes. If there is a gas leak, open all the doors and windows to ventilate the area, turn off the general gas tap and immediately call the Technical Assistance Service
- do not touch the boiler barefoot or if parts of your body are wet or damp
- press the button until “- -” is shown on the display and disconnect the electricity supply by turning off the two-position system switch, before cleaning
- it is forbidden to modify the safety or adjustment devices without the manufacturer's permission and relative instructions
- do not pull, detach or twist the wires from the boiler even if they are not connected to the power supply
- do not block or reduce the size of the ventilation openings in the room
- do not leave inflammable containers or substances in the room

The following symbols are used in this manual:

- CAUTION = operations requiring special care and adequate preparation
- NOT ALLOWED = operations that MUST NOT be performed

R.S.I.: DHW functions refer only if a water tank is connected (accessory available on request).

- keep packaging out of reach of children
- only use appliance for purposes it is devoted to
- do not lean any object on the boiler
- do not tamper with sealed elements
- it is forbidden to block the condensate outlet.

2 - BOILER INSTALLATION

Boiler must only be installed by qualified personnel.
Boiler is available in the following models:

Model	Type	Category	Power
C.S.I.	combined	C	25-35 kW
R.S.I.	CH only	C	16-25-35 kW

Exclusive GREEN C.S.I. is a C-type condensation wall-mounted boiler for heating and producing domestic hot water; **Exclusive GREEN R.S.I.** is a C-type condensation wall-mounted boiler and is able to operate in different conditions:

- **CASE A:** only heating. The boiler doesn't supply domestic hot water
- **CASE B:** only heating with water tank connected, managed by a thermostat, to prepare domestic hot water
- **CASE C:** only heating with water tank connected (kit available upon request), managed by a temperature sensor, to prepare domestic hot water. Connecting a water tank not supplied by us, please be sure that the NTC sensor used has the following features: 10 kOhm at 25°C, B 3435 ±1%.

Depending on the type of installation selected, it is necessary to set the parameter “domestic hot water mode”. Refer to page 19 for description and setting parameter operations.

This type of appliance can be installed in any kind of room as long as the fumes discharge and the comburent air intake are taken outside the room.

The following types of fumes outlet are available for this kind of boiler: B23P; B53P; C13,C13x; C23; C33,C33x; C43,C43x; C53,C53x; C63,C63x; C83,C83x. Installation must comply with local standards and regulations in force.

For proper installation, we remind you that:

- the boiler must not be installed over a kitchen or any other cooking equipment
- minimum spaces are to be left in order to allow maintenance operations: at least 2,5 cm every side and 20 cm under the boiler
- it is forbidden to leave inflammable substances in the room
- suitably insulate heat-sensitive walls (e.g.: in wood).

Support plate and integrated pre-installation template are provided for with the boiler (Fig. 1.1).

Mounting instructions:

- fix the boiler support plate (**F**) with the template (**G**) to the wall and use a plumb to check that it is perfectly horizontal
- trace out 4 holes (Ø 6 mm) for fixing the boiler support plate (**F**) and 2 holes (Ø 4 mm) for fixing the pre-installation template (**G**)
- make sure all the measurements are correct, then drill holes in the wall using a drill and point with the diameter given previously
- fix the plate to the wall by the supplied anchor screws
- make hydraulic connections.

After installing the boiler, the screws **D1** (Fig. 1.2) can be removed. After installing the boiler and connecting it to the water and gas supplies, fit the lower cover (**A-B**, Fig. 1.3) so that its hooks slip into the relative slots in the lower part of the boiler. Fix the lower cover with the screw **C** (Fig. 1.4) contained in the documentation envelope in the boiler.

Cleaning the system and characteristics of heating circuit water

After installing a new system or replacing a boiler, clean the heating system. To ensure the product works correctly, after cleaning, additivating and/or chemically treating the system (e.g.: anti-freeze, film-formers, etc.), make sure the characteristics of the water satisfy the parameters indicated in the table.

Parameters	um	Water in heating circuit	Inlet water
PH		7±8	
Hardness	°F	-	15±20
Appearance		-	limpid

3 - HYDRAULIC CONNECTIONS

Position and dimensions of hydraulic connections are specified in **figure 1.1**:

A - CH return	3/4"
B - CH delivery	3/4"
C - Gas connection	3/4"
D - DHW outlet	1/2" (GREEN C.S.I. only)
E - DHW inlet	1/2" (GREEN C.S.I. only)
F - Support plate	
G - Pre-installation template	

If water hardness exceeds 28°F, it is recommended to use water softeners, to prevent any limestone deposit in boiler due to excessively hard water.

4 - INSTALLING THE EXTERNAL PROBE

The correct position of the external probe is essential for the climatic control function to run properly.

The probe must be installed outside the building to be heated, at about 2/3 of the height of the NORTHERN or NORTHWESTERN face, far from flue pipes, doors, windows and sunny areas.

Attaching the external probe to the wall (Fig. 1.6)

- To access the terminal board and anchor holes, unscrew the plastic probe cover from the housing by rotating it anticlockwise
- Mark the points where the holes will be drilled using the probe housing as a template
- Remove the box and drill holes for 5x25 expansion grips
- Fix the housing to the wall using the two supplied expansion grips
- Unscrew the cable-holding nut, insert the bipolar cable (with a cross section between 0,5 and 1mm², not supplied) for the connection between the probe and the boiler
- For the electrical connection between the external probe and the boiler, refer to the chapter "Electric connection"
- Tighten the cable-holding nut properly and close the cover of the protective box.

- ⚠ The probe must be positioned on a smooth surface. In the case of a brick wall or a wall with an irregular surface, provision must be made for a smooth contact surface.
- ⚠ The maximum length of the connection between the external probe and the boiler is 30 m.
- ⚠ The connection cable between the probe and the boiler must not have connections. If these prove to be necessary, they must be made watertight and suitably protected.
- ⚠ Any ducts for the connection cable must be separate from other power lines (230 V.a.C.).

5 - CONDENSATE COLLECTION

The outlet collector (**A**, Fig. 1.7) collects: the condensate water, any evacuation water from the safety valve and the system outlet water.

- ⚠ The collector must be connected, by means of a rubber pipe (not supplied), to a suitable collection and evacuation system in the storm water outlet and in compliance with current regulations.
- ⚠ The external diameter of the collector is 20 mm: we therefore suggest using an Ø 18-19 mm pipe, to be closed with a suitable clamp (not supplied).
- ⚠ The manufacturer is not responsible for any damage caused by the lack of a collection system.
- ⚠ The outlet connection line must have a guaranteed seal.
- ⚠ The manufacturer of the boiler is not responsible for any flooding caused by interventions of the safety valve.

6 - GAS CONNECTION

Before connecting appliance to gas pipe network, check the following:

- regulations in force are met
- gas type used is the same as set for appliance operation
- pipes are clean.

Gas must be piped externally. If the pipe goes through a wall it must go through the central opening in the lower part of the template. It is recommended to install an appropriately sized filter on the gas line in case gas from the mains contains some small solid particles. After installation make sure that all the joints have been made airtight conforming to standard installation practices.

7 - ELECTRIC CONNECTION

To access the electrical connections, proceed as follows:

- unscrew the lower cover fixing screw (**C**, Fig. 1.4)
- pull the cover towards you and remove (**A-B**) (Fig. 1.5)
- loosen the fixing screws (**D**) and remove the shell (Fig. 1.2)
- lift up the panel and turn it forwards
- open the terminal board covers making them slide in the direction of the arrows (Fig. 1.8: **E** high voltage connections 230 V, **F** low voltage connections, **G** water tank sensor connections only GREEN R.S.I.).

Connect the appliance to the mains power supply with a switch featuring a distance of at least 3,5 mm (EN 60335-1, category III) between each wire. The appliance uses alternating current at 230 Volt/50 Hz, has a power input of 130 W (16kW R.S.I. - 25kW C.S.I. - 25kW R.S.I.) and 175 W (35kW R.S.I. - 35kW C.S.I.) and complies with EN 60335-1 standard. Connect the boiler to a safe earth circuit according to current legislation.

Live and neutral (L-N) connections should also be respected.

The boiler can operate with phase-neutral or phase-phase power supply. For floating power supply, without an earth-bonded conductor, it is necessary to use an insulation transformer with secondary anchored to ground.

- ⚠ The earth conductor must be a couple of cm longer than the others.
- ⚠ Gas and/or water pipes may not be used to earth electrical equipment.
- ⚠ The installer is responsible for making sure that the appliance has an adequate earthing system; the manufacturer shall not be held liable for eventual damages caused by incorrect usage or failing to earth the boiler.

Use the **supplied power cable** to connect the boiler to the mains power supply. Connect the ambient thermostat and/or time clock as shown in the electrical diagram on page 125.

When replacing the power cable, use a HAR H05V2V2-F cable, 3 x 0,75 mm², Ø max. external 7 mm.

8 - FILLING AND EMPTYING THE SYSTEM

The central heating system can be filled up once the water mains have been connected up.

This must be done while the installation is cold by:

- giving two or three turns to the cap of the automatic air vent valve (**A**, Fig. 1.9) to open it;
- making sure the cold water inlet tap is open (**B**, Fig. 1.9) (GREEN C.S.I. only)
- opening the filling tap (**C**, on the boiler for GREEN C.S.I., external for GREEN R.S.I.) until the pressure on the hydrometer (**D**) is between 1 and 1,5 bar (blue zone) (Fig. 1.9).

Close the filling tap after filling it up.

The boiler is equipped with an efficient air separator so that there is no need to do anything manually.

The burner only ignites when air venting has finished.

NOTE: air extraction from the boiler takes place automatically, through two automatic bleeding valves, **A** and **E**.

The first is situated on the pump, while the second is inside the air chamber.

NOTE (GREEN C.S.I. only): the boiler is also equipped with a semi-automatic filling system. The first system-filling operation must be carried out by opening tap **C** with the boiler turned off.

NOTE (GREEN R.S.I. only): manual filling tap is not supplied with the boiler, foresee one external or verify if external water tank has one.

Before starting to empty it, remove the electrical feeder by positioning the general switch for the system on "off".

- Close the interception devices for the thermal system
- Loosen the system outlet valve (**F**) manually
- The water from the system is discharged through the outlet collector (**G**).

DHW system emptying (GREEN C.S.I. only)

The hot water system must be emptied every time there is risk of freezing by:

- turning off the tap at the mains
- turning on all the hot and cold taps
- emptying out the lowest parts of the system.

ATTENTION

The collector must be connected, by means of a rubber pipe (not supplied), to a suitable collection and evacuation system in the storm water outlet and in compliance with current regulations. The external diameter of the collector is 20 mm: we therefore suggest using an Ø 18-19 mm pipe, to be closed with a suitable clamp (not supplied). The manufacturer is not responsible for any damage caused by the lack of a collection system.

Suggestions to correctly eliminate air from the heating system and boiler (Fig. 8.2)

We recommend carrying out the sequence of operations given below during first installation or with extraordinary maintenance work:

1. Using a CH11 spanner open the manual air vent valve located above the air box; the tube supplied with the boiler must be connected to the valve to let out the water into an outside container.
2. Open the manual system filling stopcock on the water group, wait until the water starts coming out of the valve;
3. Switch on the boiler leaving the gas cock closed;
4. Use the room thermostat or the remote control panel to activate request for heat so that the three-way will turn to heating;
5. Turn on a tap to activate request for hot water (for instantaneous boilers only; use the water heater thermostat for boilers just for heating connected to an external water heater) for an interval of 30' every minute to make the three-way cycle from heating to hot water and vice versa about ten times (the boiler will go into alarm as there is no gas under these circumstances, it must therefore be reset every time this happens);
6. Continue the sequence until water only comes out of the manual air vent valve and the flow of air has finished; close the manual air vent valve at this point;
7. Make sure the system is at the correct pressure (1 bar is ideal);
8. Close the manual system filling stopcock on the water group;
9. Open the gas cock and ignite the boiler.

9 - FUMES EXHAUSTION AND BURNING AIR SUCTION

EXHAUST CONFIGURATIONS (Fig. 1.11-1.12)

Boiler is homologated for the following exhaustion configurations:

B23P-B53P - Suction in room and discharge outside

C13 - Concentric wall exhaustion. Pipes can separately start from boiler, but outlets must be concentric or close enough to be subject to similar wind conditions (within 50 cm)

C23 - Concentric exhaustion in common chimney (suction and exhaustion in the same chimney)

C33 - Concentric roof exhaustion. Outlets like C13

C43 - Exhaustion and suction in common separate chimneys, but subject to similar wind conditions

C53 - Wall or roof separate exhaustion and suction in different pressure areas. Exhaustion and suction must never be located on opposite walls

C63 - Exhaustion and suction with separately certified and sold pipes (1856/1)

C83 - Single or common chimney exhaustion and wall suction

Refer to regulations in force for exhaustion of combustion products.

Boiler is provided for without fume exhaustion/air suction kit, since forced draught sealed chamber accessories can be used, as they better adapt to installation characteristics.

For fume extraction and burning air restoration in boiler, use original pipes or other EC-certified pipes with equivalent characteristics; check connection is correct as shown on instructions fume accessories provided for with. More appliances can be connected to a single chimney, provided that all appliances are sealed chamber type.

"FORCED OPEN" INSTALLATION (TYPE B23P-B53P, intake inside and outlet outside) - Fumes outlet duct Ø 80 mm (Fig. 1.13)

The fumes outlet duct can be aimed in the most suitable direction for installation needs. To install follow the instructions supplied with the kit.

⚠ In this configuration, the boiler is connected to the Ø 80 mm fumes outlet duct by means of a Ø 60-80 mm adaptor.

⚠ In this case, the combustion supporting air is taken from the room in which the boiler is installed, which must be a suitable and ventilated technical room.

⚠ Non-insulated fumes outlet ducts are potential sources of danger.

⚠ Provision must be made for a 1% slope of the fumes outlet duct towards the boiler.

	Max length fumes outlet duct Ø 80 mm	Pressure drop for each bend (45°/90°) [m]
16 R.S.I.	48 m	
25 C.S.I.-R.S.I.	48 m	0,5 / 0,8
35 C.S.I.-R.S.I.	60 m	

INSTALLATION "SEALED" (TYPE C)

Boiler is a C-type appliance (sealed chamber) and must be safely connected to fume exhaustion duct and burning air suction duct, both getting outside; appliance cannot operate without these ducts.

Concentric outlets (Ø 60-100) (Fig. 1.14)

Concentric ducts may be placed in the most suitable direction for installation requirements but special care must be taken as regards the external temperature and the length of the duct.

Horizontal

	Max linear length concentric duct Ø 60-100 mm	Pressure drop for each bend (45°/90°) [m]
16 R.S.I.	7,80 m	
25 C.S.I.-R.S.I.	7,80 m	0,5 / 0,8
35 C.S.I.-R.S.I.	7,80 m	

Vertical

	Max linear length concentric duct Ø 60-100 mm	Pressure drop for each bend (45°/90°) [m]
16 R.S.I.	8,80 m	
25 C.S.I.-R.S.I.	8,80 m	0,5 / 0,8
35 C.S.I.-R.S.I.	8,80 m	

⚠ Rectilinear length means without bends, outlet ends and connections.

⚠ The fumes outlet duct must slope by 1% towards the condensate collector.

⚠ Uninsulated fumes outlets are potential hazards.

⚠ The boiler automatically adapts ventilation according to the type of installation and the length of the duct.

⚠ Do not obstruct or narrow the comburent air inlet duct in any way.

To install follow the instructions supplied with the kit.

Concentric outlets (Ø 80-125) (Fig. 1.14)

For this installation it is necessary to install the suitable adaptor kit. Ducts may be placed in the most suitable direction for installation requirements. For the installation process, follow the instructions supplied with the kit for the specific accessory for condensation boilers.

	Max linear length concentric duct Ø 80-125 mm	Pressure drop for each bend (45°/90°) [m]
16 R.S.I.	17 m	
25 C.S.I.-R.S.I.	17 m	0,5 / 0,9
35 C.S.I.-R.S.I.	28 m	

Twin outlets (Ø 80) (Fig. 1.15)

The split duct can be aimed in the most suitable direction for installation needs. The combustion-supporting air intake duct must be connected to the entrance after having removed the closing cap, attached with three screws, and having attached a suitable adaptor.

The fumes outlet duct must be connected to the fumes outlet after having installed a suitable adaptor.

For the installation process, follow the instructions supplied with the kit for the specific accessory for condensation boilers.

⚠ The fumes outlet duct must slope by 1% towards the condensate collector.

⚠ The boiler automatically adapts ventilation according to the type of installation and the length of the duct. Do not obstruct or narrow the comburent air inlet duct in any way.

⚠ For an indication of the maximum lengths of every single pipe, refer to the graphs (Fig. 1.16).

⚠ Using longer ducts causes a loss in the power of the boiler.

	Max length twin duct Ø 80 mm	Pressure drop for each bend (45°/90°) [m]
16 R.S.I.	40 + 40 m	
25 C.S.I.-R.S.I.	40 + 40 m	0,5 / 0,8
35 C.S.I.-R.S.I.	50 + 50 m	

⚠ Rectilinear length means without bends, outlet ends and connections.

10 - TECHNICAL DATA

		C.S.I. 25 kW	C.S.I. 35 kW	R.S.I. 16 kW	R.S.I. 25 kW	R.S.I. 35 kW
CH	Nominal thermal flow rate	kW	25	34.6	16	25
		kcal/h	21500	29756	13760	21500
	Nominal thermal power (80°/60°)	kW	24.43	33.74	15.6	24.43
		kcal/h	21006	29012	13416	21006
	Nominal thermal power (50°/30°)	kW	26.13	36.75	16.8	26.13
		kcal/h	22468	31601	14434	22468
	Reduced thermal flow rate	kW	6	7	3.5	6
		kcal/h	5160	6020	3010	5160
	Reduced thermal power (80°/60°)	kW	5.86	6.88	3.4	5.86
		kcal/h	5041	5918	2890	5041
	Reduced thermal power (50°/30°)	kW	6.44	7.55	3.7	6.44
		kcal/h	5537	6490	3148	5537
DHW*	Nominal thermal flow rate	kW	25	34.6	-	-
		kcal/h	21500	29756	-	-
	Maximum thermal power**	kW	25	34.6	-	-
		kcal/h	21500	29756	-	-
	Reduced thermal flow rate**	kW	6	7	-	-
		kcal/h	5160	6020	-	-
	Minimum thermal power**	kW	6	7	-	-
		kcal/h	5160	6020	-	-
Working efficiency Pn max - Pn min (80-60°)	%	97.7-97.7	97.5-98.3	97.5-96.0	97.7-97.7	97.5-98.3
Working efficiency 30% (47° return)	%	101.2	102.1	101.1	101.2	102.1
Combustion efficiency	%	97.9	97.8	97.6	97.9	97.8
Working efficiency Pn max - Pn min (50-30°)	%	104.5-107.3	106.2-107.8	104.9-104.6	104.5-107.3	106.2-107.8
Working efficiency 30% (30° return)	%	107.1	108.6	107.8	107.1	108.6
Electric power	W	130	175	130	130	175
Category		II2H3P	II2H3P	II2H3P	II2H3P	II2H3P
Supply voltage	V - Hz	230-50	230-50	230-50	230-50	230-50
Protection level	IP	X5D	X5D	X5D	X5D	X5D
Chimney and skirt losses with burner off	%	0.10-0.80	0.10-0.80	0.10-0.80	0.10-0.80	0.10-0.80
CH operation						
Maximum pressure - temperature	bar	3-90	3-90	3-90	3-90	3-90
Minimum pressure for standard working/operating	bar	0.25-0.45	0.25-0.45	0.25-0.45	0.25-0.45	0.25-0.45
Selection field of CH water temperature	°C	20-80	20-80	20-80	20-80	20-80
Pump maximum head available for system	mbar	300	300	300	300	300
capacity	l/h	1000	1000	1000	1000	1000
Membrane expansion tank	l	10	10	10	10	10
Expansion vessel pre-charge (CH)	bar	1	1	1	1	1
DHW operation*						
Maximum pressure	bar	6	6	-	-	-
Minimum pressure	bar	0.15	0.15	-	-	-
Hot water quantity $\Delta t 25^\circ C$	l/min	14.3	19.8	-	-	-
$\Delta t 30^\circ C$	l/min	12	16.5	-	-	-
$\Delta t 35^\circ C$	l/min	10.2	14.2	-	-	-
DHW minimum capacity	l/min	2	2	-	-	-
Selection field of DHW temperature	°C	35-60	35-60	-	-	-
Flow regulator	l/min	10	14	-	-	-
Gas pressure						
Natural gas pressure (G20)	mbar	20	20	20	20	20
LPG pressure (G31)	mbar	37	37	37	37	37
Hydraulic connections						
CH input-output	Ø	3/4"	3/4"	3/4"	3/4"	3/4"
DHW input-output (GREEN C.S.I.)	Ø	1/2"	1/2"	-	-	-
Water tank delivery-return (GREEN R.S.I.)	Ø	-	-	3/4"	3/4"	3/4"
Gas input	Ø	3/4"	3/4"	3/4"	3/4"	3/4"
Boiler dimensions and weight						
Height	mm	845	845	845	845	845
Width	mm	453	453	453	453	453
Depth	mm	358	359	358	358	359
Weight	kg	44	47	43	41	43
Fan performance						
Fan residual head, pipes 0,5 + bend 90° (intake+discharge)	Pa	110	195	57	110	195
Flow rates (G20)						
Air capacity	Nm³/h	31.237	43.231	20.446	31.237	43.231
Furnace capacity	Nm³/h	34	46.701	22.05	33.744	46.701
Mass flow (max-min)	gr/s	11.32-2.72	015.67-3.17	7.41-1.62	11.32-2.72	15.67-3.17
Fume exhaustion and air suction concentric pipe						
Diameter	mm	60-100	60-100	60-100	60-100	60-100
Max lenght	m	7.8	7.8	7.8	7.8	7.8
Loss for a 90°/45° bend	m	0.85/0.5	0.85/0.5	0.85/0.5	0.85/0.5	0.85/0.5
Hole in wall (diameter)	mm	105	105	105	105	105
Diameter	mm	80-125	80-125	80-125	80-125	80-125
Max lenght	m	17***	28***	17***	17***	28***
Fume exhaustion and air suction separated pipe						
Diameter	mm	80	80	80	80	80
Max lenght	m	40+40	50+50	40+40	40+40	50+50
Loss for a 90°/45° bend	m	0.8/0.5	0.8/0.5	0.8/0.5	0.8/0.5	0.8/0.5
Forced open installation (B23P-B53P)						
Diameter	mm	80	80	80	80	80
Max lenght	m	48	60	48	48	60
Loss for a 90°/45° bend	m	0.8/0.5	0.8/0.5	0.8/0.5	0.8/0.5	0.8/0.5
Nox	class	5	5	5	5	5
Emission values at maximum and minimum of gas G20 ***						
Maximum CO s.a. lower than	p.p.m.	180	250	91	180	250
CO ₂	%	9	9	8.8	9	9
NOx s.a. lower than	p.p.m.	50	70	16	50	70
At fumes	°C	34	54	50	34	54
Minimum CO s.a. lower than	p.p.m.	40	40	10	40	40
CO ₂	%	9.3	9	8.8	9.3	9
NOx s.a. lower than	p.p.m.	40	60	15	40	60
At fumes	°C	28	36	39	28	36

* DHW values refer to GREEN C.S.I. models.

** Average value among various sanitary running conditions.

*** Estimated with one 90° bend; 16 extensions of 1 meter and a horizontal exhaust of 1 meter (16kW and 25kW), 27 extensions of 1 meter and a horizontal exhaust of 1 meter (35kW).

**** Tested with Ø60-100 concentric - lenght 0.85m - water temperature 80-60°C.

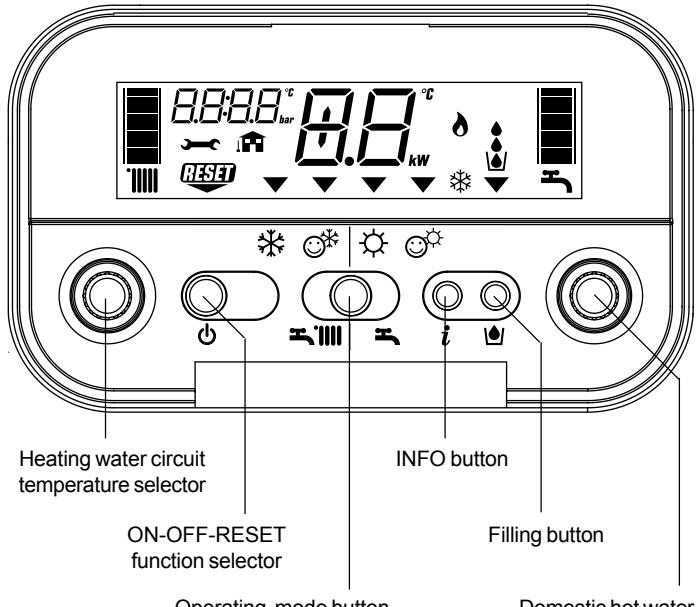
11 - MULTIGAS TABLE

		G20	G31
Lower Wobbe index (15°C-1013 mbar)	MJ/m ³ S	45.67	70,69
Lower heat value	MJ/m ³ S (MJ/kgS)	34,02 (-)	88 (46,34)
Supply nominal pressure	mbar (mm H ₂ O)	20 (204)	37 (377)
Supply minimum pressure	mbar (mm H ₂ O)	10 (102.0)	-
EXCLUSIVE GREEN C.S.I. 25 kW			
Number of main burner nozzles	n.	1	1
Burner diameter	Ø mm	70	70
Gas diaphragm	mm	6.7	4.7
Burner length	mm	120	120
CH maximum gas capacity	Sm ³ /h	2.65	-
	kg/h	-	1.94
DHW maximum gas capacity	Sm ³ /h	2.65	-
	kg/h	-	1.94
CH minimum gas capacity	Sm ³ /h	0.63	-
	kg/h	-	0.47
DHW minimum gas capacity	Sm ³ /h	0.63	-
	kg/h	-	0.47
Numbers of fan revolutions at slow start	revs/min	3700	3700
Maximum number of fan revolutions	revs/min	4900	5100
Minimum number of fan revolutions	revs/min	1400	1400
EXCLUSIVE GREEN C.S.I. 35 kW			
Number of main burner nozzles	n.	1	1
Burner diameter	Ø mm	70	70
Gas diaphragm	mm	7	5
Burner length	mm	120	120
CH maximum gas capacity	Sm ³ /h	3.66	-
	kg/h	-	2.69
DHW maximum gas capacity	Sm ³ /h	3.66	-
	kg/h	-	2.69
CH minimum gas capacity	Sm ³ /h	0.74	-
	kg/h	-	0.54
DHW minimum gas capacity	Sm ³ /h	0.74	-
	kg/h	-	0.54
Numbers of fan revolutions at slow start	revs/min	3700	3700
Maximum number of fan revolutions	revs/min	6000	6000
Minimum number of fan revolutions	revs/min	1400	1400
EXCLUSIVE GREEN R.S.I. 16 kW			
Number of main burner nozzles	n.	1	1
Burner diameter	Ø mm	70	70
Gas diaphragm	mm	4.7	3.6
Burner length	mm	90	90
CH maximum gas capacity	Sm ³ /h	1.69	-
	kg/h	-	1.24
CH minimum gas capacity	Sm ³ /h	0.37	-
	kg/h	-	0.27
Numbers of fan revolutions at slow start	revs/min	3700	3700
Maximum number of fan revolutions	revs/min	4800	4800
Minimum number of fan revolutions	revs/min	1400	1400
EXCLUSIVE GREEN R.S.I. 25 kW			
Number of main burner nozzles	n.	1	1
Burner diameter	Ø mm	70	70
Gas diaphragm	mm	6.7	4.7
Burner length	mm	120	120
CH maximum gas capacity	Sm ³ /h	2.65	-
	kg/h	-	1.94
CH minimum gas capacity	Sm ³ /h	0.63	-
	kg/h	-	0.47
Numbers of fan revolutions at slow start	revs/min	3700	3700
Maximum number of fan revolutions	revs/min	4900	5100
Minimum number of fan revolutions	revs/min	1400	1400
EXCLUSIVE GREEN R.S.I. 35 kW			
Number of main burner nozzles	n.	1	1
Burner diameter	Ø mm	70	70
Gas diaphragm	mm	7	5
Burner length	mm	120	120
CH maximum gas capacity	Sm ³ /h	3.66	-
	kg/h	-	2.69
CH minimum gas capacity	Sm ³ /h	0.74	-
	kg/h	-	0.54
Numbers of fan revolutions at slow start	revs/min	3700	3700
Maximum number of fan revolutions	revs/min	6000	6000
Minimum number of fan revolutions	revs/min	1400	1400

12 - START-UP AND OPERATION (GREEN C.S.I.)

The boiler produces heating and domestic hot water. The control panel contains the main boiler control and management functions.

Description of commands



Heating water temperature selector: sets the heating water temperature.

Domestic hot water temperature selector: sets the domestic hot water temperature.

Function key:

ON - the boiler is electrically powered and waiting for operating requests (-)

OFF - the boiler is electrically powered but will not respond to operating requests
RESET - resets the boiler following a fault

Operating mode button: allows the most suitable operating mode to be selected (winter - winter comfort - summer - summer comfort).

Info button: shows a sequence of information concerning the operating status of the machine.

Filling button: pushing it, the boiler automatically fills the system until the pressure reaches 1 to 1.5 bar.

Switching on

Switch on the boiler as follows:

- access the gas tap through the slots in the cover located in the lower part of the boiler
- open the gas tap by turning it anti-clockwise (Fig. 1)
- power the boiler.

When powered, the boiler performs a test sequence and a series of numbers and letters are shown on the display.

If the test is successful the boiler is ready to work about 4 seconds after the cycle ends.

The display will look like Fig. 2.

If the test is unsuccessful, the boiler will not work and a "0" will flash on the display.

In this case, contact the Technical Assistance Centre.

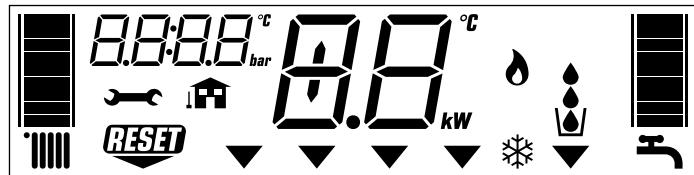
⚠ The boiler turns on in the status it was in before it was switched off: if the boiler was in the winter comfort mode when it was switched off, it will turn on again in the winter comfort mode. If it was in the OFF mode, the display will show two segments in the central area (Fig. 3). Press the button to enable operation.

- press the function selector until the indicator moves to the required function , depending on the kind of operation chosen.

- **WINTER** : with the selector in this position, the heating water and domestic hot water functions are activated.

In this position the S.A.R.A. function is enabled in the heating mode (see chapter "Boiler functions"). The boiler actives the temperature stabiliser in order to ensure the continuous production of domestic hot water, even for small demands or when the inlet water is already hot. This prevents temperature oscillations due to the burner switching off/on.

Description of display symbols



graduated heating water temperature scale with heating function symbol

graduated domestic hot water temperature scale with domestic hot water function symbol

fault symbol (for details, please see page 15)

reset symbol (for details, please see page 15)

pressure value

external sensor connection

heating/domestic hot water temperature

or
 fault symbol (e.g. 10 - no flame)

function selector (turned to the chosen operating mode: winter - winter comfort- summer - summer comfort)

burner operating symbol

anti-freeze function active symbol

system filling function symbol

fill symbol

- **WINTER COMFORT** : with the selector in this position, as well as the traditional function of heating water and domestic hot water, the preheating function is also activated which keeps the water in the domestic hot water exchanger hot in order to reduce waiting times. The S.A.R.A. Booster and Domestic hot water preheating functions are enabled in this position (see chapter "Boiler functions").

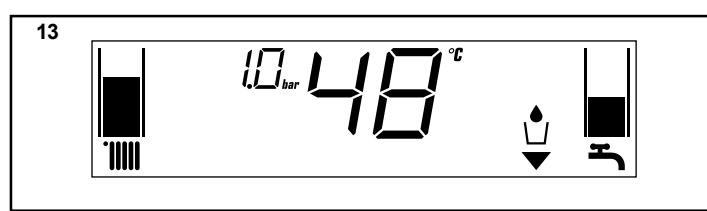
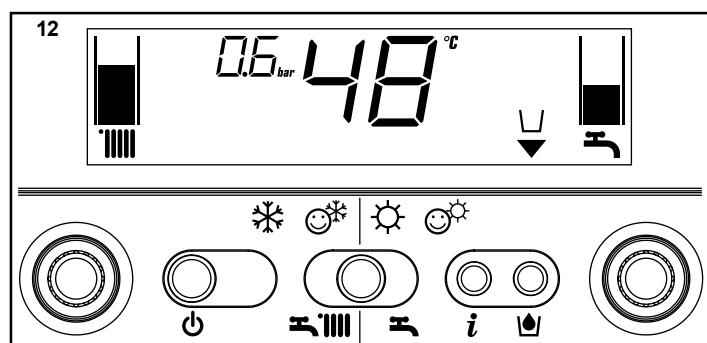
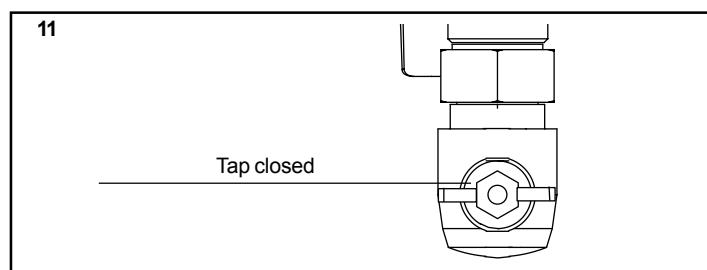
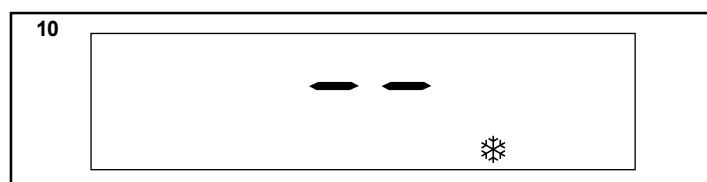
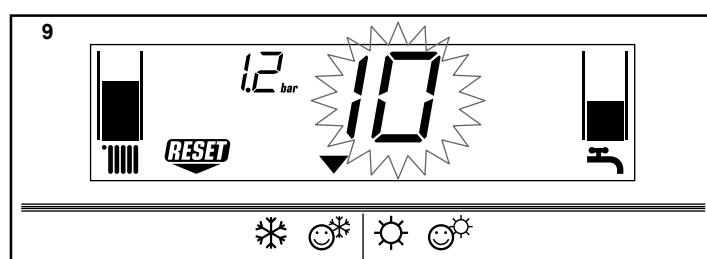
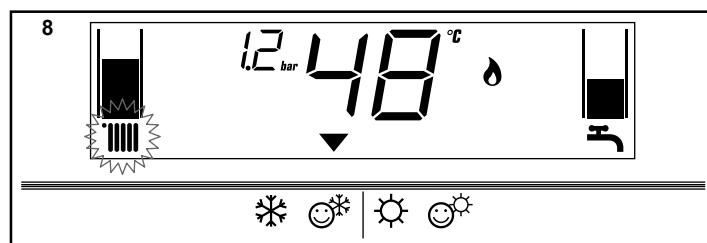
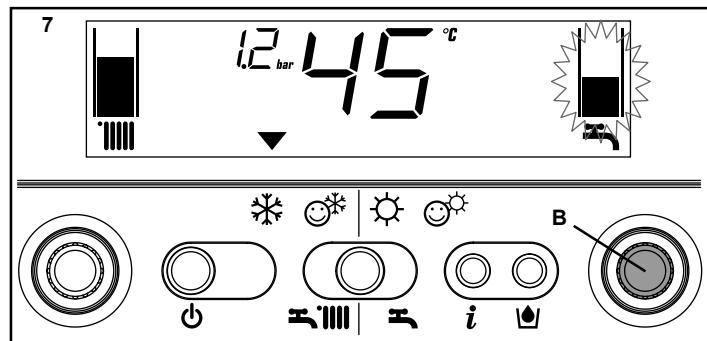
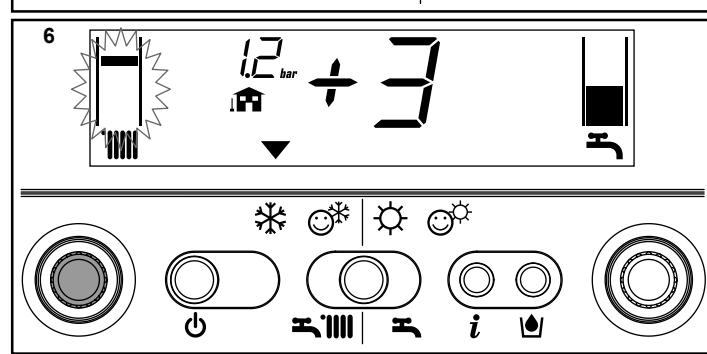
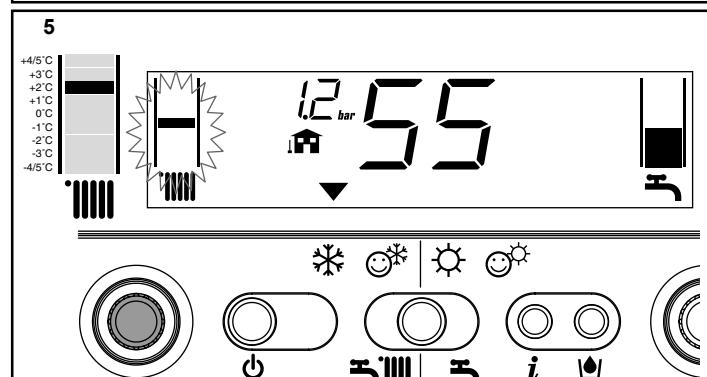
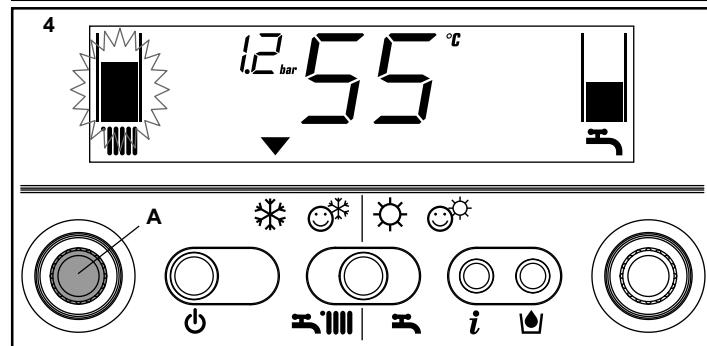
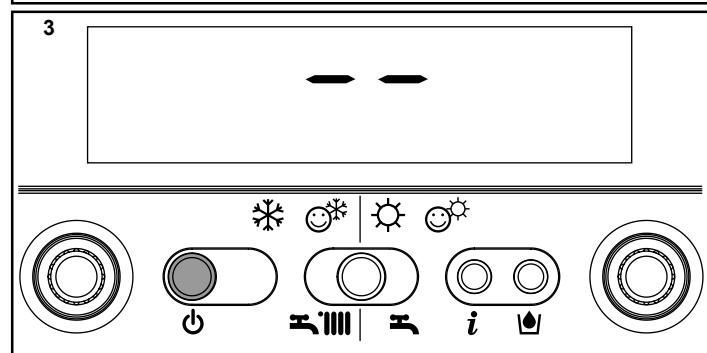
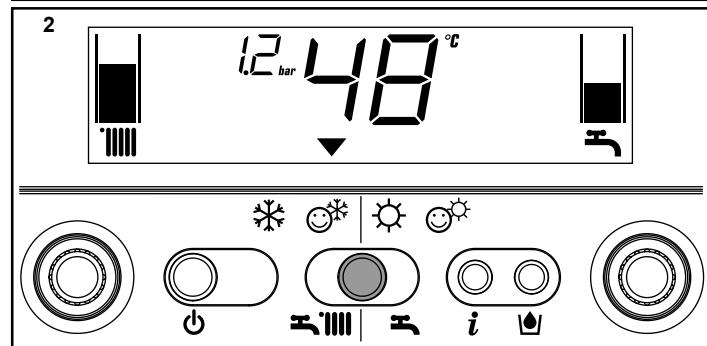
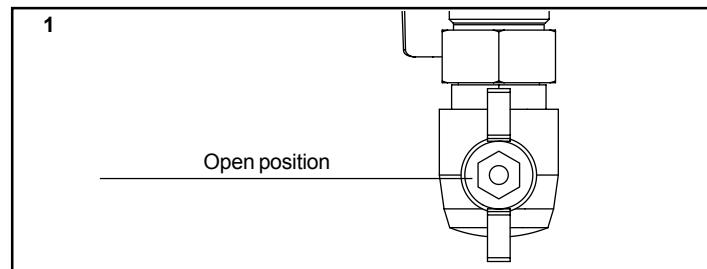
- **SUMMER** : with the selector in this position, just the traditional domestic hot water function is activated.

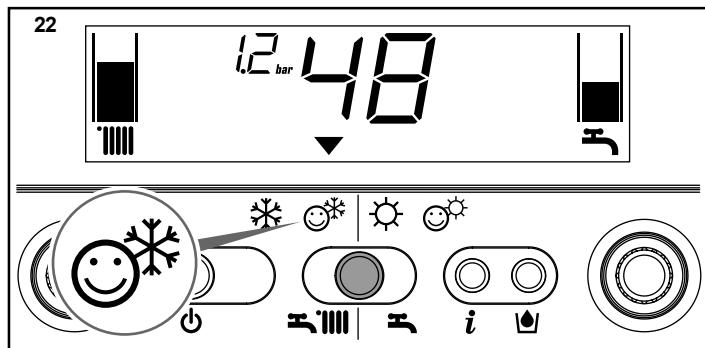
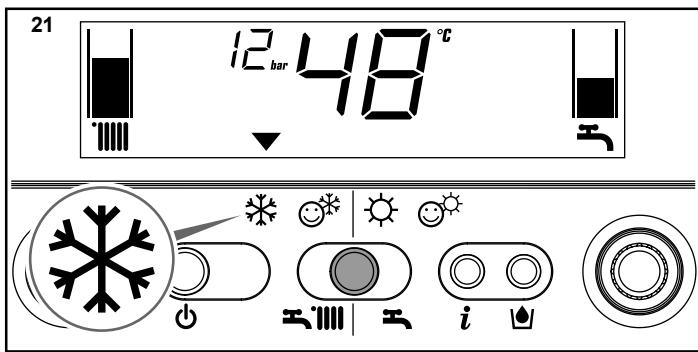
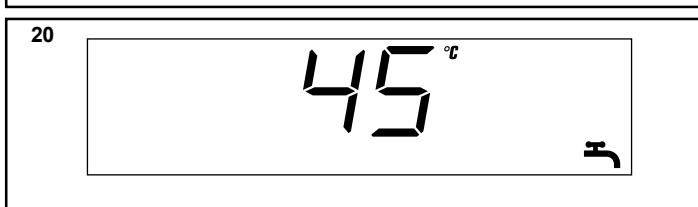
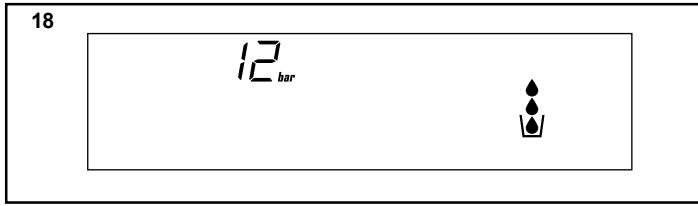
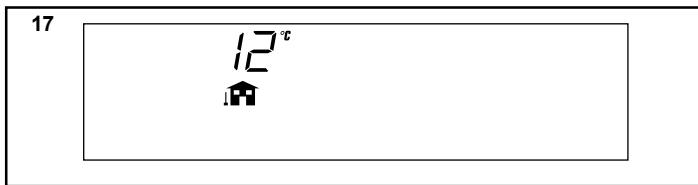
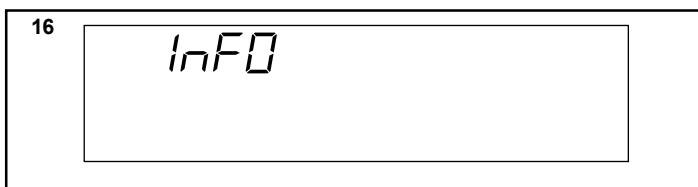
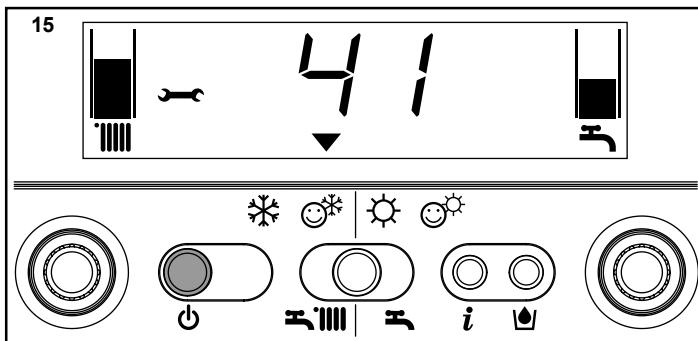
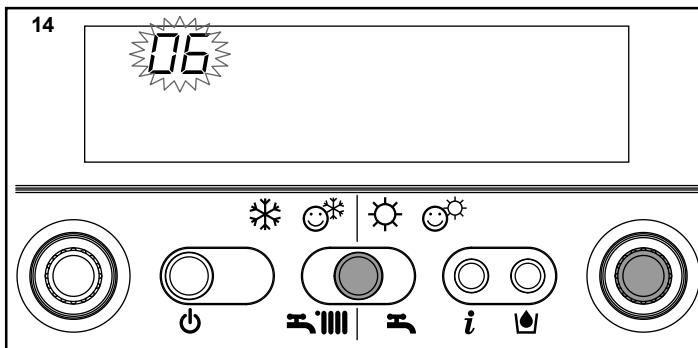
- **SUMMER COMFORT** : with the selector in this position, the boiler provides just domestic hot water with a temperature stabiliser for small deliveries. Ideal at the times of year or in the areas where the mains water is already warm. In these conditions, the temperature of the hot water produced by a boiler with just traditional functions (see SUMMER and WINTER COMFORT) may be instable.

Adjusting heating water temperature

Turning the selector A (Fig. 4), after having positioned the selector mode on winter or winter comfort , it is possible to regulate the heating water temperature.

Turn clockwise to increase the temperature and anticlockwise to decrease. The bar segments light up (every 5°C) as the temperature is increased. The selected temperature value appears on the display. If you enter the S.A.R.A. adjustment field (from 55 to 65°C) while selecting the heating water temperature, the symbol and the graduated scale start flashing. For details about the S.A.R.A. function, read page 12. The selected temperature value appears on the display.





Adjusting heating water temperature with an external sensor connected

When an external probe is connected, the value of the delivery temperature is automatically chosen by the system which rapidly adjusts ambient temperature to the changes in external temperature. Just the central segment of the bar is illuminated (Fig. 5).

To increase or decrease the temperature with respect to the value automatically calculated by the electronic board, turn the heating water selector clockwise to increase and anticlockwise to decrease. The bar segments light up (at every comfort level), correction tolerance lies between - 5 and + 5 comfort levels (Fig. 5). When choosing the level of comfort, the digit area of the display shows the required level of comfort while the bar shows the matching segment (Fig. 6).

Adjusting domestic hot water temperature

To adjust domestic hot water temperature, turn switch **B** (Fig. 7) clockwise to increase and anticlockwise to decrease. The bar segments light up (every 3°C) as the temperature is increased.

The selected temperature value appears on the display.

When choosing the temperature, both for heating and domestic hot water, the display shows the value being selected. About 4 seconds after the selection has been made, the modification is memorised and the display returns to the delivery temperature read by the probe.

Working the boiler

Adjust the ambient thermostat to the required temperature (approx. 20°C). If there is a demand for heating water, the boiler starts and the symbol is shown on the display (Fig. 8). The boiler will remain working until the set temperatures are reached, after which it will go on stand-by. In the event of ignition or operating faults, the boiler will perform a "safety stop".

The flame symbol will go out and the fault code and will be displayed (Fig. 9). For a description of faults and how to reset them, consult chapter "Troubleshooting".

Switching off

Switching off for short periods

For brief absences press the button to switch off the boiler. The display will show two segments in the central area (Fig. 3). When the boiler remains powered with the gas tap open, it is protected by the following systems:

- anti-freeze (Fig. 10): when the temperature of the water in the boiler falls below safety values, the circulator and the burner work at minimum power to increase the water temperature to a safe value (35°C). The symbol lights up on the display.
- circulator anti-block: one operating cycle is performed every 24 hours.

Switching off for long periods

For prolonged absences press the button to switch off the boiler (Fig. 3). The display will show two segments in the central area. Turn the main switch to "off".

Turn off the gas tap under the boiler by turning it clockwise (Fig. 11).

In this case, the anti-freeze and anti-block systems are disabled. Empty the water circuit or suitably protect it with a good make of anti-freeze. Drain the domestic hot water circuit.

Boiler functions

Semi-automatic filling

The boiler features a semi-automatic filling device which turns on by pressing the button when the corresponding symbol is shown on the display (Fig. 12).

If this condition occurs it means that the system is incorrectly pressurised though the boiler will continue to work regularly. Press the circuit filling button to start-up the filling sequence.

INF2 list

Step	Description	Display 2 digits	Display 4 digits
1	Input probe temperature	xx	01 °C
2	Return probe temperature	xx	02 °C
3	First sanitary probe temperature (*)	xx	03 °C
4	Not used in this model	xx	Cond °C
5	Not used in this model	xx	05
6	Second heating system probe temperature	xx	06 °C
7	Not used in this model	xx	07
8	Ventilator speed /100	xx	FAN
9	Not used in this model	xx	09
10	Not used in this model	xx	10
11-18	Historic alarm codes	xx	HIS0-HIS7

Note (*): if the SAN probe is faulty or disconnected, in the place of the value “- -” is displayed.

Press the circuit filling button  a second time to interrupt the filling sequence.

During filling, the drops of the circuit filling symbol  and the growing pressure value appear on the display in a cascade sequence (Fig. 13).

After filling, the  symbol is displayed for a few moments and then turns off.

Note

During filling, the boiler does not perform other functions. For example, if there is a request for domestic hot water, the boiler is unable to provide it until filling has finished.

Note

If circuit pressure reaches 0.6 bar, the pressure value flashes on the display (Fig. 14); if it falls below a minimum safety value (0.3 bar), fault code 41 appears on the display (Fig. 15) for a certain time, following which, if the fault persists, fault code 40 is displayed (see chapter on “Troubleshooting”).

In the event of fault 40, press  to reset and then  to start filling the circuit.

If you have to fill the system several times, contact the Technical Service Centre to check whether the heating circuit is watertight (see if there are any leaks).

Information

Press , the display turns off and just the word InFO appears (Fig. 16). Press the button  to view operating information. Press the button again to move on to the next piece of information. If the  button is not pressed, the system automatically exits the function.

Info list:

Info 0 - shows the word InFO (Fig. 16)

Info 1 - only with the external probe connected, displays external temperature (e.g. 12°C) (Fig. 17).

The values shown on the display range between - 30°C and 35°C.

Beyond these values the display shows “--”.

Info 2 - shows circuit pressure (Fig. 18)

Info 3 - shows the set heating temperature (Fig. 19)

Info 4 - shows the set domestic hot water temperature (Fig. 20)

Info 5 - displays the set heating temperature, in reference to the second circuit, only if it is connected.

S.A.R.A. function (Fig. 21)

If the “winter” mode is selected, the S.A.R.A. (**Automatic Ambient Adjustment System**) function can be activated.

Turn the heating water temperature selector to a temperature ranging between 55 and 65°C.

The S.A.R.A. self-adjustment system activates: depending on the temperature set on the ambient thermostat and the time taken to reach it, the boiler automatically adjusts the heating water temperature to reduce operating times, thereby increasing operating comfort and energy saving.

S.A.R.A. BOOSTER function (Fig. 22)

If the “winter comfort” mode is selected, the S.A.R.A. Booster function is activated for the heating circuit and reaches the required ambient temperature more quickly.

DOMESTIC HOT WATER PRE-HEATING function (Fig. 22)

If the “winter comfort” mode is selected, the domestic hot water Preheating function is enabled. This function sets out to keep the domestic hot water contained in the boiler hot, thereby considerably reducing delivery waiting times.

The  function should be selected to reduce power consumption in areas where the mains water is not particularly cold.

In this case, the Booster and Preheating functions are not activated.

INF2 (Fig. 23)

It is possible to display information, which may be useful for the Technical Assistance Centre, by pressing the button  for 10 seconds: the code “INF2” appears on the display.

13 - START-UP AND OPERATION (GREEN R.S.I.)

This boiler is able to operate in different conditions:

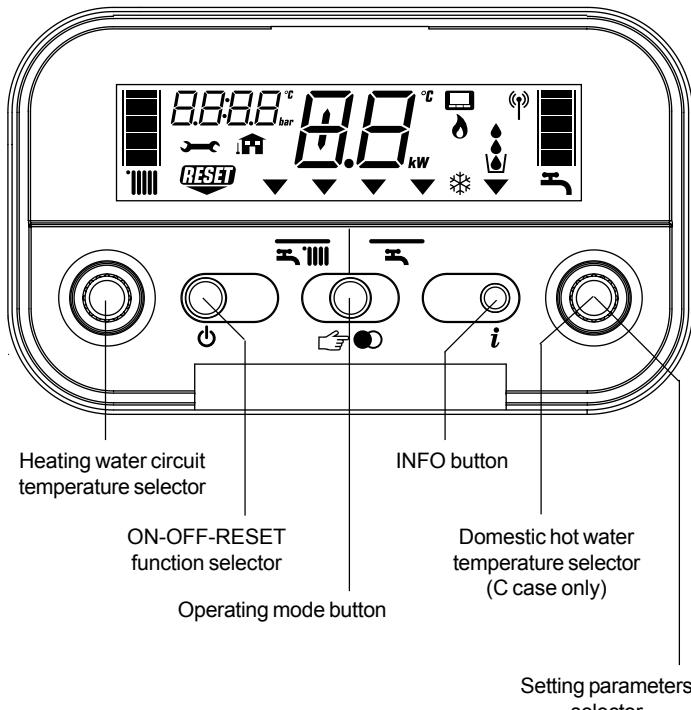
CASE A - only heating

CASE B - only heating with external water tank connected, managed by a thermostat, to prepare domestic hot water

CASE C - only heating with external water tank connected, managed by a temperature sensor (kit available upon request), to prepare domestic hot water.

Depending on the type of installation selected, it is necessary to set the parameter "domestic hot water mode". This operation must be performed by a Technical Service Centre when starting-up the boiler.

Description of commands



Heating water temperature selector: sets the heating water temperature.

Domestic hot water temperature selector (C case only): sets the domestic hot water temperature stored in the water tank.

Setting parameters selector (cases A, B and C): using in calibration and programmation phase.

Function key:

ON - the boiler is electrically powered and waiting for operating requests (-)

OFF - the boiler is electrically powered but will not respond to operating requests

RESET - resets the boiler following a fault

Operating mode button: button allows to choose the desired operating mode: pressing it, the indicator "function selector" ▼ moves to: (winter) or (summer, only if water-tank connected).

Info button: shows a sequence of information concerning the operating status of the machine.

Switching on

Switch on the boiler as follows:

- access the gas tap through the slots in the cover located in the lower part of the boiler
- open the gas tap by turning it anti-clockwise (Fig. 1)
- power the boiler.

When powered, the boiler performs a test sequence and a series of numbers and letters are shown on the display.

If the test is successful the boiler is ready to work about 4 seconds after the cycle ends.

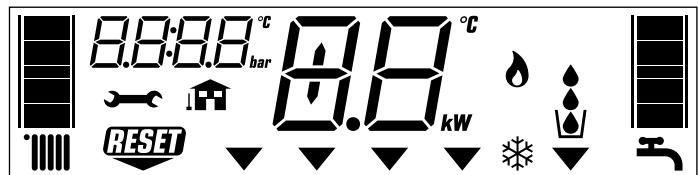
The display will look like Fig. 2.

If the test is unsuccessful, the boiler will not work and a "0" will flash on the display.

In this case, contact the Technical Assistance Centre.

! The boiler turns on in the status it was in before it was switched off: if the boiler was in the winter mode when it was switched off, it will turn on again in the winter mode. If it was in the OFF mode, the display will show two segments in the central area (Fig. 3). Press the button to enable operation.

Description of display symbols



graduated heating water temperature scale with heating function symbol

graduated domestic hot water temperature scale (shown in C case only)

domestic hot water function symbol (shown in B and C cases)

fault symbol (for details, please see page 22)

reset symbol (for details, please see page 22)

pressure value

external sensor connection

heating/domestic hot water temperature (shown in C case only) or

fault symbol (e.g. 10 - no flame)

function selector (turned to the chosen operating mode: winter or summer (only if water-tank connected))

burner operating symbol

anti-freeze function active symbol

Choose the desired operating mode by pressing button, until the ▼ symbol moves to:

WINTER

SUMMER

WINTER function (Fig. 4)

With the selector in this position, the boiler provides hot water for the heating and, if an external water tank is connected, provides water to the water tank to allow domestic hot water preparation. Function S.A.R.A Booster is enabled in this position (see chapter "Boiler functions").

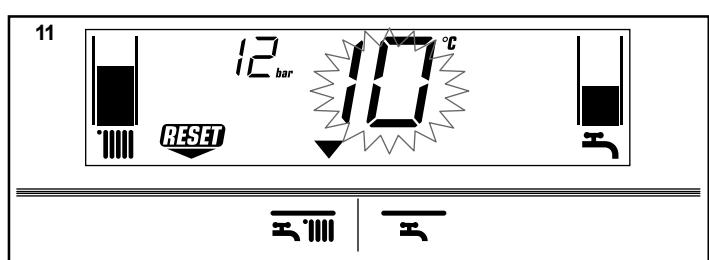
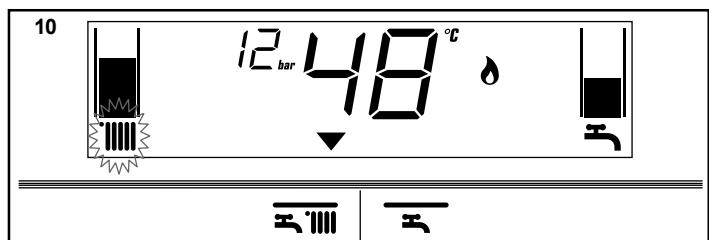
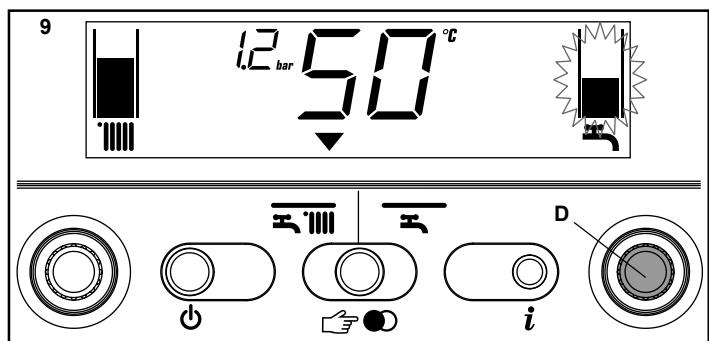
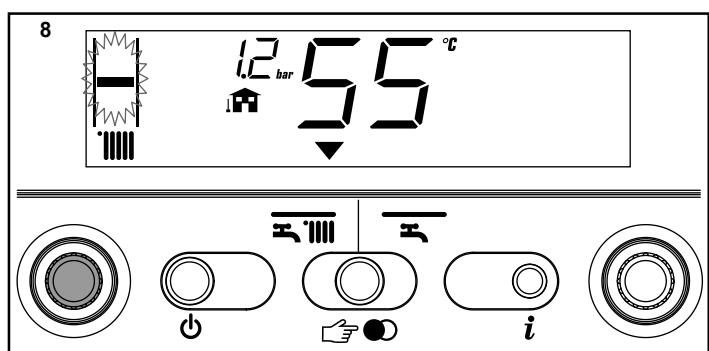
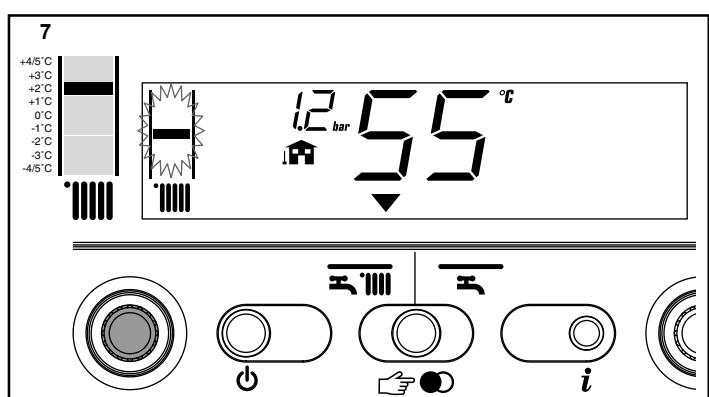
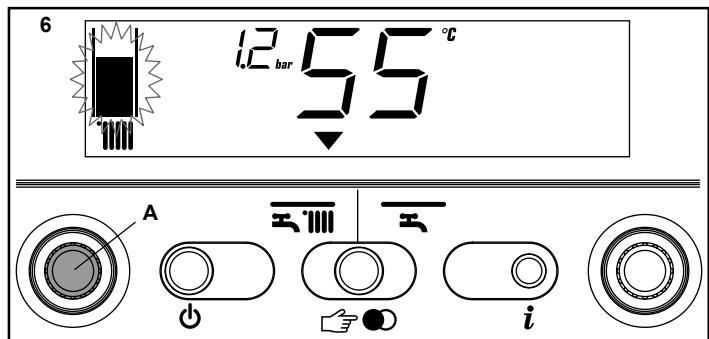
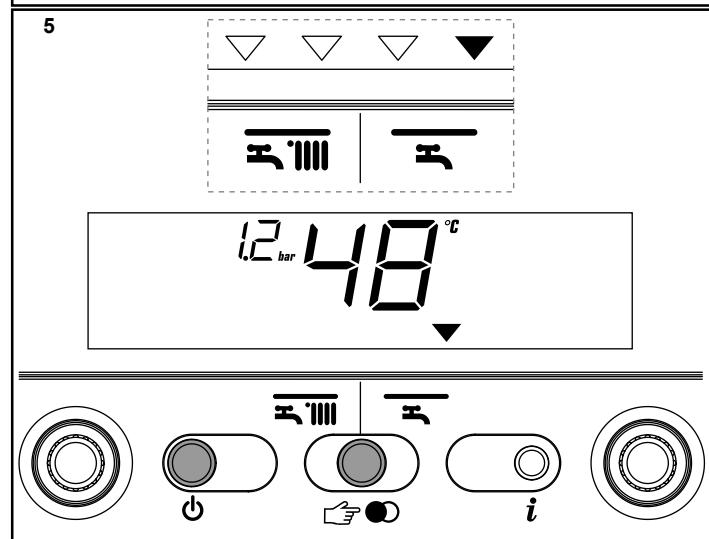
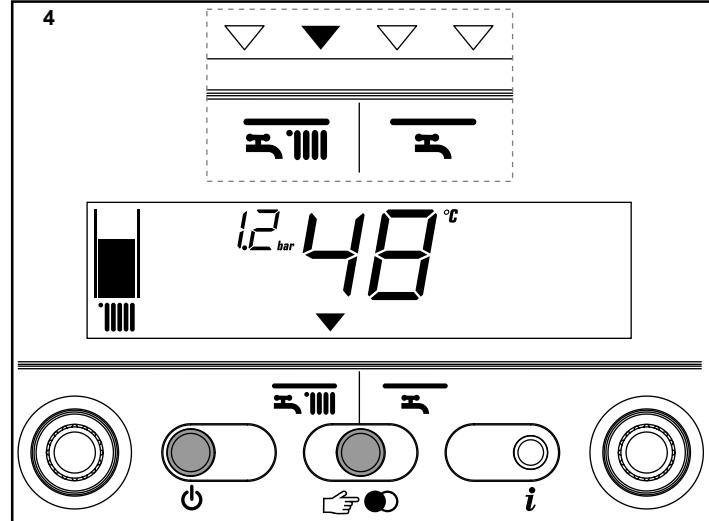
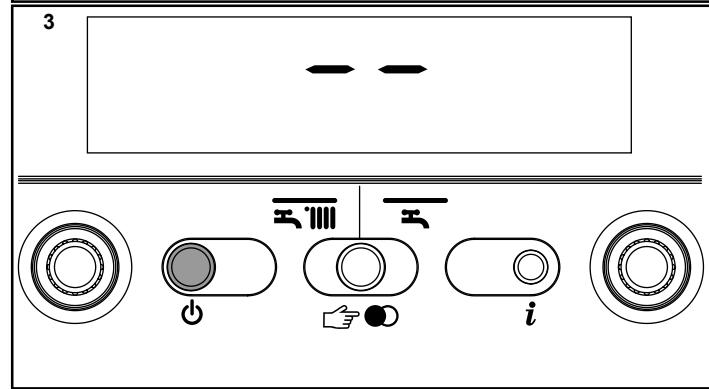
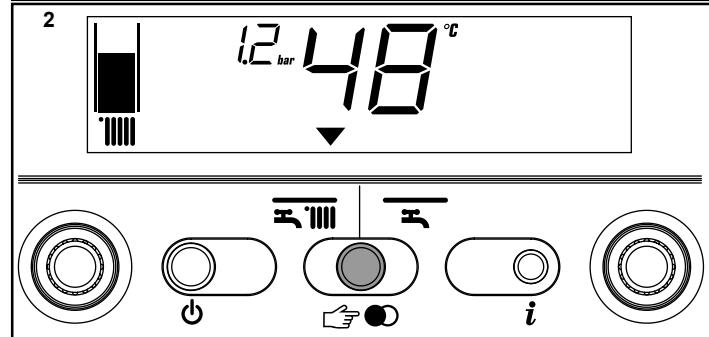
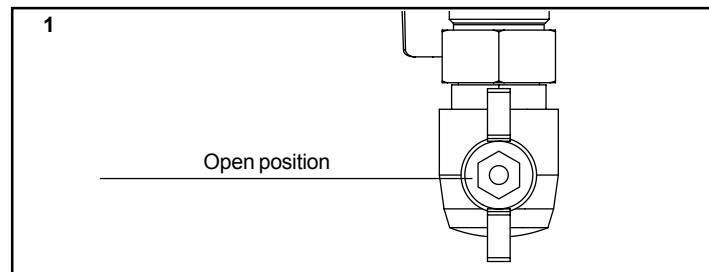
SUMMER function (only with external water tank connected, Fig. 5)

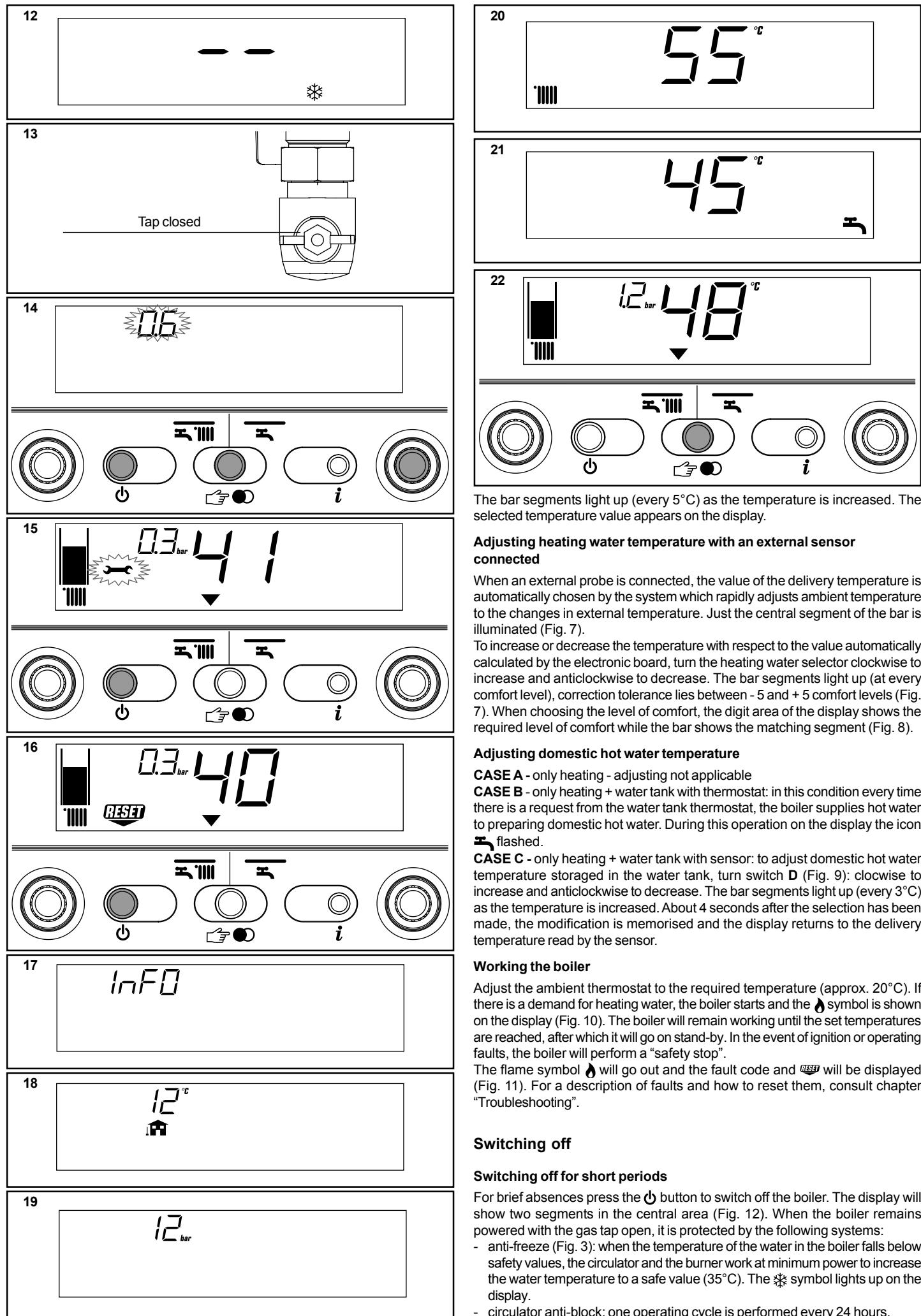
With the selector in this position, the boiler provides water to the water tank with a temperature stabiliser to allow domestic hot water preparation.

Adjusting heating water temperature

Turning the selector A (Fig. 6), after having positioned the selector mode on winter , it is possible to regulate the heating water temperature.

Turn clockwise to increase the temperature and anticlockwise to decrease.





INF2 list

Step	Description	Display 2 digits	Display 4 digits
1	Input probe temperature	xx	01 °C
2	Return probe temperature	xx	02 °C
3	Sanitary probe temperature: water tank with thermostat (A and B cases) water tank with probe (C case)	-- xx	03 °C 03 °C
4	Not used in this model	xx	Cond °C
5	Not used in this model	xx	05
6	Second heating system probe temperature	xx	06 °C
7	Not used in this model	xx	07
8	Ventilator speed /100	xx	FAN
9	Not used in this model	xx	09
10	Not used in this model	xx	10
11-18	Historic alarm codes	xx	HIS0-HIS7

Switching off for long periods

For prolonged absences press the  button to switch off the boiler (Fig. 3). The display will show two segments in the central area. Turn the main switch to "off".

Turn off the gas tap under the boiler by turning it clockwise (Fig. 13).

 In this case, the anti-freeze and anti-block systems are disabled. Empty the water circuit or suitably protect it with a good make of anti-freeze.

Boiler functions**Filling the circuit**

If circuit pressure reaches 0.6 bar, the pressure value flashes on the display (Fig. 14); if it falls below a minimum safety value (0.3 bar), fault code 41 appears on the display (Fig. 15) for a certain time, following which, if the fault persists, fault code 40 is displayed (see chapter on "Troubleshooting").

In the event of fault 40 (Fig. 16) proceed as follows to restore the correct pressure value:

- press  button
- open the filling tap external to the boiler, until the pressure shown in the display is between 1 and 1.5 bar.

If you have to fill the system several times, contact the Technical Service Centre to check whether the heating circuit is watertight (see if there are any leaks).

Information

Press , the display turns off and just the word InFO appears (Fig. 17). Press the button  to view operating information. Press the button again to move on to the next piece of information. If the  button is not pressed, the system automatically exits the function.

Info list:

Info 0 - shows the word InFO (Fig. 17)

Info 1 - only with the external probe connected, displays external temperature (e.g. 12°C) (Fig. 18). The values shown on the display range between - 30°C and 35°C. Beyond these values the display shows " - "

Info 2 - shows circuit pressure (Fig. 19)

Info 3 - shows the set heating temperature (Fig. 20)

Info 4 - shows the set heating temperature (only water tank with sensor, Fig. 21)

Info 5 - displays the set heating temperature, in reference to the second circuit, only if it is connected.

S.A.R.A. BOOSTER function (Fig. 22)

If the "winter" mode is selected, the S.A.R.A. Booster function is activated for the heating circuit. This function allows to reach the required ambient temperature more quickly.

Depending on the temperature set on the ambient thermostat and the time taken to reach it, the boiler automatically adjusts the heating water temperature to reduce operating times, thereby increasing operating comfort and energy saving.

INF2 (Fig. 23)

It is possible to display information, which may be useful for the Technical Assistance Centre, by pressing the button  for 10 seconds: the code "INF2" appears on the display.

14 - TROUBLESHOOTING

When a fault appears on the display, the flame symbol  goes out, a flashing code is shown and the two symbols  and  appear either together or separately. For a description of the faults, consult the following table.

FAULT	Alarm ID	Symbol 	Symbol 
FLAME FAILURE BLOCK (D)	10	YES	NO
PARASITE FLAME (T)	11	NO	YES
RE-ATTEMPT IN PROGRESS (T)	12	NO	NO
MINIMUM GAS INPUT PRESSURE (T)	13	NO	YES
MINIMUM GAS INPUT PRESSURE (D)	14	YES	NO
FLAME PRESENT IN STAND-BY FOR NO REASON (D)	15	YES	YES
LIMIT THERMOSTAT/FUME THERMOSTAT (D)	20	YES	NO
SHORT CIRCUIT FUMES PROBE (D)	21	YES	YES
MAXIMUM TEMPERATURE FUMES PROBE (D)	22	YES	NO
MAXIMUM TEMPERATURE INPUT PROBE (D)	24	YES	NO
MAXIMUM TEMPERATURE INPUT PROBE (T)	25	NO	YES
MAXIMUM TEMPERATURE RETURN PROBE (D)	26	YES	NO
MAXIMUM TEMPERATURE RETURN PROBE (T)	27	NO	YES
RETURN-INPUT PROBE DIFFERENTIAL (D)	28	YES	YES
FUMES PROBE OPEN (D)	29	YES	YES
FUMES OUTLET OR AIR PRESSURE SWITCH (cycle start) (D)	30	YES	NO
FUMES OUTLET OR AIR PRESSURE SWITCH (cycle start) (T)	31	NO	YES
VENTILATOR IN CYCLE (low number of revolutions) (D)	33	YES	YES
VENTILATOR (cycle start) (D)	34	YES	NO
VENTILATOR (cycle end) (T)	35	NO	YES
FUMES OUTLET OR AIR PRESSURE SWITCH (in cycle) (T)	36	NO	YES
VENTILATOR IN CYCLE (high number of revolutions) (D)	37	YES	YES
FUMES OUTLET OR AIR PRESSURE SWITCH (in cycle) (D)	38	YES	YES
INSUFFICIENT SYSTEM PRESSURE (D*)	40	YES	NO
INSUFFICIENT SYSTEM PRESSURE (T*)	41	NO	YES
WATER PRESSURE TRANSDUCER (D)	42	YES	YES
ELECTRONIC BOARD (D)	50-59	YES	YES
SANITARY PROBE 1 (T°)	60	NO	YES
SHORT CIRCUIT/OPEN PRIMARY PROBE (D)	70	YES	YES
MAXIMUM TEMPERATURE INPUT PROBE (T)	71	NO	NO
SHORT CIRCUIT/OPEN RETURN PROBE (D)	72	YES	YES
LOW TEMPERATURE THERMOSTAT (T)	77	NO	YES
INPUT/RETURN DIFFERENTIAL (T)	78	NO	YES
INPUT/RETURN DIFFERENTIAL (D)	79	YES	NO
SYSTEM ANOMALY (D)	80	YES	YES
SYSTEM ANOMALY (T)	81	NO	YES
SYSTEM ANOMALY (D)	82	YES	YES
SYSTEM ANOMALY (T)	83	NO	YES
CONDENSATE OR CONDENSATE SENSOR (D)	92	YES	NO
CONDENSATE OR CONDENSATE SENSOR (T)	93	NO	YES
CONDENSATE SENSOR OR OPEN CIRCUIT (D)	94	YES	YES
CONDENSATE SENSOR OR OPEN CIRCUIT (T)	95	NO	YES

(D) - Permanent - (T) - Temporary. In this operating status the boiler attempts to eliminate the fault on its own

(*) C.S.I. - Fault in domestic hot water circuit sensor - 60: the boiler works regularly but does not ensure the stability of the hot water temperature which, however, is delivered at a temperature of approximately 50°C. The fault code is only displayed in standby. R.S.I. - Only with external water tank with sensor. The fault code is shown when the boiler is in stand-by.

(*) If these two errors occur, check the pressure indicated on the water gauge. If the pressure is insufficient (< 0,4 bar, red area), proceed with the filling operations described in the chapter "Filling and emptying the systems". If the system's pressure is sufficient (> 0,6 bar, blue area) the malfunction is caused by a lack of water circulation. Contact the Technical Assistance.

Resetting faults

Wait for about 10 seconds before resetting operating conditions.

Then proceed as follows:

1) Viewing just the symbol

If  disappears, it means that an operating fault has been discovered which the boiler is attempting to solve on its own (temporary stoppage). If the boiler does not resume normal operation, two things may happen:

Case A (Fig. A)

 disappears, the  symbol and a different alarm code appear. In this case, proceed as described in point 2.

Case B (Fig. B)

 and a different alarm code are displayed together with .

In this case, proceed as described in point 3.

2) Viewing just the symbol (Fig. C)

Press the  button to reset the appliance. If the boiler starts the ignition phase and resumes normal operation, it may have stopped by accident.

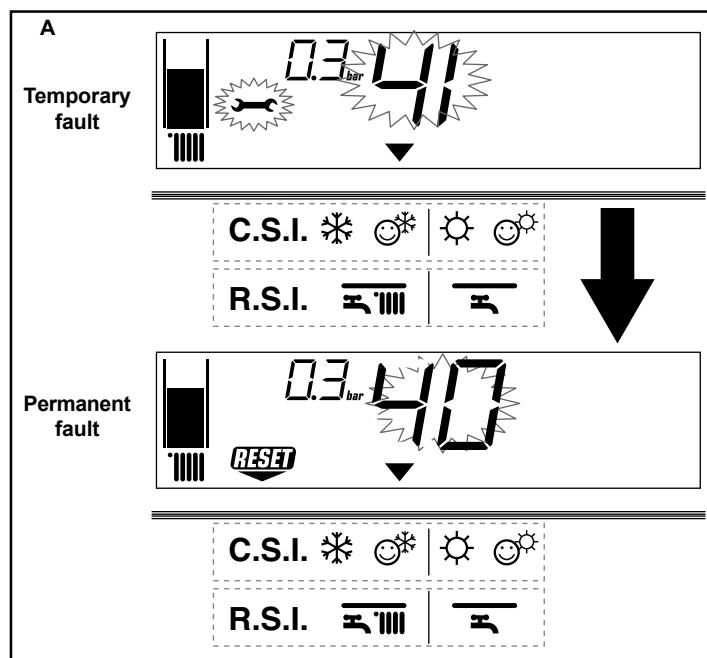
If these stoppages should continue, contact the Technical Assistance Centre.

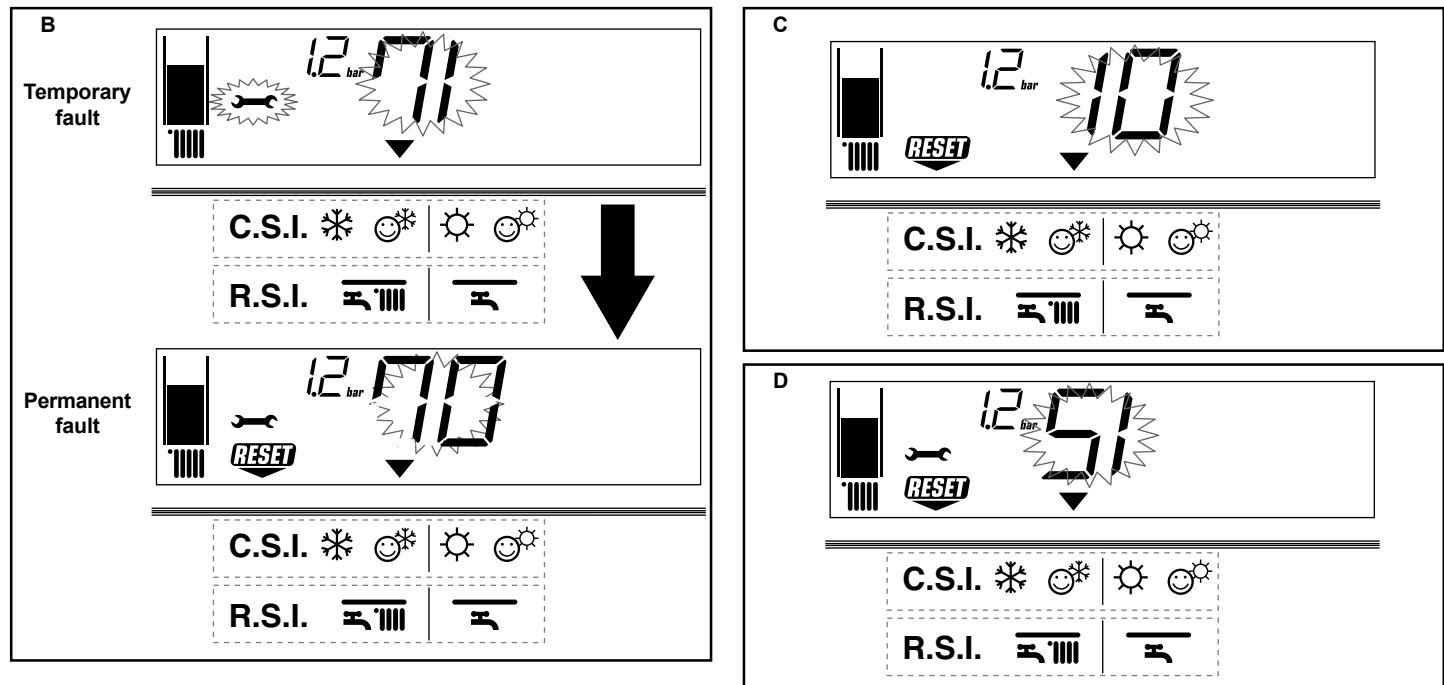
3) Viewing the and symbols (Fig. D)

Contact the Technical Assistance Centre.

Note (C.S.I.)

Fault in domestic hot water circuit sensor - 60: the boiler works regularly but does not ensure the stability of the hot water temperature which, however, is delivered at a temperature of approximately 50°C. The fault code is only displayed in standby.





15 - PROGRAMMING PARAMETERS

This boiler incorporates a new generation of electronic boards that, by setting/ modifying operating parameters, allow the boiler to be personalised to satisfy various system and/or user requirements. The programmable parameters are shown in the table on the next page.

- ⚠** The parameters must be programmed with the boiler in the OFF position. To do this, press the **⊕** button until the display shows “--” (Fig. E). During parameter modification operations, the “select functions” button acts as an ENTER (confirm) button, the **i** button acts as an ESCAPE (escape) button. If no confirmation is given within 10 seconds, the value is discarded and returns to the previously set one.

Setting the password

Press and hold down the select functions button and the **i** button together for about 10 seconds. The display will look like Fig. F. Enter the password for accessing the parameter modifications function by turning the domestic hot water temperature selector to obtain the required value. The password for accessing the parameter programming function is located on the back side of the control panel. Confirm by pressing ENTER.

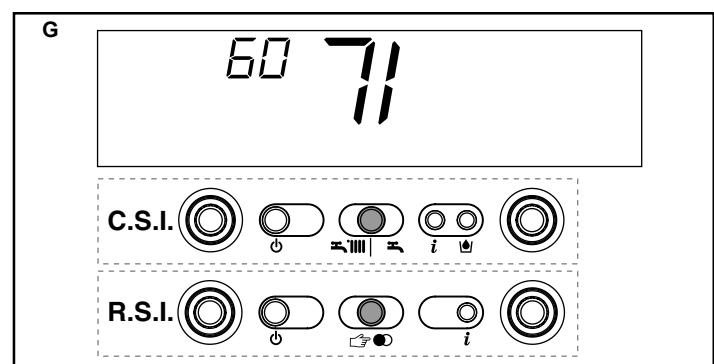
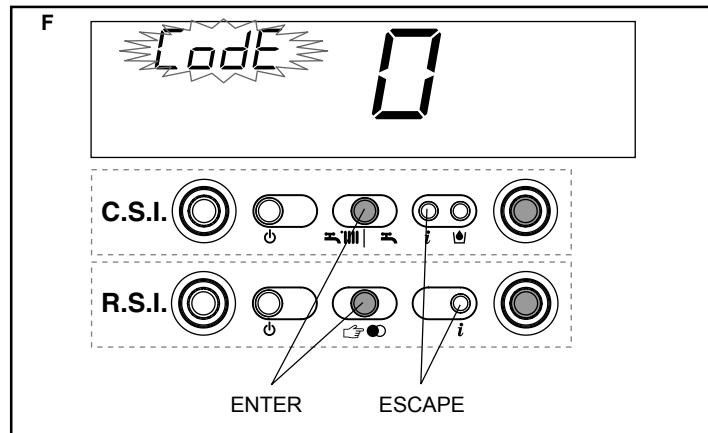
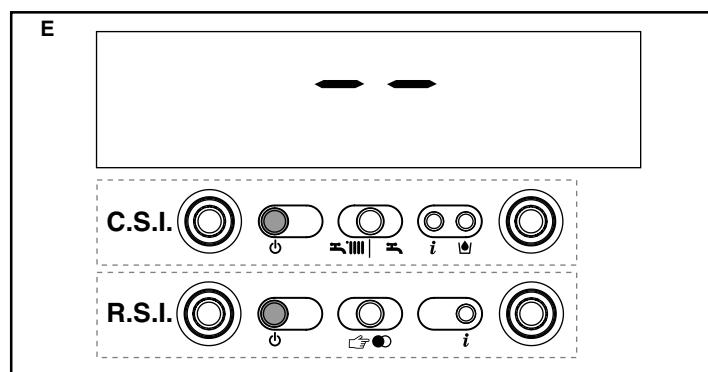
Modifying parameters

Turn the domestic hot water temperature selector (Fig. G) to sequentially scroll the two-figure codes of the parameters indicated in the table. After identifying the parameter you wish to modify, proceed as follows:

- press ENTER to access the parameter modification function. When ENTER is pressed, the previously set value starts flashing (Fig.H)
- turn the domestic hot water temperature selector to change the value
- press ENTER to confirm the new value. The digits stop flashing (Fig.I)
- press ESCAPE to exit.

The boiler returns to the “--” (OFF) status.

To reset, press the **⊕** button (Fig. E).



PROGRAMMABLE PARAMETERS

N. PAR.	PARAMETERS DESCRIPTION	UNIT OF MEASURE	MIN	MAX	DEFAULT (1)	PARAMETERS (2)
1	GAS TYPE		1 Methane 2 LPG 3 Methane France		1	
2	BOILER POWER		10(3)-16-20(3)-26-30-34-50(3)-70(3)		16*-26-34	
3	INSULATION LEVEL OF BUILDING	min	5	20	5	
10	DHW MODE		0 - OFF 1 - Instantaneous 2 - Mini-tank 3 - External water- tank with thermostat 4 - External water- tank with sensor		1	
11	DHW CIRCUIT MAXIMUM SET-POINT (C.S.I.)	°C		60	60	
12	WATER TANK MAXIMUM SET-POINT (R.S.I.)	°C	40	80	60	
13	DELIVERY TEMPERATURE EXTERNAL WATER TANK (R.S.I.)	°C	40	85	80	
14	DELTA EXTERNAL WATER TANK (ON) (R.S.I.)	°C	50	10	5	
20	HEATING MODE		0 - OFF 1 - ON 2 - Zone valves + remote control panel 3 - CONNECT AP 4 - Not used 5 - Not used 6 - CONNECT AT/BT		1	
21	HEATING CIRCUIT MAXIMUM SET-POINT	°C	40	80	80	
22	MINIMUM HEATING SET POINT	°C	20	39	20	
23	MAXIMUM HEATING VENTILATOR SPEED	revs/min	36 (3.600 ⁽⁴⁾)	G20 G31	MAX	
				16 kW* 48 25 kW 49 35 kW 60		
24	MINIMUM HEATING VENTILATOR SPEED	revs/min	G20	G31 36 (3.600 ⁽⁴⁾)	MIN	
				16 kW* 14 25 kW 14 35 kW 14		
25	DIFFERENTIAL HEATING POSITIVE	°C	2	10	6	
26	DIFFERENTIAL HEATING NEGATIVE	°C	2	10	6	
28	MAX HEATING POWER REDUCTION TIMER	min	0	20	15	
29	FORCED HEATING SHUT DOWN TIMER	min	0	20	5	
30	HEATING TIMER RESET FUNCTION	-	0 (NO)	1 (YES)	0	
31	MAXIMUM HEATING SET POINT 2CH (II circuit)	°C	40	80	80	
32	MINIMUM HEATING SET POINT 2CH (II circuit)	°C	20	39	20	
40	DHW THERMOSTAT OPERATING MODE (C.S.I.)		0 - OFF 1 - AUTO 2 - ON		1	
41	DHW PREHEATING FUNCTION (C.S.I.)		0 - OFF 1 - AUTO 2 - ON		1	
42	S.A.R.A. FUNCTION (C.S.I.)		0 - OFF 1 - AUTO		1	
43	S.A.R.A. BOOSTER FUNCTION		0 - OFF 1 - AUTO		1	
44	THERMOREGULATION FUNCTION		0 - OFF 1 - AUTO		1	
45	INCLINATION THERMOREGULATION CURVE (OTC)	-	2,5	40	20	
46	THERMOREGULATION FUNCTION 2CH		0 - OFF 1 - AUTO		1	
47	INCLINATION THERMOREGULATION CURVE (OTC) 2CH	-	2,5	40	20	
48	THIS PARAMETER IS NOT USED ON THIS MODEL. DO NOT MODIFY				0	
50	THIS PARAMETER IS NOT USED ON THIS MODEL. DO NOT MODIFY				1	
51	HEAT REQUEST TYPE CH1 (I circuit)	-	0	1	0	
52	HEAT REQUEST TYPE CH2 (II circuit)	-	0	1	0	
61	DHW ANTIFREEZE FUNCTION TEMPERATURE (ON)	°C	0	10	4	
62	HEATING ANTIFREEZE FUNC. DELIVERY TEMP. (ON)	°C	0	10	6	
63	THIS PARAMETER IS NOT USED ON THIS MODEL. DO NOT MODIFY				6	
65	EXTERNAL SENSOR REACTIVITY		0 (very slow)	255 (very slow)	255	
85	SEMI-AUTOMATIC FILLING		0 - Disabled 1 - Enabled		1	
86	AUTOMATIC FILLING PRESSURE (ON)	bar	0.4	1.0	0.6	

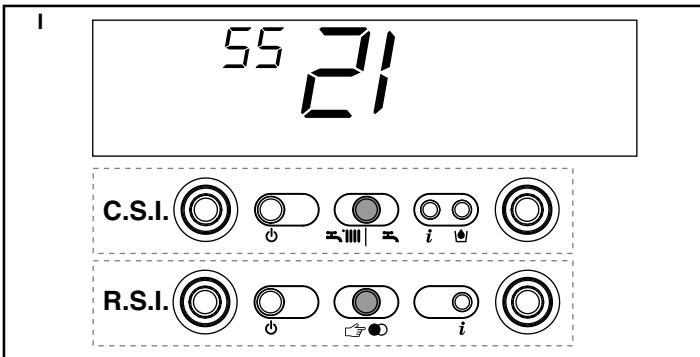
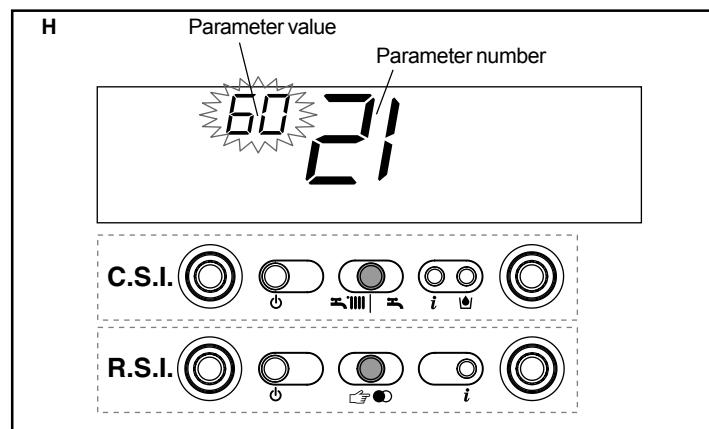
* R.S.I. only

(1) Setted in factory.

(2) Setted by technical assistance centre.

(3) Power not available at the moment.

(4) The value is expressed on the display in revs/min/100 (example 3.600 = 36).



16 - SETTING THE THERMOREGULATION

Checking the connection with the external probe

After connecting the external probe to the boiler, use the INFO function to check that the probe has been automatically recognised by the temperature control card. Immediately after installation, the value read by the probe may very well be higher than that measured by a reference probe. Enable and optimise the THERMOREGULATION function by setting the following parameters:

PARAMETER	AVAILABLE IN THE PROGRAMMING MODE
TYPE OF BUILDING	3 INSTALLATION AND CALIBRATION & SERVICE
MAXIMUM HEATING SET POINT	21 INSTALLATION
MINIMUM HEATING SET POINT	22 INSTALLATION
ENABLE THERMOREGULATION FUNCTION	44 INSTALLATION
OFFSET TEMPERATURE CURVE	45 INSTALLATION AND CALIBRATION & SERVICE
TYPE OF HEAT REQUEST	51 INSTALLATION

To access the programming mode, consult "Programming parameters".

PARAMETER 03. Type of building

In order to calculate delivery temperature, the temperature control system does not directly use the external temperature value but considers the heat insulation of the building: in well-lagged buildings, external temperature variations affect the ambient temperature less than they do in badly-lagged buildings. Use parameter 3 to set the heat insulation level of the building according to the following scheme:

Type of building				
New houses	Old houses	Hollow bricks	Solid bricks	Stones
A	19	14	12	8
B	20	16	15	11
C	19	15	14	9
D	18	12	10	5

PARAMETERS 21 and 22. Maximum and minimum delivery temperature

temperature

These two parameters limit the delivery temperature automatically produced by the TEMPERATURE CONTROL function. PARAMETER 21 determines MAXIMUM DELIVERY TEMPERATURE (MAXIMUM HEATING SET POINT) while PARAMETER 22 determines MINIMUM DELIVERY TEMPERATURE (MINIMUM HEATING SET POINT).

PARAMETER 44. Enable thermoregulation function

The connected external temperature probe combined with PARAMETER 44 provides the following operating modes:

EXTERNAL PROBE CONNECTED and PARAMETER 44 = 0 (OFF) in this case the TEMPERATURE CONTROL function is disabled even though the external probe is connected. The temperature read by the external probe can always be viewed by pressing the INFO button. The TEMPERATURE CONTROL symbols are not displayed.

EXTERNAL PROBE CONNECTED, PARAMETER 44 = 1 (ON) in this case the TEMPERATURE CONTROL function is enabled. The temperature read by the external probe and the TEMPERATURE CONTROL symbols can be viewed by pressing the INFO button.

 The TEMPERATURE CONTROL function cannot be enabled unless the external probe has been fitted and connected. In this case, PARAMETER 44 is ignored and has no effect on boiler operation.

PARAMETER 45. Choosing the offset temperature curve (graph 1)

The offset heating curve maintains a theoretical ambient temperature of 20°C at external temperatures ranging from +20°C to -20°C. The choice of the curve depends on the rated minimum external temperature (on the geographical area, therefore) and the rated delivery temperature (on the type of system, therefore) and must be carefully calculated by the fitter using the following formula:

$$P.45 = 10 \times \frac{\text{rated delivery } T - 20}{20 - \text{rated min. external } T}$$

If, from your calculations, you obtain an intermediate value between two curves, we suggest choosing the compensation curve closest to the value obtained. Example: if the value obtained from the calculations is 8, this is between curve 7.5 and curve 10. In this case, choose the closest curve, which is 7.5.

PARAMETER 51. Type of heat request

IF AN AMBIENT THERMOSTAT IS CONNECTED TO THE BOILER, SET PARAMETER 51 = 0 (graph 2).

The ambient thermostat makes a heat request when its contact closes, while it stops it when its contact opens. Though delivery temperature is automatically calculated by the boiler, the user may manually override it. By modifying HEATING on the user interface, the HEATING SET POINT will no longer be available but just a value that can be set from +5 to -5°C as required. Modifications to this value do not directly change delivery temperature but affect the calculation made to automatically determine its value by modifying the reference temperature of the system (0 = 20°C).

For boilers fitted with the S.A.R.A. BOOSTER function, if the AMBIENT THERMOSTAT remains closed for a long time, the boiler automatically increases the delivery temperature which is added to the effect of the temperature control function. When the AMBIENT THERMOSTAT opens, the boiler automatically returns to the value determined by the TEMPERATURE CONTROL function.

IF A PROGRAMMABLE TIMER IS CONNECTED TO THE BOILER, SET PARAMETER 51 = 1 (graph 3).

When the contact is closed, the heat request is made by the delivery probe on the basis of the external temperature in order to maintain the rated ambient temperature at the DAY level (20°C). When the contact opens, it does not stop the heat request but reduces (parallel shift) the temperature curve to the NIGHT level (16°C). Though delivery temperature is automatically calculated by the boiler, the user may manually override it.

By modifying HEATING on the user interface, the HEATING SET POINT will no longer be available but just a value that can be set from +5 to -5°C as required.

Modifications to this value do not directly change delivery temperature but affect the calculation made to automatically determine its value by modifying the reference temperature of the system (0 = 20°C for DAY level; 16°C for NIGHT level).

CONNECT AT/BT

In case of using CONNECT AT/BT, accessory supplied on request, the boiler gives the possibility to choose 2 thermoregulation curves:

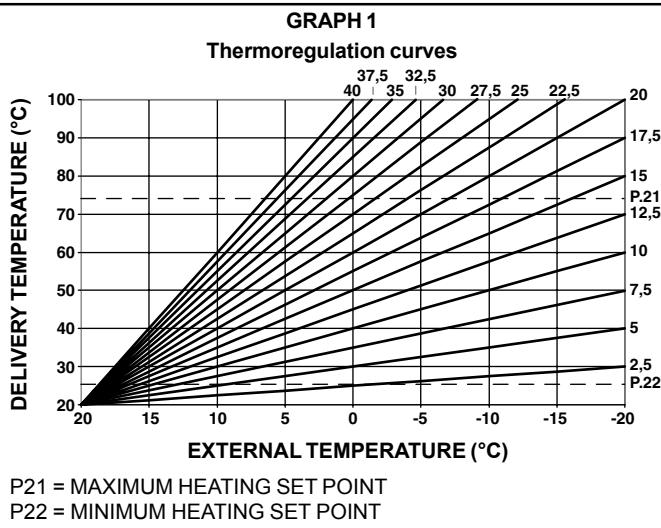
- OTC 1 CH (parameter 45) for a direct system
- OTC 2 CH (parameter 47) for a mixed system.

Even in case of second circuit (2CH) the curve depends on the external minimum project temperature (on the geographical area, therefore) and on the delivery project temperature (on the type of system, therefore); the installer must put attention to calculate it using the following formula:

$$P.47 = 10 \times \frac{\text{rated delivery } T - 20}{20 - \text{rated min. external } T}$$

Parameters 31 and 32 give the possibility to define the maximum and the minimum central heating set-point of the second circuit.

To correct the curve in this configuration, please refer to the instructions supplied with the accessory.

**17 - SERIAL NUMBER PLATE**

	DHW operation
	CH operation
Qn	nominal capacity
Pn	nominal power
IP	protection level
P. min	minimum pressure
Pmw	DHW maximum pressure
Pms	CH maximum pressure
T	temperature
η	working efficiency
D	specific capacity
NOx	NOx value class

	Gas type		Gas category	
	Condensing boiler			
N.	IP	P. min.		η =
230 V ~ 50 Hz	Qn =			D: l/min
Pmw = 6 bar T= 60 °C	Pn =			NOx: 5
Pms = 3 bar T= 90 °C				

18 - ADJUSTMENTS

The boiler has already been factory adjusted by the manufacturer. If a new adjustment is required, for example, after extraordinary maintenance, replacing the gas valve or converting from natural gas to LPG, proceed as follows.

⚠ Maximum and minimum power, minimum and maximum heating, must be adjusted in the indicated sequence by qualified staff.

- Unscrew the lower cover fixing screw (C, Fig. 1.4)
- Pull the cover towards you and remove (A-B) (Fig. 1.5)
- Loosen the two fixing screws (D) and remove the shell (Fig. 1.2)
- Lift up the panel and turn it forwards
- Loosen the pressure tap screw downline from the gas valve by about two turns and connect the pressure gauge to it

⚠ CALIBRATION & SERVICE operations must be performed with the boiler in the OFF position. To do this, press the button until the display shows “- -” (Fig. E).

⚠ During parameter modification operations, the “select functions” button acts as an ENTER (confirm) button, the button acts as an ESCAPE button. If no confirmation is given within 10 seconds, the value is discarded and returns to the previously set one.

Setting the password

Press and hold down the operating mode button and the button together for about 10 seconds. The display will look like Fig. F.

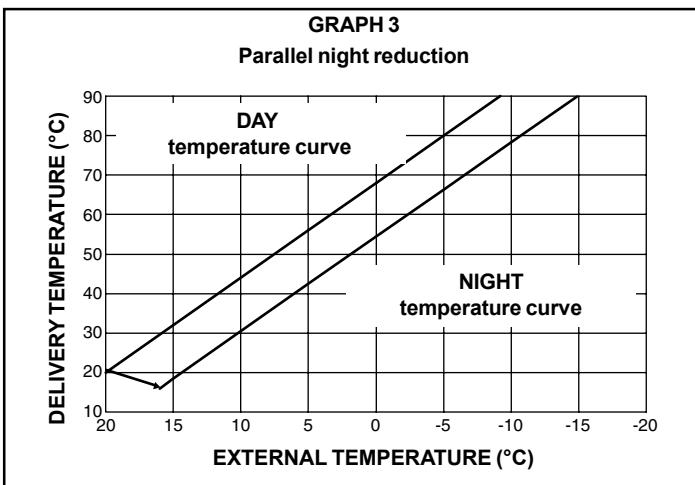
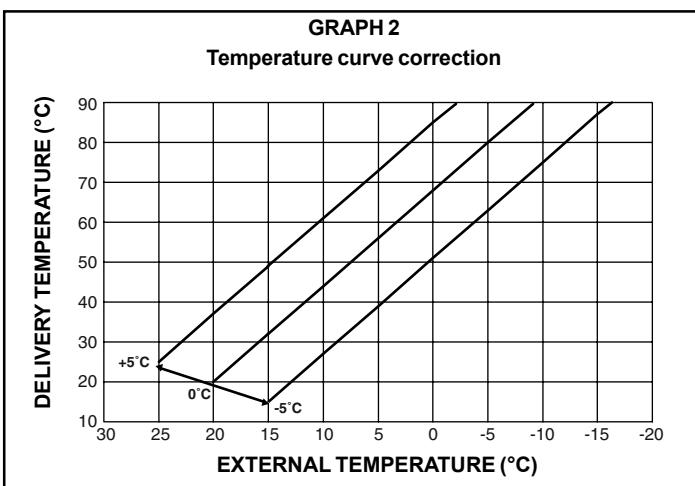
Enter the password for accessing the parameter modifications function by turning the domestic hot water temperature selector to the required value.

The password is located on the back side of the control panel. Confirm by pressing ENTER.

Calibration phases

Turn the domestic hot water selector to sequentially scroll the CALIBRATION & SERVICE phases:

- 1 gas type
 - 2 boiler power (do not modify this parameter)
 - 10 domestic hot water mode (do not modify this parameter)
 - 3 insulation level of building (only if external sensor is connected)
 - 45 inclination of thermoregulation curve (OTC), only if external sensor is connected)
 - 47 inclination of thermoregulation curve 2CH (OTC), only if external sensor is connected)
- HP maximum fan speed (do not modify this parameter)
LP minimum fan speed (do not modify this parameter)
SP ignition speed (do not modify this parameter)
HH boiler at maximum power
LL boiler at minimum power
MM fan ignition speed (do not modify this parameter)
23 maximum heating adjustment possibility
24 minimum heating adjustment possibility.
- ⚠ The parameters 2 - 10 - HP - SP - LP - MM - 23 - 24 must be modified, by professionally qualified personnel, only if absolutely necessary. The manufacturer refuses any responsibility in the case of incorrect setting of the parameters.**



GAS TYPE (P. 1)

Modify the set value as follows:

- press ENTER to access the parameter modification function. When ENTER is pressed, the previously set value starts flashing (Fig. H)
- turn the domestic hot water temperature selector to change the value (1 MTN - 2 LPG)
- press ENTER to confirm the new value. The digits stop flashing.

BOILER POWER (P. 2)

To modify the boiler power:

- select parameter 02
- press the ENTER button to access the parameter value modification function. As the ENTER button is pressed, the digits flash, highlighting the previously set value
- turn the sanitary water temperature selector in order to adjust the value to the desired number: 26 (25 kW) and 34 (35kW) for GREEN C.S.I.; 16 (16kW), 26 (25 kW) and 34 (35kW) for GREEN R.S.I.
- confirm the new value you have set by pressing ENTER. The digits stop flashing.

⚠ It is absolutely forbidden to set different gas types and/or boiler powers from those indicated on the registration plate.

⚠ The manufacturer refuses any responsibility if the 2 parameters are set at different values compared to those indicated on the registration plate.

MAXIMUM VENTILATOR SPEED (P. HP)

- Select parameter HP
- Press the ENTER button, then modify the value of the parameter by turning the sanitary water temperature selector. The maximum speed of the fan is linked with the type of gas and the power of the boiler, **table 1**
- Turn the sanitary water temperature selector in order to adjust the set value
- Confirm the new value you have set by pressing ENTER.

The value indicated on the display is expressed in revs min/100 (example 3600 = 36).

The value set during this operation automatically modifies the maximum value of parameter 23.

MINIMUM VENTILATOR SPEED (P. LP)

- Select parameter LP
- Press the ENTER button, then modify the value of the parameter by turning the sanitary water temperature selector. The minimum speed of the fan is linked with the type of gas and the power of the boiler, **table 2**
- Turn the sanitary water temperature selector in order to adjust the set value
- Confirm the new value you have set by pressing ENTER.

The value indicated on the display is expressed in revs min/100 (example 3600 = 36).

The value set during this operation automatically modifies the maximum value of parameter 24.

VENTILATOR IGNITION SPEED (P. SP)

- Select parameter SP
- Press the ENTER button, then modify the value of the parameter by turning the sanitary water temperature selector. The standard slow start value is 3700 revs/min
- Confirm the new value you have set by pressing ENTER.

MAXIMUM POWER ADJUSTMENT (P. HH) (Fig. 1.17)

- Turn the boiler OFF
- Select the parameter HH and wait for the boiler to come on
- Check that the maximum CO₂ reading on the analyser (see paragraph "Checking combustion parameters", page 23) corresponds with the values indicated in **table 3**.

If the CO₂ proves to comply with the values in the table, proceed to adjust the next parameter (LL - adjusting the minimum), if different modify the value by turning the maximum power adjustment screw with a screwdriver (clockwise to decrease) until you obtain a value contained in **table 3**.

MINIMUM POWER ADJUSTMENT (P. LL) (Fig. 1.17)

- Select the parameter LL (with the boiler still OFF) and wait for the boiler to come on.
- Check that the minimum CO₂ reading on the analyser (see paragraph "Checking combustion parameters", page 23) corresponds with the values indicated in **table 4**.

If the CO₂ proves to be different from the values in the table, proceed to adjust the parameter by turning the maximum power adjustment screw after having unscrewed the protective cap (clockwise to increase) until you obtain a value contained in **table 4**.

Table 1**MAXIMUM NUMBER OF FAN REVOLUTIONS**

	G20	G31	
16 R.S.I.	48	48	rpm
25 C.S.I.-R.S.I.	49	51	rpm
35 C.S.I.-R.S.I.	60	60	rpm

Table 2**MINIMUM NUMBER OF FAN REVOLUTIONS**

	G20	G31	
16 R.S.I.	14	14	rpm
25 C.S.I.-R.S.I.	14	14	rpm
35 C.S.I.-R.S.I.	14	14	rpm

Table 3

	G20	G31	
16 R.S.I. - CO ₂ max	8,8	10,0	%
25 C.S.I.-R.S.I. - CO ₂ max	9,0	10,0	%
35 C.S.I.-R.S.I. - CO ₂ max	9,0	10,0	%

Table 4

	G20	G31	
16 R.S.I. - CO ₂ min	8,8	10,0	%
25 C.S.I.-R.S.I. - CO ₂ min	9,3	10,3	%
35 C.S.I.-R.S.I. - CO ₂ min	9,0	10,0	%

IGNITION SPEED (P. MM)

- Select parameter MM.
- The boiler starts at the slow ignition speed.
- Turn the heating water selector to increase or decrease the fan speed.

MAXIMUM HEATING ADJUSTMENT POSSIBILITY (P. 23)

- Select parameter 23
- Press the ENTER button to access the parameter value modification function
- Turn the sanitary water selector to modify the maximum fan speed
- Confirm the value you have set by pressing ENTER.

MINIMUM HEATING ADJUSTMENT POSSIBILITY (P. 24)

- Select parameter 24
- Press the ENTER button to access the parameter value modification function
- Turn the sanitary water selector to modify the minimum fan speed
- Confirm the value you have set by pressing ENTER.
- Exit the CALIBRATION & SERVICE function by pressing ESCAPE.
- The boiler returns to the “--” (OFF) status.
- To reset, press the  button.
- Disconnect the pressure gauge and tighten the pressure tap screw.

⚠ After adjusting the gas valve, seal it with sealing wax.

After making adjustments:

- return the temperature set with the ambient thermostat to the required position
- close the panel
- put back the shell.

19 - GAS CONVERSION

It is easy to convert from one gas family to another even after the boiler has been installed. This operation must be performed by professionally qualified staff. The boiler is designed to work with natural gas or LPG. The product plate indicates which fuel it has been fitted out to use.

It is possible to convert the boiler from one kind of gas to the other using kits which can be supplied on request:

- natural gas to LPG conversion kit
- LPG to natural gas conversion kit.

To disassemble, proceed as follows:

- disconnect the boiler from the power supply and close the gas tap
- remove the components to access to the internal parts of the boiler (Fig. 1.18-1.19)
- remove the gas ramp (A)
- remove the nozzle (B) contained inside the gas ramp and replace it with the one contained in the kit
- remount the gas ramp
- remount components previously removed
- power the boiler and open the gas tap (with the boiler working, check there are no leaks in the gas supply circuit).

Programme the "Gas type" parameter and adjust the boiler as described in the "Adjustments" chapter.

 The boiler may only be converted by qualified staff.

 After conversion, adjust the boiler again as shown in the relative paragraph and apply the new rating plate contained in the kit.

20 - CHECKING COMBUSTION PARAMETERS

To ensure the product remains in perfect working order, and to comply with current legislation, systematically check the boiler at regular intervals.

To analyse combustion, proceed as follows:

- access the CALIBRATION & SERVICE phase by setting the password as indicated in chapter "Adjustments"
- insert the analyser probes in the designated positions on the air chamber, after having removed screw B and cap C (Fig. 1.20)
- make sure, in the HH and LL parameters, that the CO₂ values correspond with those indicated in the table. If the value displayed is different, proceed to modify it as indicated in the chapter "Adjustments", in the sections for parameters HH and LL
- carry out the combustion analysis.

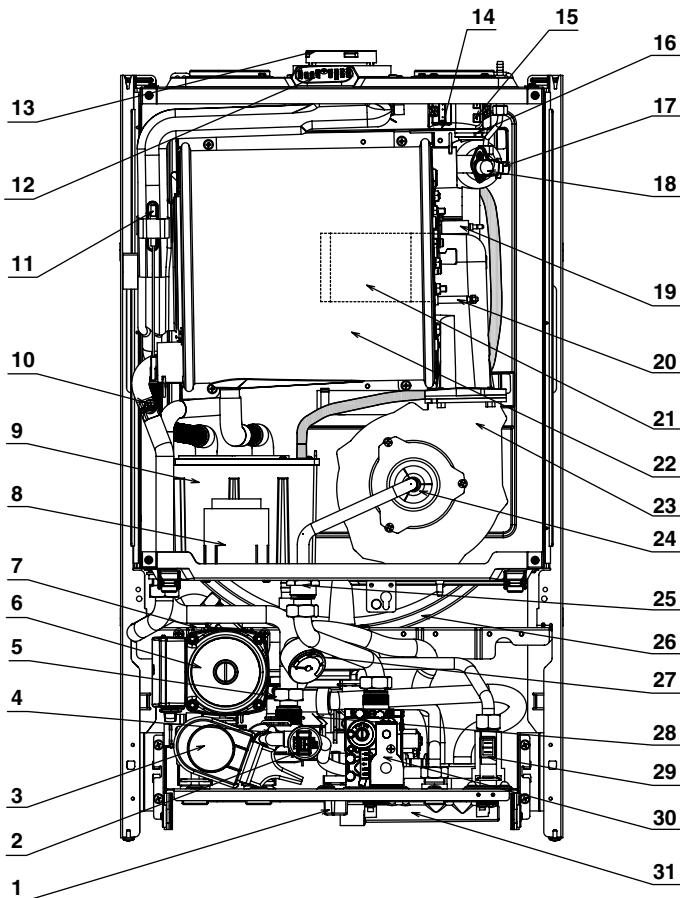
Subsequently:

- remove the analyser probes and close the combustion analysis sockets with the designated screw
- close the instrument panel, reassemble the cover and boiler shell, following the procedure described for dismantling it in reverse order.

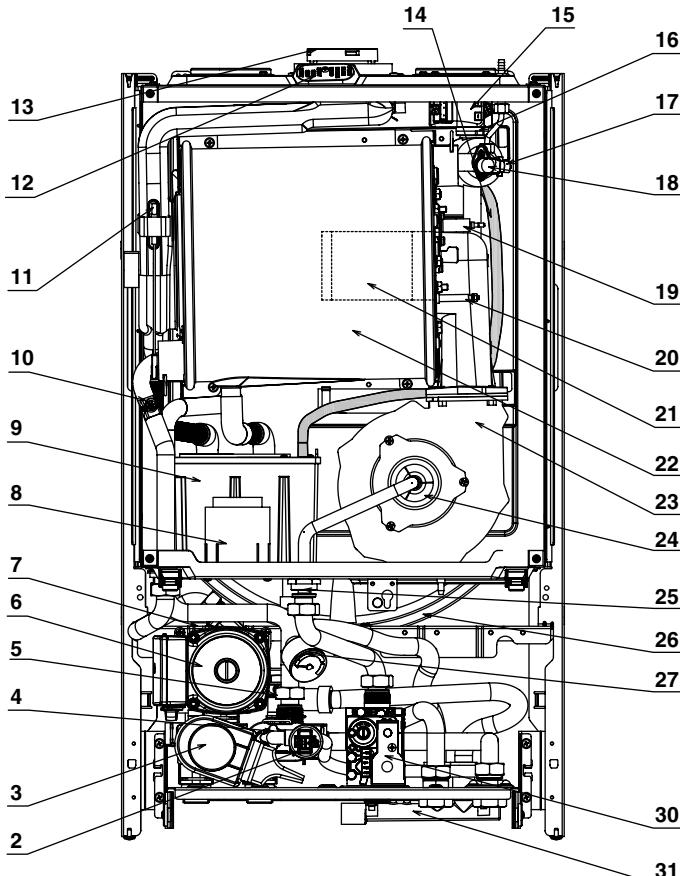
 The fumes analysis probe must be fully inserted.

IMPORTANT: the function that switches off the boiler when water temperature reaches a maximum of about 90°C is still enabled during the combustion analysis phase.

EXCLUSIVE GREEN C.S.I.



EXCLUSIVE GREEN C.S.I.



[EN] - BOILER OPERATING ELEMENTS

- 1 - Filling tap (C.S.I.)
- 2 - Pressure transducer
- 3 - Three-way solenoid valve
- 4 - Discharge valve
- 5 - Safety valve
- 6 - Circulation pump
- 7 - Lower air vent valve
- 8 - Fan transformer
- 9 - Siphon
- 10 - Return NTC sensor
- 11 - Flue thermostat
- 12 - Flue analysis sample cap
- 13 - Flue outlet
- 14 - Degassing unit discharge pipe
- 15 - Remote ignition transformer
- 16 - Upper air vent valve
- 17 - Delivery NTC sensor
- 18 - High limit thermostat
- 19 - Ignition/detection electrode
- 20 - Condensate level sensor
- 21 - Burner
- 22 - Main exchanger
- 23 - Fan
- 24 - Mixer
- 25 - Gas nozzle
- 26 - Expansion vessel
- 27 - Hydrometer
- 28 - Domestic hot water exchanger (C.S.I.)
- 29 - Flow switch (C.S.I.)
- 30 - Gas valve
- 31 - Exhaust collector

[ES] - COMPONENTES FUNCIONALES DE LA CALDERA

- 1 - Llave de llenado (C.S.I.)
- 2 - Transductor de presión
- 3 - Válvula de tres vías eléctrica
- 4 - Válvula de vaciado
- 5 - Válvula de seguridad
- 6 - Bomba de circulación
- 7 - Purgador de aire inferior
- 8 - Transformador ventilador
- 9 - Sifón
- 10 - Sonda NTC retorno
- 11 - Termostato humos
- 12 - Tapón toma análisis de la combustión
- 13 - Salida de humos
- 14 - Tubo salida desgasificador
- 15 - Transformador de encendido exterior
- 16 - Purgador de aire superior
- 17 - Sonda NTC impulsión
- 18 - Termostato límite
- 19 - Electrodo encendido-detección llama
- 20 - Sensor nivel condensados
- 21 - Quemador
- 22 - Intercambiador principal
- 23 - Ventilador
- 24 - Mezclador
- 25 - Inyector gas
- 26 - Vaso expansión
- 27 - Hidrómetro
- 28 - Intercambiador agua sanitaria (C.S.I.)
- 29 - Flusostato (C.S.I.)
- 30 - Válvula gas
- 31 - Colector descargas

[PT] - ELEMENTOS FUNCIONAIS DA CALDEIRA

- 1 - Torneira de enchimento (C.S.I.)
- 2 - Transdutor de pressão
- 3 - Válvula eléctrica de três vias
- 4 - Válvula de descarga
- 5 - Válvula de segurança
- 6 - Bomba circuladora
- 7 - Válvula de sangria ar inferior
- 8 - Transformador ventilador
- 9 - Sifão
- 10 - Sonda NTC retorno
- 11 - Termóstato fumos
- 12 - Tampa tomada análise fumos
- 13 - Descarga fumos
- 14 - Pequeno tubo descarga degasificador
- 15 - Transformador de ignição remoto
- 16 - Válvula de sangria ar superior
- 17 - Sonda NTC saída
- 18 - Termóstato limite
- 19 - Vela de ignição - detecção chama
- 20 - Sensor nível condensado
- 21 - Queimador
- 22 - Permutador principal
- 23 - Ventilador
- 24 - Mixer
- 25 - Bico de gás
- 26 - Tanque de expansão
- 27 - Hidrómetro
- 28 - Permutador água sanitária (C.S.I.)
- 29 - Fluxômetro (C.S.I.)
- 30 - Válvula do gás
- 31 - Coletor descargas

[HU] - A KAZÁN FUNKCIÓNALIS ALKATRÉSZEI

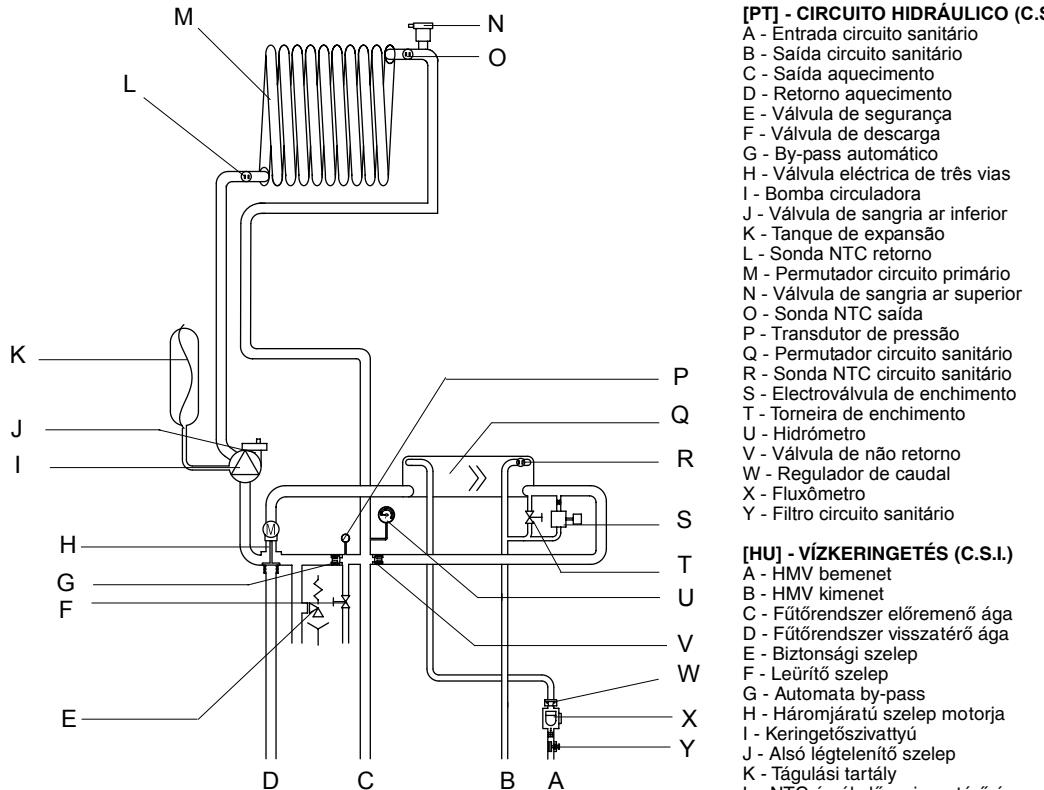
- 1 - Feltöltőcsap (C.S.I.)
- 2 - Víznyomás-jelző
- 3 - Villamos hárómájratú szelep
- 4 - Leürítő szelep
- 5 - Biztonsági szelep
- 6 - Keringetőszivattyú
- 7 - Alsó légtelenítő szelep
- 8 - Ventilátor transzformátor
- 9 - Szifon (kondenzátor)
- 10 - NTC érzékelő a visszatérő ágon
- 11 - Füstgáz termosztát
- 12 - Füstgáz mintavételező csatlakozás
- 13 - Füstgázvezetés
- 14 - Automata légtelenítőtől vízelvezető cső
- 15 - A távgyűjtés transzformátora
- 16 - Felső légtelenítő szelep
- 17 - NTC érzékelő előremenő ágon
- 18 - Határoló termosztát
- 19 - Gyújtó-lángör elektróda
- 20 - Kondenzátor szintérzékelő
- 21 - Égő
- 22 - Fűtőköri hőcserélő
- 23 - Ventilátor
- 24 - Előkeverő egység
- 25 - Gáz fűvöka
- 26 - Tágulási tartály
- 27 - Hidrométer
- 28 - HMV hőcserélő (C.S.I.)
- 29 - Áramlásszabályozó (C.S.I.)
- 30 - Gázszelep
- 31 - Vízgyűjtő

[RO] - ELEMENTELE FUNCTIONALE ALE CENTRALEI

- 1 - Robinet de umplere (C.S.I.)
- 2 - Traductor de presiune
- 3 - Vana cu 3 caie
- 4 - Robinet evacuare
- 5 - Robinet de siguranta
- 6 - Pompa de circulatie
- 7 - Supapa inferioara canal aer
- 8 - Transformator ventilator
- 9 - Sifon
- 10 - Senzor return NTC
- 11 - Termostat de fum
- 12 - Capac esantion gaze de ardere
- 13 - Evacuare geze de ardere
- 14 - Teava scurgere unitate de eliminare gaz
- 15 - Transformator aprindere de la distanta
- 16 - Supapa superioara canal aer
- 17 - Senzor alimentare NTC
- 18 - Termostat limita superioara
- 19 - Electrood aprindere-detector flacara
- 20 - Senzor nivel condensare
- 21 - Arzator
- 22 - Schimbator principal
- 23 - Ventilator
- 24 - Mixer
- 25 - Duza gaz
- 26 - Vas de expansiune
- 27 - Hidrometru
- 28 - Schimbator apa calda menajera (C.S.I.)
- 29 - Fluxostat (C.S.I.)
- 30 - Vana gaz
- 31 - Colector de evacuare

[DK] - KEDLENS BESTANDDELE

- 1 - Ikke DK
- 2 - Vandtryksmåler
- 3 - Tre-vejs ventil
- 4 - Tømmehane
- 5 - Sikkerhedsventil (anlæg)
- 6 - Cirkulations pumpe
- 7 - Automatudlufter
- 8 - Transformer
- 9 - Kondensfang
- 10 - Retur NTC føler
- 11 - Termostat dimovs
- 12 - Røggasanalyse hætte
- 13 - Røg afkast
- 14 - Forbindelse for automat udluftter
- 15 - Tændboks
- 16 - Automatudlufter
- 17 - Fremløbs NTC føler
- 18 - Overkogtermostat
- 19 - Tændings/overvægnings elektrode
- 20 - Føler for kondens
- 21 - Brænder
- 22 - Hoved veksler
- 23 - Blæser
- 24 - Mixer
- 25 - Gas dyse
- 26 - Ekspansionsbeholder
- 27 - Manometer
- 28 - Ikke DK
- 29 - Ikke DK
- 30 - Gas armatur
- 31 - Kondensafløb

**[EN] - HYDRAULIC CIRCUIT (C.S.I.)**

- A - Domestic hot water inlet
 B - Domestic hot water outlet
 C - Heating delivery
 D - Heating return
 E - Safety valve
 F - Drain valve
 G - Automatic by-pass
 H - Three way valve
 I - Circulator
 J - Lower air vent valve
 K - Expansion vessel
 L - Return NTC sensor
 M - Primary exchanger
 N - Upper air vent valve
 O - Delivery NTC sensor
 P - Pressure transducer
 Q - Domestic hot water exchanger
 R - Domestic hot water sensor
 S - Filling electrovalve
 T - Filling tap
 U - Hydrometer
 V - Non return valve
 W - Flow regulator
 X - Flow switch
 Y - DHW filter

[ES] - CIRCUITO HIDRÁULICO (C.S.I.)

- A - Entrada sanitario
 B - Salida sanitario
 C - Impulsión calefacción
 D - Retorno calefacción
 E - Válvula de seguridad
 F - Válvula de vaciado
 G - By-pass automático
 H - Válvula de tres vías eléctrica
 I - Circulador
 J - Purgador de aire inferior
 K - Vaso expansión
 L - Sonda NTC retorno
 M - Intercambiador primario
 N - Purgador de aire superior
 O - Sonda NTC impulsión
 P - Transductor de presión
 Q - Intercambiador sanitario
 R - Sonda NTC sanitario
 S - Electroválvula de llenado
 T - Llave de llenado
 U - Hidrómetro
 V - Válvula de antirretorno
 W - Limitador de caudal
 X - Flusostato
 Y - Filtro sanitario

[PT] - CIRCUITO HIDRÁULICO (C.S.I.)

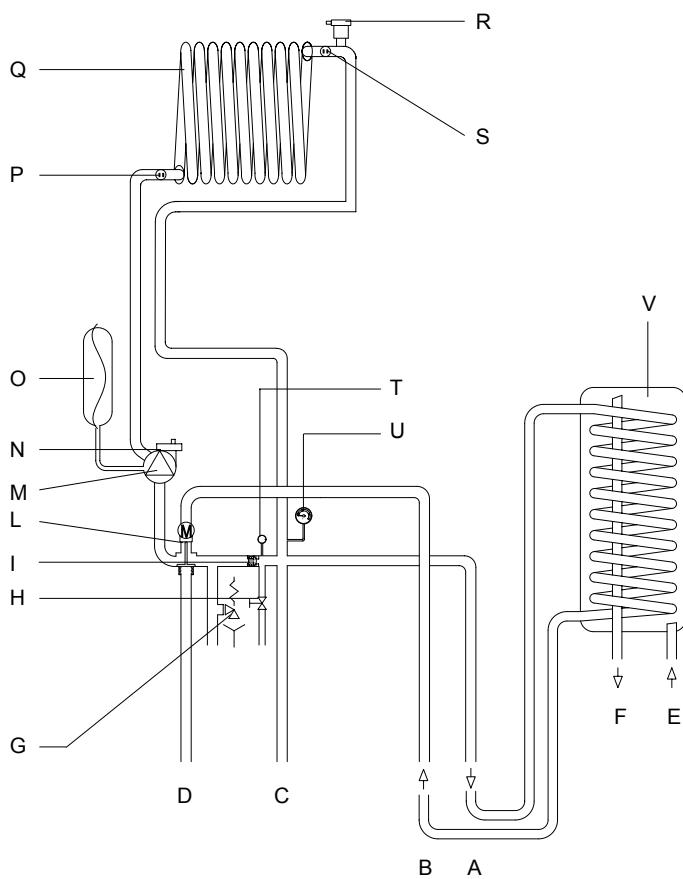
- A - Entrada circuito sanitário
 B - Saída circuito sanitário
 C - Saída aquecimento
 D - Retorno aquecimento
 E - Válvula de segurança
 F - Válvula de descarga
 G - By-pass automático
 H - Válvula eléctrica de três vias
 I - Bomba circuladora
 J - Válvula de sangria ar inferior
 K - Tanque de expansão
 L - Sonda NTC retorno
 M - Permutador circuito primário
 N - Válvula de sangria ar superior
 O - Sonda NTC saída
 P - Transdutor de pressão
 Q - Permutador circuito sanitário
 R - Sonda NTC circuito sanitário
 S - Electroválvula de enchimento
 T - Torneira de enchimento
 U - Hidrómetro
 V - Válvula de não retorno
 W - Regulador de caudal
 X - Fluxômetro
 Y - Filtro circuito sanitário

[HU] - VÍZKERINGETÉS (C.S.I.)

- A - HMV bemenet
 B - HMV kimenet
 C - Fűtőrendszer előremenő ága
 D - Fűtőrendszer visszatérő ága
 E - Biztonsági szelep
 F - Leürítő szelep
 G - Automata by-pass
 H - Háromjáratú szelep motorja
 I - Keringetőszivattyú
 J - Alsó légtelenítő szelep
 K - Tágulási tartály
 L - NTC érzékelő a visszatérő ágon
 M - Fűtőkör hőcsereelő
 N - Felső légtelenítő szelep
 O - NTC érzékelő előremenő ágon
 P - Víznyomás-jelző
 Q - HMV hőcsereelő
 R - HMV NTC érzékelő
 S - Feltölő mágnesszelep
 T - Feltöltőcsap
 U - Hidrometer
 V - Visszacsapó szelep
 W - Hozamszabályozó
 X - Áramlásszabályozó
 Y - HMV szűrő

[RO] - CIRCUIT HIDRAULIC (C.S.I.)

- A - Intrare apa calda menjera
 B - lesire apa calda menajera
 C - Tur incazire
 D - Retur incalzire
 E - Robinet de siguranta
 F - Robinet de evacuare
 G - By-pass automat
 H - Vâna cu 3-cai
 I - Pompa
 J - Supapa inferioara canal aer
 K - Vas de expansiune
 L - Senzor retur NTC
 M - Schimbator primar
 N - Supapa superioara canal aer
 O - Senzor alimentare NTC
 P - Traductor de presiune
 Q - Schimbator apa calda menajera
 R - Senzor ACM NTC
 S - Supapa electrica de umplere
 T - Robinet de umplere
 U - Hidrometru
 V - Supapa non retur
 W - Regulator de debit
 X - Fluxostat
 Y - Filtru ACM



[PT] - CIRCUITO HIDRÁULICO (R.S.I.)

- A - Suprimento boiler
- B - Retorno boiler
- C - Saída aquecimento
- D - Retorno aquecimento
- E - Entrada água fria
- F - Saída água fria
- G - Válvula de segurança
- H - Válvula de descarga
- I - By-pass automático
- L - Motor válvula de três vias
- M - Bomba circuladora
- N - Válvula de sangria ar inferior
- O - Tanque de expansão
- P - Sonda NTC retorno
- Q - Permutador circuito primário
- R - Válvula de sangria ar superior
- S - Sonda NTC saída
- T - Transdutor de pressão
- U - Hidrómetro
- V - Boiler (pode-se fornecer a pedido)

[HU] - VÍZKERINGETÉS (R.S.I.)

- A - Tároló előremenő ága
- B - Tároló visszatérő ága
- C - Fűtőrendszer előremenő ága
- D - Fűtőrendszer visszatérő ága
- E - Hidegvíz bemenet
- F - Melegvíz kimenet
- G - Biztonsági szelep
- H - Leürítő szelep
- I - Automata by-pass
- L - Háromjáratú szelep motorja
- M - Keringetőszivattyú
- N - Alsó légtelenítő szelep
- O - Tágulási tartály
- P - NTC érzékelő a visszatérő ágon
- Q - Fűtőkör hőcserelá
- R - Felső légtelenítő szelep
- S - NTC érzékelő előremenő ágon
- T - Víznyomás-jelző
- U - Hidrométer
- V - Tároló (külön megrendelésre szállítjuk)

[RO] - CIRCUIT HIDRAULIC (R.S.I.)

- A - Tur rezervor apa
- B - Retur rezervor apa
- C - Tur incalzire
- D - Retur incalzire
- E - Intrare apa rece
- F - Iesire apa calda
- G - Supapa de siguranta
- H - Robinet evacuare
- I - By-pass automat
- L - Vana cu 3-cai
- M - Pompa
- N - Supapa inferioara canal aer
- O - Vas de expansiune
- P - Senzor retur NTC
- Q - Schimbator primar
- R - Supapa superioara canal aer
- S - Senzor alimentare NTC
- T - Traductor presiune
- U - Hidrometru
- V - Rezervor apa (disponibil la cerere)

[DK] - HYDRAULISK KREDSLØB (R.S.I.)

- A - Fremløb til varmtvandsbeholder
- B - Retur fra varmtvandsbeholder
- C - Anlæg frem
- D - Anlæg retur
- E - Koldtvands tilgang
- F - Varmtvands udgang
- G - Sikkerhedsventil
- H - 1ømmehane
- I - omløb
- L - 3 vejs motor ventil
- M - Pumpe
- N - Automatudlifter
- O - Ekspansionsbeholder
- P - Retur NTC føler
- Q - Hovedveksler
- R - Automatudlifter
- S - Fremløbs NTC føler
- T - Trykmåler
- U - Manometer
- V - Ekstern varmtvandsbeholder

[EN] - HYDRAULIC CIRCUIT (R.S.I.)

- A - Water tank delivery
- B - Water tank return
- C - Heating delivery
- D - Heating return
- E - Cold water inlet
- F - Hot water outlet
- G - Safety valve
- H - Drain valve
- I - Automatic by-pass
- L - 3-way motor valve
- M - Circulator
- N - Lower air vent valve
- O - Expansion vessel
- P - Return NTC sensor
- Q - Primary exchanger
- R - Upper air vent valve
- S - Delivery NTC sensor
- T - Pressure transducer
- U - Hydrometer
- V - Water tank (available upon request)

[ES] - CIRCUITO HIDRÁULICO (R.S.I.)

- A - Impulsión interacumulador
- B - Retorno interacumulador
- C - Impulsión calefacción
- D - Retorno calefacción
- E - Entrada agua fría
- F - Salida agua caliente
- G - Válvula de seguridad
- H - Válvula de vaciado
- I - By-pass automático
- L - Motor válvula de tres vias
- M - Circulador
- N - Purgador de aire inferior
- O - Vaso expansión
- P - Sonda NTC retorno
- Q - Intercambiador primario
- R - Purgador de aire superior
- S - Sonda NTC impulsión
- T - Transductor de presión
- U - Hidrómetro
- V - Interacumulador (accesorio opcional)

EXCLUSIVE GREEN C.S.I.

[EN] - MULTI-WIRE DIAGRAM

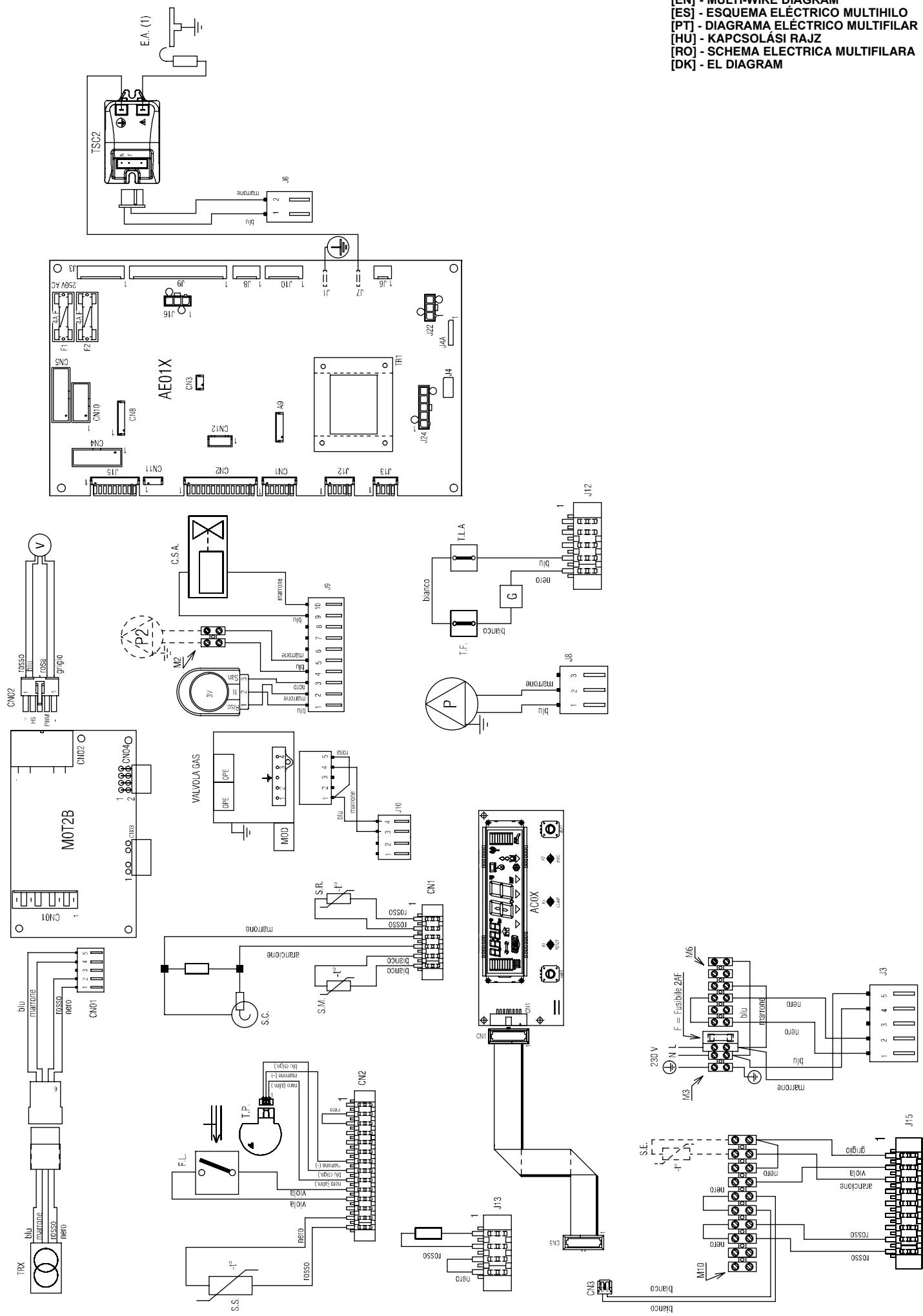
[ES] - ESQUEMA ELÉCTRICO MULTIHILO

[PT] - DIAGRAMA ELÉCTRICO MULTIFILAR

[HU] - KAPCSOLÁSI RAJZ

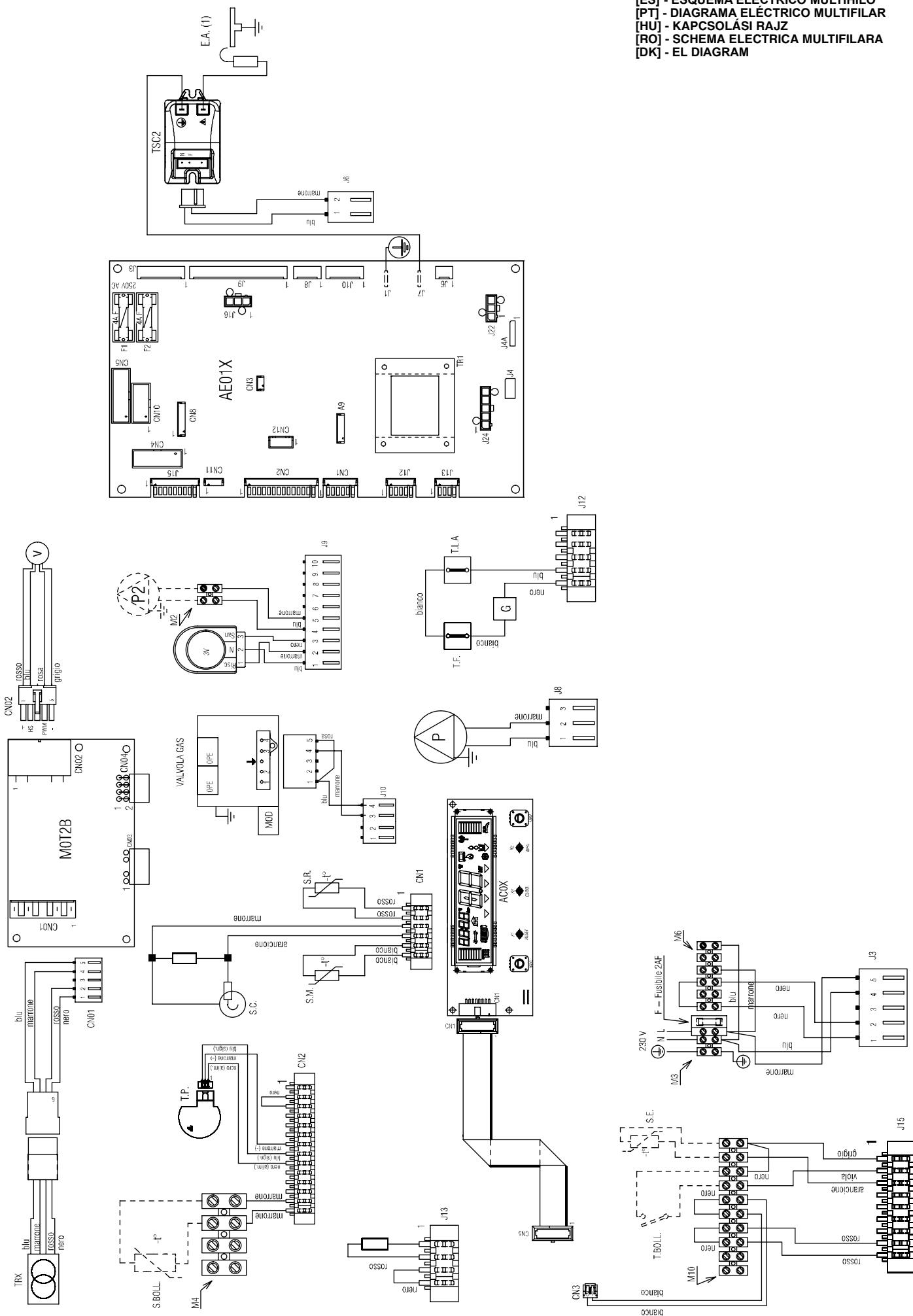
[RO] - SCHEMĂ ELECTRICĂ MULTIFILARĂ

[DK] - EL DIAGRAM



EXCLUSIVE GREEN R.S.I.

[EN] - MULTI-WIRE DIAGRAM
 [ES] - ESQUEMA ELÉCTRICO MULTIHILO
 [PT] - DIAGRAMA ELÉCTRICO MULTIFILAR
 [HU] - KAPCSOLÁSI RAJZ
 [RO] - SCHEMĂ ELECTRICA MULTIFILARA
 [DK] - EL DIAGRAM



[EN] - MULTI-WIRE DIAGRAM**L-N POLARISATION IS RECOMMENDED**

Blu - Blue
 Marrone - Brown
 Nero - Black
 Rosso - Red
 Bianco - White
 Viola - Violet
 Rosa - Pink
 Arancione - Orange
 Grigio - Grey
 Valvola gas - Gas valve
 Fusibile - Fuse
 Elettrodo - Electrode
 RISC. - CH
 SAN. - DHW
 3V - 3-way solenoid valve servomotor
 AC0X - Display board
 AE01X - Control board
 C.S.A. - Semi-automatic heating circuit filler (C.S.I.)
 CN1-CN12 - Connectors
 E.A.R. - Ignition/detection electrode
 F - Fuse 2AF
 F.L - Flow switch (C.S.I.)
 F1-F2 - Fuse 4AF
 G - Connector
 J1-J24 - Connectors
 MOT2B - Engine control board
 M10 - Terminal board for external connections in low voltage
 M2 - Terminal board supplementary pump connection
 M3-M6 - Terminal board for external connections in high voltage
 M4 - Terminal board water tank sensor connection (R.S.I.)
 MOD - Modulator
 OPE - Gas valve operator
 P - Pump
 P2 - External supplementary pump
 S.BOLL. - Water tank sensor (R.S.I.)
 S.C. - Condensate sensor
 S.E. - External sensor
 S.M. - Primary circuit delivery temperature sensor
 S.R. - Primary circuit temperature sensor (NTC)
 S.S. - Domestic hot water circuit temperature sensor (NTC) (C.S.I.)
 T.BOLL. - Water tank thermostat (R.S.I.)
 T.F. - Fume thermostat
 T.L.A. - Limit thermostat over-temperature water
 T.P - Pressure transducer
 TR1 - Main transformer
 TRX - Fan transformer
 TSC2 - Ignition transformer
 V - Fan

[ES] - ESQUEMA ELÉCTRICO MULTIHILO**LA POLARIZACIÓN L-N È ACONSEJADA**

Blu - Azul
 Marrone - Marrón
 Nero - Negro
 Rosso - Rojo
 Bianco - Blanco
 Viola - Violeta
 Rosa - Rosa
 Arancione - Anaranjado
 Grigio - Gris
 Valvola gas - Válvula gas
 Fusibile - Fusible
 Elettrodo - Electrode
 RISC. - CALEF.
 SAN. - SAN.
 3V - Servomotor válvula 3 vias
 AC0X - Tarjeta visor digital
 AE01X - Tarjeta comando
 C.S.A. - Llenado semiautomático instalación calefacción (C.S.I.)
 CN1-CN12 - Conectores de conexión
 E.A.R. - Eléctrodo encendido/detección
 F - Fusible 2AF
 F.L - Flusostato sanitario (C.S.I.)
 F1-F2 - Fusible 4AF
 G - Conector
 J1-J24 - Conectores de conexión
 MOT2B - Tarjeta control motor
 M10 - Bornera para conexiones externos en baja tensión
 M2 - Bornera conexión bomba suplementaria
 M3-M6 - Bornera para conexiones externos en alta tensión
 M4 - Bornera conexión sonda interacumulador (R.S.I.)
 MOD - Modulador
 OPE - Operador válvula gas
 P - Bomba
 P2 - Bomba suplementaria exterior
 S.BOLL. - Sonda interacumulador (R.S.I.)
 S.C. - Sensor condensado
 S.E. - Sonda exterior
 S.M. - Sonda impulsión temperatura circuito primario
 S.R. - Sonda (NTC) temperatura circuito primario
 S.S. - Sonda (NTC) temperatura circuito sanitario (C.S.I.)
 T.BOLL. - Termostato interacumulador (R.S.I.)
 T.F. - Termostato humos
 T.L.A. - Termostato límite agua sobretemperatura
 T.P - Transductor de presión
 TR1 - Transformador principal
 TRX - Transformador para ventilador
 TSC2 - Transformador de encendido
 V - Ventilador

[PT] - DIAGRAMA ELÉCTRICO MULTIFILAR

SUGERE-SE A POLARIZAÇÃO L-N
 Blu - Azul
 Marrone - Castanha
 Nero - Preto
 Rosso - Vermelho
 Bianco - Branco
 Viola - Roxo
 Rosa - Rosa
 Arancione - Laranja
 Grigio - Cinzento
 Valvola gas - Válvula de gás
 Fusibile - Fusível
 Elettrodo - Eléctrodo
 RISC. - AQUEC.
 SAN. - SANIT.
 3V - Servomotor válvula de três vias
 AC0X - Cartão do display
 AE01X - Cartão de comando
 C.S.A. - Carregamento semi-automático da instalação de aquecimento (C.S.I.)
 CN1-CN12 - Conectores
 E.A.R. - Eléctrodo ignição/detecção
 F - Fusível 2A
 F.L - Fluxômetro circuito sanitário (C.S.I.)
 F1-F2 - Fusível 4AF
 G - Conector
 J1-J24 - Conectores
 MOT2B - Cartão controlo motor
 M10 - Placa de bornes para ligações externas em baixa tensão
 M2 - Placa de bornes ligação bomba suplementar
 M3-M6 - Placa de bornes para ligações externas em alta tensão
 M4 - Placa de bornes ligação sonda boiler (R.S.I.)
 MOD - Modulador
 OPE - Operador válvula do gás
 P - Bomba
 P2 - Bomba suplementar externa
 S.BOLL. - Sonda boiler (R.S.I.)
 S.C. - Sensor condensado
 S.E. - Sonda externa
 S.M. - Sonda saída temperatura circuito primário
 S.R. - Sonda (NTC) temperatura circuito primário
 S.S. - Sonda (NTC) temperatura circuito sanitário (C.S.I.)
 T.BOLL. - Termóstato boiler (R.S.I.)
 T.F. - Termóstato fumos
 T.L.A. - Termóstato limite água sobreaquecimento
 T.P - Transdutor de pressão
 TR1 - Transformador principal
 TRX - Transformador para ventilador
 TSC2 - Transformador de ignição
 V - Ventilador

[HU] - KAPCSOLÁSI RAJZ**A FAZIS-NULLA POLARIZÁCIÓ AJÁNLOTT**

Blu - kék
 Marrone - barna
 Nero - fekete
 Rosso - piros
 Bianco - fehér
 Viola - lila
 Rosa - Rózsaszínű
 Arancione - Narancssárga
 Grigio - szürke
 Valvola gas - Gázszelép
 Fusibile - Biztosíték
 Elettrodo - Elektróda
 RISC. - Fűt.
 SAN. - HMV
 3V - Háromjáratú szelep állítómotor
 AC0X - Kijelző-panel
 AE01X - Vezérlőpanel
 C.S.A. - Fűtőrendszer félautomata feltöltés (C.S.I.)
 CN1-CN12 - Csatlakozókonnektorok
 E.A.R. - Gyűjtő/lángör elektróda
 F - Olvadóbiztosíték 2AF
 F.L - Áramlásszabályozó (C.S.I.)
 F1-F2 - Olvadóbiztosíték 4AF
 G - Konnektor
 J1-J24 - Csatlakozókonnektorok
 MOT2B - Motor ellenőrző panel
 M10 - Sorkapocs a alacsány feszültségű csatlakozások részére
 M2 - Sorkapocs a kiegészítő szivattyú csatlakoztatásához
 M3-M6 - Sorkapocs a magasfeszültségű csatlakozások részére
 M4 - Sorkapocs az indirekt tároló érzékelőjének csatlakoztatásához (R.S.I.)
 MOD - Modulációs terkers
 OPE - A gázszelép operátoregysége
 P - Szivattyú
 P2 - Külös kisegítő szivattyú
 S.BOLL. - Tároló érzékelő (R.S.I.)
 S.C. - Kondenzáztum érzékelő
 S.E. - Külös érzékelő
 S.M. - Fűtőköri hőmérsékletérzékelő előremenő ágon
 S.R. - Fűtőköri (NTC) hőérzékelő
 S.S. - HMV köri (NTC) hőérzékelő (C.S.I.)
 T.BOLL. - Tároló termosztát (R.S.I.)
 T.F. - Füstgáz termosztát
 T.L.A. - Vízhőmérséklet határolótermosztát
 T.P - Víznyomás-jelző
 TR1 - Elsődleges transzformátor
 TRX - Ventilátor transzformátor
 TSC2 - Gyűjtő transzformátor
 V - Ventilátor

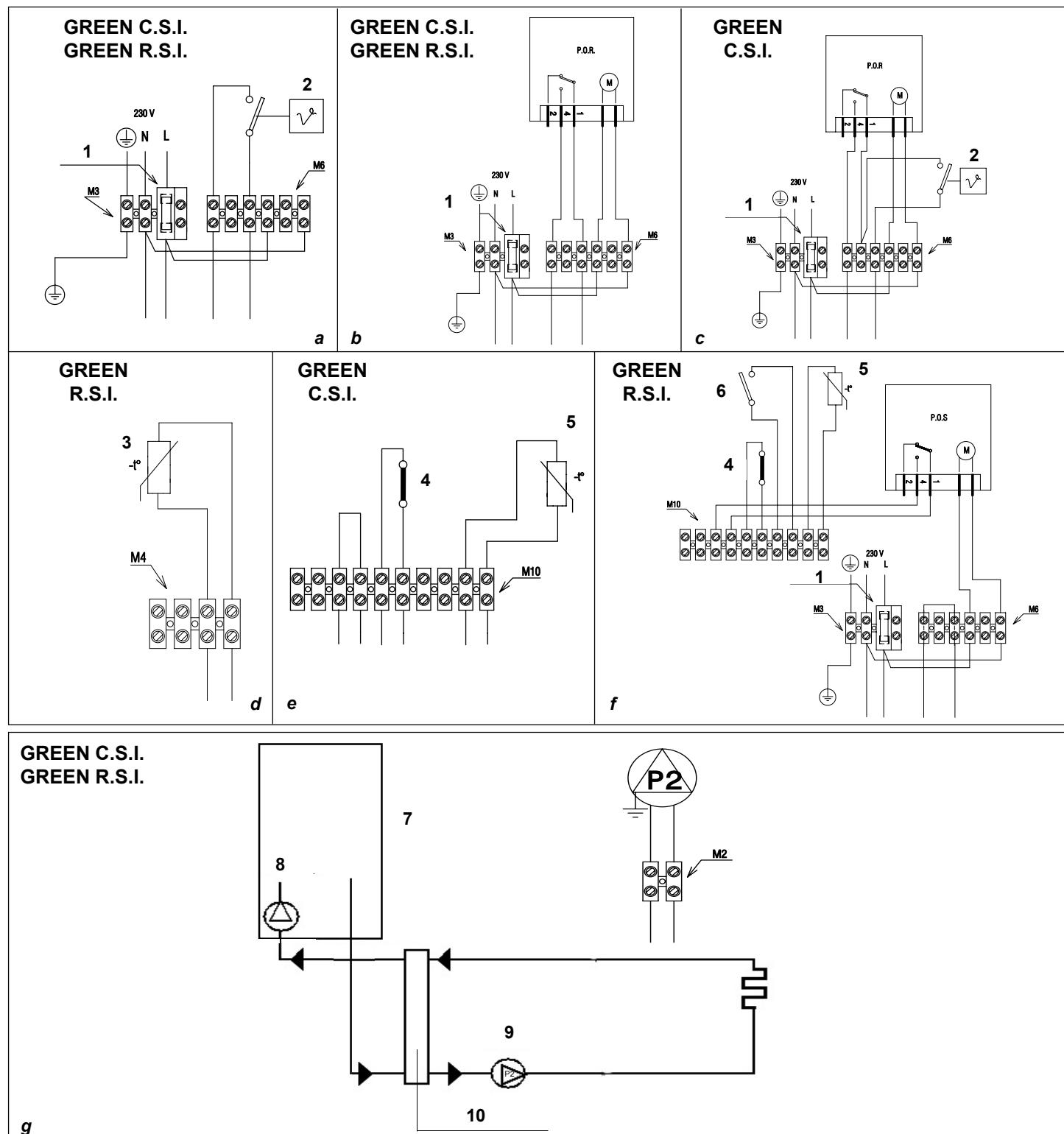
**[RO] - SCHEMA ELECTRICA MULTIFILARA
ESTE RECOMANDATA POLARIZAREA L-N**

Blu - Albastru
 Marrone - Maro
 Nero - Negru
 Rosso - Rosu
 Bianco - Alb
 Viola - Violet
 Rosa - Roz
 Arancione - Portocaliu
 Grigio - Gri
 Valvola gas - Vana gaz
 Fusibile - Sigurante
 Elettrodo - electrod
 RISC. - incalzire
 SAN. - ACM
 3V - Supapa solenoidală cu 3 cai, cu servomotor
 AC0X - Placa de afisare
 AE01X - Placa de control
 C.S.A. - Umplere semi-automata circuit incalzire (C.S.I.)
 CN1-CN12 - Conectori
 E.A.R. - Electrod aprindere/detectie
 F - Siguranta 2AF
 F.L - Fluxostat (C.S.I.)
 F1-F2 - Siguranta 4AF
 G - Conectoi
 J1-J24 - Conectori
 MOT2B - Tablou comanda motor
 M10 - Priza conexiune de joasa tensiune
 M2 - Priza conexiune pompa suplimentara
 M3-M6 - Priza conexiuni de inalta tensiune
 M4 - Priza conexiune sonda boiler extern (R.S.I.)
 MOD - Modulator
 OPE - Operator supapa gaz
 P - Pompa
 P2 - Pompa externa suplimentara
 S.BOLL. - Senzor rezervor apa (R.S.I.)
 S.C. - Senzor condensare
 S.E. - Senzor extern
 S.M. - Senzor livrare temperatura circuit primar
 S.R. - Senzor circuit primar de temperatura (NTC)
 S.S. - Senzor temperatura circuit apa calda menajera (NTC) (C.S.I.)
 T.BOLL. - Termostat rezervor apa (R.S.I.)
 T.F. - Termostat de fum
 T.L.A. - Termostat limita pentru supra temperatura apei
 T.P - Traductor de presiune
 TR1 - Transformator principal
 TRX - Transformator ventilator
 TSC2 - Transformator aprindere
 V - Ventilator

[DK] - EL DIAGRAM

FASE-JORD-NUL POLARISERING ER ABSOLUT NØDVENDIG

Blu - blå
 Marrone - brun
 Nero - sort
 Rosso - rød
 Bianco - hvid
 Viola - violet
 Rosa - pind
 Arancione - orange
 Grigio - grå
 Valvola gas - Gasarmatur
 Fusibile - Sikring
 Elettrodo - Elektrode
 RISC. - ANLÆG
 SAN. - BRUGSVAND
 3V - 3-vejs ventil motor
 AC0X - Display print
 AE01X - Hoved print
 C.S.A. - Ikke DK
 CN1-CN12 - Forbindelse
 E.A.R. - Tændings/ioniserings elektrode
 F - Sikring 2AF
 F.L - Ikke DK
 F1-F2 - Sikring 4AF
 G - Forbindel
 J1-J24 - Forbindelse
 MOT2B - Blæser print
 M10 - Print for eksterne forbindelser lav volt
 M2 - Print for forbundelse til ekstrapumpe
 M3-M6 - Print for eksterne forbindelser høj volt
 M4 - Print for beholderføler
 MOD - Gasmagnet
 OPE - Gas armatur
 P - Pumpe
 P2 - Ekstern ekstra. pumpe
 S.BOLL. - Beholder føler
 S.C. - Kondens føler
 S.E. - Udeføler
 S.M. - NTC føler
 S.R. - Fremløbs føler (NTC)
 T.BOLL. - Beholder termostat
 T.F. - Termostat dimovs
 T.L.A. - Overkogtermostat
 T.P - Tryk måler
 TR1 - Hoved transformator
 TRX - Blæser transformator
 TSC2 - Tændings transformator
 V - Blæser



[EN] - CONNECTING THE AMBIENT THERMOSTAT AND/OR TIME CLOCK

HIGH VOLTAGE CONNECTIONS (fig. a, b, c)

⚠ The ambient thermostat and heating time clock contacts must be suitable for V= 230 Volt.

Make the connections for the environmental thermostat and or the time clock on the high voltage connections terminal board with 6 poles (M6) according to the following charts, after having removed the Ubolt from the terminal board.

1= 2AF fuse

2= ambient thermostat

WATER TANK SENSOR CONNECTIONS (fig. d)

Make the connections for the water tank sensor to the terminal board M4 as indicated in the diagram.

3= water tank sensor

LOW VOLTAGE CONNECTIONS (fig. e)

Make the connections for the low voltage functions to the 10-pole low voltage connections terminal board (M10), as indicated in the diagram.

4= low temperature thermostat

5= external sensor

LOW VOLTAGE CONNECTIONS (fig. f)

Make the connections for the low voltage functions to the 10-pole low voltage connections terminal board (M10), as indicated in the diagram.

Fit the P.O.S. (DHW time clock) as shown in the diagram after removing the jumper on the 10-pin terminal board (M10).

1= 2AF fuse

4= low temperature thermostat

5= external sensor

6= water-tank thermostat

SPECIAL SYSTEMS (fig. g)

Connect the pump to the 2-pole terminal board, in the area dimensioned for V = 230 Volts.

The boiler is capable of managing a supplementary pump, connected hydraulically as shown in the following diagram. In this way, it is possible to manage systems with flow rates in excess of 1300 l/h. The supplementary pump is not supplied as standard equipment, but must be chosen carefully by the installer on the basis of the dimensions of the systems.

To activate the pump, set parameter 20, heating mode, on position 03, supplementary pump (refer to the chapter "Setting parameters" for further details).

7= boiler

8= boiler pump

9= supplementary pump

10= hydraulic separator

- Close the protective caps on the terminal board, making them slide inwards, and put the previously removed screws back in
- Close the instrument panel, reassemble the coverings and boiler shell.

[ES] - CONEXIÓN TERMOSTATO AMBIENTE Y/O PROGRAMADOR HORARIO

CONEXIONES ALTA TENSIÓN (fig. a, b, c)

⚠ Los contactos del termostato ambiente y del programador horario tienen que ser dimensionados para V= 230 Voltios.

Efectuar las conexiones del termostato ambiente y/o del programador horario en la regleta de conexiones alta tensión de 6 polos (M6) según los esquemas, después de haber quitado el puente presente en la regleta.

1= fusible 2AF

2= termostato ambiente

CONEXIÓN SONDA INTERACUMULADOR (fig. d)

Efectuar la conexión de la sonda interacumulador a la regleta M4 según el esquema.

3= sonda interacumulador

CONEXIONES BAJA TENSIÓN (fig. e)

Efectuar las conexiones de los aparatos de baja tensión a la regleta conexiones baja tensión de 10 polos (M10) como indicado en figura.

4= termostato baja temperatura

5= sonda exterior

CONEXIONES BAJA TENSIÓN (fig. f)

Efectuar las conexiones de los aparatos de baja tensión a la regleta conexiones baja tensión de 10 polos (M10) como indicado en figura.

El eventual P.O.S. (programador horario sanitario) se conectará como se indica en el esquema después de haber quitado el puente presente en la regleta de 10 polos (M10).

1= fusible 2AF

4= termostato baja temperatura

5= sonda exterior

6= termostato interacumulador

INSTALACIONES ESPECIALES (fig. g)

Conectar el circulador suplementario en la regleta de 2 polos, en la zona dimensionada para V = 230 Voltios.

La caldera es capaz de gestionar un circulador suplementario conectado hidráulicamente como se muestra en el esquema siguiente. De este modo es posible gestionar instalaciones con caudales superiores a los 1300 l/h. El circulador suplementario no se suministra junto al equipo, sino que el instalador lo tiene que escoger con atención según las dimensiones de las instalaciones.

Para activar el circulador programar el parámetro 20, modalidad calefacción, en la posición 03, bomba suplementaria (hacer referencia al capítulo "Programación parámetros" para mas detalles).

7= caldera

8= circulador de caldera

9= circulador suplementario

10= separador hidráulico

- Cerrar las tapas de protección regletas haciéndolas deslizar hacia el interior y enroscar los tornillos anteriormente quitados
- Cerrar el panel de mandos, volver a montar la carcasa y la tapa cubre conexiones

[PT] - LIGAÇÃO TERMÓSTATO AMBIENTE E/OU PROGRAMADOR HORÁRIO

LIGAÇÕES ALTA TENSÃO (fig. a, b, c)

⚠ Os contactos do termóstato ambiente e do programador horário devem estar dimensionados para V= 230 Volt.

E' preciso efectuar as ligações do termóstato ambiente e/ou do programador horário à placa de bornes ligações de alta tensão de 6 pólos (M6) conforme os diagramas, depois de ter retirado o cabo descarnado presente na placa de bornes.

1= fusível 2AF

2= termóstato ambiente

LIGAÇÃO SONDA BOILER (fig. d)

Efectue a ligação da sonda do boiler à placa de bornes M4 conforme o diagrama.

3= Sonda boiler

LIGAÇÕES BAIXA TENSÃO (fig. e)

Efectue as ligações dos usos de baixa tensão à placa de bornes ligações de baixa tensão de 10 pólos (M10), segundo indicado na figura.

4= termóstato baixa temperatura

5= sonda externa

LIGAÇÕES BAIXA TENSÃO (fig. f)

Efectue as ligações dos usos de baixa tensão à placa de bornes ligações de baixa tensão de 10 pólos (M10) segundo indicado na figura.

O eventual P.O.S. (programador horário circuito sanitário) terá de ser inserido segundo indicado no diagrama, após ter retirado o cabo descarnado presente na placa de bornes de 10 pólos (M10).

1= fusível 2AF

4= termóstato baixa temperatura

5= sonda externa

6= Termóstato boiler

INSTALAÇÕES ESPECIAIS (fig. g)

Ligue a bomba circuladora suplementar à placa de bornes de 2 pólos, na zona dimensionada para V = 230 Volt.

A é capaz de gerir uma bomba circuladora suplementar conectada hidráulicamente segundo indicado no diagramma a seguir. Desta forma é possível gerenciar instalações com caudais superiores a 1300 l/h. A bomba circuladora suplementar não acompanha a , mas terá que ser escolhida pelo instalador conforme o tamanho das instalações.

Para activar a bomba circuladora, é necessário ajustar o parâmetro 20, modalidade aquecimento, na posição 03, bomba suplementar (para detalhes adicionais, faça referência ao capítulo "Ajuste parâmetros").

7= caldeira

8= bomba circuladora de caldeira

9= bomba circuladora suplementar

10= separador hidráulico

- Feche as pequenas tampas protectoras da placa de bornes, deixando-as deslizar para o interior e aparafuse os parafusos retirados anteriormente
- Feche o painel de comandos, monte novamente a cobertura e o revestimento.

[HU] - SZOBATERMOSZTÁT ÉS/VAGY IDŐPROGRAMOZÓ CSATLAKOZÁSOK

CSATLAKOZÁSOK A HÁLÓZATI FESZÜLTSÉGHEZ (a, b, c ábra)

⚠ Az időprogramozó és a szobatermosztát érintkezőjét V = 230 Volt-ra kell méretezni.

Miután eltávolította a sorkapocslécent található áthidalást, az ábrának megfelelően csatlakoztassa a szobatermosztátot és/vagy az időprogramozót a 6 pólusú (M6) sorkapocsléc hálózati feszültséggel ellátott csatlakozóhoz.

1= 2AF olvadóbiztosíték

2= szobatermosztát

A HMV TÁROLÓ ÉRZÉKELŐJÉNEK CSATLAKOZÁSA (d. ábra)

Az ábrának megfelelően, csatlakoztassa a HMV tároló érzékeljét az M4 sorkapocsléhez.

3= tároló érzékelő

ALACSONYFESZÜLTSÉGŰ CSATLAKOZÁSOK (e. ábra)

Az ábrának megfelelően, csatlakoztassa az alacsonyfeszültségű fogyasztókat a 10 pólusú (M10) sorkapocsléc alacsonyfeszültségű csatlakozóhoz.

4= alacsony hőmérsékletű termosztát

5= különböző érzékelő

ALACSONYFESZÜLTSÉGŰ CSATLAKOZÁSOK (f. ábra)

Az ábrának megfelelően, csatlakoztassa az alacsonyfeszültségű fogyasztókat a 10 pólusú (M10) sorkapocsléc alacsonyfeszültségű csatlakozóhoz.

Amennyiben HMV időprogramozt (P.O.S.) is kíván használni, távolítsa el az áthidalást a 10 pólusú sorkapocsléről (M10), majd kövesse az ábra utasításait.

1= 2AF olvadóbiztosíték

4= alacsony hőmérsékletű termosztát

5= különböző érzékelő

6= tároló termosztát

KÜLÖNLEGES BERENDEZÉSEK (g. ábra)

Csatlakoztassa a kiegészítő keringetőszivattyút a 2 pólusú sorkapocslécre, a V = 230 V-ra kialakított részhez.

A kazán alkalmaz a következő ábra szerint hidraulikusan csatlakoztatott kiegészítő keringetőszivattyú működtetésére. A szivattyú segítségével 1300 l/h-t meghaladó hozamú berendezés alakítható ki. A kiegészítő keringetőszivattyú nem tartozik az alapfelszerelések közé, ezt a telepítőnek a rendszer sajátosságainak figyelembevételével kell kiválasztani.

A keringetőszivattyú aktiválásához állítsa a 20-as (fűtési üzemmód) paramétert a 03-as pozícióra (kiegészítő szivattyú) (további részletekért lásd „A paraméterek beállítása” c. fejezetet).

7= kazán

8= kazán keringetőszivattyú

9= kiegészítő keringetőszivattyú

10= hidraulikus váltó

- Befelé csúsztatva, zárja vissza a sorkapocsléc védőfedeleit, majd helyezze vissza az előbbiekbén eltávolított csavarokat
- Zárja vissza a műszerfalat, majd szerelje vissza a fedeleit és a kazán burkolatát.

[RO] - CONECTAREA TERMOSTATULUI DE AMBIENT SI/SAU A PROGRAMATORULUI ORAR**CONEXIUNI VOLTAJ RIDICAT (fig. a, b, c)**

Termostatul de ambient si programatorul pentru timp de incalzire trebuie conectate la V= 230 Volti.

Efectuati conexiunile termostatului de ambient si sau a ceasului de control prin intermediul conexiunilor de voltaj ridicat de la nivelul tabloului cu borne cu 6 poli (M6) conform urmatoarelor diagrame, dupa ce ati indepartat axul acestuia din urma.

1= siguranta 2AF

2= termostat de ambient

CONECTAREA SENZORULUI REZERVORULUI DE APA (fig. d)

Efectuati conexiunile pentru senzorul corespunzator rezervorului de apa la tabloul cu borne M4 intocmai dupa cum este indicat in diagrama.

3= senzor rezervor apa

CONEXIUNI VOLTAJ SCAZUT (fig. e)

Efectuati conexiunile pentru functiile de voltaj redus la bornele corespunzatoare cu 10 poli de la nivelul tabloului de conexiune (M10), dupa cum este indicat in diagrama.

4= termostat temperatura scazuta

5= senzor extern

CONEXIUNI VOLTAJ SCAZUT (fig. f)

Efectuati conexiunile pentru functiile de voltaj redus la bornele corespunzatoare cu 10 poli de la nivelul tabloului de conexiune (M10), dupa cum este indicat.

Montati P.O.S. (DHW ceas de control) conform figurii, dupa de ati indepartat jumper-ul de la nivelul tabloului cu borne cu 10-pini (M10).

1= siguranta 2AF

4= termostat temperatura scazuta

5= senzor extern

6= termostat rezervor apa

SISTENE SPECIALE (fig. g)

Racordati pompa la tabloul cu borne cu 2 poli,in zona corepunzatoare si speciala pentru V = 230 Volti.

Centrala poate suporta o pompa suplimentara, care este racordata hidraulic, asa cum este prezentat in figura de mai jos.Aceasta permite gestionarea sistemelor cu un debit al sondelor mai mare de 1300 l/h. Pompa suplimentara nu este livrata ca echipament standard, si este recomandat ca aceasta sa fie aleasa cu grijă de catre instalator in functie de dimensiunile sistemelor.

Pentru a activa pompa, reglati parametrul 20, functie de incalzire,pe pozitia 03,corespunzatoare pompei suplimentare(a se consulta capitolul "Reglarea

parametrilor" pentru detalii suplimentare).

7= centrala

8= pompa centralei

9= pompa suplimentara

10= separator hidraulic

- Inchideti capacete de protectie de la nivelul tabloului de conexiune, lasandu-le sa alunecce inspre interior,si apoi remontati suruburile desurubate anterior
- Inchideti tabloul de bord, reasamblati invelisurile si carcasa centralei.

[DK] - FORBINDELSE AF RUMTERMOSTAT OG/ELLER UR**HØJ VOLT FORBINDELSE (fig. a, b, c)**

Rumtermostaten og urets kontakter skal være V= 230 Volt.

Forbind rumtermostaten og/eller uret på høj volt blokken med 6 poler (M6) som vist på diagrammet efter at lusen på blokken er fjernet.

1= 2AF sikring

2= rum termostat

FORBINDELSE TIL VARMTVANDSBEHOLDER (fig. d)

Forbind beholderføleren (NTC-føler) til forbindelsesblokken M4 som vist på diagrammet.

3= beholderføler (Bemærk parametrene skal indstilles, når der monteres NTC-føler, se side 136)

LAV VOLT FORBINDELSE (fig. e)

Forbind lav volt funktionerne til 10-pol lav volt blokken(M10), som vist på diagrammet.

4= lav temperatur termostat

5= udeføler

LAV VOLT FORBINDELSE (fig. f)

Forbind lav volt funktionerne til 10-pol lav volt blokken(M10), som vist på diagrammet.

Monter P.O.S. (brugsvands ur) som vist på diagrammet efter at lusen på 10-stiks blokken er fjernet (M10).

1= 2AF sikring

4= lav temperatur termostat

5= udeføler

6= beholdertermostat

SPECIELLE SYSTEMER (fig. g)

Forbind pumpen til 2-pols printet i området for V = 230 Volt.

Kedlen kan styre en ekstern pumpe, ved anlægsopbygning som vist på diagrammet. Hermed er det muligt at styre anlæg med flow på yderligere 1300 l/t. Den eksterne pumpe er ekstraudstyr. Pumpekapaciteten vælges under hensyn til anlæggets dimensionering.

Pumpen aktiveres ved at indstille parameter 20, opvarmnings mode, i position 03, ekstra pumpe (se afsnit “Indstilling af parameter” for yderligere detaljer.)

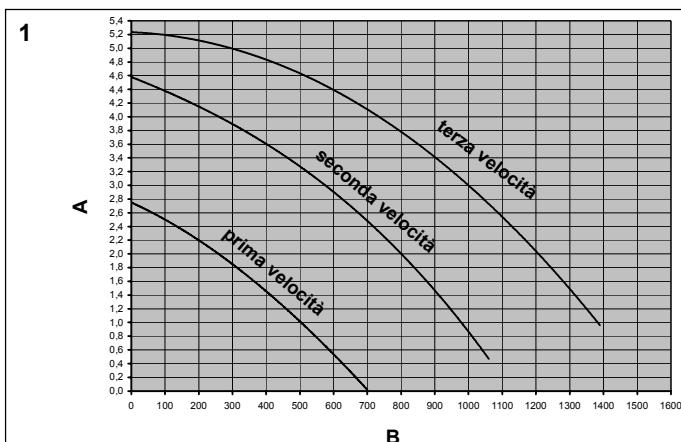
7= kedel

8= kedel pumpe

9= ekstra pumpe

10= blandepotte

- Luk beskyttelsesdækslerne på printet ved at lade dem glide indad. Monter skruene igen.
- Luk instrumentpanelet og monter dæksel og kappe.

**[EN] - CIRCULATOR RESIDUAL HEAD****A - Residual head (x 100 mbar)****B - Capacity (l/h)**

The residual head for CH system is shown in the graph 1, depending on capacity.

CH pipes are to be dimensioned considering residual head value available. Remember that boiler properly operates if water circulation in heat exchanger is sufficient.

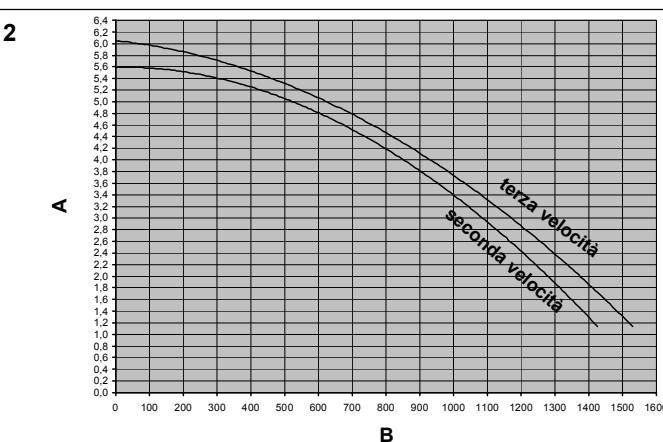
To this purpose, the boiler is equipped with an automatic bypass which regulates proper water capacity to heat exchanger under any system condition.

If there is the need to have more residual head, it is at your disposal a high efficiency pump. On graph 2 you find the curves about the two speeds.

prima velocità= first speed

seconda velocità= second speed

terza velocità= third speed

**[HU] - A KERINGETŐSZIVATTYÚ MARADÉK EMELŐNYOMÁSA****A - Maradék emelőnyomás (x 100 mbar)****B - Hozam (l/h)**

A fűtőrendszer maradék emelőnyomását a hozam függvényében az 1.sz. grafikon szemlélteti. A fűtőrendszer csőveinek méretezését a maradék emelőnyomás értékét szem előtt tartva kell meghatározni. Vegye figyelembe továbbá, hogy a kazán akkor működik megfelelően, ha a fűtőrendszer hőcserélőjében elégsges a vízáramlás. Ezért van a készülékben egy automata by-pass szelep, mely minden rendszertípus esetén gondoskodik a megfelelő vízhozam biztosításáról a fűtőrendszer hőcserélőjében.

Amennyiben nagyobb emelőnyomásra volna szüksége, külön megrendelhet egy „magas emelőnyomású keringetőszivattyú” készletet, amelynek a 2. sebességehez tartozó teljesítménygörbét a 2. sz. grafikon szemlélteti.

prima velocità= első sebesség

seconda velocità= második sebesség

terza velocità= harmadik sebesség

[ES] - ALTURA DE CARGA RESIDUAL DEL CIRCULADOR**A - Carga hidrostática residual (x 100 mbar)****B - Caudal (l/h)**

La carga hidrostática residual para la instalación de calefacción está representada, en función de la capacidad, por el gráfico 1. El dimensionamiento de las tuberías de la instalación de calefacción se tiene que efectuar teniendo presente el valor de la altura de carga residual disponible. Hay que considerar que la caldera funciona correctamente si en el intercambiador del calefacción si existe una suficiente circulación de agua. Por eso la caldera está dotada de un by-pass automático que provee regular un correcto caudal de agua en el intercambiador calefacción para cualquier tipo de instalación. Si se necesitara una mayor carga hidrostática, está disponible bajo pedido el kit “circulador alta carga hidrostática” cuyas curvas de prestación relativas a las 2 velocidades se indica en el gráfico 2.

prima velocità= primera velocidad

seconda velocità= segunda velocidad

terza velocità= tercera velocidad

[PT] - ALTURA TOTAL DE ELEVAÇÃO RESIDUAL DA BOMBA CIRCULADORA**A - Altura total de elevação residual (x 100 mbar)****B - Caudal (l/h)**

A altura total de elevação residual para a instalação de aquecimento está representada, em função do caudal, no gráfico 1. O dimensionamento dos tubos da instalação de aquecimento tem de ser efectuado considerando o valor da altura total de elevação residual disponível. É preciso ter presente que a caldeira funciona correctamente se no permutador do aquecimento houver uma circulação de água suficiente. Para esta finalidade, a caldeira é dotada de um by-pass automático que provê, quaisquer que sejam as condições da instalação, a regular um correcto caudal de água no permutador do aquecimento.

Se houver a necessidade de ter uma maior altura total de elevação, está disponível a pedido o kit “bomba circuladora de altura total de elevação” de que, no gráfico 2, são indicadas as curvas de prestação que dizem respeito às 2 velocidades.

prima velocità= primeira velocidade

seconda velocità= segunda velocidade

terza velocità= Terceira velocidade

[RO] - CARACTERISTICA DE DEBIT A POMPEI**A - Cap rezidual (x 100 mbar)****B - Capacitate (l/h)**

Presiunea reziduală pentru sistemul de incalzire centrală este prezentată în diagrama 1, în funcție de capacitate. Trebuie de incalzire centrală să fie dimensionată luând în considerare valoarea presiunii reziduale disponibile. Centrala funcționează corect dacă circulația apelor în schimbatorul de căldură este suficientă. În acest scop, centrala este echipată cu un dispozitiv automat de bypass, care reglează capacitatea apelor în schimbatorul de căldură, în orice condiție ale sistemului.

În cazul în care este nevoie de o mai mare putere reziduală, aveți la dispoziție o pompă cu eficiență ridicată. În graficul 2, veți găsi curbele corespunzătoare celor două viteze.

prima velocità= viteză intai

seconda velocità= viteză a doua

terza velocità= viteză a treia

[DK] - PUMPEKAPACITET**A - Pumpetryk(m.c.a.)****B - Kapacitet (l/t)**

Anlæggets pumpekapacitet er vist i graf 1, afhængigt af kapacitet.

Varmeanlægget skal dimensioneres i overensstemmelse med pumpekapaciteten.

Husk at kedlen kun fungerer optimalt med tilstrækkeligt vandflow.

Kedlen har derfor indbygget omløb.

Pumpen er frabiksindstillet til Pos. 2.

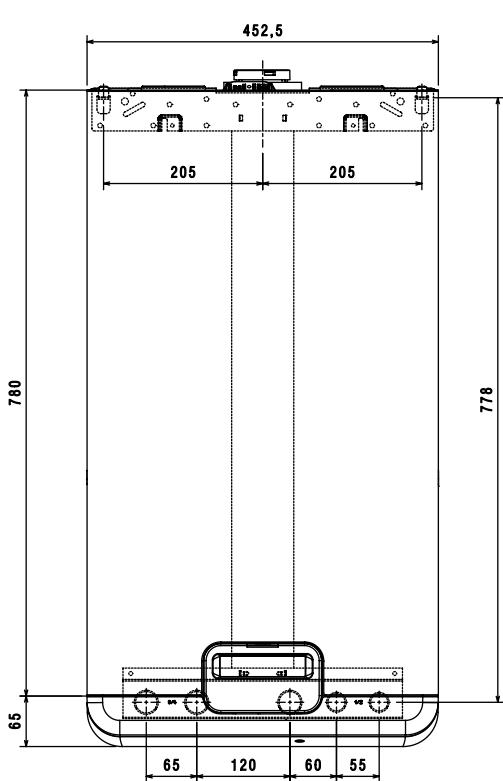
Hvis der skal anvendes større pumpekapacitet kan pumpens hastighed ændres. Se kurverne i graf 2.

prima velocità = Trin 1

seconda velocità = Trin 2

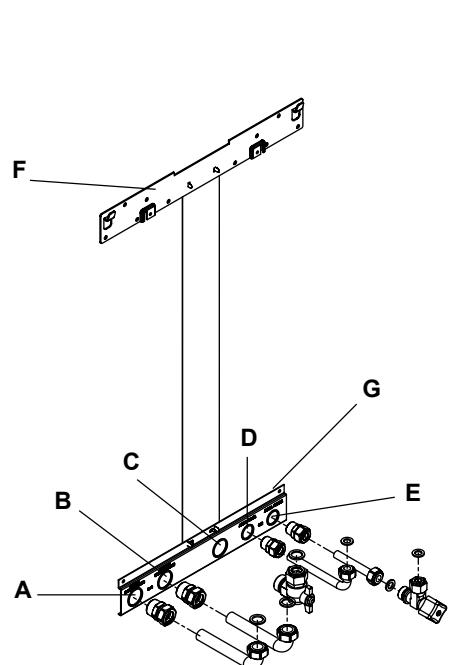
terza velocità = Trin 3

- 1.1 -

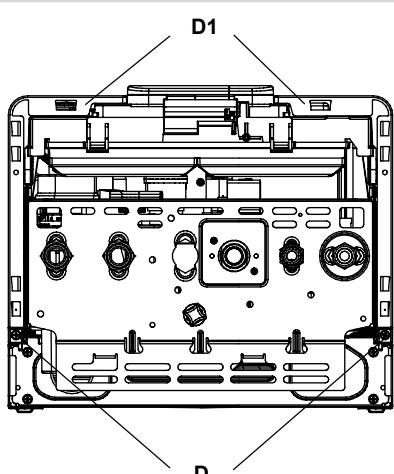


[EN] - measures in mm
 [ES] - medidas en mm
 [PT] - medidas em mm
 [HU] - méretök mm-ben
 [RO] - dimensiuni in mm
 [DK] - målt i mm

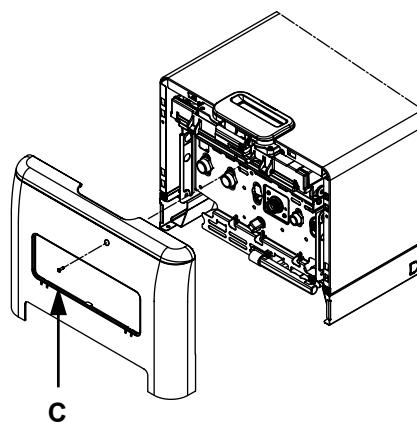
[EN] - A: condensate outlet/C: water-gas
 [ES] - A: descarga condensado/C: agua-gás
 [PT] - A: descarga condensado/C: água-gás
 [HU] - A: kondenzvíz elvezetés/C: víz-gáz
 [RO] - A: scurgere apa de condens/C: apa-gaz
 [DK] - A: kondensafløb/C: vand-gas



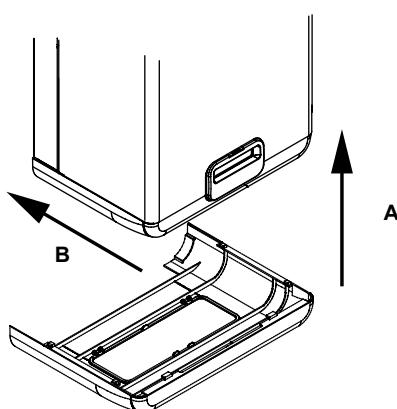
- 1.2 -



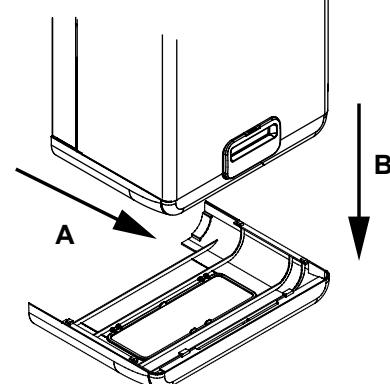
- 1.4 -

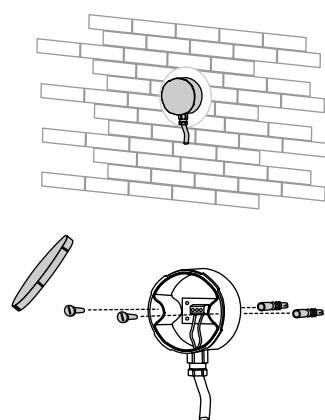
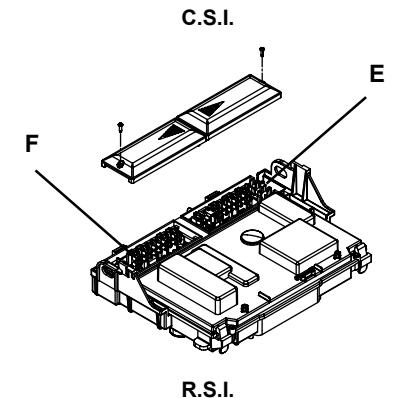
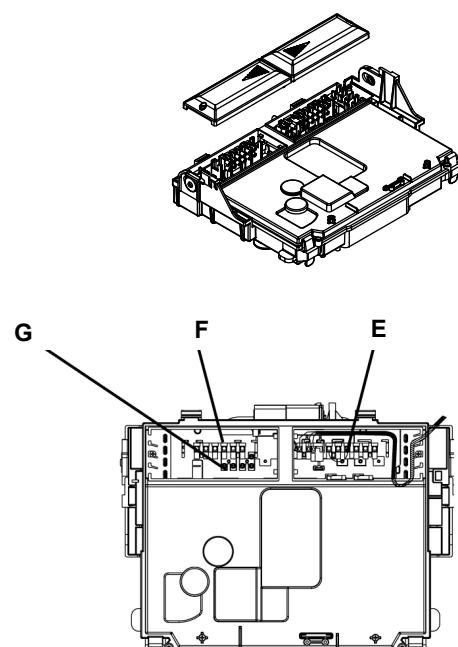
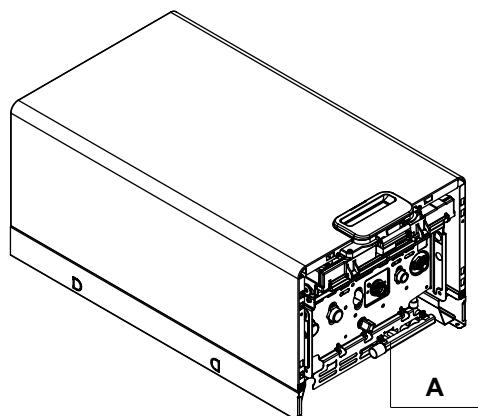
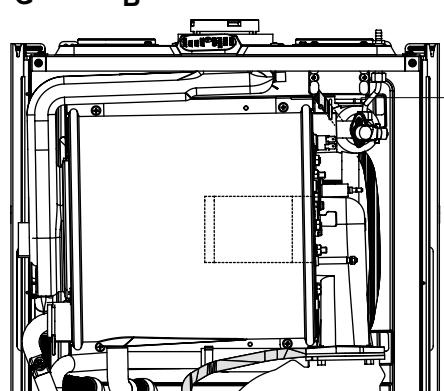
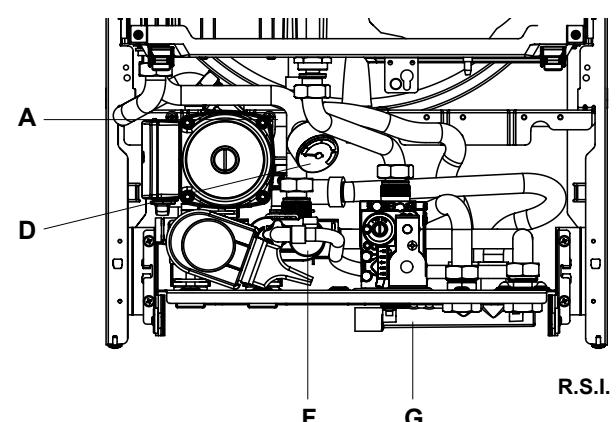
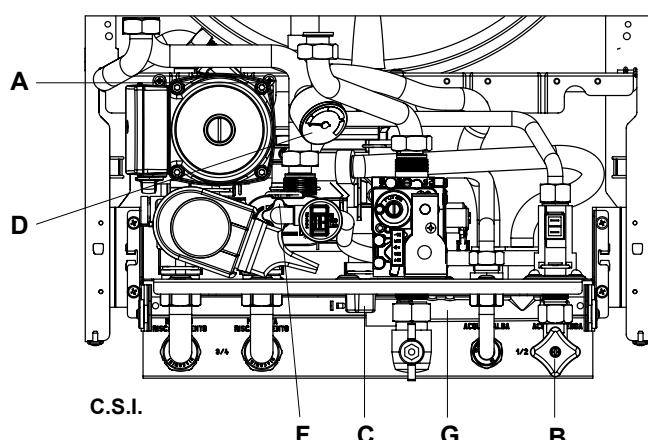


- 1.3 -

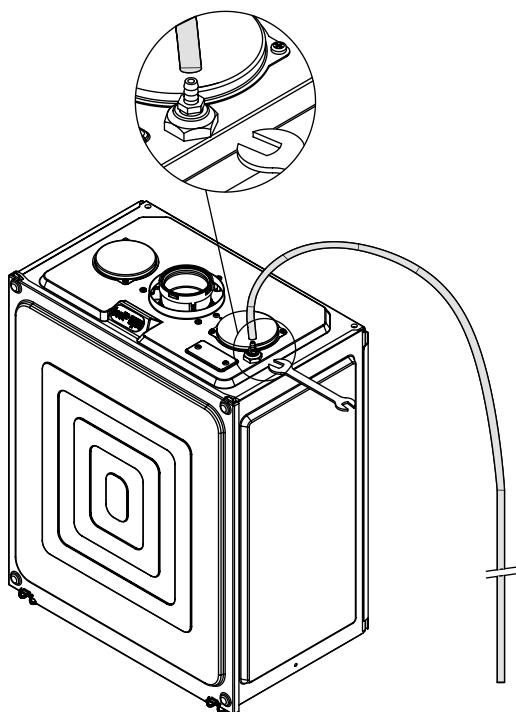


- 1.5 -

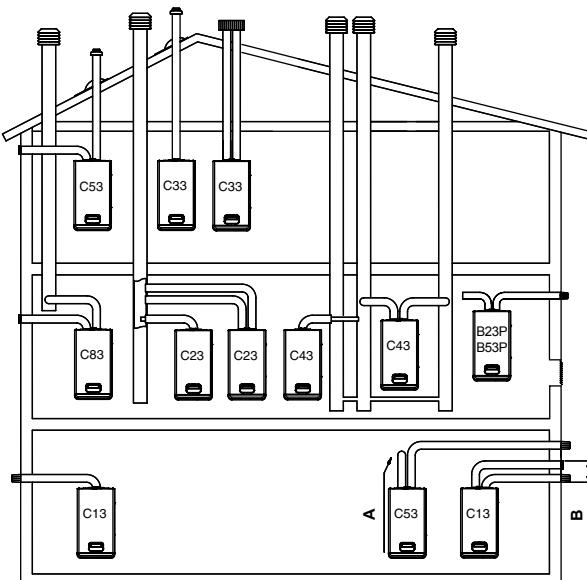


- 1.6 -**- 1.8 -****- 1.7 -****- 1.9 -**

- 1.10 -



- 1.11 -



[EN] - A: rear outlet/B: max 50 cm

[ES] - A: salida trasera/B: m^ax 50 cm

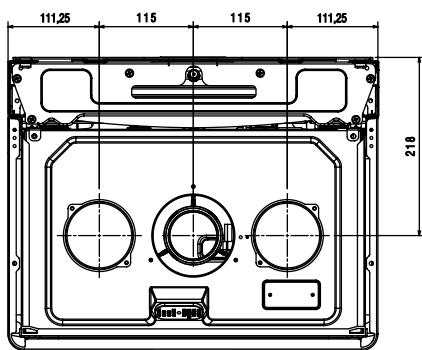
[PT] - A: saída posterior/B: m^ax 50cm

[HU] - A: hátsó kivezetés/B: max 50 cm

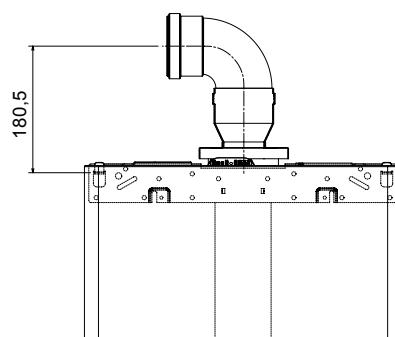
[RO] - A: supapa posteroiora/B: max 50 cm

[DK] - A: afkast bagud/B: max 50 cm

- 1.12 -



- 1.13 -



[EN] - CONCENTRIC DUCT FOR FUMES OUTLET/AIR INTAKE

[ES] - CONDUCTO CONCÉNTRICO PARA SALIDA HUMOS/ASPIRACIÓN AIRE

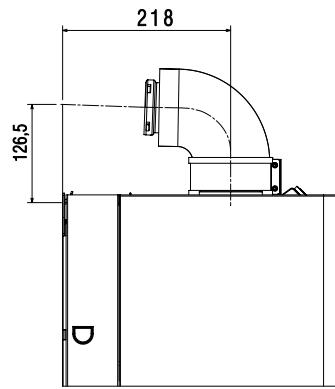
[PT] - CONDUTA CONCÉNTRICA PARA DESCARGA FUMOS/ ASPIRAÇÃO AR

[HU] - KONCENTRIKUS FÜSTGÁZELVEZETÉS / LEVEGŐBESZÍVÁS

[RO] - TUBULATURA CONCENTRICA ADMISIE-EVACUARE

[DK] - BALANCERET AFTRÆK AFKAST/LUFTINDTAG

- 1.14 -



[EN] - SPLIT DUCTS FOR FUMES OUTLET/AIR INTAKE

[ES] - CONDUCTO DESDOBLADO PARA SALIDA HUMOS/ASPIRACIÓN AIRE

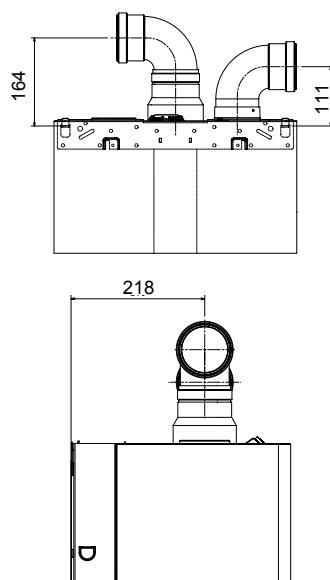
[PT] - CONDUTA SEPARADA PARA DESCARGA FUMOS / ASPIRAÇÃO AR

[HU] - OSZTOTT FÜSTGÁZELVEZETÉS / LEVEGŐBESZÍVÁS

[RO] - TUBURI SEPARATE ADMISIE-EVACUARE

[DK] - SPLIT AFTRÆK AFKAST/LUFTINDTAG

- 1.15 -



[EN] - FUMES DUCT FOR INTAKE IN ENVIRONMENTS

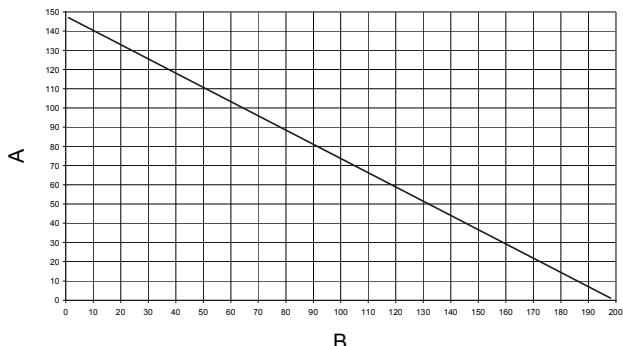
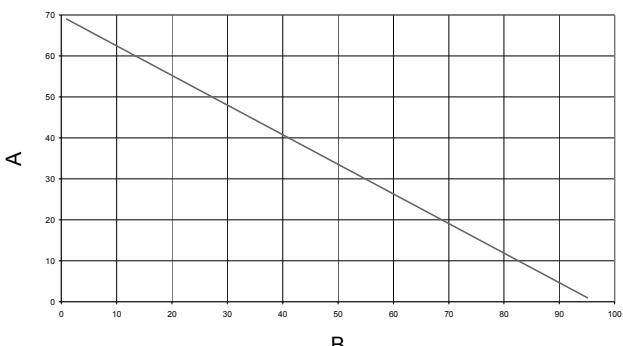
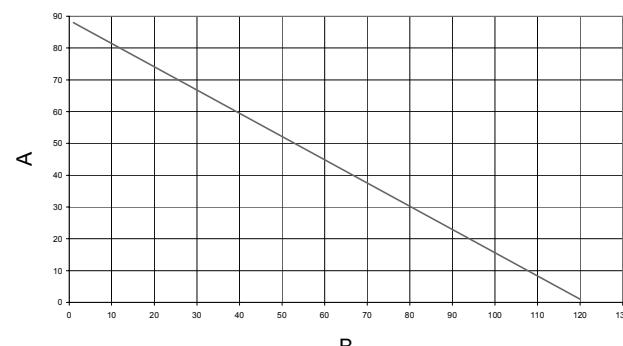
[ES] - CONDUCTO HUMOS/ASPIRACIÓN EN EL AMBIENTE (TIRO FORZADO)

[PT] - CONDUTA FUMOS / ASPIRAÇÃO NOS AMBIENTES

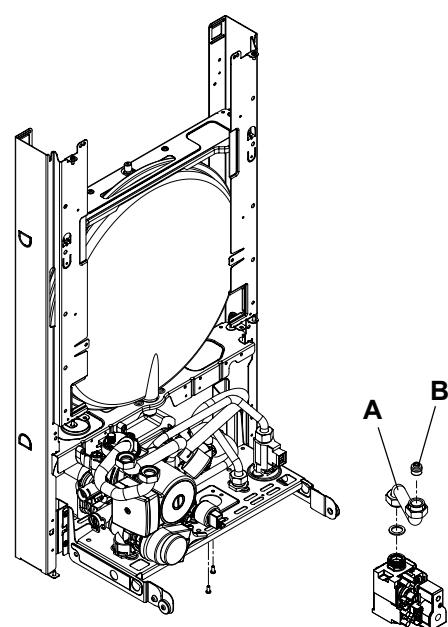
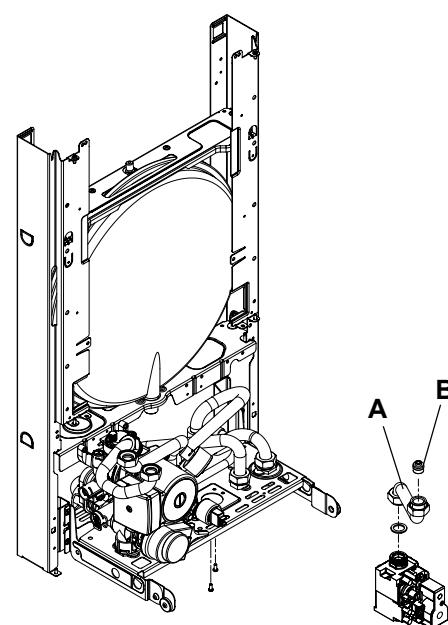
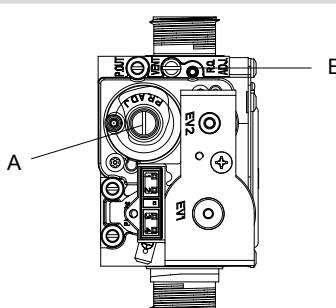
[HU] - HELYISÉGLEVEGŐ FÜGGŐ FÜSTGÁZ ELVEZETÉS

[RO] - TUBURI PENTRU AER LUAT DIN INTERIOR

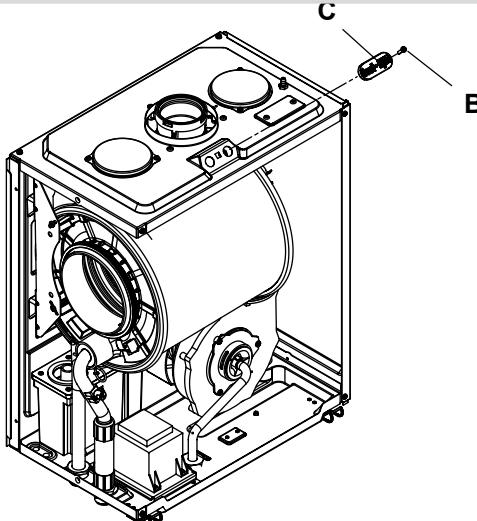
[DK] - LUFTINDTAG FRA OPSTILLINGSRUM

- 1.16 -**16 R.S.I.****B****25 C.S.I. - R.S.I.****B****35 C.S.I. - R.S.I.****B**

- [EN] - A - EXHAUSTION LENGTH (m) B - LENGTH OF THE INTAKE DUCT (m)
 [ES] - A - LONGITUD HUMOS (m) B - LONGITUD CONDUCTO ASPIRACIÓN (m)
 [PT] - A - COMPRIMENTO DESCARGA (m) B - COMPRIMENTO CONDUTA DE ASPIRAÇÃO (m)
 [HU] - A - KIVEZETES HOSSZA (m) B - SZÍVÓCSÓ HOSSZA (m)
 [RO] - A - LUNGIME EVACUARE (m) B - LUNGIMEA TUBULATURII DE ADMISIE (m)
 [DK] - A - AFKAST LÆNGDE (m) B - LUFTINDTAG LÆNGDE (m)

- 1.18 -**C.S.I.****- 1.19 -****R.S.I.****- 1.17 -**

- [EN] - A - Minimum power adjusting screw B - Maximum power adjusting screw
 [ES] - A - Tornillo regulación mínima potencia B - Tornillo regulación máxima potencia
 [PT] - A - Parafuso de regulação da mínima potência B - Parafuso de regulação da máxima potência
 [HU] - A - Minimum teljesítmény szabályozó csavar B - Maximum teljesítmény szabályozó csavar
 [RO] - A - Surub de reglaj putere minima B - Surub de reglaj putere maxima
 [DK] - A - Minimum reguleringsskrue B - Maximum reguleringsskrue

- 1.20 -



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