

The Firebelly FB2 is available with an 8kW (27,000 btu) stainless steel boiler to be used for central heating and/or domestic hot water. The boiler can be retro fitted to existing FB2 stoves if required.

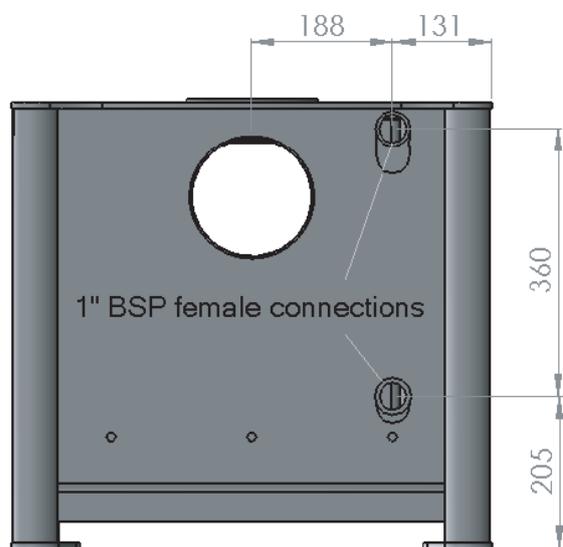
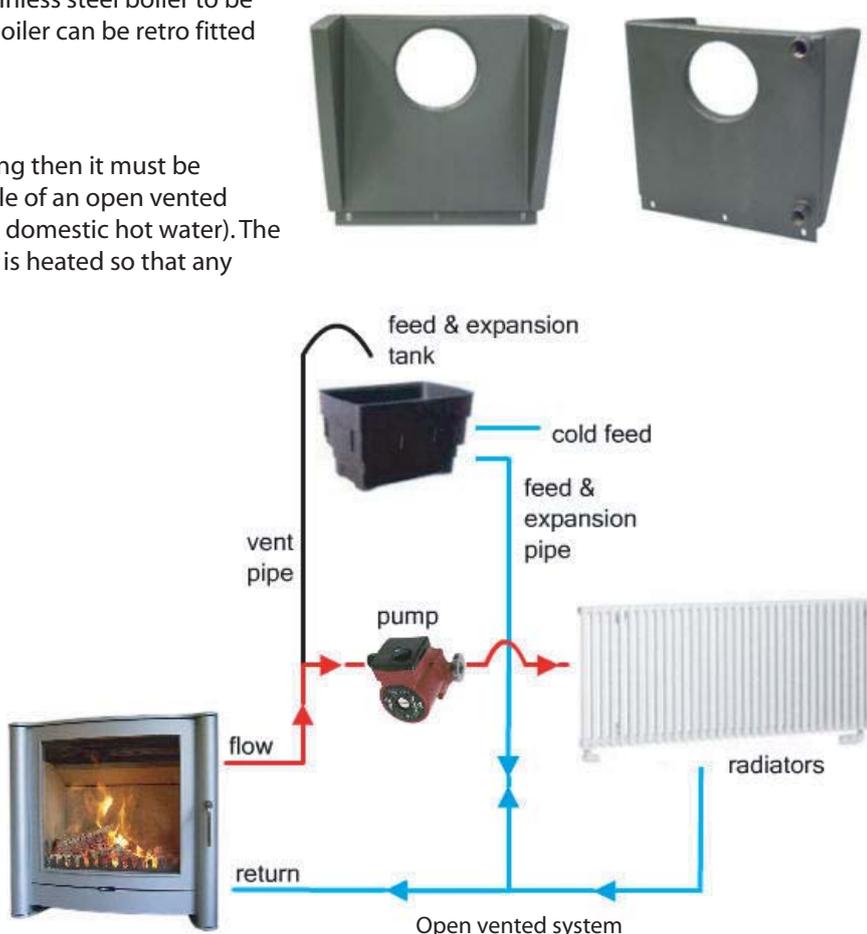
### Open vented system

If using the FB2 boiler as the single source for water heating then it must be connected to an open vented system. A simplified example of an open vented central heating circuit is shown (same principles apply for domestic hot water). The tank allows for the water in the system to expand when it is heated so that any excess hot water entering the tank from the vent pipe is recovered. The tank is fitted with a ball cock which allows the mains cold water feed to top up the system if there is any loss of water due to evaporation over time. There should also be an overflow fitted to the tank but this should be set fairly high so that the normal rising of the water level in the tank as the system heats up does not cause hot water to be drained.

### Heat dissipation

An electrical power cut would put any pump or motorised valve out of action. The heating circuit should be designed so that hot water can still rise by gravity to either a heat sink radiator (minimum 3kW) or domestic hot water tank.

**Note:** modern domestic hot water tanks are well insulated and so may not be able to dissipate heat once the water in the tank reaches temperature - a heat sink radiator may still be required.



### Connections

Rear view of the stove showing the position of the 1" BSP connections.

### Using alongside another boiler

The FB2 boiler can be used in partnership with another boiler, for example an existing oil or gas fired boiler, with the aid of a neutraliser. The neutraliser enables each boiler to operate independently without one affecting the performance of the other. It may be tempting to connect both boilers in series with each other but this may produce unpredictable and dangerous results and is against building regulations.



Dunsley Heat Neutralisers

### Important points

- Domestic hot water must be heated via an indirect system.
- On a pumped system a pipe thermostat should be used on the flow of the boiler close to the stove. This should be set so that the pump activates only when the water in the boiler reaches a temperature of 70C. This is to prevent cold water flowing through the stove as this cools the firebox reducing combustion efficiencies and resulting in excessive tar formation.
- The flow and return connections should be a minimum 22mm.
- The stove must be level and any reduction in pipe size made on a rising pipe to prevent air trapping.
- The boiler must not be used on a pressurized system.
- The boiler must not be run dry.
- Primary gravity/ pumped secondary - it must be possible for heat to be dissipated by gravity in the event of a pumped system failure.
- System design and installation should be carried out by a qualified plumber.

