

Buccaneer G.T.

Installation, Assembly and Servicing

Oil or Dual Gas Fired Boilers

Assembly and Installation Instructions for Ideal Buccaneer GT Oil, Gas or Dual Fired heating boilers should be read in conjunction with the general technical data tables enclosed and any other technical publication supplied with the burner.

CAUTION. To avoid the possibility of injury during the installation, servicing or cleaning of this appliance care should be taken when handling edges of sheet steel components.



i Ideal BOILERS

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INTRODUCTION

THE TECHNICAL INSTRUCTIONS FOR THE INSTALLATION OF THE BOILER MUST BE SCRUPULOUSLY RESPECTED, OTHERWISE THE WARRANTY MAY BE CANCELLED.

DUTY

The range of boilers is suitable for: combined indirect pumped domestic hot water and central heating systems; independent indirect pumped domestic hot water or central heating systems.

Fully pumped systems may be open vented or sealed.

The range of boilers is NOT suitable for:

1. Gravity DHW systems.
2. Gravity heating systems.
3. Direct domestic hot water supply.

FOUNDATION

The boiler must stand on a non-combustible floor (i.e. concrete or brick) which must be flat, level and of a suitable load bearing capacity to support the weight of the boiler (when filled with water) and any ancillary equipment.

If the boiler is mounted on a plinth then the dimensions must exceed the plan area of the boiler by at least 75mm on each side

GAS SAFETY (INSTALLATION AND USE) REGULATIONS, 1994

It is law that **all** gas appliances are installed and serviced by a CORGI registered installer in accordance with the above regulations. Failure to install appliances correctly could lead to prosecution. It is in your own interest, and that of safety, to ensure the law is complied with.

The installation of the boiler **MUST** also be in accordance with the latest I.E.E Wiring Regulations, local building regulations, bye-laws of the local water authority, the building regulations and the Building Standards (Scotland) and any relevant requirements of the local authority.

Detailed recommendations are contained in the following British Standard Codes of Practice:

- | | |
|------------|---|
| BS. 6891 | Low pressure installation pipes. |
| BS. 6798 | Installation of gas fired hot water boilers of rated input not exceeding 60 kW. |
| BS. 5449 | Forced circulation hot water systems. |
| BS. 5546 | Installation of gas hot water supplies for domestic purposes (2nd Family Gases) |
| BS. 6644 | Ventilation (for gas appliances of rated input exceeding 60 kW) |
| BS. 5440:2 | Ventilation (for gas appliances of rated input not exceeding 60 kW) |

GENERAL

1 BOILERS CONCERNED BY THIS DOCUMENT

The Buccaneer GT range of boilers is a range of automatic hot water boilers connected to a conventional flue to be fitted with an independent burner using oil or gas.

PACKING

Before installing your boiler, you can check with the table below to see if you do indeed have all of the component packages. For the optional equipment that may be fitted to these boilers, see the current price list.

Assembled boiler bodies:

UIN	ANA No.	Item	Pack Number	Buccaneer		
				3	4	5
138495	0	Boiler Body (3 section)	IC1	1		
138496	7	Boiler Body (4 section)	IC2		1	
138497	4	Boiler Body (5 section)	IC3			1
138498	1	Jacket pack (3 section)	IC4	1		
138499	8	Jacket pack (4 section)	IC5		1	
138500	1	Jacket pack (5 section)	IC6			1
138501	8	Control panel	IC7	1	1	1
		Options				
138502	5	Hours run meter (optional)	IC8	1	1	1

2 INSTALLATION OF THE BOILER

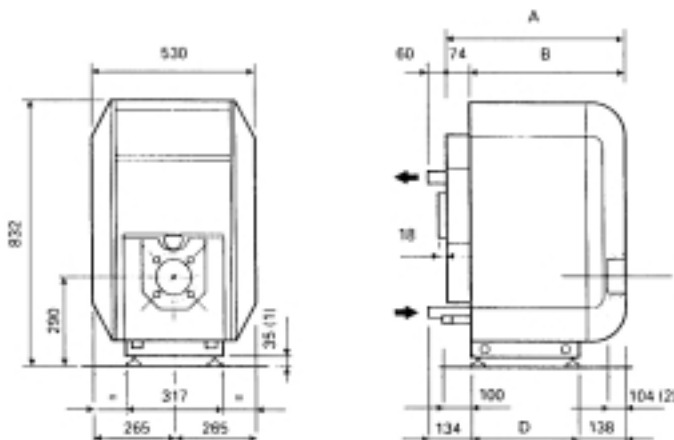
The minimum dimensions indicated on the following drawing must be respected to ensure good access around the boiler.

Remark: To allow the inlet of the combustion air, the boiler room must be adequately ventilated, the section and the location of which must comply with local recommendations.

VENTILATION GENERAL

Detailed recommendations for air supply are quoted in BS. 6644. The ventilation requirements in this gas fired boiler standard are also valid for oil fired boilers or the same heat input.

Remark: We draw your attention to the risks of corrosion of the boilers installed in or near to rooms in which the atmosphere can be polluted by chloride or fluoride substances. E.G.; industrial buildings (solvents), refrigerating machines, etc... in these cases we cannot provide a warranty.



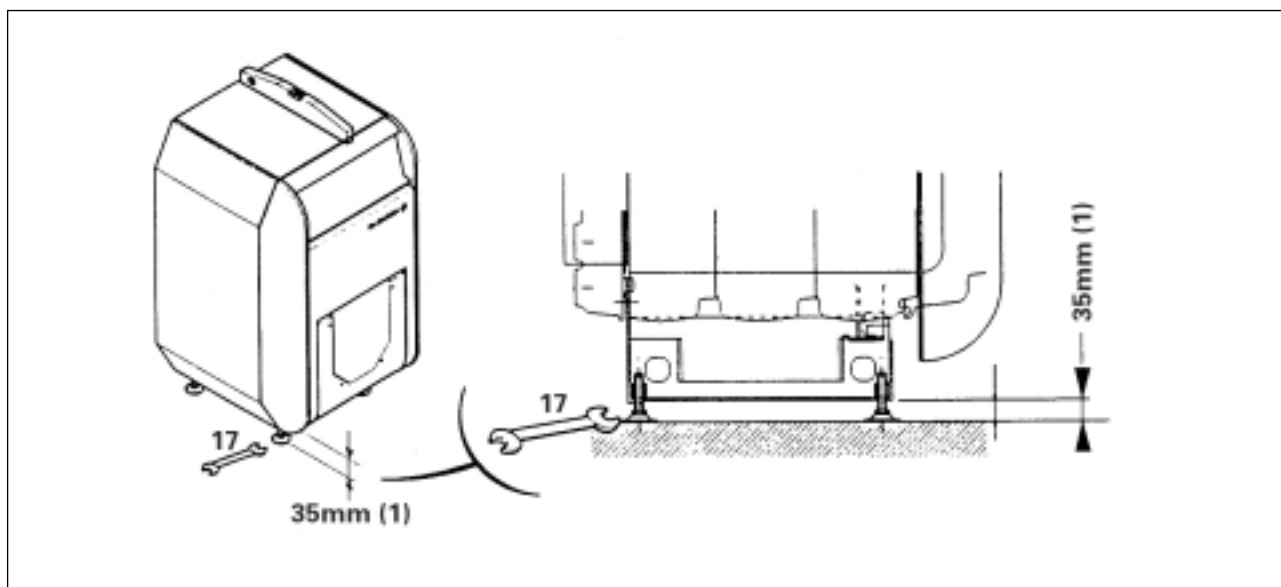
Note: (1) Adjustable feet 35mm - 45mm (2) Thickness of burner door with insulation

Boiler size (no. of sections)	3	4	5
Dimension A	545	672	799
Dimension B	471	598	725
Dimension D	330	457	584
Flow and return tappings	1 1/4"	1 1/4"	1 1/4"
Flue outlet	125	125	125
All dimensions in millimetres unless otherwise stated			

* Attention must be paid to the space occupied by the burner when the door is open.

LEVELLING

Insert the cylinder into the hole provided in each foot of the heating body and screw the adjustable foot into it. Level.



GENERAL

3 ASSEMBLY

For the assembly of the boiler, refer to the relevant paragraph of the instruction book.

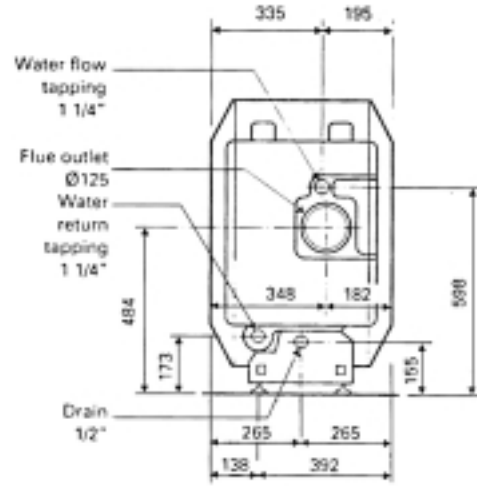
4 HYDRAULIC CONNECTION

Dimensional information required

WATER SYSTEM: General

Recommendations relating to the water system are contained in BS. 5449 Pt. 1, BS. 5401 Pt. 2, and BS. 6880.

Flow & Return	in
Buccaneer GT 3	1.25
Buccaneer GT 4	1.25
Buccaneer GT 5	1.25



INSTALLATION RECOMMENDATIONS

The installation of the boiler MUST be in accordance with the following British Standards and Codes of Practice:

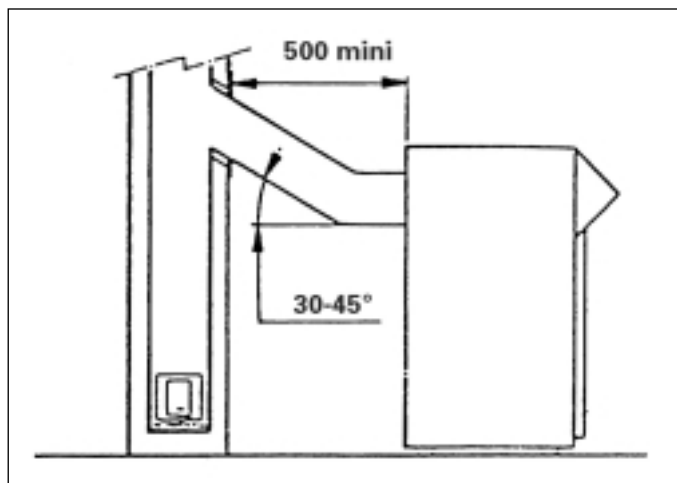
- BS. 799 Pts. 4,5,6 & 7 Oil Burning Equipment
- BS. 5410 Pts. 2 & 3 Installations for Space Heating and Hot water Supply
- BS. 5449 Pt.1 Hot water Systems
- BS. 5854 Flues and Flue Structures in Buildings
- BS. 5885 Pt.1 Gas Burners - with outputs of 60kW upwards
- BS.6644 Installation of Gas Fired Boilers
- BS.6880 Low Temperature Hot Water Heating Systems
- BS.6891 Low Pressure Gas Pipework
- British Gas Industrial Gas Fired Boilers and Publication No. IM.11 Air Heaters

The following must be confirmed with:
 Current Building Regulations and Clean Air Act
 Water Authority Regulations
 Local Authority Regulations and Regional bylaws
 Gas Safety Regulations

Any special regional requirements of local Electricity and Gas undertaking.
 Fire Service and Insurance requirements.
 All electrical wiring MUST comply with the current I.E.E. regulations for the electrical equipment of buildings. In the interests of safety, a competent installer should be employed to effect the installation of the appliance. Manufacturer's notes must NOT, in any way, be taken as overriding statutory obligations.

5 CONNECTION TO THE CHIMNEY

According to the output, the difference between the temperature of the flue gas and the ambient temperature can be as much as 160°C. The installer will have to respect all of the usual precautions (dilution - piping - T for the evacuation of condensation) in order to prevent deterioration of the chimney.



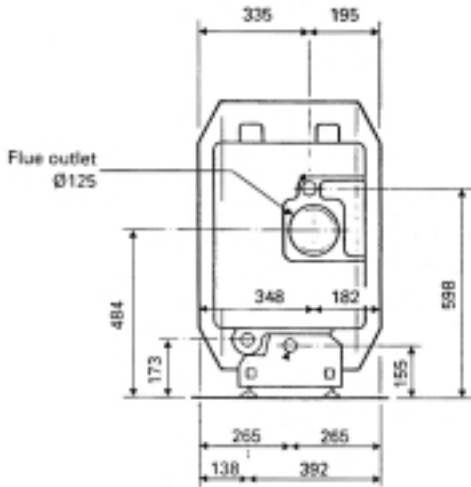
CHIMNEY AND FLUE CONNECTIONS

Detailed recommendations, relating to the design of flues for GAS fired applications are quoted in BS. 6644 and British Gas Publication No. IM 11, whilst BS. 5410 Pt. 3 similarly applies OIL fired burners.

	Power kW	Mass flow of the flue gas Oil 13% CO2 Natural gas 9% CO2 g/s	Temperature of the flue gas < °C	Chimney	
				min. Ø mm	min. H m
Buccaneer GT	16-26	10.5	< 180	125	5
Buccaneer GT	26-33	13.5	< 180	125	6.5
Buccaneer GT	33-40	16.5	< 180	125	7

INSTALLATION

Dimensional information required for the connection



Flue Outlet	mm
Buccaneer GT 3	125
Buccaneer GT 4	125
Buccaneer GT 5	125

Connection

The boiler must be installed according to the profession with an airtight pipe in a material that is resistant to hot gases from the combustion and possible acid condensations. This pipe will be as short as possible, remove and without any sudden change in its section.

6 BURNER CONNECTION

GAS SUPPLY

The gas supply MUST be sized in accordance with British Gas recommendations and be fabricated in compliance with CP. 331 Pt. 3 and any Local Gas Board installation standards.

The Local Gas Board should be contacted, at a stage prior to actual installation, for any advice or information required.

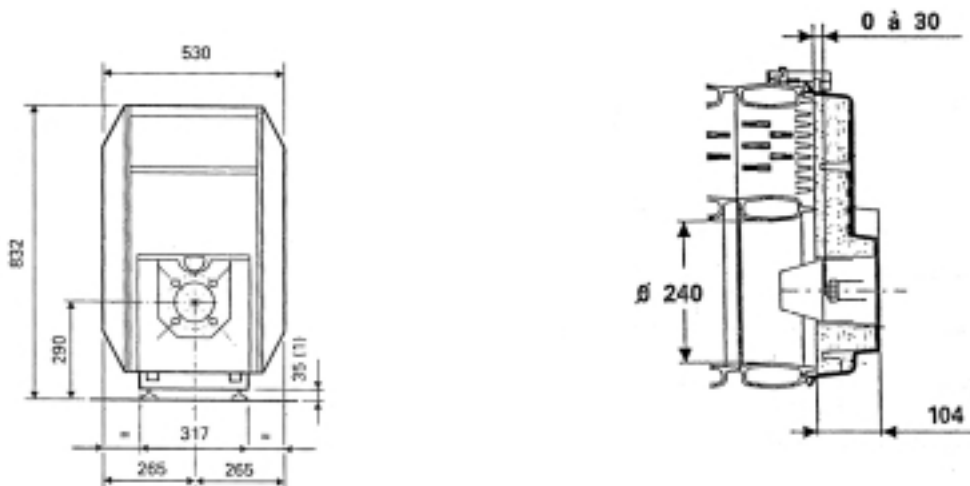
Details and advice, relating to the use of L.P.G. for firing the BUCCANEER GT range of heating boilers, are available on request to Caradon Ideal Ltd

OIL STORAGE TANK

The oil storage tank, oil supply pipe and connections to the burner unit MUST comply with the requirements of BS. 779 and CP. 5410.

The installation should conform to the recognised standards of good practice in the trade and comply with the relevant Codes of Practice, Building Regulations and Local Authority, Fire and Insurance requirements.

Piercing Ø of the burner door



7 ELECTRICAL CONNECTION

CAUTION: Must be carried out by a qualified professional

As the electrical wiring has been carefully checked in the factory, the internal connections of the control panel must not be modified under any circumstances.

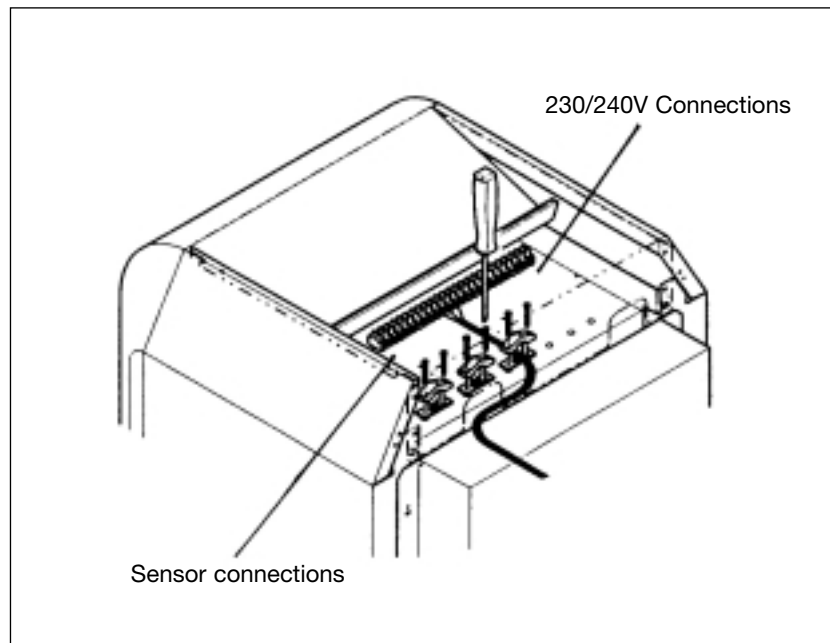
The electrical connections of the boiler must conform with the IEE wiring regulations in force, respecting the indications which appear on the electrical drawings supplied with the control panel and the directives given hereafter.

Control panel

All the connections will be made on the connection block provided for this purpose outside of the panel.

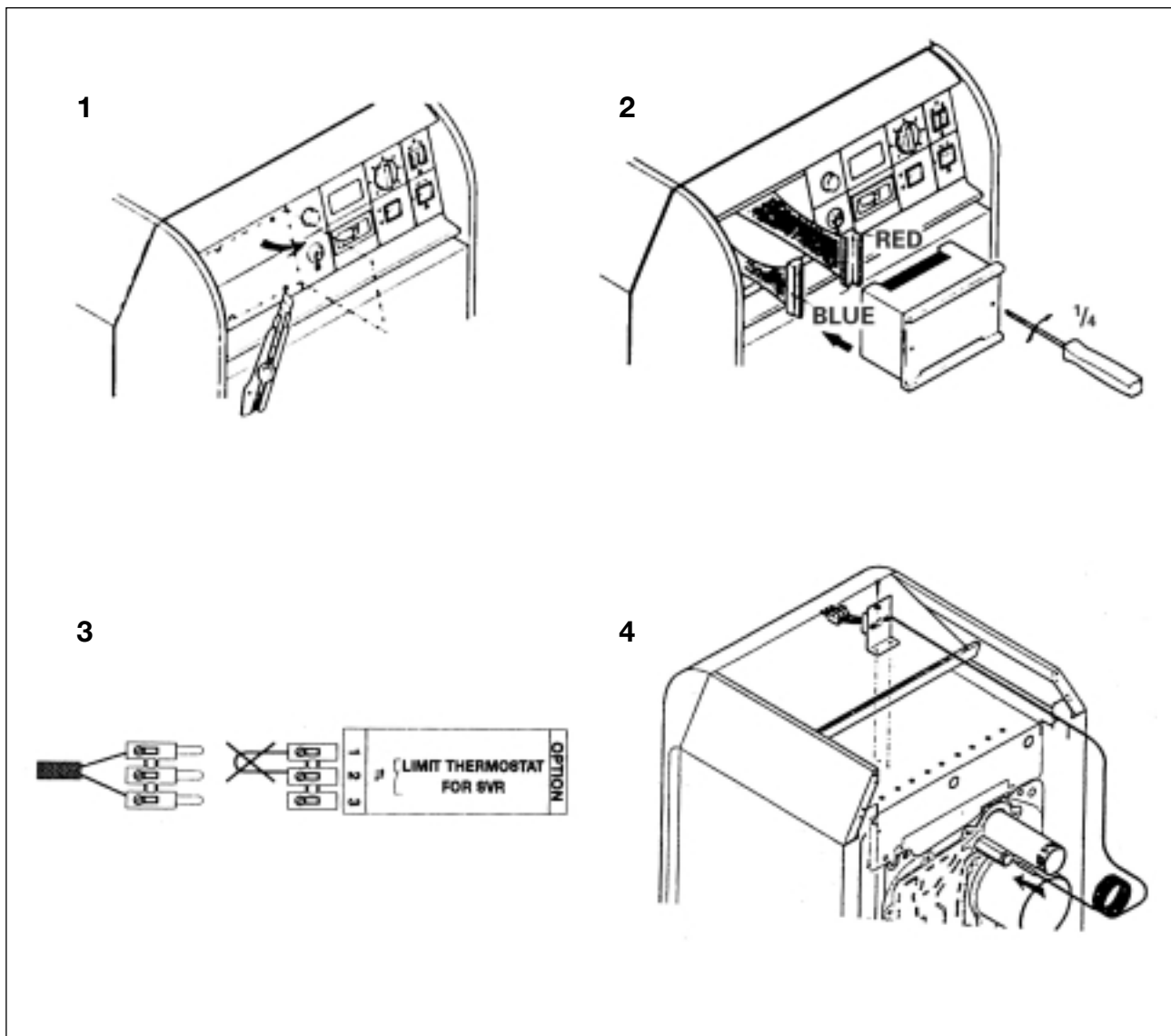
The connection cables may be fed along the inside of the boiler by the cut-outs which are situated in the upper rear panel of the boiler, the latter allowing the possible use of electrical duct which are on general sale.

These cables will be attached to the rear metal sheet of the panel with the help of cable clamps (7 cable clamps supplied in a separate bag) fitted to the metal sheet.



INSTALLATION

Assembly of the SVR sanitary hot water option

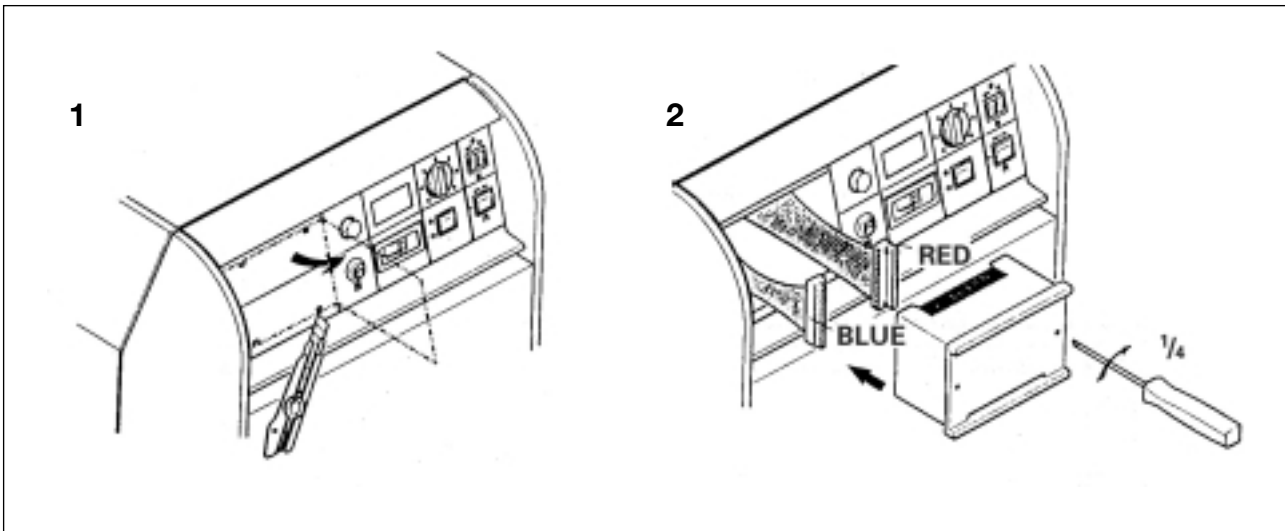


The housing of the SVR option has to be mounted on the front of the control panel. For this purpose:

- Remove the cover with a screwdriver
- Plug the 2 connections into the panel on the rear face of the housing, blue to blue and red to red
- Introduce the housing from the front and attach it with two plastic screws situated on the front of the device ($\frac{1}{4}$ turn in clockwise direction).

The thermostat limiter supplied with the SVR option must be fitted on the rear sheet of the panel with the 2 screws for the sheet which are supplied. The 3 pin male block of this thermostat is to be connected in the place provided on the block after having removed the bridge; the bulb of the thermostat must be placed in the pocket on the boiler body.

Fitting an SV-mattic regulator

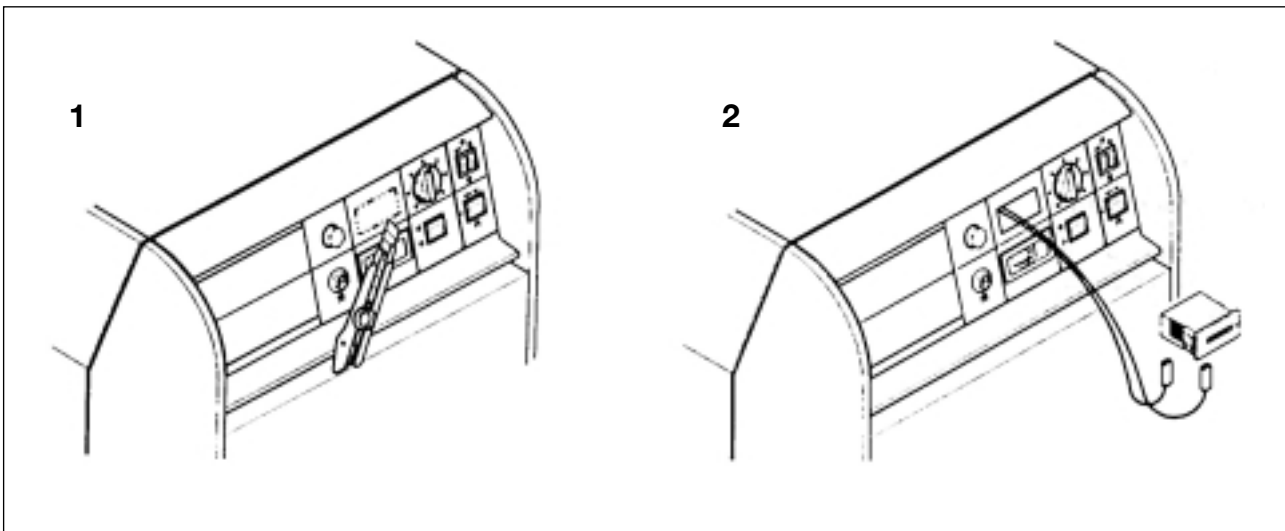


The SV-matic regulator must be fitted in the front part of the control panel. For this purpose:

- Remove the cover
- Plug the 2 connectors into the panel on the rear face of the box, blue to blue and red to red
- Insert the box from the front and attach it with two plastic screws situated on the front of the device ($\frac{1}{4}$ turn in clockwise direction).

Possible additional connections

- An alarm LED is connected to the pins 15 and 16
- A flue gas thermostat is connected to the pins 13 and 14 after the existing bridge has been removed. The pins are interchangeable.
- A hour run meter (package IC 8) can be mounted on the front face of the panel. To do this, remove the cover, take the two wires from behind the cover and connect them to the meter (wires are interchangeable). Clip the hour run meter in the panel.



Connection of the burner

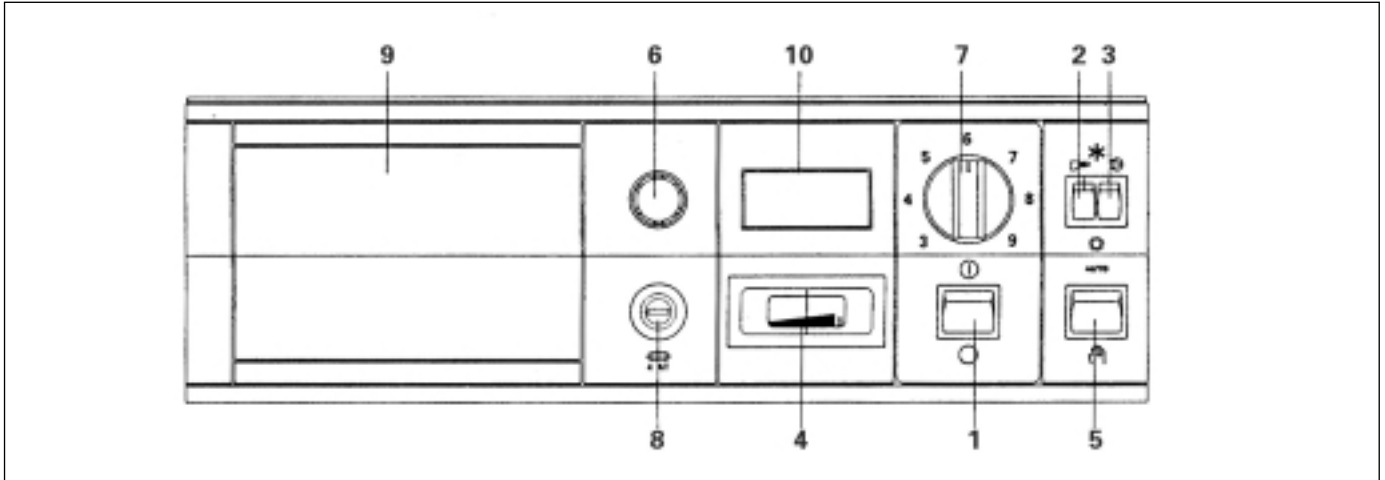
The boiler is equipped with a wire with a 7 pin male European connection plug which can be connected to the female socket supplied with the burners

INSTALLATION



8 COMMISSIONING



CONTROL PANEL

Description



1. On/Off switch

2. **Burner switch:** Used for switching OFF (summer position ) or switching ON (winter position ) , by means of action on the burner and the pump (the operation of the D. H. W. is not stopped). In case of fitting an SV-matic regulator or an D. H. W. priority (SVR), this switch is put out of service by the regulator.

3. **Heating accelerator switch:** Used for switching OFF (summer position ) or switching ON (winter position ) the accelerator.

In case of fitting a regulator or an SVR module, it must be set to the winter position .

4. Boiler thermometer

5. 3 position switch:



Manual position, this position must be used for boilers which are not equipped with SV-matic regulation or room temperature thermostats.

The temperature of the boiler is regulated by the boiler thermostat 7. This position can be used to test the burner on an installation equipped with SV-matic regulation or with a room temperature thermostat.

AUTO Automatic position, this position must be used for normal operation for boilers equipped with SV-matic regulation or room temperature thermostats.

TEST STB: Temporary action to test the safety thermostat

6. **Safety thermostat** With manual reset (factory setting - 100°C)

7. **Boiler thermostat:** It can be adjusted from 30 to 85°C. However, a factory fitted stop limits the temperature to 75°C. This stop can be moved if necessary. The boiler thermostat must compulsorily be set at maximum in case an SV-matic regulator or a room temperature thermostat is fitted.

8. **Fuse** 4 AT

9. **Place for an SV-matic regulator or the SVR option**

10. **Place for the possible hour run meter**

PRINCIPLE OF OPERATION

Regulation of the boiler

The regulation of the boiler is provided either by the boiler thermostat 7, or by the room temperature thermostat, or the SV-matic regulator if fitted.

For the boilers equipped with a room temperature thermostat or an SV-matic regulator, the temperature of the boiler is modulated by the regulator on the burner according to the room or the external temperature. The thermostat of the boiler will then be set at maximum. The safety during the operation is ensured by the safety thermostat with manual reset 6.

Regulation of the heating

The regulation of the heating can be provided in a number of ways (manual mixing valve, thermostatic taps,...), and the installer will have to explain to the customer the operation of the regulation of the heating.

For the boilers equipped with an SV-matic regulator that operates on the valve, the heating temperature is modified by means of the regulator on a monitored mixing valve depending on the external temperature.

Regulation of the domestic hot water (with SVR or SV-matic option ... B)

The presence of a load pump and an anti-thermosiphon valve on the domestic hot water circuit allows correct regulation of the domestic hot water temperature. The domestic hot water temperature is set by a potentiometer 11 situated on the SVR or SV-matic regulator. When the domestic hot water is reheated, the burner and the load pump are started up whereas the heating pump is shut off ; the boiler temperature is then regulated by the thermostat limiter integrated in the SV-matic regulator or fitted with the SVR option (this thermostat is factory set at 70°C). Once the domestic demand is satisfied, the burner is shut off and the load pump continues to operate for 4 minutes after the burner has stopped (this time is adjustable from 30 s to 15 min), to allow the residual calories which have accumulated in the heating body to be used up to complete the reheating of the tank, especially in summer.

Commissioning

The first commissioning must be made by a qualified professional.

Before the boiler is ignited, check that the installation is filled with water.

Carry out the commissioning tasks in the following chronological order:

- Set the boiler thermostat 7 to the chosen position (change the position of the stop if necessary)

IMPORTANT. for the boilers equipped with a room thermostat or an SV-matic regulator, set the boiler thermostat to its maximum.

- Place the setting potentiometer of the domestic hot water 11 to the desired temperature (SVR or SV-matic option).
- Check the position of the 3 position switch 5, which must be:
 - either in manual position: boilers **not equipped** with a room temperature thermostat or an SV-matic regulator,
 - or in automatic position "AUTO": boilers **equipped** with a room temperature thermostat or an SV-matic regulator
- Check that the safety thermostat 6 is ON. For this purpose, unscrew the hexagonal cap and press the reset button with a screwdriver.
- Turn the ON/OFF switch 1 to the ON \odot position
- Turn the burner switch 2 to winter \ast . If the boiler is equipped with SV-matic regulation or with the SVR domestic hot water option, this switch is taken out of service by the regulator.
- Turn the heating pump switch 3 to winter \ast .

Note: If there is no SV-matic regulation, the boiler thermostat should never be placed beneath the mark 4 (40°C) in order to avoid condensation of the combustion products on the walls of the boiler.

Information of the user

The installer must give the operation and maintenance instructions to the user and give all the information required on this matter, to allow the installation to operate safely.

INSTALLATION

9 MAINTENANCE

BOILER

It is not advisable to drain an installation, except in case of absolute necessity. Check regularly the water level of the installation and top it up if necessary, avoiding a sudden inlet of cold water into the hot boiler.

This operation should only be done a few times a year; otherwise, look for the leakage and remedy it without delay.

The good performance of the boiler depends on its degree of cleanliness.

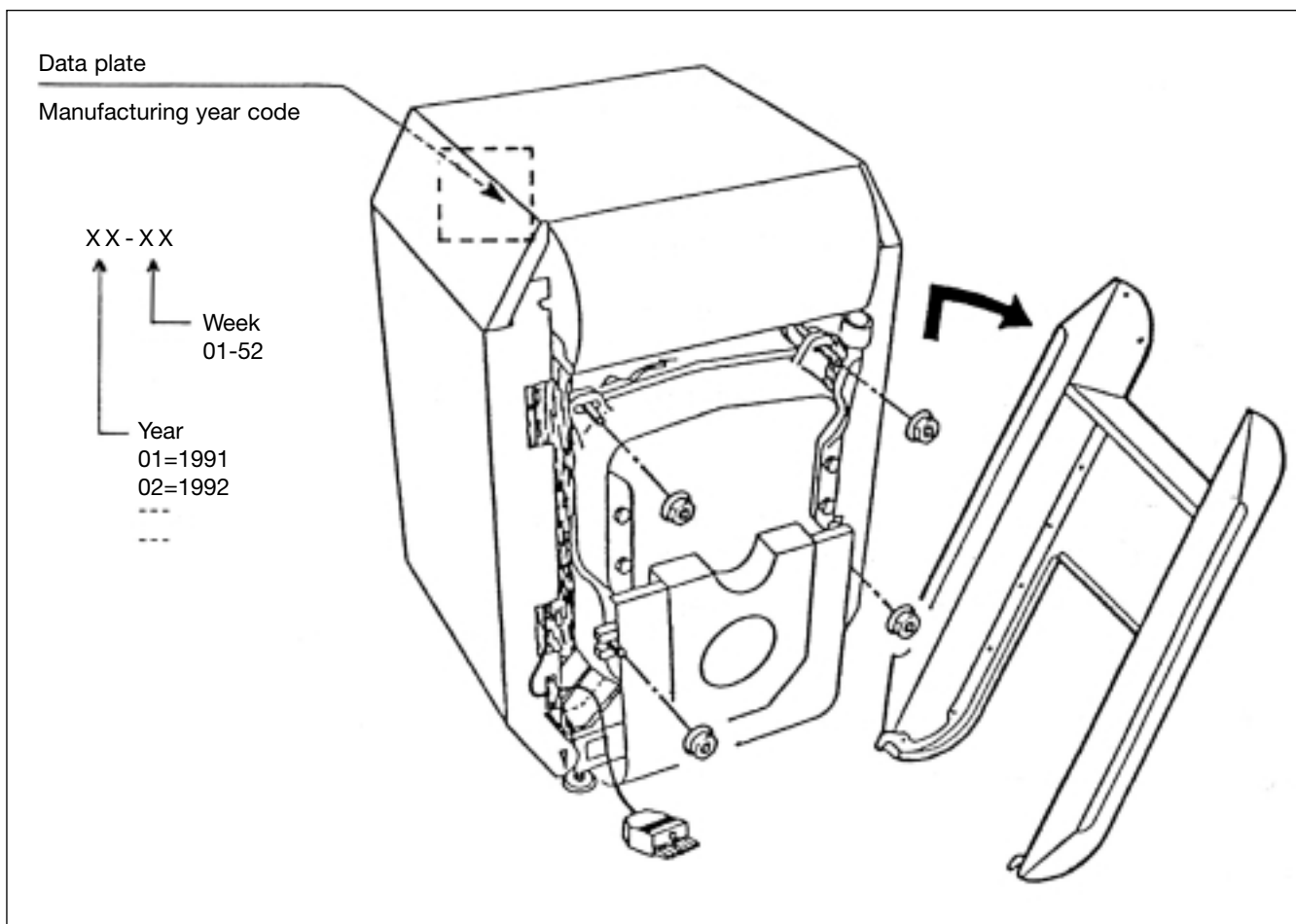
Cleaning of the boiler must be carried out as often as required and at least, as for the chimney, once a year or more, according to the regulations in force.

The following operations are always carried out with the boiler and the power supply shut off.

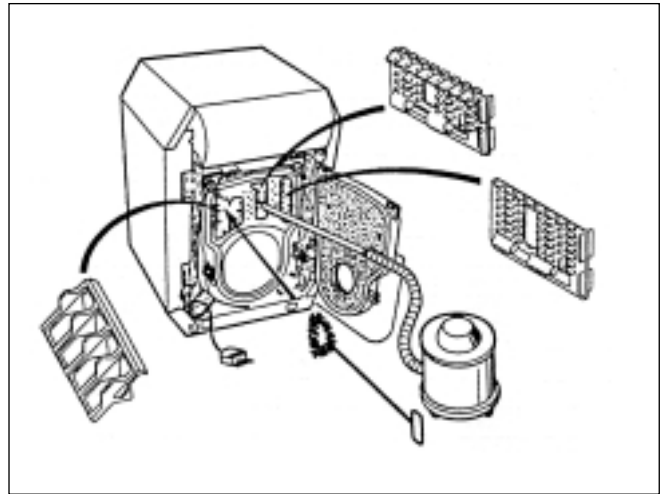
Cleaning of the flue gas circuit:

For this purpose:

- Remove the front cover
- Open the door by unscrewing the four locknuts (13mm spanner)



- Remove the convection accelerators (only for boilers with 3, 4 and 5 sections)
- Sweep carefully the upper flues and the hearth with the brush provided
- Remove the spot from the hearth with a vacuum cleaner
- Replace the convection accelerators
- Close the door and replace the front cover



PRECAUTIONS TO BE OBSERVED IN CASE OF PROLONGED STOPPAGE OF THE BOILER

- Have the boiler and the chimney carefully swept. Shut the boiler doors to avoid any air flow inside.
- If the boiler is going to be stopped for several months, we also advise removing the pipe which connects the boiler to the chimney and to close off the nozzle with a cover.
- In case of stoppage of the heating in winter leading to risks of freezing, we advise the use of a concentrated anti-freeze agent to prevent the heating water from freezing. Otherwise, completely drain the installation (in this case, the slot of the valve screw on the load pump must be positioned vertically. The tank and the sanitary hot water piping must also be drained).

INSTALLATION

10 PERFORMANCE DATA

CHARACTERISTICS TABLE

General Data

Boiler Size		3	4	5
Maximum Heat Output	kW	26	33	40
	Btu/h x 10 ³	88	112	136
Minimum Heat Output	kW	16	26	33
	Btu/h x 10 ³	55	88	112
Combustion Chamber Volume	m ³	0.016	0.02	0.025
	ft ³	0.56	0.74	0.9
Flue Way Volume	m ³	0.03	0.04	0.05
	ft ³	1.09	1.45	1.8
Boiler Water Content	l	19	24.5	30
	gal	4.18	5.4	6.6
Hydraulic Resistance at 15k	mbar	1.7	2.8	4.1
	in.w.g.	0.68	1.12	1.64
Combustion Chamber Resistance	mbar	0.05	0.05	0.05
	in.w.g.	0.02	0.02	0.02
Minimum Draught at Smokehood outlet (for max output)	mbar	0.15	0.2	0.2
	in.w.g.	0.06	0.08	0.08
Boiler DRY weight less burner unit	kg	121	149	177
	lb	267	328	390

Oil Firing Data

Boiler Size		3	4	5
Maximum Oil Rate	l/h	2.67	3.4	4.12
	gal/h	0.59	0.75	0.91
Maximum Flue gas volume	l/sec	16.7	21.2	25.7
	ft ³ /min	35.4	45	54.6

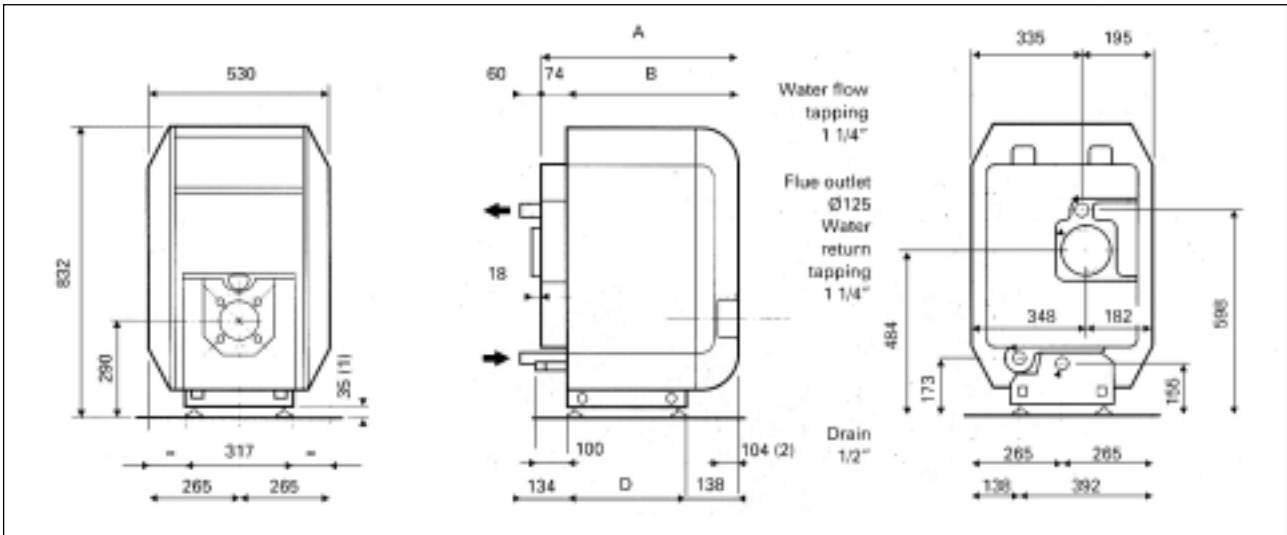
Gas Firing Data

Boiler Size		3	4	5
Maximum Gas Rate	m ³ /h	2.7	3.4	4.2
	ft ³ /h	95.3	120	148
Maximum Flue gas volume	m ³ /sec	0.015	0.02	0.023
	ft ³ /min	31.7	42.4	48.7

Data Notes:

Fuel rates and flue gas data relates to maximum outputs ratings Gas firing data relates to the use of NATURAL GAS ONLY Details for the use of LPG are available, on request, to Caradon Ideal Ltd. The gas rate at calorific values differing from the standard quoted above may be calculated by direct proportion CALORIFIC VALUE; 38.5 MJ/m³ (1035 btu/ft³)

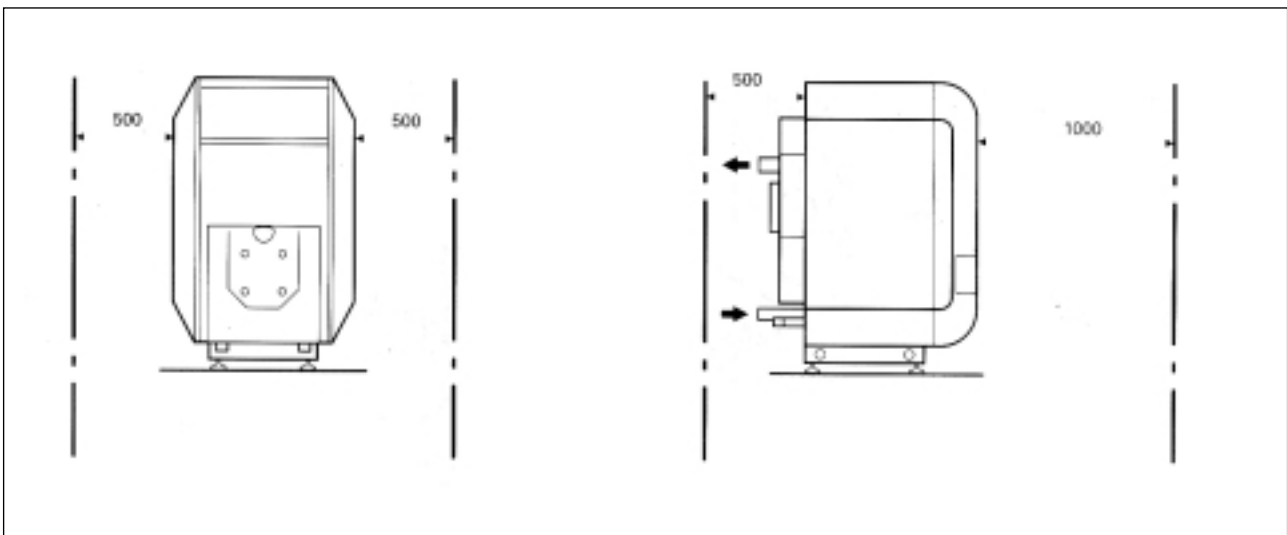
Main Dimensions



Boiler Size	3	4	5
Dimension A	545	672	799
Dimension B	471	598	725
Dimension D	330	457	584
Flow and Return Tappings	1 1/4"	1 1/4"	1 1/4"
Flue Outlet	125	125	125

All dimensions in millimetres unless otherwise stated

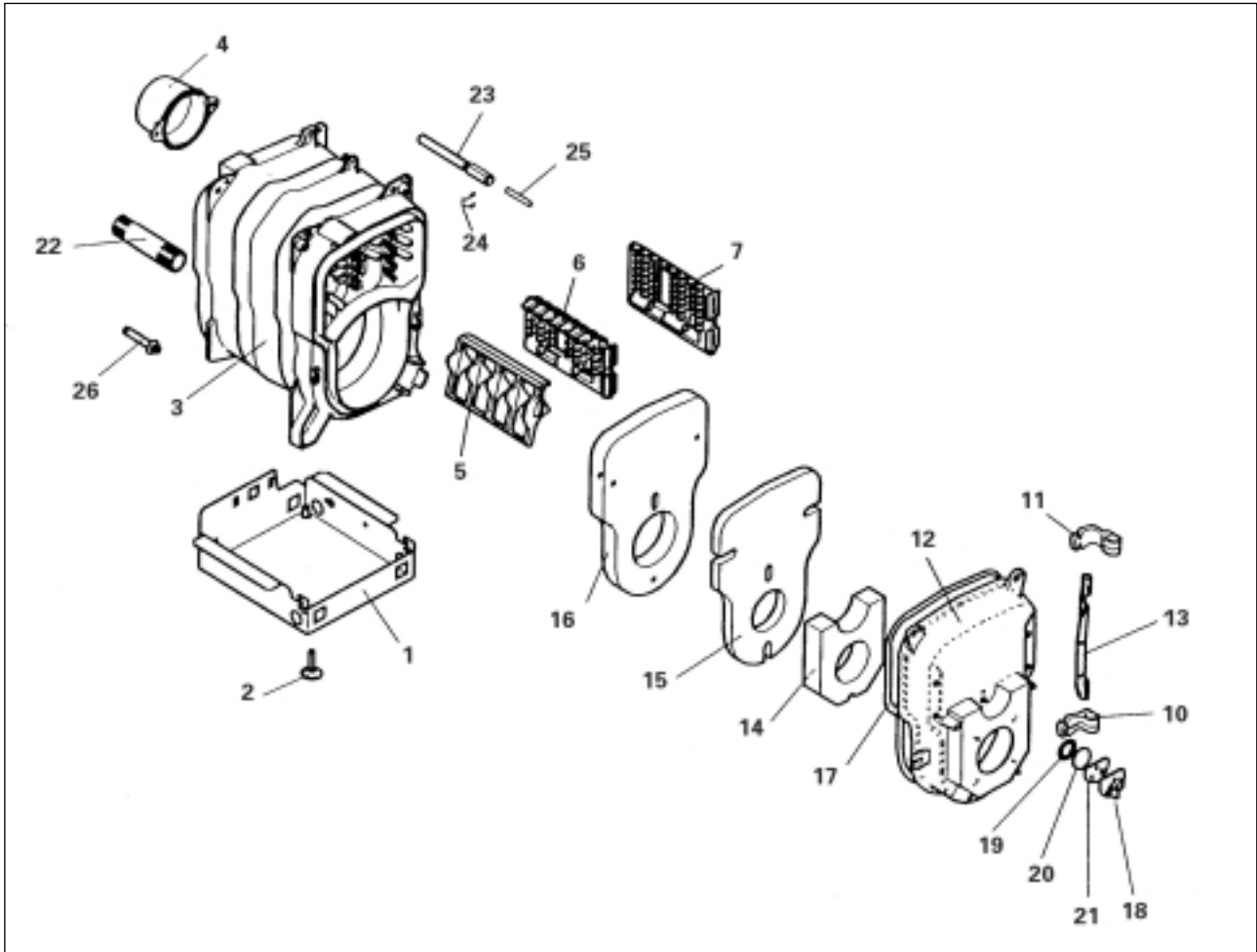
Clearances



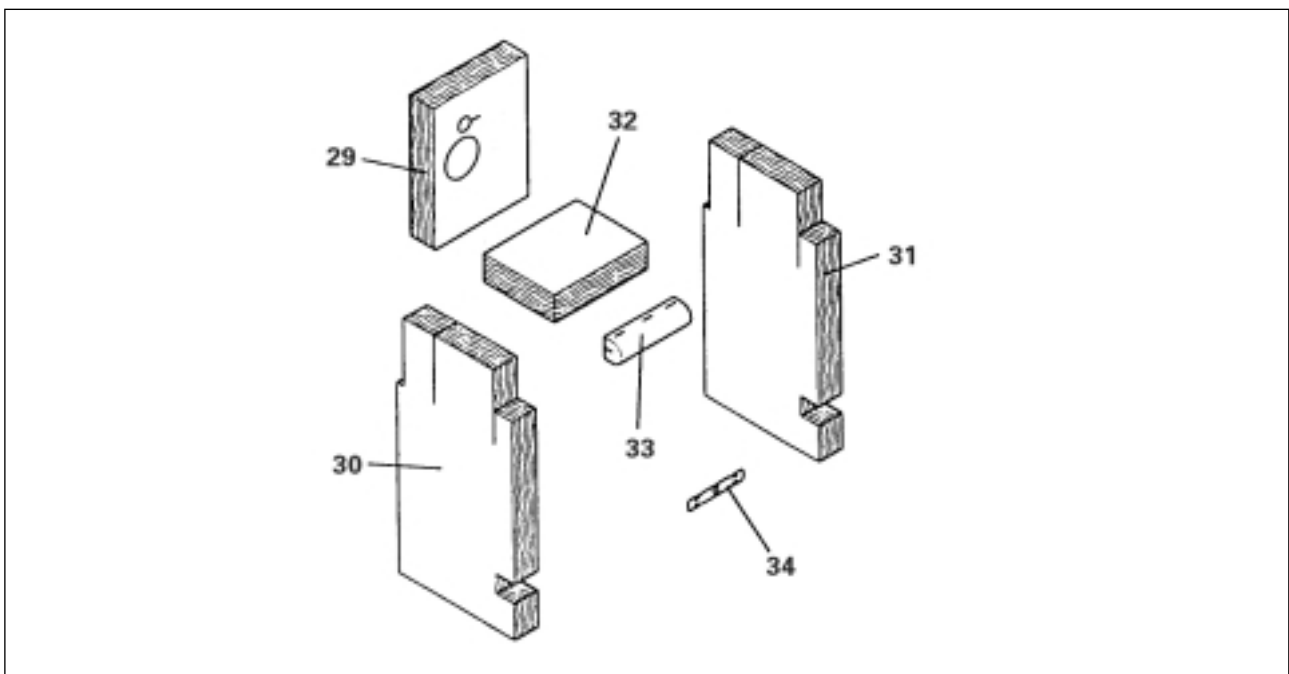
ASSEMBLY

11 EXPLODED VIEWS AND LIST OF SPARE PARTS

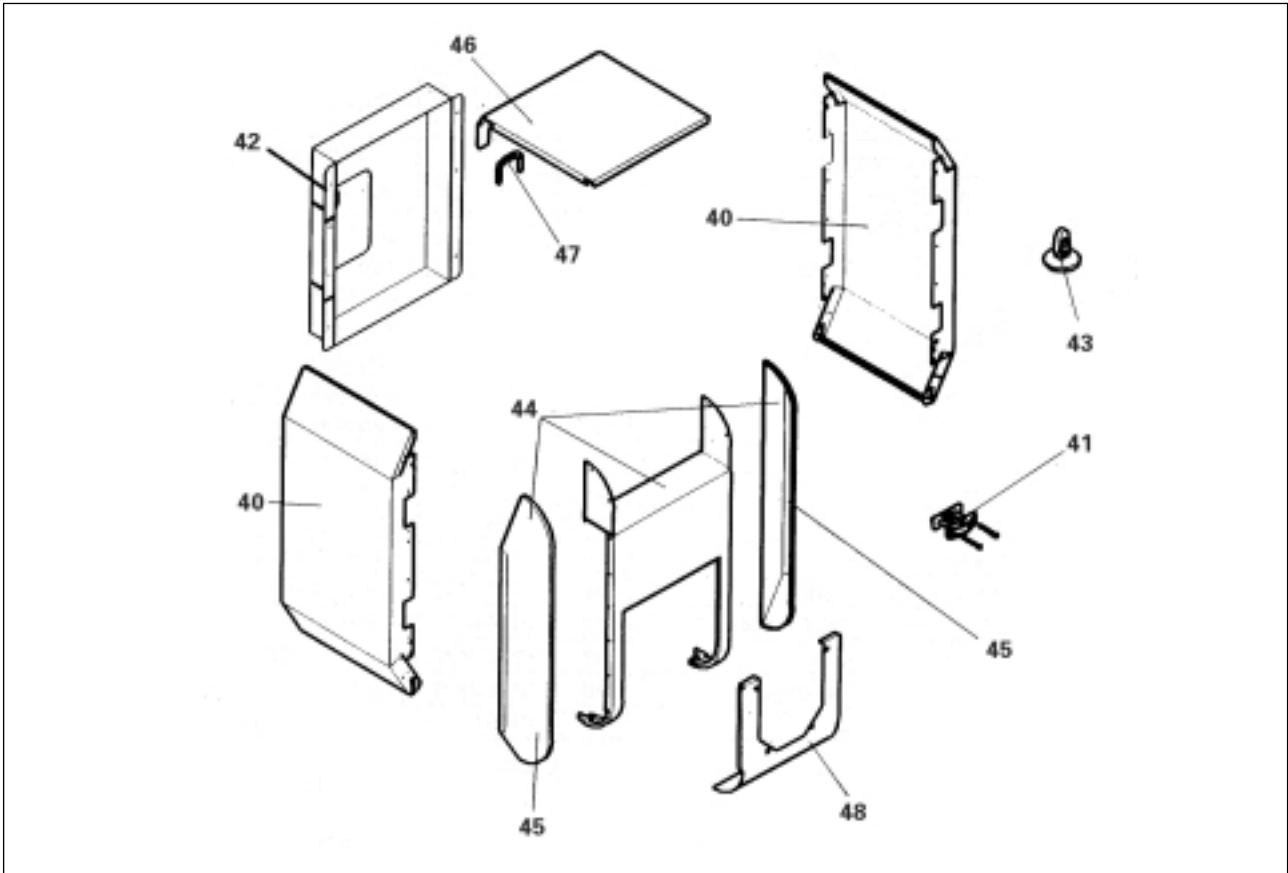
Boiler Body



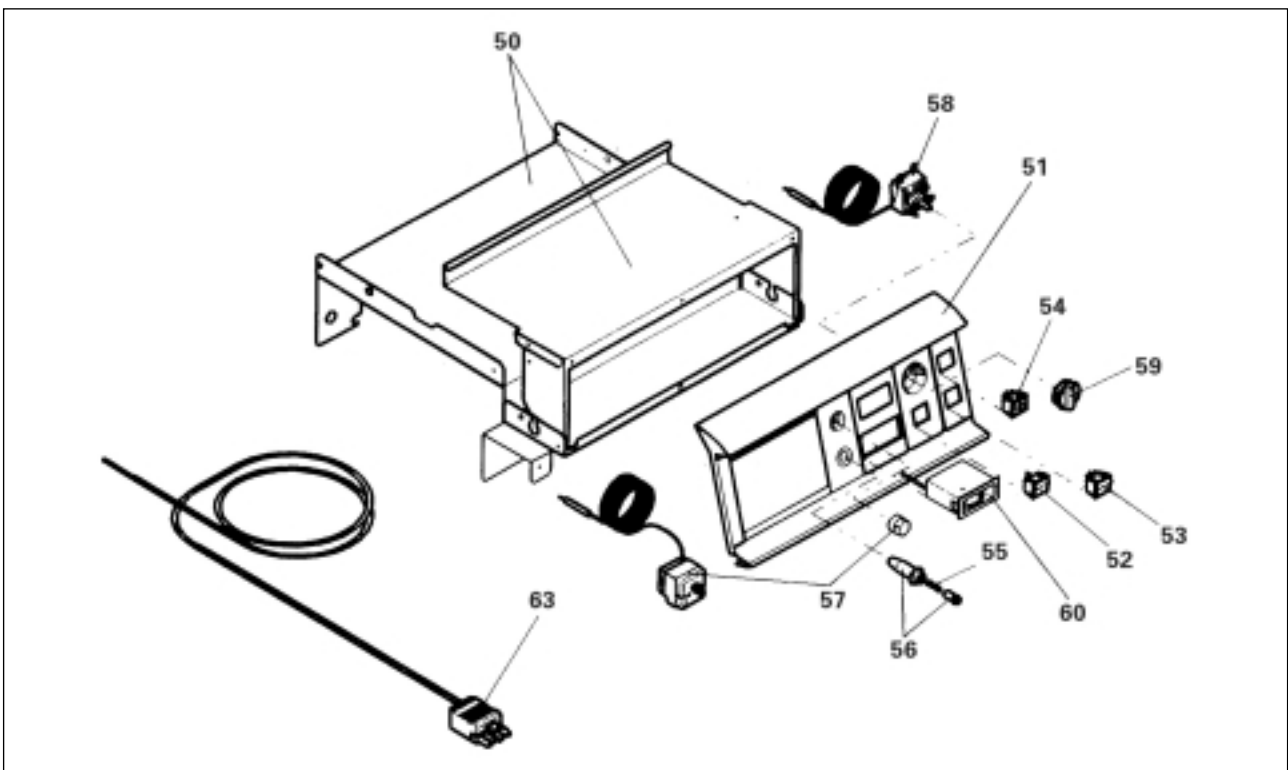
Insulation



Jacket



Control Panel



ASSEMBLY

BOILER MAIN CASING		
Ref	Code no.	PART
1	8199 8973	Base Unit 3 Elements
1	8199 8974	Base Unit 4 Elements
1	8199 8975	Base Unit 5 Elements
2	9498 2106	Adjustable Foot
3	8199 8980	Main Casing Complete 3 Elements
3	8199 8981	Main Casing Complete 4 Elements
3	8199 8982	Main Casing Complete 5 Elements
4	8199 0012	Duct 125/130
5	8199 0015	Left Baffle
6	8199 0016	Central Baffle
7	8199 0017	Right Baffle
10	8199 0008	Lower Hinge
11	8199 0009	Upper Hinge
12	8199 8905	Firebox Door
13	8199 0007	Firebox Door Axle
14	9425 0222	Door Insulation - Front
15	9425 0223	Door Insulation - Intermediate
16	9425 0224	Door Insulation - Rear
17	9508 6032	Silicon Glass - Fibre Cordon
18	8199 0004	Window Eye Glass
19	9755 0197	Window Gasket
20	9521 6246	Window
21	9425 0225	Window Insulation
22	9754 9447	Out/Return Tube
23	9536 1215	Sheath
24	9758 1286	Sheath Spring
25	9536 5613	Sheath Separator
26	9754 9448	Drain Tube
	8199 8983	Pack of Screws

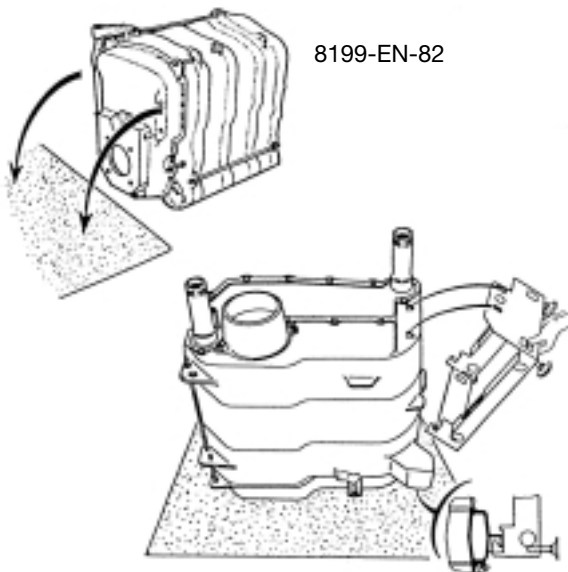
INSULATION		
Ref	Code no.	PART
	8199 8986	Complete Insulation Pack 3 Elements
	8199 8987	Complete Insulation Pack 4 Elements
	8199 8988	Complete Insulation Pack 5 Elements
29	8199 4048	Rear Insulation
30	8199 4041	Left Body Insulation 3 Elements
30	8199 4042	Left Body Insulation 4 Elements
30	8199 4043	Left Body Insulation 5 Elements
31	8199 4044	Right Body Insulation 3 Elements
31	8199 4045	Right Body Insulation 4 Elements
31	8199 4046	Right Body Insulation 5 Elements
32	8199 4040	Support Components Insulation
33	8199 4047	Cross Piece Support Insulation
34	8406 8082	Attachments

BOILER EXTERIOR PANELS		
Ref	Code no.	PART
	8199 8800	Jacket Complete 3 Elements
	8199 8801	Jacket Complete 3 Elements
	8199 8802	Jacket Complete 4 Elements
40	8199 8805	Jacket Complete 5 Elements
40	8199 8806	Side Panel Complete 3 Elements
40	8199 8807	Side Panel Complete 4 Elements
41	9532 0186	Cable Grip PA 268/RO
42	8199 8833	Rear Panel Complete
43	9649 6160	Push Rivet
44	8199 8803	Front Panel
45	9755 0146	Side Piece
46	8199 8829	Head Complete 3 Elements
46	8199 8830	Head Complete 4 Elements
46	8199 8831	Head Complete 5 Elements
47	9755 0187	Rubber Profile
48	8199 8804	Door Front Panel
	8199 8985	Jacket Screw Pack

VARIOUS		
Ref	Code no.	PART
	9696 0223	Brush

STANDARD CONTROL PANEL		
Ref	Code no.	PART
	8199 8916	Complete Control Panel
50	8199 8917	Complete Support Components
51	9750 9009	Electro - Mechanical Facia
52	9532 5091	Start/Stop Bi-Polar Switch
53	9532 5362	Bi-Polar Test Switch
54	9532 5103	Reverser Switch
55	9654 7000	4 AT Fuse
56	9655 0023	Fuse Carrier
57	9563 3315	Safety Thermostat 100°C
58	9536 5574	Controllable Thermostat 30 - 90°C
59	8218 8973	Control Button + Lugs
60	9536 5157	Flat Thermometer
	8199 4906	Electric Circuit T.C.
	8199 4907	Electric Circuit Sensors
	9650 2815	1430 ohms Resistor
63	8199 4908	Burner Cable
	8199 8984	Control Panel Screw Pack

1



8199-EN-82

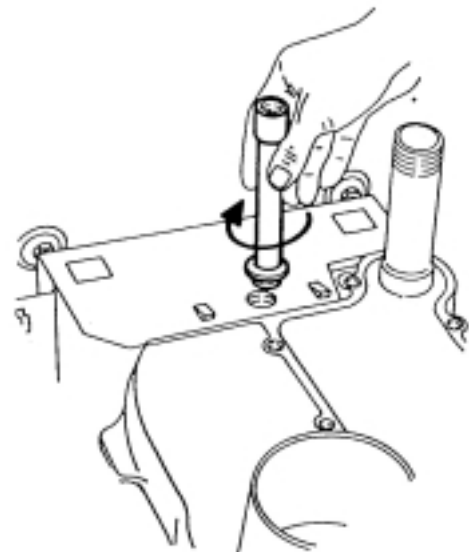
8199-EN-81

Assembly of the base

Place a sheet of paper in front of the boiler body, lift it from its pallet and stand it up on the burner.

Attach the base to the feet of the boiler and clip it onto the rear section.

2



8199-EN-29

Drain/waste tube assembly

Screw the drain tube onto the rear section. Ensure a seal by using hemp or a sealing compound.

Place the boiler body back on its feet.

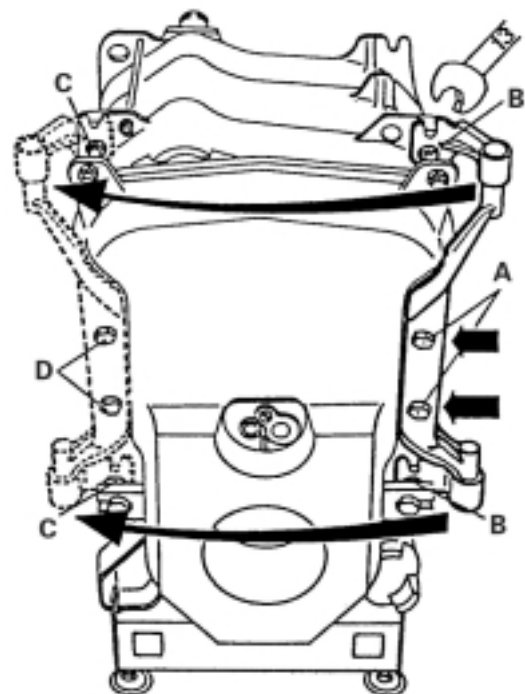
3

Changing the direction of opening of the burner door.

Take off the cast iron hinge section of the burner door by unscrewing the 2 screws A (HM8 x 12) and the upper and lower hinges by unscrewing the 2 nuts B (HM8)

Re-assemble the hinges and the hinge on the left using nuts C and screws D supplied in the casing.

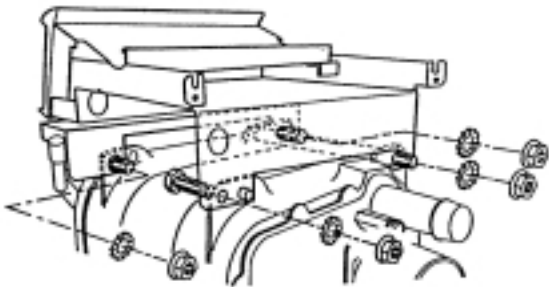
Replace the 2 screws A on the right.



ASSEMBLY

4

Only for 3-section boilers



8199-EN-31 A

Control panel assembly

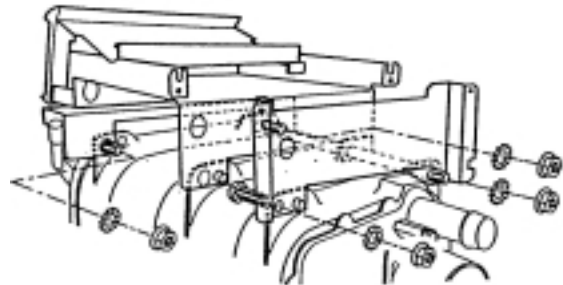
Place the control panel unit on the boiler body positioning it on the assembly flanges with the M8 gudgeon pins in front and the nipple of the unit at the rear.

Fix this to the front section with 2 HM8 nuts plus 2 toothed washers \varnothing 8.

Fix to the rear section with 1 HM8 x 30 screw plus 2 nuts plus 2 toothed washers \varnothing 8.

5

Only for 4 & 5 section boilers



8199-EN-32

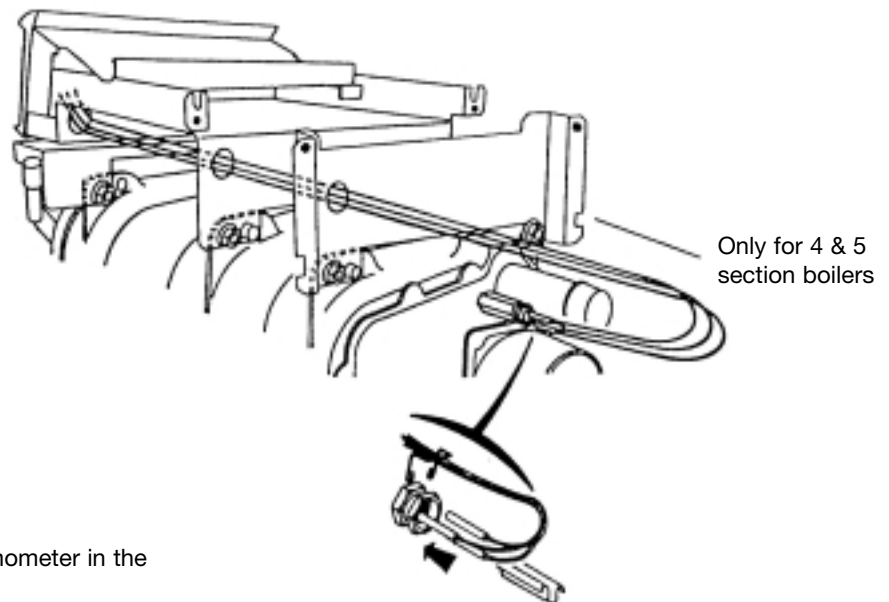
Control panel and rear strut assembly

Place the control panel unit on the boiler body positioning it on the assembly flanges with the M8 gudgeon pins in front and the nipple in the intermediate position.

Fix this to the front section with 2 HM8 nuts plus 2 toothed washers \varnothing 8.

Fix the rear strut to the rear section with 1 HM8 x 30 screw plus 2 nuts plus 2 toothed washers \varnothing 8.

6



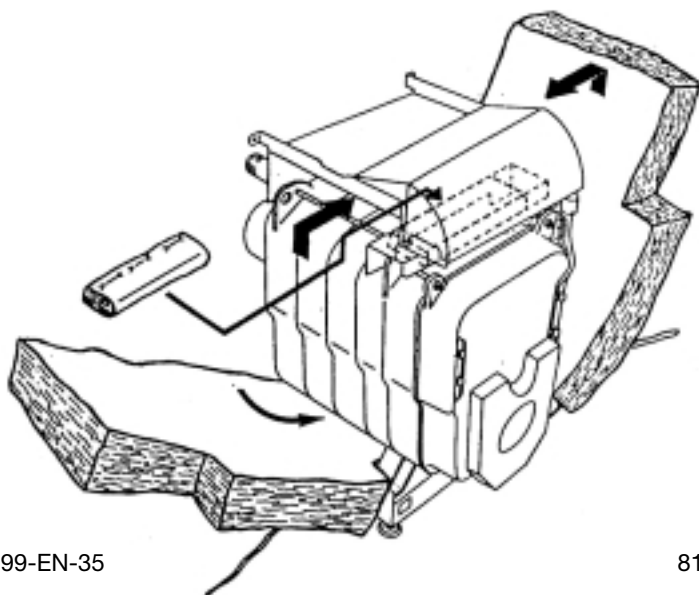
8199-EN-33

Placement of sensors

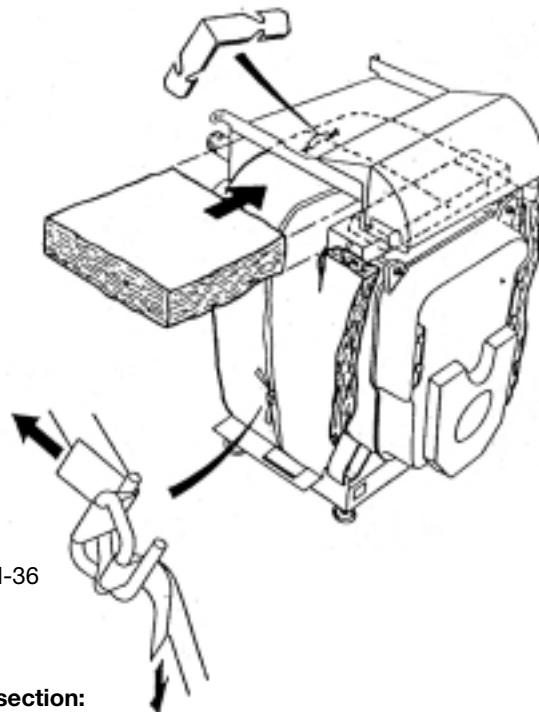
Place the thermostat sensors and the thermometer in the spring separator and then in the pocket.

Place the thermostat sensors in first, then the probe from the control, if there is one. In this case (4 sensors) do not use the separator spring.

7



8199-EN-35



8199-EN-36

Fitting of the insulation for the main casing, the panel and the upper section:

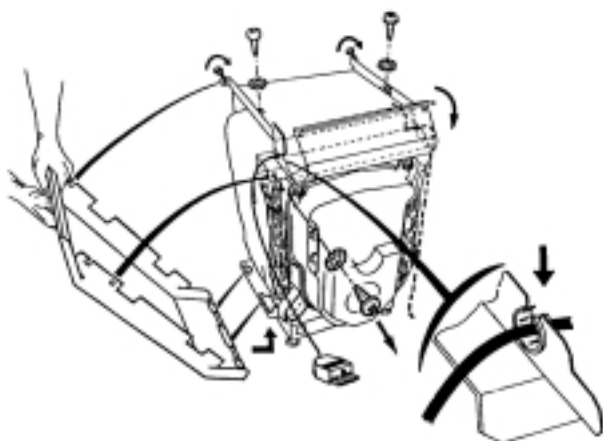
Place the front panel insulation in the space provided under the control panel.

Pass the strap (3 section boilers) or both straps (4 & 5 boilers) under the boiler body.

Place the wide part (with cut-out for the feet) of the insulation panels of the heat body between the base and the main casing and fix them under the control panel using the 2 fixings.

Tighten the insulation around the casing by pulling the strap(s).

8



8199-EN-37 A

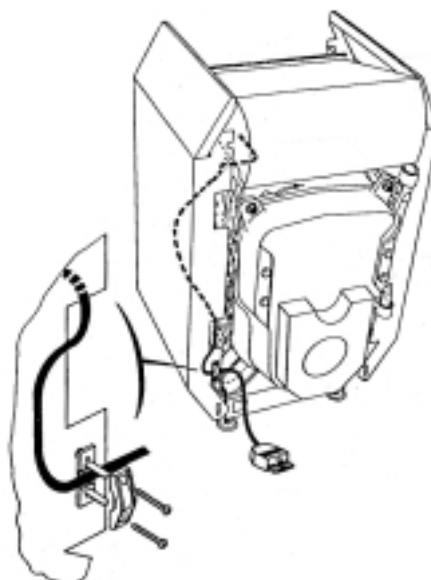
Wiring of burner cable and fitting of side panels

Open the panel (2 screws plus toothed washers)

Fit the burner cable, on the side opposite to the burner door hinge (according to European safety regulations) and pass it through the outside of the crosspiece.

Fit the panel into the base and hook it onto the screw $\varnothing 3,94 \times 12,7$ and the toothed washer already fitted behind the control panel (3 section boilers) or the rear crosspiece (4 & 5 section boilers) and tighten it.

Fix the front panels to the control panel using 2 screws $\varnothing 3,94 \times 12,7$ and 2 toothed washers $\varnothing 4$ - ready supplied.



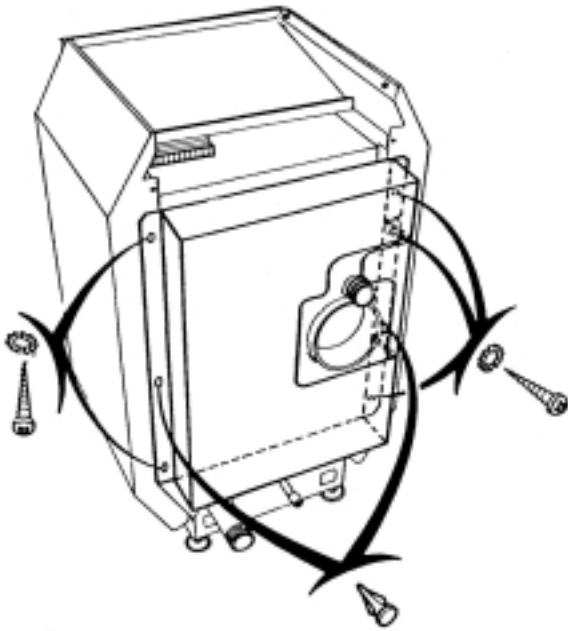
8199-EN-38 A

Securing the burner cable

Pass the burner wire behind the side panel towards the burner keeping it in position using the cable holder supplied (see diagram). Adjust the length of the cable so that it will need to be disconnected when the burner door is opened. Slide the surplus cable to the back between the insulation and the side panel.

ASSEMBLY

10



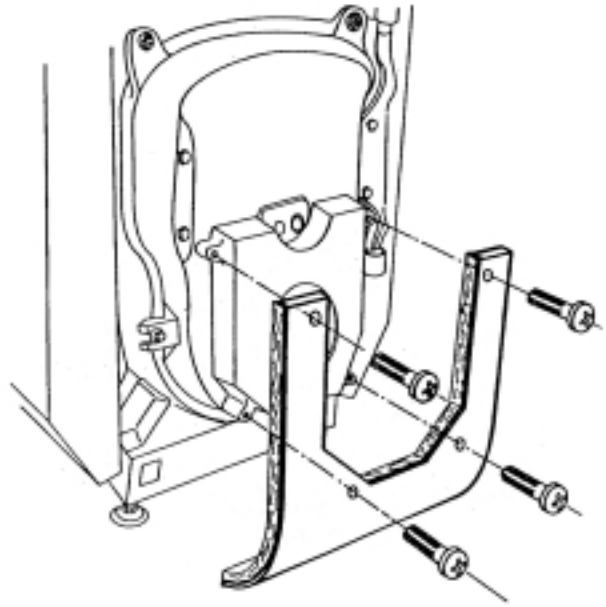
8199-EN-39 A

Fitting the rear panel

Fix the rear panel along with its insulation on the side panels using the two plastic clips ready fitted.

Fix using 5 screws \varnothing 3,94 x 12,7 plus 5 toothed washers \varnothing 4.

11



8199-EN-41 A

Fitting the front door panel

Fix the front burner door panel with the 4 black screws EC CB M6 x 12

12

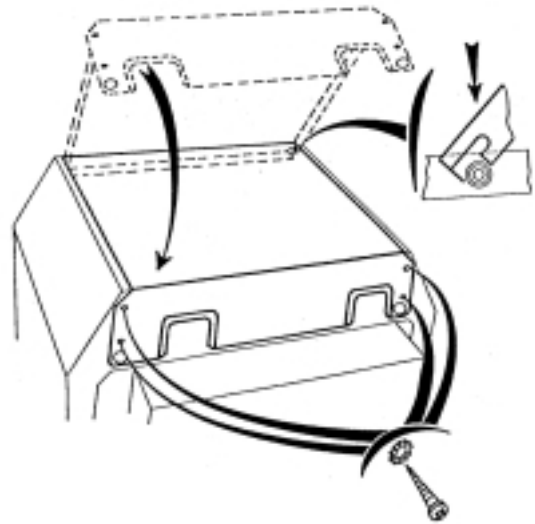


8199-EN-42 A

Fitting of front panel

Hook the front panel at the bottom onto the side panels and clip it onto the control panel.

13



8199-EN-40

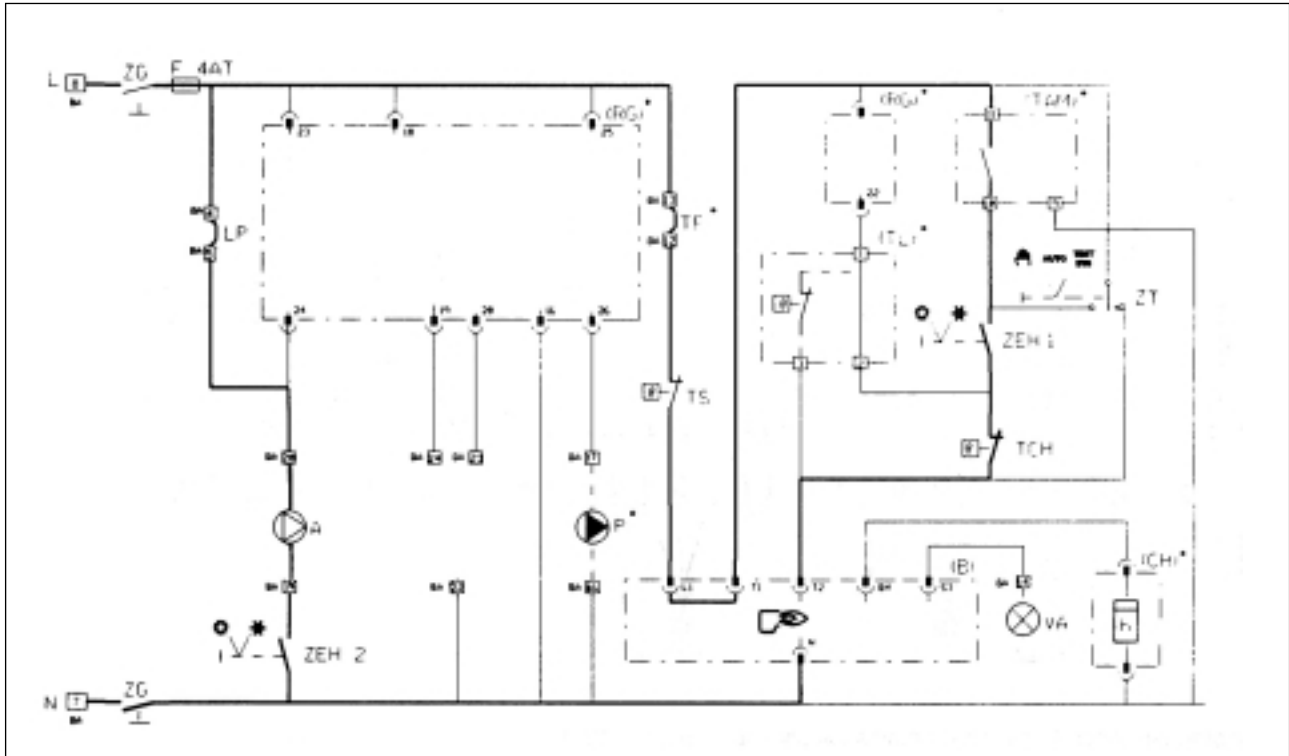
Electrical connections and fitting of the top

The electrical connections must be made by a qualified person (see instructions supplied with the control panel).

Hook the top into the sockets of the side panels,

Fix it at the rear with 4 screws \varnothing 3,94 x 12,7 plus 4 toothed washers \varnothing 4.

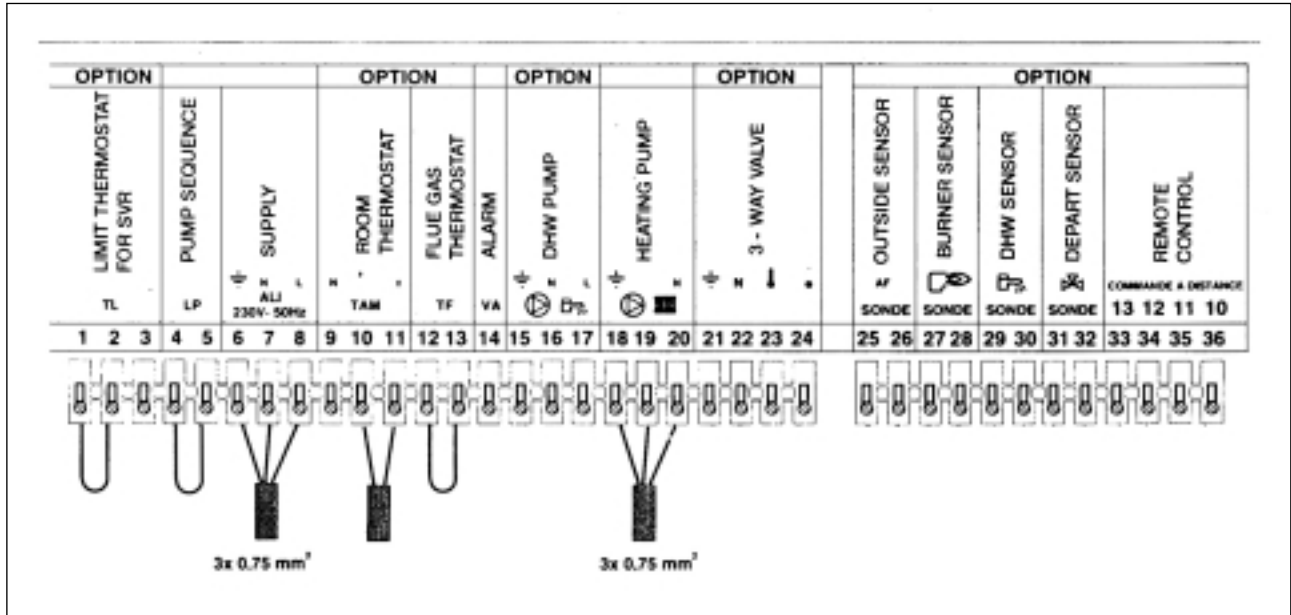
INTERNAL WIRING DIAGRAM



A	Heating Pump	RG	Control
B	Burner	TAM	Room thermostat
BA	Bar	TCH	Boiler thermostat
CH	Timer	TF	Flue gas thermostat
CS	Safety contact	TL	Limit thermostat
F4AT	Fuse	TS	Safety thermostat
L	Mains supply	VA	Alarm
LP	Neutral	V3V	3-Way valve
N	DHW pump	ZEH1	Summer/winter switch
P			
ZEH	Summer-winter switch booster		
ZG	Main switch		
ZT	Test switch		
*	Optional		

ASSEMBLY

CONTROL PANEL - WIRING DETAILS



For standard operation connect mains supply and heating pump as shown in the above diagram.

Technical Training

The Caradon Plumbing Limited Technical Training Centre offers a series of first class training courses for domestic, commercial and industrial heating installers, engineers and system specifiers. For details of courses please ring:

.....01482 498432

Caradon Plumbing Limited

pursues a policy of continuing improvement in the design and performance of its products. The right is therefore reserved to vary specification without notice.

September 2001

AO

09/68



PO Box 103
National Avenue
Kingston upon Hull
HU5 4JN
Telephone 01482 492251
Facsimile 01482 448858

Registration No. 4049093
Registered Office
Kelburn House
7-19 Mosley Street
Newcastle Upon Tyne
NE1 1YE

Commercial Heating Technical Helpline 01482 498376

Caradon
Plumbing Limited