



Water Underfloor Heating Kit

- ✓ For multiple rooms
- ✓ 50 year pipe warranty
- ✓ CE approved
- ✓ Easy to install

INSTALLATION MANUAL



UNDERFLOOR HEATING SYSTEM

MULTIPLE ROOM SYSTEM INSTALLATION MANUAL

Manufactured in
Europe!



Thank you for investing in our industry leading ProWarm™ underfloor heating system

ProWarm™ Water Underfloor Heating Systems are the ideal choice for homeowners and tradesmen wishing to install a premium branded water underfloor heating kit.

This instruction manual contains important information regarding the safe installation and operation of your underfloor heating system. Please read carefully.

See our online videos for helpful guidance

In addition to this manual we have online installation videos that guide you through each stage of process with easy to follow CGI graphics and helpful dialogue. [Scan QR code to watch video >](#)



Technical support **01268 567019**

Before you begin Installing:

Please read through these instructions carefully and check that you have all the components required. ProWarm™ water underfloor heating kits contain everything you need in one box for your water underfloor heating project. NB: This multi zone system is controlled by multiple thermostats.

- ✓ Rated UPM3 Grundfos Pump*
- ✓ HDPE-AL-PEX Pipe to Suit Area
- ✓ Edging insulation (NA: for low profile)
- ✓ Thermostat(s)
- ✓ Actuators
- ✓ Pipe Staples
- ✓ Pipe Cutters
- ✓ Pipe rerounding tool
- ✓ Wiring centre
- ✓ All pipe connections to fix pipe to pump and manifold



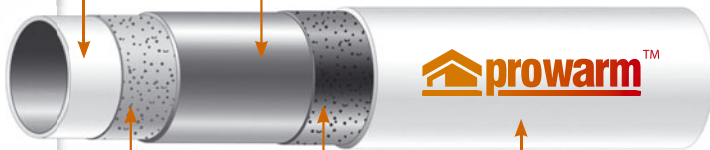
We use **high quality HDPE/AL/PEX Pipe** (HDPE-AL-PEX) in all our ProWarm™ water underfloor heating systems

AN INNER LAYER in cross-linked polyethylene PE-Xb

AN INTERMEDIATE LAYER in aluminium alloy, butt-welded along length of pipe.

50 YEAR PIPE WARRANTY

- ✓ HDPE-AL-PEX.
- ✓ Working pressure & temperature 10bar, 95°C.
- ✓ 100% oxygen impermeable.
- ✓ Lifetime warranty.

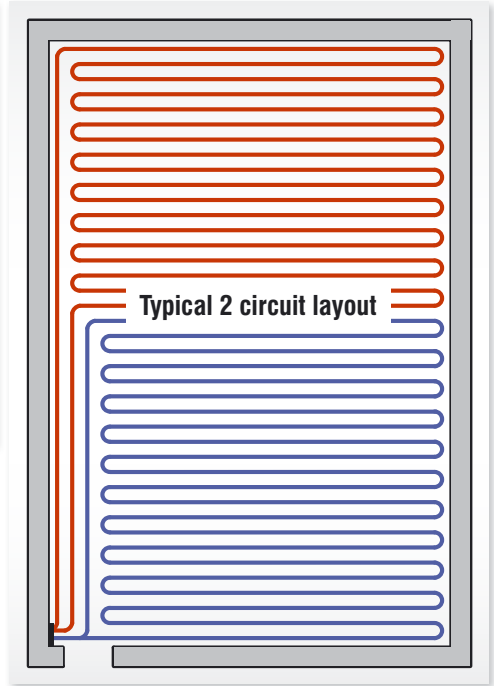
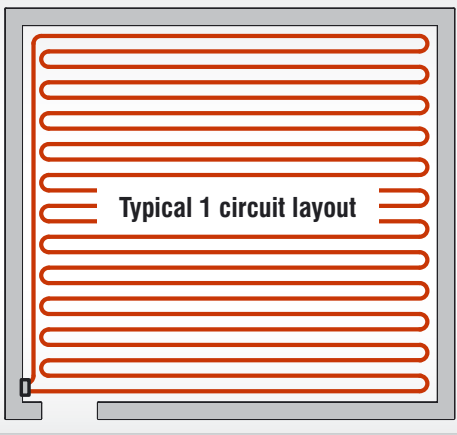


TWO BINDING LAYERS of adhesive bind the metal pipe with the two layers of polyethylene

AN OUTER LAYER HDPE- high density polyethylene

prowarm™

Installation for a **multiple room (multi circuit system)**



- 1) Select a suitable location for the pump & manifold unit and mount on the wall. See opposite page for assembly.
- 2) Refer to the typical pipe installation drawings and determine the pipe layout - the layout is not critical and can be varied to suit site conditions, the important criteria being the pipe spacing, see below.
- 4) The pipe is marked every metre by the metre. (maximum length for any circuit is 110m, 70m for low profile 12mm pipe circuit).
- 5) Pipes should be laid 100mm away from walls.
- 6) Do not lay pipe under fixed units.
- 7) Lay the pipe in rooms furthest from the manifold and work back, do the room with the manifold last.
- 8) When pipes to/from one area pass through another, these two pipes should be run close together around any perimeters of the rooms they are passing through. These pipes are called leaders. If you have a large number of leaders running close together, you will need to insulate these to prevent hotspots, this can be done by sleeving the pipe using the Prowarm Pipe Conduit.
- 9) Lay the pipe as planned, fixing every 75-100cm if using pipe staples or clip rail. You may need a few more pipe fixings on the bends.

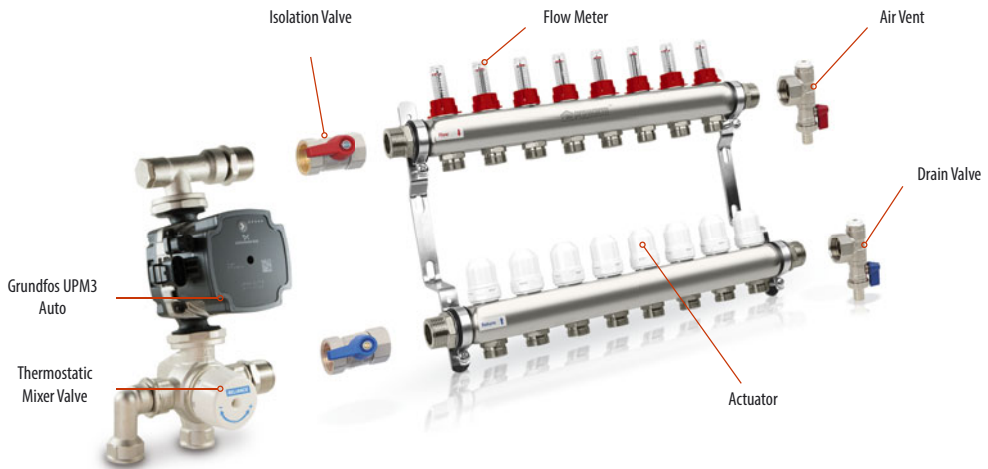
- 10) If the pipe is kinked when bending, the pipe should be straightened and rearranged so that the location of the kink remains in a straight length, no other remedial action is required.
- 11) Once you have laid the circuit, at the manifold cut the squarely using the pipe cutters provided, re-shape the end of the pipe using the re-rounding tool also provided (not necessary if using 10 or 12mm pipe).
- 12) To connect the pipe to the manifold use the eurocones provided. Slide the nut over the pipe

followed by the split olive and push the insert into the pipe ensure that the rubber seals do not come out of their grooves. Now connect the pipe up to the manifold tightening the nut using a spanner. Do not overtighten.

- 13) Label the pipe using a permanent marker with both the Room name and the length of pipe used.
- 14) Prevent people from walking on the pipes too much, keep tools etc away from the pipes and use running boards if needed. The pipe is very tough, but it is better to be safe than sorry.

PIPE SPACINGS

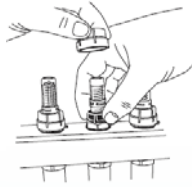
ProWarm™ Multiple Room Kits are deigned to be installed at 200mm centres. This means that they are suitable for installation when being fed from a conventional boiler. If however you are using a Low temperature Heat Source such as an Air or Ground source heat pump the pipe should be installed the pipe at 150mm centres, you will need a bespoke design for this.



- 1) Attach manifold to wall.
- 2) Fit ball valves to manifold, the end with the loose nut to manifold(remember the washers!).
- 3) Assemble pump & mixing valve as shown.
- 4) Connect supply pipework to mixing valve using 3/4" male iron compression fittings.
DO NOT APPLY HEAT TO MIXING VALVE

FILLING THE MANIFOLD SYSTEM

- 1) When initially filling the UFH heating system it is important to remove the air in the pipework to ensure correct operation. It is therefore necessary to follow the procedure below.
- 2) **IT IS NOT ADEQUATE TO FILL THE SYSTEM USING THE BOILER FILLING LOOP**
- 3) Please note: The manifold flow meters are delivered in the closed position; these need to be opened for water to flow through the loops. Lift of the red locking caps and turn the black plastic part a couple of turns in the anti-clockwise direction. Just enough so that you see 2-3 turns of thread. Do not undo too much as they can detach from the manifold completely.
- 4) Do not twist the glass as this will completely remove the gauge, this is designed only to be removed for cleaning purposes, and when the flow has been isolated.
- 5) To fill the system, a hose from the cold mains should be connected to the upper fill valve. A spare length of hose should then be connected to the bottom valve which once opened will allow the water to be flushed into a bucket or drain.
- 6) Ensure that the main flow and return ball valves are closed on the manifold.
- 7) First isolate all but one of the heating circuits by turning off the relevant decorators caps (White or Blue Caps).
- 8) Next turn the cold water on and open the fill and drain valve levers to flush out the open circuit with clean water until it runs freely from the bottom valve.
- 9) Once filled and water is running free of any bubbles, isolate this circuit and open the next one.
- 10) Repeat this until all circuits have been filled. You can introduce any inhibitor or anti-freeze at this stage.
- 11) Once all circuits have been filled, shut the bottom drain valve before closing the last decorators cap.
- 12) Shut the top filling valve off, turn off and disconnect the hose from the manifold.
- 13) Now connect a pressure test pump to the manifold fill valve, open the valve and pump up the pressure to 6 bar. Leave this for 1 hour and make sure that the pressure does not drop within this time. Once you are happy with this release the pressure down to 4 bar ready to pour the screed on top. Once the screed is solid enough to walk on release the pressure to 0 until you are ready to connect it to your heating system.



COMMISSIONING

- 1) Screed or Structural flooring should be laid immediately after pipelaying to protect the pipe.
- 2) Screed floors must be cured before the heating system is turned on. It takes approximately 1 day for every 2mm of screed. This may vary depending upon temperature and screed type, if unsure consult with your screed supplier.
- 3) A Joist system with Pug-mix (biscuit mix of screed) can have heat applied immediately, the pug-mix of screed must be completely dried before laying the flooring. Solid wood flooring must be conditioned before fixing.
- 4) Connect the manifold to your heating system, you should use compression fittings or push fit adaptors to connect to the mixing valve. You will need a $\frac{3}{4}$ " BSP Male to 22mm compression fitting, or a $\frac{3}{4}$ " BSP male to 22mm push fit connection. Do not apply heat near the mixing valve.
- 5) It is important to purge the pipework from the boiler to the manifold to avoid any air being introduced into the underfloor heating system.
- 6) Once the system is operational, with the Manifold pump running you can set your flow rates. Flow

rates should be set to correspond with the system design. This is achieved (with the pump running) by lifting the locking collars at the base of the flow indicators and twisting the indicator base until the desired flow is indicated, then re-fit the locking collars. The circuit length divided by 40 should give you an adequate flow rate. For example, 100m of pipe should have a flow rate of 2.5Litres per minute. See image below.



- 7) On the bottom of the manifold remove the decorator caps completely and fit the actuators to the valves. Please ensure these are screwed on tightly, these can then be wired into the control

wiring centre into their correct zones. Some rooms may comprise of more than one loop of pipe, in this case all actuators must be wired into a single zone output. For technical support call 01268 567019.

- 8) When you initially start the system, ensure the mixing valve is set to a low temperature of 35degrees C. You will only need to turn your room thermostats up just enough so that they are calling for heat, one or two degrees above the ambient room temperature.
- 9) Increase the mixing valve by 5degrees Celsius every 2-3days, up to a maximum of 50degrees for a screed or 60degrees for an in-joint system.
- 10) NOTE: When First starting the system it may take 12-24hours for the heating to become apparent.

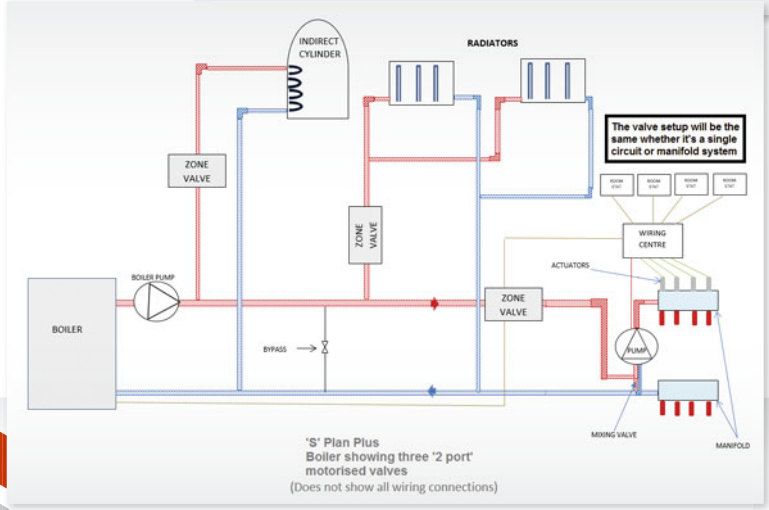
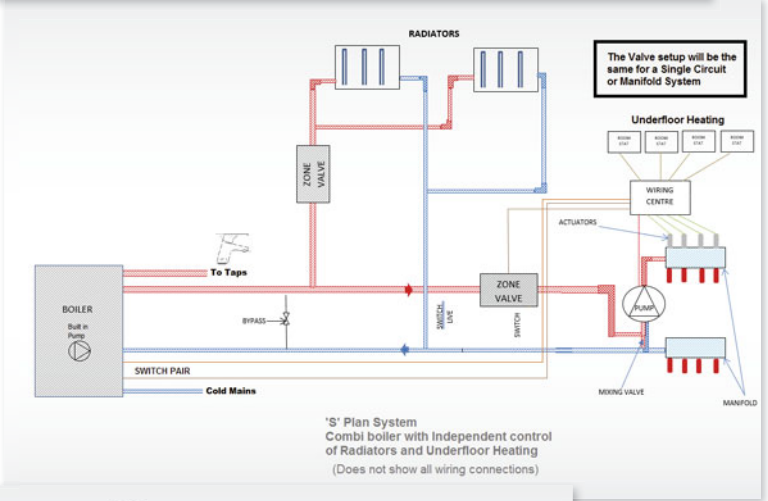
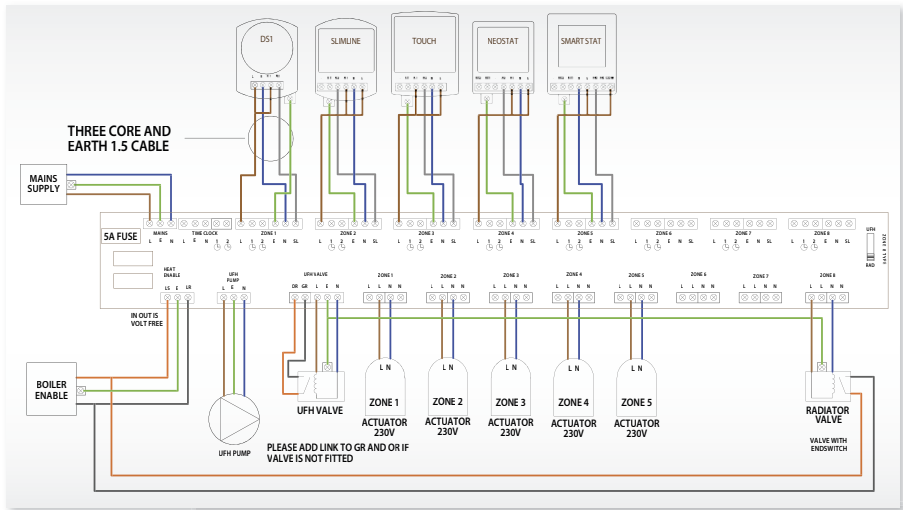
MAINTENANCE It is recommended that the following maintenance be carried out annually

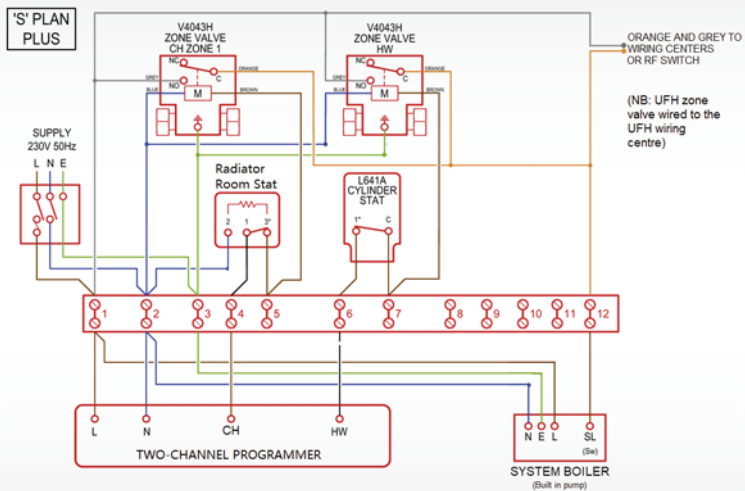
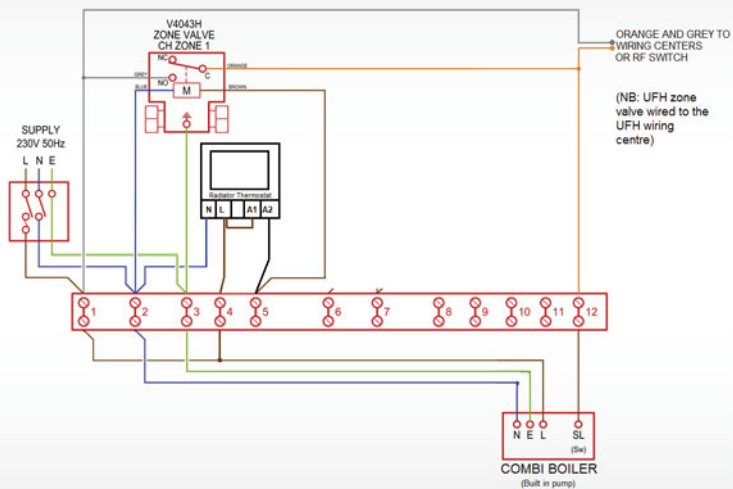
- 1) Check the actuator nuts are tight.
- 2) Visually inspect the manifold for signs of water leaking
- 3) Turn the thermostats up and ensure that all corresponding actuators open, the flow meters will indicate a flow rate once they are open and the pump is running.
- 4) Visually inspect the clear plastic flow meters to assess the colour of the water in the system, if these are dirty you should flush the system through.
- 5) If flow meters remain dirty once the water has been flushed through, you should isolate the manifold at the flow and return ball valves and physically unscrew the clear plastic part of the flow meter for cleaning, once clean screw back on and open the ball valves.

ELECTRICAL SETUP

- 1) If using hard wired thermostats, these should be wired back to the Heatmiser Wiring centre using a 1.5mm² three core and earth. If using 12volt thermostats you should use a 3pair Cat5e screened cable. Wireless thermostats are battery operated and do not require wiring to the wiring centre.
- 2) Mount the Heatmiser wiring centre onto a wall or board and run the wires into it. The wiring centre has cut outs to allow for the wires to enter.
- 3) If a large room has more than one circuit on a single thermostat it will be necessary to wire these actuators into a one zone on the wiring centre.
- 4) Thermostats should be mounted between 1.2m and 1.5m height in a room. Typically they are installed to match light switch heights. These should not be installed in direct sunlight or next to a window.
- 5) Please follow the Heatmiser wiring diagram, should you require assistance you can call Prowarm on 01268 567019 or Heatmiser directly on 01254 669090.

Example of Heatmiser UH8 wiring Diagram shown on next page.





Typical fixing methods

UNDER NEW CONCRETE OR SCREED FLOORS

A cost effective solution for installing water underfloor heating into new build properties or new extensions.

This type of system installation is the most popular and cost effective type on the market today, the pipes are incased in screed or concrete meaning that the whole floor warms up like one huge storage radiator. This system is normally for new build houses or extensions/conservatories.

CLIP RAIL SYSTEM



BETWEEN JOISTS OR SUSPENDED FLOORS

Installing water underfloor heating between joists is easy using our different installation solutions.

Please note all in joist systems require the pipe spacing to be 200mm apart or less
This means you need to select a conservatory style kit or a multiple room kit – standard room kits are designed with the pipe spacing at 250mm centers which would mean you would not have enough pipe in the kit

SPREADER PLATE SYSTEM

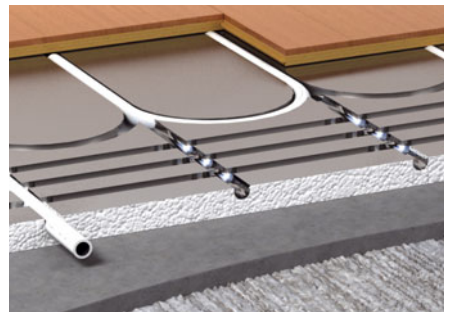


OVER EXISTING FLOORS

Installing water underfloor heating over existing floors is simple using our different installation solutions.

Our overfloor systems can be installed directly over any solid subfloor such as existing floorboards, plywood or concrete/ screed floors, or any solid surface such as existing tiles/ wooden floors.

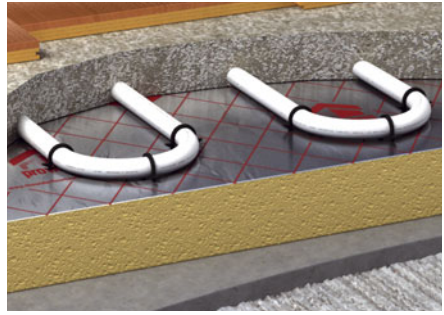
FLOATING FLOOR PANELS for finished timber floor



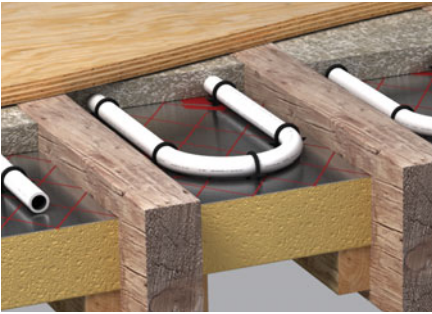
PLASTIC EGG CRATE SYSTEM



CLIPPED DIRECT WITH STAPLES



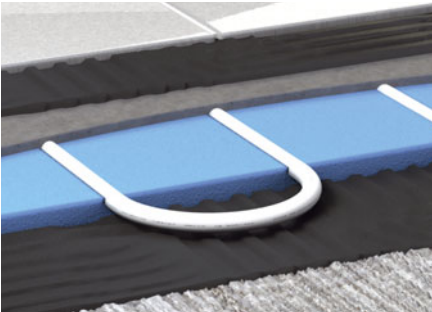
DRY BISCUIT MIX/ SCREED SYSTEM



IN JOIST FOIL BOARDS



SOLID FLOOR PANELS for finished tiled floor



OVERLAY WARM PANELS for finished tiled floor





Visit us online for a list of suppliers:
www.prowarm.com



Call us direct for technical advice:
01268 567019



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T: 01268 567019

www.prowarm.com



Gas Safe registration
number: 640068