

# Centora

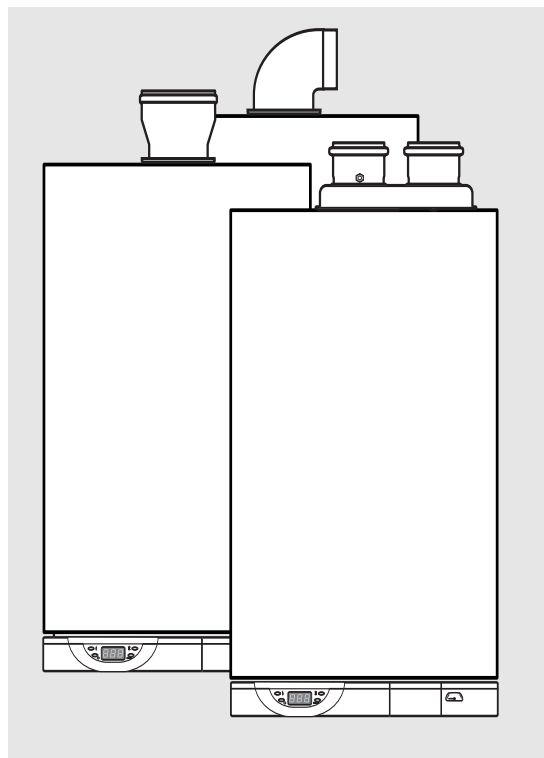
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## green

### CONDENSING WALL HUNG COMBINATION BOILER

Heating and Instantaneous Domestic Hot Water - Fanned Flue system

## Installation and Operating Instructions



Centora green 24  
Centora green 30

Manufactures N°

200906806037.32

200906822037.31

Model Type

Centora green 24 Nat

Centora green 30 Nat

Gas Council N°

47 - 980 - 21

47 - 980 - 24



**These instructions are suitable for the CENTORA GREEN boilers :**

**Do not forget the Log Book!**

Chaffoteaux & Maury supports Benchmark, the heating industry code to ensure the correct installation, commissioning and servicing of domestic central heating systems.

**To The Householder**

**Make sure you have a completed Log Book for your boiler.** This provides a record of the commissioning of your boiler.

It contains important information about your particular installation that may be required by service engineers. The Log Book will also provide contact details for the installer should you need guidance in the use of this appliance or if there are any problems.

As with your car, your boiler will work more reliably and efficiently if regularly serviced. We recommend an annual service check. The service history of the appliance will be recorded on the Log Book.

In the unlikely event of any problems with your boiler or system you should first contact your installer. If your installer cannot resolve the problem he should telephone our national service helpline.

This appliance is a combined appliance for the production of Central Heating (C.H.) and Domestic Hot Water D.H.W.)

This appliance **must only** be used for the purpose for which it is designed. The manufacturer declines all responsibility for improper or negligent use.

A charge may be made if Chaffoteaux & Maury Service is called out to resolve a non-product related fault.

Your statutory rights are not affected.

**Do not allow** children or inexperienced persons to use the appliance without supervision.

If you smell gas in the room, **do not turn on or off** light switches, use the telephone or any other objects that might cause sparks.

Open doors and windows to ventilate the room.

Shut the gas mains tap (on the gas meter) or the valve of the gas cylinder and call your Gas Supplier immediately.

If you are going away for a long period of time, remember to shut the mains gas tap or the gas cylinder valve.

**Before any intervention within the boiler it is first necessary to isolate the electrical power supply by turning the external switch to "OFF"**

TO CONTACT C&M SERVICE, PLEASE CALL THE NATIONAL WARRANTY HELPLINE ON:

**0870 600 9888**

**To The Installer**

As part of the commissioning of this appliance it is vital that the Log Book is completed and given to the Householder. Please ensure that your customer is aware of the importance of keeping the Log Book safe as a record of the installation and the appliance service history.

Please ensure that your customer is aware of the correct operation of the system, boiler and controls.

**CUSTOMER CARE**

Chaffoteaux & Maury Ltd., as a leading manufacturer of domestic and commercial water heating appliances is committed to providing high quality products and a high quality after sales service. If it is necessary to contact an engineer, then telephone the national warranty helpline 0870 600 9888.

Advice on installation or servicing can also be obtained by contacting the Technical Department on:

Tel: 0870 241 8180

Fax: 01494 459775

**GUARANTEE**

The manufacturer's guarantee is for 12 months from the date of purchase. The guarantee is invalidated if the appliance is not installed in accordance with the recommendations made herein or in a manner not approved by the manufacturer. To assist us in providing you with an efficient after sales service, please return the guarantee registration card enclosed with the boiler without delay.

## STATUTORY REQUIREMENTS

The installation of this appliance must be carried out by a CORGI Registered person or other competent person and in accordance with the requirements of the Gas Safety (Installation and Use) Regulations and the rules in force.

In GB it is necessary to comply with the Water Supply (Water Fittings) Regulation 1999, for Scotland, The Water Bylaws 2000, Scotland. The Centora Green is an approved product under the Water Regulations.

To comply with the Water Regulations, your attention is drawn to The Water Regulations guide published by the the Water Regulations Advisory Scheme (WRAS) gives full details of the requirements. In IE the requirements given under the current edition of I.S.813 must be followed. installation must also comply with the current bylaws of Local Water Undertakings.

Installation should also be carried out in accordance with Building Regulations, Local Authority Building Standards (Scotland) Regulations and current editions of the following British Standards Codes of practice: BS 7593, BS 5440 parts 1 and 2, BS 5449, BS 7593, BS 6798, BS 5546, BS 7074, BS 7671 and document IGE/UP/7.

In the Republic the Republic of Ireland the installation should be carried out in accordance with the following codes of practice:

I.S.813 Domestic Gas Installation, the following BS Standards give valuable information: BS 5546, BS 5449, BS 7074 and BS 7593.

The electrical connections must be made in accordance for GB with current I.EE. Wiring Regulations, in Scotland with the electrical provisions of the Building Regulations applicable in Scotland, the Safety Document 635 The Electricity at Work Regulation and in the Republic of Ireland in accordance with I.S.813 and the current ETCI rules.

The Centora Green does not contain any asbestos or asbestos products, or mercury derivatives. Additional CFC's have not been used in this product.

The appliance does not contain any potential hazard in relation to the COSHH regulations.

If there is a possibility of the incoming mains water pressure exceeding 10 bar then a suitable pressure limiting valve must be fitted where pressures exceed 6 bars a pressure limiting valve is preferred.

Precautions: During servicing, keep the dust generation to a minimum and avoid inhaling any dust and contact with the skin and eyes. Normal handling and use will not present any discomfort, although some people with a history of skin complaints may be susceptible to irritation. When disposing of the ceramic lining, ensure that it is securely wrapped and wash hands after contact.

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**This instruction booklet is especially designed for appliances installed in the The United Kingdom and The Republic of Ireland**

## INTRODUCTION

The **CENTORA GREEN** is a fully automatic, wall mounted, low water content condensing combination boiler. It is a room sealed, fan assisted, balanced flued appliance providing central heating and mains pressure domestic hot water on demand. It has electronic ignition and is suitable for all modern electrical control systems. The boiler is designed for sealed systems only and a circulating pump, expansion vessel together with a pressure gauge and safety valve are included within the boiler.

The standard horizontal flue kit is suitable for lengths 300 mm minimum to 600 mm maximum and includes an elbow adapter that can be rotated through 360 ° . The horizontal flue can extend up to 3 metres using 1 metre flue extension kits. 45 ° and 90° flue bends are also available as accessories.

# INSTALLER'S INSTRUCTIONS

1

## Description

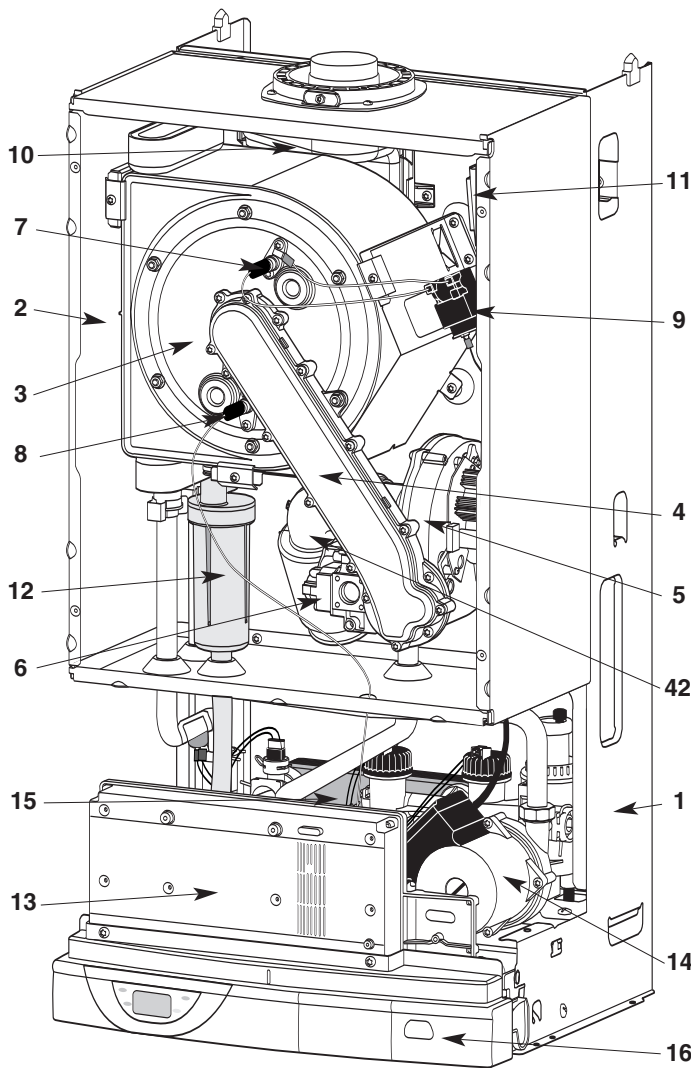


Fig. 1

- 1.- Steel chassis complete with expansion vessel
- 2.- Sealed chamber
- 3.- Burner and heat exchanger assembly
- 4.- Air / gas connection
- 5.- 24 V modulating fan
- 6.- Gas valve
- 7.- Ignition electrode
- 8.- Ionisation probe
- 9.- Ignitor
- 10.- Combustion products manifold
- 11.- 24 V transformer
- 12.- Siphon
- 13.- Electrical box
- 14.- Pump
- 15.- Secondary heat exchanger
- 16.- Pressure gauge
- 17.- Three way valve
- 18.- Automatic air separator and automatic vent
- 19.- Central heating flowswitch
- 20.- Domestic hot water flowswitch
- 21.- Central heating control thermistor
- 22.- Hot water control thermistor
- 23.- Overheat sensor
- 42.- Silencer

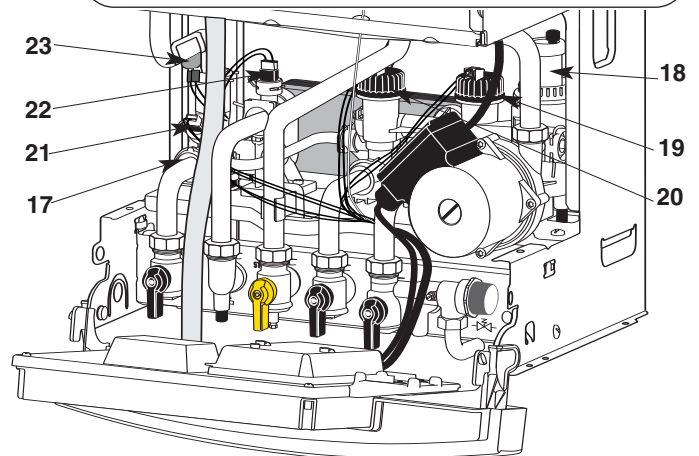


Fig. 2

- 24.- Display
- 25.- Domestic Hot water switch
- 26.- Green indicator – Domestic Hot Water mode ON
- 27.- D.H.W. temperature reducing key
- 28.- D.H.W. temperature increasing key DHW mode indicator
- 29.- Central Heating switch
- 30.- Green indicator – Central Heating mode ON
- 31.- Central Heating temperature reducing key
- 32.- Central Heating temperature increasing key
- 33.- Green indicator – Power ON
- 34.- Orange indicator - Burner ON
- 35.- Red indicator - Lock out / flame failure
- 36.- Reset key

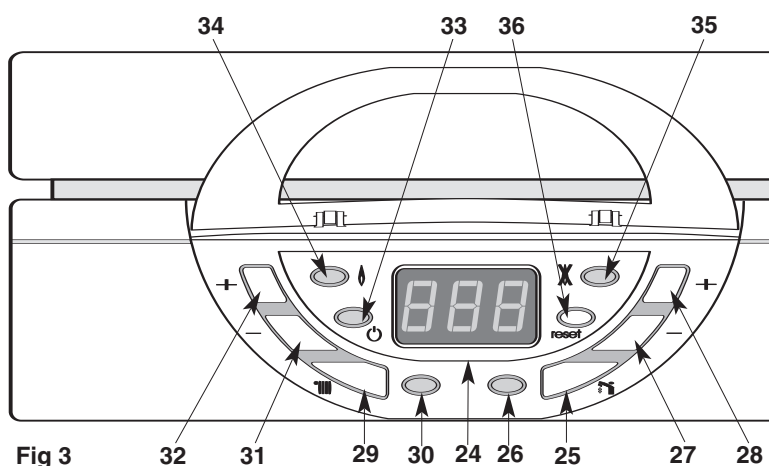


Fig. 3

# 2

## Dimensions

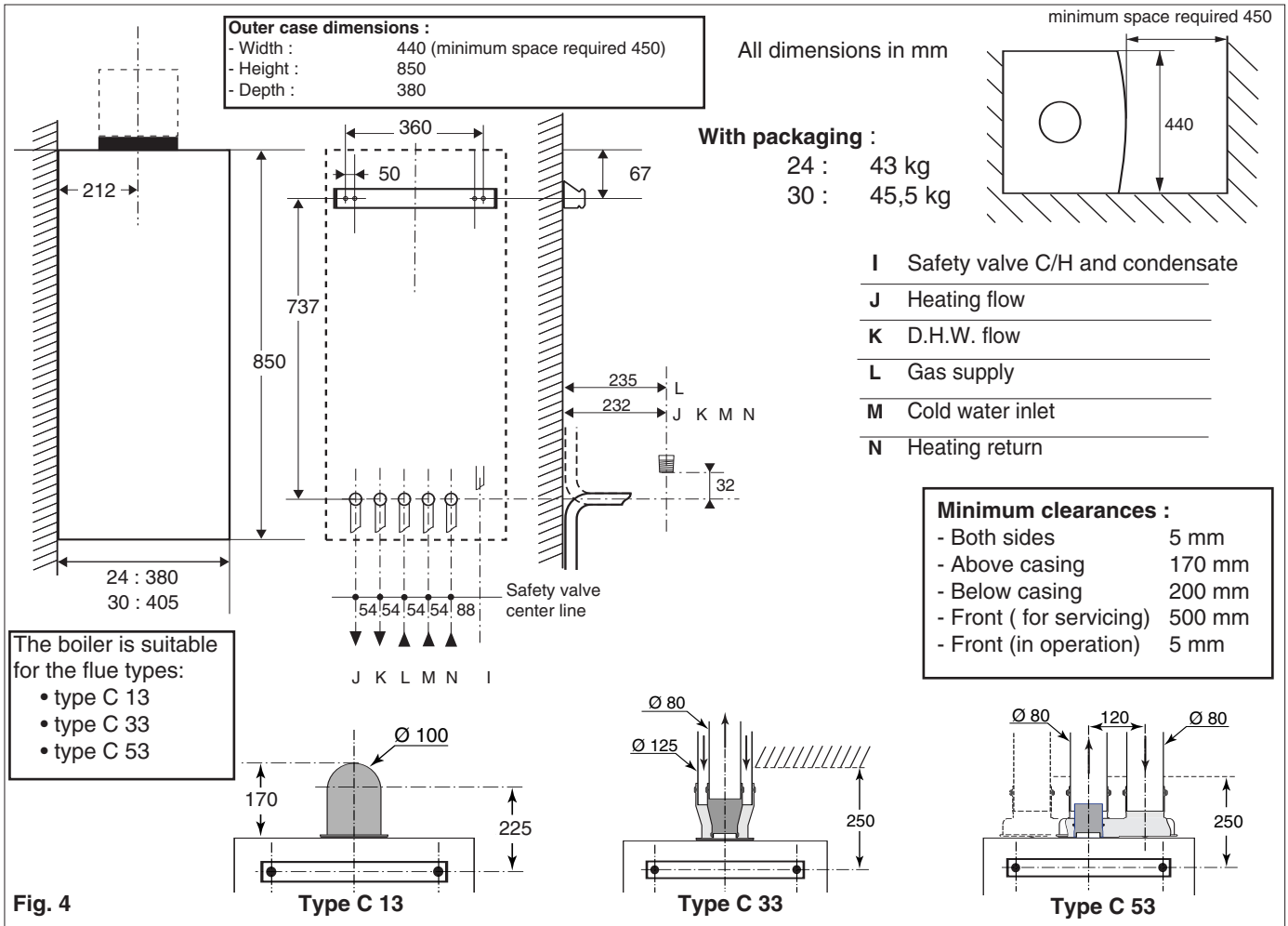


Fig. 4

Type C 13

Type C 33

Type C 53

# 3

## Hydraulic Data

Pump head available

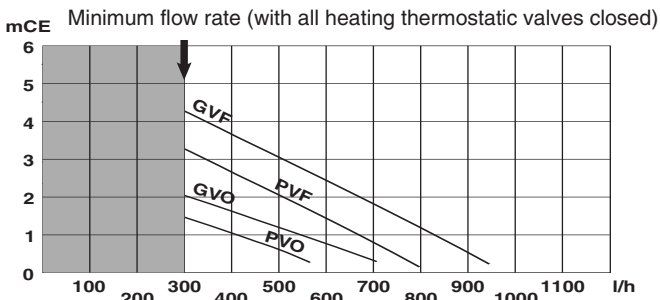


Fig. 5

The boiler comprises a double speed pump and an adjustable by-pass.

The chart (fig. 5) shows the pump head available regarding the flow rate. GVF means high speed by-pass closed, PVF means low speed by-pass closed, GVO means high speed by-pass fully open, PVO means low speed by-pass fully open.

For adjustment procedure, please refer to § 8.

The minimum flow rate to insure a correct functioning of the should be over 300 l/h (with thermostatic valves fully closed)

Maximum water capacity of Central Heating system :

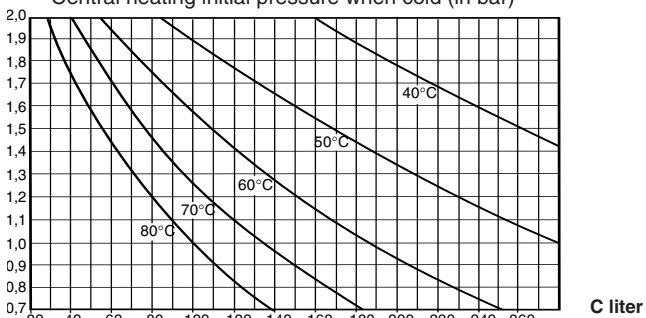
The expansion vessel is pre-charged to 0.7 bar (10 lb/in 2 ).

The vessel is suitable for systems up to 145 litres capacity.

For systems of greater capacity an additional expansion vessel will be required. Refer to the chart below and BS 7074 pt 1 or BS 5449.

The minimum initial pressure of the system should be over 0.7 bar (1 to 1.5 bar is recommended).

Pump head chart available at the outlet of the boiler  
 Central heating initial pressure when cold (in bar)



System capacity chart

Fig. 6



**Location**

The boiler can be installed on any suitable internal wall. Provision must be made to allow the correct routing of the flue and siting of the terminal to allow the safe and efficient removal of the flue products. A compartment or cupboard may be used provided that it has been purpose-built or modified for the purpose. It is not necessary to provide permanent ventilation for cooling purposes. Detailed recommendations are given in BS 5440 pt 2. If it is proposed that it is installed in a timber framed building then reference must be made to British Gas Document DM2, or advice sought from CORGI.

Avoid to install the boiler where the air inlet can be polluted by chemical products such as chlorine (swimming pool aera), or ammonia (hair dresser), or alcalin products (launderette)

**Flue**

Detailed information on flue assembly is contained in the appropriate starter pack.

The boiler must be installed so that the flue terminal is exposed to the free passage of external air at all times. It must not be allowed to discharge into another room or space such as an outhouse or closed lean-to. The minimum acceptable clearances are shown below:

- A Directly below an opening, window, etc	300 mm
- B Above an opening, window, etc	300 mm
- C Horizontally to an opening, window, etc	300 mm
- D Below gutters, soils pipes or drain pipes	75 mm
- E Below eaves	200 mm
- F Below balconies or car port roof	200 mm
- G From a vertical drain pipe or soil pipe	150 mm
- H From an internal or external corner	300 mm
- I Above ground roof or balcony level	300 mm
- J From a surface facing the terminal	600 mm
- K From a terminal facing the terminal	1200 mm
- L From an opening in the car port into the dwelling	1200 mm
- M Vertically from a terminal on the same wall	1500 mm
- N Horizontally from a terminal on the same wall	300 mm

- Q Fixed by Ubbink Rolux 4 GM flue terminal  
It may be necessary to protect the terminal with a guard. Reference should be made to the Building Regulations for guidance. Suitable guards may be obtained from the following manufacturer:

Quinnel Barret & Quinnel Wireworks  
Old Kent Road  
London SE15 1NL  
Tel: 0171 639 1357

**Ventilation**

The room in which the boiler is installed does not require specific ventilation. **If it is installed in a cupboard or compartment permanent ventilation is not required for cooling purposes.**

**Gas Supply**

The gas installation and soundness testing must be in accordance with the requirements of BS 6891. The boiler requires a 22 mm supply. Ensure that the pipe size is adequate for demand including other gas appliances on the same supply.

**Combustion system protection**

The sulphur level contained in the gas should comply with the european Standards which are :

- maximum 150 mg/m<sup>3</sup> for a short period in a year
- average level of 30 mg/m<sup>3</sup> during one year

**Electrical Supply**

The appliance requires an earthed 230V - 50 Hz supply and must be in accordance with current I.E.E. It must also be possible to be able to completely isolate the appliance electrically. Connection should be via a 3 amp fused double-

pole isolating switch with contact separation of at least 3 mm on both poles. Alternatively, a fused 3 Amp. 3 pin plug and unswitched socket may be used, provided it is not used in a room containing a bath or shower. It should only supply the appliance.

The boiler is suitable for sealed systems only. The maximum working pressure for the appliance is 10 bar. All fittings and pipework connected to the appliance should be of the same standard. If there is a possibility of the incoming mains pressure exceeding 10 bar, particularly at night, then a suitable pressure limiting valve must be fitted.

The boiler is designed to provide hot water on demand to multiple outlets within the property. If there is a requirement for greater demands, for example if the property has several bathrooms and cloakrooms, a vented or unvented hot water storage system may be used.

**Showers**

Any shower valves used with the appliance should be of a thermostatic or pressure balanced type. Refer to the shower manufacturer for performance guidance and suitability.

**Flushing and Water Treatment**

The performance of the appliance could be impaired by system debris or the effects of corrosion. The system must be flushed thoroughly to remove metal filings, solder, machining oils and other fluxes and greases before connecting the boiler. If it is an existing system, an appropriate flushing and descaling agent should be used. Refer to BS 7593 (1992) for guidance. For more information on the use of corrosion inhibitors, flushing and descaling agents, advice can be sought from the manufacturers of water treatment products such as:

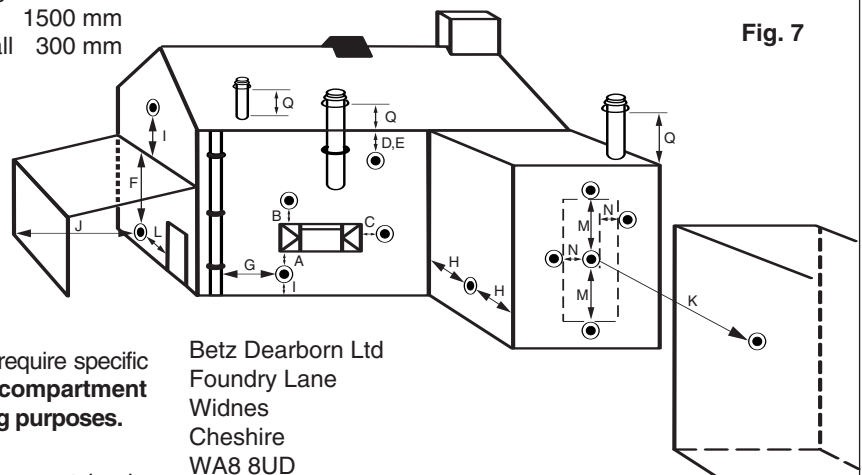


Fig. 7

Betz Dearborn Ltd  
Foundry Lane  
Widnes  
Cheshire  
WA8 8UD  
Tel: 0151 424 5351  
Fernox Manufacturing  
Britannica Works  
Clavering  
Essex  
CB11 4QZ  
Tel: 01799 550811

**System Controls**

The boiler is electrically controlled and is suitable for most modern electronic time and temperature controls. The addition of such external controls can be beneficial to the efficient operation of the system. The boiler connections for external controls are 24V and so only controls of 24V or that have voltage free contacts should be used.

Please check that you are familiar with the installation requirements before commencing work.(section 6)

The installation accessories described in the following list are included in the boiler packaging.

- Hanging bracket
- A paper template (showing the dimensions of the boiler with 5 mm side clearances, fitting instructions and commissioning instructions)
- Connection tails
- Screws and wall plugs
- Connection washers and filters
- Installation manual

#### Method of positioning the boiler on the wall.

The paper template can be used to ensure the correct positioning of kitchen cabinets etc. It also details the commissioning instructions.

The paper template has to be fixed to the wall and used to locate the position of the hanging bracket and the centre for the flue hole.

Drill and plug the wall and secure the hanging bracket using the screws provided. Remove the boiler from its packaging as shown in fig. 8 and unscrew the 4 screws **A** and remove the casing (Fig. 9).

Place the boiler on the wall on the hanging bracket (Fig. 11).

If required, there is space for all piping to pass behind the boiler. Using fig. 11 for reference, connect the gas and water pipes and the valves to the base of the appliance using the tails provided. There is a 190 mm space between the valves and the wall to make these connections.

#### Connecting the boiler to the system

- Push in the tabs “**P**” (fig. 13) on either side of the boiler and pivot the electrical box forward to gain access to the valve connections
- Remove the yellow caps and connect the boiler to the taps using washers provided in the plastic bag.
- 4 x fibre washers for the C/H flow and return, hot water outlet and cold water inlet connections
- 1 x rubber washer “**R**” for gas connection.

Provision must be made to fill and recharge the system pressure. This can be achieved using a filling loop or other methods approved by the local water authority.

Before fitting the tails onto the connecting bracket, please check the correct location of the flow restrictor **L** (fig.10) on the main inlet.

#### Safety valve and condensate drains

The pressure relief valve tube is clear silicone. It should terminate below the boiler over a tundish or 22 mm pipe (see **I** fig 4) which should in turn discharge safely outside the premises. Care should be taken that it does not terminate over an entrance or window or where a discharge of heated water could endanger occupants or passers by.

The system should be carefully checked for leaks, as frequent refilling could cause premature system corrosion or unnecessary scaling of the heat exchanger. The pipe from the siphon 12 (fig. 1) should be connected to a drain in the conditions described in the relevant British regulations.

##### External termination via condensate siphon

The condensate drainage pipe should have a minimum diameter of 22 mm, it should be inserted into a suitable acid resistant pipe - e.g. plastic waste or overflow pipe (refer to **BS 6798 : 2000**) by at least 50mm, must have a continuous fall and preferably be installed and terminated within the building.

Pay special attention to not bend the condensates silicone drain pipe such as the flow will be interrupted.

The discharge pipe must terminate in a suitable position:

- i) Connecting to an internal soil stack (at least 450mm above the invert of the stack). A trap giving a water seal of at least 75mm must be incorporated into the pipe run, there must also be an air break upstream of the trap.
- ii) Connecting into the waste system of the building, such as a washing machine or sink. The connection should be upstream of the washing machine / sink (if the connection is down stream of the waste trap then an additional trap giving a minimum water seal of 75mm and an air break must be incorporated in the pipe run as above.
- iii) Terminating into a gully below the grid level but above the water level.
- iv) Into a soakaway.

**NOTE: IF ANY CONDENSATE PIPEWORK IS TO BE INSTALLED EXTERNALLY, THEN IT SHOULD BE KEPT TO A MINIMUM AND BE INSULATED WITH A WATERPROOF INSULATION AND HAVE A CONTINUOUS FALL**

The condensate flow can reach 2 litres/hour; because of the acidity of the condensate products (Ph close to 2), take care before operation.

#### Fitting the Horizontal Flue

**Attention ! Before starting the boiler, the siphon 12 fig. 1 must be filled with water. Before fitting the flue terminal onto the boiler, please pour 1/4 litre of water in the exhaust pipe as shown in fig. 12.**

The instructions for the vertical and biflux (twin pipe) flue options are included with the relevant adapter kits.

The standard flue supplied with the appliance is suitable for lengths from 300 mm minimum to 720 mm maximum.



This means for rear flueing, the standard kit will accommodate a maximum wall thickness of 600 mm, and for side flueing a maximum wall thickness of 587 mm. This takes into account the minimum appliance side clearances of 5 mm.

If the flue is a side exit installation, then calculate the position of the hole with a slope of 5 mm / metre towards the boiler from the terminal. The flue should rise up slightly to the terminal in order to let the condensate coming back into the boiler.

**Attention ! Use only specific condensation flue kit.**

## 5

## Installing the Boiler (continued)

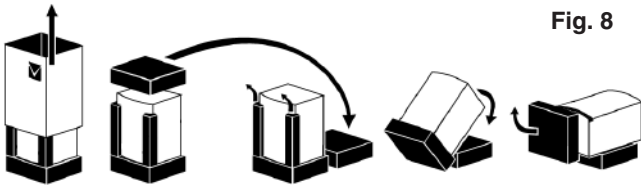


Fig. 8

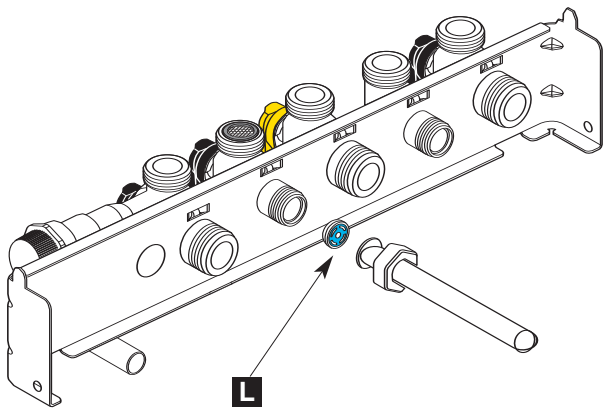


Fig. 10

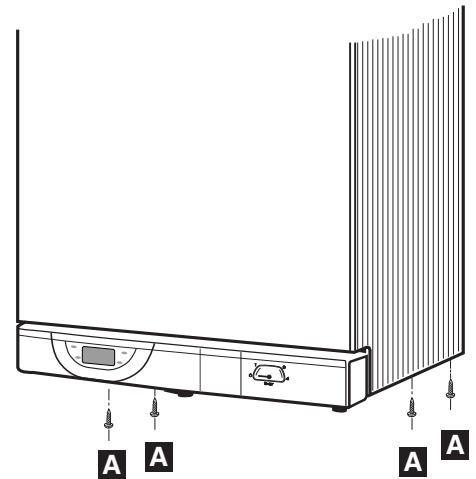


Fig. 9

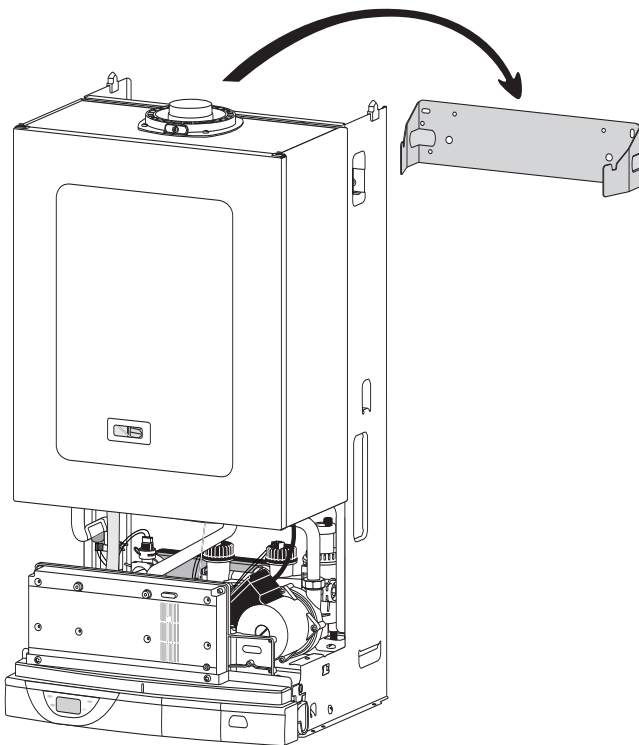


Fig.11

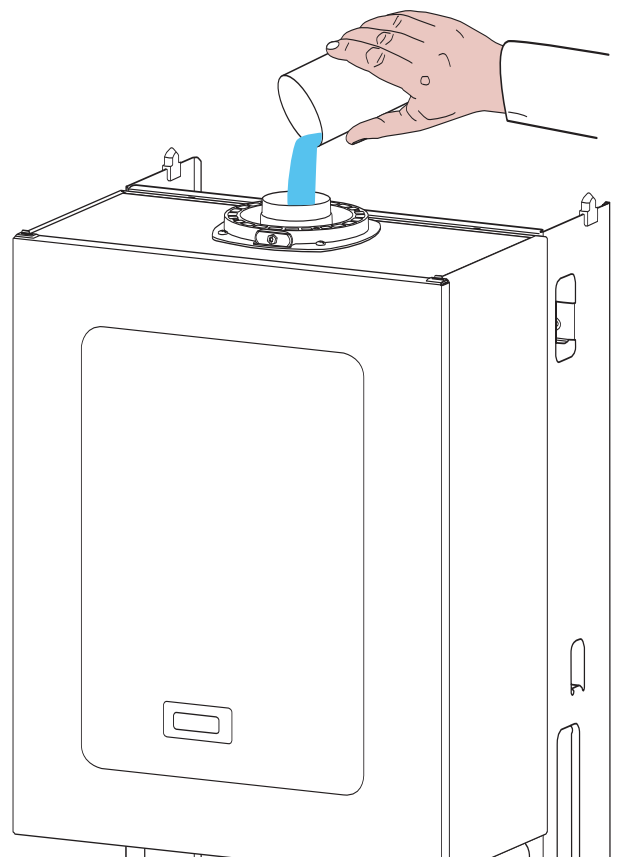


Fig.12

# 6

## Electrical Connections

### Making the Electrical Connections

Hinge down the electrical box to gain access to the electrical connections. Push in the tabs **P** (fig 13) on either side of the boiler and pivot the box forward. Undo the two retaining screws **V**, remove cover and remove cable clamp. **C** (fig 14)

Connect the live and neutral wires to the multipin plug leaving sufficient earth wire to connect to the earthing point **T** fig 14 .

Note: The connections should be made so that should the lead be pulled from its anchorage, the current carrying wires become taut before the earth wire.

If using a room thermostat or other external control, they can be connected in place of the link **S** on the multipin Plug (see fig. 14).

Note: Use only controls designed for voltage free switching or 24V supply. Do not connect to a 230V supply.

Connect multipin plug into the socket on the printed circuit board. Secure the cable using the cable clamp and replace the cover. NB The room thermostat options setting can be made before replacing the electrical box cover (1 fig.14).

All necessary settings for room thermostat operations are described in paragraph 9 ADJUSTEMENTS AND SETTINGS.

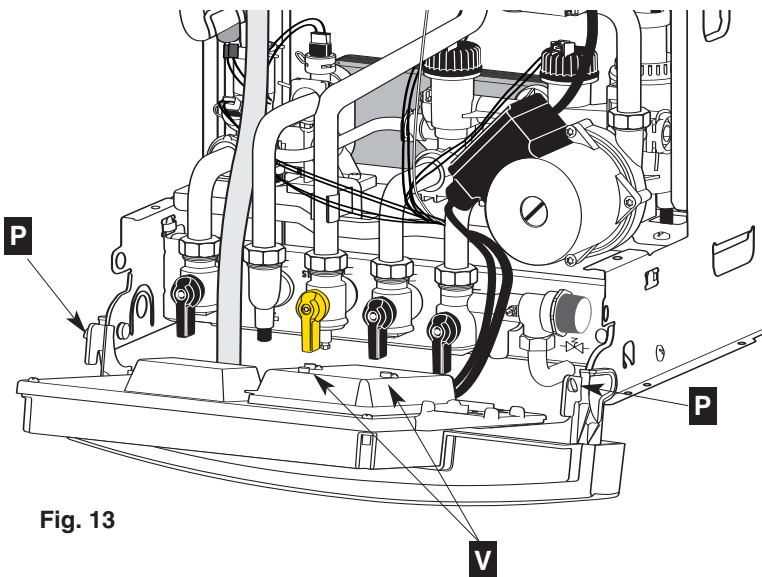


Fig. 13

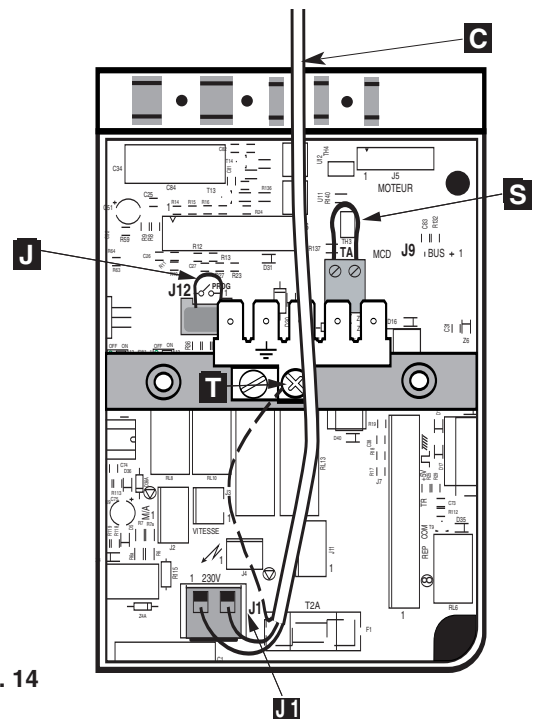


Fig. 14

# 7

## Commissioning and Testing

### Pre-commissioning

Ensure that the system has been adequately flushed.  
Purge gas supply of air and test for soundness.  
Carry out final electrical tests to ensure the correct polarity and earthing continuity.

### DHW

Open the main cold feed valve **40**.  
Open all hot taps to purge DHW system.  
Check for water soundness.  
Check flow rate at the bath tap is set correctly (see technical data).

### Central Heating

Open flow and return valves on the boiler **37** and **41** (Fig. 15)  
Open the automatic air vent **18** (Fig. 2)  
Fill system and vent radiators.  
Set system pressure and remove filling loop.  
Check for leaks.  
Manually check pump is free to turn.  
Switch on electrical supply.  
Press the Central Heating switch **29** (Fig. 3) to switch on heating mode.  
Press the + key **32** (Fig. 3) to set heating temperature to maximum.  
Allow pump to run for several minutes.

Isolate the electrical supply.  
Drain boiler and check water filter for installation debris.  
Replace filter and recharge system.

### Lighting the Boiler

Inspect the entire gas supply for soundness, including the gas meter, the gas installation should be in accordance with the relevant standards, in GB this is BS 6891 and in IE this is the current edition of I.S.813.

Connect gas pressure gauge to test point **39** (Fig. 15).  
Turn on the gas supply and boiler gas tap **39** (Fig. 15).  
Ensure electrical supply is on.  
Ensure all external controls are calling for heat.  
Press on Central Heating switch **29** (Fig. 3) to switch on heating mode.

Press the + key **32** (Fig. 3) to set heating temperature to maximum. The boiler will light. Allow the boiler to heat system.  
Check the inlet gas pressure (working pressure) while boiler is operating in hot water mode.(Refer to technicaldata).  
Check the operation of the boiler controls and safety devices.(see separate servicing leaflet for details).Set the by pass (refer to the paragraph below).  
Re-flush the system to remove any dissolved oils and fluxes.  
Recharge system pressure and introduce any water treatment as required.

# 7

## Commissioning and Testing (continued)

### By pass and Pump

The boiler is fitted with a pre-adjusted by pass. Although adjustment is not normally necessary, the by pass can be reset by turning screw **D** (fig. 15 ) anticlockwise to open the by-pass using the chart below for guidance. If used on a system with thermostatic radiator valves, the flow rate with the thermostatic valves closed should be adjusted to at least 300 l/hr. The enclosed charts indicate the residual head of the pump available for the system. The pump fitted on the boiler is a double speed model. (GV = High speed and PV = low speed). The speed setting is described in chapter 9. Speed selection is only available in C.H. mode.

### Post Commissioning

Ensure system pressure has been set correctly.  
 Set all parameters of the boilers as shown in chapter 9 ADJUSTMENTS AND SETTINGS.  
 Set boiler thermostat and controls.  
 Set programmer to householder's requirements.  
 Set external controls.  
 Ensure the Logbook is fully completed with your contact details and required readings and details of the installation.

### Handing Over to the Householder

Demonstrate the lighting and operation of the boiler.  
 Demonstrate how to maintain the system pressure.  
 Demonstrate the operation and setting of the built-in clock.  
 Explain the benefits of annual maintenance by a competent person.  
 Explain how to register guarantee.  
 Ensure the Householder countersigns the Log Book to confirm that these demonstrations have been carried out and understood.  
 For IE, it is necessary to complete a "Declaration of Conformity" to indicate compliance to I.S.813. An example of this is given in the current edition of I.S.813. An example of this is given in the current edition of I.S.813. In addition it is necessary to complete the "Benchmark" Log Book.

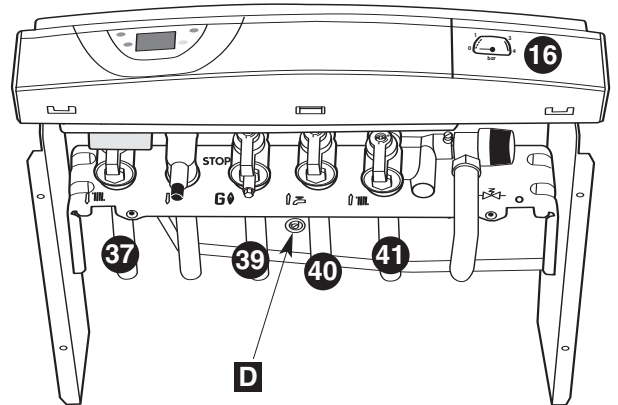


Fig. 15

# 8

## Fitting the Casing

### Fitting the casing

- Remove the protecting film from the casing :
- Position the casing as shown fig. 17
  - Slide down the casing and put the casing holes on the plastic pins located on the top of the chassis
  - Control the correct position of the casing onto the boiler
  - Tighten the 4 screws located at the bottom as shown in fig. 16.

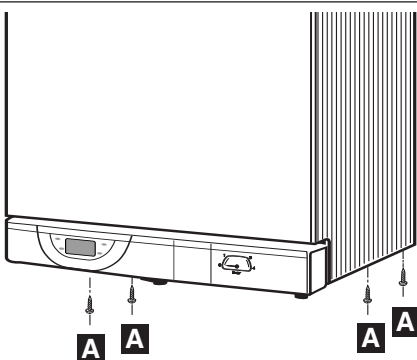


Fig.16

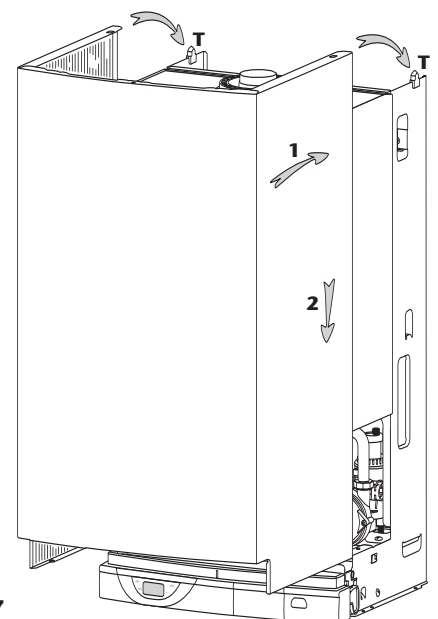


Fig. 17

The boiler is delivered with a pre setting values described in menus 3 and 4.

All settings can be changed by the installer or a qualified person. To gain access to the setting keys please, open the front door P. (fig. 18)

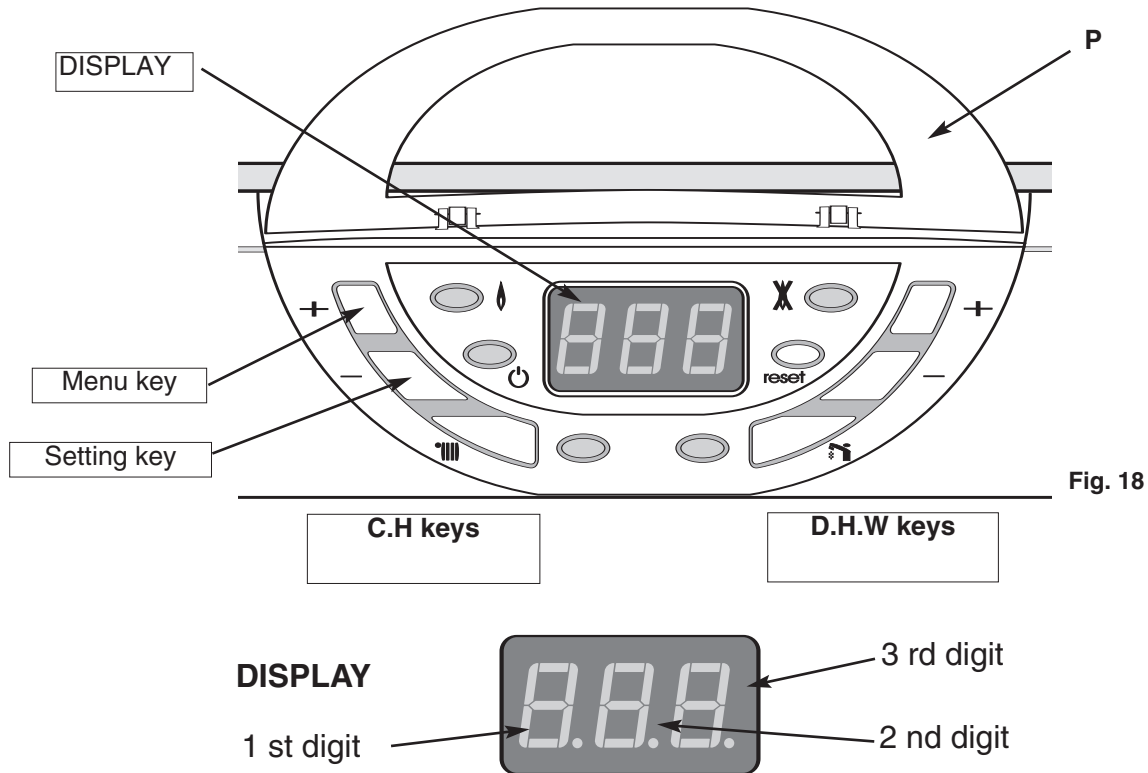


Fig. 18

To gain access to setting menus press simultaneously on  $\ominus$  and  $\oplus$  keys on the D.H.W. side during 5 seconds. (fig. 18).

Menu 1 is displayed.

**Changing the menu :**

Press on Menu key ( $\oplus$  key on C.H. side) (fig.18). The menu number is displayed for 3 seconds. Press on menu key to change for the next menu.

**Changing section in a menu (available only for menu 3 and 4 :**

Press on  $\oplus$  or  $\ominus$  key of the DHW side to change from on section to the previous or the next on in a menu.

*Note :* When you arrive at the last section of a menu, pressing on + key will change for the the 1st section. When you are at the first section, pressing on – key will change for the last section of the menu.

**Setting a parameter in a section:**

Press on setting key ( $\ominus$  key of the heating side) to enter in modification mode. The 2nd and 3rd digits are flashing Press on  $\oplus$  or  $\ominus$  on DHW side to select the correct value then press on Setting key to valid this modification and to get out from setting mode. The 2nd and 3rd digit stop flashing.

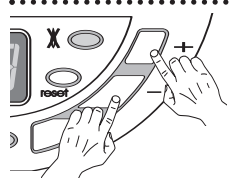
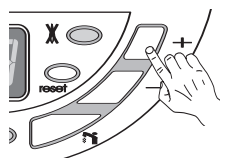
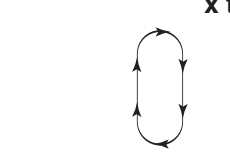
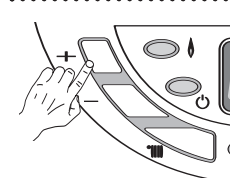

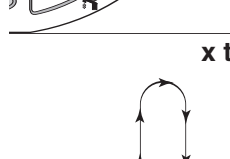
**Recalling the basic configuration:**

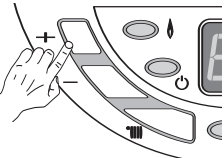
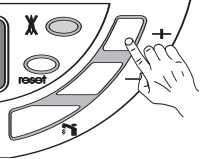

Select menu 3 or 4 then press together on  $\oplus$  key DHW side and setting key for more than 5 seconds. The digits will flash **CM** [ 0 0 ] for a while to indicate that the operation is completed.

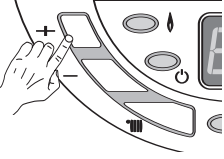
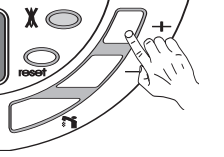

**Erasing the default register :**

Select menu 1 then press together on  $\oplus$  + key DHW side and setting key for more than 5 seconds. The digits will flash **CM** [ 0 0 ] for a while to indicate that the operation is completed.

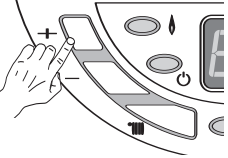







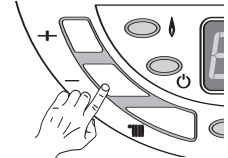




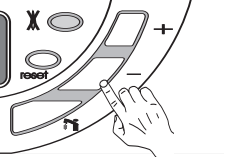




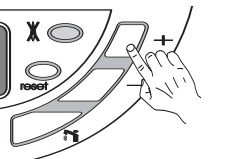




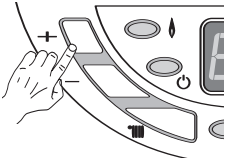
**Note :** To exit from setting mode, leave the boiler for approx. 1 minute then the computer will switch back to user mode.

ACTION	CONFIGURATION	DISPLAY																												
 <p>5''</p>  <p>x times</p> 	<p style="text-align: center;"><b>Menu - 1 - Default register</b> Record the last 10 defaults</p> <table border="1" data-bbox="414 302 1324 627"> <thead> <tr> <th>Section</th> <th>Digit 1</th> <th>Digit 2 and 3</th> </tr> </thead> <tbody> <tr> <td>Last default occurred</td> <td>0.</td> <td>code from 01 to 99</td> </tr> <tr> <td>Last but one default occurred</td> <td>1.</td> <td>code from 01 to 99</td> </tr> <tr> <td>...</td> <td>...</td> <td>code from 01 to 99</td> </tr> <tr> <td>Last default occurred before the previous one</td> <td>9.</td> <td>code from 01 to 99</td> </tr> </tbody> </table> <p>Note -- is displayed if no default is recorded.</p>	Section	Digit 1	Digit 2 and 3	Last default occurred	0.	code from 01 to 99	Last but one default occurred	1.	code from 01 to 99	...	...	code from 01 to 99	Last default occurred before the previous one	9.	code from 01 to 99	<p style="text-align: center;">- 1 -</p> <p style="text-align: center;">0. _ _</p> <p style="text-align: center;">1. _ _</p> <p style="text-align: center;">9. _ _</p>													
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 <p>once</p>  <p>x times</p> 	<p style="text-align: center;"><b>Menu - 2 - Boiler conditions</b> Indicates the conditions or the configurations of the boiler</p> <table border="1" data-bbox="414 907 1324 1556"> <thead> <tr> <th>Section</th> <th>Digit 1</th> <th>Digit 2 and 3</th> </tr> </thead> <tbody> <tr> <td>Software version of display PCB</td> <td>0.</td> <td>10 to 99</td> </tr> <tr> <td>Flue type</td> <td>2.</td> <td>1 : FF variable speed</td> </tr> <tr> <td rowspan="2">Room thermostat is calling for heat</td> <td>3.</td> <td>0 : no</td> </tr> <tr> <td>3.</td> <td>1 : yes</td> </tr> <tr> <td rowspan="2">Theoretical position of the 3 way valve</td> <td>4.</td> <td>0 : DHW</td> </tr> <tr> <td>4.</td> <td>1 : CH</td> </tr> <tr> <td>DHW flow temperature in Celsius degrees</td> <td>5.</td> <td>from 00 to 99</td> </tr> <tr> <td>CH flow temperature in Celsius degrees</td> <td>7.</td> <td>from 00 to 99</td> </tr> <tr> <td>Software version of main PCB</td> <td>9.</td> <td>10 to 99</td> </tr> </tbody> </table>	Section	Digit 1	Digit 2 and 3	Software version of display PCB	0.	10 to 99	Flue type	2.	1 : FF variable speed	Room thermostat is calling for heat	3.	0 : no	3.	1 : yes	Theoretical position of the 3 way valve	4.	0 : DHW	4.	1 : CH	DHW flow temperature in Celsius degrees	5.	from 00 to 99	CH flow temperature in Celsius degrees	7.	from 00 to 99	Software version of main PCB	9.	10 to 99	<p style="text-align: center;">- 2 -</p> <p style="text-align: center;">0. _ _</p> <p style="text-align: center;">2. 1</p> <p style="text-align: center;">3. 0</p> <p style="text-align: center;">3. 1</p> <p style="text-align: center;">4. 0</p> <p style="text-align: center;">4. 1</p> <p style="text-align: center;">5. _ _</p> <p style="text-align: center;">7. _ _</p> <p style="text-align: center;">9. _ _</p>
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	<b>Menu - 3 - Boiler options</b>	- 3 -																
once																		
		<table border="1"> <thead> <tr> <th>Section</th> <th>Digit 1</th> <th>Digit 2 et 3</th> </tr> </thead> <tbody> <tr> <td>Under floor heating system</td> <td>0</td> <td>0 : no 1 : yes</td> </tr> <tr> <td>Celectic</td> <td>4</td> <td>0 : no 1 : yes</td> </tr> <tr> <td>DHW Delay (time before CH relight after a DHW cycle)</td> <td>5</td> <td>0 to 5 mn by step 0.5mn</td> </tr> <tr> <td>DHW flow swith Delay (time before DHW flow detection to override pressure peak problem)</td> <td>6</td> <td>0 to 20 1/10 seconde</td> </tr> </tbody> </table>	Section	Digit 1	Digit 2 et 3	Under floor heating system	0	0 : no 1 : yes	Celectic	4	0 : no 1 : yes	DHW Delay (time before CH relight after a DHW cycle)	5	0 to 5 mn by step 0.5mn	DHW flow swith Delay (time before DHW flow detection to override pressure peak problem)	6	0 to 20 1/10 seconde	0 0 0 1 4 0 4 1 5 3.0 6 0
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x times 		Factory setting ✓ ✓ ✓ ✓																

ACTION	CONFIGURATION	DISPLAY																																										
	<b>Menu - 4 - Boiler settings</b>	- 4 -																																										
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x times 		Factory setting ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓																																										



ACTION	CONFIGURATION	DISPLAY			
	<b>Menu - 5 - Combustion rate control mode</b>				
<b>press once</b>		<table border="1"> <thead> <tr> <th data-bbox="620 367 699 394">Effect</th> <th data-bbox="1059 367 1155 394">Display</th> </tr> </thead> <tbody> <tr> <td data-bbox="440 423 860 450">Combustion rate control mode OFF</td> <td data-bbox="1390 418 1493 472">  </td> </tr> </tbody> </table>	Effect	Display	Combustion rate control mode OFF
Effect	Display				
Combustion rate control mode OFF					
<b>wait 5 "</b>	<table border="1"> <tbody> <tr> <td data-bbox="421 618 863 752"> Switching on the combustion rate control mode. Central heating output reach the maximum power set in menu 4 section 9. </td> <td data-bbox="887 618 1334 797"> Central heating temperature is displayed in celsius degrees. The 3 dots indicate that the combustion rate control is ON at maximum output. </td> <td data-bbox="1390 658 1493 712">  </td> </tr> </tbody> </table>	Switching on the combustion rate control mode. Central heating output reach the maximum power set in menu 4 section 9.	Central heating temperature is displayed in celsius degrees. The 3 dots indicate that the combustion rate control is ON at maximum output.		
Switching on the combustion rate control mode. Central heating output reach the maximum power set in menu 4 section 9.	Central heating temperature is displayed in celsius degrees. The 3 dots indicate that the combustion rate control is ON at maximum output.				
	<table border="1"> <tbody> <tr> <td data-bbox="421 887 863 954"> Switching the combustion rate down to minimum power. </td> <td data-bbox="887 887 1334 1066"> Central heating temperature is displayed in celsius degrees. The dot indicates that the combustion rate control is ON at minimum output. </td> <td data-bbox="1390 927 1493 981">  </td> </tr> </tbody> </table>	Switching the combustion rate down to minimum power.	Central heating temperature is displayed in celsius degrees. The dot indicates that the combustion rate control is ON at minimum output.		
Switching the combustion rate down to minimum power.	Central heating temperature is displayed in celsius degrees. The dot indicates that the combustion rate control is ON at minimum output.				
	<table border="1"> <tbody> <tr> <td data-bbox="421 1155 863 1256"> Switching on the combustion rate to maximum output set in menu 4 section 9. </td> <td data-bbox="887 1155 1334 1335"> Central heating temperature is displayed in celsius degrees. The 3 dots indicate that the combustion rate control is ON at maximum output. </td> <td data-bbox="1390 1196 1493 1249">  </td> </tr> </tbody> </table>	Switching on the combustion rate to maximum output set in menu 4 section 9.	Central heating temperature is displayed in celsius degrees. The 3 dots indicate that the combustion rate control is ON at maximum output.		
Switching on the combustion rate to maximum output set in menu 4 section 9.	Central heating temperature is displayed in celsius degrees. The 3 dots indicate that the combustion rate control is ON at maximum output.				
	<table border="1"> <tbody> <tr> <td data-bbox="421 1480 863 1559"> Switching off the combustion rate control mode. </td> <td data-bbox="1390 1476 1493 1529">  </td> </tr> </tbody> </table>	Switching off the combustion rate control mode.			
Switching off the combustion rate control mode.					
					
<b>press once</b>					

**Locking conditions of the combustion rate control mode :**

- boiler in stand by mode
- D.H.W. draw off
- room thermostat is not calling for heat
- room thermostat is calling for heat but the maximum temperature is reached
- boiler in lockout mode
- after a reset or if the main supply fails
- end of the mode if operator leave menu 5
- after 15 minutes if there is no actions on keyboard

**Note :** As soon as the combustion rate control mode is on, Central Heating and Domestic Hot Water keys are inactive.

**CH heat output setting :**

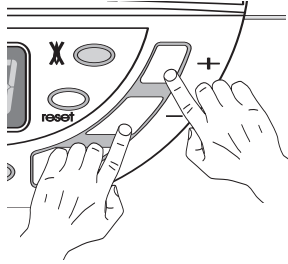
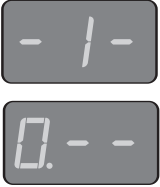
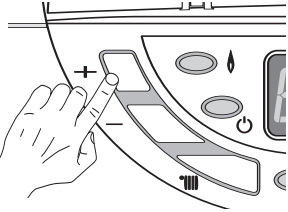
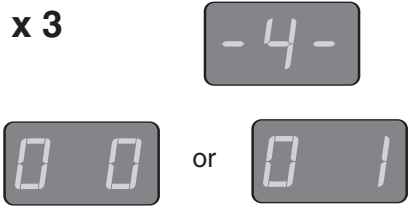
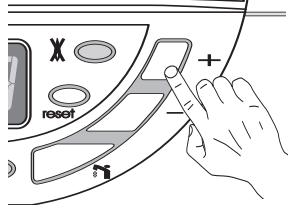
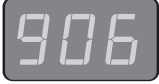
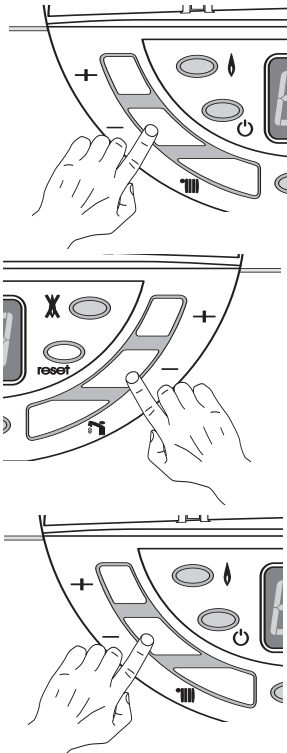

If you would like to change the setting of C/H heat output, please proceed as follow :  
 (note : the factory setting is 18 kW and the following explanation refer to menu 4 section 9)

**1** - Switch to installer mode, press key **+** and **-** on DHW side for 5 seconds.  
 The display shows :  
**-1-** then **0.-** if there is no default in the default register.

**2** - press 3 times on menu key **+** (on CH side ) to gain access to menu **-4-**,  
 The display shows :  
**-4-** then the value set for section 0 ( **00** or **01** respectively Action on burner only or pump and burner)

**3** - change for section 9 (Adjustment of CH heat output). Press on key **+** on DHW side times.  
 The display shows :  
 (906 which corresponds to the 18 kW which is the factory setting for Centora green 24)  
**9** = section 9      **06** = 18 kW

**4** - press on setting key **-** (on CH side) one time, the 2nd and 3rd digits flash together. Then press on **-** or **+** key on DHW side to change the C/H heat output step between **00** and **10**.  
 Press on setting key to confirm the value. The display stops flashing.  
 Setting procedure is finished.  
 To exit from setting mode, leave the boiler for approx. 1 minute then the computer will switch back to user mode.  
 After programming please close the door **P** (fig. 18)

		Display
<b>1</b>	 <p style="text-align: right;"><b>5''</b></p>	
.....		
<b>2</b>	 <p style="text-align: right;"><b>x 3</b></p>	
.....		
<b>3</b>	 <p style="text-align: right;"><b>x 9</b></p>	
.....		
<b>4</b>		

# 10

## Incorrect Function

In case of problem, or when the boiler has to display a message, the display flashes 2 digits. Please refer to the table below to diagnose the default.

For default 01 and 03, the red indicator 35 is alight (fig.19)

Overheating lock out

FAULT **-01**

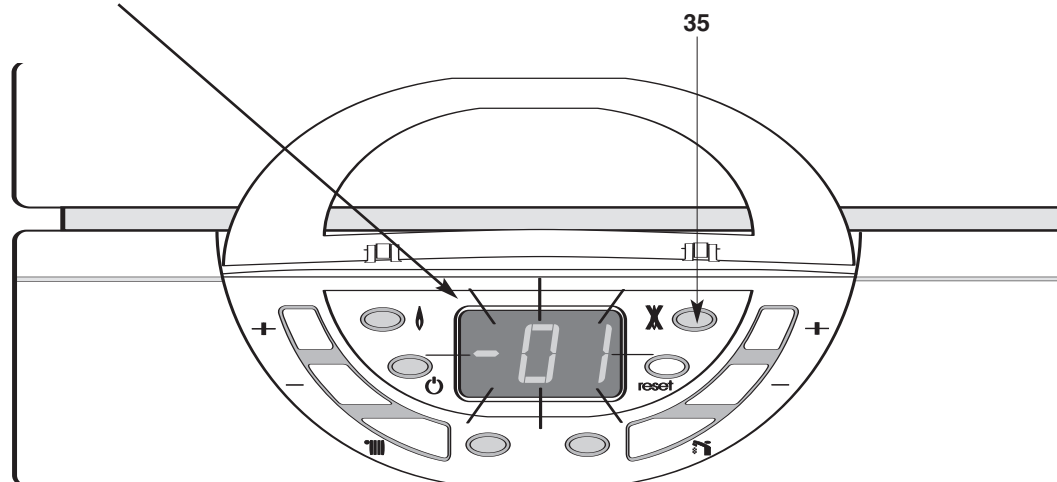


Fig. 19

Code display	Fault description	Information on functioning
01	Overheating lock out	
03	No flame detection	
05		Anti freezing system, pump on
06		Anti freezing system, pump and burner on
07	No water circulation in primary circuit	
08	No water in the primary circuit	
09	Domestic Hot Water thermistor faulty (open circuit)	
10	Domestic Hot Water thermistor faulty (short circuit)	
11	Central Heating thermistor faulty (open circuit)	
12	Central Heating thermistor faulty (open circuit)	
18		Attempt to re light
20	Wiring problem	
23	Fan speed too low	
24	Fan control system defective	
29	Three way valve blocked in CH mode	
31	Communication problem with the display PCB	
32	Communication problem with the main PCB	

# 11

## Gas Conversion

If the boiler is not set for the gas type, conversion kits are available. To convert the boiler, please use exclusively Chaffoteaux & Maury parts and proceed as mentioned in the instruction manual provided with the conversion kit, the gas conversion **must** be carried out by a CORGI registered engineer.

# USER'S INSTRUCTIONS

## 12

## Control Panel

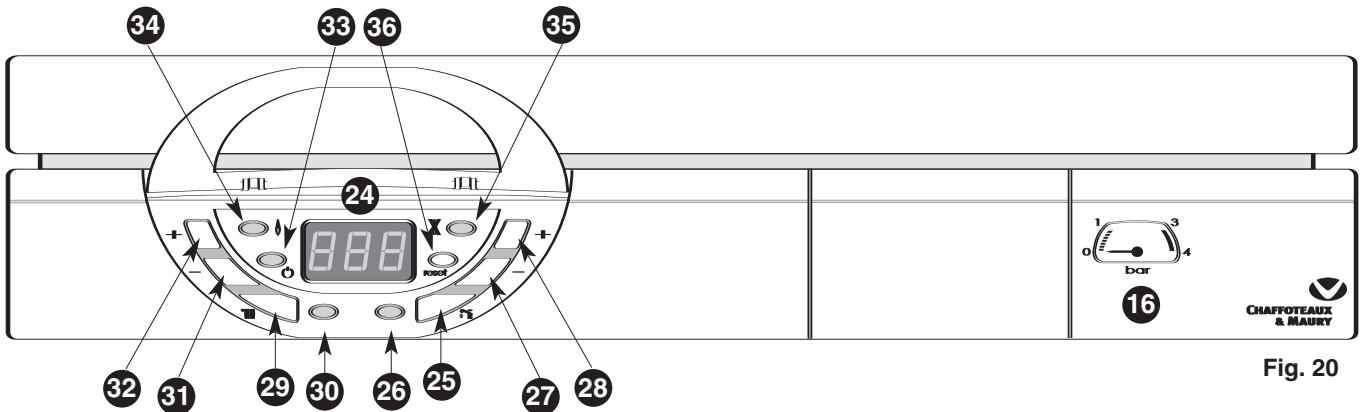


Fig. 20

### Control panel (fig. 20)

- 16.- Pressure gauge
- 24.- Display Domestic hot water temperature adjustment
- 25.- Switch for Domestic Hot Water mode
- 26.- Green indicator Heating Domestic Hot Water mode ON
- 27.- Key to reduce the Domestic Hot water temperature
- 28.- Key to rise up the Domestic Hot water temperature
- 29.- Switch for Central Heating mode
- 30.- Green indicator Central Heating mode
- 31.- Key to reduce the Central Heating temperature
- 32.- Key to rise up the Central Heating temperature
- 33.- Green indicator - Power ON
- 34.- Orange indicator - Burner ON
- 35.- Red indicator - Lock out / flame failure
- 36.- Reset button

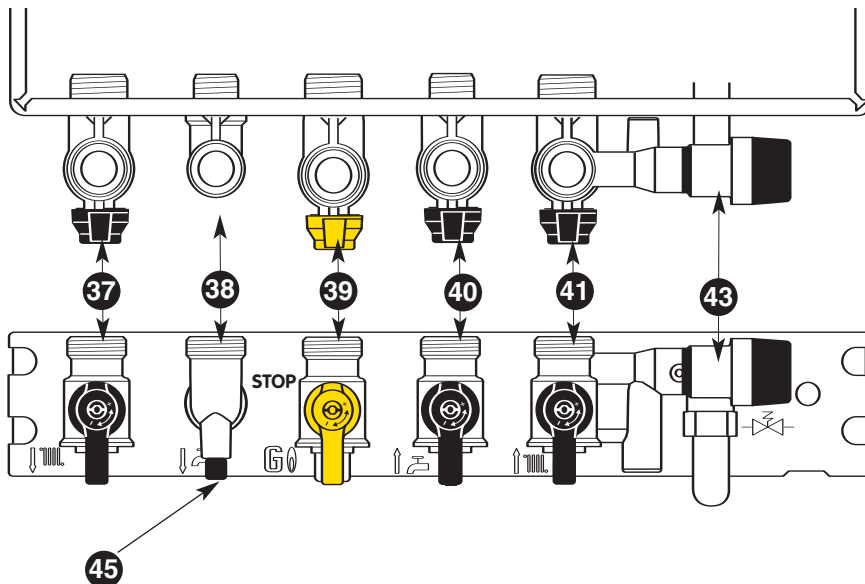



Fig. 21

### Connecting bracket Taps shown in Open position (fig. 21)

- 37 : Central heating flow isolating valve
- 38 : Domestic Hot Water outlet
- 39 : Gas service tap
- 40 : Water service tap
- 41 : Central heating return isolating valve
- 43 : Central heating pressure relief valve
- 45 : D.H.W. drain screw

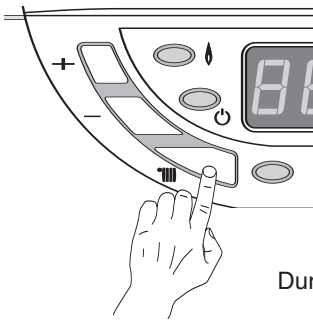
**Switching on**



1. Check that pressure in central heating system is above 0.7 bar and below 1.5 bar with the pressure gauge 16.
2. Check that the gas service tap is opened at the gasmeter and main power is on. Green indicator  Power ON 33.
3. Open the gas tap 39 (fig.21).



The boiler is now ready to use.



**Attention !** If the boiler stays a long time without working, some air in the gas pipe can hinder the first lightings. (please refer to paragraph 18 Incorrect Function)

**Switching on Central heating**



Press on key 29 , the green indicator 30 will light and the display will show the Heating flow temperature. 

Keys 31  and 32  allow to adjust the temperature required in the Central Heating system regarding the weather conditions.

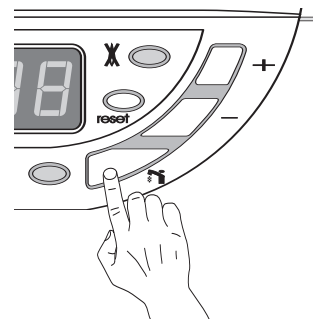
- press  to increase temperature when weather is cold
- press  to reduce temperature when weather is fair

During the temperature setting operation the display will flash.

If the room thermostat is calling for heat, a dot will be displayed at the bottom of the 3rd digit




**Switching on the Domestic Hot water**

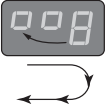




Press on key 25 , the green indicator 26 will light :

If there is no water demand

the display will show the following graphic 


In case of draw off


a square made of 4 digits will move clockwise on the display 


Keys 27  and 28  allow to adjust the temperature required for the Domestic Hot Water flow. During the temperature setting operation the display will flash.

**Note :** The configuration of CH system can generate some gravity effect when the boiler is set in DHW mode only. It may result a temperature rise of the heating pipes close to the boiler (or eventually a radiator). To avoid that, it is possible to close during summer period (Central Heating switched off) the heating flow isolating tap (37 fig. 21). Don't forget to open it when you will switch on the Central Heating mode again.

**Switching on the Domestic Hot water and Central Heating together**

Press on key 29  the green indicator 30 will light.

Press on key 25  the green indicator 26 will light.

If there is no water demand the display will show the heating flow temperature 

In case of draw off a square made of 4 digits will move clockwise on the display 

## 13

## How to Use (continued)

**Stand by mode**

A fixed digit at the centre of the display and the green indicator **33** on

Putting the boiler in stand by mode and anti freeze system. :

Press on key **29**  and **25**  , to switch off both DHW and CH mode. The green indicators **30** and **26** will stop.

**During the all duration of the stand by mode, an automatic anti-sticking system will switch on the pump for 1 minute and make a movement of the 3 way valve each 23 hours.**



**The stand by mode will disable the anti-freeze function of the room thermostat (if fitted). To leave the room thermostat anti freeze system operative, please let the Central Heating mode on.**

The boiler is equipped with an automatic anti freeze system which permanently on.

If the Central Heating temperature decrease bellow 7°C, the pump will start.

If the Central Heating temperature decrease bellow 4°C, the pump and the burner will start.

**Turn off the boiler**

- Press on key **29**  and **25**  , to switch off both DHW and CH mode. The green indicators **30** and **26** will stop
- Switch off the main electrical supply
- Shut off the gas service tap **39** (fig. 21)

**Note :** In this conditions, the **anti-freeze** system is inoperative

## 14

## Maintenance

As with your car, your boiler will work more reliably and efficiently if regularly serviced. We recommend an annual service check. The service history of the appliance will be marked on the logbook.

## 15

## Guarantee

The manufacturer`s guarantee is for 12 months from the date of purchase. The guarantee is voidable if the appliance is not installed in accordance with the recommendations made herein or in a manner not approved by the manufacturer. To assist us in providing you with an efficient after sales service, please return the guarantee registration card enclosed with the boiler without delay.

## 16

## Practical Information

**Pump anti-sticking device**

When the boiler is switched on, an automatic anti-sticking system will switch on the pump for 1 minute and make a movement of the 3 way valve each 23 hours. This is a normal functioning.

**Precaution to avoid freezing**

We recommend you contact your installer or local service centre to take precautions adapted to your system.

• **DHW system**

Turn off the main cold water supply and drain the boiler :

- Open a hot water tap
- Unscrew the cold water inlet tail
- Pour the water out the boiler with the screw **45** (fig. 21)

• **CH system**

Chose one of the following solution :

- 1) Drain completely the Central Heating system
- 2) Protect the Central Heating system with anti freeze chemical products and verify periodically the concentration
- 3) Let the Heating mode switched on and set the room thermostat to anti-freeze mode (between 5 and 10°C)
- 4) Let your boiler in stand by mode, the anti-freeze device will switch on the pump and the burner if necessary.



### Helpful suggestions

- Periodically check the system pressure using the pressure gauge and make sure that the pressure is between 1.0 and 1.5 bar when the system is off and cool. If the pressure is below the minimum recommended value, the pressure must be brought into the acceptable range. Consult your installer for checking and refilling the system.  
If the pressure level drops on a frequent basis, it is likely there is a water leak in the system. If this is the case, your installer must inspect the system.
- The outer panel of the boiler's case must only be cleaned with a damp cloth, do not use abrasive cleaners. The control panel can be wiped with either a damp or dry cloth. Spray polishes must not be used on the control panel surface or knobs. Care must be taken in preventing any liquid entering the appliance.
- If the water is exceptionally hard, install a water softener so that the efficiency of the boiler remains the same over time as this will consume less gas.

## 17

### Gas Conversion

This appliance is suitable for Natural gas or LPG. A gas conversion must be made by a competent person.

## 18

### Incorrect Operation

Fault	Cause	Solution
The boiler doesn't start	No gas, no water or no electricity	Check the water pressure in the central heating system and external electrical supply, check that the gas supply is on, should there still be a problem contact your local service centre.
	Air in the gas pipe	Contact your local service centre.
	Room thermostat switched off	Turn up the room thermostat
Red indicator alight	Ignition lockout	Wait for a few minutes Press the reset button <b>36</b> (fig.21) the red led will go out and the boiler attempts to re-light. If the red indicator lights too frequently, please call your local service centre.
Noises in CH system	Air presence in CH system or. Insufficient pressure	Purge of air the system and rise up the system pressure (chapter 8)
Radiators rise in temperature During summer season	Gravity effect in the CH system	Close the heating flow isolating valve. Don't forget to open it again when you will start heating.

**If these solutions do not cure the fault, call a qualified professional**

Model	Centora green 24		Centora green 30	
Appliance category.....	II 2H3P		II 2H3P	
Heat gross input C/H maxi .....	27.8 kW	94,534 Btu/h	31.6 kw	107,843 Btu/h
Heat gross input DHW maxi.....	27.8 kW	94,534 Btu/h	31.6 kw	107,843 Btu/h
Heat output C/H 50°/30° maxi .....	26 kW	88,732 Btu/h	30 kW	102,383 Btu/h
Heat output C/H 80°/60° maxi.....	24 kW	81,907 Btu/h	28 kW	95,557 Btu/h
Heat output DHW maxi .....	24 kW	81,907 Btu/h	30 kW	102,393 Btu/h
C/H operating temperature.....	80°C max	25°C min	80°C max	25°C min
C/H circuit pressures Min operating .....	0.7 bar	10 lb/in <sup>2</sup>	0.7 bar	10 lb/in <sup>2</sup>
C/H circuit pressures Max operating .....	2.5 bar	36.3 lb/in <sup>2</sup>	2.5 bar	36.3 lb/in <sup>2</sup>
DHW flow rates 30°C .....	12 l/min	2.66 gal/min	14 l/min	3.10 gal/min
DHW flow rates 35°C .....	10.3 l/min	2.29 gal/min	12 l/min	2.66 gal/min
Cold water mains pressures Min operating.....	0.5 bar	7.25 lb/in <sup>2</sup>	0.5 bar	7.25 lb/in <sup>2</sup>
Cold water mains pressures Max operating.....	10 bar	145 lb/in <sup>2</sup>	10 bar	145 lb/in <sup>2</sup>
Flow limiter rate.....	8 l/min		10 l/min	
Compartment ventilation .....	not required		not required	
<b>Natural gas G20</b>				
Gas rate C/H max .....	2.64 m <sup>3</sup> /h	93 ft <sup>3</sup> /h	3.01 m <sup>3</sup> /h	106 ft <sup>3</sup> /h
Gas rate DHW max .....	2.64 m <sup>3</sup> /h	93 ft <sup>3</sup> /h	3.01 m <sup>3</sup> /h	106 ft <sup>3</sup> /h
Gas rate C/H & DHW mini.....	0.87 m <sup>3</sup> /h	31 ft <sup>3</sup> /h	1 m <sup>3</sup> /h	35 ft <sup>3</sup> /h
Gas valve restrictor diameter .....	without		without	
<b>Propane L.P.G G31</b>				
Gas rate C/H max. ....	1.94 kg/h	36 ft <sup>3</sup> /h	2.21 kg/h	41 ft <sup>3</sup> /h
Gas rate DHW max. ....	1.94 kg/h	36 ft <sup>3</sup> /h	2.21 kg/h	41 ft <sup>3</sup> /h
Gas rate C/H & DHW mini.....	0.64 kg/h	12 ft <sup>3</sup> /h	0.73 kg/h	13 ft <sup>3</sup> /h
Gas valve restrictor diameter .....	4.40 mm		4.8 mm	
Safety discharge .....	3 bar	43.5 lb/in <sup>2</sup>	3 bar	43.5 lb/in <sup>2</sup>
Expansion vessel - Pre-charge pressure .....	0.7 bar	9.4lb/in <sup>2</sup>	0.7 bar	9.4lb/in <sup>2</sup>
Net capacity at 3 bar in liter.....	5.44		5.44	
Adjustable by-pass				
Electrical characteristics				
Supply .....	230 v		230 v	
Consumption .....	150 w		150 w	
Protection .....	IP 44		IP 44	
Fuse F1 .....	2 A		2 A	
Fuse F2 .....	1.25 A		1.25 A	
Fuse F3 .....	0.315 A		0.315 A	
Fuse F4 .....	0.250 A		0.250 A	
External controls .....	24 v		24 v	



This appliance is suitable for Natural gas or LPG. A gas conversion must be made by a competent person.  
Chaffoteaux & Maury are continuously improving their products and therefore reserve the right to change specifications without prior notice and accepts no liability for any errors or omission in the information contained in this document.

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