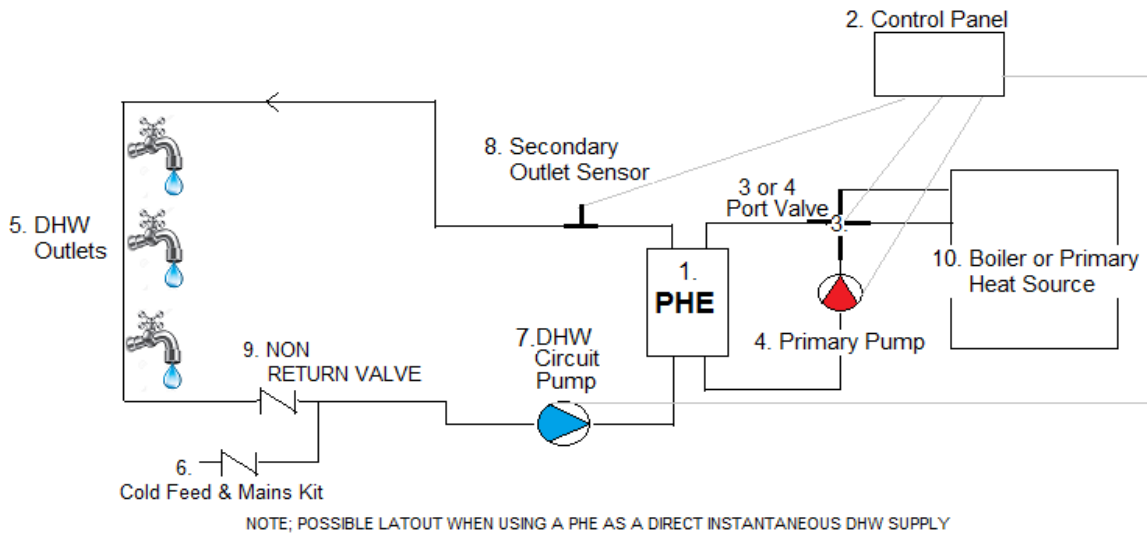


## INSTANTANEOUS DHW SYSTEM USING A PLATE HEAT EXCHANGER



### 1. Plate Heat Exchanger Design.

To start, we need to know the peak demand from the DHW circuit and the KW power available to correctly calculate the most suitable instantaneous PHE.

### 2. System Control Panel.

The control panel will sense the secondary flow temperature leaving the plate heat exchanger and send a signal to the modulating 3 or 4 port valve to close or open depending on demand.

### 3. Primary 3 or 4 port valve.

This valve will open or close as demand (temperature) increases or decreases on the secondary flow out of the PHE.

### 4. Primary Heating Pump.

This pump will circulate water at the correct design flow rate

### 5. Secondary Domestic Hot Water Outlets

These outlets will be taps, showers, kitchen appliances etc.

### 6. Secondary Cold Feed & Mains Kit.

This is the point where fresh water enters the DHW circuit to replenish used water.

### 7. Secondary DHW Circuit Pump.

This pump maintains the correct flow between the cylinder & PHE.

### 8. Secondary Temperature Sensor.

This will sense the DHW flow temperature out of the PHE to the outlets and tell the control panel to open or close the 3 or 4 port valve allowing more or less hot water through on the Primary side of the PHE.

### 9. Secondary Non Return Valve.

This NRV will stop mains water going backwards into the DHW circuit and only allow system water to pass through to the PHE.

### 10. Boiler or Primary heat source

This is the heat source that will provide the KW power to heat the Secondary Circuit.