

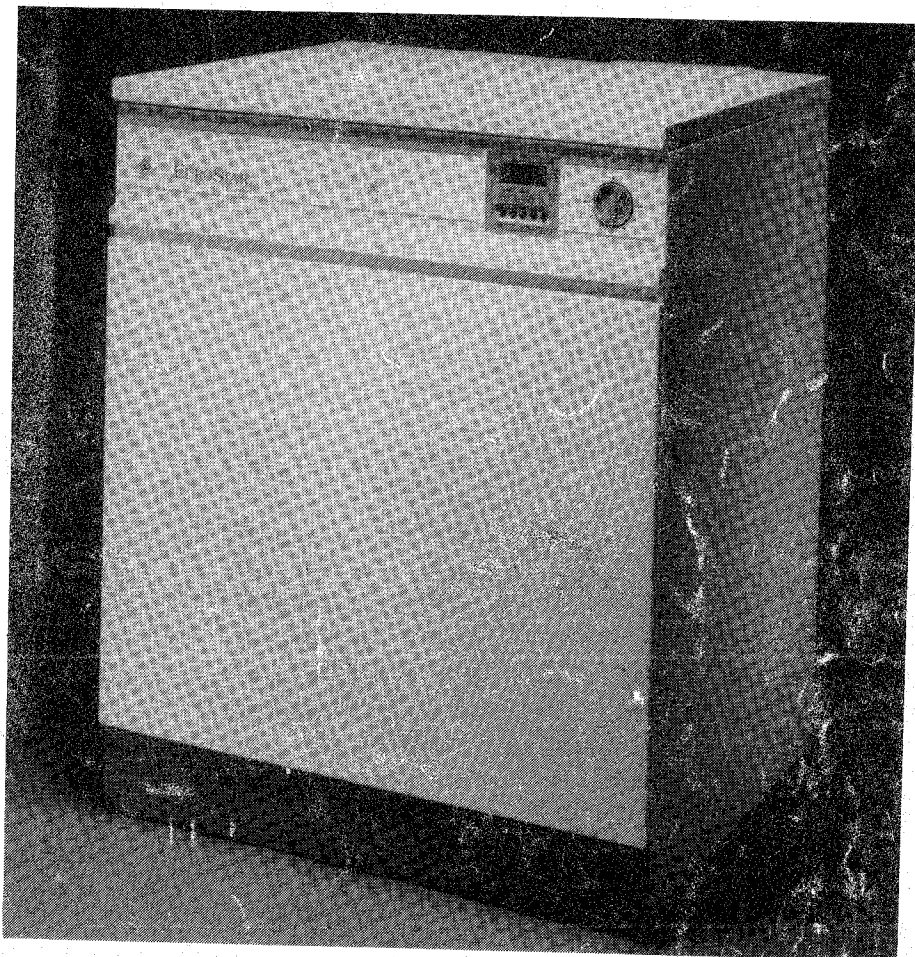
E/Star 70 mk II

2230

TRIANCO

Eurostar Combi

3-Port Pump 208072



Model shown with optional programmer kit

Reverse pump upto

300/96

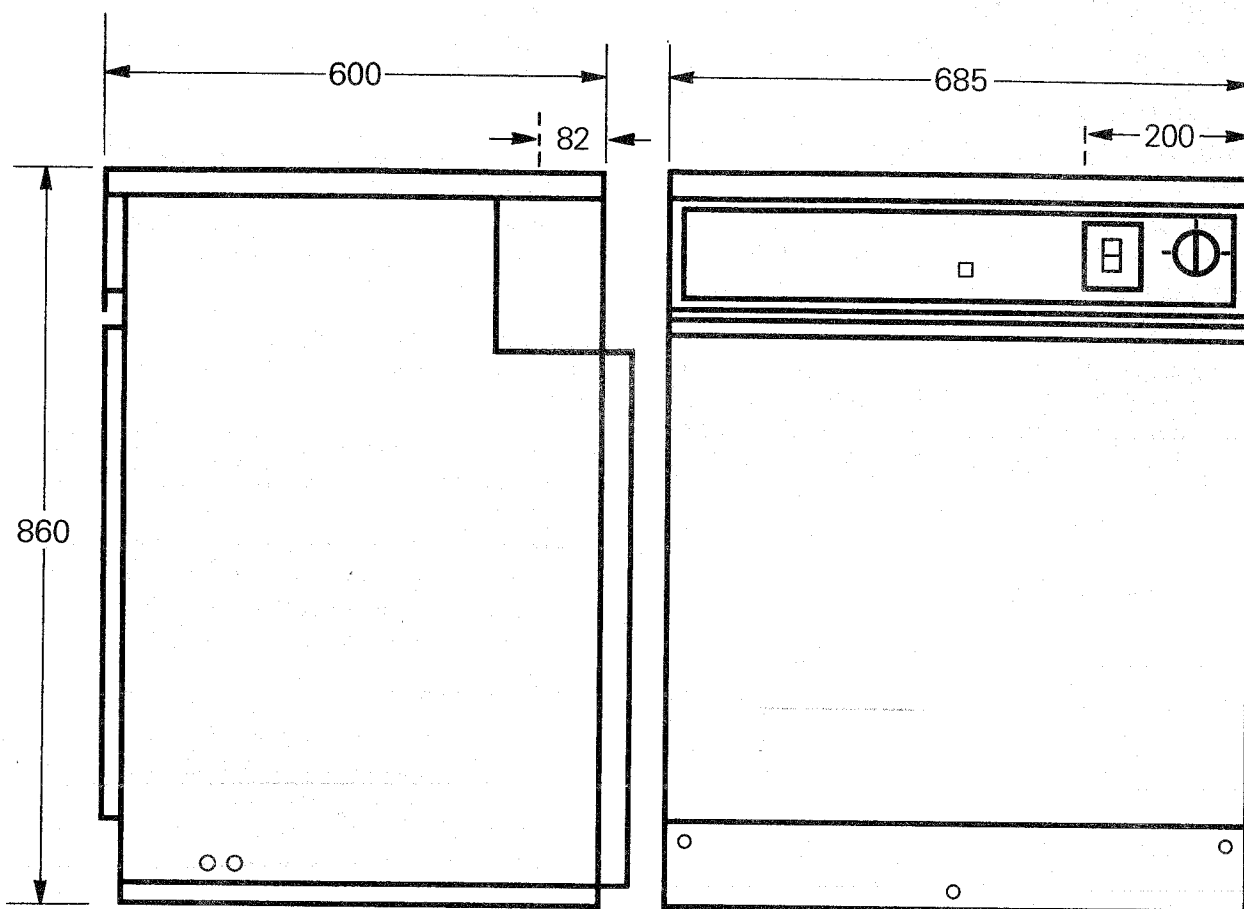
**USER INSTALLATION
COMMISSIONING & SERVICING
INSTRUCTIONS**

To be retained by the householder.

To be retained by householder

TECHNICAL DATA

[illegible]



SPACE REQUIRED FOR INSTALLATION AND MAINTENANCE		
REAR	NIL (mm)	NIL (in)
SIDE LH/RH	20 (mm)	$\frac{3}{4}$ (in)
FRONT	600 (mm)	24 (in)
TOP	450 (mm)	18 (in)
BASE	NIL (mm)	NIL (in)

THE BOILER MAY BE INSTALLED BELOW A KITCHEN WORK SURFACE SO LONG AS THE SECTION IS REMOVABLE AND THE MAINTENANCE CLEARANCE IS MAINTAINED CLEARANCE UNDER WORK SURFACE 5mm MINIMUM

Fig.1

OUTLINE DIMENSIONS/CLEARANCES

PUMP FLOW CURVE

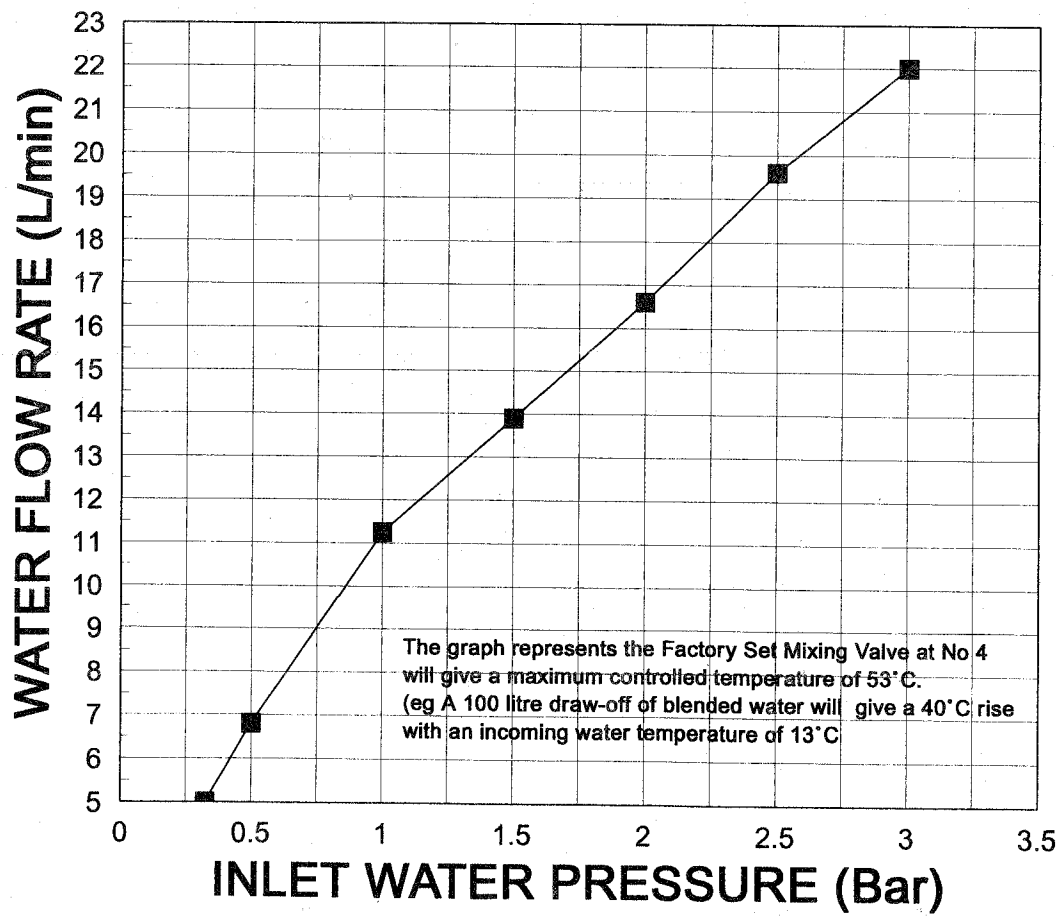
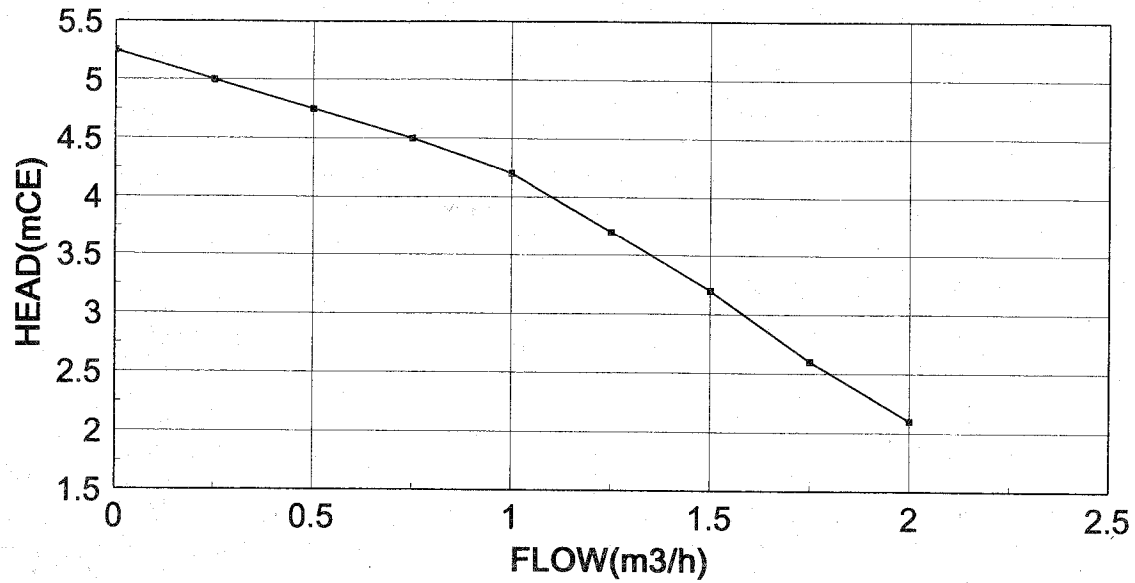
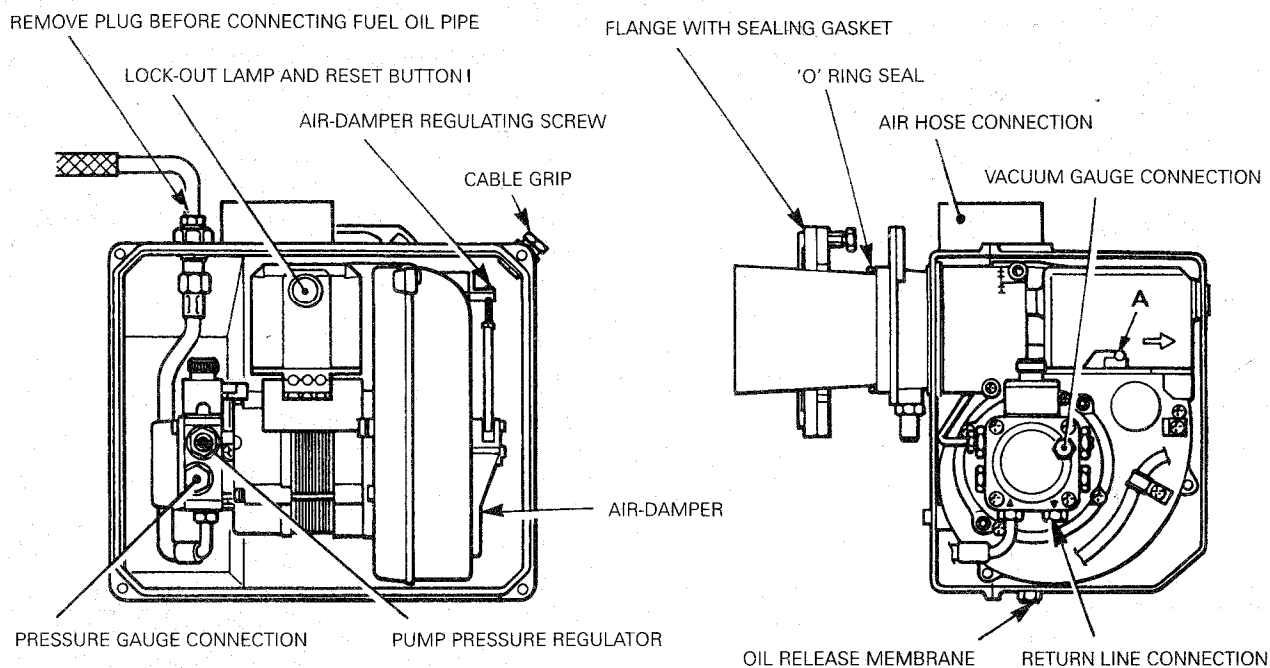


Fig. 2

FLOW GRAPH



NOTES:

- (a) TO REMOVE THE CONTROL-BOX FROM THE BURNER, LOOSEN SCREW (A) AND PULL TOWARDS THE ARROW.
- (b) THE PHOTO-CELL IS FITTED DIRECTLY INTO THE CONTROL-BOX (UNDERNEATH THE IGNITION-TRANSFORMER) ON A PLUG-IN SUPPORT.

Fig 4.

BURNER GENERAL ASSEMBLY

Burner Settings

Riello Burner Model	Comb. Head	Danfoss Nozzle USG/H	Pump Pressure P.S.I.	Firing Rate ml/min	Nom. Air Setting		CO ₂ %	Smoke No.	Flue Gas Temp. °C
G5 BF	206972	0.65x80°S	130	41.5	CF	BF	12.6	0	215
					3.8	4.2			

Burner Settings

Air Damper Settings (Fig. 5)

Adjustment of the damper may be required to achieve the CO₂ level indicated in the Burner Settings table.

This can be carried out by removing plug B and rotating screw 'C' with a screwdriver, in the positive (+) direction to increase air (for lower CO₂) and in the negative (-) direction to reduce air (for increased CO₂).

Oil Pipe Connections (Fig. 7 and 8)

The burner is supplied for use with a one pipe system. If used on a two pipe system, it is necessary to fit the by-pass plug into the return connection (See Fig. 7). It is also necessary to fit the return pipe (these are available from Trianco Part No. 28026).

(Additional long life hose available from Trianco for two pipe system) Part No. 207029.

Flexible Oil Hose

Check hose periodically for leaks and replace as necessary.

Oil Release Membrane

In the rare event of an oil leak occurring inside the burner cover an Oil Release Membrane allows oil to drop out into the boiler base tray where it can be readily detected. After curing the leak a new Oil Release Membrane must be fitted if the boiler is fitted with a room sealed balanced flue. Replacement is not necessary if the boiler is used with a conventional chimney (Trianco Part No. 28008).

Nozzle Replacement (Fig. 8)

Before assembling or removing the nozzle, loosen screw C and move electrodes forward.

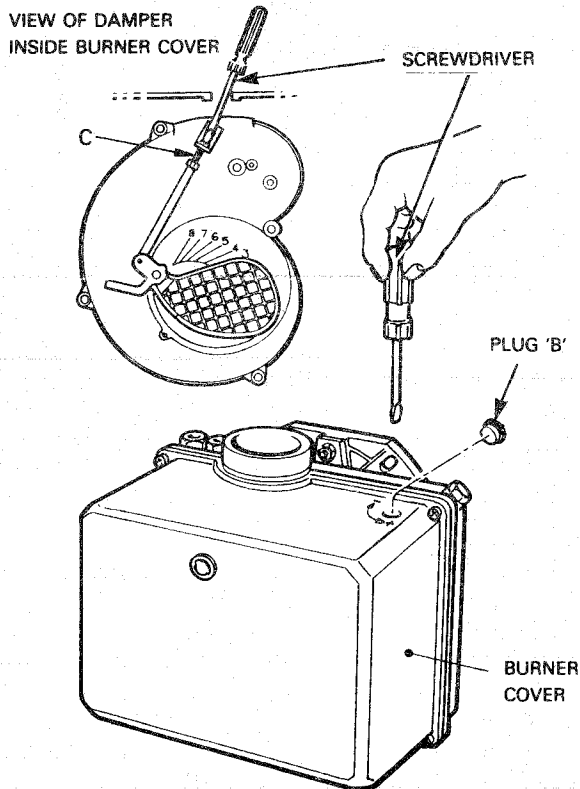


Fig.5 AIR DAMPER ADJUSTMENT

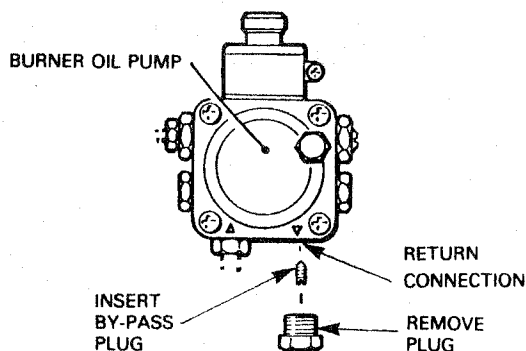


Fig.6 OIL PUMP BY-PASS PLUG

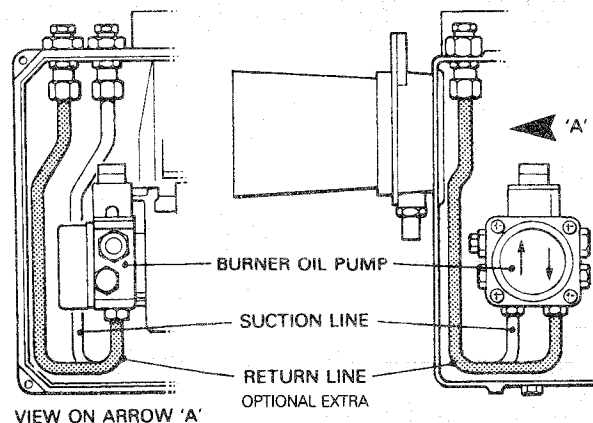


Fig.7 RETURN PIPE CONNECTION (TWO PIPE SYSTEM)

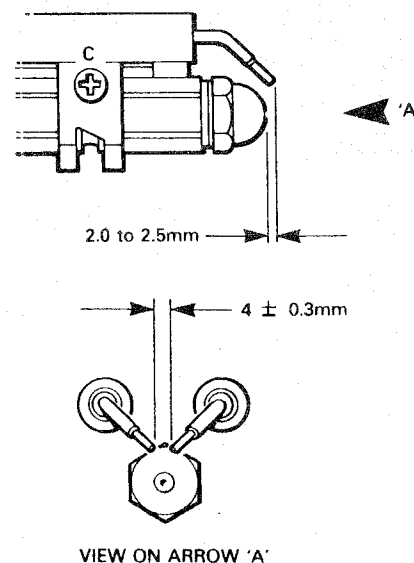


Fig.8 ELECTRODE SETTING

FUNCTION OF CIRCULATING PUMP

1. General Description

- (a) The circulating pump on this appliance has been designed to pump on the return flow.
- (b) The pump is a bi-directional 3-port type which means the live supply to the pump can be switched to make the pump rotate in either direction 'A' or 'B'.
- (c) The pump housing also contains a mechanical paddle which moves to close off one of the Return Ports 3 or 4, depending on the pump rotation.

2. Hot Water Mode

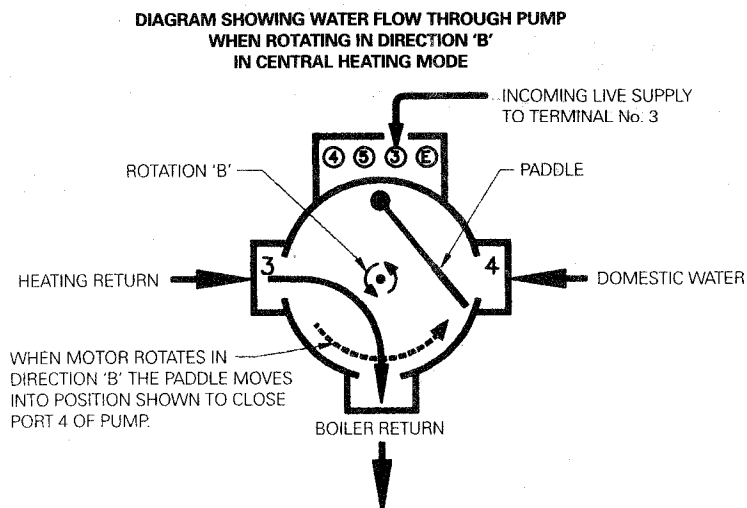
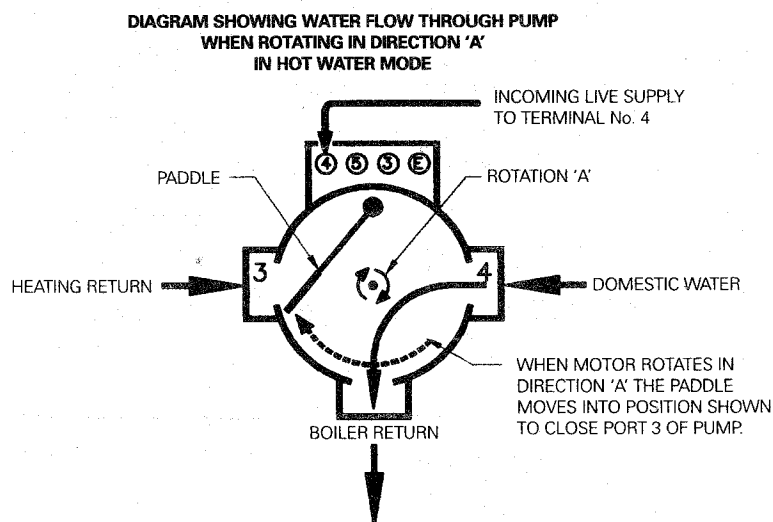
- (a) Power is supplied to Terminal 4 on the pump. This drives the motor in direction 'A' which, in turn, pulls water through the domestic heat exchanger and into the pump (Return Port 4). This moves the mechanical paddle over to close off heating Return Port 3 on the pump.
- (b) The water is then returned to the boiler for re-heating.

3. Central Heating Mode

- (a) Power is supplied to Terminal 3 on pump. This drives the motor in direction 'B' which, in turn, pulls water from the central heating system (Return Port 3 on the pump) and moves the mechanical paddle over to close off heat exchanger Return Port 4 on the pump.
- (b) The water is then returned to the boiler for re-heating.

4. Electrical Operation

- (a) For the pump to change direction in operation, the mains power has to be cut off to the pump for 3 seconds (min).
- (b) This allows the pump to stop before power is applied to the alternative Terminal, enabling the pump to rotate in the opposite direction.
- (c) The pump control board in the control box is responsible for the operation of the pump switching from hot water mode to central heating mode. Refer to full wiring diagram Fig. 3 and pump flow diagrams.



PUMP FLOW DIAGRAMS

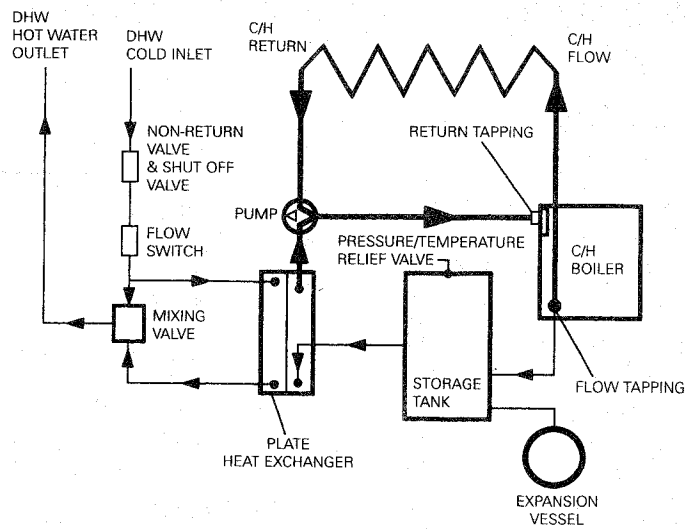


Fig. 9a

EUROSTAR COMBI SCHEMATIC LAYOUT CENTRAL HEATING MODE

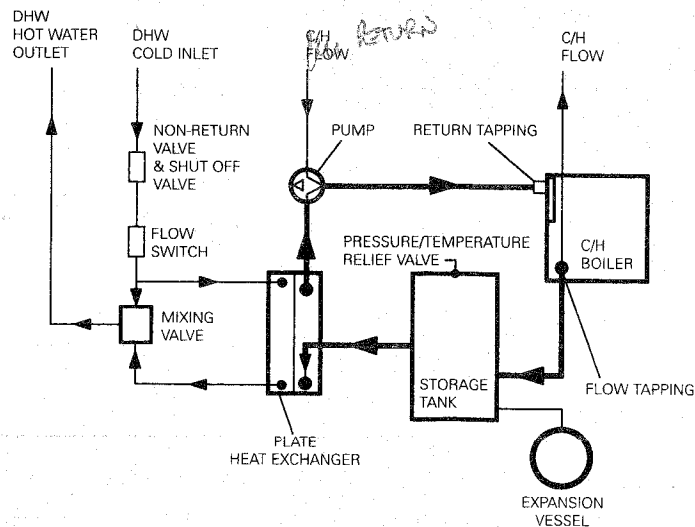


Fig. 9b

EUROSTAR COMBI SCHEMATIC LAYOUT DOMESTIC HOT WATER MODE

Fig.9

EUROSTAR COMBI SCHEMATIC LAYOUT

Note: appliance incorporates Pump Expansion Vessel, Pressure Gauge, Air Vent and Safety Valve.

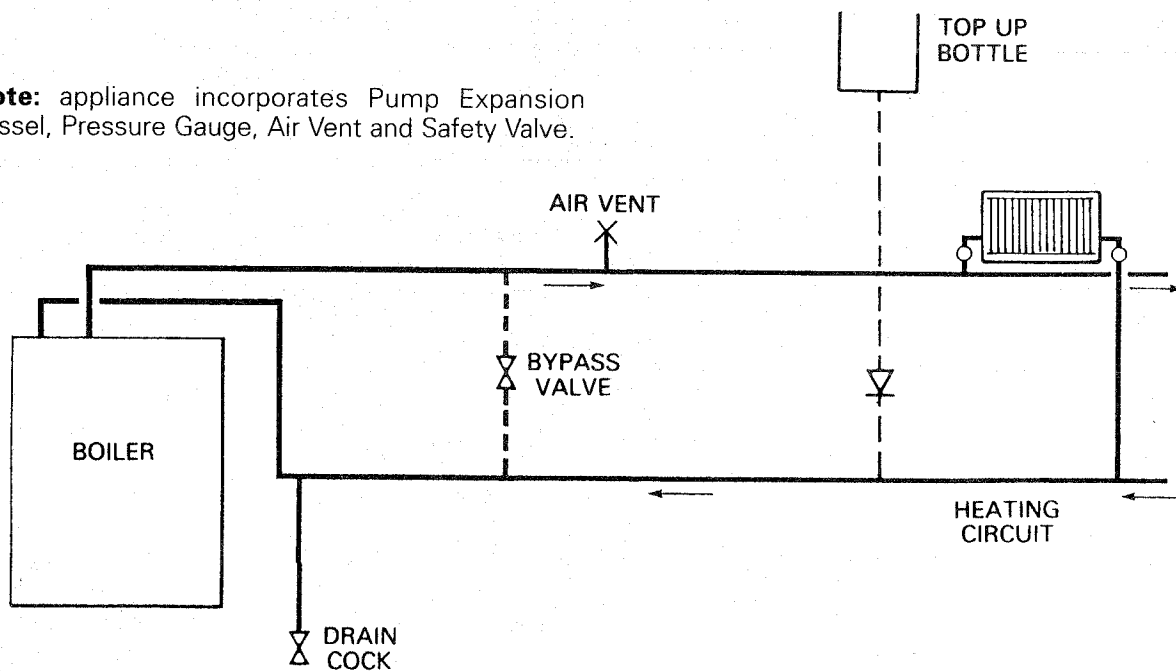
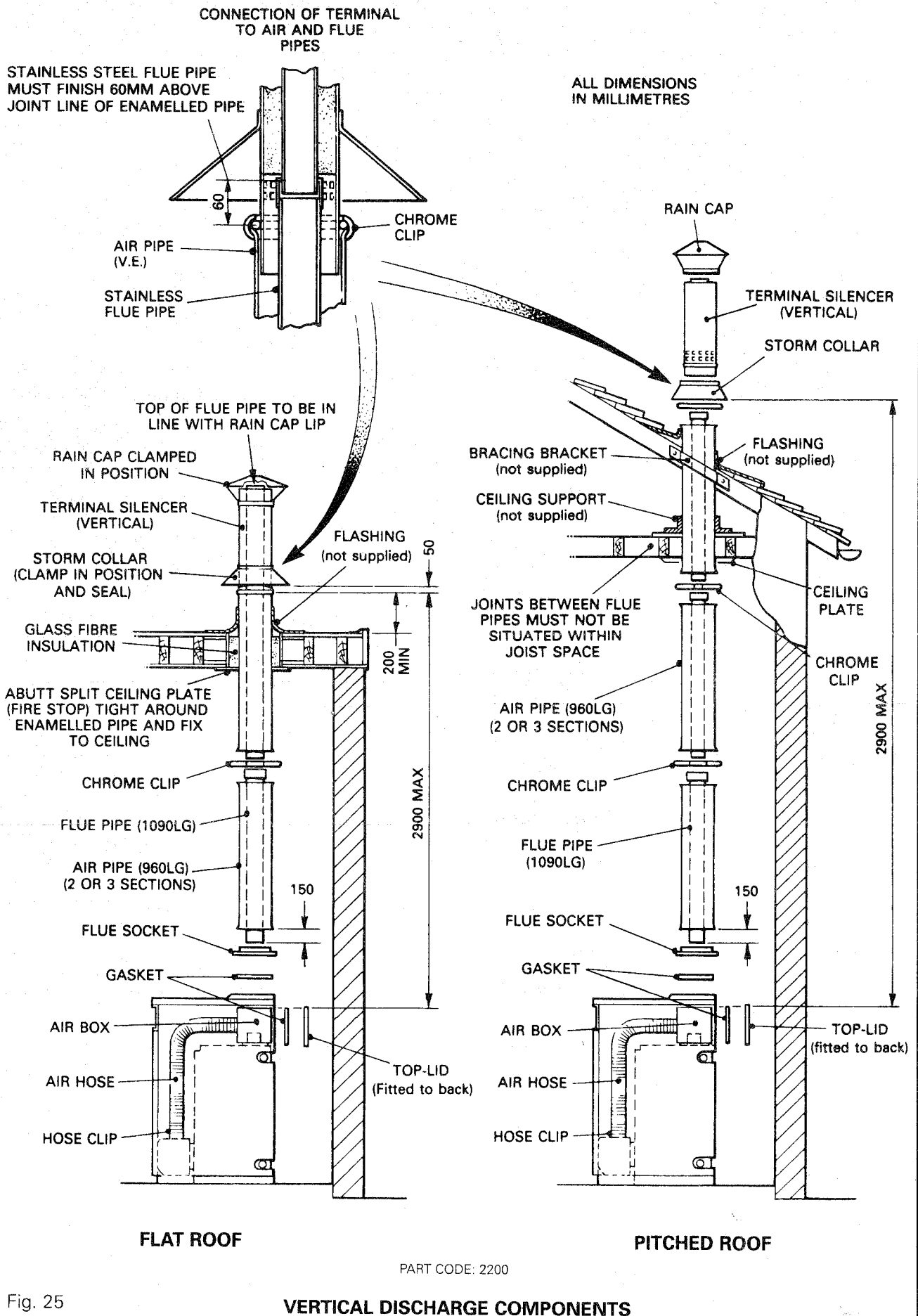
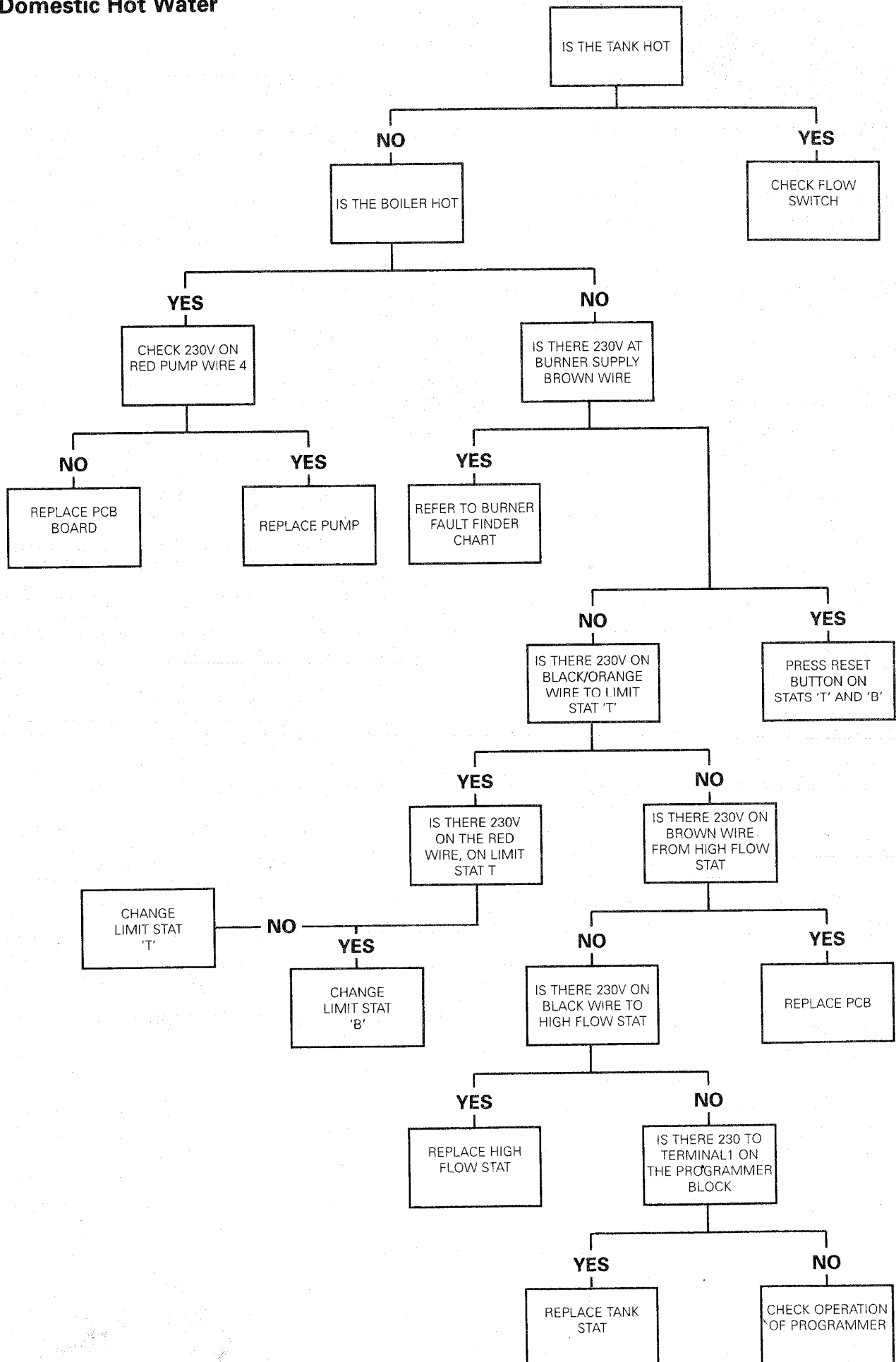


Fig.10

SEALED SYSTEM PIPING SCHEMATIC DIAGRAM



Domestic Hot Water

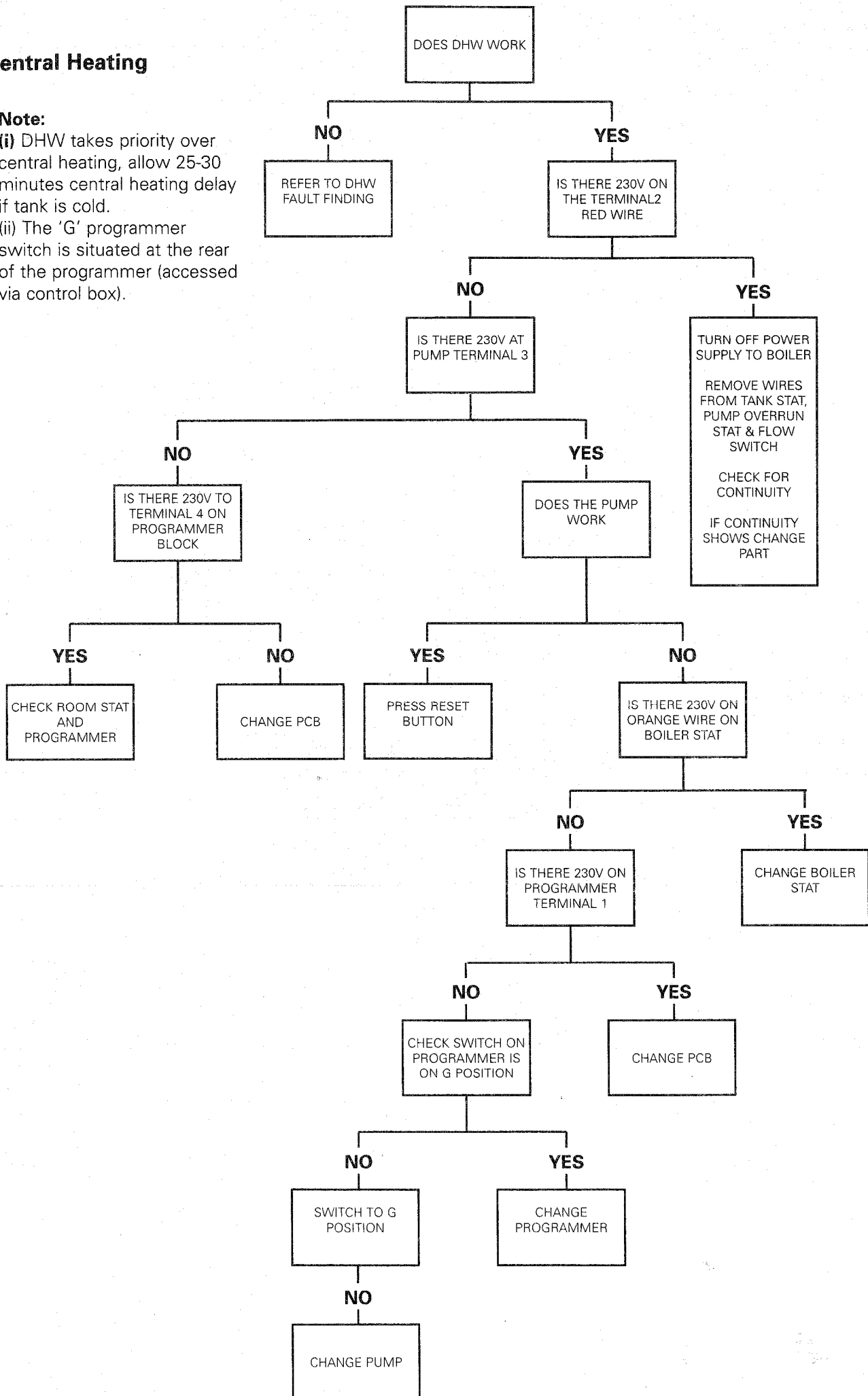


Central Heating

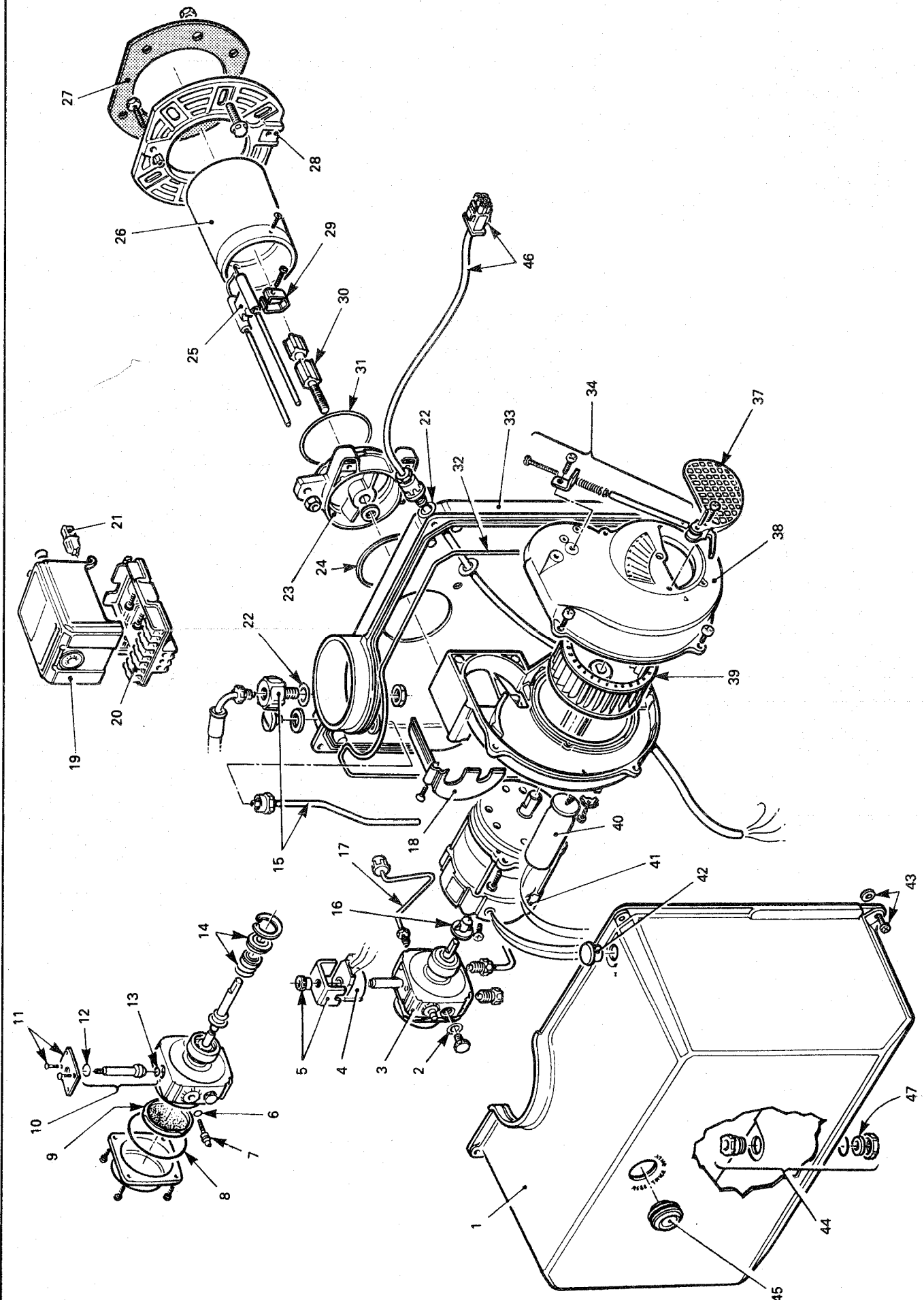
Note:

(i) DHW takes priority over central heating, allow 25-30 minutes central heating delay if tank is cold.

(ii) The 'G' programmer switch is situated at the rear of the programmer (accessed via control box).



Riello Burner parts

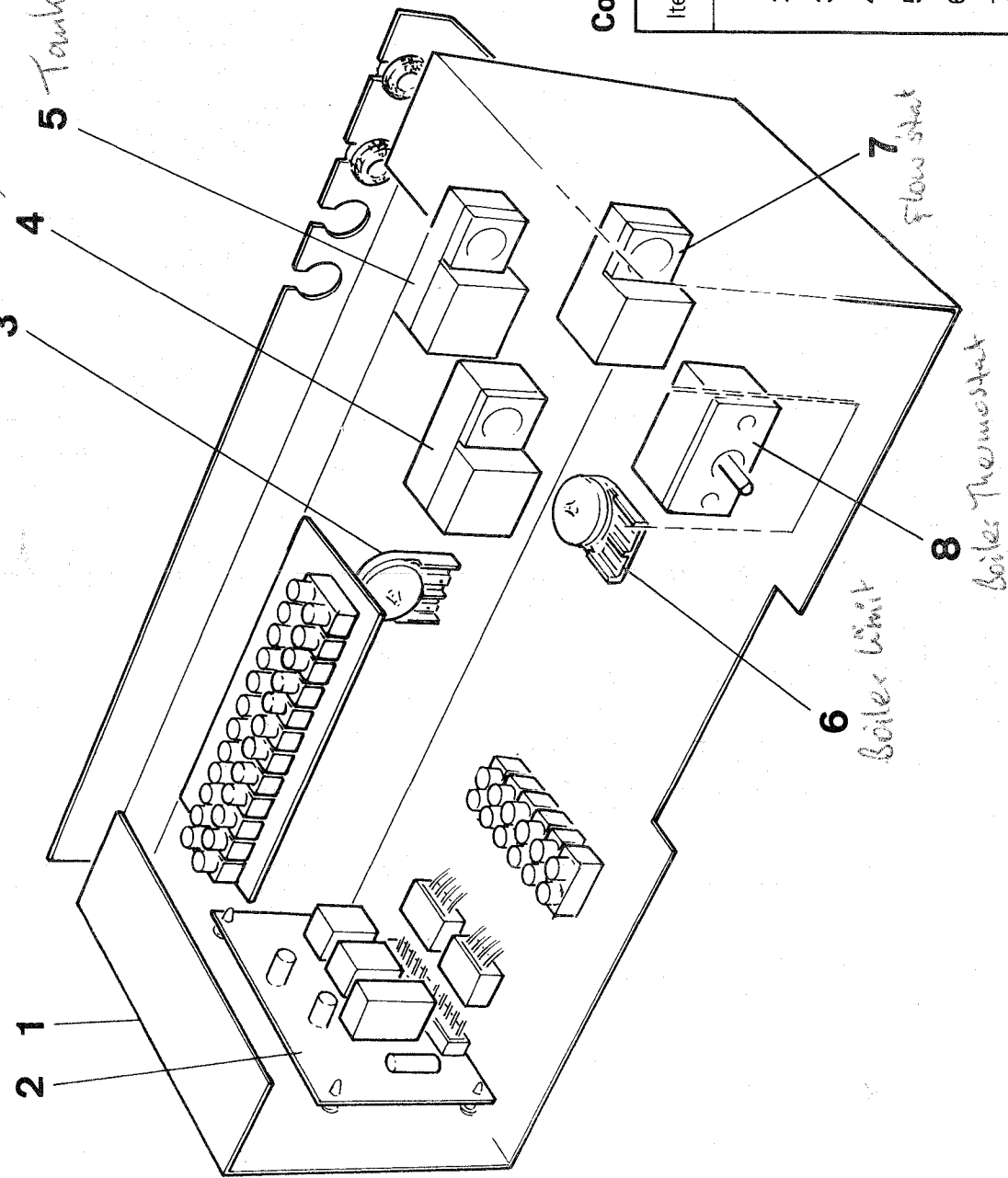


Riello Burner Parts

EuroStar 70 – G5BF 206963

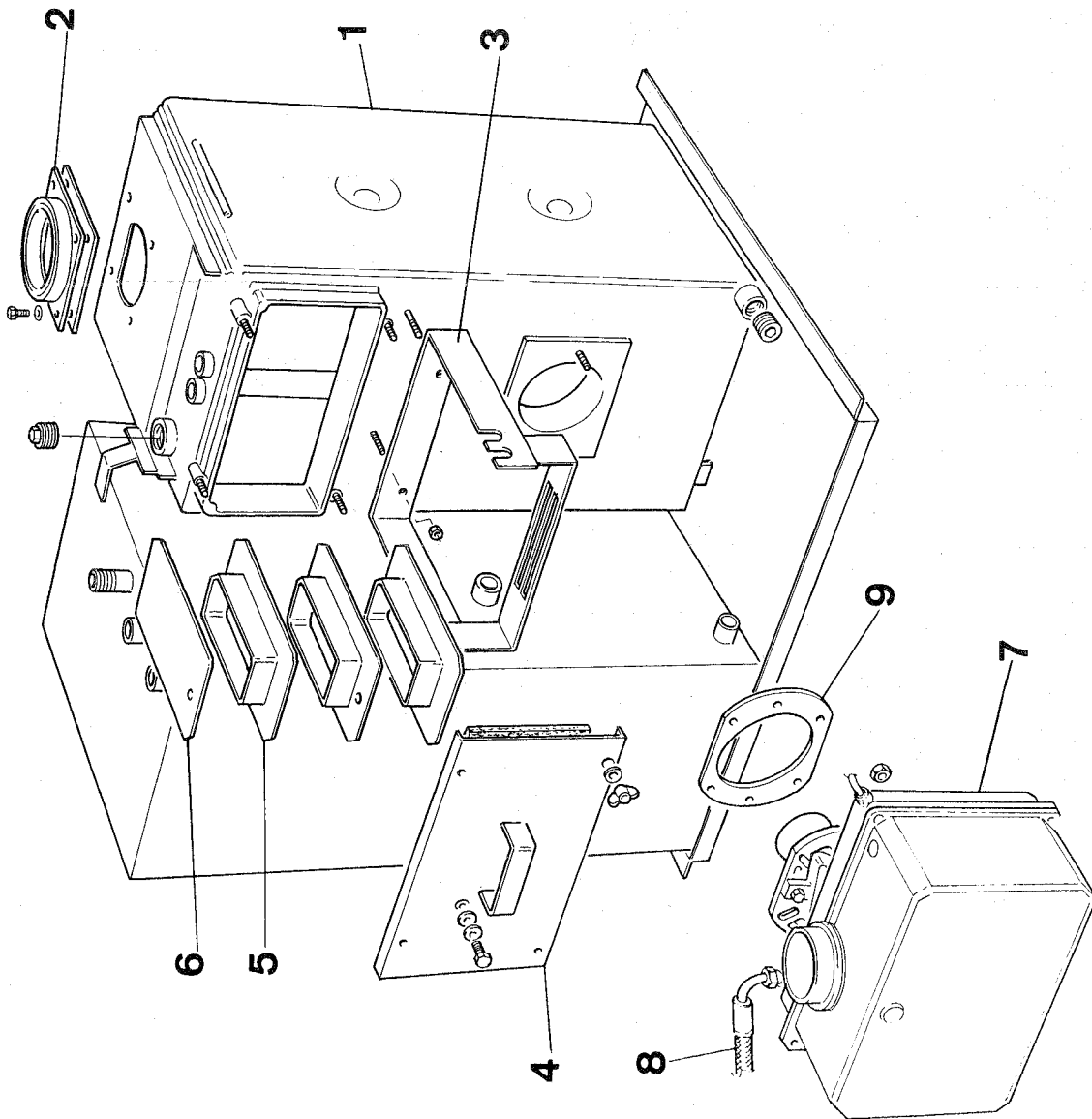
Item	Description	Trianco Part No.
3	Oil Pump	204345
4	Solenoid Coil	27937
16	Drive Coupling	27949
17	Oil Pipe	28018
19	Control box 530SE * (A)	28004
21	P.E. Cell	27944
25	Electrode assembly	28007
26	Cup-Shaped head	206972
27	Gasket	28005
40	Capacitor 4 uF	27979
41	Motor	27932
47	Oil Release Membrane	28025
–	Danfoss 0.65 x 80°s Nozzle (EuroStar 70)	26858

Tank limits
 3
 4
 5 Tank stat
 over-run stat



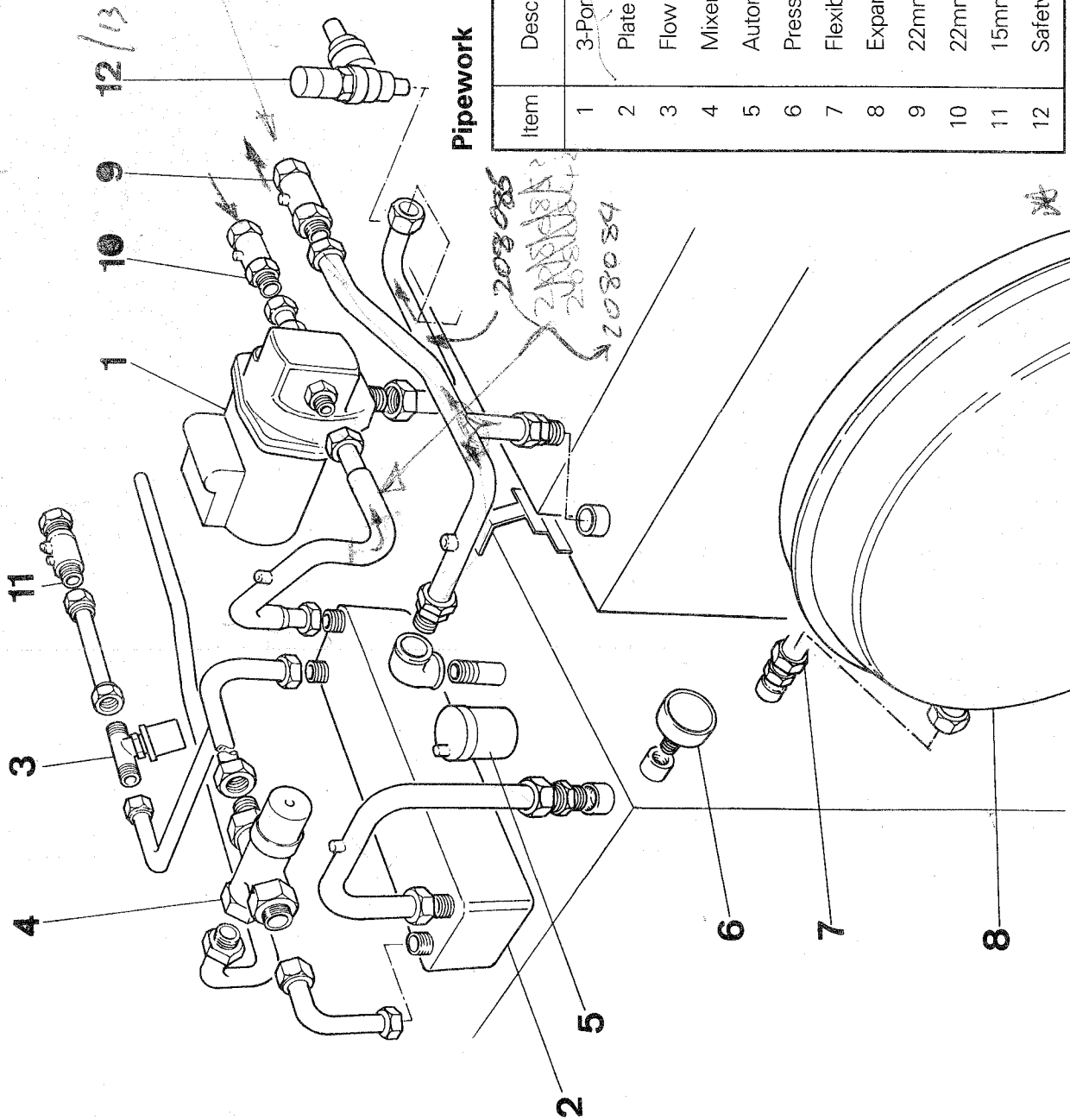
Control Box Assembly

Item	Description	Trianco Part No.
1	Control Box Assembly	208120
2	P.C.B. Time Delay Board	208079
3	Tank Limit Stat.	208096
4	Overrun Stat.	208075
5	Tank Thermostat	500039
6	Boiler Limit Stat.	206892
7	Flow Stat.	501767
8	Boiler Control Stat.	206896



Boiler Parts

Item	Description	Trianco Part No.
1	Boiler & Tank W.V.	208001
2	Flue off-take	205105
3	Expansion Vessel Bracket	207274
4	Cleaning Door	206900
5	Baffle (1 off)	206950
6	Baffle Top Plate (1 off)	206951
7	Burner Assembly	206963
8	Oil Line	207029



Pipework

Item	Description	Trianco Part No.
1	3-Port Circulating Pump	208072
2	Plate Heat Exchanger	208071
3	Flow Switch	208077
4	Mixer Valve	208078
5	Automatic Air Vent	207296
6	Pressure Gauge	501808
7	Flexible Pipe	207292
8	Expansion Vessel	207291
9	22mm Ball Valve	99466 ⁶⁴⁷
10	22mm Ball Valve	99647
11	15mm Ball Valve	99462
12	Safety Valve	208069

13 early one - Honeywell name type part 501708

3 bar 95cc