the underfloor heating company

APPROVED BY PROFESSIONALS

Screed

Kit Installation Guide

- Easy to Install
- Small or Large Rooms & Multi-Rooms
- Complies to Latest Regulations
- UKCA Approved
- Lifetime Warranty

Clips System

Water Kit

the underfloor heating company

Thank you for choosing our industry leading water underfloor heating system.

Our water underfloor heating kits are the perfect option for both homeowners and tradesmen looking to install a high quality underfloor heating system.

This manual provides essential information concerning the safe installation and operation of your underfloor heating system. Please read carefully.

Need Help? Talk to an Expert...

01625 466 258

www.theunderfloorheatingcompany.co.uk

Screed Kit Installation Guide

Contents

Screed Kit Overview

Screed Kits require the underfloor heating pipe to be fixed to a foil backed insulation board and then covered by a screed, so are best suited for new builds and extensions where a new floor slab will be laid.

Screed Kits are **not suitable for retro fitting** onto existing floors or over joists. For these types of projects please view our range of Overlay Kits and Joist Kits.

Before you begin installing...

Please read through these instructions carefully and check that you have all the components required.

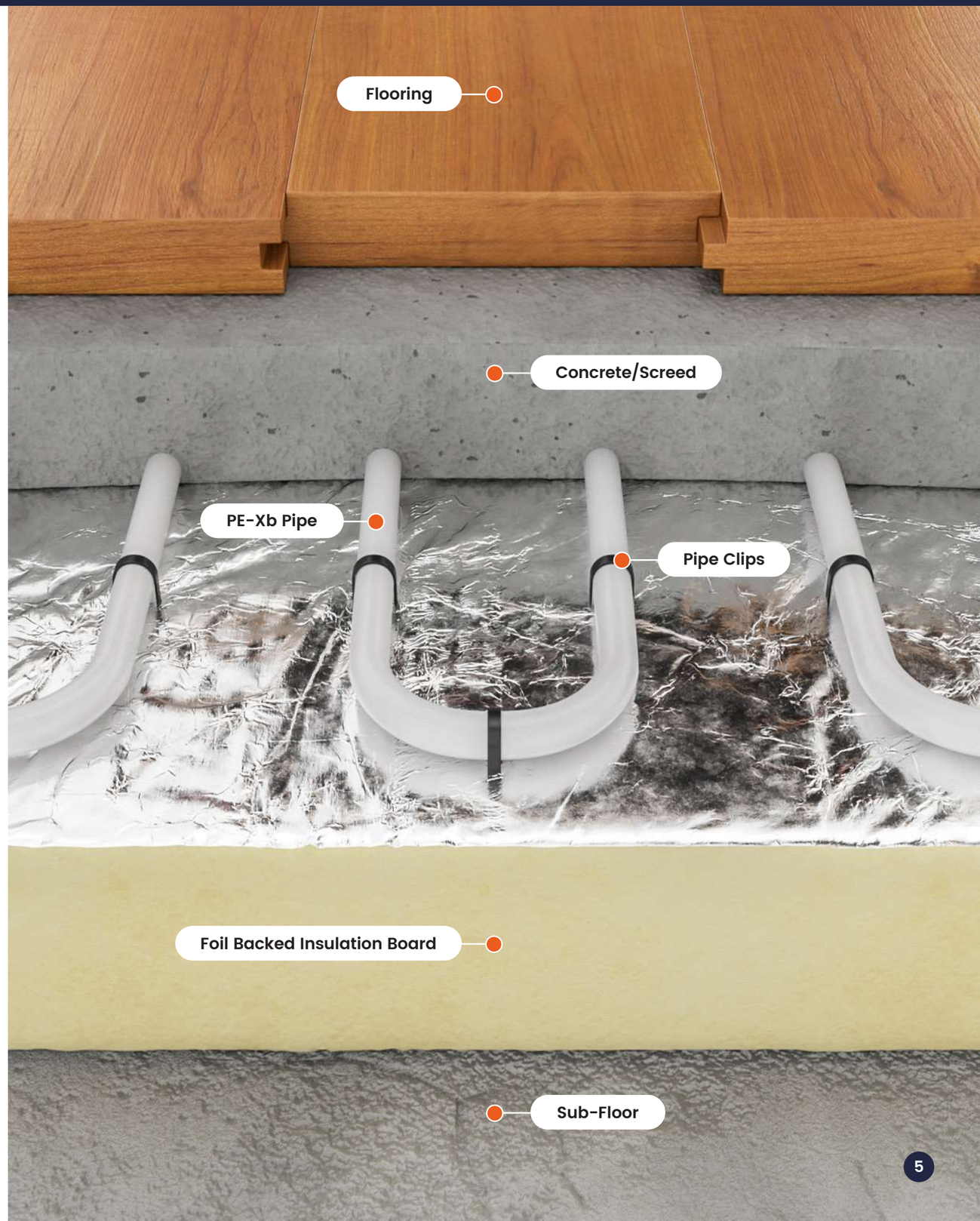
The Underfloor Heating Company's kits contain everything you need in one box for your project. If you need help or advice with your installation please get in touch.

NB: Single zone systems are controlled by one thermostat.

UKCA Approved

All our cables meet current regulations and are compliant with Part P. Should you have any uncertainties regarding your installation do not hesitate to contact us.

Cross Section Detail



Kit Contents

Single Room Kit Contents

Included in your kit are all the components needed to build your single room underfloor heating system.

Room Mixer Set

PE-Xb-multilayer Pipe

Pipe Staples

Edging Insulation

Pipe Cutters

Pipe Rerounding Tool

Pipe Connections

Multi-Room Kit Contents

For larger rooms and multi-room systems your kit will include all of the above as well as:

Rated Wilo Pump & Mixer

Manifold & Valves

Wiring Centre

Actuators

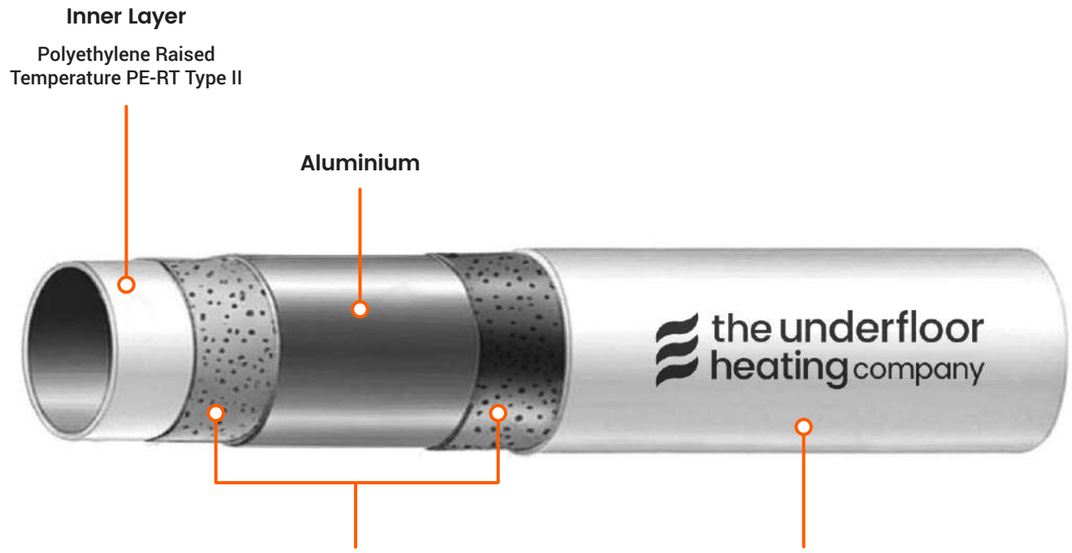
Optional Thermostat

Thermostats are NOT included in the Kit.
We have a wide range to choose from on our website.

N.B. Multiple Thermostats will be required for Multi-Room setups.

High Quality Multi Layered Pipe

We only use High Quality Multi Layered Pipe (PE-RT type II /Al/PE-RT) in all our Water Systems.

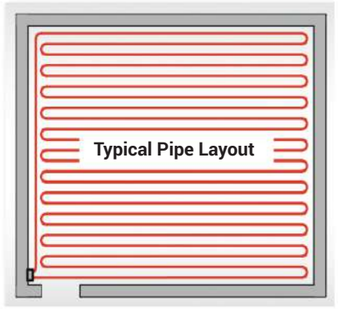


Pipe Warranty

- PE-RT type II /AL/PE-RT
- Working Pressure & Temperature 10bar, 95°C
- 100% Oxygen Impermeable
- Lifetime Warranty

Small Room Installation (single circuit system)

1. Select a suitable location for the pump/control valve unit and mount on the wall.
2. Fit the two nut & inserts as in the pump/control valve assembly shown on opposite page.
3. Refer to **typical pipe installation drawing** 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,
4. The pipe is marked every metre by the metre. (max length for any circuit is 100m, 80m for low profile 12mm pipe circuit).
5. Pipes should be laid 100mm away from walls.
6. Do not lay pipe under fixed units. Typical pipe layout
7. Lay the pipe as planned, fixing every 0.5m onto PIR Insulation base and return to the manifold. Note on loops there will be a requirement for more fixing to hold pipe in place.
8. 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.
9. To connect the circuit, cut the pipe end squarely using the plastic pipe cutter, re-round the pipe end with the tool provided, place the nut over the pipe, ensure the olive and insert is fully fitted over the end of the pipe and the assembly is attached to the pump. Tighten the nut using an open end spanner. Do not over tighten.
10. Prevent people from walking on the pipes, keep tools etc away from the pipes and use running boards. The pipe is very tough, but it is better to be safe than sorry.
11. It is IMPORTANT that the underfloor heating system is properly filled with water (use a garden hose) and purged completely of air to ensure correct operation, .
12. **IT IS NOT ADEQUATE TO FILL THE SYSTEM USING THE BOILER FILLING LOOP!**



Pipe Spacings

Standard Output System

Suitable for internal well insulated areas such as a living room, kitchen or bathroom. Pipe spacings set at 200mm centres.

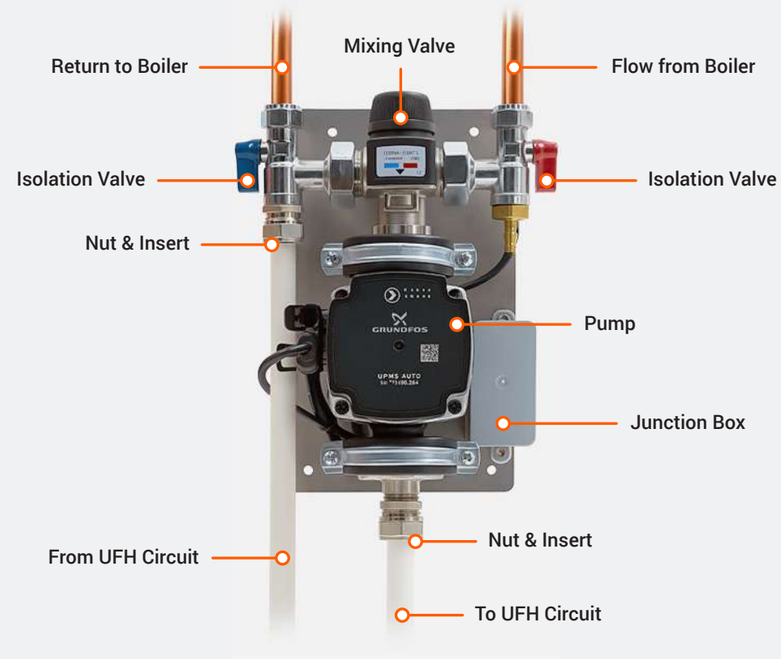
High Output System

Suitable for areas of high heat loss, such as conservatories, extensions & external buildings. Pipe spacings set at 150mm centres.

Low Profile Systems

Panels are spaced at 150mm centres.

Pump / Control Valve Assembly



Commissioning

1. Screed or chipboard flooring should be laid immediately after pipelaying to protect the pipe.
2. Concrete screed floors must be cured before any heat is applied, a general rule of thumb is to allow 1 day per 2 millimetres of screed (check with screed installer).
3. Timber floor with drymix infill can have heat applied immediately, the drymix must be dried completely before laying the flooring.
4. Hardwood timber flooring must be 'conditioned' before fixing.
5. It is important to purge the pipework from the boiler to the manifold, to avoid air being introduced into the underfloor heating system.
6. Initially start the system with the thermostatic valve set at min (35°c).
7. Increase setting by 5° per day, up to a maximum of 50° for concrete floors, max 60° for timber floors.
8. When first starting up the system it may take 12-24 hrs for the heating effect to become apparent.

Large Room Installation (multi circuit system)

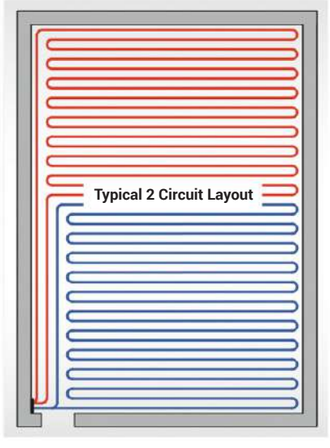
1. Select a suitable location for the pump & manifold unit and mount on the wall. See opposite page for assembly.

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 - important criteria being the pipe spacing, (see below).

3. The pipe is marked every metre by the metre. (max length for any circuit is 100m, 80m for low profile 12mm pipe circuit).

4. Pipes should be laid 100mm away from walls.

5. Do not lay pipe under fixed units.



6. To lay the circuit, cut the pipe end squarely using the plastic pipe cutter, re-round the pipe end with the tool provided, place the nut over the pipe, ensure the olive and insert is fully fitted over the end of the pipe and the assembly is attached to the manifold. Tighten the nut using an open end spanner. Do not over tighten.

7. Lay the pipe as planned, fixing every 0.5m onto PIR Insulation base and return to the manifold. Note on loops there will be a requirement for more fixing to hold pipe in place.

8. 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.

9. Prevent people from walking on the pipes, keep tools etc away from the pipes and use running boards. The pipe is very tough, but it is better to be safe than sorry.

Pipe Spacings

Standard Output System

Suitable for internal well insulated areas such as a living room, kitchen or bathroom. Pipe spacings set at 200mm centres.

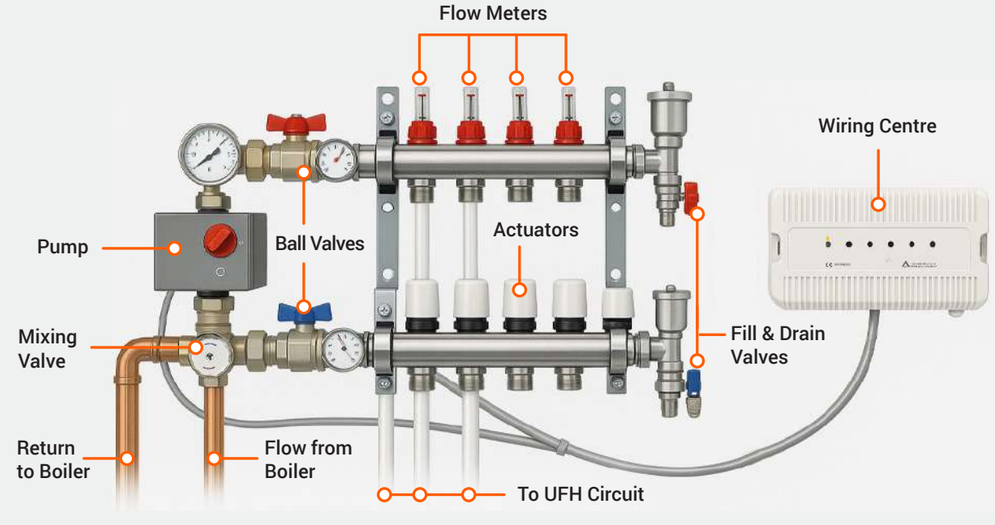
High Output System

Suitable for areas of high heat loss, such as conservatories, extensions & external buildings. Pipe spacings set at 150mm centres.

Low Temperature Systems (Renewables)

Suitable for areas where the heat source runs at low temperature, ideal for Air or Ground Source Heat Pumps and other renewable energies. Pipe spacings are set at 150mm centres.

Pump & Manifold Assembly



Filling the Manifold System

1. It is IMPORTANT that the underfloor heating system is properly filled with water and purged completely of air 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. Connect a hose from a mains pressure cold water supply to the hose connection on the top (flow) manifold, and another hose from the hose connection on the bottom (return) manifold to a drain.
4. Ensure that all the black caps on the bottom (return) manifold are screwed down, closing the valves.
5. Ensure that the main flow & return ball valves are closed on the manifold.
6. Turn on the water and open the hose connection valve on the top (flow) manifold.
7. Open the first circuit valve by unscrewing the black cap allowing water to flow into the pipe.
8. Open the hose connection valve on the bottom (return manifold) allowing water to flow freely into the drain until the water is clear with no air bubbles.
9. Open the second circuit valve (black cap) and close the first.
10. Open the third circuit valve and close the second etc.
11. Continue until the last circuit has been purged and close the hose connection valve on the bottom (return) manifold before closing the last circuit valve (black cap).
12. While under pressure, check manifold & pipework for leakage.
13. Close hose connection valve on the top (flow manifold) and remove the hoses.
14. If possible pressure test the system to 6 bar for 2 hours.

Large Room Installation (multi circuit system)

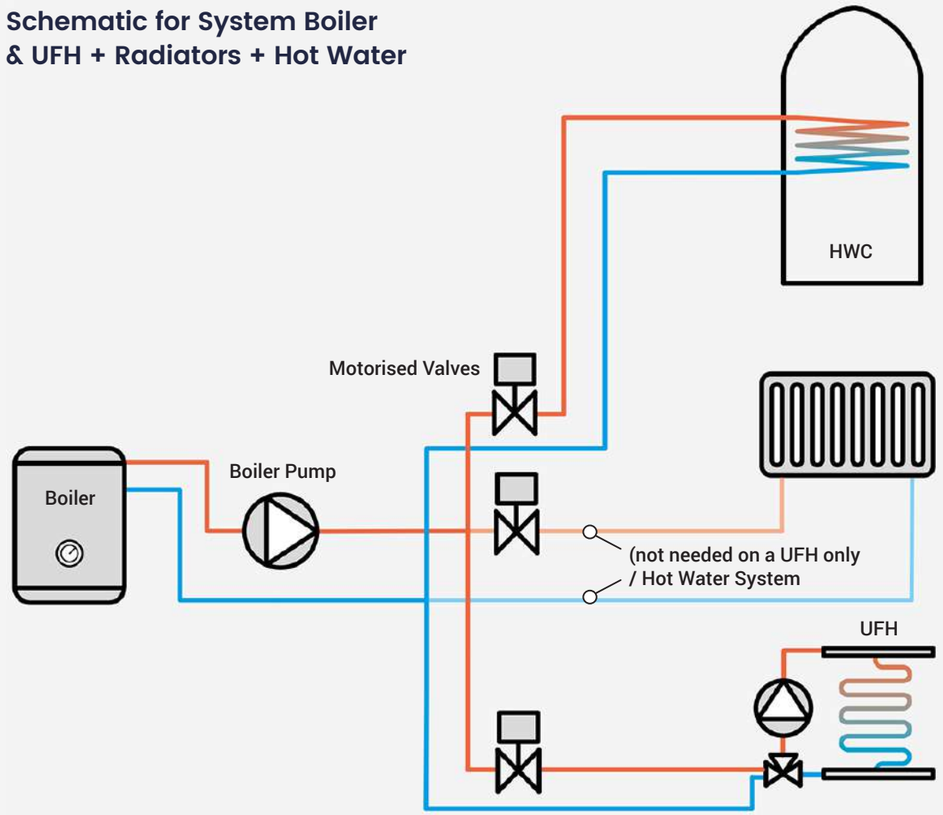
Commissioning

1. Screed or chipboard flooring should be laid immediately after pipelaying to protect the pipe.
2. Concrete screed floors must be cured before any heat is applied, a general rule of thumb is to allow 1 day per 2 millimetres of screed.
3. Timber floor with drymix infill can have heat applied immediately, the drymix must be dried completely before laying the flooring.
4. Hardwood timber flooring must be 'conditioned' before fixing.
5. It is important to purge the pipework from the boiler to the manifold, to avoid air being introduced into the underfloor heating system.
6. It is not normally necessary to balance the system but if required follow this procedure. The system is balanced by running the pump, and adjusting the flow to each zone by turning the square spigots under the blue caps on the bottom manifold, the flow in the respective sight glasses should be set at a figure calculated by dividing the length of pipe for that zone by 40.
   Example: Circuit 1, 85m/40 = approx 2 on the scale. Low profile systems circuit at 70m÷40=1.75.
7. Initially start the system with the thermostatic valve set at min (35°c).
8. Increase setting by 5° per day, up to a maximum of 50° for concrete floors, max 65° for timber floors.
9. The flow & return from the boiler should be connected to the manifold connections shown using compression couplings.
10. When first starting up the system it may take 12-24 hrs for the heating effect to become apparent!

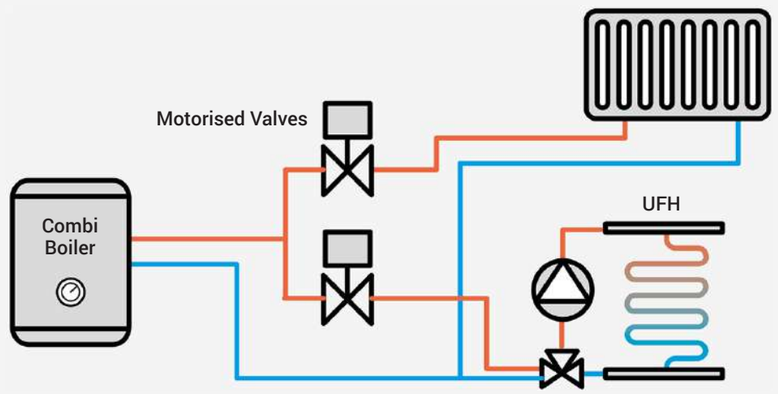
Electrical Setup (for single & multi circuit systems)

1. Wiring to the thermostat will be dependant on the type of thermostat chosen.
2. Thermostat position in the room is not critical but positions affected by the sun should be avoided, mounting height approx 1.5m.
3. The room thermostat is used to switch the pump.
4. The single circuit pump control valve unit incorporates a pipe thermostat and will not operate unless hot water is available from the boiler/heating system.

Schematic for System Boiler & UFH + Radiators



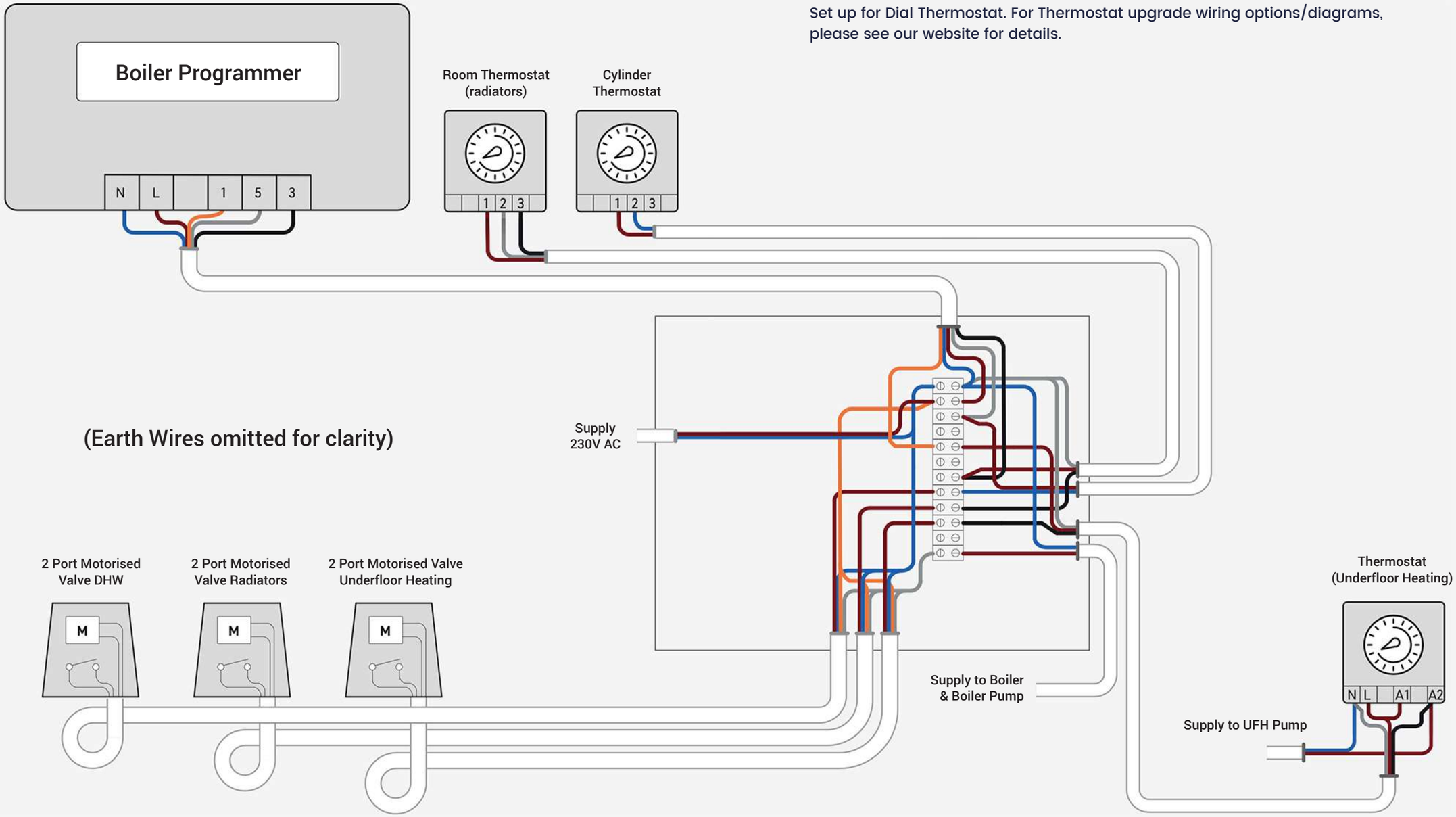
Schematic for Gas Combination Boiler & Underfloor Heating + Radiators



Boiler Electrical Connections

Single Circuit UFH + existing ‘S’ Plan System + System Boiler

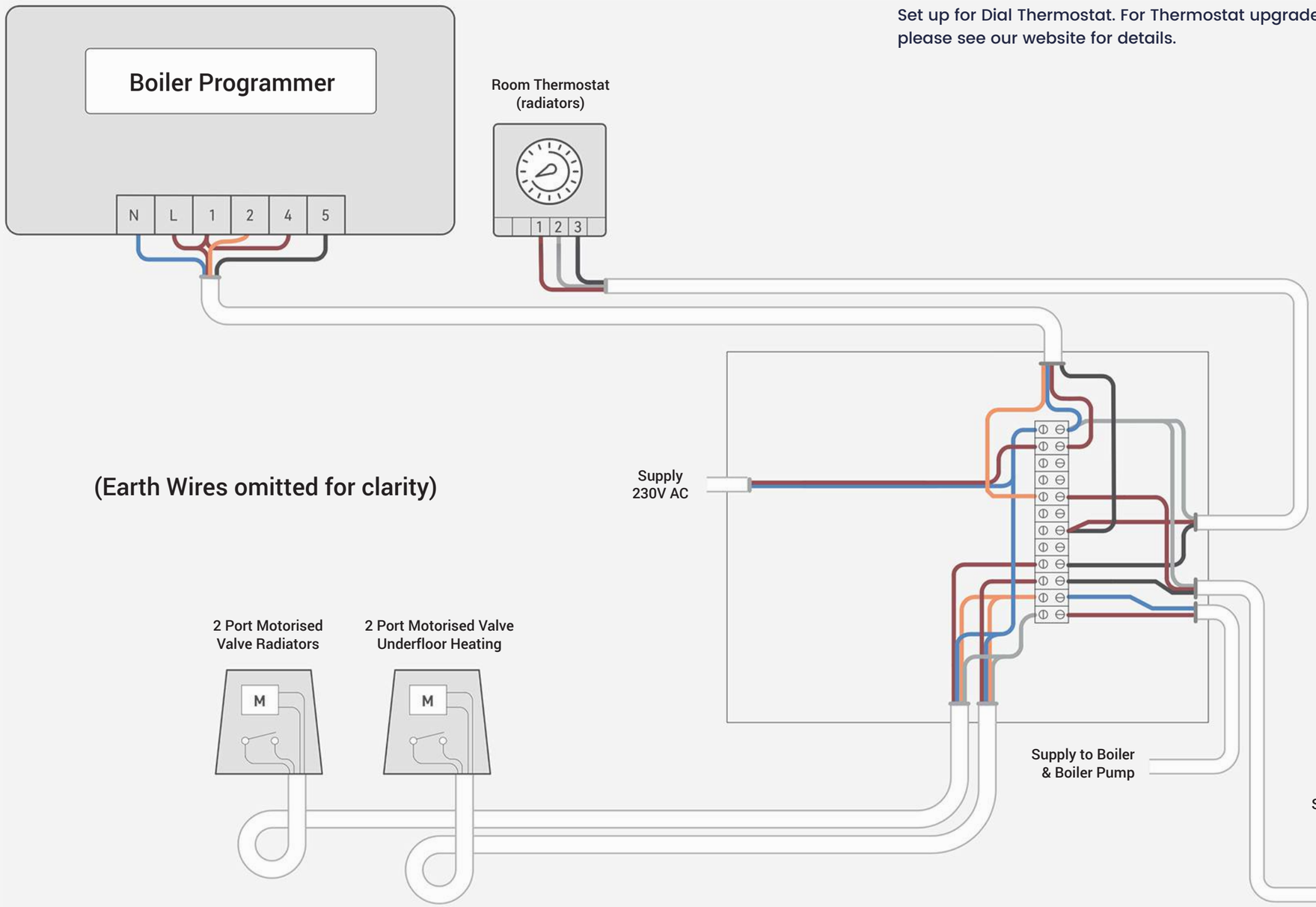
Set up for Dial Thermostat. For Thermostat upgrade wiring options/diagrams, please see our website for details.



Combi Boiler Electrical Connections

Single Circuit UFH + Radiators + Combination Boiler

Set up for Dial Thermostat. For Thermostat upgrade wiring options/diagrams, please see our website for details.



(Earth Wires omitted for clarity)

WARNING:

Exercise care when connecting to boiler connections, its important that a voltage is not applied to boiler terminals from this control system or damage to boiler may occur.

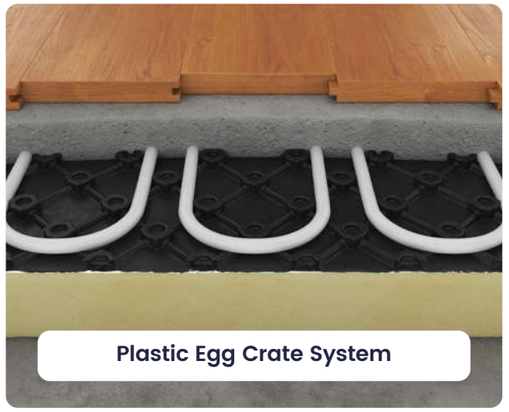
Typical Fixing Methods

Under New Concrete or Screed Floors

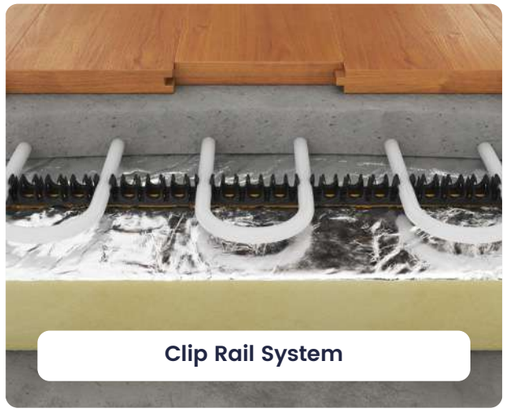
A cost effective solution for installing water underfloor heating into new build properties or new extensions.

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.

Clipped Direct with Staples



Plastic Egg Crate System



Clip Rail System

Unsure which System you need?

Talk to an Expert...

01625 466 258

Warranty

Our Water Heating Pipes come with a Full Lifetime Warranty.

The warranty excludes coverage for installations performed by unauthorized individuals, as well as for defects resulting from improper design by third parties, misuse, damage inflicted by others, damage occurring during transit, incorrect installation, and any other subsequent damages that may arise.
If the damage is attributable to any of the aforementioned reasons, replacement will incur full charges.

Please visit website for full terms & conditions.
www.theunderfloorheatingcompany.co.uk

the underfloor heating company