

Superior Mk.II



*The code of practice for the installation,
commissioning & servicing for central heating systems*

CERTIFICAZIONE
DEL SISTEMA DI
QUALITÀ AZIENDALE

ISO 9001
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GASTEC

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***The code of practice for the installation,
commissioning & servicing for central heating systems***

Please refer to commissioning instructions for filling in the log book.

Note: All CORGI registered installers carry a CORGI ID Card.
You can check your installer is CORGI Registered by calling 01256 372300

SIME 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 (if a sealed, pressurised system is installed)?
- Is the Auto Air Vent open (if fitted to the system)?
- Has the pump been rotated manually?
- Is the gas supply working pressure correct?
- Is the boiler wired correctly? (See installation manual).
- Has the customer been fully advised on the correct use of the boiler, system and controls?
- Has the log book provided been completed?

1 TECHNICAL FEATURES AND DIMENSIONS

1.1 INTRODUCTION

The Sime "SUPERIOR" is a range of wall mounted cast iron boilers. The combustion system is fan assisted and has a small balanced flue terminal.

The appliance is supplied suitable for use with natural gas and incorporated a direct burner ignition system.

The appliance is supplied with a concentric air and flue duct suitable for wall thickness up to 740 mm [29 in] although extension duct kits are available and may be used up to a total flue length of 3.0 m [119 in].

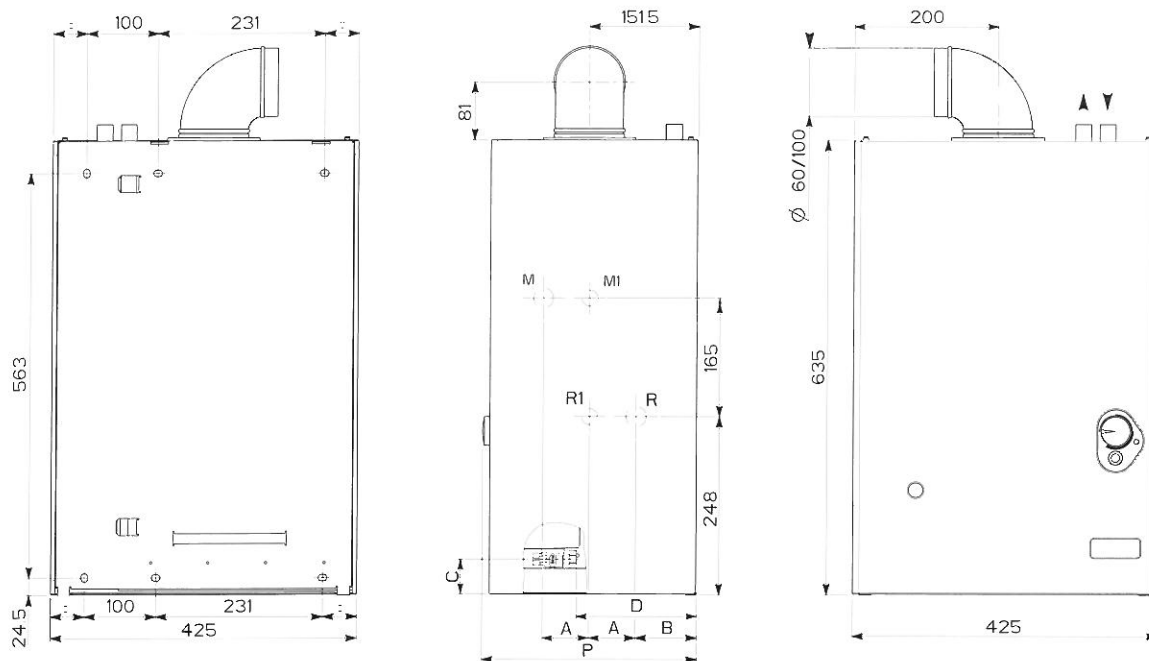
The combined flue and air duct can exit the boiler from either side or from the rear of the appliance.

A vertical extension and additional flue elbow may be fitted. If required, the boilers can also be fitted with a separate twin flue kit [see section 3 for details].

The boiler is designed for use with sealed primary water systems and is supplied fully assembled and complete with compression joints for simple connection to the heating system. If the wall thickness is less than 0.5 in [19 in] the appliance can be installed from inside the room without access to the external wall although a wall liner is required. This is available as an optional extra. Full details are given in section 3.

The boiler can be used with a 230V room thermostat [class II according to EN 60730.1].

1.2 DIMENSIONAL DETAILS



| | Superior 40 - 50 - 60 | Superior 75 - 90 |
|------|-----------------------|------------------|
| P mm | 290 | 350 |
| A mm | 65 | 104 |
| B mm | 85 | 68 |
| C mm | 49 | 35 |
| D mm | 167 | 227 |

Fig. 1

TABLE 1 - Connections

| | | | |
|----|--------------------|---------|--------------------|
| M1 | CH Flow (Pumped) | 22 mm | Compression |
| R1 | CH Return (Pumped) | 22 mm | Compression |
| M | Gravity flow | 28 mm | Compression |
| R | Gravity return | 28 mm | Compression |
| G | Gas | Rc 1/2" | 1/2" in BSP female |

TABLE 2 - Minimum clearances

| | | |
|----------------------------|--------|--------|
| ABOVE THE APPLIANCE CASING | 200 mm | 8 in |
| AT THE R.H.S. | 5 mm | 1/4 in |
| AT THE L.H.S. | 5 mm | 1/4 in |
| BELOW THE APPLIANCE CASING | 100 mm | 4 in |
| IN FRONT OF THE APPLIANCE | 450 mm | 18 in |

1.3 GENERAL DATA

TABLE 3a - Nominal boiler ratings (2 minutes after lighting) for Superior 40 Mk.II

| MODE | OUTPUT | | INPUT (G.C.V.) | | BURNER PRESSURE | |
|-----------------------|--------|--------|----------------|--------|-----------------|------|
| | kW | Btu/h | kW | Btu/h | mbar | inwg |
| CENTRAL HEATING RANGE | 8.7 | 29,700 | 11.2 | 38,300 | 7.8 | 3.1 |
| | 9.0 | 30,700 | 11.6 | 39,500 | 8.4 | 3.4 |
| | 9.3 | 31,800 | 12.0 | 40,800 | 8.9 | 3.6 |
| | 9.6 | 32,900 | 12.3 | 42,200 | 9.5 | 3.8 |
| | 9.9 | 33,900 | 12.7 | 43,400 | 10.1 | 4.0 |
| | 10.3 | 35,000 | 13.1 | 44,700 | 10.7 | 4.3 |
| | 10.6 | 36,100 | 13.5 | 46,000 | 11.3 | 4.5 |
| | 10.9 | 37,200 | 13.9 | 47,300 | 11.9 | 4.8 |
| | 11.2 | 38,300 | 14.2 | 48,600 | 12.6 | 5.0 |
| | 11.5 | 39,400 | 14.6 | 49,900 | 13.2 | 5.3 |
| | X* | 11.9 | 40,500 | 15.0 | 51,200 | 13.9 |

*Factory setting

TABLE 3b - Nominal boiler ratings (2 minutes after lighting) for Superior 50 Mk.II

| MODE | OUTPUT | | INPUT (G.C.V.) | | BURNER PRESSURE | |
|-----------------------|--------|--------|----------------|--------|-----------------|------|
| | kW | Btu/h | kW | Btu/h | mbar | inwg |
| CENTRAL HEATING RANGE | 11.5 | 39,100 | 14.8 | 50,600 | 8.4 | 3.4 |
| | 11.8 | 40,100 | 15.2 | 51,800 | 8.8 | 3.5 |
| | 12.1 | 41,200 | 15.5 | 53,100 | 9.2 | 3.7 |
| | 12.4 | 42,200 | 15.9 | 54,300 | 9.7 | 3.9 |
| | 12.7 | 43,300 | 16.3 | 55,500 | 10.1 | 4.1 |
| | 13.0 | 44,300 | 16.6 | 56,700 | 10.5 | 4.2 |
| | 13.3 | 45,400 | 17.0 | 58,000 | 11.0 | 4.4 |
| | 13.6 | 46,500 | 17.3 | 59,200 | 11.5 | 4.6 |
| | 13.9 | 47,500 | 17.7 | 60,400 | 11.9 | 4.8 |
| | 14.2 | 48,600 | 18.1 | 61,600 | 12.4 | 5.0 |
| | X * | 14.6 | 49,700 | 18.4 | 62,900 | 12.9 |

*Factory setting

TABLE 3c - Nominal boiler ratings (2 minutes after lighting) for Superior 60 Mk.II

| MODE | OUTPUT | | INPUT (G.C.V.) | | BURNER PRESSURE | |
|-----------------------|--------|--------|----------------|--------|-----------------|------|
| | kW | Btu/h | kW | Btu/h | mbar | inwg |
| CENTRAL HEATING RANGE | 14.4 | 49,100 | 18.7 | 63,800 | 9.1 | 3.7 |
| | 14.7 | 50,200 | 19.1 | 65,100 | 9.6 | 3.8 |
| | 15.0 | 51,400 | 19.5 | 66,500 | 10.1 | 4.0 |
| | 15.4 | 52,500 | 19.8 | 67,700 | 10.5 | 4.2 |
| | 15.7 | 53,600 | 20.2 | 69,000 | 11.0 | 4.4 |
| | 16.0 | 54,800 | 20.6 | 70,300 | 11.6 | 4.6 |
| | 16.4 | 55,900 | 21.0 | 71,500 | 12.1 | 4.9 |
| | 16.7 | 57,100 | 21.3 | 72,900 | 12.7 | 5.1 |
| | 17.1 | 58,200 | 21.7 | 74,100 | 13.2 | 5.3 |
| | 17.4 | 59,400 | 22.1 | 75,400 | 13.8 | 5.5 |
| | X* | 17.7 | 60,500 | 22.5 | 76,600 | 14.4 |

*Factory setting

TABLE 3d - Nominal boiler ratings (2 minutes after lighting) for Superior 75 Mk.II

| MODE | OUTPUT | | INPUT (G.C.V.) | | BURNER PRESSURE * | |
|-----------------------|--------|--------|----------------|--------|-------------------|------|
| | kW | Btu/h | kW | Btu/h | mbar | inwg |
| CENTRAL HEATING RANGE | 17.6 | 59,900 | 22.5 | 76,600 | 10.0 | 4.0 |
| | 18.0 | 61,400 | 23.0 | 78,400 | 10.4 | 4.2 |
| | 18.4 | 62,900 | 23.5 | 80,200 | 10.8 | 4.3 |
| | 18.9 | 64,400 | 24.0 | 81,900 | 11.2 | 4.5 |
| | 19.3 | 65,900 | 24.5 | 83,700 | 11.6 | 4.7 |
| | 19.8 | 67,400 | 25.0 | 85,400 | 12.0 | 4.8 |
| | 20.2 | 68,900 | 25.6 | 87,200 | 12.4 | 5.0 |
| | 20.6 | 70,500 | 26.1 | 89,000 | 12.9 | 5.2 |
| | 21.1 | 72,000 | 26.6 | 90,800 | 13.3 | 5.3 |
| | 21.5 | 73,500 | 27.1 | 92,500 | 13.7 | 5.5 |
| | X * * | 22.0 | 75,000 | 27.6 | 94,200 | 14.2 |

* Differential measure between downstream pressure in the gas valve and depression in sealed chamber

** Factory setting

Set the gas pressure with the balancing intake disconnected; connect the balancing intake after having set the boiler.
Disconnect the balancing intake during checking operations too.

TABLE 3e - Nominal boiler ratings (2 minutes after lighting) for Superior 90 Mk.II

| MODE | OUTPUT | | INPUT (G.C.V.) | | BURNER PRESSURE * | |
|-----------------------|--------|--------|----------------|---------|-------------------|------|
| | kW | Btu/h | kW | Btu/h | mbar | inwg |
| CENTRAL HEATING RANGE | 22.0 | 75,000 | 27.9 | 95,200 | 10.8 | 4.3 |
| | 22.3 | 76,200 | 28.3 | 96,600 | 11.1 | 4.5 |
| | 22.7 | 77,400 | 28.7 | 97,900 | 11.4 | 4.6 |
| | 23.0 | 78,600 | 29.1 | 99,300 | 11.8 | 4.7 |
| | 23.4 | 79,800 | 29.5 | 100,600 | 12.1 | 4.9 |
| | 23.7 | 81,000 | 29.9 | 102,000 | 12.4 | 5.0 |
| | 24.1 | 82,200 | 30.3 | 103,300 | 12.8 | 5.1 |
| | 24.5 | 83,400 | 30.7 | 104,700 | 13.2 | 5.3 |
| | 24.8 | 84,700 | 31.1 | 106,100 | 13.5 | 5.4 |
| | 25.2 | 85,900 | 31.5 | 107,500 | 13.9 | 5.6 |
| | X* * | 25.5 | 87,100 | 31.9 | 108,800 | 14.3 |

* Differential measure between downstream pressure in the gas valve and depression in sealed chamber

** Factory setting

Set the gas pressure with the balancing intake disconnected; connect the balancing intake after having set the boiler.
Disconnect the balancing intake during checking operations too.

TABLE 4 - General specifications

| | | | 40 Mk.II | 50 Mk.II | 60 Mk.II | 75 Mk.II | 90 Mk.II |
|----------------------|----------------|-------------------|----------|----------|----------------|----------|----------|
| Burner | Injector | | | | 1 | | |
| | | ø mm | 3.0 | 3.4 | 3.6 | 4.2 | 4.5 |
| Max. gas consumpt. | | m ³ /h | 1,43 | 1,75 | 2,14 | 2,63 | 3,04 |
| System Press | min | bar | | | 0.12 | | |
| | max | bar | | | 3 | | |
| Adjustable Flow Temp | Pump mode min | °C | | | 50 on - 60 off | | |
| | Pump mode max | °C | | | 72 on - 84 off | | |
| | D.H.W. gravity | °C | | | 50 on - 60 off | | |
| Safety stat | | °C | | | 105 | | |
| Re-Start Delay | | Seconds | | | 180 | | |
| Anti-Inertia Temp. | | °C | | | 90 off - 95 on | | |
| Max. working temp. | | °C | | | 84 | | |
| Boiler pressure drop | | mbar @ 11 °C | 70 | 103 | 150 | 167 | 224 |
| Electricity Supply | | | | | 230V/50Hz | | |
| Internal Fuse | | | | | F 2A | | |
| Power Consumption | | W | 55 | 55 | 60 | 65 | 65 |
| Weight | | kg | 46 | 46 | 46 | 57 | 57 |

2 GENERAL REQUIREMENTS FOR INSTALLATION

2.1 STATUTORY REQUIREMENTS

GAS SAFETY [INSTALLATION AND USE REGULATIONS [as amended]. It is the law that a registered person, in accordance with the above regulations, installs all gas appliances. Failure to install appliances correctly could lead to prosecution. It is in your own interest, and that of safety, to ensure that the law is complied with.

In addition to the above regulations, this appliance must be installed in accordance with the current IEE Wiring Regulations [BS 7871], Local Building Regulations, the Building Standards [Scotland] [Consolidation] Regulations, Byelaws of the local water undertaking, and Health and Safety Document No 635 'The Electricity at Work Regulations 1989'. It should also be in accordance with the relevant recommendations in the current editions of the following British Standards and Codes of Practice: BS5449, BS5546, BS5440: 1, BS5440:2, BS6798, BS6891, and BG.DM2, BS7074, and BS5482 for propane installations.

Manufacturer's instructions must NOT be taken in any way as over-riding statutory obligations.

2.2 BOILER POSITION

In sighting the boiler, the following limitations MUST be observed: The boiler is not suitable for external installation. The position selected for installation should be within the building, unless otherwise protected by a suitable enclosure, and MUST allow adequate space for installation, servicing, and operation of the appliance, and for air circulation around it [section 2.4]. This position MUST allow for a suitable flue termination to be made. The boiler must be installed on a flat vertical wall which is capable of supporting the weight of the appliance, and any ancillary equipment.

If the boiler is to be fitted in a timber framed building it should be fitted in accordance with the Institute of Gas Engineers document for Gas Installations In Timber Frame Housing, Reference 1SF UP 7:1998. If in doubt, advice must be sought from the gas supplier.

If the appliance is installed in a room containing a bath or shower, any electrical switch or control utilising mains electricity must be so situated that it cannot be touched by a person using the bath or shower. Attention is drawn to the requirements of the current IEE Wiring Regulations [BS7871], and in Scotland the electrical provisions of the Building Regulations applicable in Scotland.

A compartment used to enclose the appliance MUST be designed and constructed specifically for this purpose. An existing cupboard, or compartment, may be used provided it is modified accordingly.

Where installation will be in an unusual location, special procedures may be necessary. BS6798 gives detailed guidance on this aspect.

2.3 FLUE TERMINAL POSITION

Detailed recommendations for flue installation are given in BS5440: 1. The following notes are for general guidance: The boiler MUST be installed so that the terminal is exposed to the external air.

It is important that the position of the terminal allows free passage of air across it at all times.

It is ESSENTIAL TO ENSURE, in practice that products of com-

bustion discharging from the terminal cannot re-enter the building, or any other adjacent building, through ventilators, windows, doors, other sources of natural air infiltration, or forced ventilation air conditioning. If this does occur, the appliance MUST be turned OFF IMMEDIATELY and the gas supplier consulted.

The minimum acceptable dimensions from the terminal to obstructions and ventilation openings are specified in fig. 2.

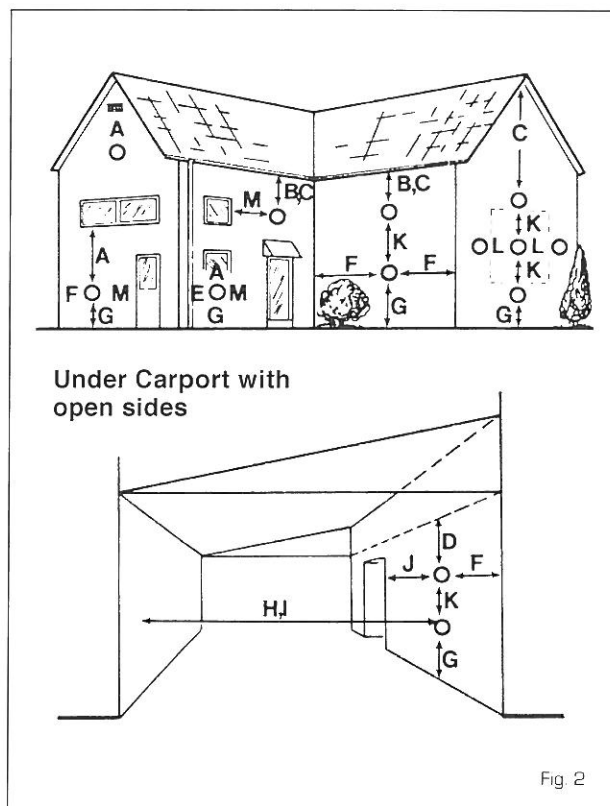


Fig. 2

TABLE 5

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

2.4 VENTILATION REQUIREMENTS

Detailed recommendations for air supply are given in BS5440: 2.

The following notes are for general guidance:

It is not necessary to have a purpose provided air vent in the room or internal space in which the appliance is installed.

2.5 GAS SUPPLY

The gas supplier should be consulted at the installation planning stage in order to establish the availability of an adequate supply of gas.

An existing service pipe MUST NOT be used without prior consultation with the gas supplier.

A gas meter can only be connected by the gas supplier or their contractor.

An existing meter should be of sufficient size to carry the maximum boiler input plus the demand of any other installed appliance. [BS6891: 1988]. The gas required for the boiler is specified in Table 4.

The governor at the meter must give a constant outlet pressure of 20 mbar [8 in wg] for natural gas when the appliance is running. The gas supply line should be purged.

NOTE: Before purging open all doors and windows, also extinguish any cigarettes, pipes, and any other naked lights.

The complete installation must be tested for gas soundness. It is important to assure an adequate gas supply to the appliance. No more than 3 m of 15 mm pipe should be used. Where the supply exceeds 3 m the pipe should be suitably sized only reducing to 15 mm for the last 3 m prior to the appliance.

2.6 ELECTRICITY SUPPLY

The appliance MUST be earthed. A mains supply of 230V - 50 Hz single phase is required.

All external controls and wiring MUST be suitable for mains voltage.

Wiring should be in 3-core PVC insulated cable NOT LESS than 0.75 mm [24 x 0.2 mm] to BS6500, Table 16. Wiring external to the boiler MUST be in accordance with current IEE Wiring Regulations [BS 7671] and local regulations. The supply connection to the flying lead provided MUST be made to a fused double pole switch, having a 3 mm [1/8 in] contact separation in both poles, serving only the boiler and system

controls.

The fuse rating should be as per the original instructions. This connection should be readily accessible and be made adjacent to the boiler. All fuses must be ASTA approved to BS 1362.

2.7 EXTERNAL CONTROLS AND COMPONENTS

The boiler is intended for use with a 230 V room thermostat. The appliance requires a live feed from this to operate the appliance and external circulating pump.

The pump MUST be wired to the appliance.

May need more notes when details are available.

The connection is made to the terminal block as described in section 3.8.1

2.8 WATER SYSTEMS

2.8.1 General

This appliance is designed for connection to the following types of indirect domestic systems:

- Fully pumped, sealed central heating systems.
- Fully pumped, open vented central heating systems.
- Combined, gravity domestic hot water and pumped central heating systems.

The domestic hot water cylinder must be of the indirect type with a separate feed and vent pipes. Single feed cylinders must not be used.

The pump, including isolation valves, should be fitted in the heating flow pipe from the appliance.

The pump should provide suitable flow to maintain an 11°C temperature rise between the pumped flow and return pipes connected to the appliance. Details of the appliance pressure drop are provided in Table 4.

System drain cocks should be fitted at the lowest points in the system in order to provide adequate drain points.

BS5442 provides information for the protection of the boiler due to freezing. A frost thermostat should be fitted to the system controls.

2.8.2 Requirements for open vented systems

A 22 mm copper vent pipe must be connected to the top of the boiler flow pipe and terminate above the cold feed/expansion tank. It must be suitably positioned to allow any discharge into the cold feed tank/expansion and must be on a continuous rise from the boiler flow pipe where it is connected.

The cold feed/expansion tank must have a capacity of at least 22 litres. The cold feed pipe from the cold feed/expansion tank should be 15 mm copper.

The cold feed/expansion tank should have a lid.

The bottom cold feed/expansion tank must be no less than 1.2 m and no more than 30 m above the top of the appliance.

2.8.3 Requirements for sealed water systems

A sealed system must only be filled by a competent person using one of the approved methods shown in fig. 3. The system design should incorporate the connections appro-

ALTERNATIVE METHODS OF FILLING A SEALED SYSTEM

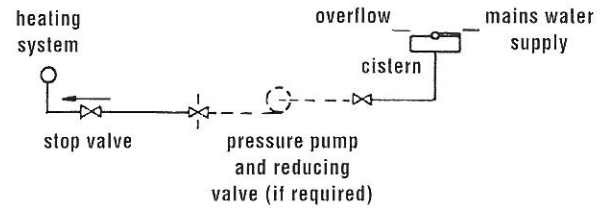
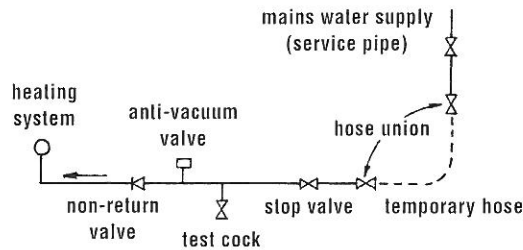


Fig. 3

appropriate to one of these methods. The system pressure must not be less than the static head of the system.

A **safety valve** set at 3 bar must be fitted to the flow pipe exiting the appliance. It should be as close to the appliance as practical and there shall be no restrictions between it and the appliance. It should be connected above or to the side of the pipe centre line in a position that is accessible for testing. The outlet from the valve should be routed so that any discharge, water or steam, does not cause a hazardous condition.

A **pressure gauge** must be fitted to allow the person filling the system to see it to control the fill pressure. A gauge with

a range of 0 to 5 bar; or similar, is suitable.

A suitable **expansion vessel** must be fitted to the system. It should be connected close to the inlet side of the circulating pump. Its size must be calculated in accordance with BS 5449: pt1: 1997.

TABLE 6

| | | | | |
|---|-----|-------|------|------|
| Vessel charge and initial system pressure | bar | 0.5 | 1.0 | 1.5 |
| | psi | 7.3 | 14.5 | 21.8 |
| Total water content of system if using an 8 l (1.76 gal) expansion vessel is used | l | 87 | 64 | 44 |
| | gal | 19.1 | 14.0 | 9.7 |
| To size the expansion vessel for other system capacities multiply the system volume by: | | .0833 | .109 | .156 |

The **hot water cylinder** must be an indirect type and be suitable to operate at pressure of 0.35 bar over the pressure at that of the safety valve, (3.35 bar minimum).

A single feed cylinder must not be used. A low level filling point must be provided which incorporates a stopcock.

Provision should be made to replace system water losses by either pre-pressurising the system or fitting a make up vessel at the highest point of the system. BS 5376: pt2: 1976.

2.8.4 Fully pumped

The heating system design should be based on the following information:

The appliance pressure drop details are given in Table 4.

A minimum flow rate corresponding to a heating differential of 11°C must be obtained at all times.

A heating by-pass should be fitted to ensure the previous condition is satisfied.

If thermostatic radiator valves are to be installed, at least one radiator should be installed without a thermostatic valve [usually the bathroom radiator].

The combined flow pipe (heating & hot water) should be connected to the 22 mm flow pipe, which exits the appliance at the rear, top right of the case (top manifold).

The combined return pipe (heating & hot water) should be connected to the 22 mm return pipe, which enters the appliance at the rear, top right of the case (bottom manifold).

SEALED WATER SYSTEM

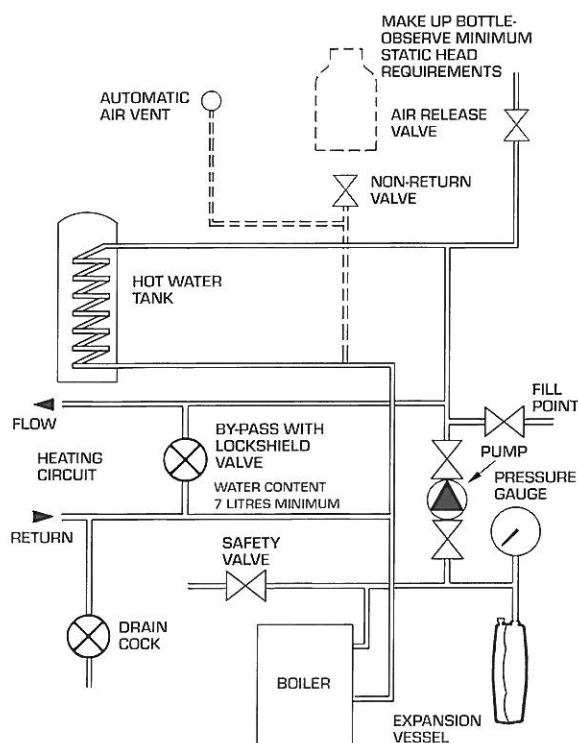


Fig. 4

TYPICAL SYSTEM DESIGN, FULLY PUMPED, OPEN VENTED.

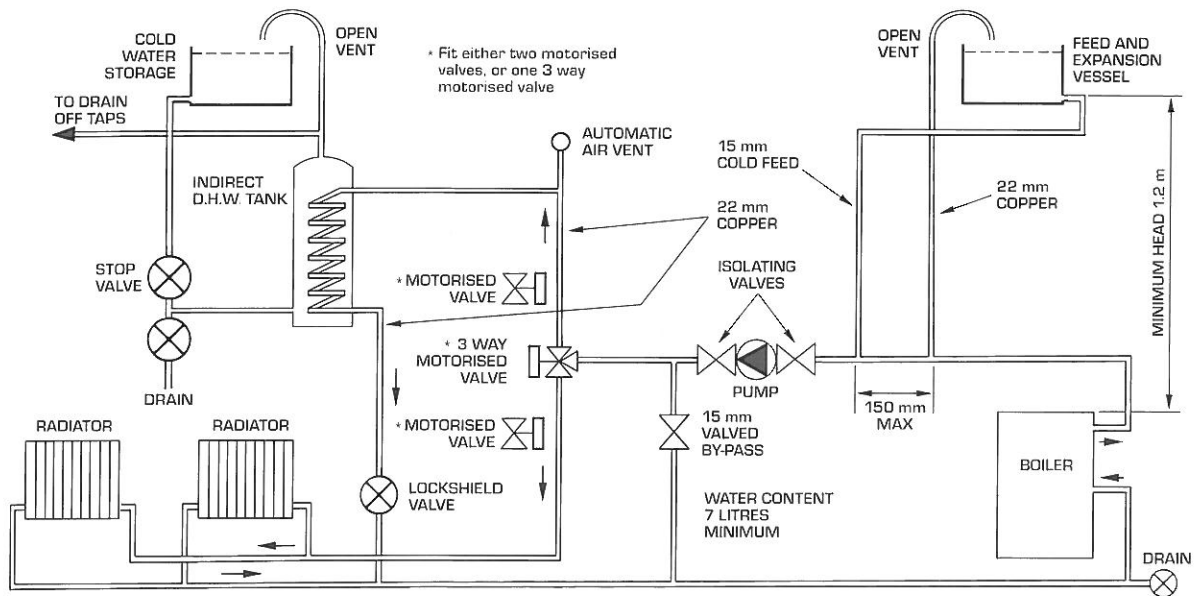


Fig. 5

2.8.5 Combined pumped C.H. & Gravity D.H.W. systems

When this option of system is chosen:

The gravity hot water pipes to the indirect hot water cylinder must be 28 mm diameter and be connected to each of the 28 mm connections on the flow and return manifold.

The pumped central heating pipes should be 22 mm diame-

ter and be connected to each of the 22 mm connections on the flow and return manifolds. A gravity system requires a minimum circulating head of 1 m assuming there is no horizontal pipe run. If horizontal pipe runs are required then an increase in head of 0.5 m is required for every additional 1 m of horizontal pipe. Further details are available in the current issues of BS5449 and BS6798.

COMBINED PUMPED C.H. & GRAVITY D.H.W. SYSTEM

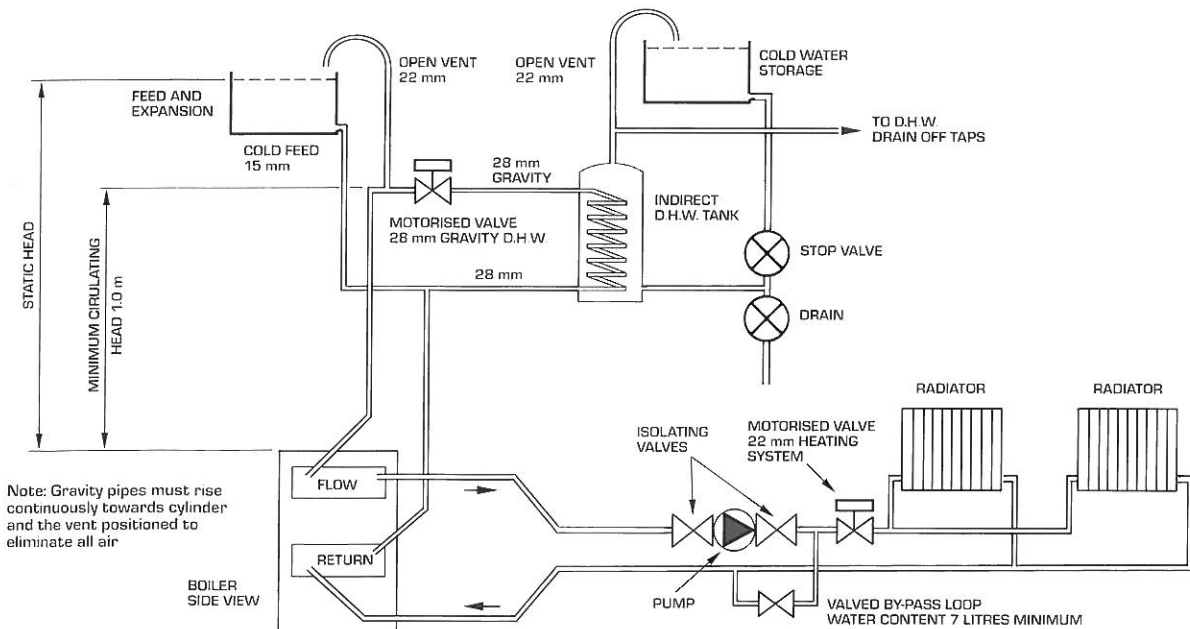


Fig. 6

3 INSTALLING THE BOILER

3.1 UNPACKING THE BOILER

The standard appliance is supplied in two cardboard carton. In addition up to two extension duct kits may be used. If the appliance is to be installed without access to the outside wall, the wall liner will also be required.

Unpack each carton and check the contents against the following lists:

Appliance package:

- Boiler (appliance + mounting frame)
- Installation, servicing and User instructions
- Wall template
- Fixing screws with wall plugs and washers

Flue package:

- Telescopic flue / terminal assembly
- Flue package [1 x gasket, 2 x 'O' rings, 4+3 screws]
- Flue elbow
- Inner and outer wall seal

3.2 PREPARING THE WALL

Before installing the appliance ensure that the chosen location is suitable [section 2.2] and the requirements for flue position [section 2.3], and minimum clearances, [Table 2] are satisfied. These minimum clearances are essential to provide access for servicing.

Fix the template to the wall in the chosen position.

Mark the position of the two upper fixing holes, the two lower fixing holes and the flue air duct hole on the appropriate wall. For side flue options it will be necessary to project a horizontal centre line along the rear wall to the side wall.

Drill the top two fixing holes using a 8 mm masonry drill. 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 129 mm diameter, which should be sealed with mortar.

The wall liner is available as an optional extra.

Drill the lower two fixing holes using a 8 mm masonry drill. Fit the plastic plugs provided.

3.3 HANGING THE BOILER

Remove the outer case securing screws, located at the bottom rear of the boiler, and lift the case off the appliance.

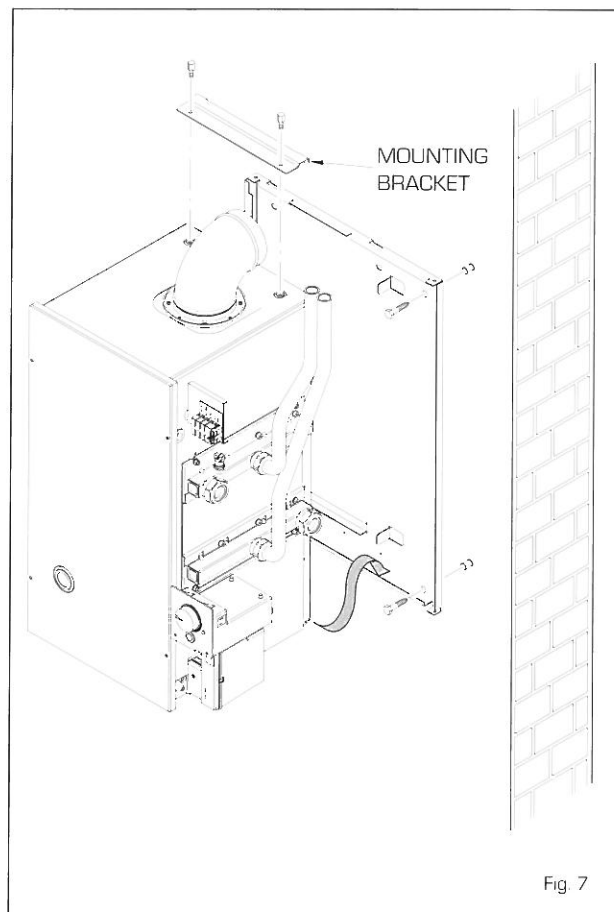
Remove the mounting bracket unscrewing the two screws and separate the sealed chamber from the boiler frame.

Fix the frame to the wall through the screws supplied and replace the sealed chamber and casing in position.

3.4 FLUE AND TERMINAL PREPARATION

If the wall thickness is less than 0.5 m [19 in] the flue/air duct may be fitted without access to the outside wall providing the optional wall liner kit is used.

[This consists of a steel pipe, 0.5 m long and 129 mm outside diameter with a 1 mm wall thickness].

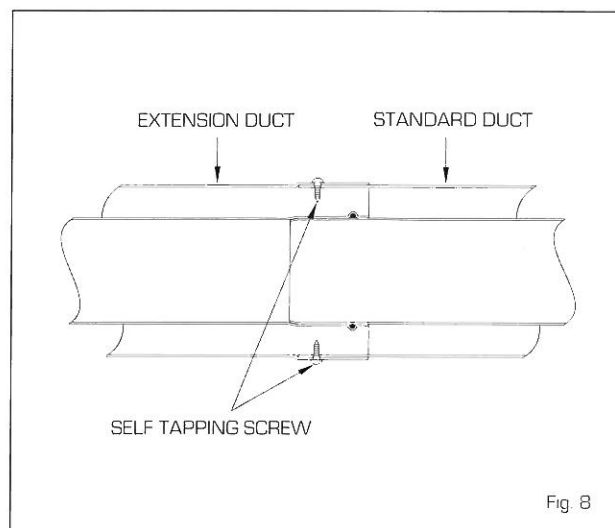


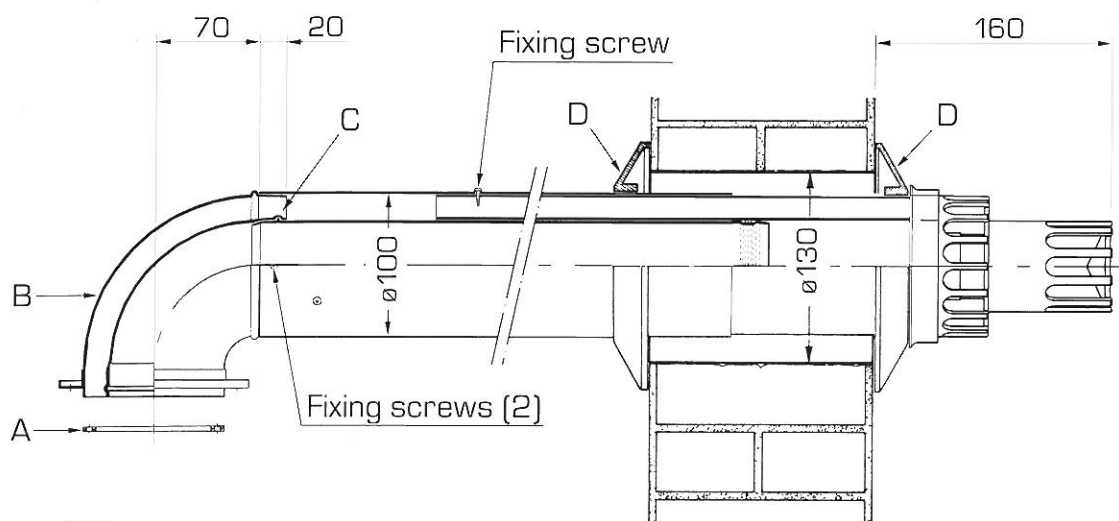
3.4.2 Cutting & Setting To The Correct Length

Determine whether an extension duct is required with reference to the Table 7.

NOTE: No flue extension can be used with the "Superior 90 MK II" model.

- If any extensions are required separate the two telescopic parts of the standard duct. Slide the swaged end of the extension duct over the painted (larger) part and fix in position with the two screws provided with the extension duct. Fit any further extension ducts in a similar manor. Ensure the inner flue ducts are correctly inserted and the 'O' ring





KEY

- A Gasket \varnothing 95/125 x 2
- B Elbow
- C O-ring
- D Rubber sealing ring

Fig. 10

seals are correctly located.

- Assemble the ducts to the turret ensuring the inner flue duct is correctly inserted. Do not fit the two 'O' ring seals at this stage. Fix in position with the two screws provided.
- Fit the remaining part of the standard duct into the extensions and adjust to the correct length. If the correct length cannot be achieved with the telescopic action of the flue, the end of the extension duct [air and flue] should be cut shorter. The telescopic action of the flue can then be used to achieve the overall correct length. Fix in position with the screw provided.

3.5. FLUE AND TERMINAL INSTALLATION

3.5.1 Installations from inside the room

Wall thickness up to 0.5 m [19 in] only, hole diameter 130 mm [19 in], sufficient to accept the optional wall liner kit.

- As previously detailed, a wall liner 129 mm diameter 500 mm [19 in] long is available as an optional extra for use when fitting the flue air duct from inside the building, [or where it is required to seal the hole through a cavity wall]. Cut the liner to the wall thickness, insert into the hole, and seal with mortar at inner and outer wall faces. Access to the outside can be made by inserting one's hand through the liner.
- Fit the rubber-sealing ring onto the largest diameter of the plastic terminal as shown in fig. 9. Ensure that it is the correct way around and spray the outside surface with talcum powder or soap solution to reduce friction.
- Remove the turret from the flue assembly.
- From inside the building slide the duct assembly into the wall liner until the sealing ring passes completely through the wall then pull the air duct back until the ring is pulled up to the wall surface.
- Proceed to section 3.5.3.

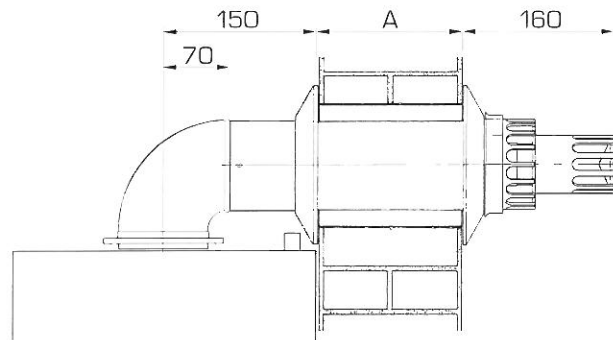
3.5.2 Installations from outside the building only

- Fit the rubber-sealing ring onto the largest diameter of the plastic terminal as shown in fig. 9. Ensure that it is the correct way around.
- Remove the turret from the flue assembly.
- From outside the building, slide the duct assembly into the wall until the sealing ring forms a good seal against the outside wall.

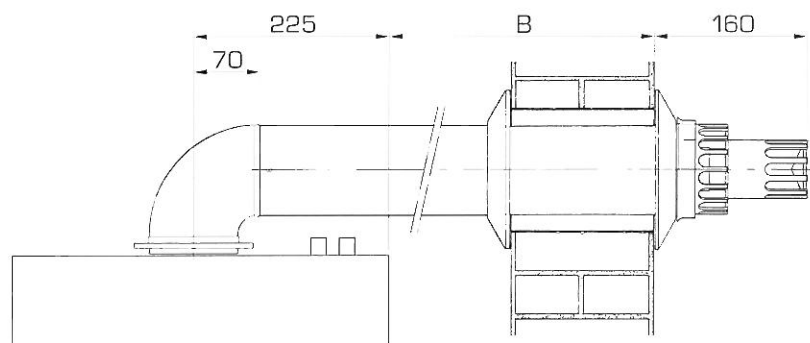
3.5.3 Connecting the duct assembly All installations

- From inside the building and with reference to fig. 9 slide on the second rubber-sealing ring. Check that the outer rubber-sealing ring is pulled up to the wall and that the duct assembly is horizontal, and then adjust the inner rubber-sealing ring to the correct position to retain the flue assembly in position.
- Fit the two red 'O' rings into the grooves in each end of the flue turret.
- Engage the flue turret into the air duct assembly, ensuring the 'O' ring is correctly located and the air duct meets up to the external swage on the turret.
- Secure together with the two self-cutting screws provided.
- Remove the five fixing screws securing the sealed chamber front panel then remove the panel.
- Place the gasket under the flange of the elbow and fit the elbow onto the top of the appliance, taking care to ensure that the 'O' ring seal is correctly located. This must be checked from inside the sealed chamber.
- Secure the elbow onto the top of the appliance using the four screws provided.
- Refit the sealed chamber front panel.

REAR FLUE OUTLET



R.H. SIDE FLUE OUTLET



L.H. SIDE FLUE OUTLET

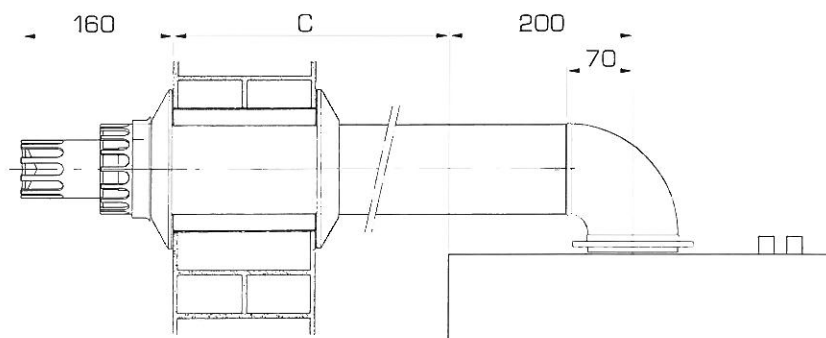


TABLE 7 - Maximum flue lengths (measured from appliance casing to outside wall face)

| | Rear outlet (A) | | R.H. side outlet (B) | | L.H. side outlet (C) | |
|-----------------------|-----------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|
| | mm | in | mm | in | mm | in |
| STANDARD FLUE KIT | 675 | 26 ¹ / ₂ | 600 | 23 ¹ / ₂ | 625 | 24 ¹ / ₂ |
| WITH 1 EXTENSION KIT | 1,495 | 58 ³ / ₄ | 1,420 | 56 | 1,445 | 57 |
| WITH 2 EXTENSION KITS | 2,305 | 90 ³ / ₄ | 2,230 | 87 ¹ / ₂ | 2,255 | 88 ³ / ₄ |

NOTE: No flue extension can be used with the "Superior 90 Mk.II" model

Fig. 9

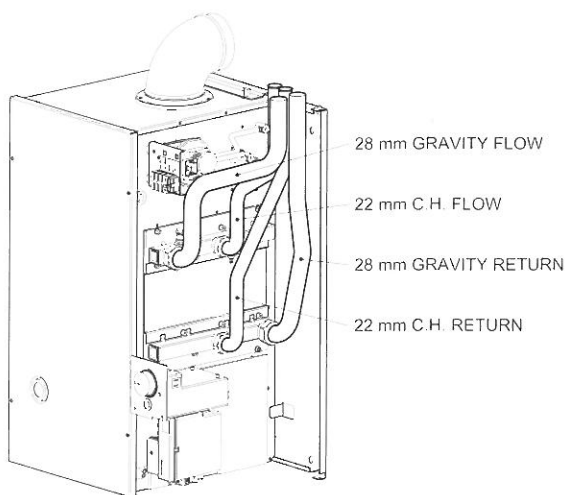
3.6 WATER CONNECTIONS

Detailed information is given in section 2.8

The appliance is supplied with a flow and return pipe [each 22 mm copper] exiting the case at the top, rear right hand corner. These are for the pumped side of a combined system or a fully pumped system.

If the appliance is to be installed on a combined system, the two 28 mm connections must be used for the gravity flow and return; the system may be connected directly to the 28 mm compression fittings on the boiler manifolds. Street elbows should be used immediately into the manifolds. The 22 mm pipes must remain in use for the pumped circuit.

WATER CONNECTIONS, COMBINED PUMPED CH & GRAVITY DHW



WATER CONNECTIONS, FULLY PUMPED

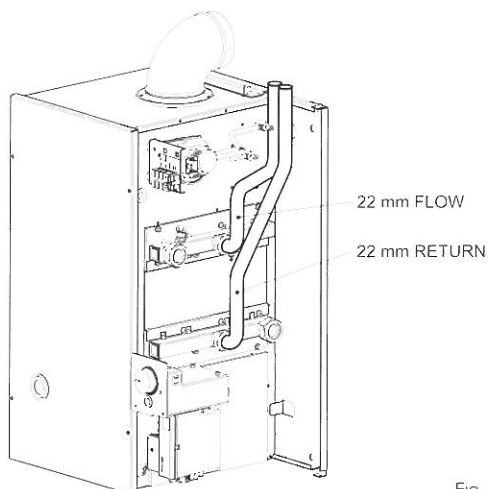


Fig. 11

3.7 GAS CONNECTIONS

The gas service cock is located at the bottom right hand side of the appliance. Connect the gas supply pipe to the Rc 1/2" connection using a suitable jointing compound. The pipe should be routed to the rear of the appliance prior to exiting downwards. This is to clear the decorative case. Fig. 16 shows the gas service cock.

3.8 WIRING INSTRUCTIONS

3.8.1 Boiler connections

The appliance electrical connections are situated at the top right hand side. This is a covered and fused terminal block with five connections. All installations require all connections to be used.

| | |
|-------------|--|
| Live | This should be a permanent live supply to the appliance |
| Earth | |
| Neutral | |
| Heat Demand | This should be the switched live supply to the appliance |
| Pump Live | The live supply to the pump must be connected to this. |

Fully pumped or combined pumped and gravity operation

The appliance is supplied ready for installation within a fully pumped heating/hot water system.

If the appliance is to be installed within a combined pumped and gravity system, the switch on the rear of the control box should be set to gravity.

ELECTRICAL CONNECTION BLOCK AND PUMPED/GRAVITY SWITCH

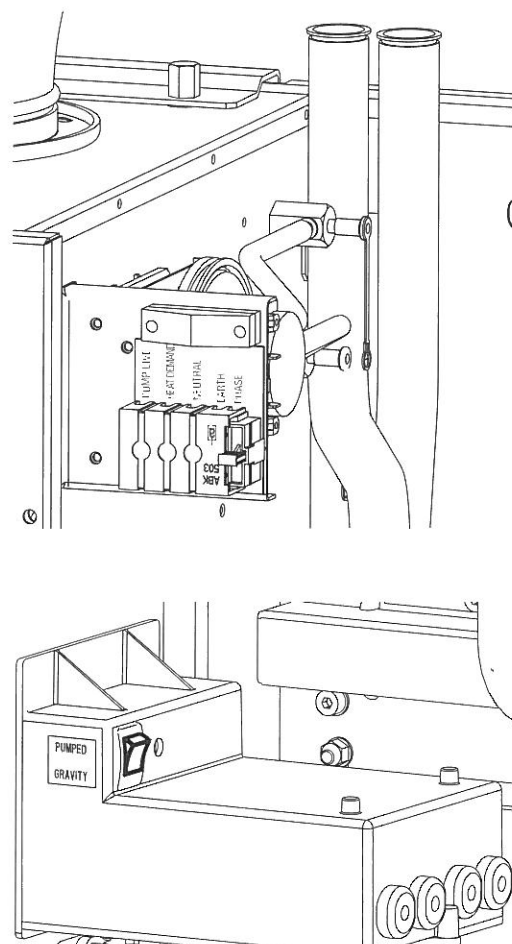
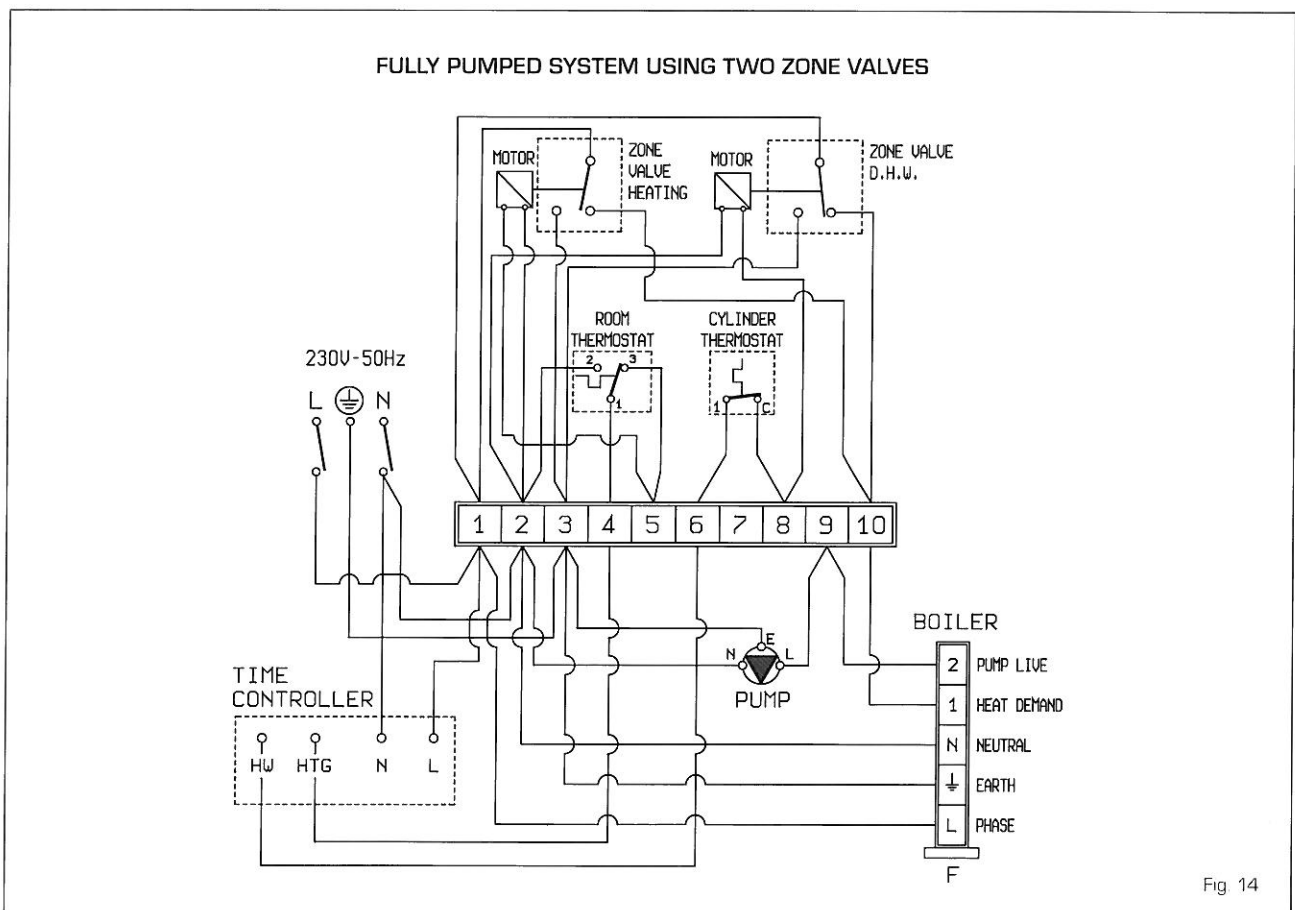
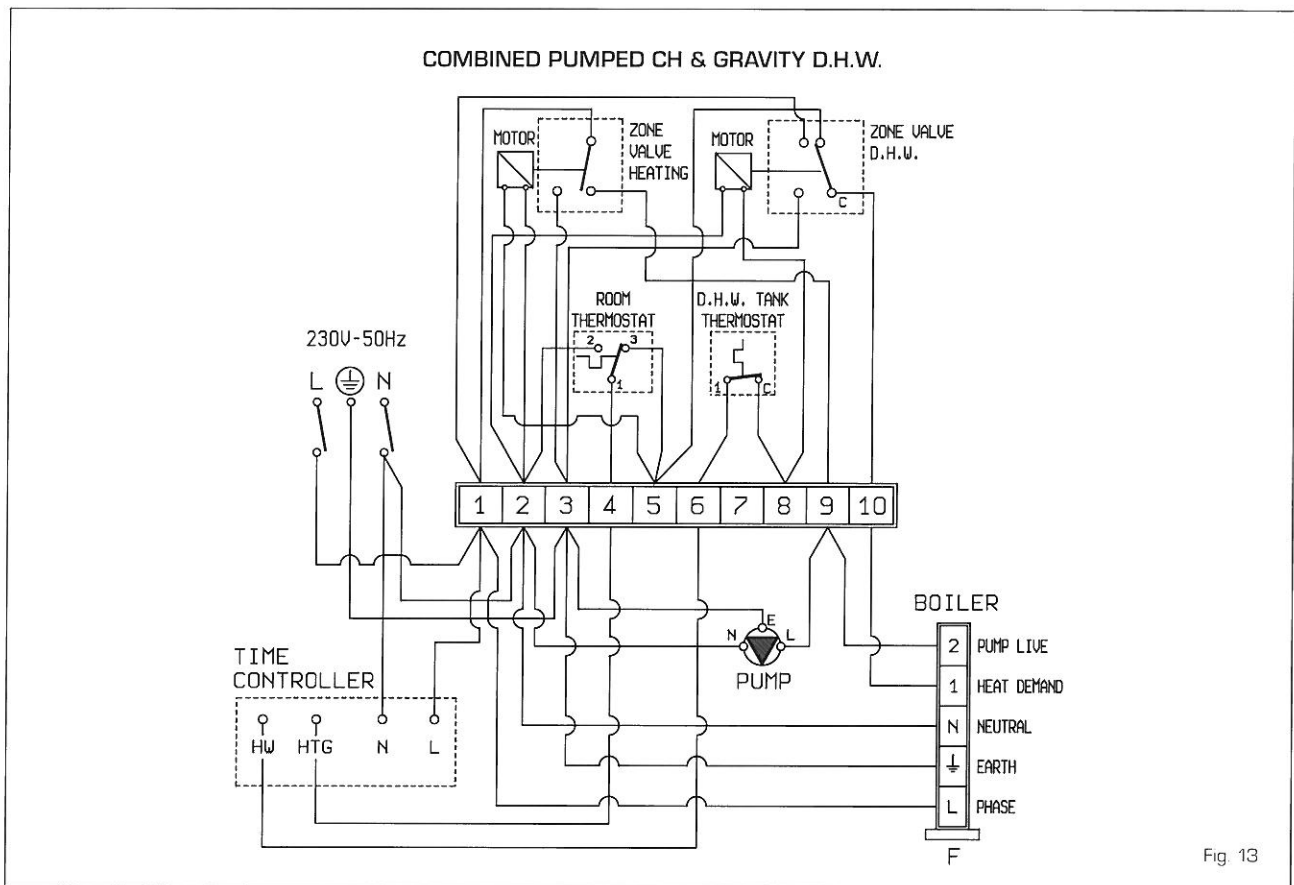


Fig. 12

3.8.2 Schematic system wiring diagrams



FULLY PUMPED SYSTEM USING MID POSITION ZONE VALVE

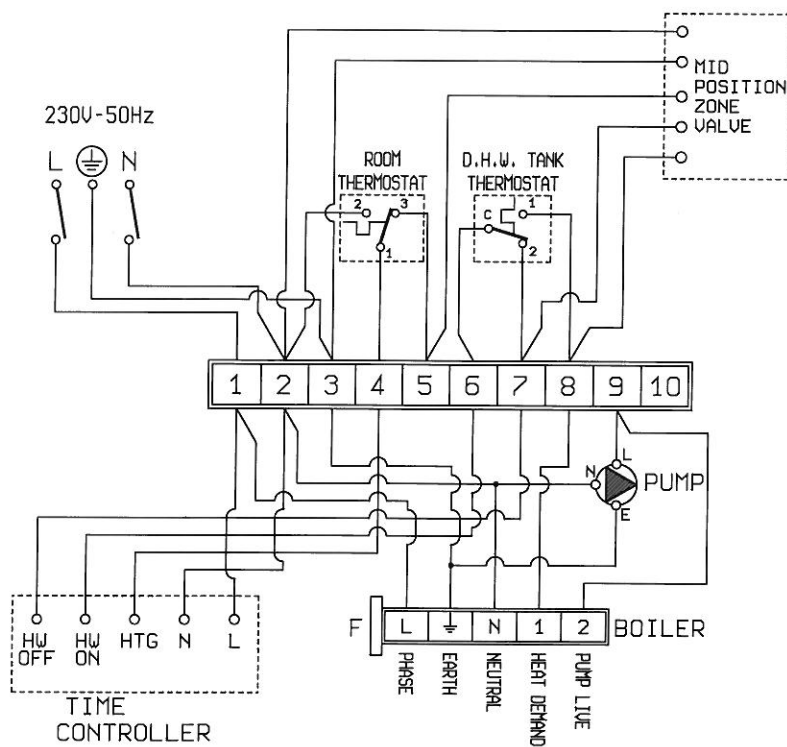


Fig. 15

4 COMMISSIONING AND TESTING

A competent person must carry out the following electrical system checks using a suitable test meter: earth continuity, polarity, resistance to earth and short circuit.

Before commissioning the appliance, the whole gas installation including the meter **MUST** be purged and tested for gas soundness in accordance with BS6891.

IMPORTANT: open all doors and windows, extinguish naked lights, and **DO NOT SMOKE** whilst purging the gas line.

Before commencing the commissioning procedure, ensure that the electricity supply is isolated and the gas service cock is turned on.

4.1 INITIAL WATER FILL AND LIGHTING THE APPLIANCE

- Open all the valves in the system and ensure the system and boiler are thoroughly flushed.
- Refill and vent the complete system and boiler and check for water leaks. Ensure all valves are open to complete this.
- Connect a suitable pressure test gauge to the test point, located on the gas valve.
- Set all external controls to on and turn on the electrical supply.
- Turn the boiler control to maximum and check the pump is operating correctly and water is circulating.
- After a short period the ignition lockout indicator will be illuminated, Press the reset button and turn off the boiler control.
- Turn on the gas supply.
- Turn the boiler control to maximum and check the boiler lights.
- Allow the boiler to operate for at least 2 minutes and check the burner pressure is in accordance with that specified on the data label.
- If adjustment is required, remove the cover from the top of the governor on the gas valve and adjust the burner pressure.
- Replace the cover and turn off the appliance.
- Remove the pressure test gauge and refit the sealing screw. Check for gas soundness with leak detection fluid.
- Make sure the external controls are fully operational and the complete system is controlled correctly. Balance the flow rates through the boiler, radiators and hot water tank. The complete system should now be allowed to heat to

maximum and a final check completed.

- Turn off the system and drain for the final time.
- Refill and vent the system completely.
- Set the boiler and external controls to a suitable setting.

4.2 ADDITIONAL OPERATIONS FOR SEALED SYSTEMS

Whilst the system is empty and cold, check the expansion valve is pre-charged to the desired pressure. This can be done using a tyre pressure gauge. Increase or reduce the pre-charge as required.

Following the Hot drain down, flush the system thoroughly and refill the system to a pressure of 1.5 bar.

Check the operation of the safety valve and check for leaks.

Whilst still cold, adjust the system pressure to that required. Set the pointer on the gauge to indicate the set pressure.

4.3 FINAL CHECKS

- Re-light and test for gas soundness.
- Re-fit the white outer casing and secure it at the bottom with the two screws provided.

4.4 USER'S INSTRUCTIONS

Upon completion of commissioning and testing the system, the installer should:

- Give the 'Users instructions' to the householder and emphasise their responsibilities under the Gas Safety [Installation and Use] Regulations 1998 [as amended] Explain and demonstrate the lighting and shutdown procedures.
- Advise the householder on the efficient use of the system, including the use and adjustment of all system controls.
- Advise the user of the precautions necessary to prevent damage to the system, and to the building, in the event of the system remaining inoperative during frost conditions.
- Explain the function of the boiler overheat control, and how to reset it.
- Emphasise that if cut out persists, the boiler should be turned off and the installer or service engineer consulted.
- Stress the importance of an annual service, by a regular heating engineer.

GAS VALVE SHOWING GAS PRESSURE TEST POINT, ADJUSTER AND GAS COCK

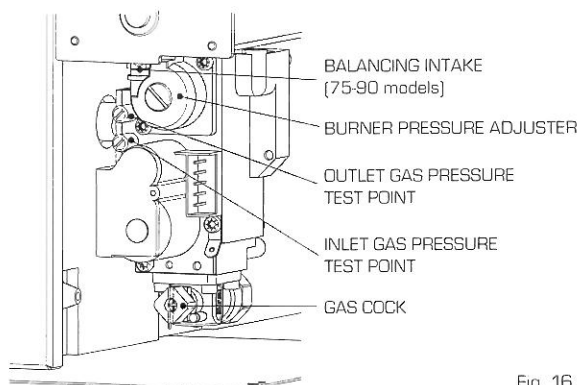


Fig 16

APPLIANCE CONTROLS

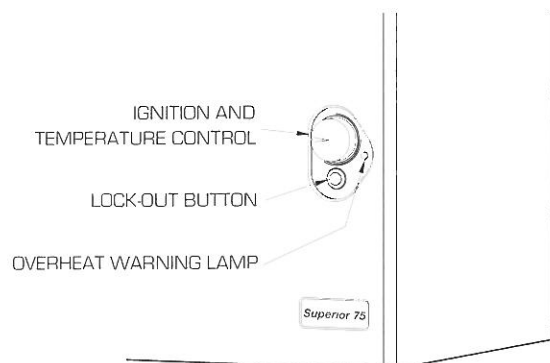


Fig 17

5 ROUTINE SERVICING INSTRUCTIONS

To ensure continued efficient operation of the appliance, it is recommended that it is checked and serviced as necessary at regular intervals.

The frequency of servicing will depend upon the particular installation conditions and usage but in general once a year should be adequate. It is the law that any service work must be carried out by registered personnel [C.O.R.G.I.].

Before commencing any service operation, ISOLATE the mains electrical supply, and TURN OFF the gas supply at the main service cock. Service the appliance by following the full procedure detailed below.

A flue products sampling point is located to the right hand side of the appliance.

This may be used to check the performance of the appliance prior to/instead of servicing.

It is the lower of the two fittings to which the air pressure switch is connected. The test equipment should be connected but not switched on before the appliance is in operation.

5.1 MAIN BURNER ASSEMBLY

- Remove the casing by unscrewing the retaining screws at bottom rear of the appliance and pulling the panel forwards, lifting it off the two pins at the top two corners.
- Remove the 4 fixing screws securing the sealed chamber front panel then remove the panel.
- Unscrew the 2 screws securing the combustion chamber front panel and remove the panel, taking care not to damage the insulation.
- Remove the red ignition control box from the gas valve, 1 screw.
- Unplug the ignition and detection leads from the ignition box, taking note of their respective position.
- Slide the burner forwards and at the same time feed the two wires through the grommet in the sealed chamber. Remove the burner complete with the electrodes and leads.
- Inspect and if necessary clean the electrodes and the main burner bars.
- Inspect the main injector for any signs of damage or debris and clean if necessary.

5.2 FAN ASSEMBLY

- Disconnect the electrical connections to the fan. Note the position of the earth conductor.
- Whilst supporting the fan, remove the three screws securing the fan to the mounting plate.
- Slide the fan downwards and once disengaged from the flue turret, remove it forwards
- Inspect the fan and clean if necessary.

5.3 HEAT EXCHANGER

- Remove the fan mounting plate, 2 screws.
- Remove each of the flue baffles by lifting them upwards, clear of the heat exchanger and clean if necessary.
- Inspect the heat exchanger and clean if necessary with a soft brush.

5.4 RE-ASSEMBLY

- Re-assemble all the components in reverse order.
- Check that the fan earth connection is correctly re-fitted. Note that the fan polarity [Line and Neutral] is immaterial.
- Ensure the ignition wires are correctly fitted and connected to the ignition control
- Ensure that all seals are correctly fitted.
- Fit the sealed chamber front panel
- Check for gas soundness before fitting the white casing.

5.5 RE-COMMISSIONING

- Turn on the gas supply, and check for gas soundness.
- Check the operation of the appliance and all the external controls.
- The burner pressure should be checked after at least 10 minutes running. The data label on the appliance states the details.
- Adjust if necessary as described in section 4.

6 FAULT FINDING

If an electrical fault occurs on the appliance the preliminary electrical system checks contained in the British Gas Multi-meter 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

6.1 EARTH CONTINUITY CHECK

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

6.2 SHORT CIRCUIT CHECK

Switches turned FULL ON meter set on Ω [ohm] x 1 scale and adjust the zero if necessary. Test leads from L to N on appliance terminal block, if meter reads 0 then there is a short circuit.

Meters set on Ω [ohm] x 100 scale and adjust the zero if necessary. Repeat it with leads from L to E. If meter reads less than infinity [∞] 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.

6.3 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. 230 V ac.
- Test leads from L to E meter reads approx. 230 V ac.
- Test leads from N to E meter reads from 0 to 15 V ac.

6.4 RESISTANCE TO EARTH CHECK

Appliance must be disconnected from main supply and meter set on Ω [ohm] x 100 scale and adjust the zero if necessary. All switches including thermostat on test leads from L to E – if meter reads other than infinity [∞] 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 faultfinding procedure. On completion of the service/fault finding task which has required the breaking and remaking of electrical connections then the checks 6.1 Earth continuity, 6.3 Polarity and 6.4 Resistance to earth must be repeated.

6.5 FAULT FINDING

Before proceeding through this fault finding guide:

- 1) ensure all connections to the electronic circuit board and the 12 way connector to the ignition device are correctly fitted.
- 2) Position the temperature control completely anticlockwise.

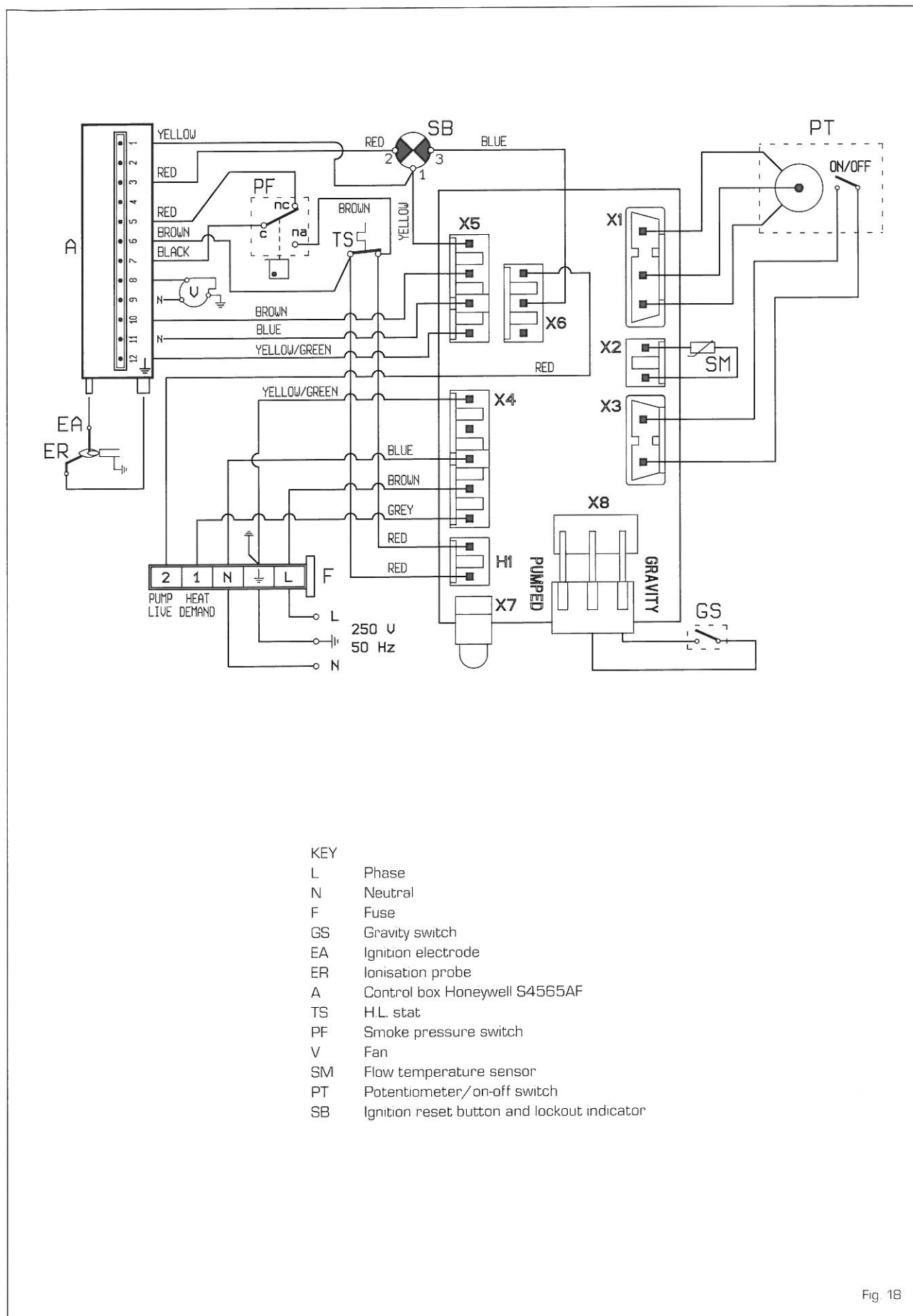
- 3) Turn ON external gas and electricity supplies.
- 4) Ensure there is 230 V at the permanent live "PHASE" on the installation terminal block.
- 5) Ensure there is 230 V at the switched live "HEAT DEMAND" on the installation terminal block. A link between terminals "PHASE" and "HEAT DEMAND" will simulate the external controls being ON.

NOTE: A 3 minutes anti-cycle device is incorporated in the boiler control

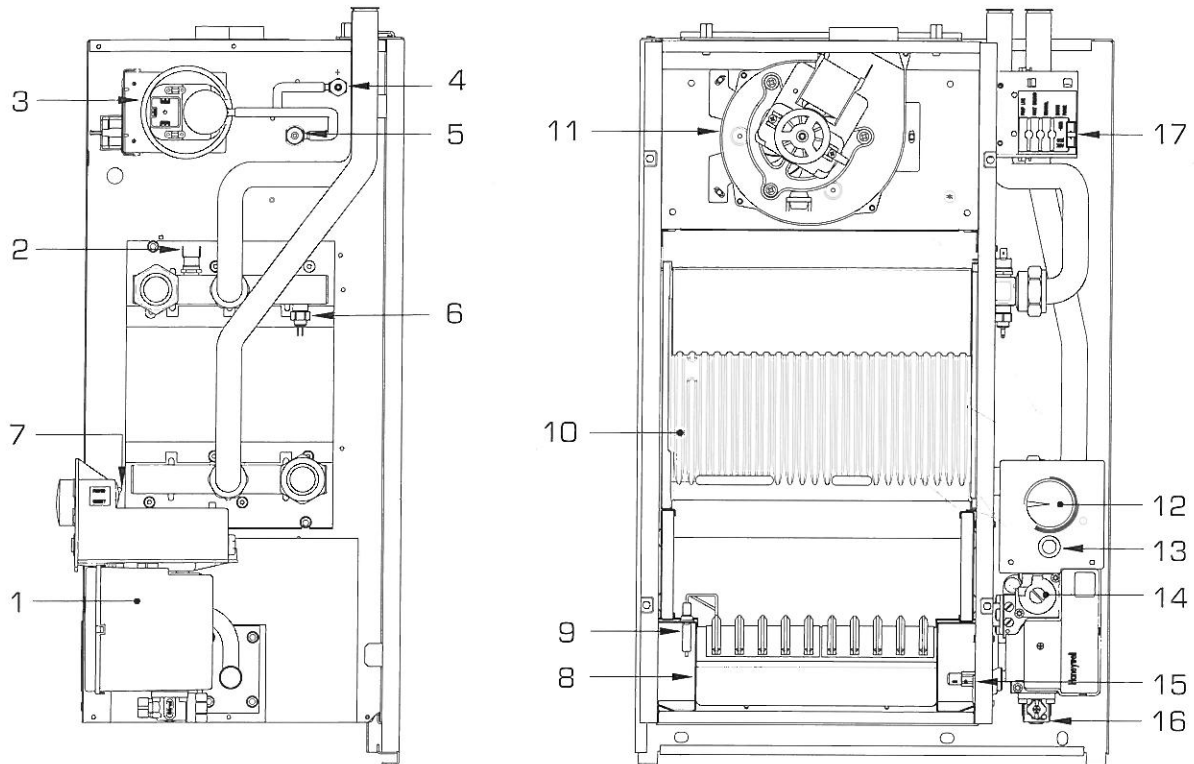


7 WIRING DIAGRAM AND INTERNAL VIEW

7.1 FUNCTIONAL FLOW WIRING DIAGRAM



7.2 INTERNAL VIEW



KEY

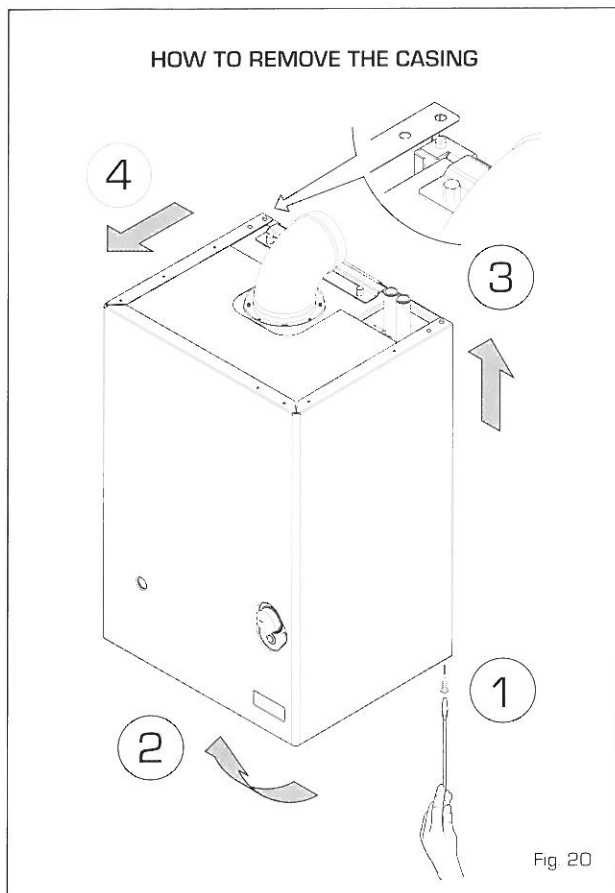
- | | |
|--------------------------------|---------------------------------------|
| 1 Igniter PCB. | 9 Ignition electrode/ionisation probe |
| 2 Safety stat 105°C | 10 Cast-iron exchanger |
| 3 Air pressure switch | 11 Fan |
| 4 Positive pressure test point | 12 On/Off switch - Potentiometer |
| 5 Negative pressure test point | 13 Lock-out button |
| 6 Thermistor | 14 Gas valve |
| 7 Pumped/gravity switch | 15 Main gas nozzle |
| 8 Main burner assembly | 16 Gas cock |
| | 17 Terminal strip |

Fig. 19

8 REPLACEMENT OF PARTS

Before commencing any service operation, ISOLATE the mains electrical supply, and TURN OFF the gas supply at the main service cock. It is the law that any service work must be carried out by registered personnel [C.O.R.G.I.].

Following the replacement of any components the appliance should be re-commissioned as detailed in section 4.



8.1 AIR PRESSURE SWITCH

- Remove the casing by unscrewing the retaining screws at bottom rear of the appliance and pulling the panel forwards, lifting it off the two pins at the top two corners.
- Disconnect the three wires from the air pressure switch, noting their position.
- Pull off the two sensing tubes.
- Unscrew the two screws retaining the air pressure switch and its bracket and remove the assembly.
- Remove the air pressure switch from its mounting bracket, 2 screws.
- Replace the air pressure switch and re-assemble in reverse order. Ensure the sensing tubes and electrical connections are correctly fitted.

8.2 LIMIT THERMOSTAT

- Remove the casing by unscrewing the retaining screws at bottom rear of the appliance and pulling the panel forwards, lifting it off the two pins at the top two corners.
- Disconnect the two wires from the thermostat.
- Unscrew the thermostat from the manifold.
- Replace the thermostat and re-assemble in reverse order.

8.3 CONTROL TEMPERATURE SENSOR

- Remove the casing by unscrewing the retaining screws at bottom rear of the appliance and pulling the panel forwards, lifting it off the two pins at the top two corners.
- Disconnect the two wires from the control sensor.
- Unscrew the control sensor from the manifold.
- Replace the control sensor and re-assemble in reverse order.

8.4 IGNITION CONTROL BOX

- Remove the casing by unscrewing the retaining screws at bottom rear of the appliance and pulling the panel forwards, lifting it off the two pins at the top two corners.
- Unscrew the screw retaining the cover of the control box, unplug the connector and remove the control box.
- Replace it and re-assemble in reverse order.

8.5 ELECTRONIC PCB

- Remove the casing by unscrewing the retaining screws at bottom rear of the appliance and pulling the panel forwards, lifting it off the two pins at the top two corners.
- Remove the cover of the control panel by unscrewing the rear screw, lift it off the two front pins and turn upside-down to gain access to the electronic PCB.
- Unplug the connectors and remove the PCB by unscrewing the retaining screws.
- Replace the electronic PCB and re-assemble in reverse order.

8.6 GAS VALVE

- Remove the casing by unscrewing the retaining screws at bottom rear of the appliance and pulling the panel forwards, lifting it off the two pins at the top two corners.
- Remove the cover of the control panel by unscrewing the rear screw, lift it off the two front pins to gain access to the screws blocking the lower support of the control panel; unscrew them to remove the control panel.
- Remove the ignition control box from the gas valve, 1 screw.
- Close the gas cock under the gas valve; disconnect it from the valve (4 screws) and disconnect the pipe connecting the gas valve to the sealed chamber (4 screws).
- Replace the gas valve and re-assemble in reverse order.

8.7 MAIN BURNER

- Remove the casing by unscrewing the retaining screws at bottom rear of the appliance and pulling the panel forwards, lifting it off the two pins at the top two corners.
- Remove the 4 fixing screws securing the sealed chamber front panel then remove the panel.
- Unscrew the 2 screws securing the combustion chamber front panel and remove the panel, taking care not to damage the insulation.
- Remove the red ignition control box from the gas valve, 1 screw.
- Unplug the ignition and detection leads from the ignition

box, taking note of their respective position.

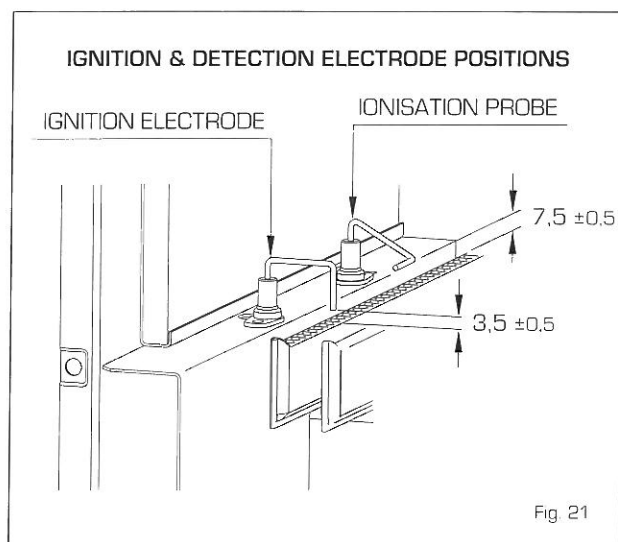
- Slide the burner forwards and at the same time feed the two wires through the grommet in the sealed chamber. Remove the burner complete with the electrodes and leads.
- Unscrew and remove each electrode
- Fit the existing electrodes to the new burner, ensuring their correct position.
- Re-assemble all the components in reverse order.

8.8 IGNITION ELECTRODE

- Remove the ignition electrode [front] as detailed in section 8.7
- Replace the ignition electrode and re-assemble in reverse order.

8.9 DETECTION ELECTRODE

- Remove the detection electrode [front] as detailed in section 8.7.
- Replace the detection electrode and re-assemble in reverse order.



8.10 MAIN BURNER INJECTOR

- Remove the main burner as detailed in section 8.7, without removing the electrodes from the burner
- Unscrew and remove the injector from the gas manifold, working from within the sealed chamber.
- Replace the injector and re-assemble in reverse order.

8.11 COMBUSTION FAN

- Remove the casing by unscrewing the retaining

screws at bottom rear of the appliance and pulling the panel forwards, lifting it off the two pins at the top two corners.

- Remove the 4 fixing screws securing the sealed chamber front panel then remove the panel.
- Unscrew the 2 screws securing the combustion chamber front panel and remove the panel, taking care not to damage the insulation.
- Disconnect the electrical connections to the fan. Note the position of the earth conductor.
- Whilst supporting the fan, remove the three screws securing the fan to the mounting plate.
- Slide the fan downwards and once disengaged from the flue turret, remove it forwards.
- Replace the fan and re-assemble in reverse order.

8.12 BURNER VIEWING WINDOW

- Remove the casing by unscrewing the retaining screws at bottom rear of the appliance and pulling the panel forwards, lifting it off the two pins at the top two corners.
- Remove the 4 fixing screws securing the sealed chamber front panel then remove the panel.
- Push out the broken viewing window from the inside if the front panel.
- Remove all debris from the retaining seal.
- Replace the viewing window and re-assemble in reverse order.

8.13 COMBUSTION CHAMBER INSULATION

The design of this appliance is such that the rear insulation panels do not normally require replacement unless mechanically damaged.

IMPORTANT:

When handling insulation panels, take care to avoid producing or inhaling dust particles. When removing old panels. Dampen with water to minimise dust.

- Remove the casing by unscrewing the retaining screws at bottom rear of the appliance and pulling the panel forwards, lifting it off the two pins at the top two corners.
- Remove the 4 fixing screws securing the sealed chamber front panel then remove the panel.
- Unscrew the 2 screws securing the combustion chamber front panel and remove the panel.
- Replace the front panel insulation panel.
- The side insulation panels may be replaced by sliding them forwards, clear of their retaining metalwork.
- Re-assemble the components in reverse order. If the rear insulation panels are to be removed, the fan, fan mounting plate, heat exchanger baffles and air pressure sensing probe should be removed first.
- The rear panels can now be removed.
- Replace, fitting the lower piece from the bottom and the upper two from the top.

9 SHORT LIST OF PARTS

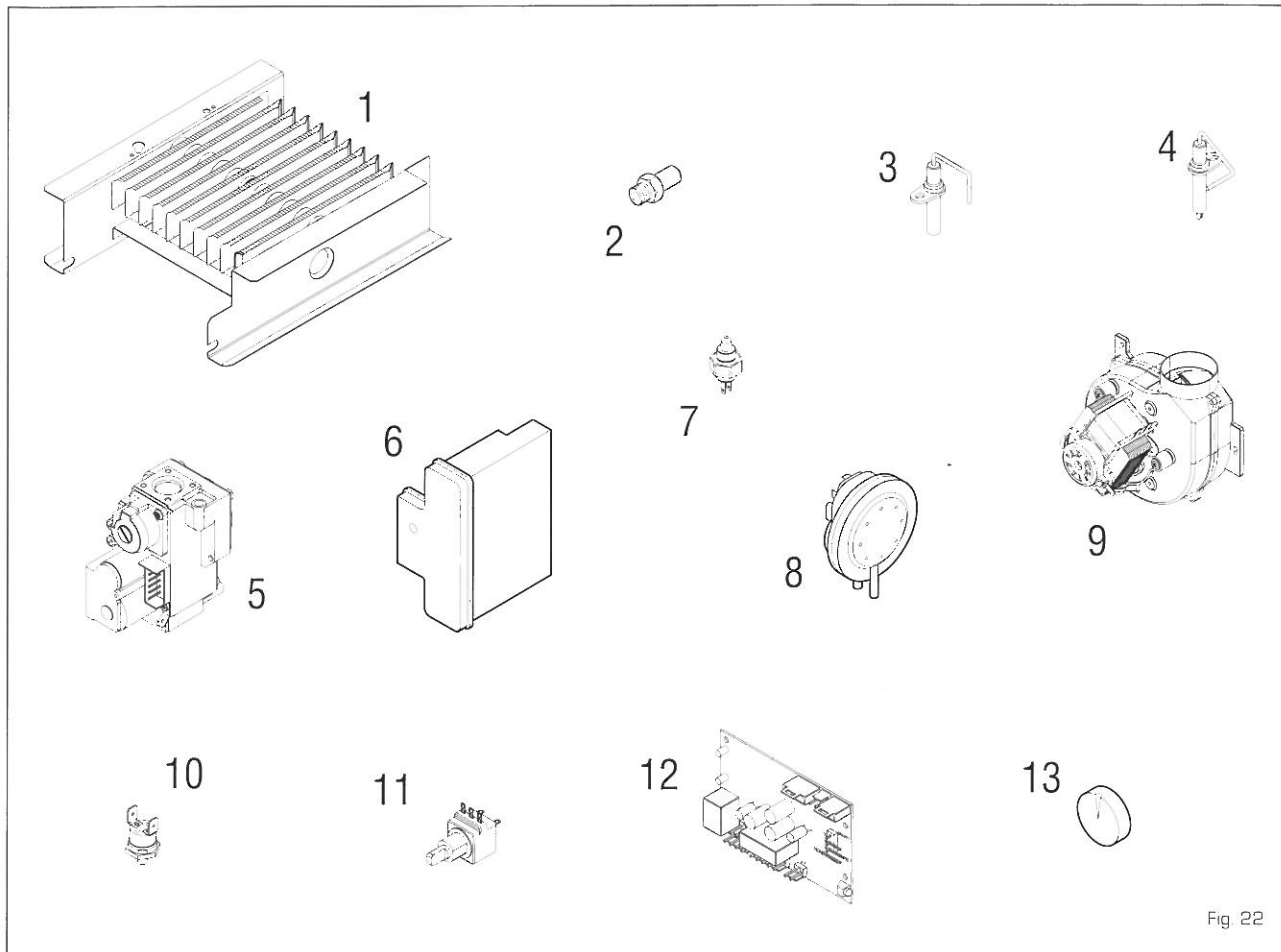


Fig 22

| KEY | G.C. PART NO | DESCRIPTION | NO OFF | MAKER'S PT NO |
|-----|--------------|----------------------------|--------|---------------|
| 1 | | Main Burner 40 | 1 | 5189800 |
| 1 | | Main Burner 50-60 | 1 | 5189801 |
| 1 | | Main Burner 75-90 | 1 | 5189802 |
| 2 | | Main Injector 40 | 1 | 6050225 |
| 2 | | Main Injector 50 | 1 | 6050230 |
| 2 | | Main Injector 60 | 1 | 6050233 |
| 2 | | Main Injector 75 | 1 | 6050239 |
| 2 | | Main Injector 90 | 1 | 6050264 |
| 3 | | Ignition Electrode | 1 | 6235926 |
| 4 | | Detection Electrode | 1 | 6235925 |
| 5 | | Honeywell Gas Valve | 1 | 6243815 |
| 6 | | Honeywell Ignition Control | 1 | 6210201A |
| 7 | | Temperature Sensor | 1 | 6231354 |
| 8 | | Air Pressure Switch 40 | 1 | 6225713 |
| 8 | | Air Pressure Switch 50-90 | 1 | 6225715 |
| 8 | | Air Pressure Switch 60-75 | 1 | 6225700 |
| 9 | | Fan 40-50 | 1 | 6225617 |
| 9 | | Fan 60 | 1 | 6225618 |
| 9 | | Fan 75-90 | 1 | 6225619 |
| 10 | | Safety Thermostat | 1 | 6146716 |
| 11 | | Potentiometer | 1 | 6287700 |
| 12 | | Electronic PCB | 1 | 6230640 |
| 13 | | Knob | 1 | 6230921 |

USER INSTRUCTIONS

VERY IMPORTANT!

PLEASE MAKE SURE YOUR LOG BOOK ENCLOSED IS FILLED IN CORRECTLY.

ALL CORGI REGISTERED INSTALLERS CARRY A CORGI ID CARD.

BOTH SHOULD BE RECORDED IN YOUR CENTRAL HEATING LOG BOOK.

YOU CAN CHECK YOUR INSTALLER IS CORGI REGISTERED

BY CALLING ON 01256 372300

2 YEAR GUARANTEE

IN ORDER TO OBTAIN THE SECOND YEAR'S COVER,

PLEASE REGISTER YOUR BOILER BY SENDING IN THE ENCLOSED GUARANTEE CARD,

OR PHONING OUR SERVICE DEPARTMENT WITH THE DETAILS ON: 01246 471950

OPERATING INSTRUCTIONS FOR THE USER

GAS SAFETY [INSTALLATION AND USE] REGULATIONS [as amended]. It is the law that a registered person, in accordance with the above regulations, installs all gas appliances. Failure to install appliances correctly could lead to prosecution. It is in your own interest, and that of safety, to ensure that the law is complied with.

It is essential that the appliance be correctly earthed.

An electricity supply of 230 V ~ 50 Hz fused at 3 A is required.

Read these instructions carefully before attempting to operate the appliance.

1.1 INTRODUCTION

The Sime "Superior Mk.II" are a range of wall mounted cast iron boilers. They utilise a fully automatic ignition system together with electronic temperature control. The combustion system is fan assisted and uses a concentric flue and air

duct that can exit the boiler to either side or to the rear, ending in a small balanced flue terminal on the outside wall.

The appliance is suitable for use with natural gas.

1.2 APPLIANCE OPERATION

The installation engineer will have set the range rated appliance to the correct heating requirement for the property. There should be no need to adjust the boiler control once it has been set unless the temperature set point needs to be increased or decreased. The thermostat knob will adjust the set point temperature of the electronic controls in the appliance. Turning clockwise increases the set point.

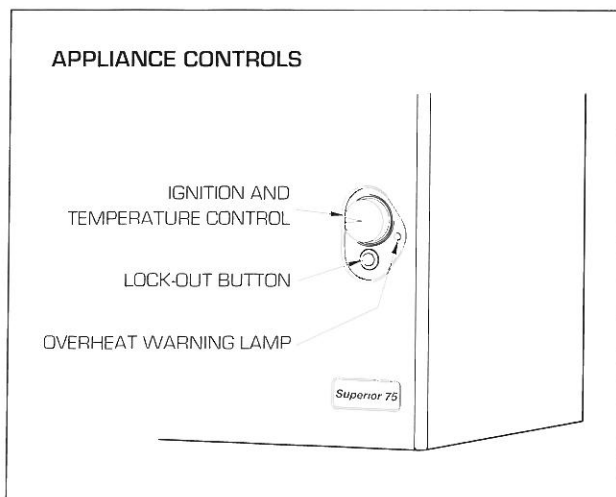
A demand for heat from the external controls will:

- check the air pressure switch,
- start the fan,
- confirm correct air flow through the appliance,
- start the spark generator,
- open the gas valve,
- ignite and prove the flame,
- monitor the appliance flow temperature, switching the appliance on and off as necessary.
- should the appliance fail to light, the lockout button will illuminate.

1.3 OPERATING INSTRUCTIONS

1.3.1 To light the appliance

- Turn on the electrical supply and set all external controls to on.
- Turn the boiler control to maximum and check the pump is operating correctly and water is circulating.
- After a short period the ignition lockout indicator will be illuminated, after a 10 second wait depress the lockout button to reset the ignition sequence. Turn off the boiler con-



trol.

- Turn on the gas supply.
- Turn the boiler control on, and to maximum. Check the boiler lights.
- Set the boiler control to the required temperature for the maximum boiler flow. Turning clockwise increases the set point temperature.
- Make sure the external controls are fully operational and the complete system is controlled correctly.

1.3.2 To turn the appliance off

The appliance may need to be switched off for short periods. If required the boiler control may be rotated to the 'O' position which will prevent the appliance from operating in the event of a demand from any external controls.

If the appliance is to be switched off for long periods the boiler control should be rotated to 'O' and the electrical supply to the complete system should be isolated.

If the appliance is to be switched off for a prolonged length of time during severe cold conditions then it is recommended that the complete heating system and appliance is drained to prevent freezing. A service engineer would normally be required for this.

If a frost thermostat is fitted to the heating system, no draining of the system is required, leave the appliance switched on at its minimum on position and turn any external timer controls off. This will allow the appliance to operate via the frost thermostat and prevent the system from freezing.

1.4 MINIMUM CLEARANCES

The following MINIMUM CLEARANCES must be available for servicing the appliance:

| | mm | in |
|-----------------------------------|-----|-----|
| ABOVE THE APPLIANCE CASING | 200 | 8 |
| AT THE R.H.S. | 5 | 1/4 |
| AT THE L.H.S. | 5 | 1/4 |
| BELOW THE APPLIANCE CASING | 100 | 4 |
| IN FRONT OF THE APPLIANCE | 450 | 18 |

1.5 ROUTINE SERVICING

To ensure continued efficient operation of the appliance, it is recommended that it is checked and serviced as necessary at regular intervals.

The frequency of servicing will depend upon the particular installation conditions and usage but in general once a year should be adequate. It is the law that any service work must be carried out by a registered person (C.O.R.G.I.).

1.6 GENERAL INFORMATION

1.6.1 Appliance overheat thermostat

The appliance is fitted with a safety cutout thermostat. In the event of the appliance overheating this will prevent the appliance from functioning.

If this occurs, both the overheat warning lamp and the ignition lock out indicator will illuminate. Allow the appliance to cool, depress the ignition-reset button and turn the rotary control to 'O'. Switch the electricity supply to the appliance off, this will reset the overheat warning lamp. Switch the electricity supply to the appliance on and reset the rotary control to its original position. If the external controls are calling for heat, the appliance will perform an ignition sequence and the burner will light.

If the situation is repeated, turn off the electrical supply and consult your installer or a service engineer.

1.6.2 Electrical supply

An interruption in the electrical supply whilst the burner is alight may cause the overheat thermostat to operate. If this happens and the electrical supply is restored whilst in this condition, the warning lamps may illuminate after an ignition sequence (refer to section 1.6.1). However should the electrical supply be restored after the appliance has cooled, normal operation will be restored.

1.6.3 Cleaning

Use only a damp cloth and mild detergent to clean the appliance outer casing. Do not use abrasive cleaners. It is recommended to clean the outer case when the appliance is cold.

1.7 SAFETY

It is essential that the instructions in this book are strictly followed for the safe and economical operation of this appliance. The appliance functions as a fan assisted balanced flue unit. The flue terminal **MUST NOT BE OBSTRUCTED** under any circumstances. If damaged, turn off the appliance and consult the installer, service engineer or gas supplier. If it is known or suspected that a fault exists on the appliance it **MUST NOT** be used until a competent person has rectified the fault.

WARNING: IF A GAS LEAK IS SUSPECTED OR EXISTS, TURN OFF THE GAS SUPPLY TO THE APPLIANCE AT THE GAS SERVICE COCK. DO NOT OPERATE ANY ELECTRICAL SWITCHES. DO NOT OPERATE ANY ELECTRICAL APPLIANCES. OPEN ALL WINDOWS AND DOORS. DO NOT SMOKE. EXTINGUISH ALL NAKED LIGHTS. CONTACT THE GAS SUPPLIER IMMEDIATELY.