

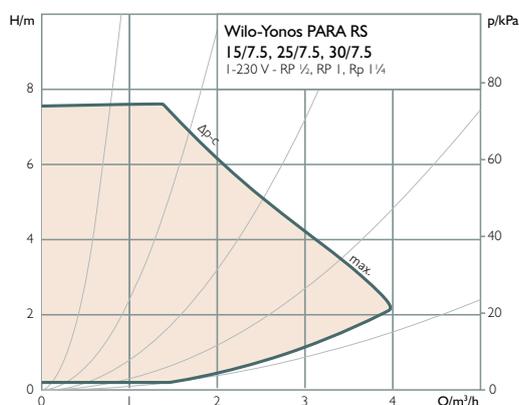
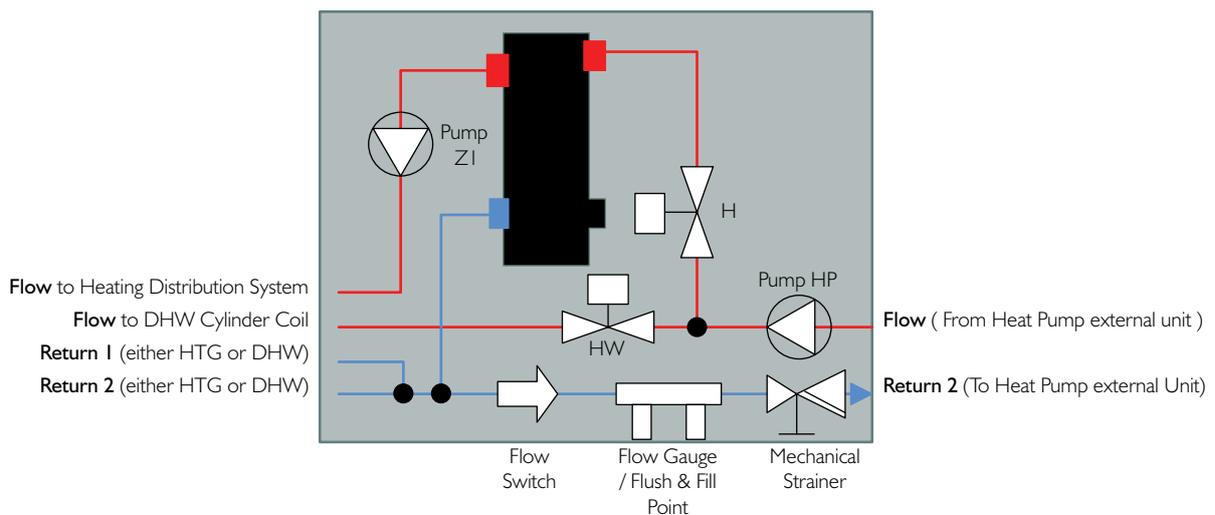
# FAST CONNECT

## Fast Connect Backboard Installation Manual

To be used in conjunction with the full Samsung EHS Installation and Maintenance Manual supplied with the unit. Both Documents should be read thoroughly before commencement of installation.

### Mechanical Installation

With the exception of a suitably sized expansion vessel and two port valves for the individual isolation of different heating zones, all of the equipment required for the installation of the heat pump is supplied on the board (A magnetic filter is advised in addition to the mechanical strainer already supplied on retrofit properties). Please refer to the full Samsung EHS installation manual for more information if required. **Please be aware that whilst the boards have been pressure tested to 3 bar in advance, it has been known for compression fittings to loosen in transit. Pressure Testing of the equipment once installed is advised and is the responsibility of the installer.**



**Please Ensure that all natural highpoints in the pipework are easy to vent.**

The heat pumps have a minimum flow requirement in order to run so please check the pressure loss versus the pump size over very long runs, for the 16kW in the very worst case you may have to upsize the HP pump.

Minimum Flow Requirements & Recommended Pipe Sizes for Each Unit.			
5kw	0.72m³/h	12 lpm	22mm Copper
9kw	1.2m³/h	20 lpm	28mm Copper
16kw	1.8m³/h	30 lpm	28mm Copper

**Important Note:** If you are looking to have the installation signed off under MCS please be aware that a 560mm **isolatable** straight length of pipe has to be left on **both** the flow and return pipes from the heat pump to the back board. This has to be internal to the property, and located so that the future installation of a heat meter by DECC is possible.

## Electrical Installation

Two power supplies are required:

**1. For the unit:** you will need a Type C MCB with the following size breakers - The 5kW unit requires a 16A supply, the 9kW requires a 20A supply and the 16kW a 32A. Armoured cable is required for all external terminations & an IP65 rotary isolator needs to be fitted adjacent to the unit. In order to expose the wiring connections inside the external unit take off the front right hand panel of the heat pump, you may need to take the lid off to do this. There are two obvious empty terminal banks inside the heat pump, the connections go into those labelled live / neutral / earth on the empty triple bank.

**2. For the backboard:** via the rotary isolator fitted in the top left hand corner of the board - A 16A supply via a type B MCB.

On the backboard you will see two coils of cables:

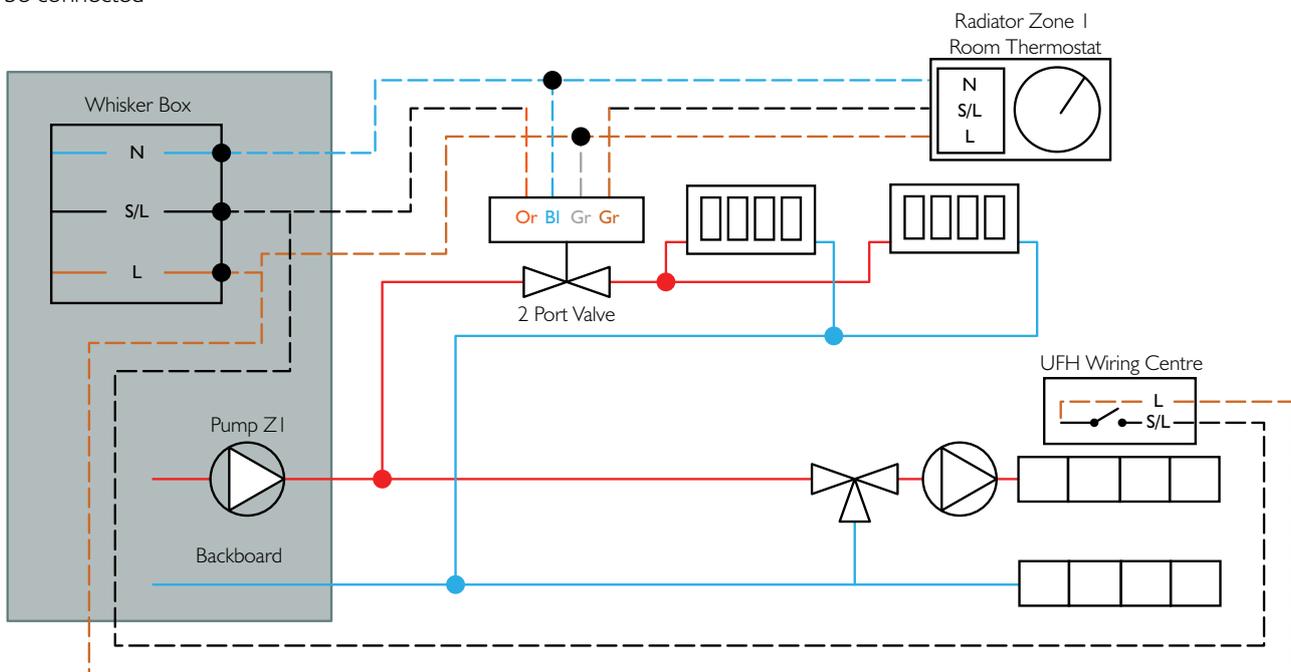
**Blue** is the hot water cylinder thermostat - please run and secure as best as possible inside the highest thermostat pocket on the cylinder – on certain cylinders this may mean packing the pocket out with insulation to maintain contact between the thermostat and the pocket.

**Grey** is a screened comms cable that needs to be run between the backboard and the outdoor heat pump unit., in the double bank next to the power supply connections as detailed above (labelled 1 & 2). 10m of cable has been supplied to complete the run but if insufficient cable is present this can be coupled with a 2 core screened sensor cable (or Belden). The connections are not polarised.

Finally two whisker boxes are found at the top left hand corner of the board:

**The first** is for the immersion in the hot water cylinder. It contains a live, neutral and earth run to the box, simply connect from these terminals via suitably sized cable to the 3kW immersion.

**The second** contains a live, switch live and neutral for the connection to a room thermostat. Each UFH wiring centre and each separate thermostat radiator zone should be wired up as follows. CPC conductors are removed for clarity but MUST be connected



## On Startup

Flush and fill the heating system thoroughly ensuring all air is removed, then add glycol to approx 25%. The Controller and relative field settings have already been setup as per Samsung EHS' Installation manual. Simply power up the controller first, then the outside unit then wait for 2mins and check there are no problems with communication Please then follow Pages 27 to 30 of Samsung EHS' heat pump installation manual as supplied with the unit and complete & return the commissioning form at the end for warranty purposes.