

# Installation and servicing instructions

## Models covered by these instructions

47-719-10 Planet Dewy 90 A  
47-719-11 Planet Dewy 110 A



**ENSURE THAT THESE INSTRUCTIONS ARE LEFT FOR THE USER AFTER COMPLETION OF THE BENCHMARK SECTION**

**Planet Dewy 90 A - 110 A**

**Please read the Important Notice within this guide regarding your boiler warranty**



### **IMPORTANT:**

*For the first year all of our appliances are protected by our manufacturer's guarantee which covers both parts and labour.*

*As you would expect from Sime Ltd, it is our aim to provide our valued customers with the best in after sales and service.*

*To take advantage of any extended warranty offered, all you have to do is to adhere to these 3 simple conditions:*

- The installation must be carried out to Manufacturers/Benchmark Standards by a Gas Safe Registered Engineer, and recorded in the installation manual.*
- The appliance must be registered with both Sime Ltd and Gas Safe within 30 days of installation.*
- The appliance must be serviced annually, by either Sime Ltd or a Gas Safe registered engineer-ensuring that the Benchmark service record in the installation manual is completed.*

*Failure to comply with the above will result in only the 12 month warranty being offered.*

*In the absence of any proof of purchase, the 12 month warranty period will commence from the date of manufacture of the boiler as shown on the appliance data plate.*

### Dealing with Condensate

Five suitable drainage points

1. Internal drain stack pipe
2. Waste water pipe \*
3. External drain or gully \*
4. Rainwater hoppers that carry both rain water and foul water \*
5. Purpose-made soakaways

\* Care should be taken not to contaminate any "Grey Water Systems"

### Pipework

Condensate pipework should be plastic, same as used for standard wastewater plumbing.

Similarly the drainage system where the condensate discharges to should also be resistant to the acidic condensate.

Connection to the internal trap in the boiler can be achieved by using a 20mm solvent weld socket.

Pipework should be kept as short as possible.

External runs should be avoided, but when necessary be a minimum of 3 meters in 32mm diameter pipework and lagged to avoid freezing, this also applies to pipe runs in unheated areas such as garages.

To reduce the possibility of condensate being trapped in the pipe, the number of bends should be kept to a minimum.

Pipework must be angled down from the boiler with a fall of at least 2.5.

The pipework must be supported at a distance of 0.5m for inclined runs and 1.0m for vertical runs.

#### Condensate traps

Where the condensate drain is not sealed to the discharge connection a trap will be required. The water seal should be 38mm or more for external discharge and 75mm or more for internal discharge. When connecting to a external stack the trap should be located within the building.

#### Stack Pipes

Condensate connections should be at least 450mm above any bend at the bottom of a stack pipe in a single or multi-story dwelling up to 3 storeys.

There are specific requirements when connecting to a stack pipe serving multi-storey buildings greater than 3 storeys.

All connections to stack pipes should avoid across flow between other Branch pipes.

#### Soakaways

Any soakaways have to be purpose-made and located as close to the boiler as possible, but clear of the buildings foundations and any buried services. The best option is to purchase a soakaway from a drainage manufacturer and install it to the manufacturers recommendation.

All descriptions and illustrations provided in this manual have been carefully prepared but we reserve the right to make changes and improvements in our products that may affect the accuracy of the information contained in this manual.

#### Code of Practice

For the installation, commissioning and servicing of domestic heating and hot water products

Benchmark places responsibilities on both manufacturers and installers.\* The purpose is to ensure that customers\*\* are provided with the correct equipment for their needs, that it is installed, commissioned and serviced in accordance with the manufacturer's instructions by competent persons and that it meets the requirements of the appropriate Building Regulations. Installers are required to carry out work in accordance with the following:



**\*The use of the word "installer" is not limited to installation itself and covers those carrying out installation, commissioning and/or servicing of heating and hot water products, or the use of supporting products (such as water treatment or test equipment).**

**\*\*Customer includes householders, landlords and tenants.**

#### Standards of Work

- Be competent and qualified to undertake the work required.
- Install, commission, service and use products in accordance with the manufacturer's instructions provided.
- Ensure that where there is responsibility for design work, the installation is correctly sized and fit for purpose,
- Meet the requirements of the appropriate Building Regulations. Where this involves notifiable work be a member of a Competent Persons Scheme or confirm that the customer has notified Local Authority Building Control (LABC) prior to work commencing,
- Complete all relevant sections of the Benchmark Checklist/Service Record when carrying out commissioning or servicing of a product or system,
- Ensure that the product or system is left in a safe condition and, whenever possible, in good working order.
- Highlight to the customer any remedial or improvement work identified during the course of commissioning or servicing work.
- Refer to the manufacturer's helpline where assistance is needed.
- Report product faults and concerns to the manufacturer in a timely manner.

#### Customer Service

- Show the customer any identity card that is relevant to the work being carried out prior to commencement or on request.
- Give a full and clear explanation/demonstration of the product or system and its operation to the customer.
- Hand over the manufacturer's instructions, including the Benchmark Checklist, to the customer on completion of an installation.
- Obtain the customer's signature, on the Benchmark Checklist, to confirm satisfactory demonstration and receipt of manufacturer's instructions.
- Advise the customer that regular product servicing is needed, in line with manufacturers' recommendations, to ensure that safety and efficiency is maintained,
- Respond promptly to calls from a customer following completion of work, providing advice and assistance by phone and, if necessary, visiting the customer.
- Rectify any installation problems at no cost to the customer during the installer's guarantee period.

#### The Benchmark Scheme

Sime Ltd is a licensed member of the Benchmark Scheme which aims to improve the standards of installation and commissioning of domestic heating and hot water systems in the UK and to encourage regular servicing to optimise safety, efficiency and performance.

Benchmark is managed and promoted by the Heating and Hotwater Industry Council. For more information visit [www.centralheating.co.uk](http://www.centralheating.co.uk)

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### IMPORTANT:

**IT IS A STATUTORY REQUIREMENT THAT ALL GAS APPLIANCES ARE INSTALLED BY COMPETENT PERSONS, IN ACCORDANCE WITH THE GAS SAFETY (INSTALLATION AND USE) REGULATIONS (CURRENT EDITION). The manufacturer's instructions must not be taken as overriding any statutory requirements, and failure to comply with these regulations may lead to prosecution.**

No modifications to the appliance should be made unless they are fully approved by the manufacturer.

**GAS LEAKS:** DO NOT OPERATE ANY ELECTRICAL SWITCH, OR USE A NAKED FLAME. TURN OFF THE GAS SUPPLY AND VENTILATE THE AREA BY OPENING DOORS AND WINDOWS CONTACT THE GAS EMERGENCY SERVICE ON 0800111999.



Please refer to commissioning instructions for filling in the checklist of this installation guide. Note: All Gas Safe registered installers carry a ID Card.

You can check your installer is Gas Safe Registered by calling 0800 408 5577

## SIME COMBINATION BOILERS

### Installer checklist

Please remember to carry out the following checks after installation. This will achieve complete customer satisfaction, and avoid unnecessary service calls. A charge will be made for a service visit where the fault is not due to a manufacturing defect.

- Has a correct by-pass been fitted and adjusted?
- Has the system and boiler been flushed?
- Is the system and boiler full of water, and the correct pressure showing on the pressure gauge?
- Is the Auto Air Vent open?
- Has the pump been rotated manually?
- Is the gas supply working pressure correct?
- Is the boiler wired correctly? (See installation manual).
- Has the D.H.W. flow rate been set to the customer requirements?
- Has the customer been fully advised on the correct use of the boiler, system and controls?
- Has the log book provided been completed?

## 1 DESCRIPTION OF THE BOILER

### 1.1 INTRODUCTION

“**PLANET DEWY 90 A - 110 A**” boilers are premix condensation thermal appliances which use microprocessor technology for function control and management.

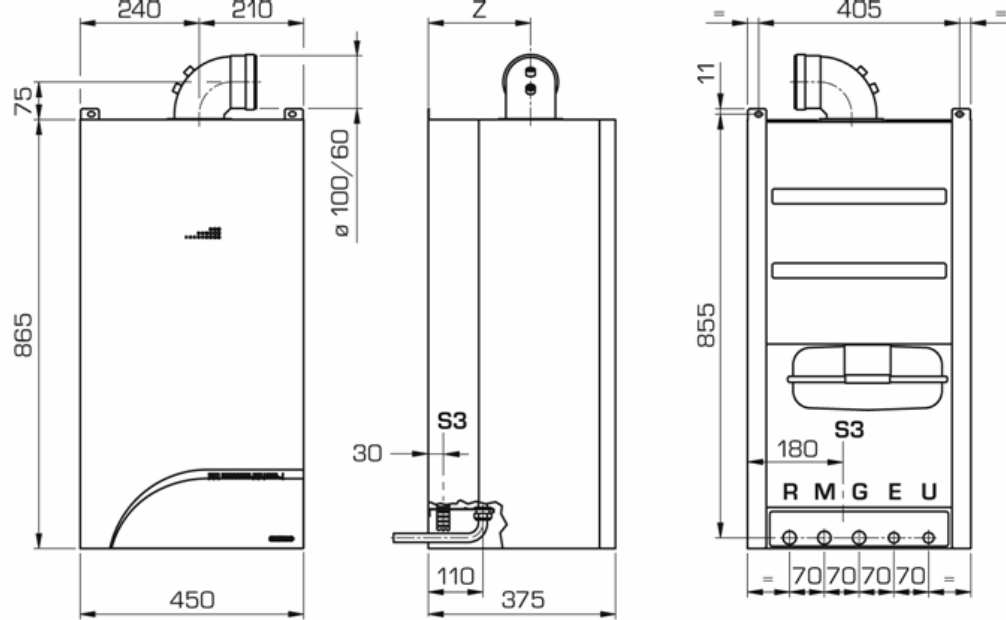
They comply with the european directives 90/396/CEE, 89/336/CEE, 73/23/CEE, 92/42/CEE and with the european specification EN 483.

These appliances heat and supply domestic hot water with a sealed forced draught combustion chamber with electronic ignition and control.

The instructions given in this manual are provided to ensure proper installation and perfect operation of the appliance.

### 1.2 DIMENSIONS

Fig. 1



R	C.H. return	3/4"
M	C.H. flow	3/4"
G	Gas connection	3/4"
E	D.H.W. inlet	1/2"
U	D.H.W. outlet	1/2"
S3	Condensation outlet	∅ 25

	90 A	110 A
Z mm	220	190

### 1.3 TECHNICAL FEATURES

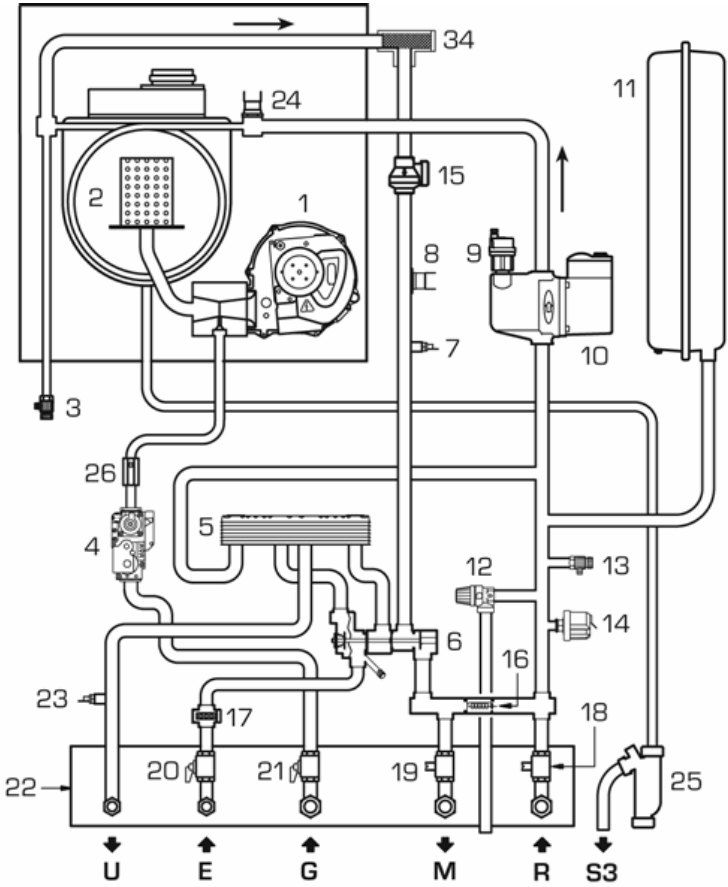
	90 A	110 A	
<b>Heat output (80-G0°C)</b>			
Nominal	kW (kcal/h)	24.5 (21,070)	29.4 (25,280)
Minimum	kW (kcal/h)	8.6 (7400)	10.4 (9,000)
<b>Heat output (50-30°C)</b>			
Nominal	kW (kcal/h)	26.9 (23130)	32.4 (27,860)
Minimum	kW (kcal/h)	9.6 (8,250)	11.7 (10,060)
<b>D.H.W. heat output</b>			
Nominal	kW	24.5	29.4
<b>Heat input</b>			
Nominal/Minimum (g.c.v.)	kW	278/10.0	33.3/12.0
Nominal/Minimum (n.c.v.)	kW	24.9/9.0	30.0/10.8
<b>Efficiency (80-60°C)</b>			
Nominal/Minimum. output (g.c.v.)	%	88.2/86.7	88.2/87.4
Nominal/Minimum. output (n.c.v.)	%	97.9/96.3	98.0/97.1
<b>Efficiency (50-30°C)</b>			
Nominal/Minimum. output (g.c.v.)	%	97.0/96.5	97.3/97.4
Nominal/Minimum. output (n.c.v.)	%	1077/1072	108.1/108.2
<b>Water content</b>	l	6,0	6,5
<b>Adsorbed power consumption</b>	W	175	175
<b>Electrical protection grade</b>		IP X4D	IP X4D
<b>Maximum water head</b>	bar	3	3
<b>Maximum temperature</b>	°C	85	85
<b>Expansion vessel</b>			
Water content	l	8	8
Preloading pressure	bar	1	1
<b>C.H. setting range</b>	°C	20÷80	20÷80
<b>D.H.W. setting range °C</b>	°C	35÷60	35÷60
<b>D.H.W. flow rate (EN 625)</b>	l/min	10.5	13.7
<b>D.H.W. flow rate Δt 30°C</b>	l/min	11.5	14.1
<b>D.H.W. flow rate Δt 35°C</b>	l/min	9.8	12.1
<b>Minimum D.H.W. flow rate</b>	l/min	2	2
<b>D.H.W. pressure</b>			
Minimum	bar	0.5	0.5
Maximum	bar	7	7
<b>Smokes temperature</b>			
Maximum/Minimum (80-60°C)	°C	65/64	70/69
Maximum/Minimum (50-30°C)	°C	46/43	48/45

		90 A	110 A	
<b>Smokes flow</b>		kg/h	42.4	49.0
<b>Category</b>			II2H3P	II2H3P
<b>Type</b>			C13-3343-53-83	C13-3343-53-83
<b>Weight</b>		kg	49	51.4
<b>Main burner nozzles</b>				
Quantity		n°	1	1
G20		∅ mm	6.5	6.0
<b>Gas consumption</b>				
Nominal/Minimum (G20)		m <sup>3</sup> /h	2.65/0.95	3.17/1.14
<b>Gas supply pressure</b>				
G20		mbar	20	20
<b>Pollutants in flue gas</b>				
CO		ppm	35	27
NOx		ppm	30	35

The gas consumptions refer to the calorific value at standard conditions at 15°C-1013 mbar.

### 1.4 FUNCTIONAL DIAGRAM

Fig. 2

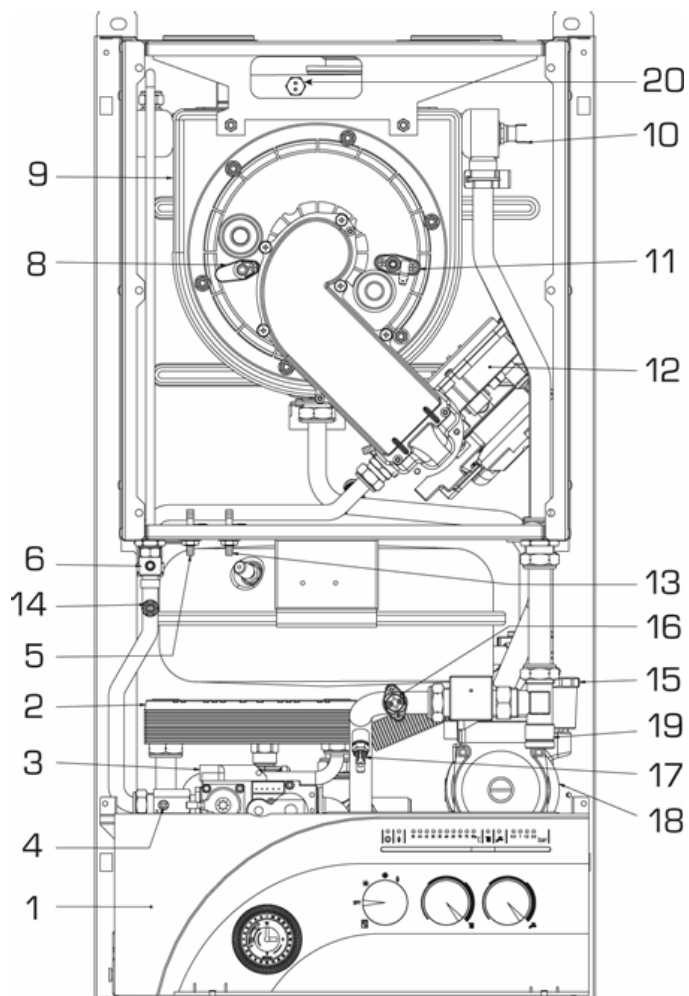


- KEY**
- 1 Fan
  - 2 Water-gas exchanger
  - 3 Breather valve
  - 4 Gas valve
  - 5 D.H.W. exchanger
  - 6 Divertor valve
  - 7 C.H. sensor (SM)
  - 8 100°C safety stat
  - 9 Air relief valve
  - 10 Circulation pump
  - 11 Expansion vessel

- 12 Safety valve
- 13 Boiler discharge
- 14 Water pressure transducer
- 15 Flowmeter
- 16 Automatic by-pass
- 17 D.H.W. filter
- 18 C.H. return cock
- 19 C.H. flow cock
- 20 D.H.W. cock
- 21 Gas cock
- 22 Fixing jig
- 23 D.H.W. sensor (SS)
- 24 90°C limit stat
- 25 Condensation water trap
- 26 Gas rate adjuster
- 34 Aqua Guard Filter System
- S3 Condensation outlet

### 1.5 MAIN COMPONENTS

Fig. 3



KEY

- 1 Control panel
- 2 D.H.W. exchanger
- 3 Gas valve
- 4 Gas rate adjuster

- 5 Positive pressure take-off
- 6 Breather valve
- 8 Sensing electrode
- 9 Water-gas exchanger
- 10 Limit stat
- 11 Ignition electrode
- 12 Fan
- 13 Negative pressure take-off
- 14 Gas pressure take-off
- 15 Automatic breather
- 16 100°C safety stat
- 17 C.H. sensor (SM)
- 18 Circulating pump
- 19 Aqua Guard Filter System
- 20 Smoke stat

## 2 INSTALLATION

The boiler must be installed in a fixed location and only by specialized and qualified firms in compliance with all instructions contained in this manual. Furthermore, the installation must be in accordance with current standards and regulations.

### 2.1 BOILER ROOM

The “**PLANET DEWY 90 A - 110 A**” version boilers can be installed in any domestic environment without any location restrictions or extra air requirements.

### 2.2 FIXING THE WALL MOUNTING BRACKET

- Mark the position of the two wall mounting bracket fixing holes and the flue/air duct hole on the appropriate wall(s).
- Drill the top two fixing holes using a 10 mm masonry drill and fit the plastic plugs provided.
- Cut the hole in the wall for the flue/air duct. The diameter should not be less than 100 mm (4 in) and must be horizontal. If the hole is not accessible from the outside of the building, its minimum diameter should be sufficient to allow the insertion of the wall liner (130 mm-5 ¼ in diameter) which will be sealed with mortar.
- Accurately measure the wall thickness, and note this dimension for later use.
- Secure the wall mounting bracket in position using the screws provided. Ensure that it is the correct way up, as indicated in [fig. 4](#).

#### 2.2.1 Replacement wall kit for other makes (optional)

The kit code n° 8093900 is supplied complete with mounting instructions.

### 2.3 CONNECTING UP SYSTEM

Before proceeding to connect up the boiler, you are recommended to flush out the system in order to eliminate any foreign bodies that might be detrimental to the operating efficiency of the appliance. When making the hydraulic connections, make sure that the dimensions indicated in [fig. 1](#) are respected. To facilitate the hydraulic connections the boiler is equipped with a valve pack code 5184803 complete with instructions sheet.

**A safety valve set at 3 bar is fitted to the appliance, the discharge pipe provided should be extended to terminate safely away from the appliance and where a discharge would not cause damage to persons or property but would be detected. The pipe should be a minimum of 15 mm id. and should be able to withstand boiling water, any horizontal runs must be kept to a minimum as pipework may be prone to freezing.**

Gas connections must be made in accordance with current standards and regulations.

When dimensioning gas pipes from the meter to the module, both capacity volume (consumption) in m<sup>3</sup>/h and gas density must be taken into account.

The sections of the piping making up the system must be such as to guarantee a supply of gas sufficient to cover the maximum demand, limiting pressure loss between the gas meter and any apparatus being used to not greater than:

- 1.0 mbar for family II gases (natural gas);
- 2.0 mbar for family III gases (butane or propane).

An adhesive data plate is stuck inside the front panel; it contains all the technical data identifying the boiler and the type of gas for which the boiler is arranged.

### 2.3.1 Connection of condensation water trap

The drip board and its water trap must be connected to a civil drain through a pipe with a slope of at least 5 mm per metre to ensure drainage of condensation water.

**The plastic pipes normally used for civil drains are the only type of pipe which is appropriate for conveying condensation to the building's sewer pipes.**

### 2.3.2 Filter on the gas pipe

The gas valve is supplied ex factory with an inlet filter, which, however, is not adequate to entrap all the impurities in the gas or in gas main pipes.

To prevent malfunctioning of the valve, or in certain cases even to cut out the safety device with which the valve is equipped, install an adequate filter on the gas pipe.

## 2.4 CHARACTERISTICS OF FEEDWATER

It is absolutely essential that the water for the central heating system is to be treated in the following cases:

- Very extensive system (with high contents of feedwater).
- Frequent addition of makeup water into the system.
- Should it be necessary to empty the system either partially or totally.

## 2.5 COAXIAL DUCT Ø 60/100

The air inlet-smoke outlet assembly, code 8096250, is included in the standard supply of the appliance complete with mounting instructions.

### NOTE:

*to use only special accessories for condensing boilers.*

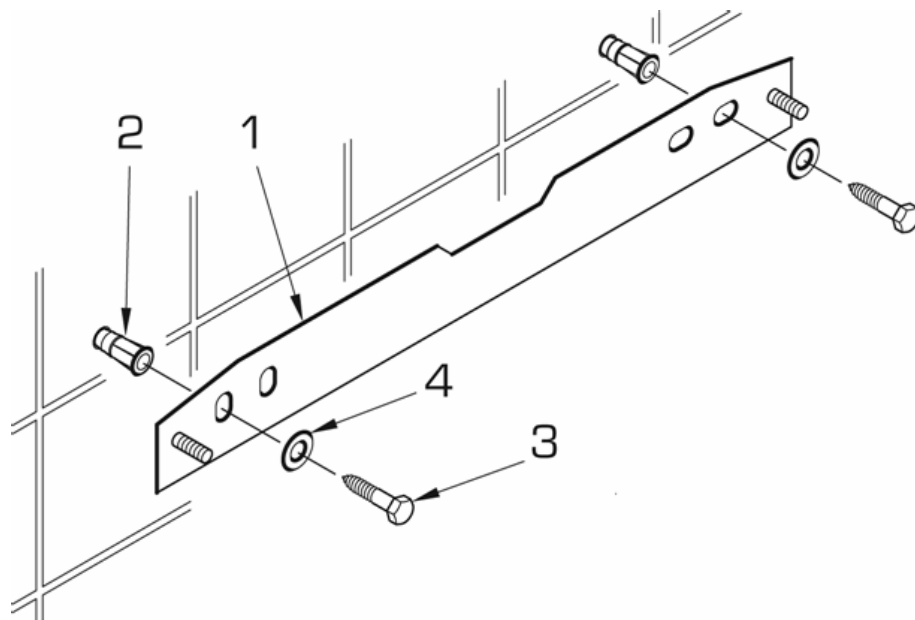
### 2.5.1 Coaxial duct accessories

The accessories to be used for this type of installation and some of the connecting systems that may be adopted are illustrated in [fig. 5](#).

**With the pipe bend included in the kit, the maximum length of the piping should not exceed 2.8 meter.**

When the vertical extension code 8086950 is used, the terminal part of the pipe must always come out horizontally.

Fig. 4

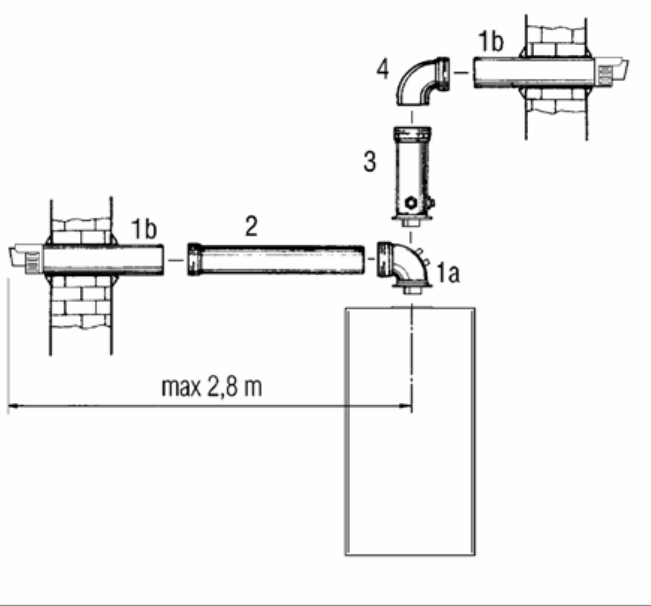


### KEY

1. Wall mounting bracket
2. Plastic wall plug (2 Off)
3. Woodscrew (2 Off)
4. Washer (2 Off)

Fig. 5





- KEY
- 1a-b Coaxial duct kit code 8096250
  - 2a Extension L. 1000 code 8096150
  - 2b Extension L. 500 code 8096151
  - 3 Vertical extension L. 140 with take-off point code 8086950
  - 4a 90° additional bend code 8095850
  - 4b 45° additional bend code 8095950

**NOTE:**  
*before installing accessories, lubricate the internal part of gaskets with silicon-based products. Avoid using oils and greases.*

**IMPORTANT:**  
*Each additional 90° curve installed reduces the available length by 0.90 metres.*  
*Each additional 45° curve installed reduces the available length by 0.45 metres.*

### 2.5.2 Positioning the outlet terminals

The outlet terminals for forced-draught appliances may be located in the external perimeter walls of the building.

To provide some indications of possible solutions, **Table 1** gives the minimum distances to be observed, with reference to the type of building shown in [fig. 6](#).

### 2.6 SEPARATE PIPES Ø 80

A special kit may be used to separate the flue gas outlet from the fresh air intake. The intake may be installed to the right or left of the flue gas outlet. Both ducts may be oriented in any direction. Refer to [fig. 7](#) for positioning. **The maximum overall length of the intake and exhaust ducts depends on the head losses of the single fittings installed (excluding the doublers) and must not be greater than 12.5 mm H<sub>2</sub>O (version "90 A") e 15.5 mm H<sub>2</sub>O (version "110 A").** For head losses in the fittings, refer to **Table 2**.

**NOTE:**  
*to use only special accessories for condensing boilers.*

Fig. 6

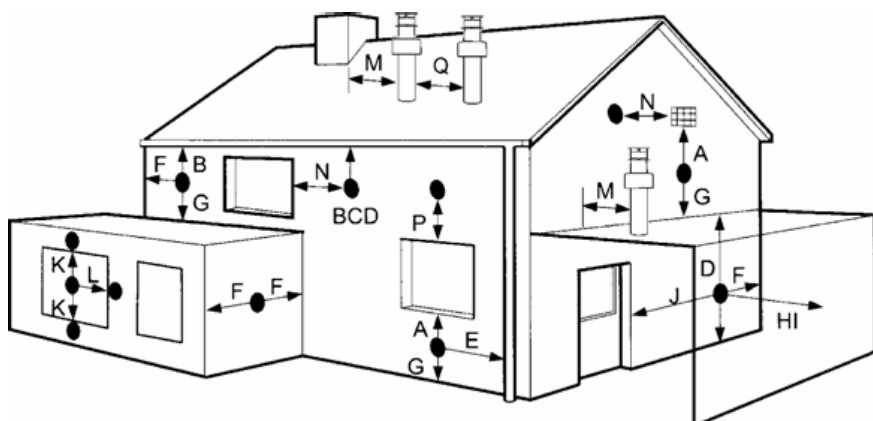


TABLE 1

Terminal position		Minimum spacing	
<b>A</b>	Directly below an openable window, air vent or any other ventilation opening	300 mm	12 in
<b>B</b>	Below guttering, drain pipes or soil pipes	75 mm	3 in
<b>C/D</b>	Below eaves, balconies or carport roof	200 mm	8 in
<b>E</b>	From vertical drain pipes or soil pipes	75 mm	3 in
<b>F</b>	From internal or external corners	300 mm	2 in
<b>G</b>	Above adjacent ground, roof or balcony level	300 mm	12 in
<b>H</b>	From a surface facing the terminal	600 mm	24 in
<b>I</b>	From a terminal facing the terminal	1,200 mm	48 in
<b>J</b>	From an opening in the carport (eg door, window into dwelling)	1,200 mm	48 in
<b>K</b>	Vertically from a terminal on the same wall	1,500 mm	60 in
<b>L</b>	Horizontally from a terminal on the same wall	300 mm	12 in
<b>M</b>	Adjacent to opening	300 mm	12 in

– If the terminal discharges into a pathway or passageway check that combustion products will not cause nuisance and that the terminal will not obstruct the passageway.

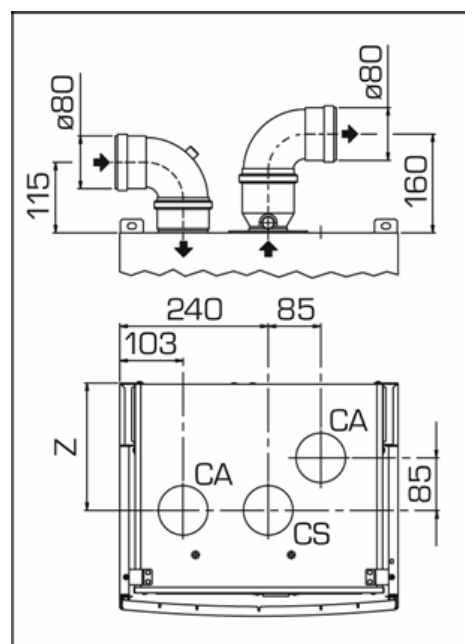
– Where the lowest part of the terminal is fitted less than 2 m (78 in) above ground, above a balcony or above a flat roof to which people have access, the terminal MUST be protected by a purpose designed guard. Terminal guards are available from Quinnell, Barrett, and Quinnell, Old Kent Road, London. State model C2, (G.C. Part No 382946).

– Where the terminal is fitted within 850 mm (34 in) of a plastic or painted gutter, or 450 mm (18 in) of painted eaves, an aluminium shield at least 1,500 mm (59 in) long must be fitted to the under-side of the painted surface.

– The air inlet/outlet flue duct MUST NOT be closer than 25 mm (1 in) to combustible material.

– In certain weather conditions the terminal may emit a plume of steam. This is normal but positions where this would cause a nuisance should be avoided.

Fig. 7



KEY

CA Inlet

CS Outlet

TABLE 2

Accessories $\varnothing$ 80	Head loss (mm H <sub>2</sub> O) vers. "90 A"			Head loss (mm H <sub>2</sub> O) vers. "110 A"		
	Inlet	Outlet	Roof outlet	Inlet	Outlet	Roof outlet
90° elbow MF	0,30	0,40	–	0,30	0,50	–
45° elbow MF	0,20	0,30	–	0,20	0,40	–
Extension L. 1000 (horizontal)	0,20	0,30	–	0,20	0,40	–
Extension L. 1000 (vertical)	0,30	0,20	–	0,30	0,30	–
Outlet terminal	–	0,30	–	–	0,40	–
Inlet terminal	0,10	–	–	0,10	–	–
Doubler fitting	0,20	–	–	0,30	–	–
Roof outlet terminal L. 1381	–	–	0,50	–	–	0,60

Example of allowable installation calculation version "90 A" in that the sum of the head losses of the single fittings is less than 12,5 mm H<sub>2</sub>O:

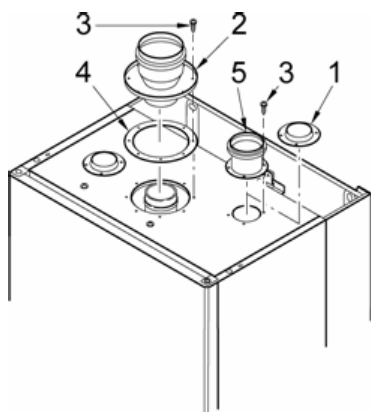
	Inlet	Outlet		
7 m horizontal pipe $\varnothing 80 \times 0,20$	1,40	–		
7 m horizontal pipe $\varnothing 80 \times 0,30$	–	2,10		
n° 2 90° elbows $\varnothing 80 \times 0,30$	0,60	–		
n° 2 90° elbows $\varnothing 80 \times 0,40$	–	0,80		
n° 1 terminal $\varnothing 80$	0,10	0,30		
Total head loss	2,10 +	3,20 =		<b>5,3 mm H<sub>2</sub>O</b>

### 2.6.1 Separate pipe accessories

Kit code 8089911 is supplied for this purpose ([fig. 8](#)).

The sectored diaphragm is to be used according to the maximum head loss allowed in both pipes, as given in [fig. 9](#).

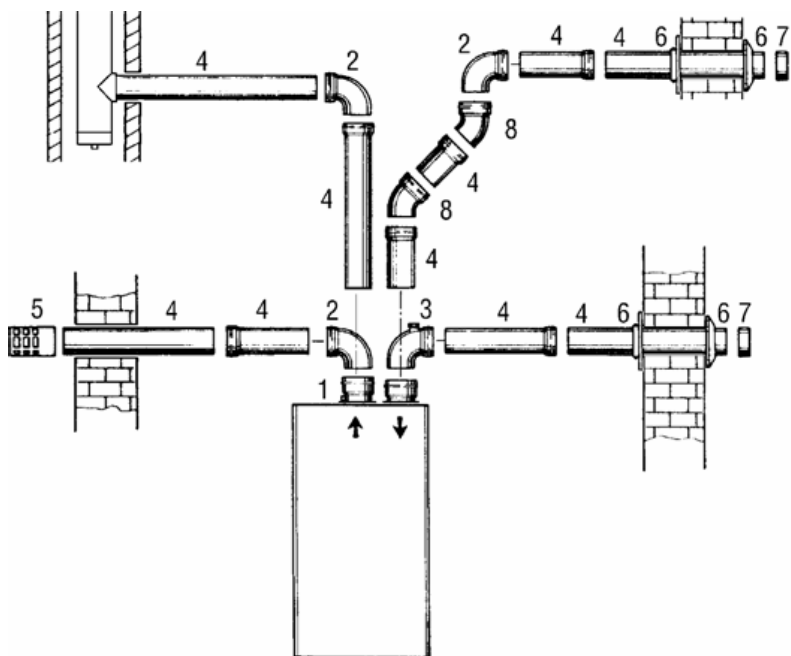
Fig. 8



#### KEY

1. Blind flange
2. Flue gas duct flange
3. Fixing screw
4. Gasket  $\varnothing 125/95$
5. Intake duct collar

Fig. 9



#### KEY

- 1 Separate pipes kit code 8089911
- 2 90° elbow MF code 8077450 (6 pz.)
- 3 90° elbow MF with take-off points code 8077452
- 4a Extension L. 1000 code 8077351(6 pz.)
- 4b Extension L. 500 code 8077350 (6 pz.)
- 5 Outlet terminal code 8089501

6 Int.-est. ring kit code 8091500

7 Inlet terminal code 8089500

8 45° elbow MF code 8077451 (6 pz.)

**NOTE:**

*before installing accessories, lubricate the internal part of gaskets with silicon-based products. Avoid using oils and greases.*

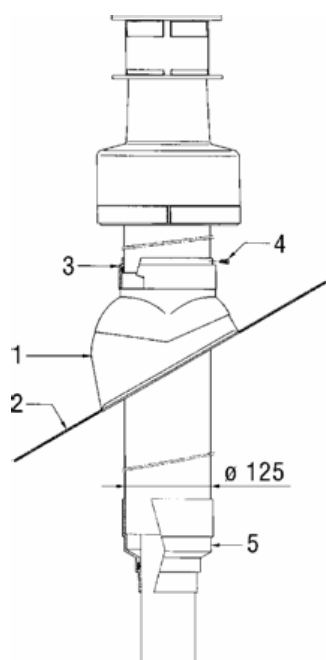
### 2.6.2 Separate-pipes roof outlet

The roof outlet terminal L. 1381 cannot be shortened and when positioning the tile, the minimum distance from the discharge head terminal must not be less than 700 mm ([fig. 10](#)). The accessories to be used for this type of installation and some of the connecting systems that may be adopted are illustrated in [fig. 11](#). There is the possibility of doubling the air-intake and smoke-outlet pipes and then bringing them back together again so as to obtain a concentric discharge by using the doubler fitting (9 [fig. 11](#)).

**For this type of discharge the sum of the maximum rectilinear development allowed for the pipes must not exceed 12.5 mm H<sub>2</sub>O (version "90 A") e 15.5 mm H<sub>2</sub>O (version "110 A").**

When calculating the lengths of pipe, take into account the parameters given in the **Table 2**.

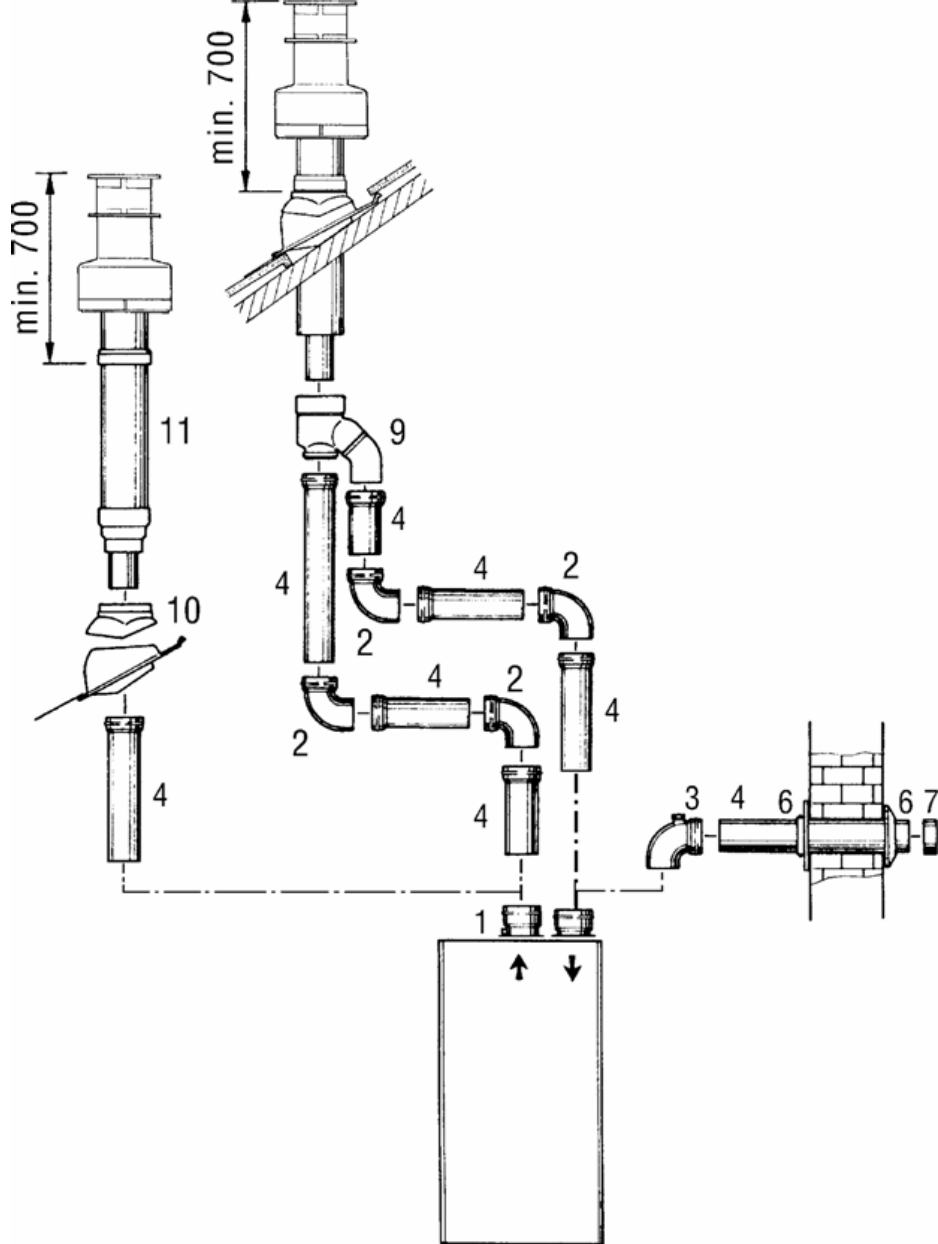
Fig. 10



**KEY**

- 1. Tile with articulated joint
- 2. Lead panel
- 3. Collar
- 4. Locking screw
- 5. Reducing fitting with washer

Fig. 11



**NOTE:**

*before installing accessories, lubricate the internal part of gaskets with silicon-based products. Avoid using oils and greases.*

**KEY**

- 1 Separate pipes kit code 8089911
- 2 90° elbow MF code 8077450 (6 pz.)
- 3 90° elbow MF with take-off points code 8077452
- 4 a Extension L. 1000 code 8077351 (6 pz.)
- 4 b Extension L. 500 code 8077350 (6 pz.)
- 6 Int.-est. ring kit code 8091500
- 7 Inlet terminal code 8089500
- 9 Doubler fitting code 8091400
- 10 Tile with articulated joint code 8091300
- 11 Roof outlet terminal L. 1381 code 8091204

**2.8 ELECTRICAL CONNECTION**

The boiler is supplied with an electric cable. Should this require replacement, it must be purchased exclusively from SIME.

The electric power supply to the boiler must be 230V - 50Hz single-phase through a fused main switch, with at least 3 mm spacing between contacts. Respect the L and N polarities and the earth connection.

**NOTE:**

*SIME declines all responsibility for injury or damage to persons, animals or things, resulting from the failure to provide for proper earthing of the appliance.*

## 2.8.1 Room stat connection

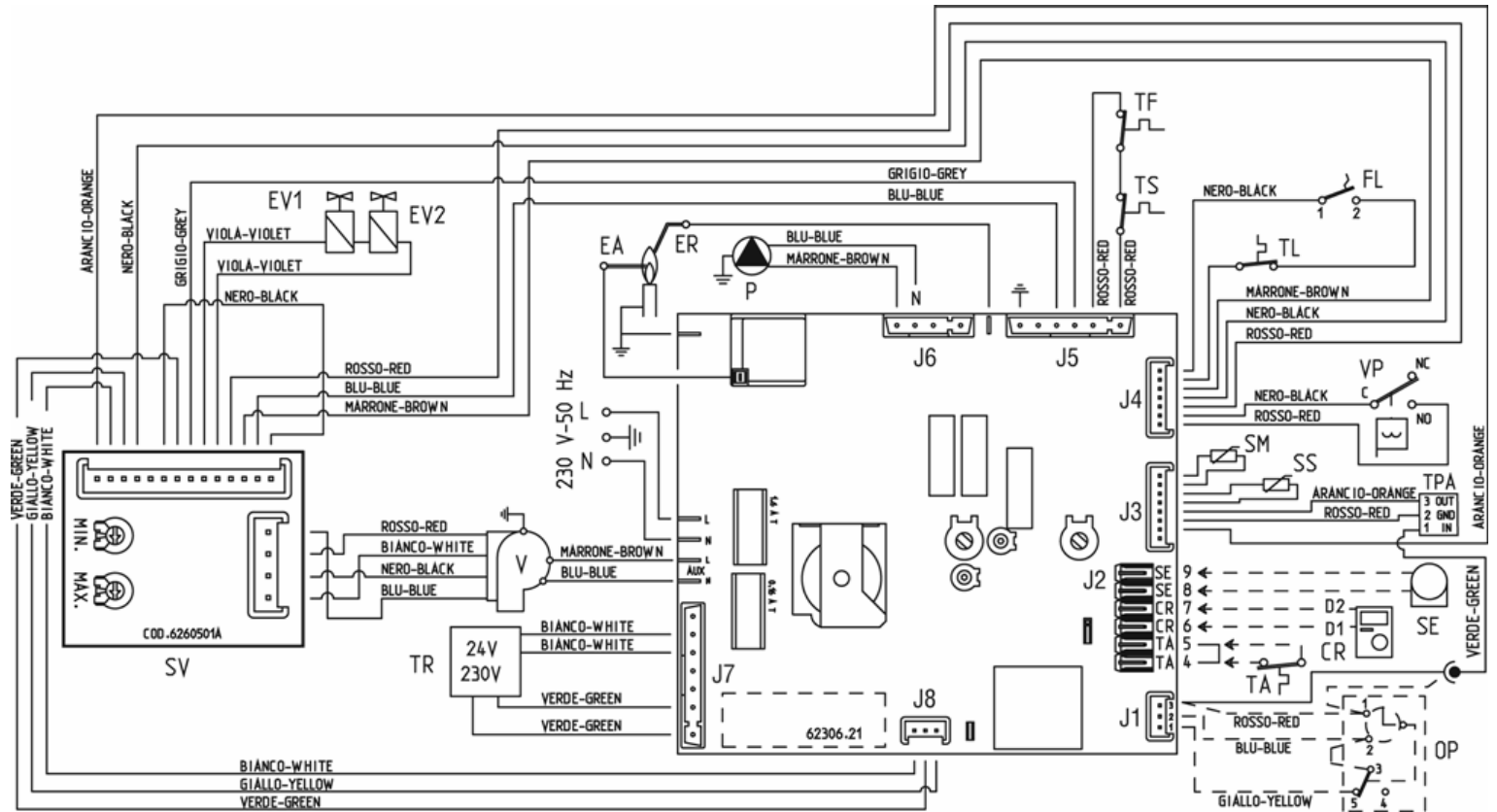
To gain access to the TA-CR-SE (J2) electronic board connector, remove the control panel cover and connect the room stat to the terminals 4–5 after having removed the jumper (fig. 13). The thermostat or timer-thermostat, recommended for better room temperature control, must be class II as specified by standard EN 60730.1 (clean contact).

### WARNING:

**Applying mains voltage to the terminals of board TA-CR-SE will irreparably damage the control board. Make sure that any connections to be made are not carrying mains voltage.**

## 2.8.2 Wiring diagram

Fig. 13



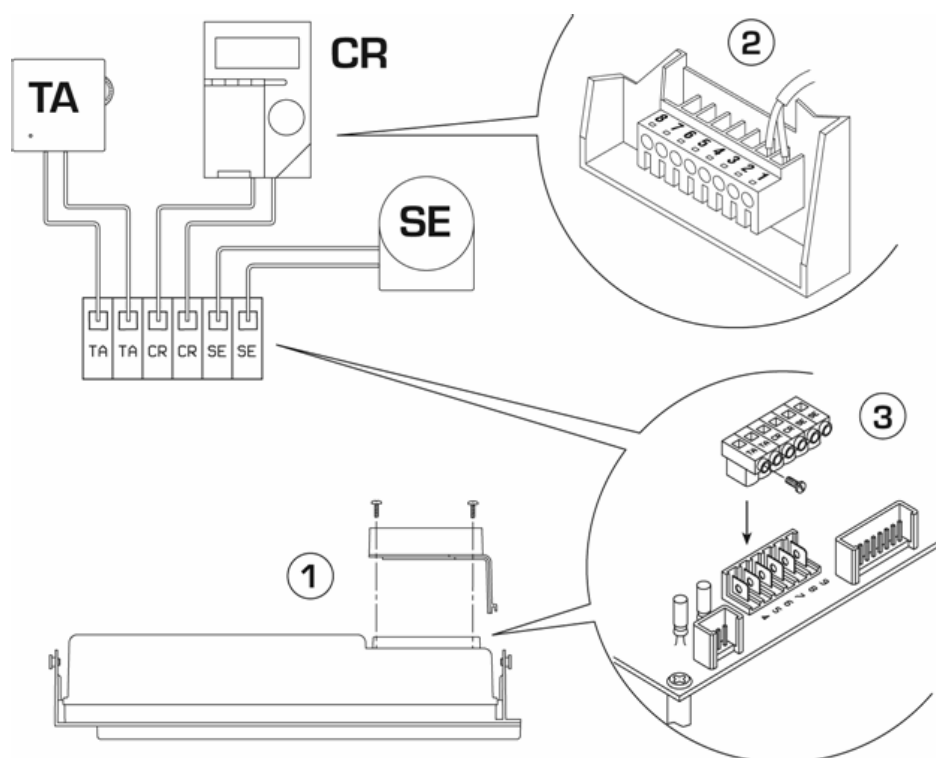
### KEY

- EV1 Gas valve coil
- EV2 Gas valve coil
- EA Ignition electrode
- ER Sensing electrode
- TS 100°C safety stat
- V Fan
- TPA Water pressure transducer
- P Pump
- VP Divertor valve
- SE External sensor (optional)
- TA Room stat
- SM C.H. sensor (blue)
- TL Limit stat
- TR Transformer 230-24V
- FL Flowmeter
- SS D.H.W. sensor (red)
- CR Logica Remote Control (optional)
- SV Ventilator board

**NOTE:**

*The room stat must be connected to the terminals 4-5*

Fig. 13/a



**KEY**

1 Control panel

2 "Logica Remote Control" terminal board

3 TA-CR-SE (J2) terminal board

TA Room stat (not supplied)

CR Logica Remote Control (optional)

SE External temperature sensor (optional)

**2.8.3 "Logica Remote Control" connection (optional)**

The electrical plant must comply with local standards and all cables must comply with low safety voltage requirements of EN 60730.

For lengths up to 25 m, use cables of section 0.25 mm<sup>2</sup>, for longer lengths up to 50 m use cables of section 0.5 mm<sup>2</sup>. First of all, assemble and wire the socket, then insert the equipment which will start-up as soon as it receives current.

To gain access to connector TA-CR-SE (J2) remove the control panel cover and connect the climate regulator to terminals 6-7 ([fig. 13/a](#)).

**WARNING:**

*External voltage must not be connected to terminals D3-D4-D5 of the "Logica Remote Control".*

*A room temperature sensor can be connected to terminals D3-D4. Alternatively, a telephone remote switch with a zero potential contact or a window contact can be connected.*

**2.8.4 External temperature sensor connection (optional)**

The cables must comply with low safety voltage requirements of EN 60730.

For lengths up to 25 m, use cables of section 0.25 mm<sup>2</sup>, for longer lengths up to 50 m use cables of section 0.5 mm<sup>2</sup>.

To gain access to boiler connector TA-CR-SE (J2) remove the control panel cover and connect the external temperature sensor to terminals 8-9 ([fig. 13/a](#)).

**2.9 LOGICA REMOTE CONTROL**

All the boiler's functions can be managed by a optional digital multifunctional device code 8092204 for the remote of the boiler itself and for regulating room climatic conditions with an operational reserve of 12 hours.

The heating circuit is controlled by the room temperature sensor built-in the equipment or by the atmospheric conditions, with or without environmental inflow, if the boiler is connected to an external sensor.

### Characteristics:


- Ergonomic control unit divided according to function (control levels).
- Clear division of basic functions:
  - operating regime, correction of set value and presence button are directly accessible;
  - Different real current values are accessible through the “info” button;
  - other functions can be programmed after the cover has been opened;
  - special service level with protected access;
- Each setting or modification is displayed and confirmed.
- Time setting (special line for changing BST/CET).
- Heating programme with max. 3 heating periods per day, individually selectable.
- Copy function for easy transfer of heating programme to the next or previous day.
- Holiday programme: the programme is interrupted for the holiday period and automatically restarted on returning home.
- Option to return the heating program to default values.
- Programming lock (child safety).

### Functions:

- Delivery temperature control guided by the atmospheric conditions, taking into account the dynamics of the building.
- Delivery temperature control guided by atmospheric conditions with influence of ambient temperature.
- Ambient temperature control only.
- Adjustable influence of ambient temperature shift .
- Switch-on and switch-off optimisation.
- Rapid lowering.
- ECO functions (daily heating limiter, automatic summer/winter switch-over).
- Controllable maximum delivery temperature limit (specifically for floor plants).
- Limitation of increase in pre-set delivery temperature.
- Anti-freeze protection for buildings.
- Domestic hot water control with nominal value requirement and enable.
- Connection to room sensor or switching of operating regime through the telephone system with external contact or through a window contact.
- Anti-bacterial.

### 2.9.1 Installation

The unit must be installed in the main living room. For installation, follow the assembly instructions inserted in the package.

At this point, with the selector knob on , the installer can adjust the basic parameters settings according to the individual needs (point 2.9.2).

**If there is a thermostatic radiator valve fitted, this must be set to maximum.**

### 2.9.2 Installation settings

The settings for the basic operating parameters for individual needs are reported in the instruction leaflet supplied with the “Logica Remote Control” and in the section reserved for the user in this manual.

For further adjustments which can be carried out by the installer, the “Logica Remote Control” offers a level of service and parameterising which can only be accessed through a special combination of buttons. To activate this level of service or parameterising press buttons up and down least 5 seconds. This will activate the parameterising level. Then use the same arrow buttons to select the individual input lines and adjust the values with - or +.



Antifreeze protection  
"Pre-set ambient  
temperature value"

51

Heating takes place up to this pre-set value if the plant is activated in stand-by [e.g. holidays].  
In this way, the building antifreeze function is active, preventing an excessive lowering of the ambient.

Summer/Winter switch-over  
temperature

52

This parameter regulates the temperature of the automatic summer/winter switch-over.

Type of control:  
0 = with ambient influence  
1 = without ambient influence

53

This parameter de-activates the ambient influence and as a result all the optimisations and adaptations.  
If a valid external temperature is not transmitted, the controller switches to the pure ambient control guide variable.

Influence of ambient temperature

54

If the ambient controller is used only as a remote control (placed in the reference room and without an external sensor connected), the value must be set at 0 (zero).  
If the change in ambient temperature from the pre-set value remains high during the entire day, the influence must be increased. If the ambient temperature is around the pre-set value (control oscillation), the influence must be reduced.

**Note: If the ambient temperature influence constant is set at 0, the adaptation of the heating curve is deactivated. In this case, parameter 57 will have no effect at all.**

Maximum limit of delivery  
temperature

55

The delivery temperature is limited to the maximum set value.

Variation of the maximum speed of the  
delivery temperature

56

The increase per minute of the prescribed delivery temperature value sent in °C is limited to the imposed value.

Activation of adaptation

57

With the activation of the adaptation, the pre-set value transmitted to the boiler regulator is adapted to the effective heat need.  
The adaptation functions with both the atmospheric guide with ambient influence and with pure ambient control.  
If the "Logica Remote Control" is set as a remote control only, the adaptation must be is deactivated.

Optimisation of  
switch-on time

58

If the switch-on time optimisation is active, the "Logica Remote Control" modifies the heating gradient until it finds the optimum heating point  
**0 = off      1 = on**

Heating gradient

59

The "Logica Remote Control" selects the switch-on time such that the set value has more or less been reached at the start of the usage time.  
The more severe the night-time cooling, the earlier the heating time starts.

Example: Current ambient temperature    18.5°C  
Nominal ambient temperature    20°C  
Heating gradient    30 min/K  
Presetting of switch-on time:  
1.5 K x 30 min/K =    45 minutes

00 means that the switch-on time has not been pre-set (function disabled).

Presetting switch-off  
time (00 = off)

60

If the switch-off time optimisation is active (value > 0), the "Logica Remote Control" modifies the pre-set time until it finds the optimum switch-off time.

## DOMESTIC HOT WATER SETTINGS

Reduced domestic hot  
water pre-set value

61

The reduced pre-set value of the temperature of the domestic hot water allow the required water temperature to be obtained outside the programmed usage times (daily programme 8).

Domestic hot water load

62

**0 = 24 hours/day      2 = blocked**  
**1 = standard      3 = second daily programme (8)**

### 2.9.3 Gradient of the characteristic heating curve

#### SERVICE VALUES

The gradient of the characteristic heating curve is imposed on the current value "15" of Logica.

Increasing the gradient as shown in the drawing of [fig. 14](#), the delivery temperature increases in correspondence to the outside temperature.



This block (1) can be activated to display all the parameters without modifying them. Pressing buttons or displays "OFF".

### 2.10 EXTERNAL TEMPERATURE SENSOR

The "Logica Remote Control" can be connected to an external temperature sensor available as an optional extra (code 8094100). This configuration ensures and maintains the required temperature constant in the room. The ambient temperature is, in fact, indicated and evaluated as the calculated mean of the value measured inside and outside the dwelling.

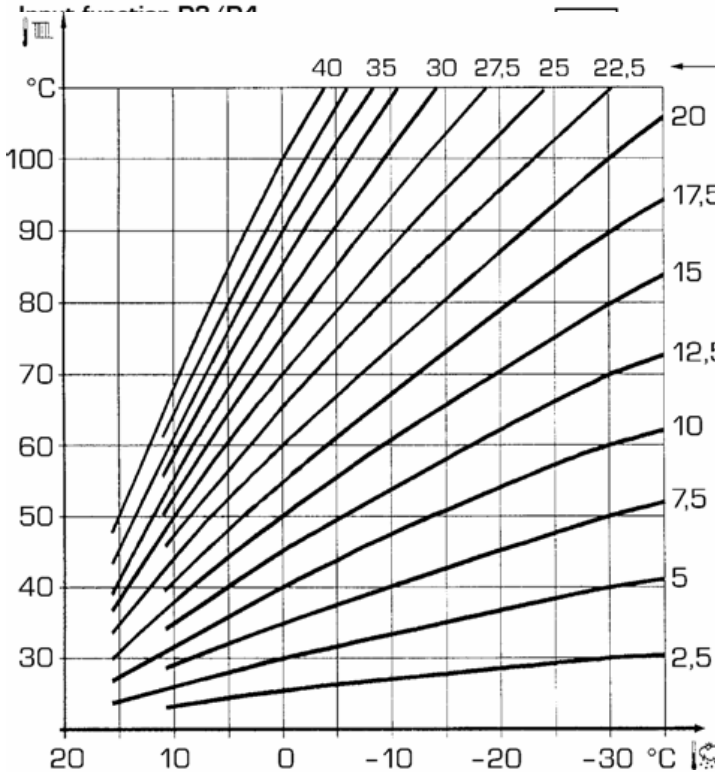
#### WARNING:

The activation block can be deactivated temporarily by pressing buttons and simultaneously; a confirmation sign appears on the display.

At this point press simultaneously the buttons and for at least 5 seconds.

For installation, follow the assembly instructions inserted in the package. To permanently remove the activation block, set parameter 63 on 0.

Fig. 14



The freely programmable input (terminals D3 and D4) allows three different functions to be activated. The parameter has the following significance:

- = If an external sensor is connected, the display will show the temperature of the external sensor ( \_ \_ = no sensor connected, function disabled).
- = With an external contact, it is possible to switch-over to "reduced pre-set value of the ambient temperature".
- = With an external contact, it is possible to switch-over to "reduced pre-set value of the antifreeze ambient temperature" (short circuit 0 0 0 or interruption \_ \_ \_). The display shows the current status of the external contact.

Input D3/D4 is connected to a zero potential external contact (parameter 62 = 2 or 3), the operating mode of the contact can be determined (remote telephone switch or window contact). The operating mode specifies the status of the contact in which the required function is active.

Display: Operating mode closed (short circuit) 0 0 0  
Operating mode open (interruption) \_ \_ \_

Parameter 64 determines the mix ratio between the internal and external ambient sensor (parameter 64 = 1).

- 0 % = internal sensor only active (0% external - 100% internal)
- 50 % = mean value of external + internal sensor
- 100 % = external sensor only active

The set mix is used for ambient control and display. If the external sensor is short circuited or interrupted, the operation continues with the internal sensor.

## 3 CHARACTERISTICS

### 3.1 ELECTRONIC BOARD

(if tank unit is installed)



The electronic boards are manufactured in compliance with the EEC 73/23 low-voltage directives.

They are supplied with 230V and, through a built-in transformer, send a voltage of 24V to the following components: gas valve, safety stat, C.H. and D.H.W. sensor, external temperature sensor (optional), modulator, micro diverter valve, flow switch safety valve, water pressure transducer, room stat or "Logica Remote Control".

This function allows the hot water to be brought to a high temperature once a week in order to eliminate eventual pathogenic agents.

It is active every Monday for a maximum duration of 2.5 hours at a delivery temperature of 65°C. 0 = not active, 1 = active

An automatic and continuous modulation system enables the boiler to adjust the heat output to the various system requirements or the User's needs. The electronic components are guaranteed against a temperature range of 0 to +60°C.

#### 3.1.1 Central heating operation

Upon demand for heating from the room temperature stat or climatic controller "Logica Remote Control", the circulation pump is activated, and approximately 90 seconds must elapse for the burner to start operating. This will happen only if the temperature is set above the value detected by the heating sensor. The heat output can be varied according to the system needs by adjusting the trimmer (14 [fig. 16](#)). At start-up of each working cycle, after the period of slow ignition having a duration of approx. 3 sec, the boiler will set itself at the heat output set on the trimmer.

#### 3.1.2 D.H.W. operation

Upon demand for hot water, the boiler starts instantaneously when the microswitch on the diverter valve makes. The required power output is regulated, via flame modulation, by the D.H.W. sensor (with fixed limit 67°C), which will compare the temperature read with the temperature set on the potentiometer.

With the delivery temperature between 70÷75°C, the flame modulation is effected by the heating sensor. When the heating flow sensor is at 75°C the electronic limiter will trip and switch-off the burner.

#### 3.1.3 Fault finding

The indicator leds signalling irregular and/or incorrect operation of the equipment are indicated in [fig. 15](#).

#### 3.1.4 Devices

The electronic board is equipped with the following devices:

– “**POT. RISC.**” trimmer (10 [fig.16](#)) Sets the maximum heating power value. To increase the value turn the trimmer clockwise; to reduce the value turn the trimmer anticlockwise.

– “**POT. ACC.**” trimmer (6 [fig.16](#)) Trimmer to vary the pressure level upon ignition (STEP), of the gas valve.

According to the type of gas for which the boiler is equipped, the trimmer must be regulated so as to obtain a pressure of approx. 3 mbar at the burner for methane gas and 7 mbar for butane gas (G30) and propane gas (G31).

To increase pressure, turn the trimmer clockwise; to reduce pressure, turn the trimmer counterclockwise.

The slow ignition pressure level can be set during the first 3 seconds following burner ignition.

**After setting the pressure level upon ignition (STEP) according to the type of gas, check that the pressure for heating is still at the value previously set.**

– “**MET-GPL**” connector (7 [fig.16](#))

With the connector switched-off, the boiler is set-up for natural gas; with the connector switched-on, the boiler is ready for LPG.

– “**ANN. RIT.**” connector (5 [fig.16](#)):

In the heating phase, the electronic board is programmed to include a burner technical delay interval of approx. 90 seconds, which occurs both at system cold starting and at subsequent re-ignitions. The aim is to overcome the problem of repeated ignitions and turning off with very short time intervals between. This could occur in particular in systems presenting high head losses. At each restart after the period of slow ignition, the boiler will set itself for about 1 minute at the minimum modulation pressure, and will then move to the heating pressure value set. When the connecting link is inserted, both the programmed technical pause and the period of operation at minimum pressure in the startup phase will be cancelled. In this case, the times elapsing between turning off and subsequent re-ignition will depend on a temperature difference of 5°C detected by the SM sensor (heating flow sensor).

Fig. 15

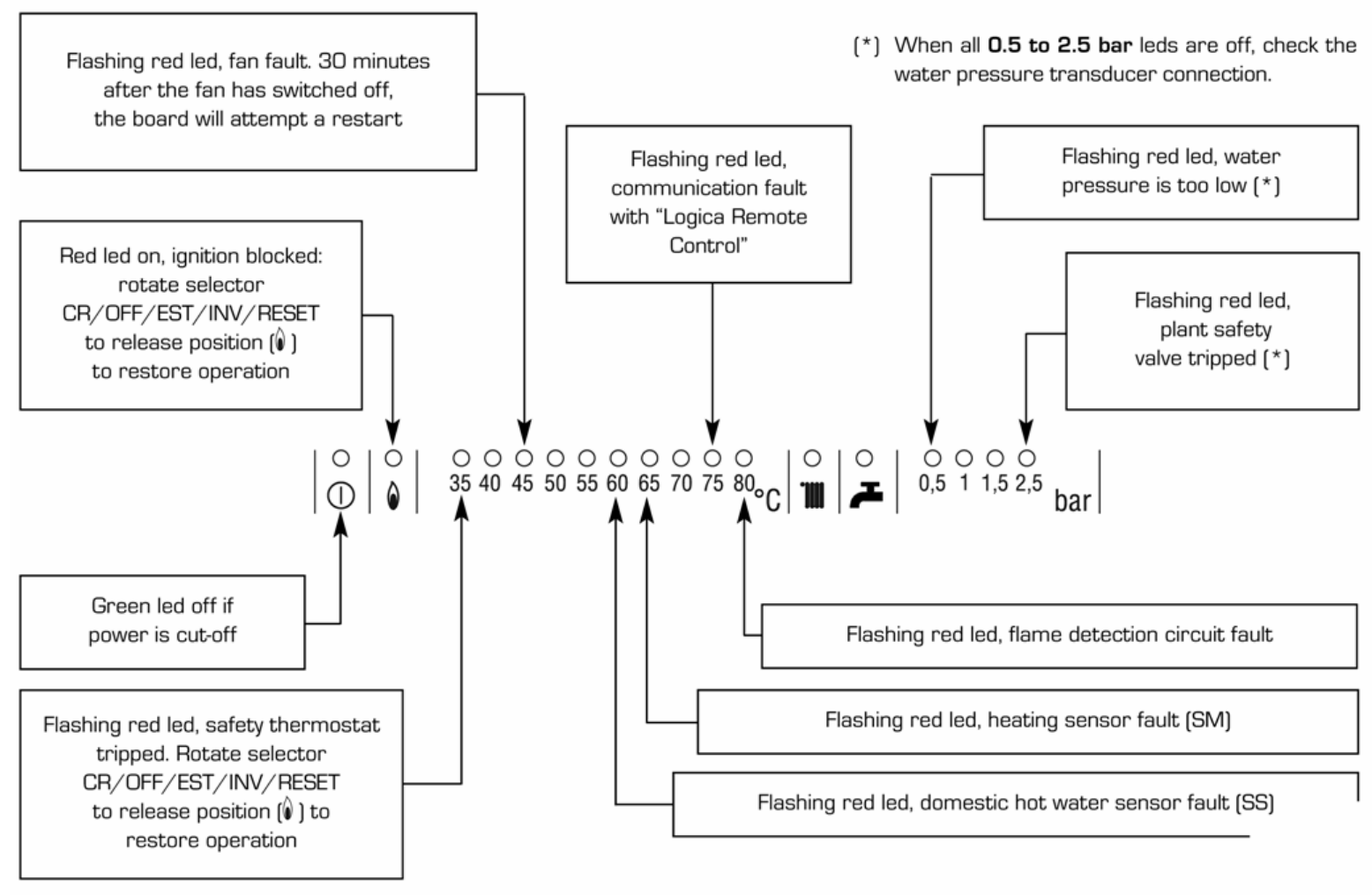
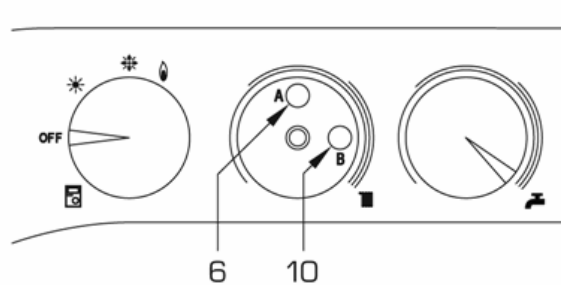
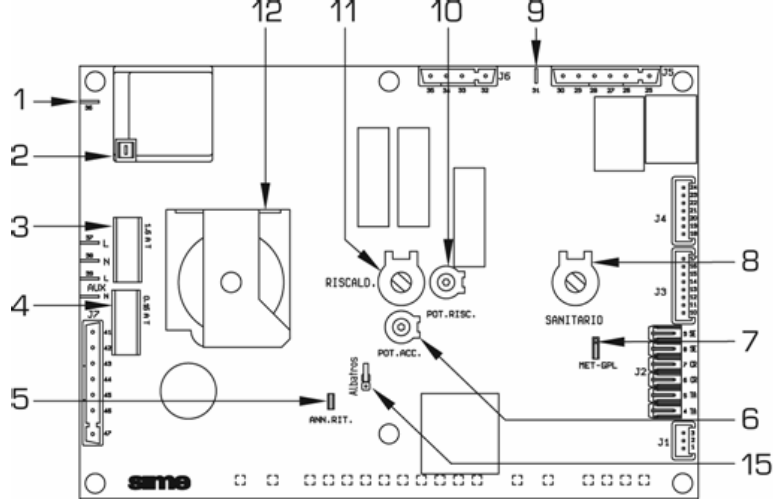


Fig. 16



#### KEY

1. Ignition electrode earth fastener
2. Ignition electrode faston
3. Fuse (1,6 AT)
4. Fuse (0,16 AT)
5. "ANN. RIT." Connector
6. "POT. ACC." Trimmer
7. Conector "MET-GPL"
8. D.H.W. potentiometer
9. Detector electrode faston
10. "POT. RISC." Trimmer
11. C.H. potentiometer
12. Selector CR/OFF/D.H.W./C.H./RESET

#### NOTE:

To gain access to trimmers (6) and (10), unscrew the central heating potentiometer knob.

#### CAUTION:

It is essential that the operations described above be carried out by authorized technical staff.

### 3.2 TEMPERATURE SENSOR AND WATER PRESSURE TRANSDUCER

Tables 3-3/a show the resistance values ( $\Omega$ ) that are obtained on the sensor as the temperature varies and the transducer values obtained as the pressure varies.

When sensor (SM) is interrupted, neither of the boiler's heating services will function. With sensor (SS) interrupted, the boiler will only work in heating mode.

TABLE 3 (Sensors)

Temperature ( $^{\circ}\text{C}$ )	Resistance ( $\Omega$ )
20	12.090
30	8.313
40	5.828
50	4.161
60	3.021
70	2.229
80	1.669

TABLE 3/a (Transducer)

Pressure (bar)	Resistance ( $\Omega$ )	
	mín	máx
0	297	320
0,5	260	269
1	222	228
1,5	95	200
2	167	173
2,5	137	143
3	108	113
3,5	90	94

### 3.3 ELECTRONIC IGNITION

Ignition and flame detection is controlled by two electrodes located on the burner.

These guarantee maximum safety with intervention times, for accidental switching off or gas failure, of within one second.

### 3.3.1 Operating cycle

Rotate the selector knob to summer or winter, and verify that green led lights up to confirm the presence of voltage.

The boiler is now ready to start working upon demand for heating or drawing off of D.H.W.; a discharge current is sent to the ignition electrode, and the gas valve opens at the same time. The burner must be ignited within 10 seconds.

However, it is possible for ignition failures to occur, with consequent activation of signal indicating that the control box has "locked out".

#### – Gas failure

The control box runs through the cycle normally sending electric power to the ignition electrode. The electrode continues spark discharge for a maximum of 10 sec. If the burner does not light, the lock-out indicator will light up.

This may occur upon first ignition or after long periods of boiler lay-off when there is air in the pipes. It may be caused by the gas cock being closed or by one of the valve coils having a break in the winding, so that the valve cannot open.

#### – Ignition electrode fails to spark

In the boiler, only the gas to the burner is seen to open.

After 10 sec. the warning light indicating equipment "lock-out" lights up.

This may be due to a break in the wire of the electrode or to the wire not properly fastened to the electric terminal of the control box;

#### – No detection of flame

The continuous spark discharge of the electrode is noted starting from ignition even though the burner is lit.

After 10 seconds have elapsed, the sparks cease, the burner goes out, and the warning light indicating equipment "lock-out" lights up.

There could have a break in the wire of the sensing electrode or the electrode itself is touching earth: the electrode is worn out and needs replacing. The control box is defective.

When there is a sudden voltage failure, the burner shuts out immediately; when power supply returns, the boiler will start up again automatically.

## 3.4 FLOW SWITCH SAFETY VALVE

A flow switch safety valve intervenes, blocking the operation of the burner if the boiler is without water due to the formation of an air lock in the heat exchanger or if the circulator is not working, or because the primary water filter "Aqua Guard Filter System" is obstructed with impurities.

#### **NOTE:**

*If replacing the flow switch valve, make sure that the arrow stamped on the valve points in the same direction as the flow of water.*

## 3.5 SYSTEM AVAILABLE HEAD

The head available for the heating plant is shown as a function of the flow in graph in [fig. 17](#).

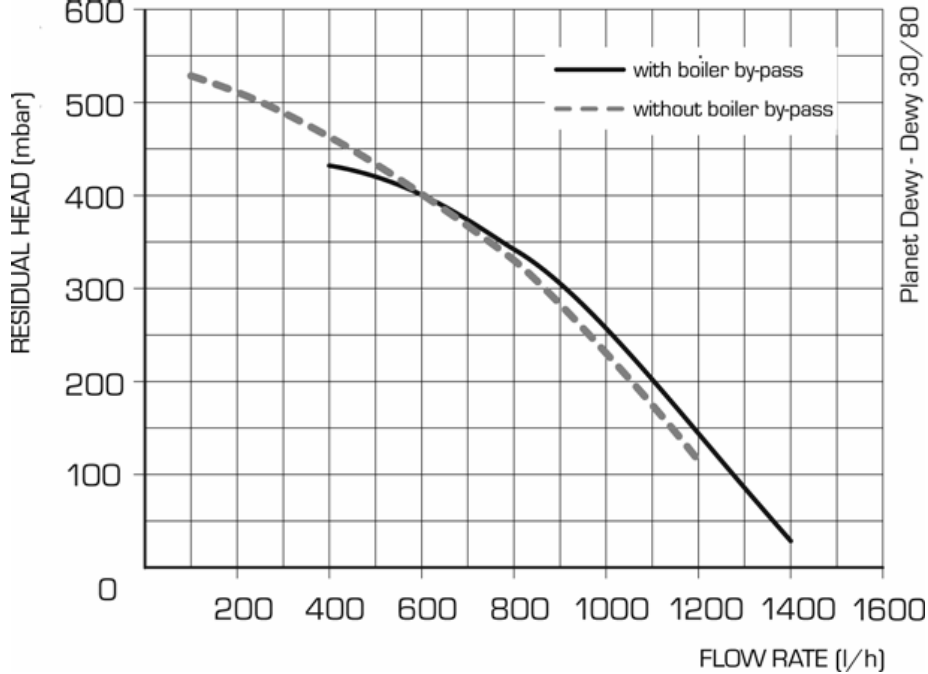
## 3.6 SMOKE STAT

To protect the polypropylene conduit from smoke the appliance is provided with an exhaust thermostat (20 [fig. 3](#)).

## 3.7 MAINS ELECTRICITY CONNECTION

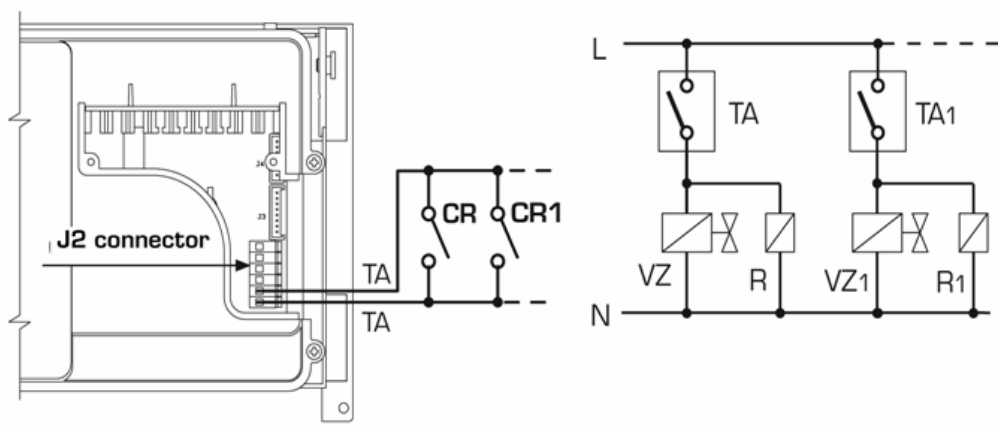
Use a separate electricity supply to connect the room stats and relative zone valves. The micro or relay contact connection is made to TA-CR-SE (J2) connector of the circuit board after having removed the jumper ([fig. 18](#)).

Fig. 17



Planet Dewy - Dewy 30/80

Fig. 18



**NOTE:**

*The relays are only used where the zone valves are not fitted with micros.*

**KEY**

TA-TA1	Zone room stat
VZ-VZ1	Zone gas valve
R-R1	Zone relay
CR-CR1	Zone microvalve or relay contact

**NOTE:**

*The relays are only used where the zone values are not fitted with micros.*

## 4 USE AND MAINTENANCE

### SIME SUPPORT

#### THE BENCHMARK INITIATIVE

All relevant sections of the logbook must be filled in at the time of installation and thereafter service information on the back page of the logbook. Commissioning of the boiler is not complete until the logbook is filled in.

#### 4.1 TEMPERATURE ADJUSTMENT OF D.H.W.

The system with a potentiometer for adjusting the temperature of D.H.W. with a setting range from 35° to 60°C offers a double advantage:

1. The boiler adapts perfectly to any type of D.H.W. system, whether the mixing system is a mechanical or a thermostat-controlled type.
2. The thermal output is dosed according to the temperature required, which means a considerable saving in fuel.

**NOTE:**

*In order to avoid any misunderstanding please remember that the value obtained by the product of temperature difference (in °C) between D.H.W. output and input into the boiler by the hourly flow rate measured on the tap, where hot water is drawn off (l/h), cannot be higher than the useful output developed by the boiler.*

## 4.2 ADJUSTMENT OF D.H.W. FLOW RATE

To adjust the hot water flow rate, use the flow-rate regulator on the diverter valve. Remember that the flow rates and corresponding temperatures of use of hot water, given in [section 1.3](#), have been obtained by positioning the selector of the circulation pump on the maximum value.

Should there be any reduction in the D.H.W. flow rate, the filter installed on the inlet to the pressure switch valve (9 [fig. 7](#)) will need cleaning.

To access the filter, you must first turn off the cold domestic water tap assembled on the template.

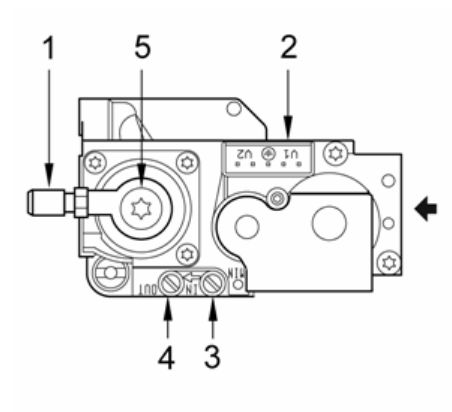
## 4.3 GAS VALVE

The boiler, is equipped standard with the HONEYWELL VK 8115M gas valve ([fig. 19](#)).

## 4.4 ADJUSTMENT OF HEAT OUTPUT FOR HEATING

To adjust boiler heat output for heating purposes, i.e., modifying the setting made at the factory which is approximately 17 kW, use a screwdriver to adjust the heating heat output trimmer (10 [fig. 16](#)).

Fig. 19



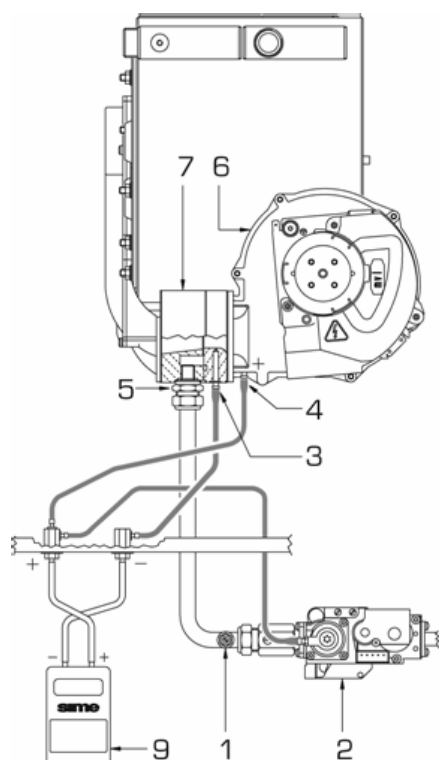
### KEY

1. Regulation intake
2. EV1-EV2 coils
3. Pressure inlet upstream
4. Pressure inlet downstream
5. Regulator

To increase working pressure, turn the trimmer clockwise; to reduce pressure, turn the trimmer counterclockwise.

To determine boiler heat output setting, check energy consumption by observing the meter and then compare with the values shown in **Table 4-4/a**; or measure "air  $\Delta p$ " with a digital pressure gauge connected up as shown in [fig. 20](#). Compare values with those shown in **Table 4-4/a**.

Fig. 20





KEY

- 1 Gas pressure intake
- 2 Gas valve
- 3 Mixer intake (-)
- 4 Ventilator intake (+)
- 5 Nozzle
- 6 Fan
- 7 Air/gas mixer
- 9 Digital pressure gauge

4.4.1 Diagram illustrating heat output in relation to “air Δp” version “90 A”

Fig. 21

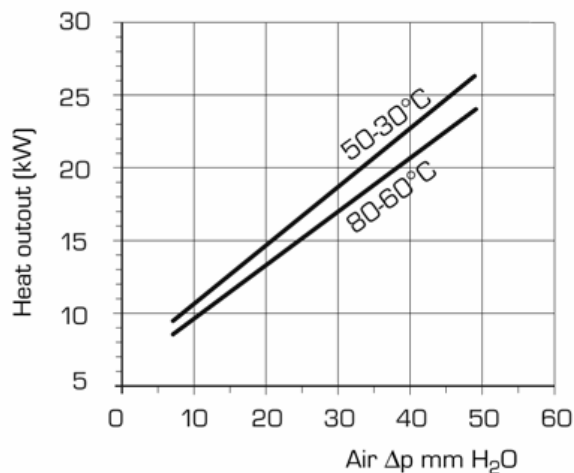


TABLE 4

Variable heat output		Air Δp *	Gas consumption **
(80-60°C)	(50-30°C)		G20
kW	kW	mm H <sub>2</sub> O	m <sup>3</sup> /h st
24.5	26.9	49.5	2.65
18.7	20.6	35.0	2.06
13.2	14.6	20.0	1.46
8.6	9.6	7.0	0.95

\* Air Δp is measured during boiler operation using a differential pressure gauge connected to the ventilator intake.

\*\* The gas consumptions refer to the calorific value at standard conditions at 15°C-1013 mbar.

4.4.2 Diagram illustrating heat output in relation to “air Δp” version “110 A”

Fig. 21/a

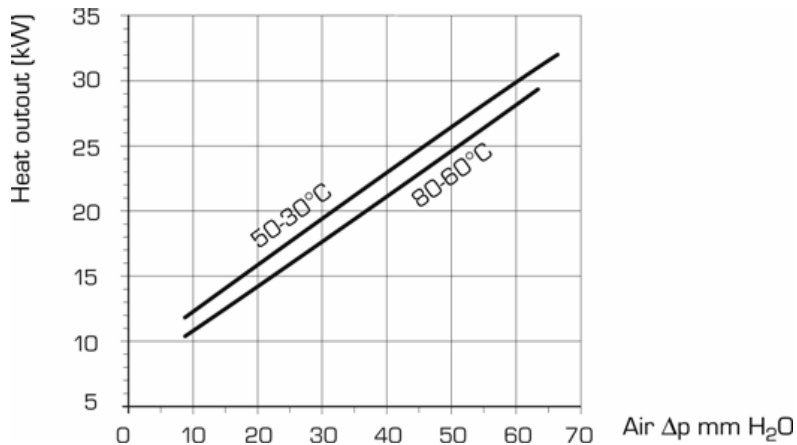


TABLE 4/a



**Variable heat output****Air  $\Delta p$  \*****Gas consumption \*\***

(80-60°C)	(50-30°C)	(80-60°C)	(50-30°C)	G20
kW	kW	mm H <sub>2</sub> O	mm H <sub>2</sub> O	m <sup>3</sup> /h st
29.4	32.4	63.8	66.4	3.17
22.9	25.0	45.0	45.0	2.48
16.1	17.6	25.0	25.0	1.75
10.5	11.7	8.4	9.2	1.14

\* Air  $\Delta p$  is measured during boiler operation using a differential pressure gauge connected to the ventilator intake.

\*\* The gas consumptions refer to the calorific value at standard conditions at 15°C-1013 mbar.

**Setting the time**

Turn the clock dial in a clockwise direction until it reads the time of the day.

**Program setting**

Press inwards the segments on the program disk corresponding to the selected switching periods.

**Function 1:** segment set outwards (C.H. "ON")

**Function 2:** segment set inwards (C.H. "OFF")

**Manual override**

0 = "OFF" permanently

clock = automatic programmed operation

1 = "ON" permanently

**Programming characteristics**

Cycle	24 hour
Number of actions per cycle	96
Program time per segment	15 min.
Min. interval between two actions	15 min.

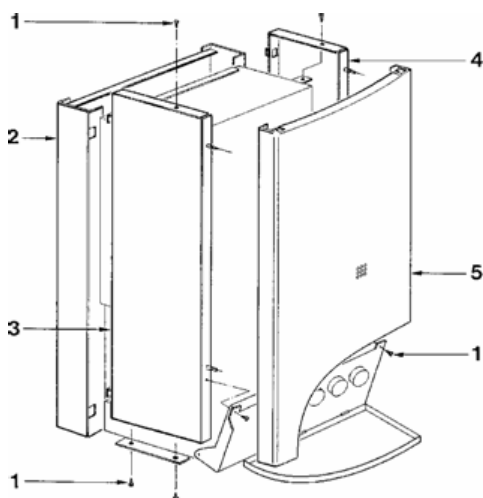
**4.6 DISASSEMBLY OF EXPANSION VESSEL**

To disassemble the expansion vessel, proceed as follows:

- Make sure that the water has been emptied out of the boiler.
- Unscrew the connection and the locknut.
- Remove the expansion vessel.

Before refilling the system, using a pressure gauge attached to the valve make sure that the expansion vessel is preloaded at a pressure of 0.8 to 1 bar.

Fig. 22

**KEY**

- A. Self-tapping screw
- B. Rear panel
- C. H. side panel
- D. H. side panel
- E. Front panel

**4.7 REMOVAL OF OUTER CASING**

It is possible to completely disassemble the shell of the boiler following these simple instructions ([fig. 22](#)):

- Remove the two screws locking the front panel to the sides.
- Pull the front panel (5) forwards so as to release it from the slot-in pins located on the sides.
- Unscrew the two screws fixing the instrument panel to the sides.
- Unscrew the four screws fixing the sides to the instrument panel support.
- Push the sides (3) and (4) upwards, sliding them out of their slots.

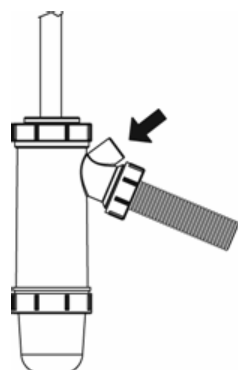
## 4.8 CLEANING AND MAINTENANCE

Preventive maintenance and checking of efficient operation of equipment and safety devices must be carried out exclusively by authorized technical personnel.

**During the maintenance operations it is necessary that the authorized technical personnel verify that the condensation water trap is full of water** (this is required particularly when the generator is kept unused for a long period).

The possible filling is effected in the hole provided ([fig. 23](#)).

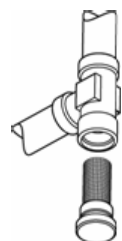
Fig. 23



## 4.9 Cleaning the C.H. water filter “Aqua Guard Filter System” (fig. 24)

To clean the filter, close the delivery/return on/off taps, turn off the power to the control panel, remove the casing and empty the boiler using the drain. Place a container for collection underneath the filter, unscrew the cap and proceed to clean the filter, removing impurities and limestone deposits. Check the seal o-ring before reassembling the cap with the filter.

Fig. 24



## 5 FAULT FINDING

If an electrical fault occurs on the appliance the preliminary electrical system checks contained in the British Gas Multimeter Instruction Booklet must be carried out first. When any service or replacement of electrical components which has required the breaking and re-making of electrical connections has taken place, the following tests must be repeated:

- earth continuity;
- short circuit;
- polarity;
- resistance to earth.

### 5.1 EARTH CONTINUITY CHECK

Appliances must be electrically disconnected, meter set on  $\Omega$  (ohm)  $\times 1$  scale and adjust zero if necessary. Tests leads from any appliance earth point (e.g. inside control box) see wiring diagrams ([section 7](#)) to earth pin on plug. Resistance should be less than 1  $\Omega$  (ohm). If the resistance is greater than 1  $\Omega$  (ohm) check all earth wires for continuity and all contacts are clean and tight. If the resistance to earth is still greater than 1  $\Omega$  (ohm) then this should be investigated further.

### 5.2 SHORT CIRCUIT CHECK

Switches turned FULL ON-meter set on  $\Omega$  (ohms)  $\times 1$  scale. Test leads from L to N on appliance terminal block, if meter reads 0 then there is a short circuit.

Meter set on  $\Omega$  (ohm)  $\times 100$  scale. Repeat it with leads from L to E. If meter reads less than infinity ( $\infty$ ) there is a fault.

## **NOTE:**

*Should it be found that the fuse has failed but no fault is indicated, a detailed continuity check (i.e. by disconnecting and checking each component) is required to trace the faulty component.*

*It is possible that a fault could occur as a result of local burning/arcing but no fault could be found under test. However, a detailed visual inspection should reveal evidence of burning around the fault.*

### **5.3 POLARITY CHECK**

Appliance reconnected to mains supply and meter set on 300 V ac scale. Test at appliance terminal block.

– Test leads from L to N meter reads approx.: 240 V ac.

– Test leads from L to E meter reads approx. 240 V ac.

– Test leads from N to E meter reads from 0 to 15 V ac.

### **5.4 RESISTANCE TO EARTH CHECK**

Appliance must be disconnected from main supply and meter on  $\Omega$  (ohm)  $\times$  100 scale. All switches including thermostat on test leads from L to E-if meter reads other than infinity ( $\infty$ ) there is a fault which should be isolated.

A detailed continuity check is required to trace the faulty component.

#### **IMPORTANT:**

*These series of checks are the first electrical checks to be carried out during a fault finding procedure. On completion of the service/fault finding task which has required the breaking and remaking of electrical connections then the checks 5.1 Earth continuity, 5.3 Polarity and 5.4 Resistance to earth must be repeated.*

### **5.5 C.H. MODE-FAULT FINDING**

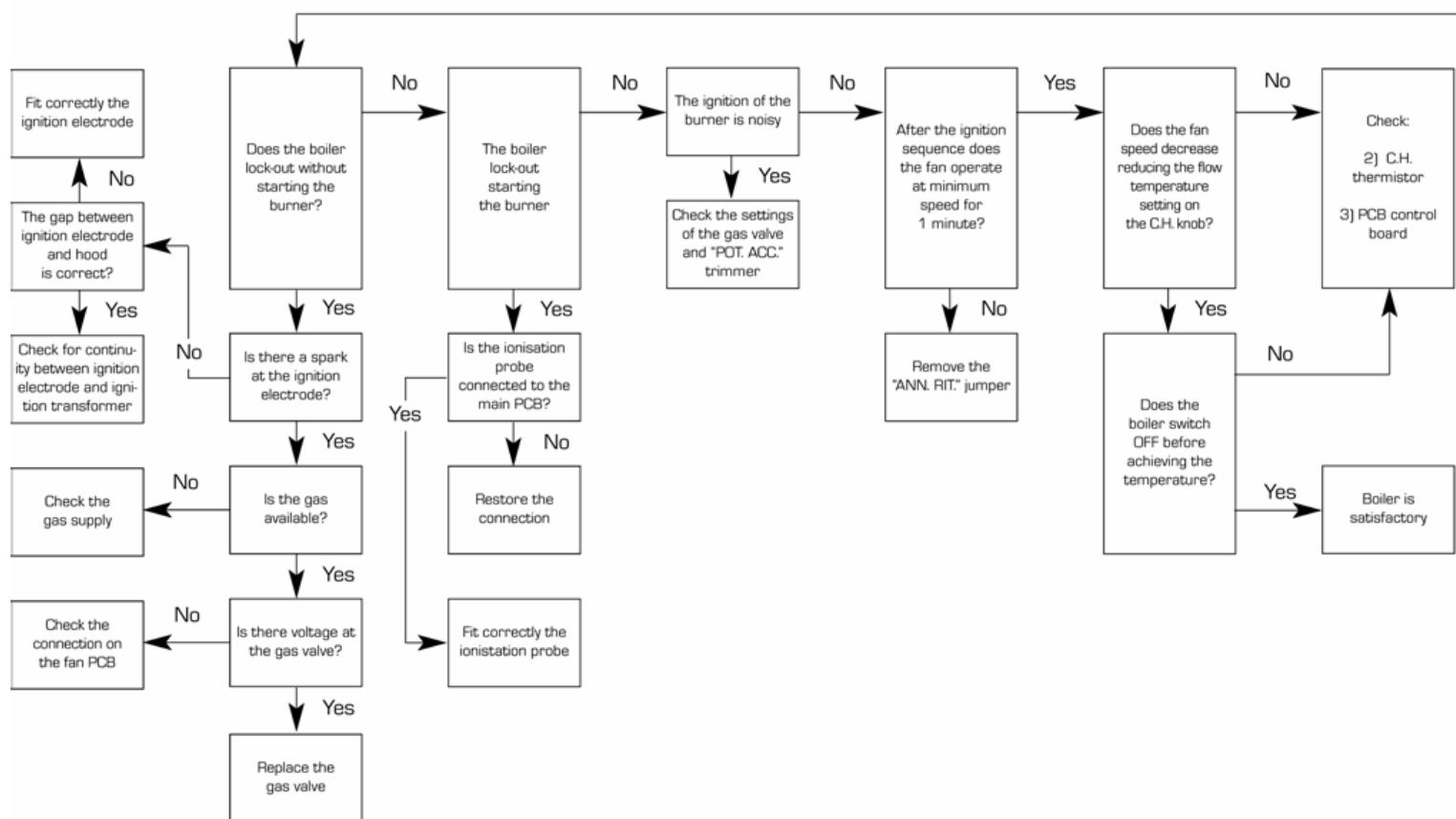
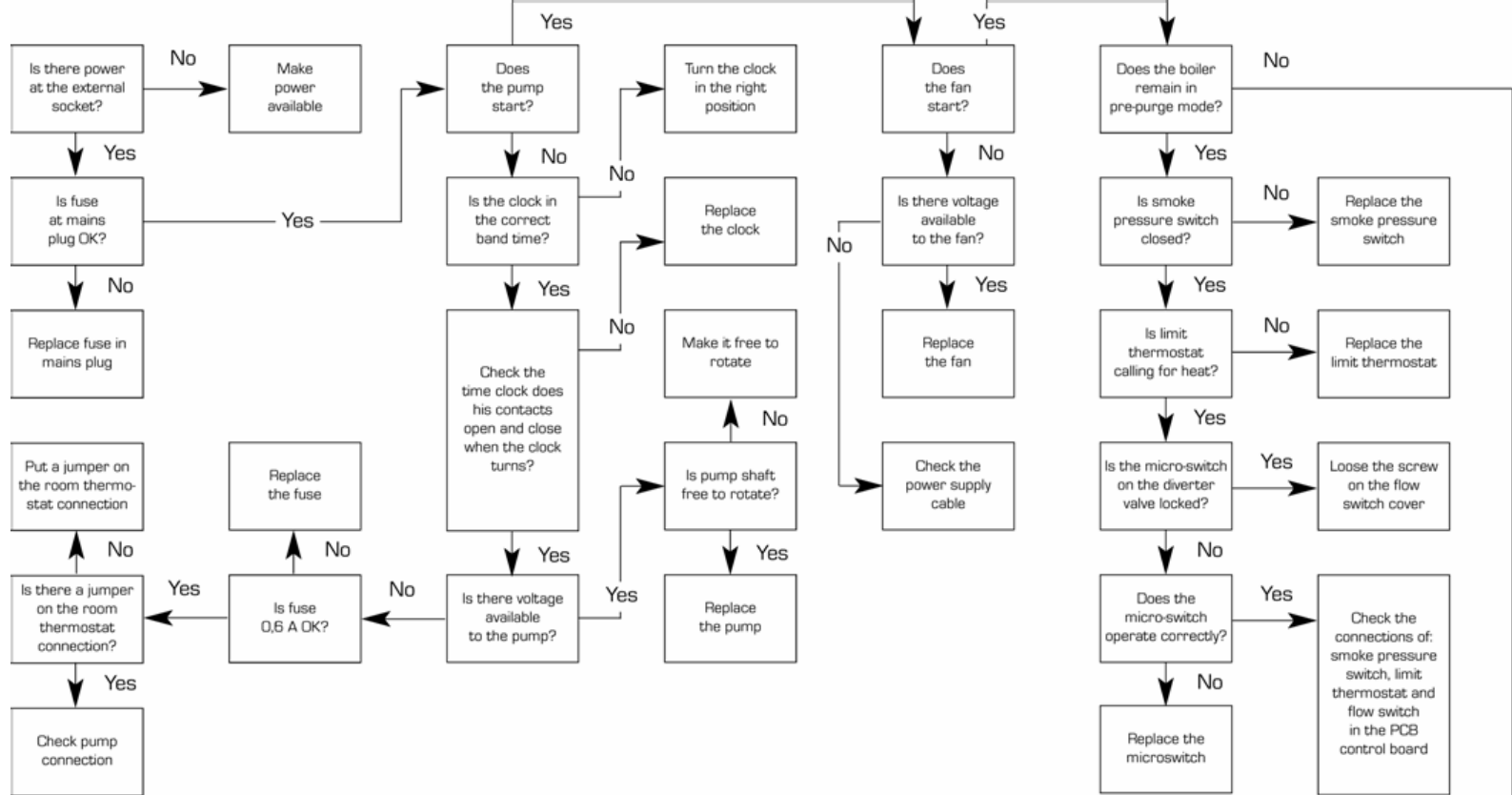
Start from cold

Rotary switch set to WINTER position.

Room thermostat (if fitted) calling for heat and all D.H.W. taps off.

C.H. thermostat set to maximum position.

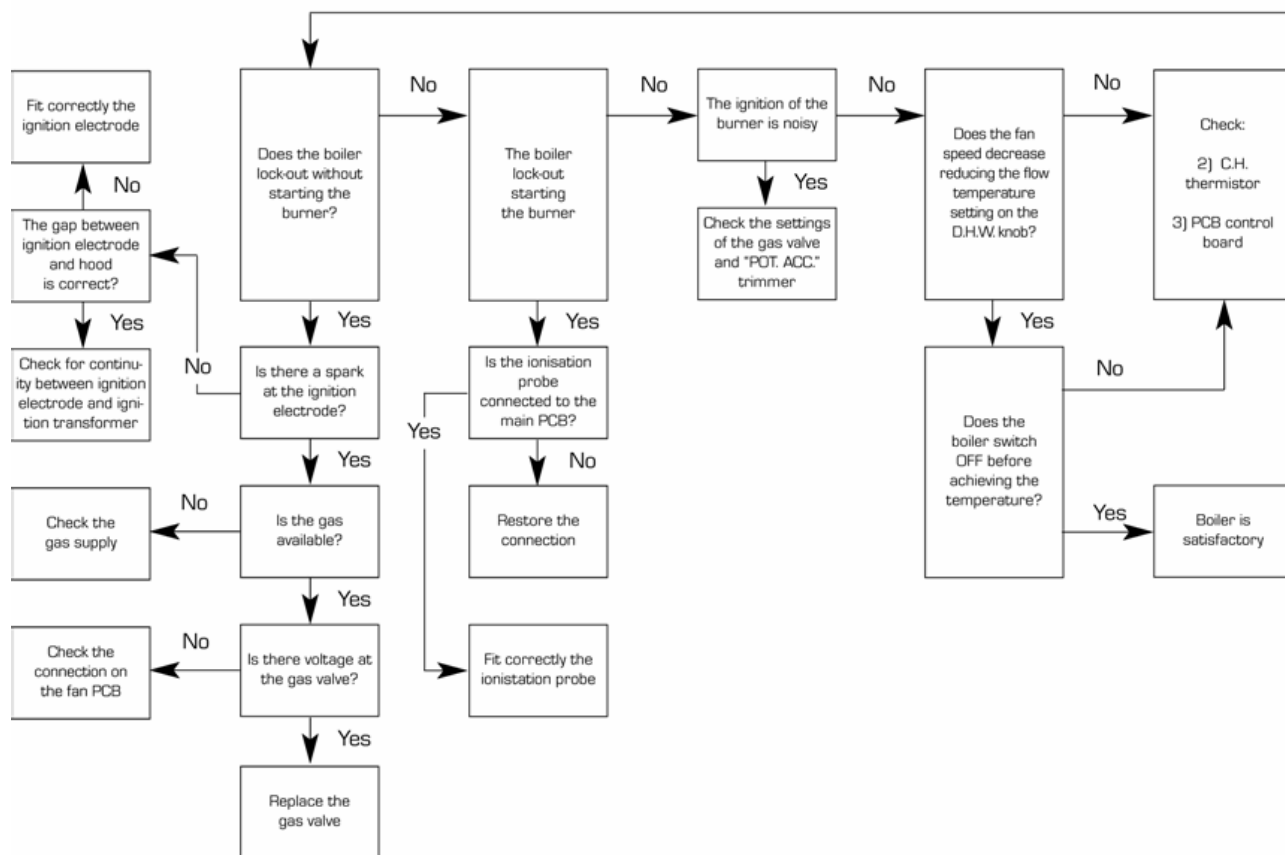
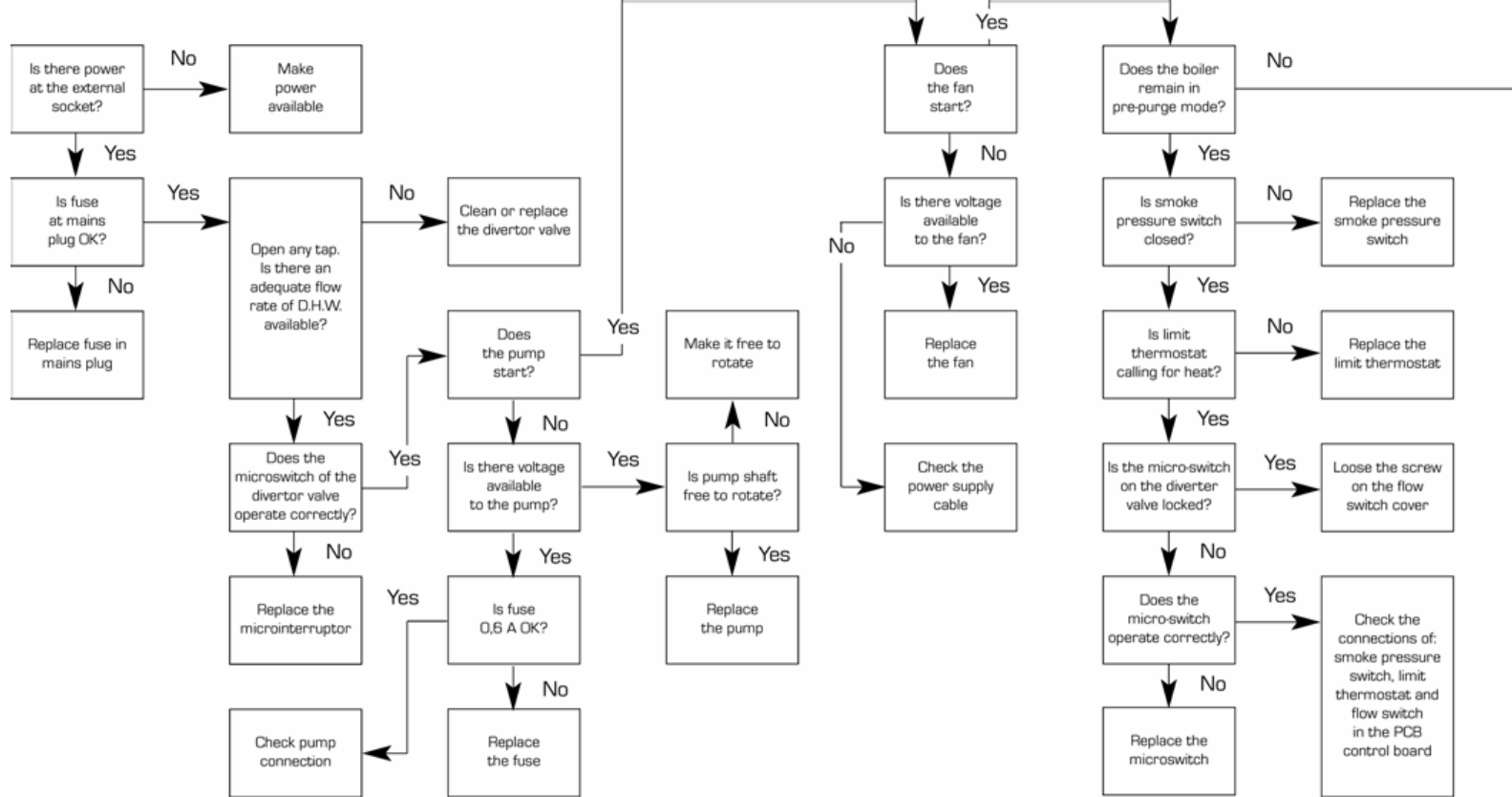
Clock in the on position (if fitted).



**NOTE:**  
 After completing fault finding reset the room thermostat (if fitted) to the required setting. If the appliance will not function check the wiring to the clock and if necessary, replace the clock.

### 5.6 D.H.W. MODE - FAULT FINDING

Start from cold - rotary switch set to SUMMER position, D.H.W. thermostat set to maximum, and all D.H.W. taps OFF.



**NOTE:**

*When commissioning the boiler, please check the polarity in case the pump and the fan are running but the burner does not fire.*

**7 STANDARD SETTINGS OF THE “LOGICA REMOTE CONTROL”**

C.H. WITHOUT ZONE				MULTI-ZONE C.H.			
WITH EXTERNAL TEMPERAT. SENSOR		WITHOUT EXTERNAL TEMPERAT. SENSOR		WITH EXTERNAL TEMPERAT. SENSOR		WITHOUT EXTERNAL TEMPERAT. SENSOR	
Function	Value	Function	Value	Function	Value	Function	Value
15	20 - 25°C	–	–	15	20 -22°C	–	–
51	5 - 6°C	51	5 - 6°C	51	5 - 6°C	51	5 - 6°C
52	15-16°C	52	15 - 16°C	52	15- 16°C	52	15 - 16°C
53	0	53	0	53	1	53	1
54	14-15	54	14 - 15	54	0	54	0

## C.H. WITHOUT ZONE

## MULTI-ZONE C.H.

WITH EXTERNAL TEMPERAT. SENSOR		WITHOUT EXTERNAL TEMPERAT. SENSOR		WITH EXTERNAL TEMPERAT. SENSOR		WITHOUT EXTERNAL TEMPERAT. SENSOR	
Function	Value	Function	Value	Function	Value	Function	Value
55	70 - 80°C	55	70 - 80°C	55	70 -80°C	55	70 - 80°C
56	7,5°C/min.	56	7,5°C/min.	56	7,5°C/min.	56	7,5°C/min.
57	1	57	0	57	1	57	0
58	0	58	0	58	0	58	0
59	0	59	0	59	0	59	0
60	0	60	0	60	0	60	0
61	indifferent	61	indifferent	61	indifferent	61	indifferent
62	0	62	0	62	0	62	0
63	0	63	0	63	0	63	0
64	1	64	1	64	1	64	1
65	0 0 0	65	0 0 0	65	0 0 0	65	0 0 0
66	indifferent	66	indifferent	66	indifferent	66	indifferent

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