



Heat Pumps and Towel Rails

Towel rails are predominately used in bathrooms to dry towels and are generally installed on the secondary domestic hot water return loop. They can also act as a secondary heat source where the UFH can struggle to maintain the temperature in these rooms because of the limited amount of floor area.

As these towel rails are off the portable hot water system non ferrous towel rails are required to avoid corrosion issues, which can be expensive.

When using a heat pump which operates at a much lower flow temperature to a traditional boiler, installing towel rails on the DHW loop can cause the cylinder to significantly drop in hot water temperature, and should therefore be avoided.

Kensa would recommend that the towel rails should either be installed as a separate dedicated primary circuit with a separate zone valve and timer and can be used as an extension of the UFH circuit.

As the towel rails are now on a primary circuit, ferrous towel rails can be used which are considerably cheaper.

Kensa would also recommend the towel rails are dual input, so they have an electric element for summer use when the heat pump is generally turned off.

Facts at a glance:

- Towel rails

These are now generally a standard item in every bathroom in the UK.

- DHW loop

Towel rails are traditionally installed on DHW secondary returns, if a heat pump is used with this type of installation it can result in low hot water temperatures.

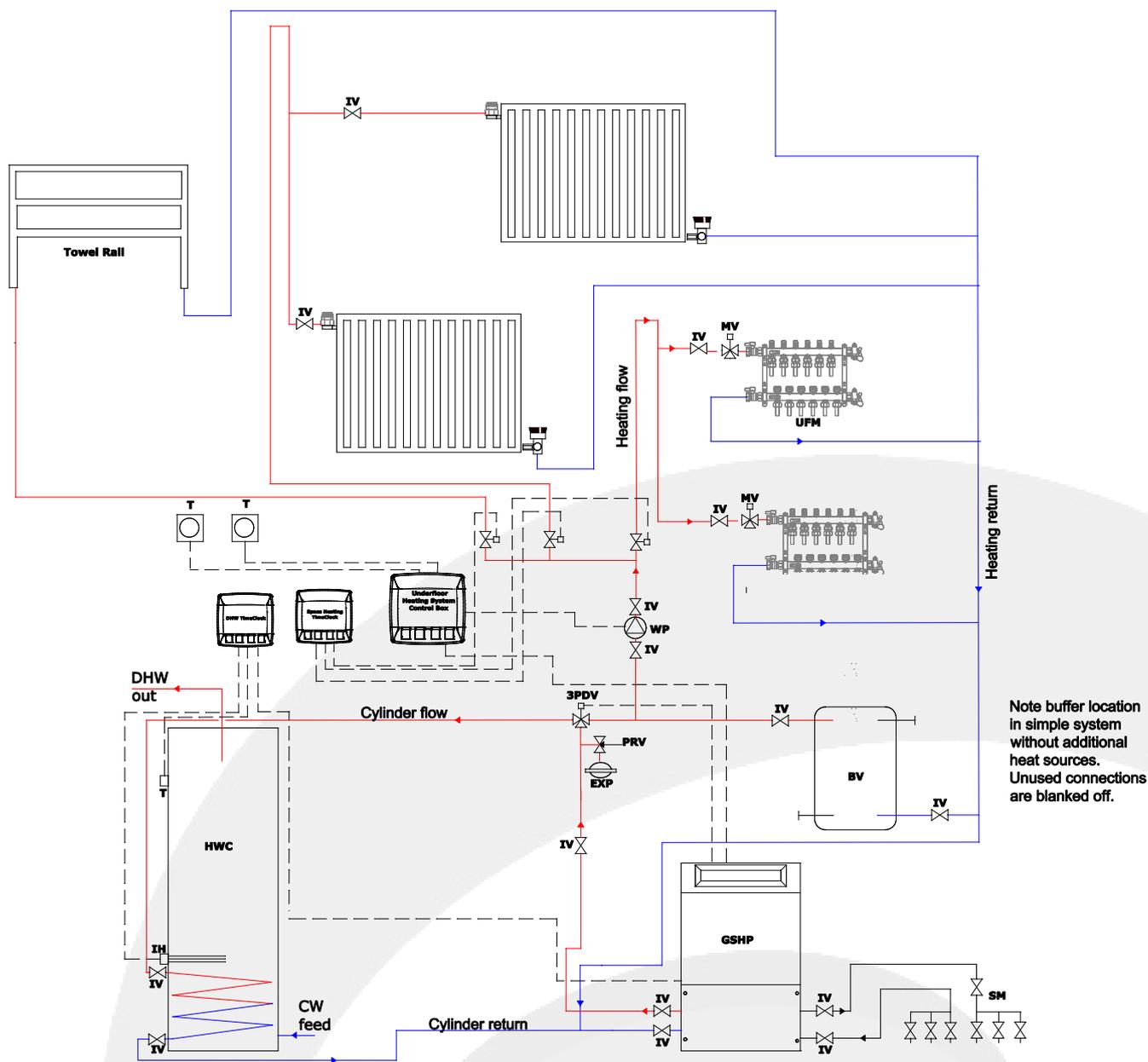
- Primary circuit

Installation of the towel rails on the primary circuit, allows low cost non-ferrous materials to be used for the towel rails.

- Dual Input

For summer use it is recommend that a dual input towel rail is used with an electric element.

Heat Pumps and Towel Rails



Abbreviations

- BV - Buffer Vessel
- CW - Cold Water
- EXP - Expansion Vessel
- GSHP - Ground source heat pump
- IH - Immersion heater

- IV - Isolation valve
- HWC - Hot Water Cylinder
- PRV - Pressure reducing valve
- T - Thermostat
- TR - Towel Rail
- WP - Water pump

Please note: The above drawing is a schematic only and additional valves and fittings maybe required. Kensa supplies the ground source heat pump, buffer vessels and hot water cylinders. Kensa also supplies the manifolds and antifreeze (not shown above).