

22kW Electric Boiler



Operating Instructions & Safety Guide



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General Safety

- This equipment should only be used by a competent person who has read and understood these instructions.
- Check condition of equipment before use. If unit is showing any signs of damage contact your supplier immediately.
- Never operate this equipment if you are ill, feeling tired or under the influence of alcohol or drugs.
- Keep all vents and grills clear of obstructions.
- Keep children and animals away from electric powered equipment. Never leave them alone when the unit is in use.
- Make sure equipment is switched off and unplugged after use.

Electrical Safety

- This unit operates on a 415 volt 5pin 32amp power supply
- Always inspect plugs and power cables for damage before plugging into power supply.
- DO NOT USE IF ANY DAMAGE IS FOUND.
- Ensure cables are installed to prevent hazards.
- If an extension lead is used, ensure it is of the correct standard and fully uncoiled before use.
- Cables must not be laid in wet or damp areas.
- Do not move equipment while operating.
- Do not pull equipment by the power lead.

Getting started and operation

Position equipment on level ground.

Position away from any possible flammable materials.

Do not use within any zoned or hazardous areas.

Keep at least 1 meter of clearance around the Boiler and don't restrict the air flow around the Boiler.

The temperature control setting will have to be set according to the actual application the boiler is being used for.

DHW applications cannot operate above 58 degrees Celsius.

Fig 1
5 pin 32amp 415 volt Appliance inlet plug found on the 22kW Boiler
240 volt 16amp axillary blue socket.
These auxiliary Sockets are used for secondary circulating pumps for underfloor heating applications



Fig 1 : Phase rotation does NOT need to be checked with this 415v appliance

Fig 2 : Typical underfloor heating application using a 22kW boiler, heat exchanger and buffer tank. The secondary circulating pump is used to circulate the water around the customers underfloor heating manifold. The green hose shown is used for the pump suction hose only as its reinforced and wont collapse. The blue buffer tank is used to release the air out of the underfloor heating circuit and also this is where the water is topped up.



Fig 5 : Control panel

LEGEND

- 1. ON/OFF switch
- 2. Power levels switch
- 3. Optional internal clock or controller
- 4. Combined temperature and pressure gauge
- 5. Boiler shutdown indicator light
- 6. Manual reset high limit thermostat
- 7. Control thermostat :
 - 1 = 15°C
 - 2 = 30°C
 - 3 = 45°C
 - 4 = 60°C
 - 5 = 80°C

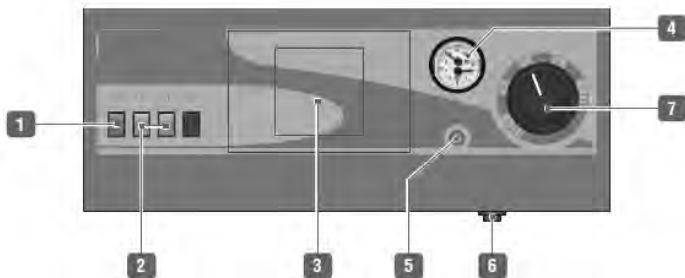


Fig 3: The primary side of the boiler (shown in picture on the left with red hoses) connected to the heat exchanger must be filled with water up to a water pressure of 1.5 Bar. this must be pressurised with water with the boiler turned off and cold. This pressure will be completely seperated from the secondary side via the heat exchanger.

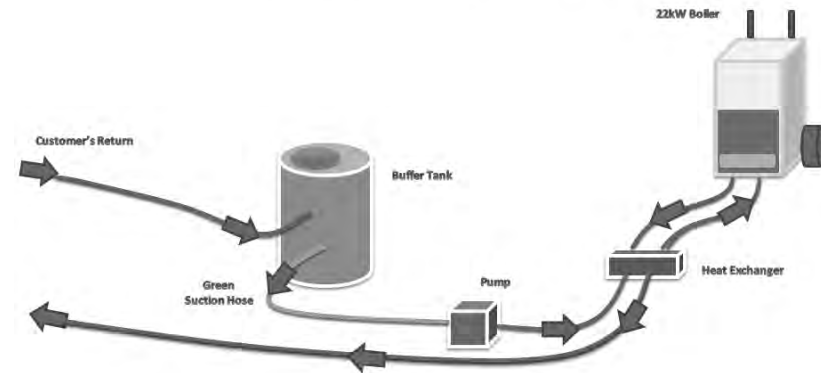


Fig 4: Schematic layout of an underfloor heating layout.

Underfloor Heating

Fig 6 : Schematic layout of a DHW application using a 22kW Boiler

