

ORMANDY MINIBREEZE  
Wall Mounted Consumer Interface Unit

# TROUBLESHOOTING GUIDE



**CAUTION**

*During the operation of this appliance the internal components of the appliance and service pipework leading into and out of the appliance will exhibit elevated temperatures. Operators, Service Engineers or other personnel should take adequate precautions to protect themselves from hazards caused by hot surfaces and hot pipework.*



**CAUTION**

*This appliance requires an electrical supply to operate. Only fully qualified competent electrical engineers should attempt any servicing or maintenance of the electrical systems of this appliance.*

## APPLIANCE OPERATION

The operation of the MINIBREEZE is very simple and the user need make no adjustment to the appliance for normal operation. Where an optional room thermostat, time clock or programmable controller has been installed with the appliance the user can adjust the supply of central heating according to their individual needs.

### Domestic Hot Water Circuit

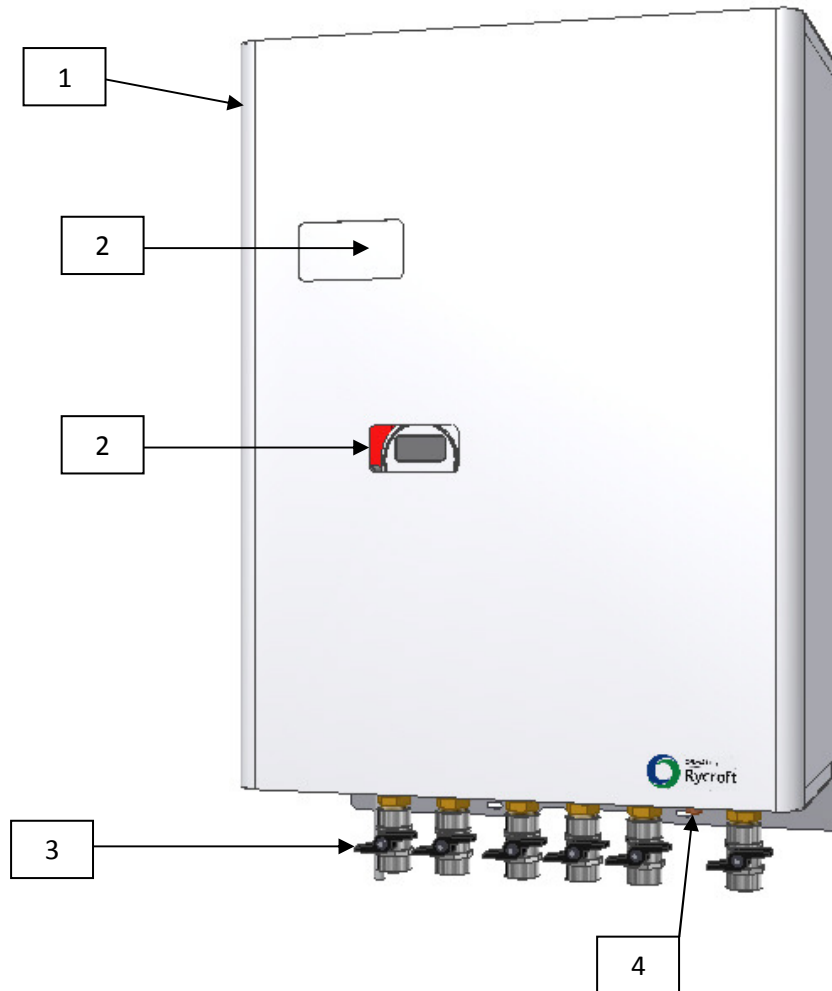
- i. The supply for domestic hot water (DHW) is taken directly from the fresh mains supply.
- ii. When there is demand for DHW, e.g. a tap is opened; the mains pressure causes flow of cold water into and through the secondary side of the DHW heat exchanger.
- iii. A temperature sensor on the DHW outlet of the heat exchanger monitors the temperature of the DHW water being supplied against the current set point.
- iv. Where required the temperature controller is actuated by the sensor to increase or decrease the flow on the primary side of the heat exchanger and thereby increase or decrease the temperature of the flow on the secondary side.

### Central Heating Circuit

- i. The temperature of the flow supplied by the central heating (LTHW) circuit is monitored by a temperature sensor inside the appliance.
- ii. The room temperature, affected by the LTHW circuit flow, may also be monitored by a dedicated room sensor.
- iii. Where there is a demand for heating the pump circulates water through the secondary side of the LTHW heat exchanger.
- iv. The flow controller in the appliance allows flow through the primary side of the LTHW circuit to maintain the monitored temperature in the secondary side of the circuit, up to the set temperature level.
- v. When the flow temperature in the secondary side meets or exceeds the set point the flow controller will reduce or shut off flow through the primary side of the LTHW heat exchanger, whilst the pump will continue to circulate water through the secondary side for a predetermined period of time.

## GENERAL LAYOUT

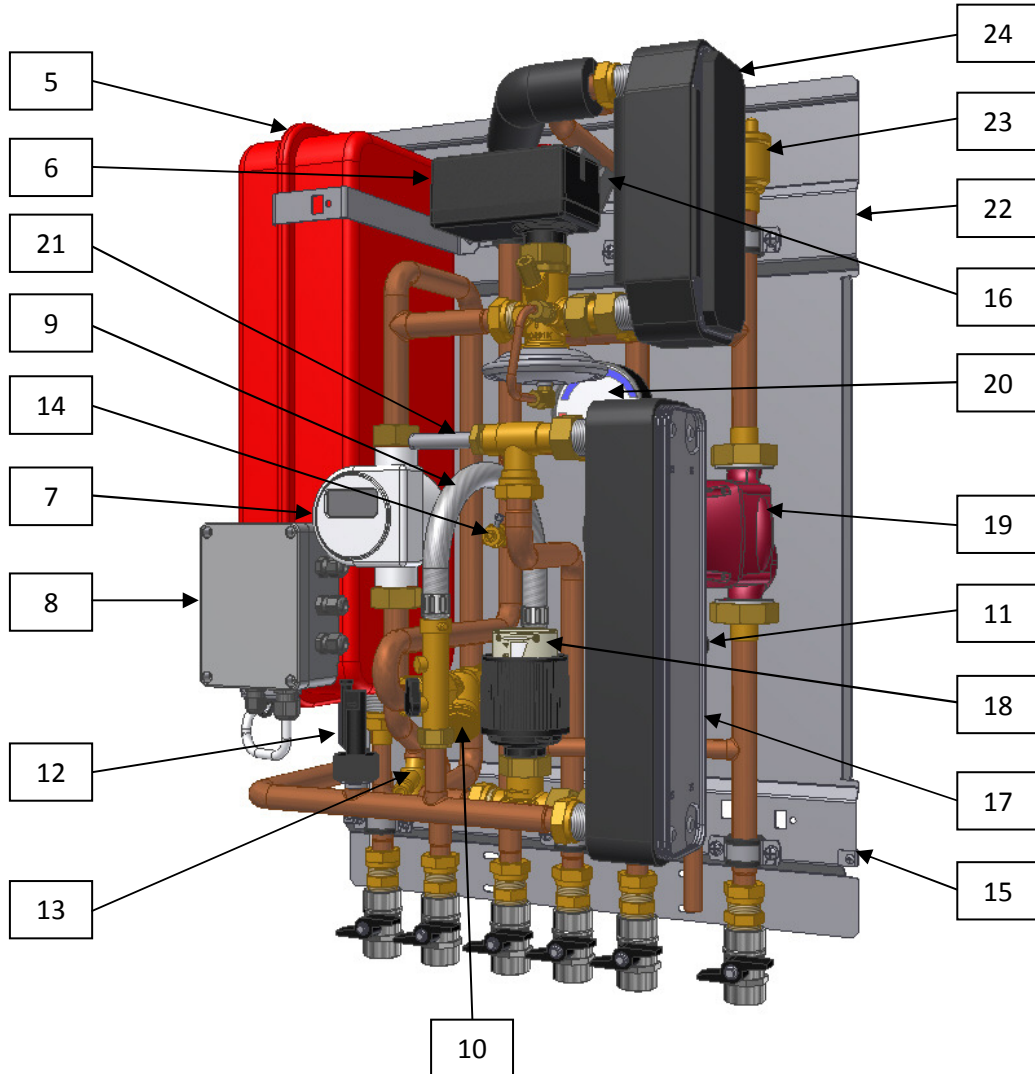
With Cover Fitted



1. Removable cover.
2. Viewing window (white or opaque dependant on whether a heat meter is fitted).
3. Service connections, G3/4" BSP Female.
4. Safety valve discharge pipe, Ø15mm OD Copper Tube.

**NOTE: The appliance is connected to a local electrical supply. The cover of the appliance should only be removed by a qualified competent service engineer. The appliance must be isolated from the local electrical supply prior to the cover being removed and checks carried out to ensure that isolation is complete.**

**With Cover Removed**

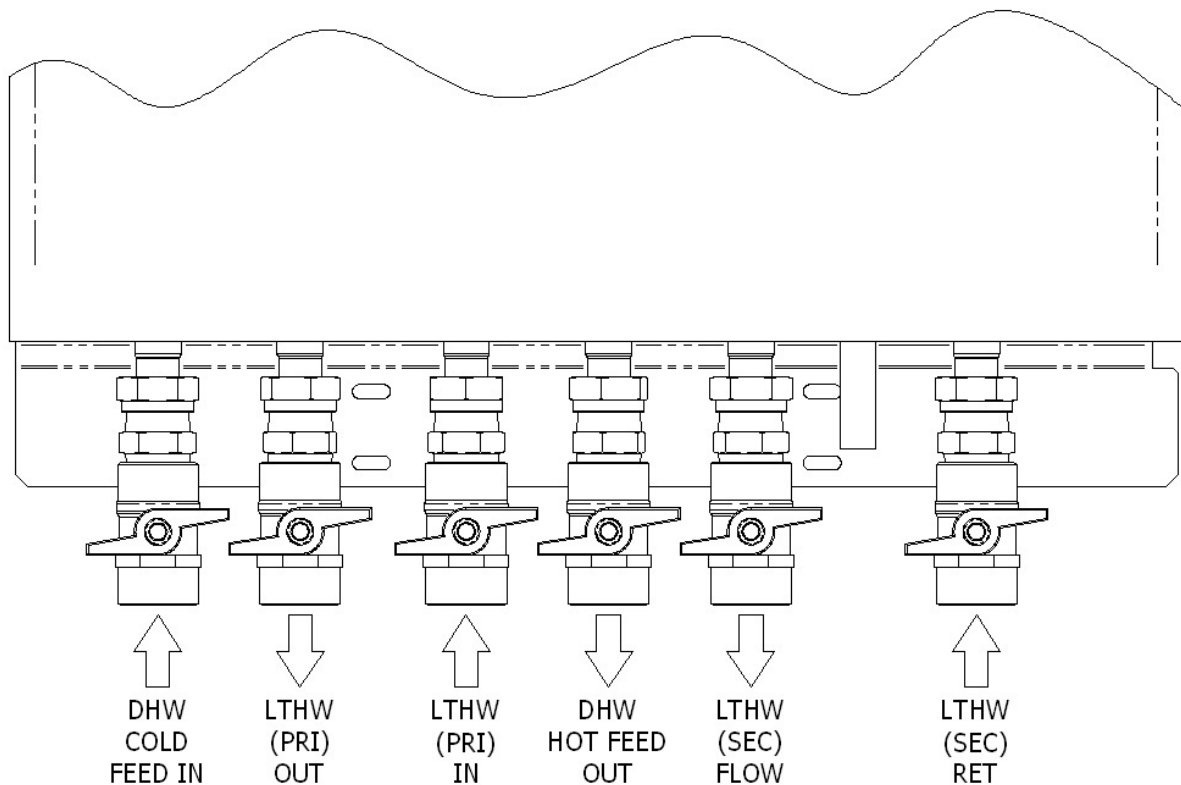


- |                                  |                                 |
|----------------------------------|---------------------------------|
| 5. Expansion Vessel              | 15. Cover Retaining Screw       |
| 6. Flow Controller               | 16. Temperature Sensor          |
| 7. Heat Meter (where fitted)     | 17. DHW Heat Exchanger          |
| 8. Terminal Box                  | 18. Temperature Controller      |
| 9. Filling Loop (temporary)      | 19. Pump                        |
| 10. Strainer                     | 20. Temperature/Pressure Gauge  |
| 11. Safety Valve                 | 21. Temperature Sensor          |
| 12. Flow Switch                  | 22. Mounting Frame              |
| 13. Drain Cock                   | 23. Automatic Air Release Valve |
| 14. G1/4" BSP Female, Test Point | 24. LTHW Heat Exchanger         |

### Connections Details

Connections to/from services in to the appliance are shown below. All inlet/outlet connections are G3/4" BSP Female.

The safety valve discharge pipe is  $\varnothing$ 15mm OD copper tube. (Note - isolation valves shown with handles in closed position).



#### DHW COLD FEED IN

Cold water supply from mains for use as domestic hot water

#### LTHW (PRI) OUT

Low temp. hot water (primary return, Minibreeze to central boiler)

#### LTHW (PRI) IN

Low temp. hot water (primary flow, central boiler to Minibreeze)

#### DHW HOT FEED OUT

Domestic hot water supply from Minibreeze to hot taps

#### LTHW (SEC) FLOW

Low temp. hot water (central heating flow from Minibreeze to radiators).

#### LTHW (SEC) RET

Low temp. hot water (central heating return from rads to Minibreeze)

## TROUBLESHOOTING

In the event that the MINIBREEZE appliance does not function as expected or you experience a drop in performance please check the following items before requesting a Service Engineers visit.

### **Problem: appliance is not supplying central heating or hot water**

- ***Before any other checks are carried out on the appliance, first isolate the primary supply and check that the strainer in the appliance is clear.***
- Check that the electrical power supply to the appliance is switched on. (Where this is not obvious from a visual check try switching on a light or electrical appliance in the residence to check the electricity supply has not been disrupted).
- Check that the service isolation valves under the appliance are open. The handle on the isolation valve body will be in line with the pipework when the valve is open.
- Check that the connections to and from the appliance have been made correctly and the directions of flow comply with the diagram in this guide.
- Check that there is sufficient pressure within the primary flow and return circuit. In order for the appliance to operate effectively there must be a differential pressure on the primary flow and return of between 0.6 and 4.0 bar.
- Check that there is heat in the primary flow and return pipes up to the service isolation valves of the appliance. Do **NOT** attempt to physically touch the pipes as they may be very hot.
- Where one is fitted, check that the room thermostat / time clock / programmable controller is working correctly, and that it is calling for heat from the appliance.
- Check that the electrical connections to the PCB within the terminal box in the appliance are all firmly seated and that there are no loose connections.
- On the PCB within the terminal box, check the position of slide switch "S1" is to the left in the "OFF" position.
- Where the appliance is connected to a Room Thermostat or Programmer with a normally open contact, i.e. open contact/no signal when there is no demand for heating and closed contact/live signal when there is demand for heating, on the PCB within the terminal box, check the position of slide switch "S2" is to the left in the "OPEN" position.

- Where the appliance is connected to a Room Thermostat or Programmer with a normally closed contact, i.e. closed contact/live signal when there is a demand for heating and open contact/no signal when there is demand for heating, on the PCB within the terminal box, check the position of slide switch "S2" is to the right in the "CLOSED" position.
- Check that mains cold water is being supplied to the appliance. (Open a cold tap in the residence to check that the supply has not been disrupted).
- Where fitted, check that any thermostatic radiator valves are not fully closed.
- When a hot water tap is opened the flow switch in the appliance, on the mains cold feed, should be triggered and signal to the flow control actuator that there is demand for DHW. The flow controller will then give priority to the DHW system and close the flow valve down to divert all primary flow to the DHW heat exchanger. Check that the flow control actuator is closing the flow valve when the hot water taps are opened. This will be shown by direction of rotation for the red handwheel on the top of the actuator.
- Check orientation of the thermostat connected to the temperature control valve. The notch should face upwards.
- Check that the thermostat is inserted in the body of the DHW heat exchanger to the correct depth.
- Check that the arrow on the body of the flow switch points towards the DHW heat exchanger.
- Check that the demand for DHW does not exceed the specified design flow rate (litres/min) for the appliance.
- Check that the setting on the adjuster ring of the temperature control valve is correct and adjust as necessary to control DHW temperature to the required level.
- Check that the capillary tube connection between the thermostat and the temperature control valve is not kinked or creased.
- Check the settings of the LTHW circulating pump, the factory default setting is PP2.
- Check the position of the flow limit screw in the body of the flow control valve. Adjust as required to increase or decrease the primary flow rate through the flow control valve.