

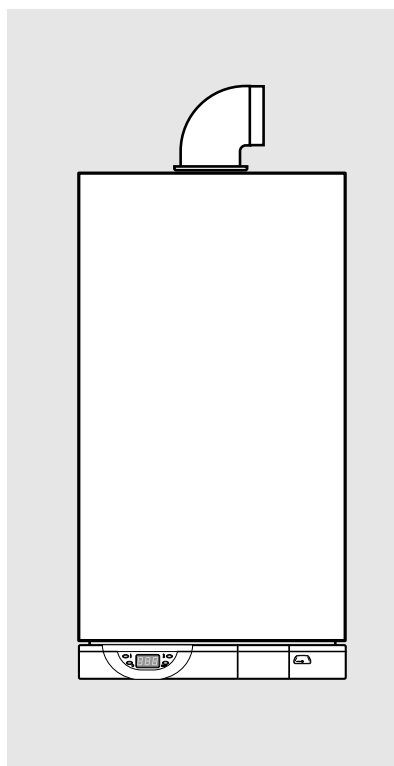
Centora

green

CONDENSING WALL-HUNG COMBINATION BOILER

Central Heating and Instantaneous Domestic Hot Water - Fanned Flue system

Installation and Operating Instructions



Centora green 18-24

G.C.N: 47-980-21

PLEASE LEAVE THESE INSTRUCTIONS
WITH THE END-USER



**CHAFFOTEAUX
& MAURY**

These instructions are suitable for '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 End User

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 a 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 in 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.

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.

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

0870 243 0224

To The Installer

As part of the commissioning of this appliance it is vital that the Log Book is completed and given to the End User. 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, 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 243 0224.

Advice on installation or servicing can also be obtained by contacting the C&M Services Department at Telford.

CUSTOMER SERVICES DEPARTMENT

Tel: 01952 222288

Fax: 01952 260915

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.

In addition, the installation must also comply with the current Water Regulations, Water Byelaws Building Regulations, IEE Wiring Regulations, Local Authority Building Standards (Scotland) Regulations and the Safety Document 635 The Electricity at work Regulation. The appliance named below 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.

It should also be carried out in accordance with current editions of the following British Standards Codes of practice: BS 6891, BS 5440 parts 1 and 2, BS 5449 part 1, BS 7593, BS 6798, BS 5546, BS 4814, BS 7074 part 1 and 2, BS 7671 and BG DM2.

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 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 specifically designed for appliances installed in the United Kingdom

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. A circulating pump, expansion vessel, 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 be extended up to 3 metres using 1 metre flue extension kits, 45° and 90° flue bends are also available as accessories.

INSTALLATION INSTRUCTIONS

1

Description

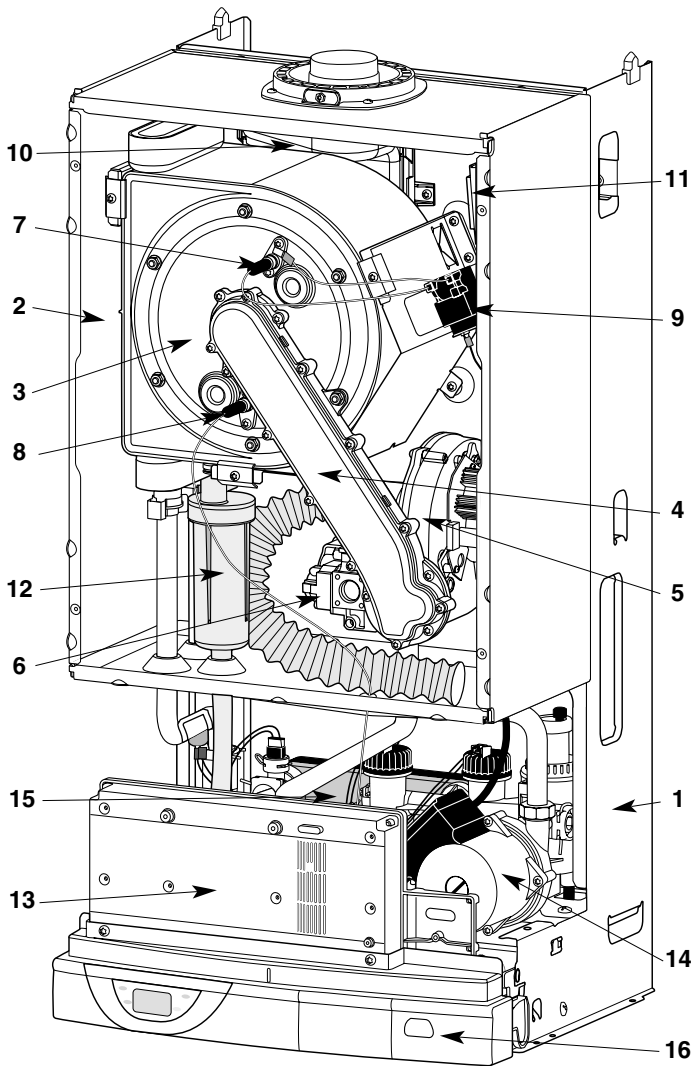


Fig. 1

- 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 trap
- 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 flow switch
- 20 - Domestic hot water flow switch
- 21 - Central heating control thermistor
- 22 - Hot water control thermistor
- 23 - Overheat sensor

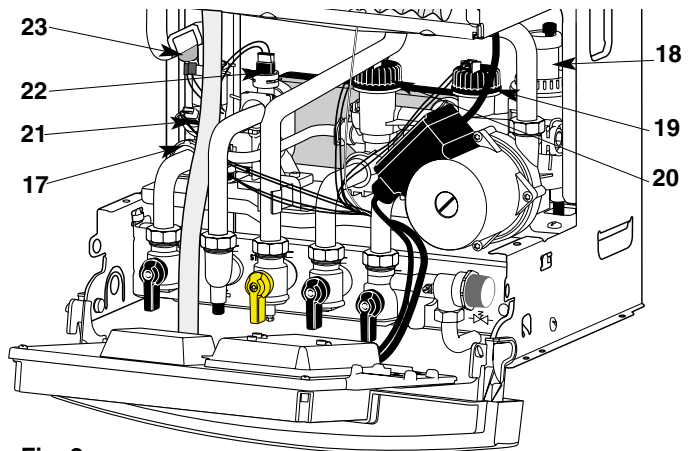


Fig. 2

- 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 D.H.W. 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

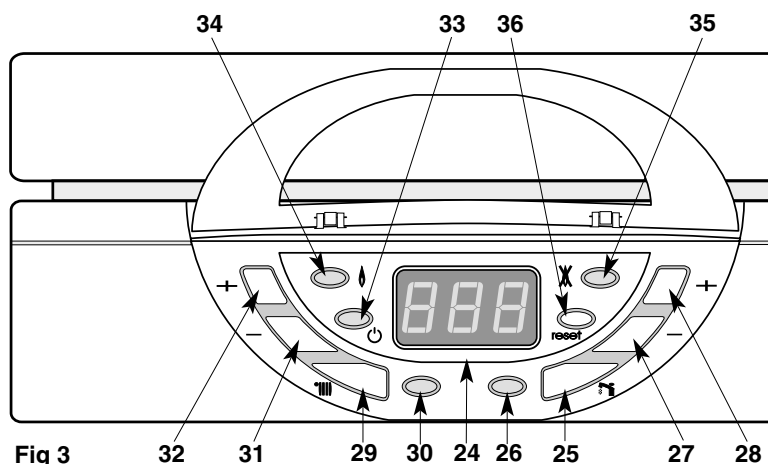
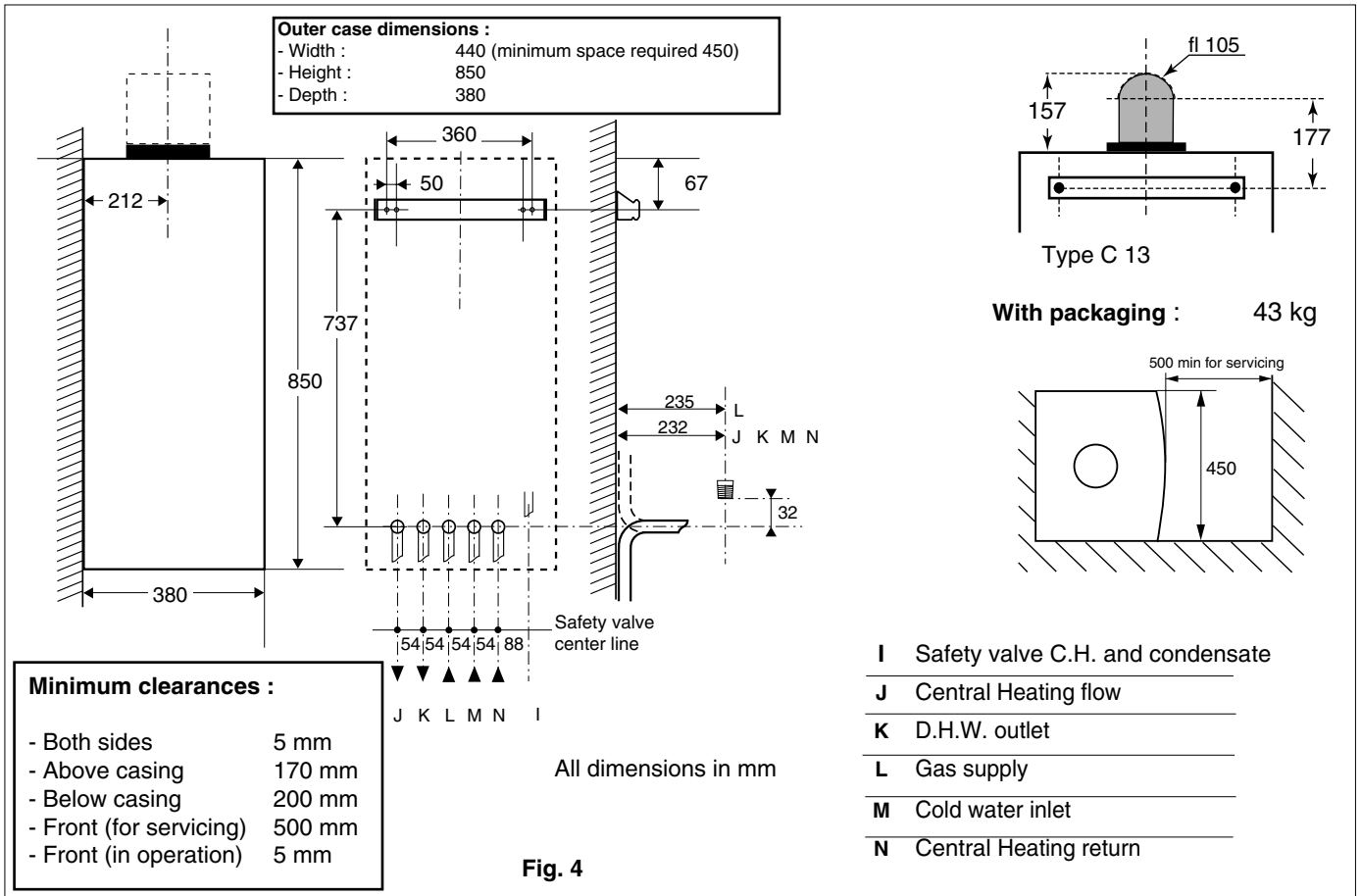


Fig 3

2

Dimensions



3

Hydraulic Data

Pump head available

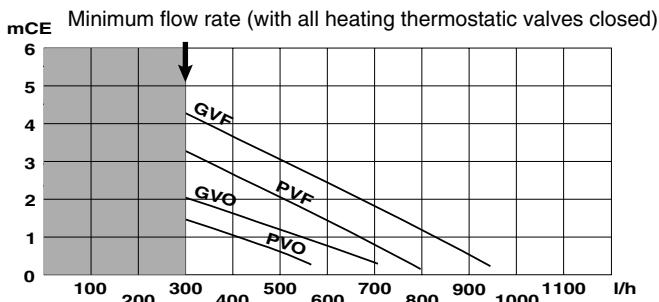


Fig. 5

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

The chart (fig. 5) shows the pump head available relating to 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 section 9.

The minimum flow rate to ensure the correct function of the pump, should be over 300 l/h (with all heating thermostatic valves fully closed)

Maximum water capacity of Central Heating system :

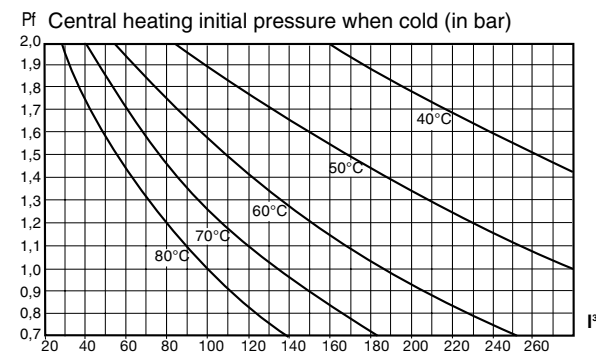
The expansion vessel is pre-charged to 0.7 bar (10 lb/in²).

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 measured at the outlet of the boiler



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 installing the boiler where the air inlet can be polluted by chemical products such as chlorine (swimming pool aera), or ammonia (hair dresser), or alkaline 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: (020) 7639 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/m³ for a short period in a year
- average level of 30 mg/m³ during one year

Electrical Supply

The appliance requires an earthed 230V - 50 Hz supply and must be in accordance with current I.E.E. Regulations. 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 a 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:

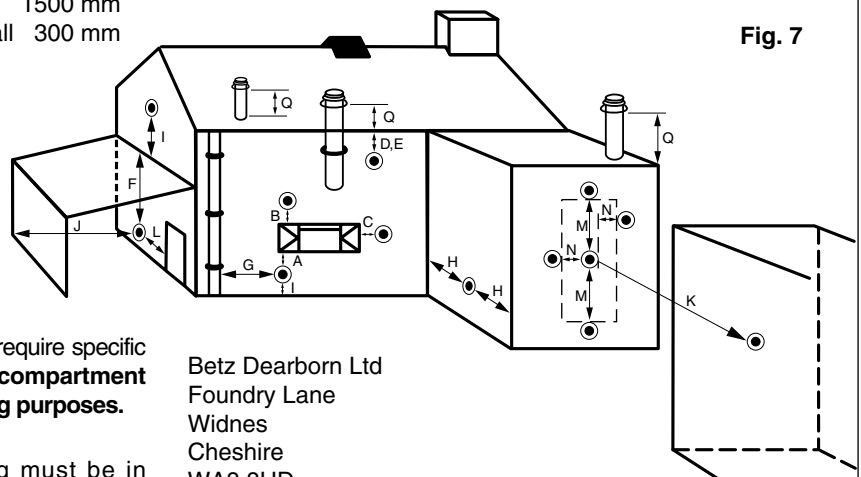


Fig. 7

Betz Dearborn Ltd
Foundry Lane
Widnes
Cheshire
WA8 8UD
Tel: 0151 424 5351
Ferno 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 4)

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 the 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.

External termination via condensate siphon

The condensate drainage pipe should have a minimum diameter of 22 mm and the external pipe length should not be more than 3m. The external length should be kept as short as possible to minimize the effect of freezing.

Please refer to **BS 6798:2000**

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 as described in the relevant British regulations.

Pay a special attention to not bend the condensate drain pipe as the flow will be interrupted. Please use exclusively drain pipe material compatible with condensate products. (refer to **BS 6798:2000**)

The condensate flow can reach 2 l/hr; because of the acidity of the condensate products (Approx. Ph2), 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 into 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 allow the condensate back into the boiler.

Attention ! Use only a C&M condensation flue kit.

5

Installing the Boiler (continued)

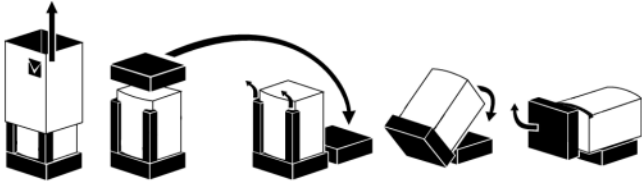


Fig. 8

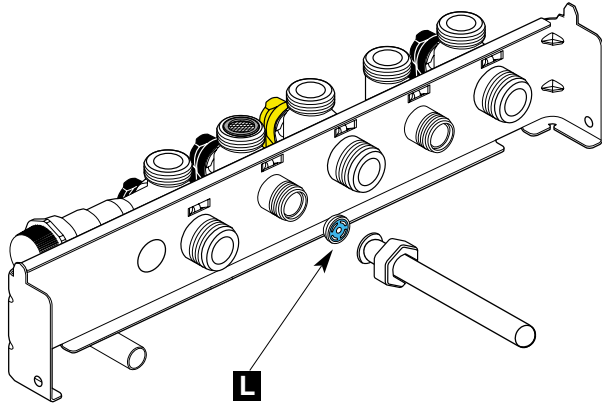


Fig. 10

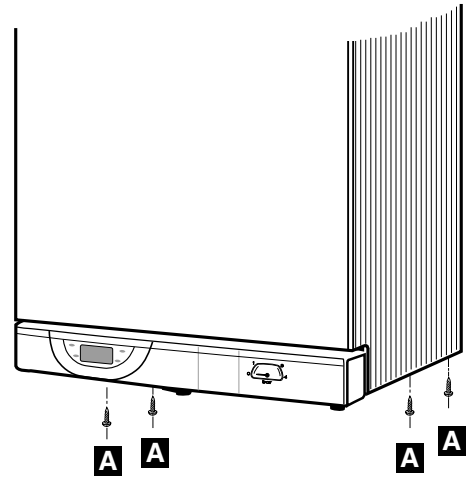


Fig. 9

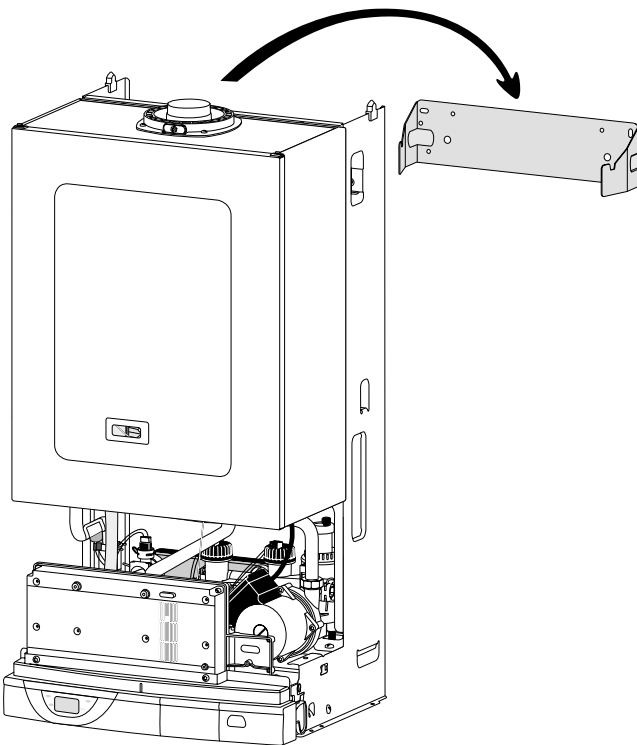


Fig.11

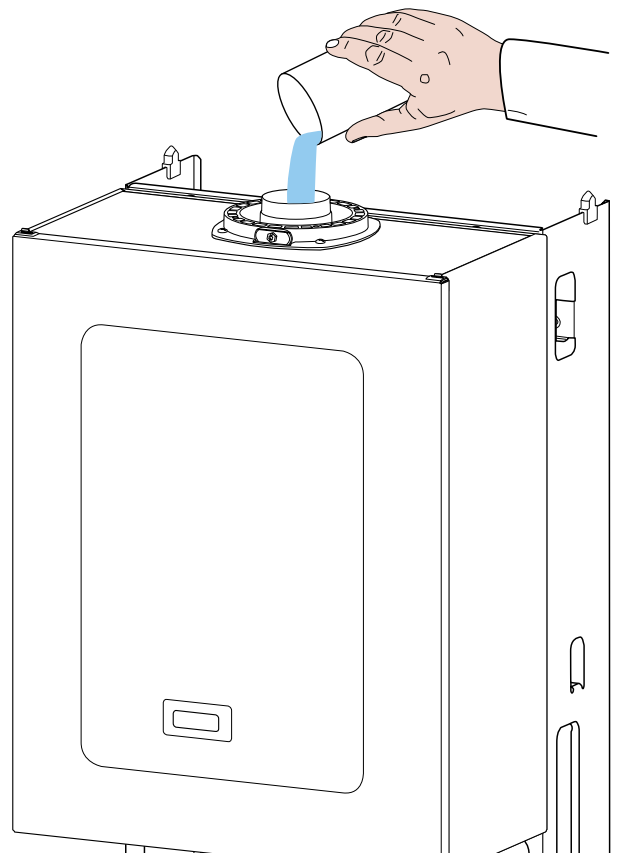


Fig.12

6

Electrical Connections

Making the Electrical Connections

Lower 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 the cover and remove the cable clamp. **C** (Fig. 14)

Connect the live and neutral wires to the multipin plug **J1** (Fig. 14) 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** (Fig. 14) on the multipin Plug.

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

Connect the 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 Section 9 ADJUSTMENTS AND SETTINGS.

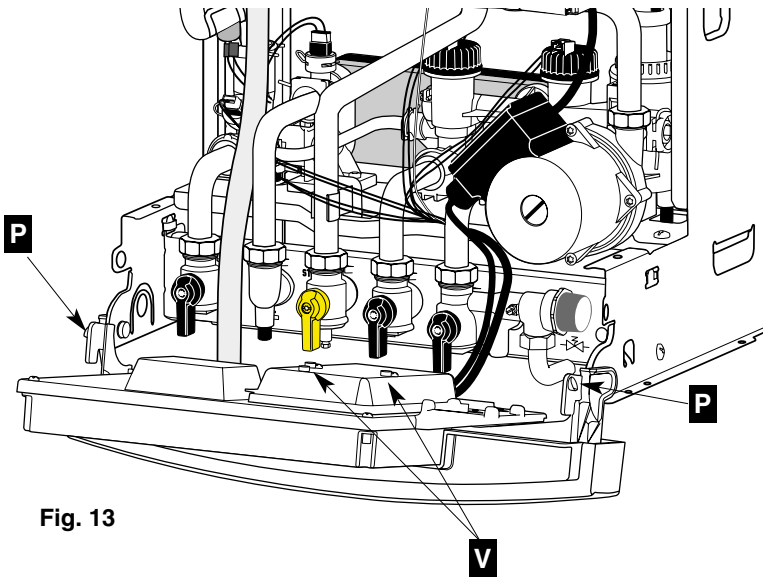


Fig. 13

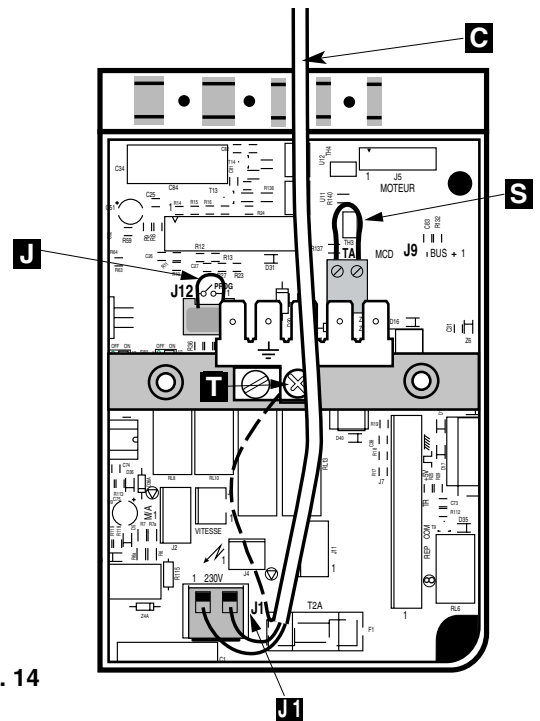


Fig. 14

7

Commissioning and Testing

Pre-commissioning

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

D.H.W.

Open the main cold feed valve **40** (Fig. 15). Open all hot taps to purge the D.H.W. system. Check for water soundness. Check the flow rate at the bath tap is set correctly (see technical data).

Central Heating

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

maximum.

Allow the pump to run for several minutes.

Isolate the electrical supply.

Drain the boiler and check the water filter for installation debris.

Replace the filter and recharge system.

Lighting the Boiler

Connect a gas pressure gauge to the test point **39** (Fig. 21).

Turn on the gas supply and boiler gas tap **39** (Fig. 21).

Ensure the electrical supply is on.

Ensure all external controls are calling for heat.

Press the Central Heating switch **29** (Fig. 3) to switch on the heating mode.

Press the '+' key **32** (Fig. 3) to set heating temperature to maximum.

The boiler will light. Allow the boiler to heat the system.

Check the inlet gas pressure (working pressure) while the boiler is operating in D.H.W. mode. (Refer to technical data).

Check the operation of the boiler controls and safety devices. (see the servicing leaflet for details). Set the by-pass (refer to the page 12).

Re-flush the system to remove any dissolved oils and fluxes.

Recharge system pressure and introduce any water treatment as required.

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 Section 9. Speed selection is only available in C.H. mode.

Post Commissioning

Ensure the system pressure has been set correctly.
 Set all the parameters of the boilers as shown in Section 9 ADJUSTMENTS AND SETTINGS.
 Set the boiler thermostat and controls.
 Set the programmer to the requirements of the End User.
 Set the external controls.
 Ensure the Log Book is fully completed with your contact details and all the required 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 the guarantee.
 Ensure the End User countersigns the Log Book to confirm that these demonstrations have been carried out and understood.

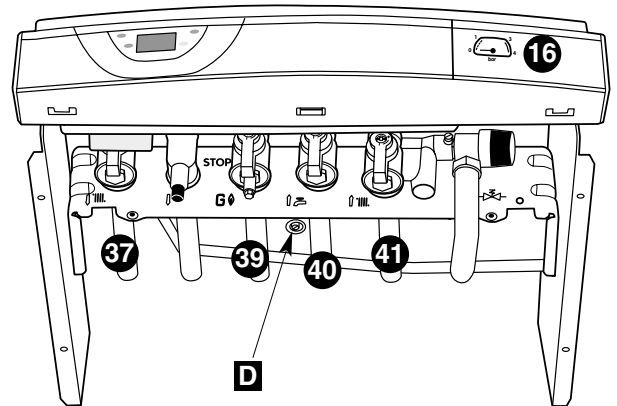


Fig. 15

Fitting the casing

- Remove the protective film from the casing :
- Position the casing as shown fig. 17
 - Slide down the casing and locate the casing holes on the plastic pins on top of the chassis
 - Ensure the correct positioning of the casing onto the boiler
 - Tighten the 4 screws located at the bottom as shown in Fig. 16.

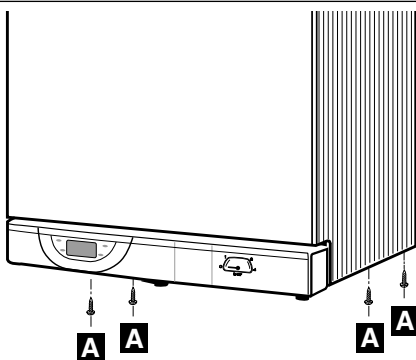


Fig.16

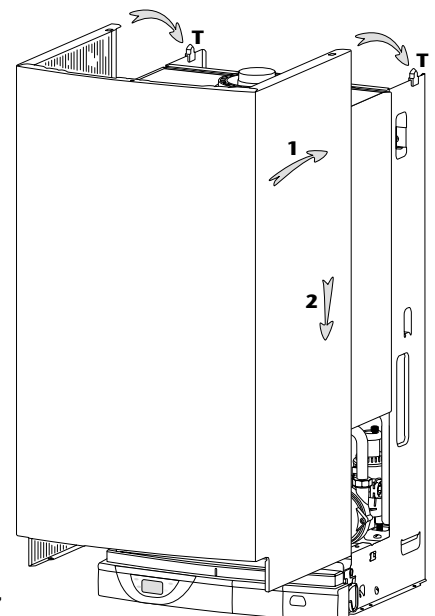


Fig. 17

The boiler is delivered with pre-set 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)

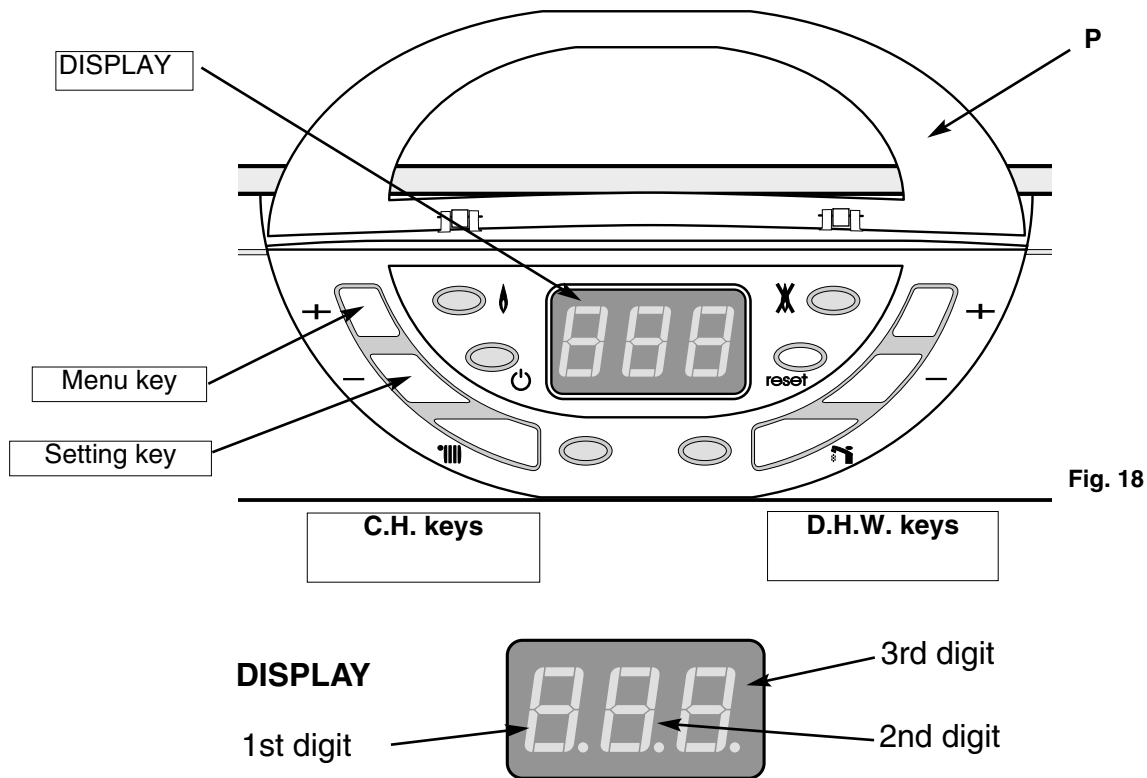


Fig. 18

To gain access to the setting menus press both the \ominus and \oplus keys on the D.H.W. side for 5 seconds. (Fig. 18). Menu 1 is displayed.

Changing the menu :

Press the \oplus key (C.H. side) (Fig.18). The menu number is displayed for 3 seconds. Press the + key (C.H. side) again to show the next menu.

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

Press the \oplus or \ominus key (D.H.W. side) to change from one section to the next in a menu.

Note : When you arrive at the last section of a menu, pressing the \oplus key will change to the 1st section. When you are at the first section, pressing the \ominus key will change to the last section of the menu.

Setting a parameter in a section:

Press the \ominus key (C.H. side) to enter the modification mode. The 2nd and 3rd digits will flash. Press the \oplus or \ominus key (D.H.W. side) to select the correct value then press the \ominus key (C.H. side) to validate the modification and to exit the setting mode. The 2nd and 3rd digits will stop flashing.

Recalling the basic configuration:

Select menu 3 or 4 then press the \oplus key (D.H.W. side) and the \oplus key (C.H. side) for more than 5 seconds. The digits will flash CM [??] for a while to indicate that the operation is completed.

Erasing the default register :

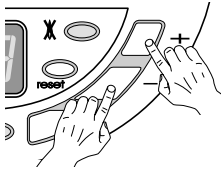
Select menu 1 then press both the \oplus key (D.H.W. side) and the \oplus key (C.H. side) for more than 5 seconds. The digits will flash CM [??] for a while to indicate that the operation is completed.

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

ACTION

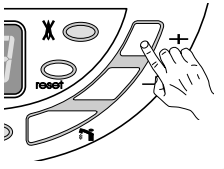
CONFIGURATION

DISPLAY

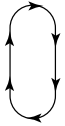


5 "

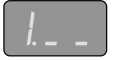
Menu - 1 - Default register
Records the last 10 defaults



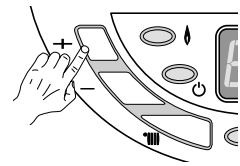
x times



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



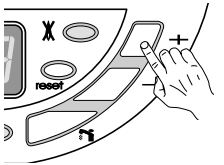
Note -- is displayed if no default is recorded.



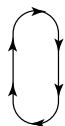
once

Menu - 2 - Boiler conditions

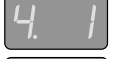
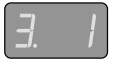
Indicates the conditions or the configurations of the boiler



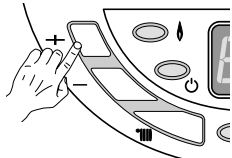
x times



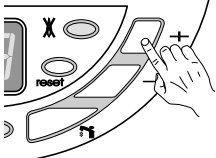
Section	Digit 1	Digit 2 and 3
Software version of display P.C.B.	0.	10 to 99
Nominal Power of the boiler (type 18 or 24 kW)	1.	24
Flue type	2.	1 : FF variable speed
Room thermostat is calling for heat	3.	0 : no
	3.	1 : yes
Theoretical position of the 3 way valve	4.	0 : D.H.W.
	4.	1 : C.H.
DHW flow temperature in °C	5.	from 00 to 99
CH flow temperature in °C	7.	from 00 to 99
Software version of main P.C.B.	9.	10 to 99



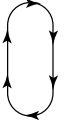
ACTION



once



x times



CONFIGURATION

Menu - 3 - Boiler options

Section	Digit 1	Digit 2 and 3
Under floor heating system	0	0 : no 1 : yes

DISPLAY

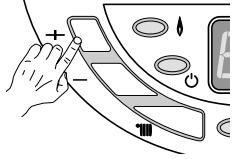
- 3 -

0 0

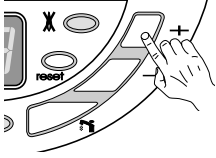
0 1

Factory setting ✓

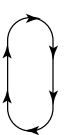
ACTION



once



x times



CONFIGURATION

Menu - 4 - Boiler settings

Section	Digit 1	Digit 2 and 3
Room thermostat operation	0	0 : Burner only
	0	1 : Burner and pump
Pump speed	1	0 : High speed
	1	1 : Low speed
Pump post circulation duration From 0 to 5 minutes by step of 0.5 min.	2	0,0 min
	2	0,5 min
	2	1,0 min
	2	5,0 min
Maximum Central Heating flow temperature	4	50°C
C.H. anti cycling delay	4	80°C
TAC From 0 to 5 minutes by step of 0.5 min.	8	0,0 min
	8	0,5 min
	8	2,5 min
	8	5,0 min
C.H. maximum output limitation by step of 1 kW For a 24 kW model	9	Power value 8 to 18

DISPLAY

- 4 -

0 0

0 1

1 0

1 1

2 0 0

2 0 5

2 1 0

2 5 0

4 5 0

4 8 0

8 0 0

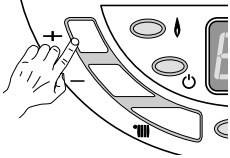



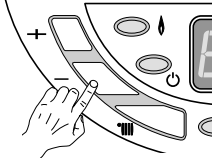

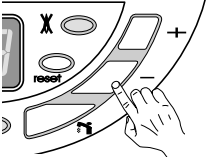

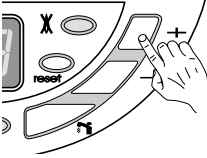

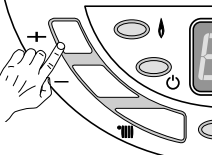

8 0 5

8 2 5

8 5 0

9 1 8

Factory setting ✓

ACTION	CONFIGURATION	DISPLAY			
	Menu - 5 - Combustion rate control mode				
press once		<table border="1"> <thead> <tr> <th data-bbox="624 371 699 398">Effect</th> <th data-bbox="1059 371 1155 398">Display</th> </tr> </thead> <tbody> <tr> <td data-bbox="440 427 863 454">Combustion rate control mode OFF</td> <td data-bbox="1394 421 1497 477">  </td> </tr> </tbody> </table>	Effect	Display	Combustion rate control mode OFF
Effect	Display				
Combustion rate control mode OFF					
wait 5 "					
	Switching on the combustion rate control mode. Central heating output reaches the maximum power set in menu 4 section 9.	Central heating temperature is displayed in °C. The 3 dots indicate that the combustion rate control is ON at maximum output.			
press once					
	Switching the combustion rate down to minimum power.	Central heating temperature is displayed in °C. The dot indicates that the combustion rate control is ON at minimum output.			
press once					
	Switching on the combustion rate to maximum output set in menu 4 section 9.	Central heating temperature is displayed in °C. The 3 dots indicate that the combustion rate control is ON at maximum output.			
press once					
	Switching off the combustion rate control mode.				
press once					

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 the operator exits menu 5
- after 15 minutes if no keys are pressed.

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

C.H. power output setting :

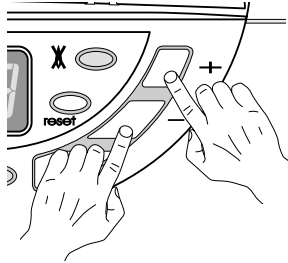
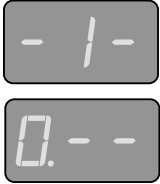
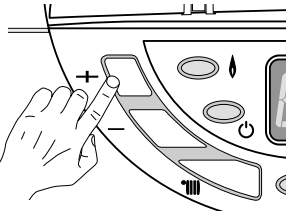
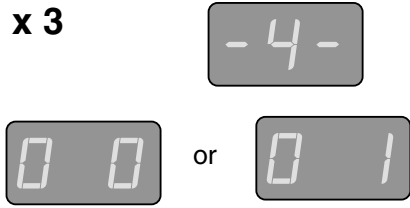
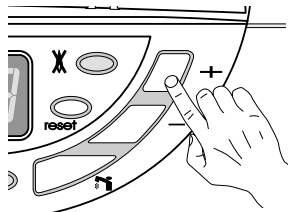

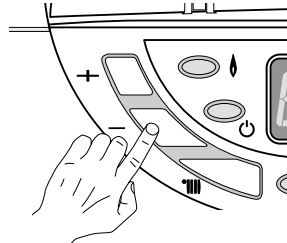
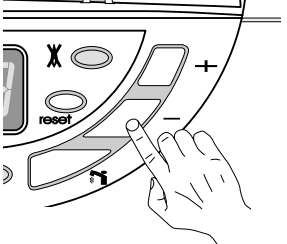
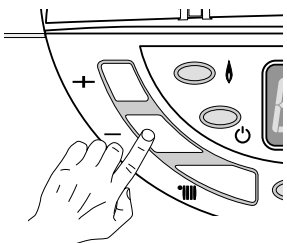


If you would like to change the setting of C.H. power output to 12 kW, please proceed as follows :
(Note: the factory setting is 18 kW and the following explanation refers to menu 4 section 9)

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

2 - press the **+** key (C.H. side) 3 times 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 - Select section 9 (Adjustment of C.H. heat output). Press the **+** key (D.H.W. side) 9 times.
 The display shows :
918 (this corresponds to 18 kW which is the factory setting)
9 = section 9 **18** = 18 kW

4 - press the **-** key (C.H. side) once, the 2nd and 3rd digits will flash together. Then press the **-** key (D.H.W. side) to change to 3.0 on the 2nd and 3rd digits.
 The display shows :
912 press the - key (C.H. side) to confirm this value. The display will stop flashing. The setting procedure is finished.
 To exit from the setting mode, leave the boiler for approx. 1 minute the computer will then return to the user mode.
 After programming is completed please close the door. **P** (fig. 17)

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

10

Incorrect Operation

In case of a problem, or when the boiler displays a message, the 2 digits will flash.. Please refer to the table below to diagnose the default.

For default 01 and 03, the red indicator **35** will light (Fig.19)

Overheat lock-out

FAULT **-01**

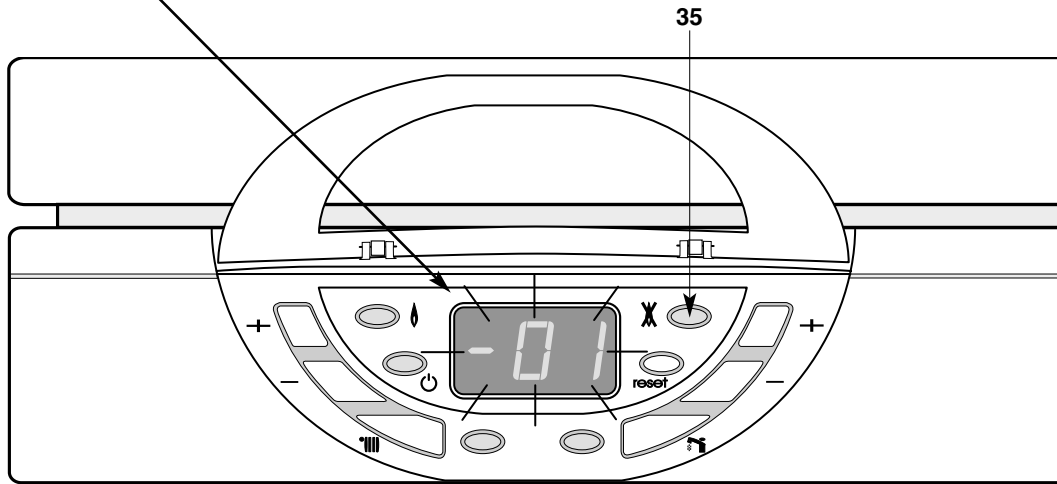


Fig. 19

Code display	Fault description	Operation Information
01	Overheat lock-out	Anti freezing system, pump on Anti freezing system, pump and burner on
03	No flame detection	
05		
06		
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 C.H. mode	
31	Communication problem with the display P.C.B.	
32	Communication problem with the main P.C.B.	

11

Gas Conversion

If the boiler is not set for the gas type, conversion kits are available. To convert the boiler, please use originally Chaffoteaux & Maury parts and proceed as is mentioned in the instruction manual provided with the conversion kit.

USER INSTRUCTIONS

12

Control Panel

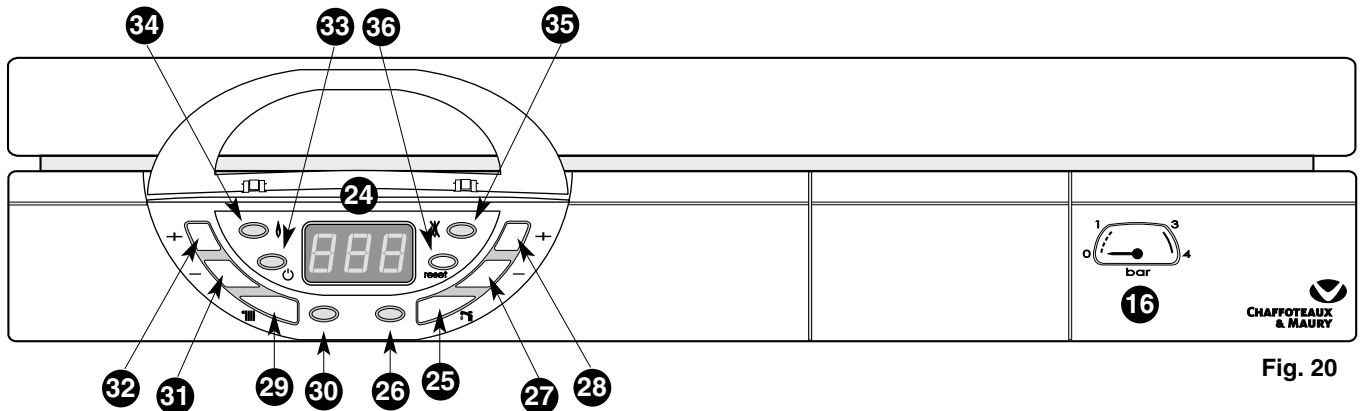


Fig. 20

Control panel (Fig. 20)

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

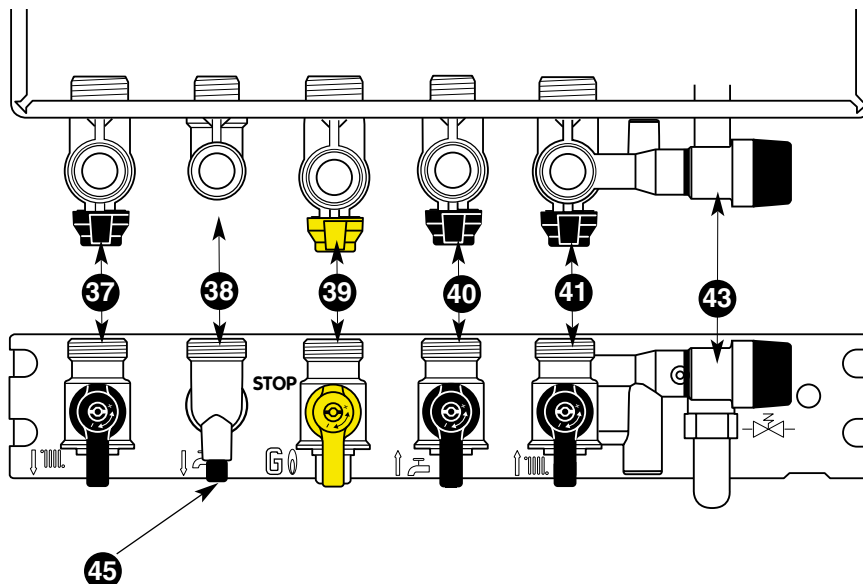



Fig. 21

Connecting bracket (Taps shown in the open position) (Fig. 21)

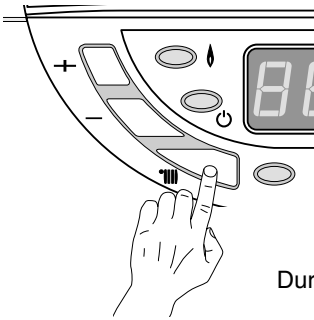
- | | |
|---|---|
| 37 : Central heating flow isolating valve | 40 : Water service tap |
| 38 : Domestic Hot Water outlet | 41 : Central Heating return isolating valve |
| 39 : Gas service tap | 43 : Central Heating pressure relief valve |
| | 45 : D.H.W. drain screw |



Switching on



1. Check that the pressure in the central heating system is above 0.7 bar and below 1.5 bar with the pressure gauge **16** (Fig.20)
2. Check that the gas service tap is opened at the gas meter and the main power is on. Green indicator  (Power ON) **33** (Fig.20).
3. Open the gas tap **39** (Fig.21).



The boiler is now ready to use.

Attention ! If the boiler has been off for a long period of time without working, some air in the gas pipe can hinder the first attempts to ignite. (please refer to section 18 (Incorrect Operation))

Switching on the Central heating

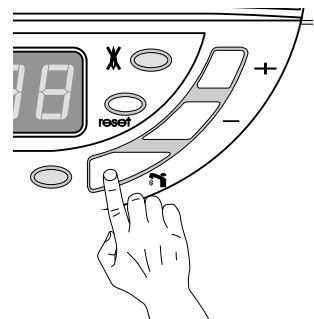
Press the  key **29**, the green indicator **30** (Fig.20) light and the display will show the Heating flow temperature. 


Keys **31**  and **32**  (Fig.20) allow the temperature to be adjusted as required in the Central Heating system depending on the weather conditions.

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

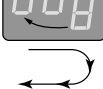
Switching on the Domestic Hot water



Press the  key **25**, the green indicator **26** (Fig.20) will light :

If there is no water demand

the display will show the following graphic 

During draw off


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


Keys **27**  and **28**  (Fig.20) allow the temperature to be adjusted as required for the Domestic Hot Water flow. During the temperature setting operation the display will flash.


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

Switching on the Domestic Hot Water and the Central Heating together

Press the  key **29** the green indicator **30** (Fig.20) will light.

Press the  key **25** the green indicator **26** (Fig.20) will light.

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

During 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** (Fig.20) will light.

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

Press the **||||** and **🔑** keys, **25** and **29** (Fig.20) to switch off both the D.H.W. and the C.H. mode. The green indicators **30** and **26** (Fig.20) will go out.

During the duration of the stand by mode, an automatic anti-sticking system will activate the pump for 1 minute and operate the 3 way valve every 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 leave the Central Heating mode on.

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

If the Central Heating temperature decreases below 7°C, the pump will start.

If the Central Heating temperature decreases below 4°C, the pump and the burner will start.

Turn off the boiler

- Press the **||||** and **🔑** keys, **25** and **29** to (Fig.20) switch off both the D.H.W. and the C.H. mode. The green indicators **30** and **26** (Fig.20) will go out.
- Switch off the main electrical supply
- Shut off the gas service tap **39** (Fig. 21)

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

14

Maintenance

As with a 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 in the Log Book.

15

Guarantee

The manufacturer's guarantee is valid for 12 months from the date of installation. 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 activate the pump for 1 minute and operate the 3 way valve every 23 hours. This is a normal function.

Precaution to avoid freezing

We recommend you to contact your installer or local service centre for further information.

• D.H.W. system

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

- Open a hot water tap
- Unscrew the cold water inlet tail
- Drain the water from the boiler with the D.H.W. drain screw **45** (Fig. 21)

• C.H. system

Chose one of the following solution :

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

17

Gas Conversion

This appliance is suitable for Natural gas or L.P.G. Any 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	Control gas, water and electrical supply, fuses...
	Air in the gas pipe	Follow the procedure in section 7
		Set up the room thermostat
Red indicator illuminates	Room thermostat switched off	Wait for a few minutes Press the reset button 36 (Fig.21) the red L.E.D. goes out and the boiler attempts to re-light. If the red indicator illuminates frequently, please call your localfaïtes service centre.
Noises in the C.H. system	Air is present in the C.H. system or. system pressure is insufficient.	Purge the system of air and increase the system pressure (section 7)
Radiators rise in temperature During summer season	Gravity effect in the C.H. system	Close the C.H. flow isolating valve. Don't forget to open it again before you switch on the Central Heating.

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

Model**Centora green 18-24**

Appliance category.....	II 2H3P	
Gross heat input C.H. max.....	20.9 kW	71,290 Btu/h
Gross heat input D.H.W. max.....	27.8 kW	94,800 Btu/h
Heat output C.H. 50°/30° max.....	19.5 kW	66,550 Btu/h
Heat output C.H. 80°/60° max.....	18 kW	61,430 Btu/h
Heat output D.H.W. max.....	24 kW	80,910 Btu/h
C.H. operating temperature.....	80°C max	25°C min
C.H. circuit pressure min operating.....	0.7 bar	10 lb/in ²
C.H. circuit pressure max operating.....	2.5 bar	36.3 lb/in ²
D.H.W. flow rate ΔT 30°C.....	12 l/min	2.66 gal/min
D.H.W. flow rate ΔT 35°C.....	10.3 l/min	2.29 gal/min
Cold water mains pressure min operating.....	0.5 bar	7.25 lb/in ²
Cold water mains pressure max operating.....	10 bar	145 lb/in ²
Flow limiter rate.....	8 l/min	
Compartment ventilation.....	not required	
Natural gas G20		
Gas rate C.H. max.....	1.98 m ³ /h	70 ft ³ /h
Gas rate D.H.W. max.....	2.65 m ³ /h	93 ft ³ /h
Gas rate C.H. & D.H.W. min.....	0.87 m ³ /h	31 ft ³ /h
Gas valve restrictor diameter.....	5.55 mm	
Propane L.P.G. G31		
Gas rate C.H. max.....	1.46 kg/h	27 ft ³ /h
Gas rate D.H.W. max.....	1.94 kg/h	36 ft ³ /h
Gas rate C.H. & D.H.W. min.....	0.64 kg/h	12 ft ³ /h
Gas valve restrictor diameter.....	4.15 mm	
Safety discharge.....	3 bar	43.5 lb/in ²
Expansion vessel - Pre-charge pressure.....	0.7 bar	9.4 lb/in ²
Net capacity at 3 bar in litres.....	5.44	
Adjustable by-pass		
Electrical characteristics		
Supply.....	230V~	
Consumption.....	150W	
Protection.....	IP4 XD	
Fuse F1.....	2 A	
Fuse F2.....	1.25 A	
Fuse F3.....	0.315 A	
Fuse F4.....	0.250 A	
External controls.....	24V~	

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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