

Speedfit[®]

The Push-fit Solution for Plumbing and Heating Systems

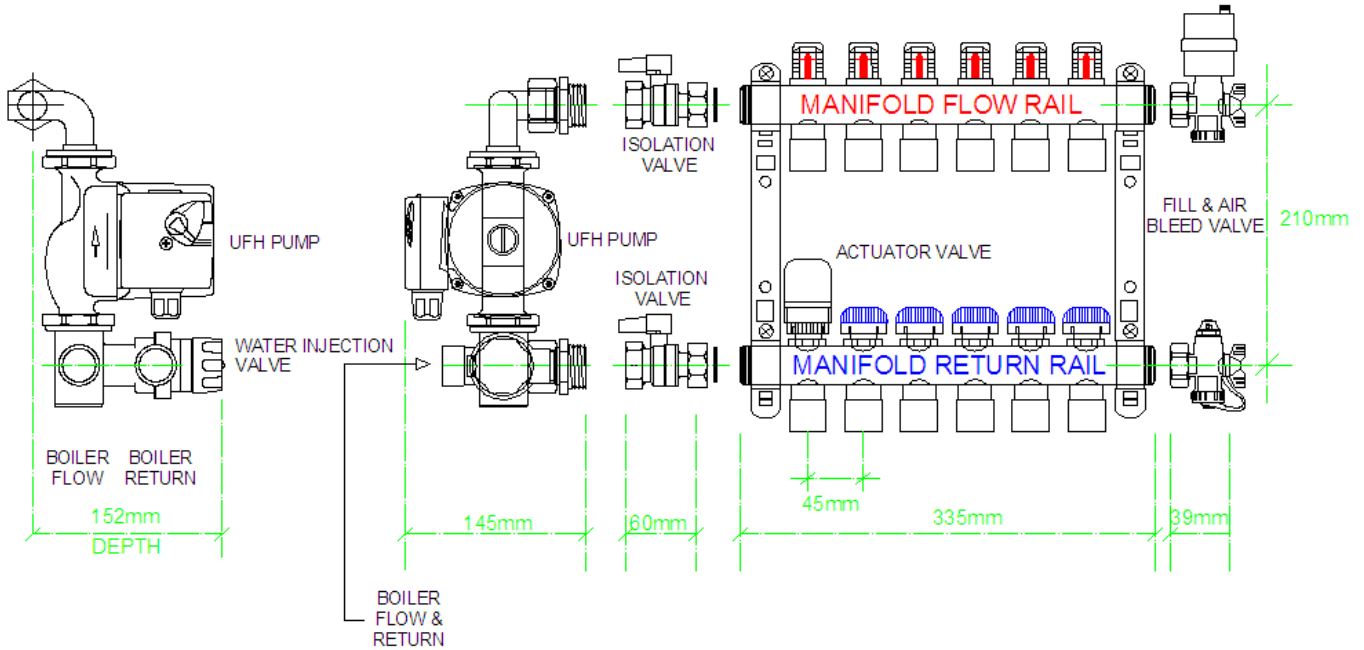


UNDERFLOOR HEATING SYSTEMS

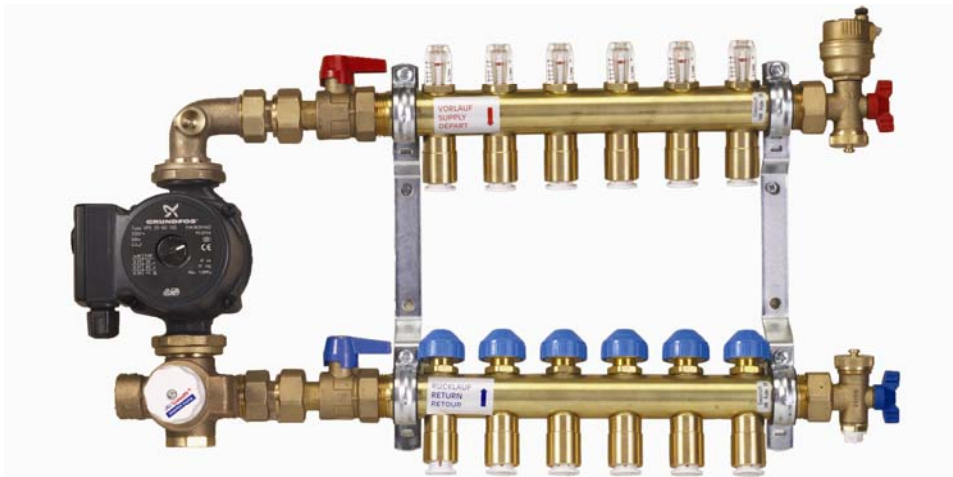
ESTIMATE NOTES AND DETAILS

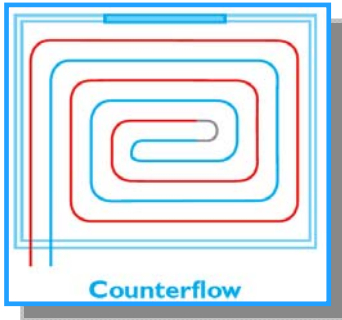
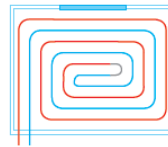


TYPICAL 6 PORT MANIFOLD & PUMP PACK
 INSTALLATION DETAIL



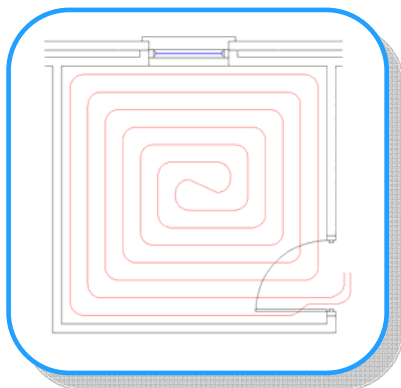
Overall Manifold / Pump Pack Dimensions	
4 Port Manifold	489mm
6 Port Manifold	579mm
8 Port Manifold	669mm
10 Port Manifold	759mm
12 Port Manifold	849mm



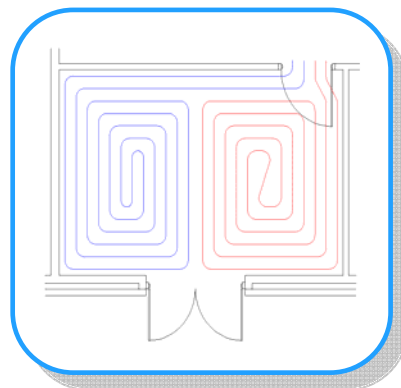


Counterflow is a common circuit pattern to use, it can sometimes be referred to as a spiral pattern. This pattern achieves an even floor temperature with alternating flow and returns.

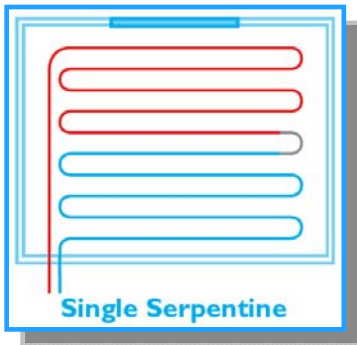
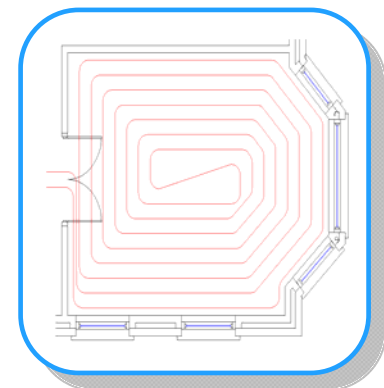
Square Room single circuit



Square Room double circuit

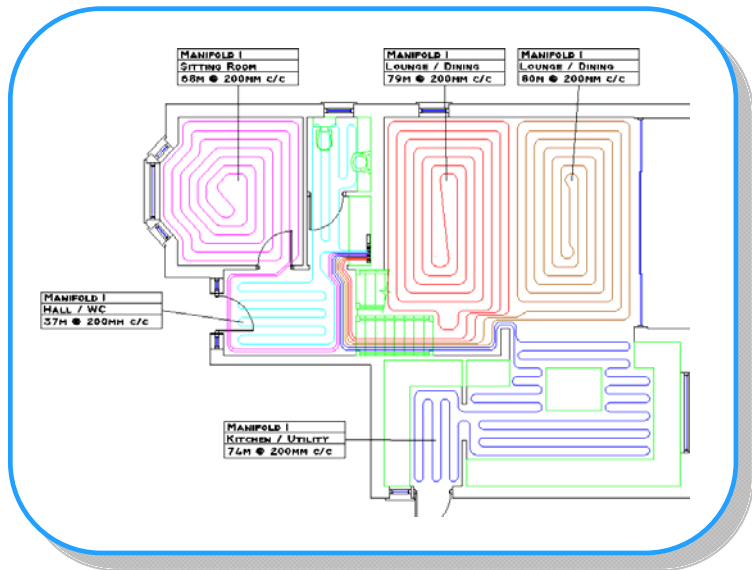


Bay Room or conservatory

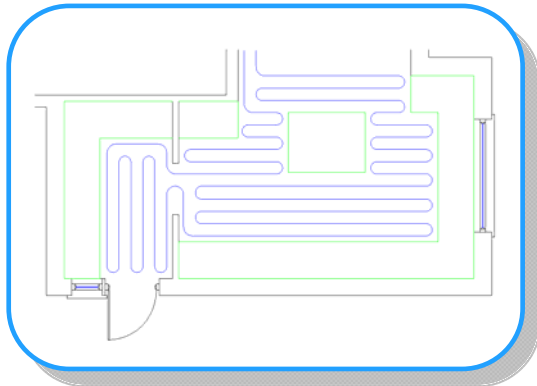


Serpentine is a simple up & down circuit pattern. It is especially good to use when you have irregular shaped rooms or small areas such as kitchens and utility rooms. This pattern is also used for the Spreader plates systems.

Example drawing using both patterns



Irregular shaped room



UFH INFORMATION PACK

INSTALLING SCREEDED FLOORS

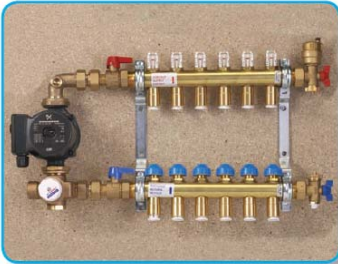


DATA SHEET 3

JAN 2010



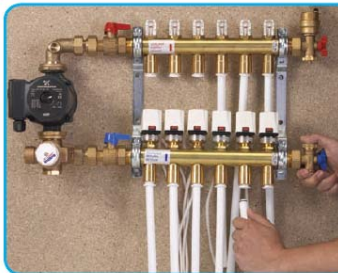
Make sure the floor is cleared of dust and debris. Lay the floor insulation and edge insulation and tape all joints to prevent the ingress of the screed.



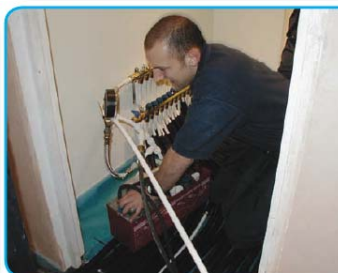
Fit the Manifold Rail to the wall in your chosen position (best positioned centrally to the system if possible), and connect the Control Pack.



The Speedfit pipe can now be laid in a pre-determined pattern and fixed to the insulation with either Pipe Staples or Clip Rail.



The Speedfit pipe can now be connected to the manifold.



The system can now be filled with water and pressure tested using correct methods.



The system can now be screeded. The system should remain under pressure until the screed has cured. Do not use the system to dry the screed.



Spreader plates are available for timber flooring using either traditional joists or TJI joists. The plates absorb the heat from the pipework and spread it evenly across the floor decking above.

400mm x 1000mm Spreader Plates



Spreader plates 390mm x 1000mm are designed for use with traditional joists at 400mm centres. They are laid across the top of joists and fixed in place using a hand stapler.



The Speedfit pipe is pushed into plates grooves at a fixed 200mm centres. The joists will need to be notched at one end to continue the circuit and return to the manifold.

165mm x 1000mm Spreader Plates



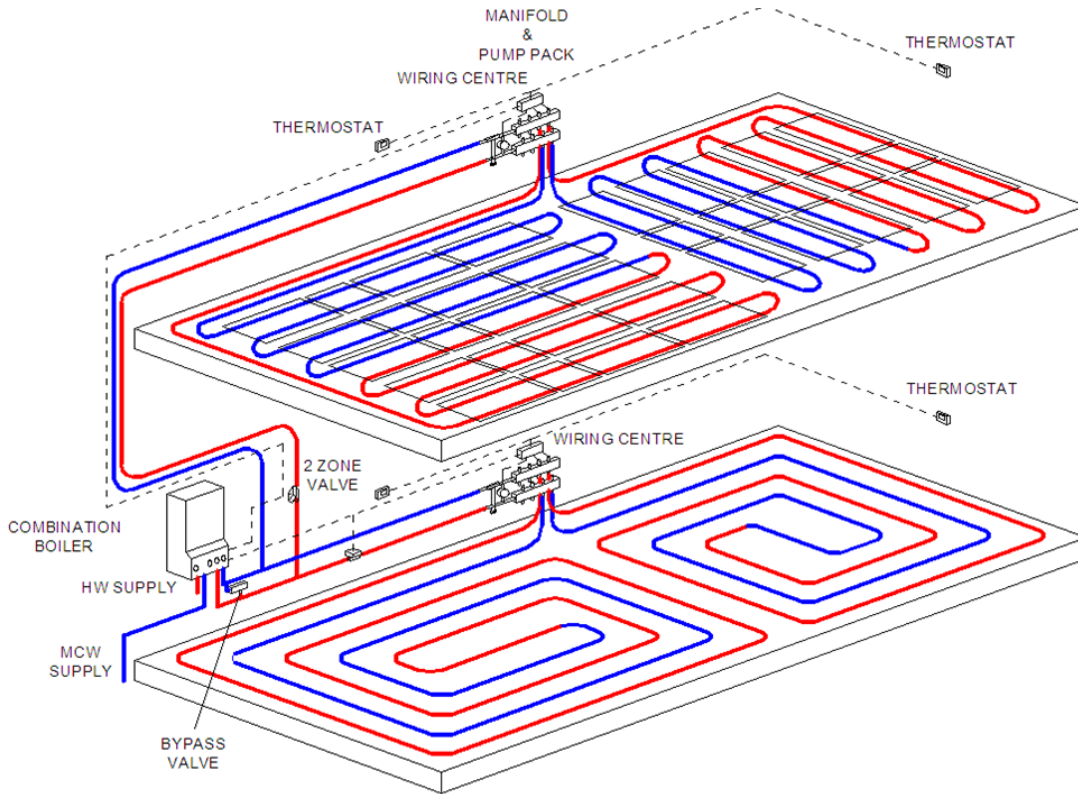
Spreader plates 165mm x 1000mm are designed for use with either traditional or TJI joists where the finished flooring is already in place. They are fixed to the flooring from underneath using either screws or staples.



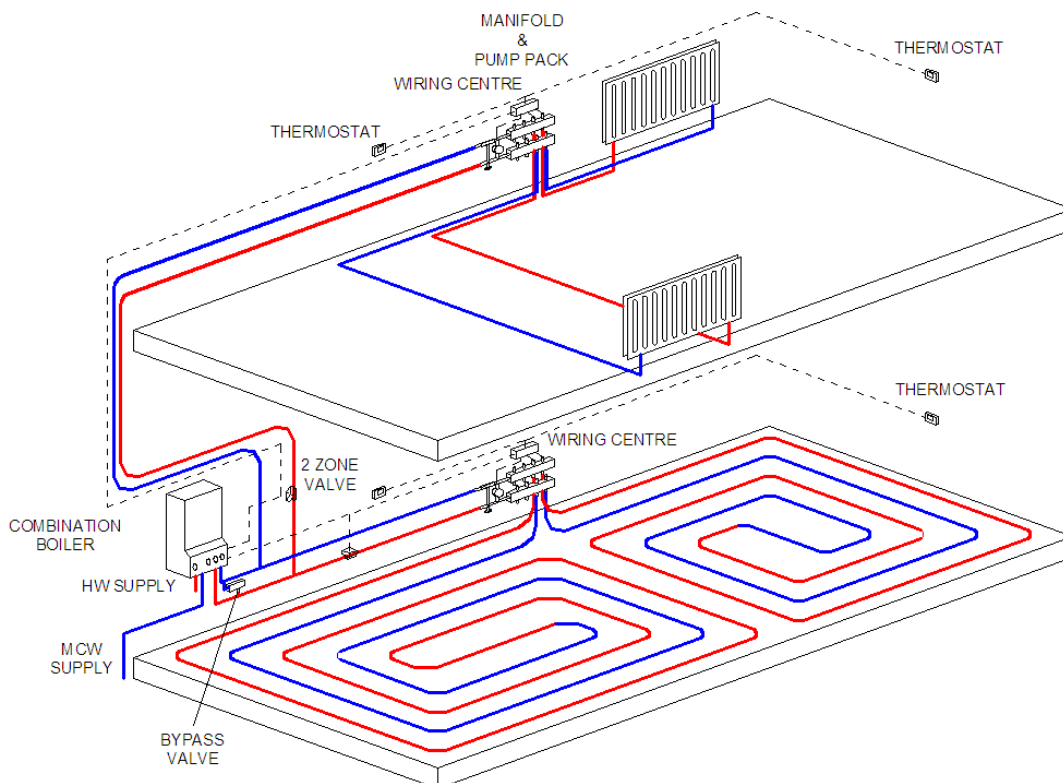
They can also be used on either 400mm or 600mm centre joists. The Speedfit pipe is pushed into the plates grooves from underneath at a fixed 200mm centres. Insulation is then placed between the joists to the underside of the plates.



EXAMPLE GROUND & FIRST FLOOR UFH SYSTEM



EXAMPLE GROUND FLOOR UFH SYSTEM WITH ENERGY SAVER ON FIRST FLOOR





Manifold Heating System (Energy Saver)

MANIFOLD FEED RADIATOR SYSTEM

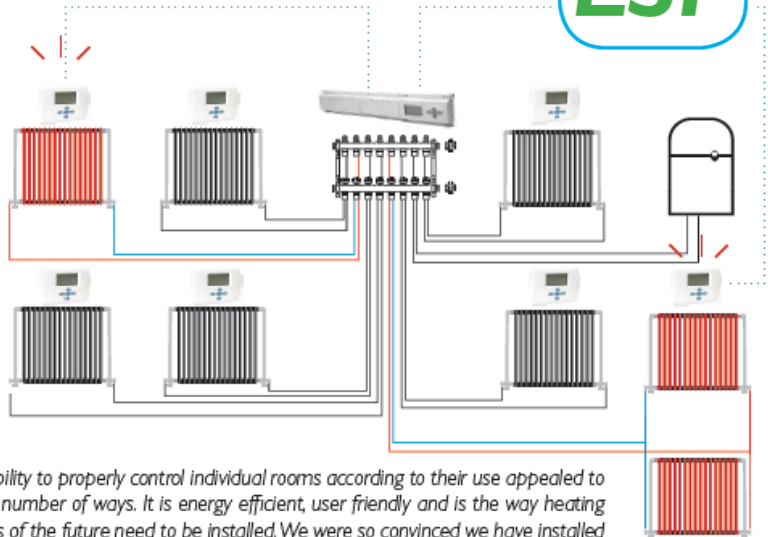
Unlike a conventional system where radiators are connected to a common flow and return controlled by one thermostat, this manifold feed system allows each room to have its own individual hot water supply to its radiators.

Energy saving electrical controls can then be installed, enabling the user to set time and temperature control for each room to suit individual use.

The thermostats in the system are linked back to a Speedfit Wiring Centre that in turn will open and close the actuator valves on the manifold.

The wiring centre will also turn the boiler and pump on in response to a demand for heat from an individual room or rooms.

There is a range of thermostats to suit individual needs.



"The ability to properly control individual rooms according to their use appealed to us in a number of ways. It is energy efficient, user friendly and is the way heating systems of the future need to be installed. We were so convinced we have installed it on a prestigious development in Boverton."

Steven Vanprag
Summerhouse Point Development Ltd

"I am installing the Manifold system in my new house. I like the idea of being able to turn off areas of my house that I am not using. Only paying for the heat in the rooms that I want and when I want, it seems obvious when I think about it."

Royston O'Riley
Home owner

Underfloor Heating Packs

Speedfit Underfloor Heating Packs consist of:

A Control Unit which is pre assembled and pre wired, has integral ballvalves to allow for isolation from the primary system, an adjustable blending valve to control the temperature of the water and a high quality 6 metre head circulating pump. An anti-vibration mounting bracket ensures silent operation.

Programmable Room Thermostat to give individual time and temperature, with a simple menu for easy adjustment. There are 9 preset 7-day programs and the facility to create up to 4 user programs where you can set up your own daytime and set back heating patterns.

Speedfit Barrier Pipe that is lightweight and flexible with an inner barrier to prevent the ingress of air. Manufactured and Kitemarked to BS7291 Class S.



UFH INFORMATION PACK

FREQUENTLY ASKED QUESTIONS



DATA SHEET 7

JAN 2010

Can UFH be used in conjunction with radiators ?

Yes, Underfloor Heating can be easily integrated with traditional radiator systems and domestic hot water.

How long does UFH take to warm up from cold?

In high mass systems such as some screed floors the system can take 2-3 hours to heat up from cold. After an initial heat up advanced controls maintain the screed temperature reducing energy use and allowing for overnight reduction and quick heat up the following morning. Timber floors and thin screed systems are comparable to radiator systems.

How much heat will my UFH system provide?

Typically a screeded floor will emit a maximum of 100w/m². Timber floor structures will emit a maximum of 70w/m².

What floor areas can a manifold heat ?

A single manifold can serve approximately 120-150 m² of heated floor area with a maximum of 12 loops.

How long do I leave my UFH on for during the day ?

UFH is most efficient if left on 24hrs a day using room thermostats to control the comfort levels in each space. Timers and programmers allow the user to choose when the heating is on / off or when to tell the system to reduce the average temperature overnight for example, known as set-back. This saves energy and gives a faster heat up time the following morning.

How long does it take to produce an estimate ?

We aim to produce an initial estimate within 48hours of receiving your drawings. If this estimate is acceptable we aim to produce a detailed appraisal and quotation within 72 hours of receiving your acceptance. Full CAD drawings and system specifications can be produced on conformation of your order with a Speedfit. These are normally produced within 2-3 weeks – faster in many cases.

What type of Screed should I use ?

Most screeds are a traditional sand and cement mix of 65 –75mm in thickness. Additives and binding agents are also used for added strength and flexibility. Thinner screeds (40-50mm), often known as pumped or liquid screeds are available. These offer better response times for UFH and quicker drying times. Specific advice should be sought from the screed manufacturer who will specify the correct screed for your project. Speedfit can discuss the options with you.

Where should the manifold be positioned?

The UFH manifold can be located anywhere. However, to reduce pipe runs and achieve a balanced system it is preferable to locate the manifold centrally.

How much pipe do I need ?

In a typical property, pipe is spaced at 200mm centres which equates to approximately 5m/m². Loops should be no longer than 100m. Speedfit will calculate the pipe spacing and loop lengths for each room / zone to meet the heat requirements of the space.

How much water will be in my system?

Speedfit manufacture a 15mm Polybutylene pipe for use with UFH. Every 1m of pipe contains 0.1L of water.

What is edge insulation used for ?

Edge insulation is very important and is primarily used on screeded floor systems. It creates an insulation barrier around the perimeter of a room to prevent lateral heat loss and provide an expansion gap for the solid floor as it heats up and cools down. Speedfit Edge insulation should also be used as an expansion medium on areas of screeded floor in excess of 40m².

Do I need to add inhibitors to the system ?

Yes, Speedfit advise that inhibitors should be used in all central heating systems including UFH. Fernox & Betz Dearborn manufacture suitable products.

Can I join pipes in the floor ?

Pipes should not be joined in the floor.

How much Insulation do I need?

The amount of insulation within a building are very important for an underfloor heating system. A layer of insulation should be placed immediately below the heating pipes to minimise the downward heat loss of the floor and maximise the heat emitted upwards. The total amount of insulation required is calculated in 2 parts. Firstly, the architect will specify the type and depth of insulation to comply with the Building Regulations. Secondly, the UFH system designer should specify any additional insulation layer required for the UFH to counteract the effect of the resistance of the floor and floor coverings above the heating pipes.

Do I have to buy a staple gun ?

For large projects it cost effective to purchase a staple gun. However, most Speedfit stockists offer the facility to hire tools such as pressure testers and staple guns at a daily rate.

What Guarantee do Speedfit Give?

As a result of its long term programmes and rigorous quality standards John Guest Speedfit Limited offer a 25 year guarantee against the defects in materials or manufacturing of Speedfit Barrier Pipe manufactured by John Guest. John Guest Underfloor Heating Products, which should be installed and maintained in accordance with our recommendations, carry a 2year guarantee against defects in materials and manufacture. John Guest Plumbing and Heating Products are for use with normal UK domestic plumbing and heating systems and are supplied in accordance with our Conditions of Sale.