

## Priority Heating Wiring Plan : Providing Heating and Direct Hot Water fitted with 2nd Set Point DHW Kit

### Features:

1. Independent control of heating zone.
2. Independent Time and Temperature control of the domestic hot water zone.
3. Circulating pump switches off when system is satisfied.
4. Priority given to heating zone.
5. Reduces peak demand as heating and hot water never operate simultaneously.

### Application:

The Priority Heating Wiring Plan is designed to provide independent control of both heating and domestic hot water circuits in fully pumped installations. The priority is given to the central heating over the domestic hot water.

Because the priority is given to the heating circuit the domestic hot water should be programmed to heat up before there is a call for heating and after the heating has switched off.

### DHW Demand

In periods of very cold weather where there is a high demand for hot water it may be necessary to use an additional heat source to provide sufficient hot water.

### IMPORTANT

Due to the lower flow temperatures produced by ASHP it will be necessary to fit an immersion heater time controller to bring on the immersion heater at least once a week to boost the domestic hot water to 65°C. This will eliminate the risk of legionella forming in the domestic hot water cylinder.

### Installation:

#### Valve

Water flow must be in the direction of the arrow on the valve body.

#### Room Thermostat

The room thermostat must be positioned where it will not be subject to extraneous heat gains from direct sunlight or draughts.

#### Cylinder Thermostat

For the optimum performance the thermostat must be located between 1/4 and 1/3 from the base of the cylinder. The thermostat must be set at either 45°C on the standard BWarm model and 55°C on the BWarm i model.

#### Bypass Valve

An automatic bypass valve must be fitted to ensure min flow rate through ASHP.

#### 2nd Set Point Kit

Call signal for the central heating must be wired into terminal 2. Call signal for domestic hot water must be wired into terminal 1. This will ensure that when there is a call for the higher flow temperature DHW the unit will operate to the higher temperature setting (2nd set point).

### Time Control

#### Programmer

A twin channel volts free programmer to provide independent control to DHW and heating zones.

#### Immersion Heater Time Control

Must be set to bring on the immersion heater to raise the cylinder temperature to 65°C at least once a week.

## Operation:

### Heating Only

On demand for heating, a signal is sent via the programmer to the room thermostat. This energizes the motorized valve which sends a signal to start the ASHP and the water is directed through the heating circuit.

### Hot Water Only

On demand the programmer sends a signal via the cylinder thermostat to the DHW motorized valve. The valve energizes and a signal is sent to Terminal I on the ASHP, the flow of water is directed through the hot water cylinder.

### Heating and Hot Water

When there is a demand from both thermostats the heating circuit takes priority over the hot water circuit.

### Components

- 2 Port Zone Valves 2 off
- Cylinder Thermostat
- Room Thermostat (with change over contact)
- 7 Day Twin Channel Programmer [volts free]
- Automatic By Pass
- Relay

## Commissioning System Controls

- 1 Switch on heating only. ASHP runs. Water will pass around the heating circuit only. Switch off.
- 2 Bleed radiators etc... as required.
- 3 Switch on hot water. ASHP runs. Water passes around the hot water circuit only. Switch off.
- 4 Switch on hot water and central heating. ASHP runs. Water circulates around the heating circuit only. Turn down room thermostat and until it is satisfied. ASHP runs water is circulated around hot water circuit only.
- 5 Reset all controls to correct temperature settings and explain programmer setting to customer.
- 6 Set Immersion heater time control to bring on immersion heater at agreed set times. Temperature setting on the immersion heater to be set to 65°C.

