UNDER FLOOR HEATING MANIFOLD INSTALLATION INSTRUCTIONS

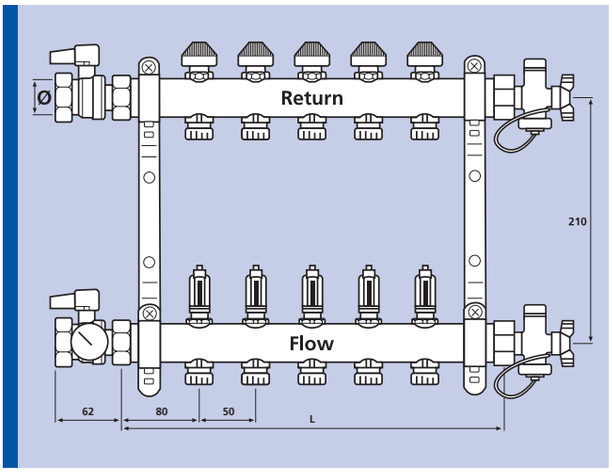
Manifolds are common to all systems above 30m², independent of the under floor heating system. Manifolds are supplied complete and fixed to the wall mounting bracket.

The manifold comes complete with a drain and air vent assembly, which can be positioned on either end of the manifold. Isolation valves are supplied separately for the supply end of each manifold.

The bottom manifold is the flow and the top manifold is the return. Each manifold port comes complete with a Polyplumb push fit connection. Pipes are connected to manifolds by inserting a pipe stiffener into the pipe and simply push fitting the pipe into the port.

The flow meter on each flow port of the manifold provides a visual indication of the flow through each circuit.

Both manual and lockshield balancing can be undertaken by either using the blue cap on the return manifold for manual adjustment, or removing the blue cap and adjusting using the key supplied with each manifold.



Outlets	2	3	4	5	6	7	8
L (mm)	190	245	300	355	410	465	520

Outlets	9	10	11	12	13	14
L (mm)	575	630	685	740	795	850

Preparing and installing the manifold

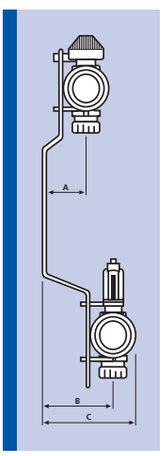
Remove the manifold from the box and arrange the flow and return manifolds to ensure that the inlets/outlets are pointing downwards. Remove the air vent and drain valve from the packaging and connect to the desired end of the manifold.

Ensure the seal is correctly in place before tightening the compression nut by hand on to the manifold. To ensure the valves are securely connected to the manifold, use a 38mm spanner or wrench to tighten by a further half turn.

Remove the isolating valves (supplied separately) from the packaging and connect to the opposite end of the manifold. As with the air vent and drain valve, ensure the seal is correctly in place before tightening the compression nut by hand on to the manifold. Then, complete the connection by using a 38mm spanner or wrench to tighten by a further half turn.

Fix the manifold horizontally in the desired position utilising both screw holes on each bracket.

The manifold is now in position and ready to be connected to the mains from the boiler and the under floor heating pipe circuits. A set of self adhesive stickers are included to help identify each circuit on the manifold. The stickers also provide the opportunity to record the number of turns required for the correct flow rate through each circuit.

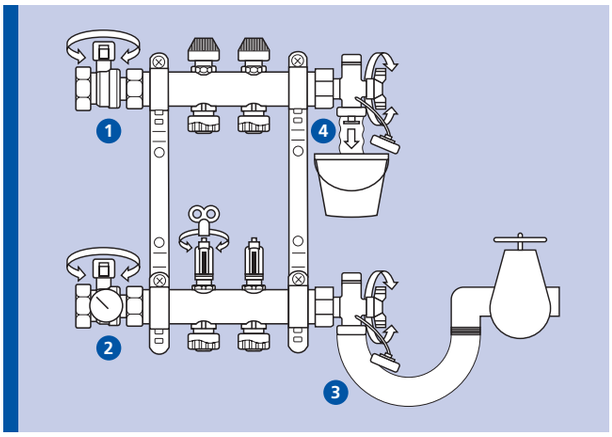


Dimension	1”
A (mm)	39
B (mm)	64
C (mm)	86

Polypipe

System Commissioning

Initial system filling



Close the manifold isolating valves (1) & (2). Connect a hose pipe to the manifold return drain off point (4) and take to a drain. Connect a second hose to the manifold filling point (3) and attach to a mains cold water supply (3 bar max). The connections to the manifold drain and fill points are ¾" BSP. Use flexible ¾" tap connectors for the simplest method of connection.

Close all under floor heating circuits except one, by screwing down the blue caps and closing the isolating valves situated on top of the manifold flow meter. Flush the first circuit with mains cold water until all of the air has been purged. Once this has been done close the first circuit and repeat the process for all of the other circuits on the manifold.

Once the system has been filled and purged of air, and before any screed is laid, a system pressure test must be carried out to confirm the integrity of the installation. It is recommended that this test be done using a suitable hydraulic pressure test kit and not with air.

NOTE: The system pressure test should be carried out with the manifold pump pack removed.

Close the manifold isolating valves and connect the pressure test pump to the manifold flow rail using the ¾" threaded connection on the filling/drain-off point (3). Pressurise the system to 6 bar max and leave under pressure for 1 hour.

Once the pressure test is complete reduce the system pressure down to 3 bar to protect the pipework whilst any screeding process is carried out.

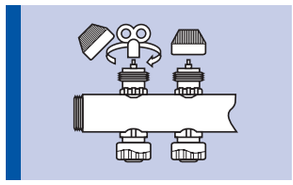
IMPORTANT NOTE: Do not leave the system under pressure during periods of extreme cold weather or when there is a risk of freezing.

System balancing

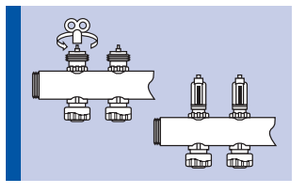
Once the system is up and running it is necessary to balance the system in accordance with the design data provided.
This should be done using the following method:

Ensure that the boiler and main system duty pump are operating correctly and that sufficient heat input and flow rates are being provided at the manifold(s).

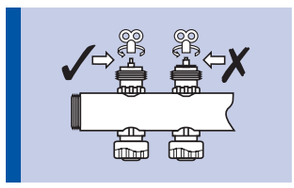
Set the under floor heating controls to call for heat and check to see that the two-port zone valve and manifold pump are energised.



Remove the blue cap from the manifold flow port and, using the bleed key provided, turn the flow adjustment spindle clockwise to completely close the circuit.

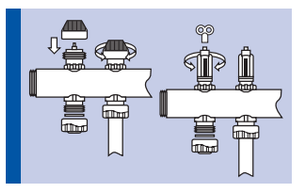


Slowly open the valve by turning the spindle anti-clockwise until the required flow rate in l/min is achieved in the flow meter window.



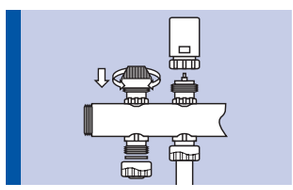
When adjusting the manifold flow rates care should be taken to ensure that the adjustment spindle is not left with any of the thread showing.

In order to carry out any maintenance to the installation it is possible to isolate individual circuits by closing both the flow and return ports, as shown in the diagram below.



NOTE: The isolating valve fitted to the manifold flow meter is not used for balancing purposes.

If it becomes necessary to close off a manifold completely, this can be done by using a ¾" brass cap with a suitable rubber washer insert.



Once all of the circuit flow rates have been adjusted the system should be left to operate for a short period whilst any remaining air is removed.

Once this has been done the flow rates should be re-checked and adjusted if necessary before the actuator heads are fitted. If the actuator heads are not likely to be fitted for a while then it is recommended that the blue caps are used in order to protect the flow rate settings and prevent any debris from entering the flow valve assembly.

IMPORTANT NOTE: When using the PB970014 Modulating Pump Unit to ensure that the primary boiler flow temperature provided at the manifold is at least 15°C hotter than the required manifold operating temperature. This is due to the fact that this manifold uses an 'injector method' to mix down the primary water. Furthermore, when balancing the system with this particular manifold kit please ensure that the modulating pump is set to a fixed head speed whilst making any adjustments.