

Filling and commissioning your underfloor heating system

The manifold and pipework needs to be correctly filled with water and fully vented of air. This can be best achieved by using mains pressure water through the two manifold filling valves. Both of the manifold isolation valves need to be closed. Connect a hose pipe from a mains water supply (water tap) to the manifold flow filling/drain valve. Connect another hose pipe to the manifold return filling/drain valve with the other end of the hose positioned at your chosen wastewater point.

When the water enters the manifold, open and close each circuit individually one by one, using the black plastic caps. Purge each circuit of any air before moving on to the next one. When filling each circuit, wait until clear water is coming out without air bubbles. Continue the process until all the loops are fully vented of all air. Close the manifold filling/drain valves when done. **Do not attempt to fill the UFH system from the boiler filling loop.**

The system should be pressure tested at 6 bar (ideally for 24 hours) before screeding.

When the F&R pipes from the boiler have been installed and the plumber fills these, it is important that he bleeds out the air from these pipes before opening the isolation valves on the manifold. When the F&R pipes are vented of any air, the isolation valves can be opened. The pumps should be run for five minutes before again venting any potential air at the bleed valve on the filling/drain valves.

The flow manifolds are supplied with flow meters. To adjust the flow rates both on the return manifold and on the flow manifold, use the key provided with the manifold. See the manifold instructions for additional information on how to adjust the flow meters. The following is an approximate guide on how to adjust the loops:

<u>Length of circuit</u>	<u>Percentage open</u>
10 – 30 metres	30 % open
40 – 60 metres	50 % open
60 – 90 metres	75 % open
90 – 100 metres	100 % open

If the return manifold is not getting warm despite the flow metres showing good flow rates, there could be air in the system. Or the flow and return pipes from the boiler have incorrectly been switched over by mistake. Run the pump on speed 3 and make sure that its arrow points towards the flow manifold. *(The system must be on for 24 hours to confirm that all the loops are working).*

Unless you have a one zone (thermostat) system, actuators should be fitted onto the return manifold for individual control. If only one programmable room thermostat (with a two port valve fitted) is controlling the system, there is no need for any actuators. In this case leave all circuits open.

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